

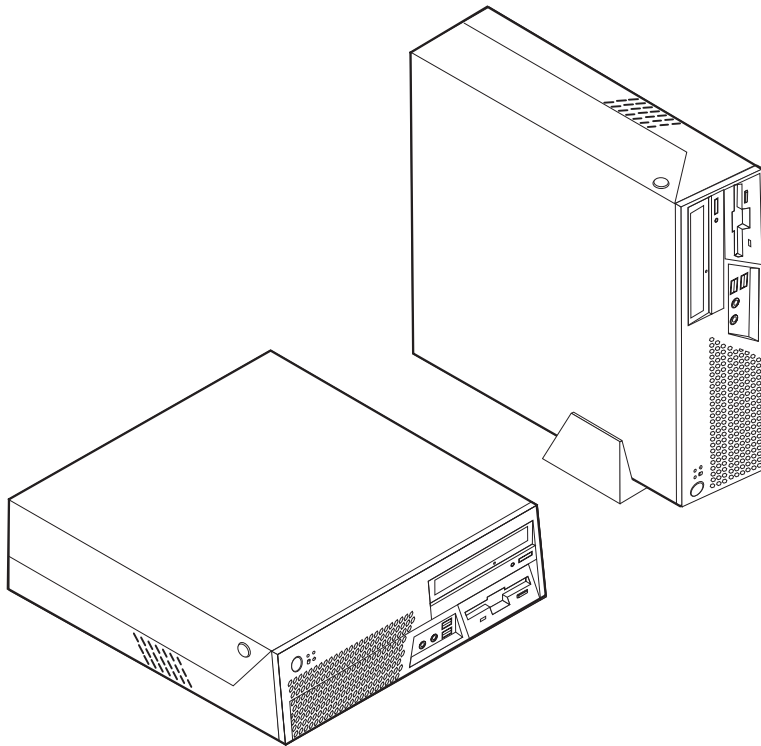
# ThinkCentre

## Hardware Replacement Guide

Types 8111, 8154, 8161, 8162

Types 8163, 8164, 8165, 8211

Types 8212, 8213, 8214





## Hardware Replacement Guide

Types 8111, 8154, 8161, 8162

Types 8163, 8164, 8165, 8211

Types 8212, 8213, 8214

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## Overview

This guide is intended to be used by customers who are replacing Customer Replaceable Units (CRUs) as well as trained service personnel who are replacing Field Replaceable Units (FRUs). In this document, CRUs and FRUs will be referred to as parts.

This guide does not include procedures for all parts. It is expected that cables, switches, and certain mechanical parts can be replaced by trained service personnel without the need for step-by-step procedures.

This guide contains instructions for replacing the following parts:

**Note:** Use only the parts provided by Lenovo™.

- Power supply
- System board
- Microprocessor
- Hard disk drive
- Diskette drive
- Optical drive
- Memory module
- PCI adapter card
- Internal speaker
- Keyboard
- Mouse

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## Safety information for replacing CRUs

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer. To obtain a copy of the *Quick Reference* go to the World Wide Web at <http://www.lenovo.com/think/support>.

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## Safety information for replacing FRUs

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain a copy of the *HMM*, go to the World Wide Web at <http://www.lenovo.com/think/support>.

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## Additional information resources

If you have Internet access, the most up-to-date information for your computer is available from the World Wide Web.

You can find the following information:

- CRU removal and installation instructions
- CRU removal and installation videos
- Publications
- Troubleshooting information

- Parts information
- Downloads and drivers
- Links to other useful sources of information
- Support phone list

To access this information, point your browser to <http://www.lenovo.com/think/support>

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## Tools required

To replace some parts in your computer, you might need a flat-blade or Phillips screwdriver.

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## Handling static-sensitive devices

Static electricity, although harmless to you, can seriously damage computer components and parts.

When replacing a part, do *not* open the static-protective package containing the new part until the defective part has been removed from the computer and you are ready to install the new part.

