CHAPTER 7
Checking Inside the Computer

Your Dell PowerEdge 300 system supports a variety of internal options that expand system capabilities. This file prepares you to install options inside the computer. It describes how to remove and replace the computer cover and rotate the power supply away from the system board. It also familiarizes you with the internal components you may handle if you install Dell hardware options.

Before You Begin

To make working inside your computer easier, make sure you have adequate lighting and a clean work space. If you temporarily disconnect cables or remove expansion cards, note the position of the connectors and slots so that you can reassemble the system correctly.

You will use the information in this section every time you install a hardware option inside your computer. *Read this section carefully*, because the information is not repeated in such detail elsewhere in this guide.

Safety First—For You and Your Computer

Working inside your computer is safe—*if* you observe the following precautions.

WARNING: FOR YOUR PERSONAL SAFETY AND PROTECTION OF YOUR EQUIPMENT

Before starting to work on your computer, perform the following steps in the sequence indicated:

1. **Turn off your computer and all peripherals.**
2. **Disconnect your computer and peripherals from their AC power sources. Also, disconnect any telephone or telecommunication lines from the computer. Doing so reduces the potential for personal injury or shock.**
3. **If you are disconnecting a peripheral from the computer or are removing a component from the system board, wait 10 to 20 seconds after disconnecting the computer from AC power before disconnecting the peripheral or removing the component to avoid possible damage to the system board.**

4. **To verify that all power has been removed from the system, make sure that the standby light-emitting diode (LED) on the system board has gone out. For the location of this LED, see Figure 8-1, in Chapter 8, "Installing System Board Options".**

5. **Touch an unpainted metal surface on the computer chassis, such as the power supply, before touching anything inside your computer.**

6. **While you work, periodically touch an unpainted metal surface on the computer chassis to dissipate any static electricity that might harm internal components. Also avoid touching components or contacts on a card and avoid touching pins on a chip.**

In addition, Dell recommends that you periodically review the safety instructions at the front of this guide.

Unpacking Your Hardware Option

When you remove an option from its shipping carton, you may find it wrapped in antistatic packing material designed to protect it from electrostatic damage. Do not remove the packing material until you are ready to install the option.

CAUTION: See "Protecting Against Electrostatic Discharge," in the safety instructions at the front of this guide.

Removing the Computer Cover

Use the following procedure to remove the computer cover:

1. Turn off your computer and peripherals, and make sure you unplug the computer from its electrical outlet before you remove the computer cover. Observe the Warning for "Safety First—For You and Your Computer" at the front of this chapter. Also observe the safety instructions at the front of this guide.

2. If you have installed a padlock through the padlock ring on the back panel (see Figure 7-1), remove the padlock.

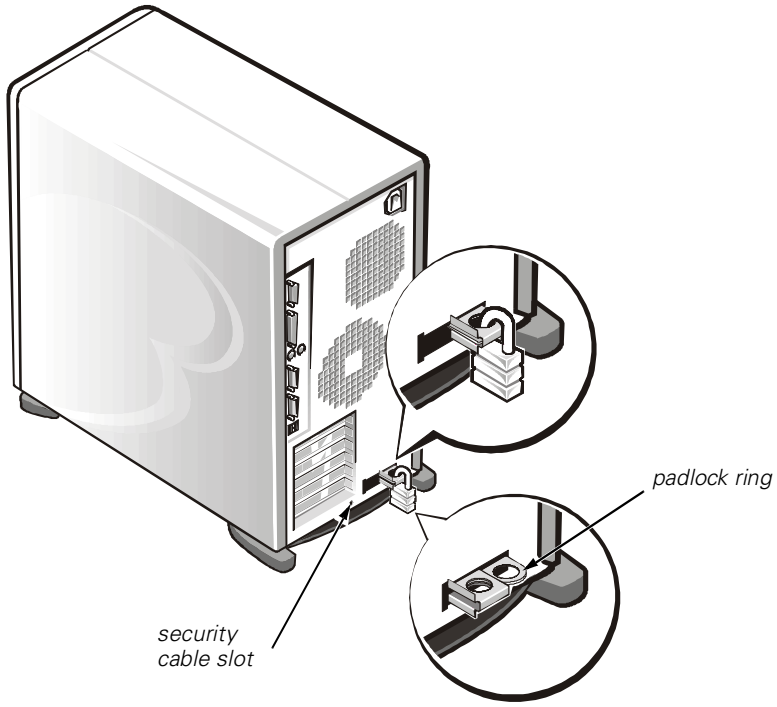

Figure 7-1. Padlock Installed

3. Remove the cover.
4. Facing the left side cover, press the release button (located at the bottom-left corner of the front bezel) and lift the bottom of the cover, allowing it to pivot up toward you (see Figure 7-2).
5. Disengage the tabs that secure the cover to the top of the chassis, and lift the cover away.

