CHAPTER 6
Working Inside Your Computer

Your Dell computer system supports a variety of internal options that expand system capabilities. This chapter tells you how to remove the computer cover and familiarizes you with the internal components you may handle if you install Dell hardware options. For instructions on installing internal components such as expansion cards, system board options, and tape and CD-ROM drives, see the *Installation and Troubleshooting Guide*.

Before You Begin

To make working inside your computer easier, make sure that you have adequate lighting and a clean work space. If you disconnect cables or remove expansion cards temporarily, note the location and orientation of each component 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 elsewhere in this guide.

Safety First—For You and Your Computer

While working inside the computer, do not attempt to service the computer except as explained in this guide and elsewhere in Dell documentation. Always follow the instructions closely.

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

WARNING FOR YOUR PERSONAL SAFETY AND PROTECTION OF THE EQUIPMENT

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

1. **Turn off the computer and all peripherals.**

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

3. **Disconnect the computer, peripherals, and power supplies from their electrical outlets, unless you are installing or removing a hot-pluggable component (a power supply or hard-disk drive).**

4. **While you work, periodically touch an unpainted metal surface on the computer chassis to dissipate any static electricity that might harm internal components.**

5. **Never place conductive objects such as tools, metal pens, or screws inside the system.**

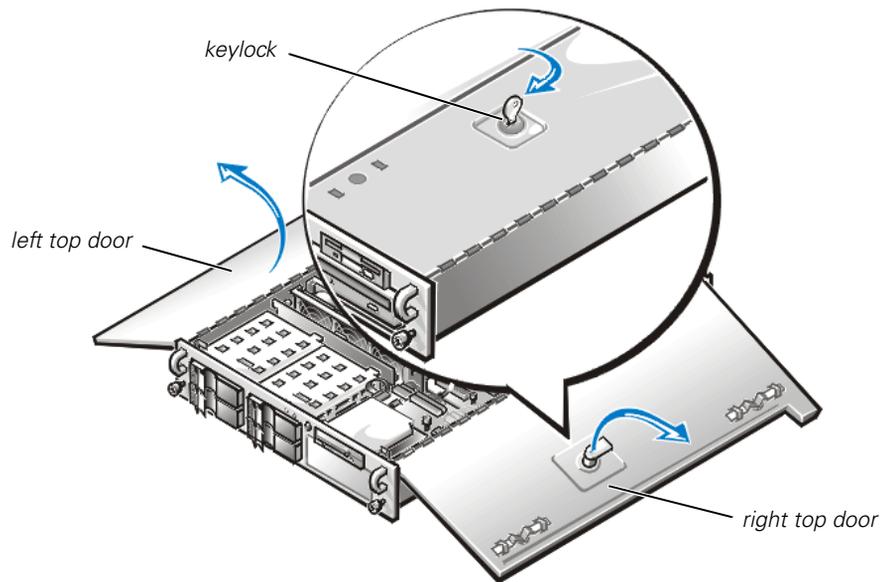In addition, Dell recommends that you periodically review the safety instructions for this system.

Removing and Replacing the Computer Cover

The computer is enclosed by an optional front bezel and a top cover. To upgrade components or troubleshoot problems inside the computer, you may need to remove the front bezel and open the lockable top covers. If your computer has an optional front bezel, you must remove the front bezel to access the hard-disk drives. Opening the top cover allows access to the system board, daughter board, small computer system interface (SCSI) backplane board, external SCSI devices, and the diskette-drive interface cable.

Opening the Computer Cover

To open the top computer cover, perform the following steps:

1. Observe the precautions in "Safety First—For You and Your Computer." Also observe the safety instructions.

2. If your system has a bezel, press the pushbuttons on each side of the bezel and and pull it away from the chassis to release the two detents on the back of the bezel.

3. Unlock the top cover lock and open the doors (see Figure 6-1).

keylock

left top door

right top door

Figure 6-1. Opening the Computer

Closing the Computer Cover

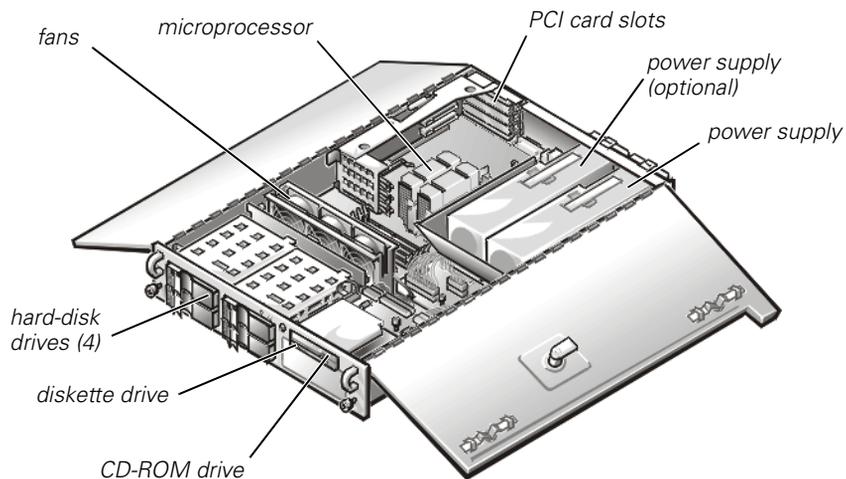To close the computer covers, perform the following steps:

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.

NOTICE: Make sure that no cables or cable connectors are lying on the top diskette drive in the upper drive cage. Foreign objects on top of the drive can interfere with drive operation and permanently damage the drive.

2. Check that no tools or parts (including screws) are left inside the computer.

3. Close the doors.

4. Set the keylock to the locked position before sliding the computer back into the rack.

Inside the Chassis

In Figure 6-2, the top cover is open to provide an interior view. Figure 6-2 also identifies the drive bays. Refer to these illustrations to locate interior features and components discussed later in this guide.

Figure 6-2. Inside the System (Top View)

Figure 6-3 shows the location of the jumpers on the system board. For more information on the function of these jumpers, see "Jumpers, Switches, and Connectors," in the *Installation and Troubleshooting Guide*.

PASSWD
ISA CLR
CARDBIOS

SPREAD

Figure 6-3. System Board Jumpers