When you handle parts and other computer components, take these precautions to avoid static-electricity damage:

- Limit your movement. Movement can cause static electricity to build up around you.
- Always handle parts and other computer components carefully. Handle adapters, memory modules, system boards, and microprocessors by the edges. Never touch any exposed circuitry.
- Prevent others from touching the parts and other computer components.
- Before you replace a new part, touch the static-protective package containing the part to a metal expansion-slot cover or other unpainted metal surface on the computer for at least two seconds. This reduces static electricity in the package and your body.
- When possible, remove the new part from the static-protective packaging and install it directly in the computer without setting the part down. When this is not possible, place the static-protective package that the part came in on a smooth, level surface and place the part on it.
- Do not place the part on the computer cover or other metal surface.



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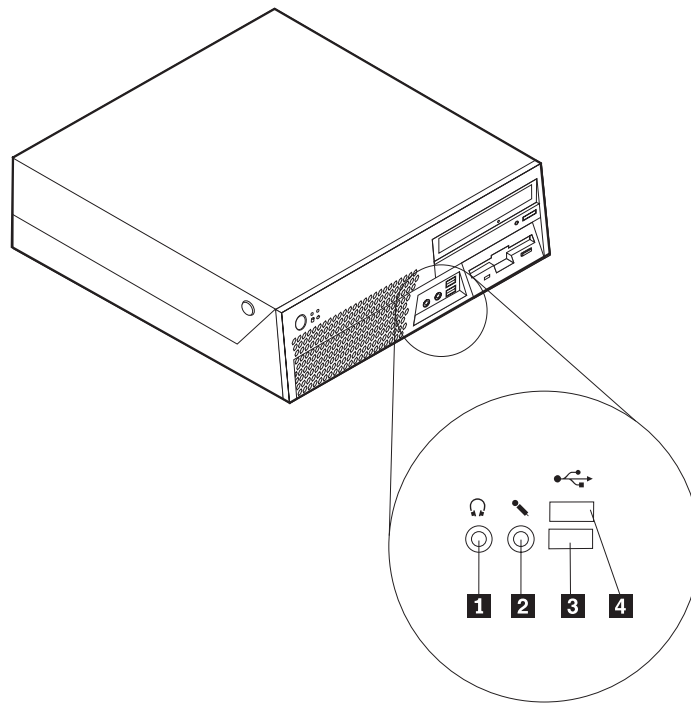
## Chapter 1. Locations

This chapter provides illustrations to help locate the various connectors, controls and components of the computer. To open the computer cover, see “Opening the cover” on page 5.

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### Locating the connectors on the front of your computer

The following illustration shows the location of connectors on the front of the computer.

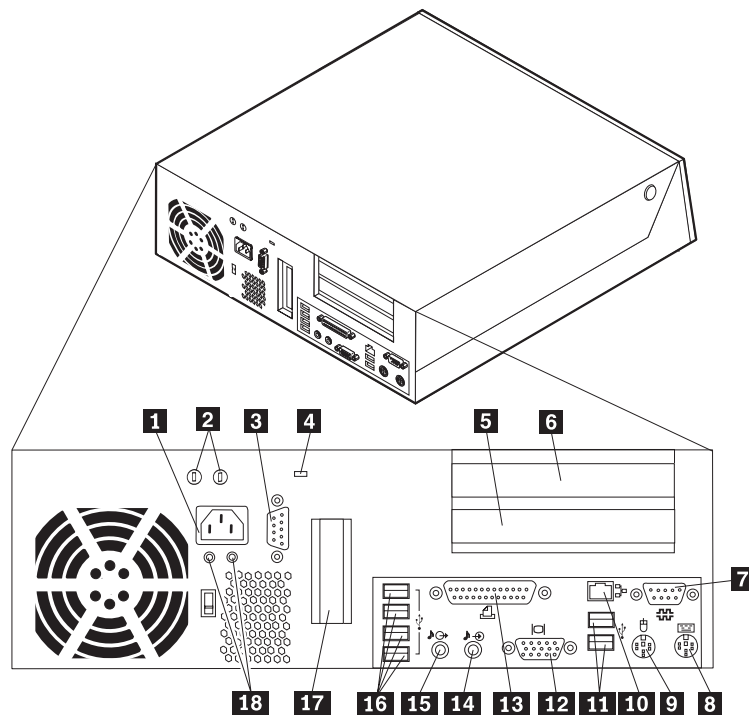


**1** Headphone connector  
**2** Microphone connector

**3** USB connector  
**4** USB connector

## Locating the connectors on the rear of your computer

The following illustration shows the location of connectors on the rear of the computer.