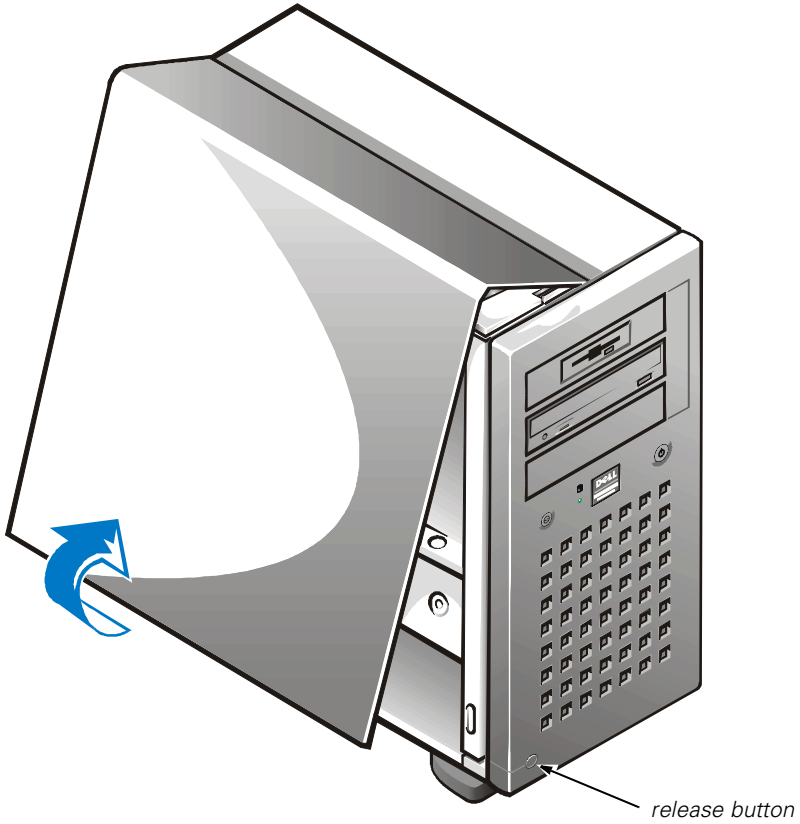

Figure 7-2. Removing the Computer Cover

Replacing the Computer Cover

Use the following procedure to replace the computer cover:

1. Check all cable connections, especially those that might have come loose during your work. Fold cables out of the way so that they do not catch on the computer cover. Make sure cables are not routed over the drive cage—they will prevent the cover from closing properly.
2. Check to see that no tools or extra parts (including screws) are left inside the computer's chassis.
3. Replace the cover.
4. Facing the left side of the computer, hold the cover at a slight angle as shown in Figure 7-3, and then align the top of the cover with the top of the chassis. Hook

the tabs on the cover into the recessed slots on the computer chassis so that the tabs catch the hooks inside the slots.

Pivot the cover down toward the bottom of the chassis and into position. Make sure the securing hooks at the bottom of the cover click into place.

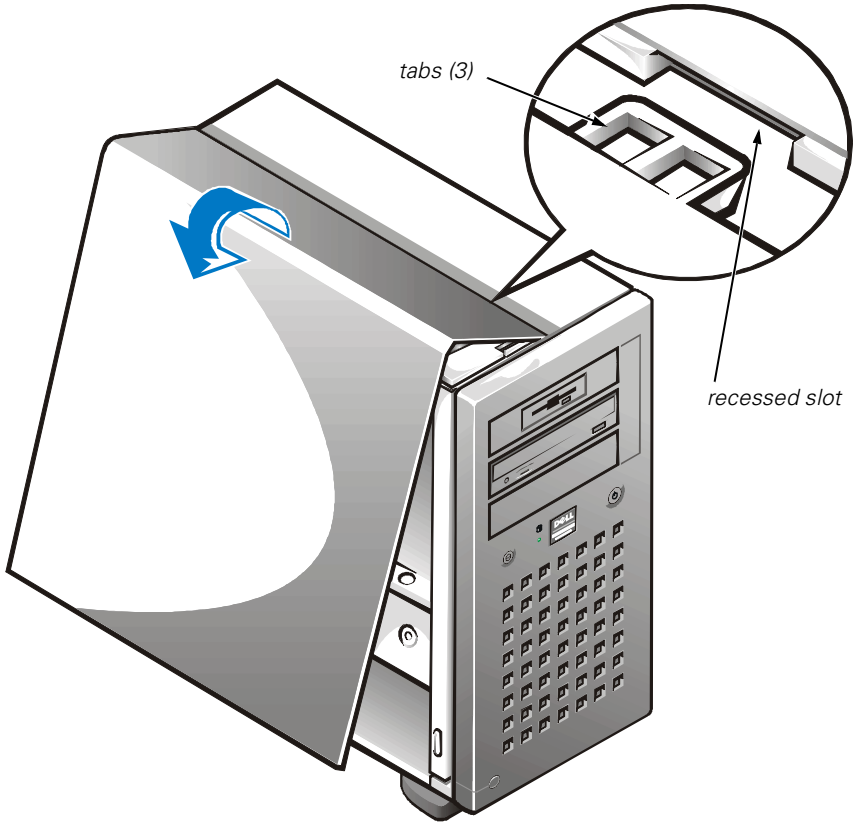

Figure 7-3. Replacing the Computer Cover

5. If you are using a padlock to secure your system, reinstall the padlock.

NOTE: After removing and replacing the chassis, the chassis intrusion detector will cause the following message to be displayed at the next system start-up:

`ALERT! Cover was previously removed`.

6. Reset the chassis intrusion detector by entering the System Setup program and setting **Chassis Intrusion** to **Not Detected**. See "Using the System Setup Program" in your *User's Guide* for instructions.

NOTE: If a setup password has been assigned by someone else, contact your network administrator for information on resetting the chassis intrusion detector.

Inside Your Computer

Figure 7-4 shows a side view of your computer to help you orient yourself when installing hardware options. Unless otherwise specified, locations or directions relative to the computer are as shown.

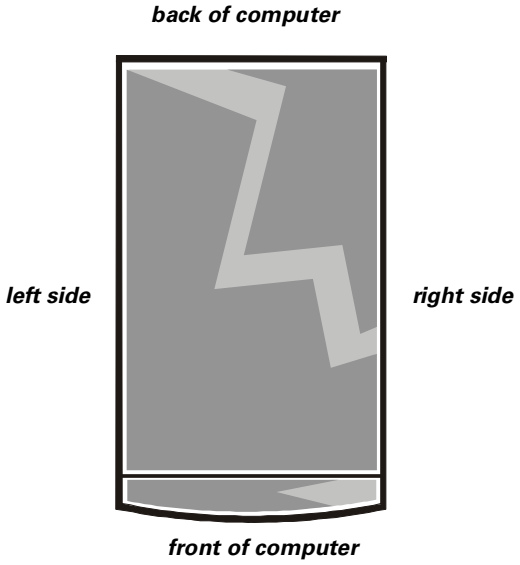

Figure 7-4. Computer Orientation View

Figure 7-5 shows your computer with its cover removed. Refer to this illustration to locate interior features and components discussed in this guide.

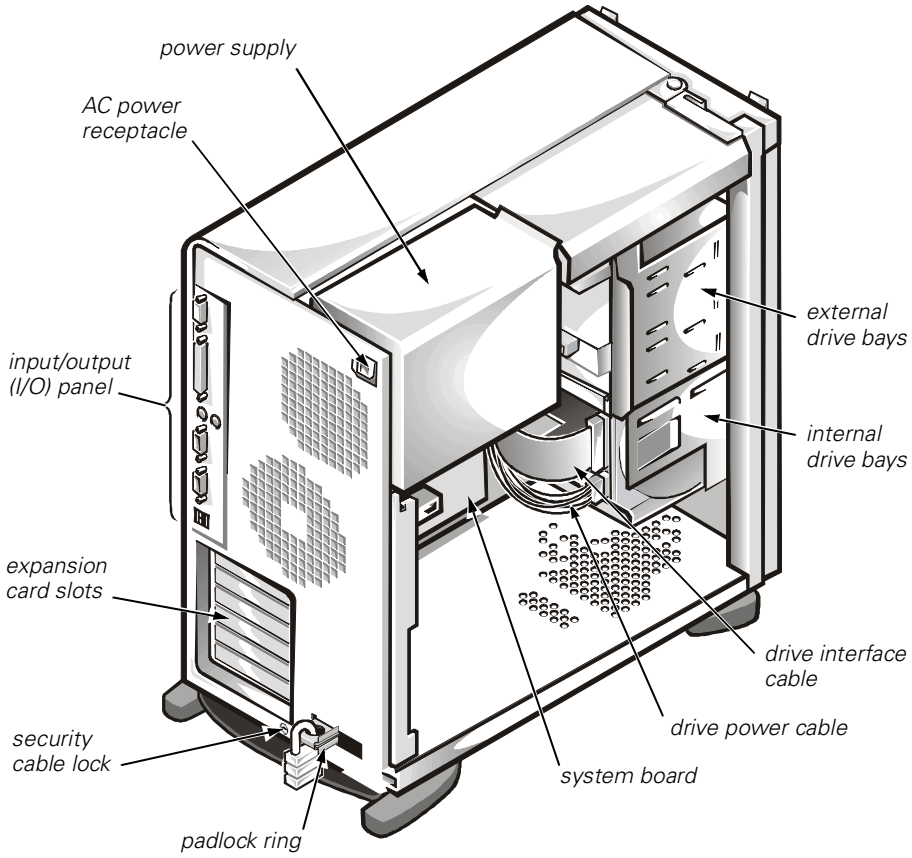

Figure 7-5. Inside the Chassis

The system board holds the computer's control circuitry and other electronic components. Some hardware options are installed directly on the system board. Drive support is as follows:

- The three 5.25-inch external drive bays provide space for up to three drives, including a 3.5-inch diskette drive (standard) and, typically, an optional CD-ROM drive and/or tape drive.
- The removable hard-disk drive cage provides space for up to three 1-inch hard-disk drives.

When you look inside the computer, note the DC power cables leading from the power supply. The power cables supply power to the system board, drives, and any expansion cards that connect to external peripherals.

The wide ribbon cables are the interface cables for internal drives. For the diskette drive, an interface cable connects each drive to an interface connector on the system board or on an expansion card. For IDE devices, interface cables connect the devices

to an IDE connector on the system board. (For more information, see Chapter 9, "Installing Drives.")

During an installation or troubleshooting procedure, you may be required to change a jumper or switch setting. For information on the system board jumpers, see Appendix B, "Jumpers, Switches, and Connectors."

Rotating the Power Supply Away From the System Board

To access some components on the system board, you may have to rotate the system power supply out of the way. Use the following procedure to rotate the power supply:

1. Remove the computer cover as instructed in "Removing the Computer Cover" earlier in this chapter.
2. Disconnect the AC power cable from the AC power receptacle on the back of the power supply (see "Rotating the Power Supply").