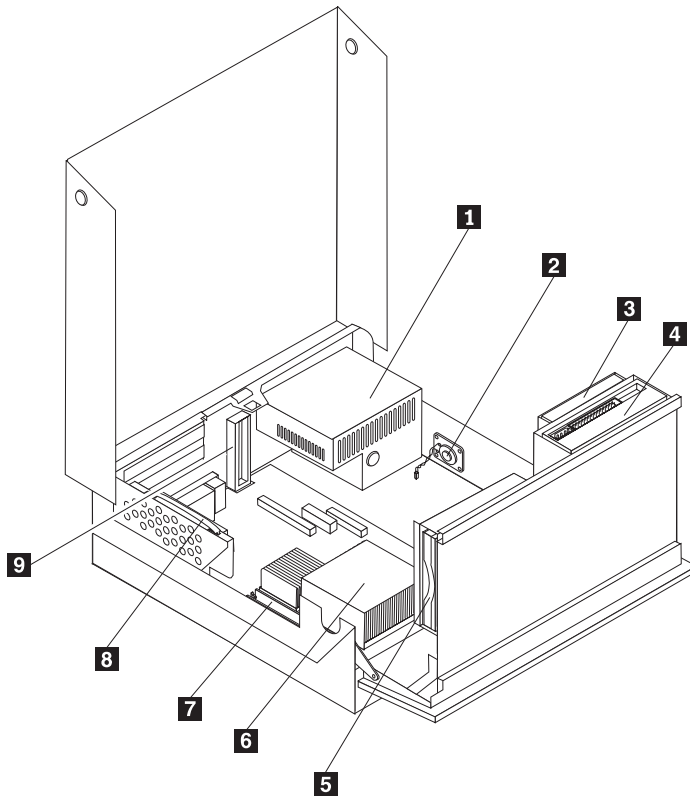


- |          |                                |           |  |
|----------|--------------------------------|-----------|--|
| <b>1</b> | Power cord connector           | <b>10</b> | Ethernet connector                                       |
| <b>2</b> | Rope clip holes                | <b>11</b> | USB connectors   |
| <b>3</b> | Serial connector (some models) | <b>12</b> | VGA monitor connector                                    |
| <b>4</b> | Cable lock latch               | <b>13</b> | Parallel connector                                       |
| <b>5</b> | PCI adapter connector          | <b>14</b> | Audio line in connector                                  |
| <b>6</b> | PCI adapter connector          | <b>15</b> | Audio line out connector                                 |
| <b>7</b> | Serial connector               | <b>16</b> | USB connectors   |
| <b>8</b> | Standard keyboard connector    | <b>17</b> | PCI Express x16 graphics adapter connector (some models) |
| <b>9</b> | Standard mouse connector       | <b>18</b> | Power supply diagnostic LEDs                             |

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## Locating components

The following illustration will help you locate the various components in your computer.