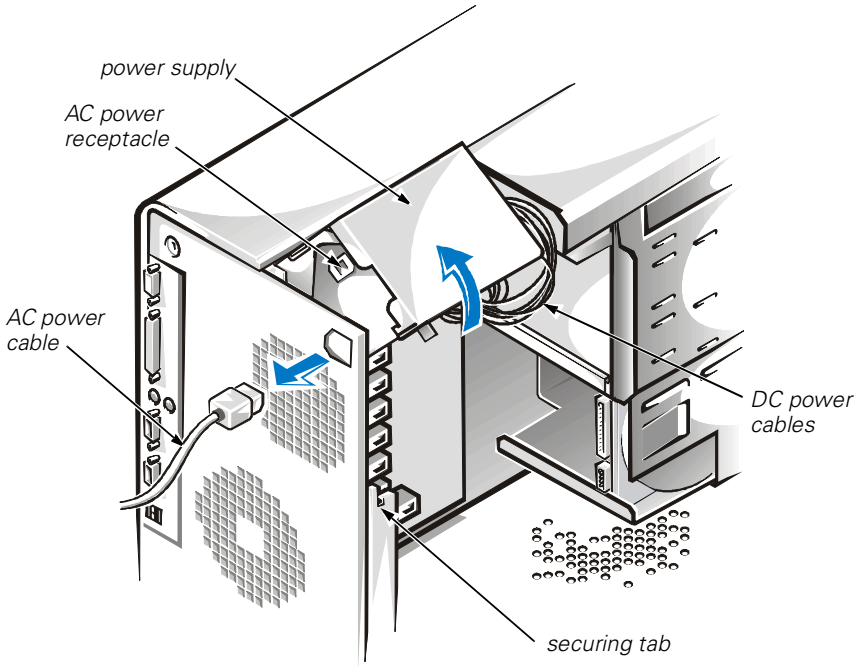

Figure 7-6. Rotating the Power Supply

3. Free the power supply by pressing the securing tab labeled "RELEASE," then rotate the power supply upward until it locks in one of its extended positions.

4. The power supply bracket has detents to hold the power supply up in one of several extended positions, which are especially useful when the chassis is standing upright.

Removing and Replacing the Front Bezel

The bezel is secured to the front of the chassis by two tabs and two hooks. The tab release for the bezel is at the top of the computer chassis and can be accessed only with the computer cover removed (see "Replacing the Computer Cover"). With the cover removed, release the bezel by pressing the tab release marked with the icon (see Figure 7-7).

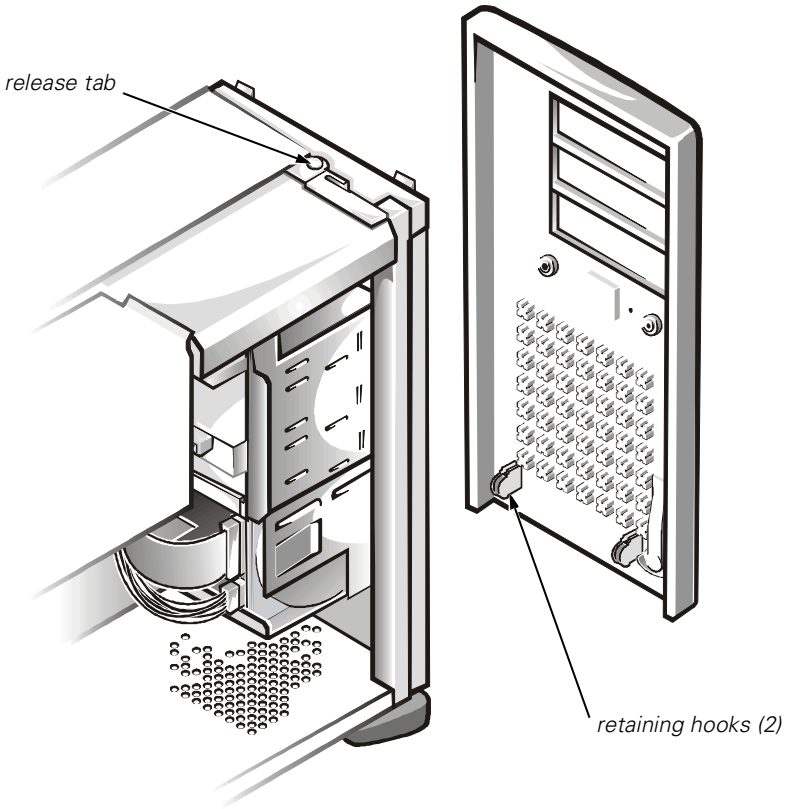

Figure 7-7. Removing the Front Bezel

While pressing the tab release, tilt the bezel away from the chassis, disengage the two retaining hooks at the bottom of the bezel, and carefully pull the bezel away from the chassis.

To replace the bezel, fit the two retaining hooks on the bezel into their corresponding slots at the bottom of the chassis. Then rotate the top of the bezel toward the chassis until the top tabs snap into their corresponding slots on the bezel.

Removing and Replacing Front-Panel Inserts

Empty 5.25-inch drive bays contain a front-panel insert to protect the inside of the computer from dust particles and also to ensure proper airflow within the computer. Before you install a drive in an empty drive bay, you must first remove the front-panel insert (see Figure 7-8).

To remove the insert covering a drive bay, follow these steps:

1. Turn off the system, including any attached peripherals, and disconnect all the AC power cables from their power sources.
2. Remove the computer cover as instructed in "Removing the Computer Cover," earlier in this chapter.
3. Remove the front bezel using the instructions in "Removing and Replacing the Front Bezel,"earlier in this chapter.
4. With your thumbs, press in on each end of the insert until the insert snaps free of the bezel.

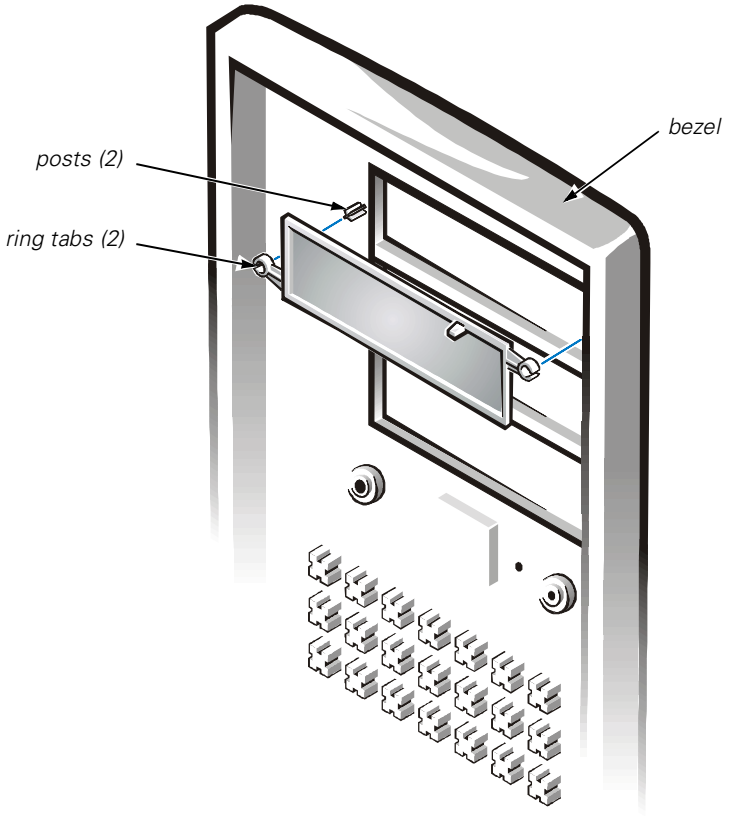

Figure 7-8. Removing a Front-Panel Insert

To replace a front-panel insert, work from inside the bezel. Insert the two ring-tabs (one on each end of the insert) over the posts on the inside of the bay opening, and firmly press both ends of the insert into place.

Responding to a Dell OpenManage Server Agent Alert Message

The optional Dell OpenManage Server Agent management application monitors critical system voltages, temperatures and the system cooling fan. It also generates alert messages that appear in the Simple Network Management Protocol (SNMP) trap log file. To see the trap log, select any enterprise under the SNMP trap log icon. More information about the **Alert Log** window and options is provided in the Dell OpenManage Server Agent documentation found on the *Dell OpenManage Server Assistant* CD.

Troubleshooting a Wet Computer

Liquid spills, splashes, and excessive humidity can cause damage to the system. If an external device (such as a printer or an external drive) gets wet, contact the device manufacturer for instructions. If the computer gets wet, complete the following steps.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

1. Turn off the system, including any attached peripherals, and disconnect the system from the electrical outlet. Remove the computer cover. See "Removing the Computer Cover," earlier in this chapter.

2. Let the computer dry for at least 24 hours.

   Make sure that it is thoroughly dry before proceeding.

3. Remove all expansion cards installed in the computer.

   See "Removing an Expansion Card," in Chapter 8.

4. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

   Does the system have power?

   Yes. Go to step 6.

   No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

5. Turn off the system, disconnect it from the electrical outlet, remove the computer cover, and reinstall all expansion cards you removed in step 4.

   See "Installing an Expansion Card," in Chapter 8.

6. Replace the computer cover, and reconnect the system to the electrical outlet.

7. Run the **System Set** test group in the Dell Diagnostics.

   See Chapter 5, "Running the Dell Diagnostics."

   Did the tests run successfully?

   Yes. The system is operating properly.

   No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

Troubleshooting a Damaged Computer

If the computer was dropped or damaged while being moved, you should check the computer to see if it functions properly. If an external device attached to the computer is dropped or damaged, contact the manufacturer of the device for information on

obtaining technical assistance from Dell. Follow these steps to troubleshoot a damaged computer:

1. Turn off the system, including any attached peripherals, and disconnect the system from its electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

2. Remove the computer cover.

   See "Removing the Computer Cover," earlier in this chapter.

3. Check all the board and card connections in the computer.

4. Verify all internal cable and component connections.

   Make sure that all cables are properly connected and that all components are properly seated in their connectors and sockets.

5. Replace the computer cover and reconnect the system to the electrical outlet.

6. Run the **System Set** test group in the Dell Diagnostics.

   See Chapter 5, "Running the Dell Diagnostics."