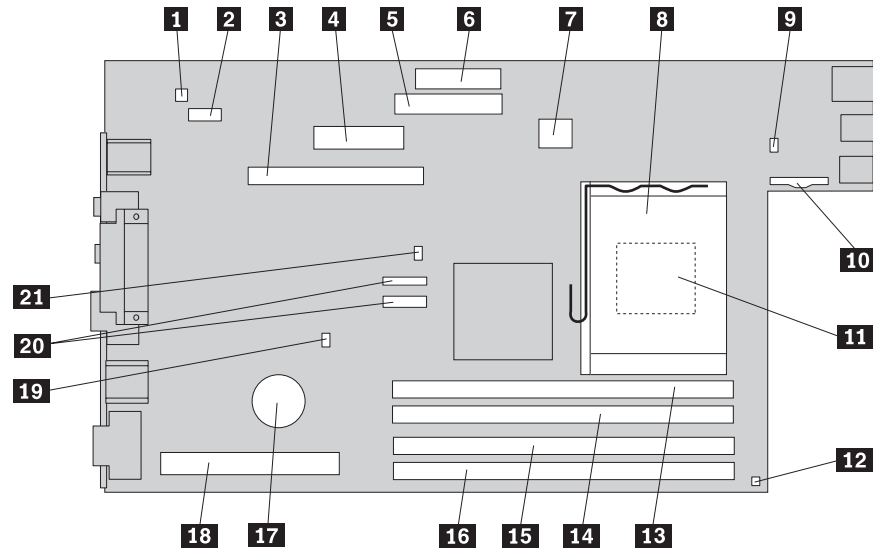


- |          |                       |          |   |
|----------|-----------------------|----------|---|
| <b>1</b> | Power supply assembly | <b>6</b> | Microprocessor and heat sink                                |
| <b>2</b> | Internal speaker      | <b>7</b> | Memory module   |
| <b>3</b> | Diskette drive        | <b>8</b> | PCI riser assembly  |
| <b>4</b> | Optical drive         | <b>9</b> | PCI Express x16 graphics adapter connector<br>(some models) |
| <b>5</b> | Hard disk drive       |          |   |

## Identifying parts on the system board

The system board (sometimes called the planar or motherboard) is the main circuit board in your computer. It provides basic computer functions and supports a variety of devices.

The following illustration shows the locations of parts on the system board.



- |           |  |           |                            |
|-----------|--|-----------|----------------------------|
| <b>1</b>  | Internal speaker connector                 | <b>12</b> | Fan connector 2            |
| <b>2</b>  | Serial connector 2 (COM2)                  | <b>13</b> | Memory connector 1         |
| <b>3</b>  | PCI Express x16 graphics adapter connector | <b>14</b> | Memory connector 2         |
| <b>4</b>  | Power connector                            | <b>15</b> | Memory connector 3         |
| <b>5</b>  | PATA primary IDE connector                 | <b>16</b> | Memory connector 4         |
| <b>6</b>  | Diskette drive connector                   | <b>17</b> | Battery                    |
| <b>7</b>  | 12v power connector                        | <b>18</b> | PCI riser connector        |
| <b>8</b>  | Microprocessor heat sink                   | <b>19</b> | Chassis intrusion switch   |
| <b>9</b>  | Fan connector 1                            | <b>20</b> | SATA connectors            |
| <b>10</b> | Front panel connector                      | <b>21</b> | Clear CMOS/Recovery jumper |
| <b>11</b> | Microprocessor                             |           |                            |

---

## Chapter 2. Replacing hardware

### Attention

Do not open your computer or attempt any repair before reading the "Important safety information" in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

**Note:** Use only the parts provided by Lenovo.

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### Opening the cover

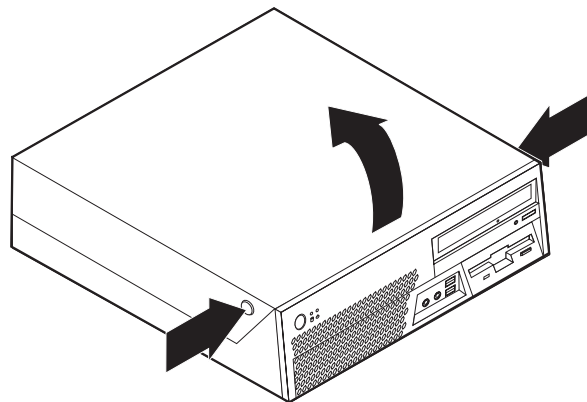
#### Important



**Turn off your computer and wait 3 to 5 minutes to let the computer cool before opening the computer cover.**

To open the computer cover:

1. Remove any media (diskettes, CDs, or tapes) from the drives, shut down your operating system, and turn off all attached devices.
2. Unplug all power cords from electrical outlets.
3. Disconnect all cables attached to the computer. This includes power cords, input/output (I/O) cables, and any other cables that are connected to the computer.
4. Remove the floor stand, if attached.
5. Remove any locking devices such as a cable lock that secure the cover.
6. Press the buttons on the sides of the computer and pivot the cover upward to open the computer as shown.