   Did the tests run successfully?

   Yes. The system is operating properly.

   No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

Troubleshooting the Battery

If an error message indicates a problem with the battery, or if the System Setup program loses the system configuration information when the computer is turned off, the battery may be defective.

Follow these steps to troubleshoot the battery:

1. Turn off the system, including any attached peripherals, and disconnect the system from its electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

2. Remove the computer cover.

   See "Removing the Computer Cover," found earlier in this chapter.

3. If an expansion card blocks your access to the battery, remove the expansion card.

   See "Removing an Expansion Card," in Chapter 8, for instructions.

4. Check the connection of the coin cell battery to the system board.

   Is the battery firmly installed in the battery socket on the system board?

   Yes. Go to step 6.

   No. Go to step 5.

5. Reseat the battery in its socket.

   Is the problem resolved?

   Yes. The battery was loose. You have fixed the problem.

   No. Continue with this procedure.

WARNING

There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

6. Replace the battery.

   See "Replacing the System Battery," in Chapter 8, for instructions on replacing the battery.

   Is the problem resolved?

   Yes. The battery's charge was low. You have fixed the problem.

   No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

7. Reinstall the expansion cards removed in step 3, if applicable.

8. Replace the system cover, and reconnect the system to the electrical outlet.

Troubleshooting the Power Supply

The system contains one 330-watt power supply that can be rotated up to provide access to the system board (see Figure 7-6).

Troubleshooting Power Cable Connections

Follow these steps to troubleshoot power cable connections:

1. Check the power outlet and power cable (see Chapter 2, "Checking Connections and Switches").

2. Turn off the system, including any attached peripherals, and disconnect all the power cables from the electrical outlets.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

3. Remove the computer cover. See "Replacing the Computer Cover," found earlier in this chapter.
4. Check the power cable connection to the POWER_1 connector on the system board.

Troubleshooting the Cooling Fan

If you experience trouble with the cooling fan, make sure the fan cable is plugged into the FAN connector on the system board.

Troubleshooting Expansion Cards

If an error message indicates an expansion-card problem or if an expansion card seems to perform incorrectly or not at all, the problem could be a faulty connection, a conflict with software or other hardware, or a faulty expansion card. Follow these steps to troubleshoot expansion cards:

1. Start the Resource Configuration Utility (RCU), and verify that all ISA expansion cards have been configured correctly. Save the configuration before exiting the utility.

   See "Using the Resource Configuration Utility" in the *User's Guide* for instructions.

2. Turn off the system, including any attached peripherals, and disconnect the system from the electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

3. Remove the computer cover and verify that each expansion card is firmly seated in its connector.

   See "Removing the Computer Cover," found earlier in this chapter.

   Are the expansion cards properly seated in their connectors?

   Yes. Go to step 5.

   No. Go to step 4.

4. Reseat the expansion cards in their connectors.

   See "Removing an Expansion Card" and "Installing an Expansion Card" in Chapter 8 for instructions on removing and replacing expansion cards.

   Is the problem resolved?

   Yes. The connection was loose. You have fixed the problem.

   No. Go to step 5.

5. Verify that any appropriate cables are firmly connected to their corresponding connectors on the expansion cards.

   For instructions on which cables should be attached to specific connectors on an expansion card, see the expansion card's documentation.

   Are the appropriate cables firmly attached to their connectors?

   Yes. Go to step 7.

   No. Go to step 6.

6. Reconnect the cable connectors to the appropriate connectors on the expansion cards.

   Is the problem resolved?

   Yes. The cable connections were loose. You have fixed the problem.

   No. Go to step 7.

7. If applicable, inspect all jumpers and configuration switches on each expansion card.

   Most ISA expansion cards have configuration settings for an interrupt request (IRQ) line, a direct memory access (DMA) channel, and a base memory or basic input/output system (BIOS) address. To keep expansion cards from conflicting with each other, you need to know both the starting memory address and the amount of memory required by each card.

   For instructions on jumper and configuration settings, see the expansion card's documentation.

   Is each expansion card configured correctly?

   Yes. Go to step 9.

   No. Go to step 8.

8. Reconfigure the card according to the instructions in the card's documentation.

   Is the problem resolved?

   Yes. The memory configuration of the card was incorrect. You have fixed the problem.

   No. Go to step 9.

9. Remove all expansion cards.

   See "Removing an Expansion Card" in Chapter 8 for information on removing expansion cards.

10. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

11. Enter the System Setup program, and update the system configuration information.

    See "Using the System Setup Program" in the *User's Guide* for instructions.

    For any ISA expansion cards, run the RCU and update the configuration information. See "Using the Resource Configuration Utility" in the *User's Guide* for instructions.

12. Run the RAM test group in the Dell Diagnostics.

    See Chapter 5, "Running the Dell Diagnostics."

    Did the tests run successfully?

    Yes. Go to step 13.

    No. See Chapter 10, "Getting Help," for information on obtaining technical assistance.

13. Turn off the system, including any attached peripherals, and disconnect the system from the electrical outlet.

14. Remove the computer cover, reinstall one of the expansion cards you removed in step 9, and repeat steps 10 through 12.

15. Repeat steps 13 and 14 for each of the remaining expansion cards that you removed in step 9.

    Have you reinstalled all of the expansion cards without encountering a test failure?

    Yes. You have fixed the problem.

    No. See Chapter 10, "Getting Help," for information on obtaining technical assistance.

Troubleshooting System Memory

A system memory problem can be a faulty dual in-line memory module (DIMM) or a faulty system board. If a random-access memory (RAM) error message appears, the system probably has a memory problem.

When you turn on or reboot the system, the <Caps Lock> and <Scroll Lock> indicators on the keyboard should flash momentarily and then turn off. If **Num Lock** in the System Setup program is set to **On**, the <Num Lock> indicator should flash momentarily and then remain on; otherwise, it should turn off. Abnormal operation of these indicators can result from a defective DIMM in socket DIMM_A.

Follow these steps to troubleshoot system memory:

1. Turn on the system, including any attached peripherals.

   Is there an error message indicating invalid system configuration information after the memory count is completed?

   Yes. Go to step 2.

   No. Go to step 10.

2. Enter the System Setup program and check the **System Memory** setting.

   See "Using the System Setup Program" in the *User's Guide* for instructions.

   Does the amount of memory installed match the **System Memory** setting?

   Yes. Go to step 10.

   No. Go to step 3.

3. Turn off the system, including any attached peripherals, and disconnect the power cable from the electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

4. Remove the computer cover.

   See "Removing the Computer Cover," earlier in this chapter.

5. Remove the support panel.

   Turn the two thumbscrews on the support panel and pull the tabs on the right side of the panel out of the slots in the chassis.

6. Reseat the DIMMs in their sockets.

   See "Adding Memory" for instructions on removing and replacing DIMMs.

7. Replace the support panel.

   Align the panel so that the two tabs are to the right. Fit the tabs into the two slots on the chassis back and swing the panel closed. Secure the panel with the two thumbscrews.

8. Replace the computer cover, reconnect the system to an electrical outlet, and turn on the system.

9. Enter the System Setup program and check the **System Memory** setting again.

   Does the amount of memory installed match the **System Memory** setting?

   Yes. Go to step 10.

   No. Go to step 11.

10. Reboot the system, and observe the monitor screen and the <Num Lock>, <Caps Lock>, and <Scroll Lock> indicators on the keyboard.

    Does the monitor screen remain blank, and do the <Num Lock>, <Caps Lock>, and <Scroll Lock> indicators on the keyboard remain on?

    Yes. Go to step 11.

    No. Go to step 13.

11. Repeat steps 3 and 4.

12. If possible, swap the DIMM in socket DIMM_A with one of the same capacity, reboot the system, and observe the monitor screen and the indicators on the keyboard.

    Is the problem resolved?

    Yes. You have fixed the problem.

    No. Go to step 13.

13. Run the RAM test group in the Dell Diagnostics.

    See Chapter 5, "Running the Dell Diagnostics."

    Did the tests run successfully?

    Yes. You have fixed the problem.

    No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

Troubleshooting the Video Subsystem

Troubleshooting video problems involves determining which of the following is the source of the problem: the monitor, the monitor interface cable, the video memory, or the video logic of the computer. You can also have a high-resolution video expansion card installed, which overrides the video logic of the computer.

The following procedure troubleshoots problems with the video memory and video logic only. Before you begin, perform the procedure found in "Troubleshooting the Monitor" in Chapter 6 to determine whether or not the monitor is the source of the problem.

If you have a high-resolution video expansion card, first complete the steps in "Troubleshooting Expansion Cards" in this chapter to verify that the card is configured and installed correctly.

Follow these steps to troubleshoot the video subsystem:

1. Run the **Video** test group in the Dell Diagnostics.

   See Chapter 5, "Running the Dell Diagnostics."

   Most of the tests in the **Video** test group are interactive; that is, you must respond before the diagnostics continues with the next test.

   Did the tests run successfully?

   Yes. It is not a video hardware problem. See Chapter 4, "Finding Software Solutions."

   No. Go to step 2.

2. Turn off the system, including any attached peripherals, and disconnect the power cable from the electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

3. Remove the computer cover.

   See "Removing the Computer Cover," found earlier in this chapter.

4. Determine whether a video expansion card is installed.

   Is a video expansion card installed?

   Yes. Go to step 5.

   No. The integrated video controller is faulty. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

5. Remove the video expansion card, connect the monitor interface cable to the video connector on the computer's back panel.

6. Replace the computer cover, reconnect the system to an electrical outlet, and turn on the system.

   Did the tests run successfully?

   Yes. The video expansion card is faulty. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

   No. See Chapter 10, "Getting Help," for instructions on obtaining assistance.

Troubleshooting the System Board

A system board problem can result from a defective system board component, a faulty power supply, or a defective component connected to the system board. If an error message indicates a system board problem, follow these steps to troubleshoot the problem:

1. Turn off the system, including any attached peripherals, and disconnect the system from its electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

2. Remove the computer cover.

   See "Removing the Computer Cover," found earlier in this chapter.

3. Reseat the DIMMs in their sockets.

   See "Adding Memory," in Chapter 8, for instructions on removing and replacing DIMMs.

4. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

   Is the problem resolved?

   Yes. You have fixed the problem.

   No. Go to step 5.

5. Remove all expansion cards except the SCSI host adapter card and the video expansion card (if they are installed).

6. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

7. For any ISA expansion cards, run the RCU and update the configuration information.

   See "Using the Resource Configuration Utility" in the *User's Guide* for instructions.

8. Enter the System Setup program and update the system information.

   See "Using the System Setup Program" in the *User's Guide* for instructions.

9. Run the **System Set** test group in the Dell Diagnostics.

   See Chapter 5, "Running the Dell Diagnostics."

   Did the tests run successfully?

   Yes. Go to step 10.

   No. Go to step 15.

10. Repeat steps 1 and 2.

11. Reinstall one of the expansion cards you removed in step 5, repeat steps 6 through 8, and continue with step 12.

12. Run the **System Set** test group again.

    Did the tests run successfully?

    Yes. Go to step 13.

    No. Go to step 14.

13. Repeat step 11 for each of the remaining expansion cards you removed in step 5.

    Have you reinstalled all of the expansion cards without a test failure?

    Yes. Go to step 14.

    No. One of the expansion cards is faulty. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

14. Disconnect the keyboard and reboot the system.

    Does the system boot successfully to the operating system?

    Yes. Go to step 15.

    No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

15. Swap the keyboard with a comparable working keyboard and run the **System Set** test group again.

    Did the tests run successfully?

    Yes. You have fixed the problem.

    No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

Troubleshooting the Diskette Drive Subsystem

If the monitor displays a system error message indicating a diskette drive problem during execution of either the boot routine or the Dell Diagnostics, the problem may be caused by any of the following conditions:

- The system configuration settings do not match the physical diskette subsystem configuration.
- The diskette drive cable is not properly connected or *is* faulty.
- An expansion card is interfering with proper drive operations.
- A diskette drive may be improperly configured.
- The diskette drive is faulty.
- The computer's power supply is not providing sufficient power for the drives.
- The computer's diskette drive logic is faulty.

Follow these steps to troubleshoot the diskette drive subsystem:

1. Enter the System Setup program, and verify that the system is configured correctly for the **Diskette Drive A** setting.

   See "Using the System Setup Program" in the *User's Guide* for instructions.

2. If the system configuration settings are incorrect, make the necessary corrections in the System Setup program, and then reboot the system.

3. Run the **Diskette Drives** test group in the Dell Diagnostics to see whether the diskette drive subsystem now works correctly.

   See Chapter 5 "Running the Dell Diagnostics," for more information.

   Did the tests run successfully?

   Yes. If you were in the middle of another procedure, continue with the next step in the procedure you were performing.

   No. Go to step 4.

4. Turn off the system, including any attached peripherals, and disconnect the system from its electrical outlet.

CAUTION: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

5. Remove the computer cover.

   See "Removing the Computer Cover," found earlier in this chapter.

6. Check the diskette drive cabling.

   Is the diskette drive securely connected to the diskette-drive interface cable connector?

   Is the diskette-drive interface cable securely connected to the interface connector (labeled "DISKETTE") on the system board?

   Is the drive's DC power cable firmly connected to the drive?

   Yes. Go to step 8.

   No. Go to step 7.

7. Reconnect the DC power cable connector.

8. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

9. Run the **Diskette Drives** test group in the Dell Diagnostics to determine whether the diskette drive subsystem now works correctly.

   See Chapter 5, "Running the Dell Diagnostics," for more information.

   Did the tests run successfully?

   Yes. You have fixed the problem.

   No. Go to step 10.

10. Repeat steps 4 and 5, and remove all expansion cards.

    See "Removing an Expansion Card" in Chapter 8, for instructions.

11. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

12. Run the **Diskette Drives** test group in the Dell Diagnostics to determine whether the diskette drive subsystem now works correctly.

    Did the tests run successfully?

    Yes. An expansion card may be conflicting with the diskette drive logic, or you may have a faulty expansion card. Repeat steps 1, 2, and 3.

    No. Go to step 13.

13. Repeat steps 4 and 5, and reinstall one of the expansion cards you removed in step 10.

    See "Installing an Expansion Card" in Chapter 8, for instructions.

14. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

15. Run the **Diskette Drives** test group in the Dell Diagnostics to determine whether the diskette drive subsystem now works correctly.

    Did the tests run successfully?

    Yes. Go to step 16.

    No. Go to step 17.

16. Repeat steps 13 through 15 until all expansion cards have been reinstalled or until one of the expansion cards prevents the system from booting from the diagnostics diskette.

17. Repeat steps 4 and 5. Verify that the drive's termination is enabled and that the drive-select jumper is set to the DS1 position.

    Some diskette drives may require you to remove the drive from the computer to change the drive's termination and drive-select settings.

    For information about removing and replacing diskette drives, see "Installing a Drive in a 5.25-Inch Drive Bay."

    For information about the drive's termination and drive-select settings, refer to the documentation for the drive.

    Is the drive configured correctly?

    Yes. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.

    No. Go to step 18.

18. Correct the drive-select jumper and drive termination settings.

19. Replace the computer cover, reconnect the system to the electrical outlet, and turn on the system.

20. Run the **Diskette Drives** test group in the Dell Diagnostics to see whether the diskette drive subsystem now works correctly.

    Did the tests run successfully?

    Yes. You have solved the problem.

    No. See Chapter 10, "Getting Help," for instructions on obtaining technical assistance.