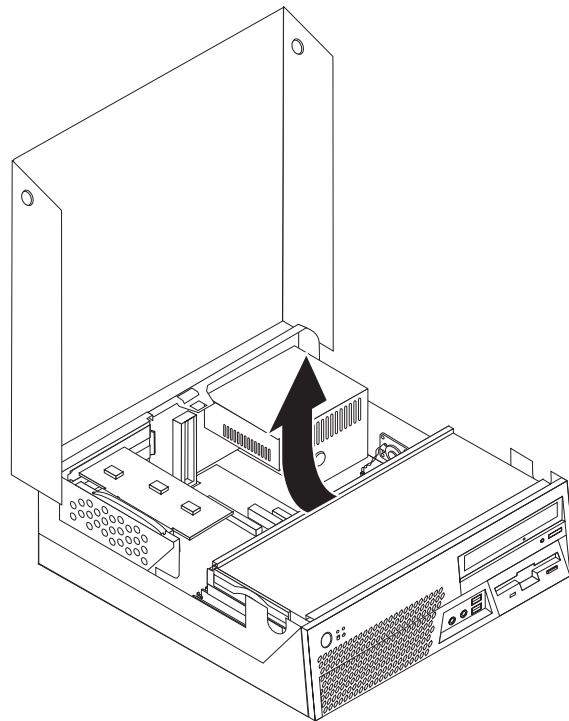
## Replacing the power supply

### Attention

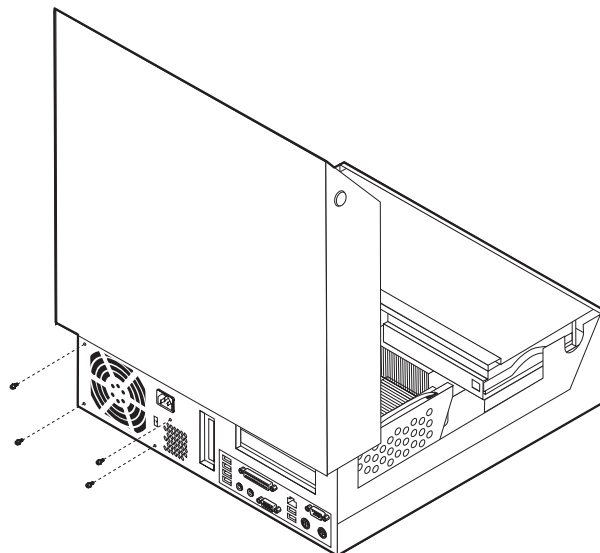
Do not open your computer or attempt any repair before reading the "Important safety information" in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

This section provides instructions on how to replace the power supply.

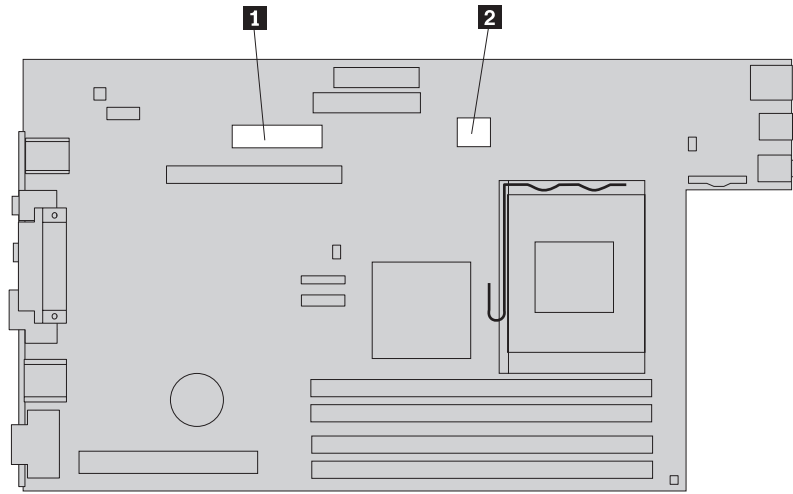
1. Open the computer cover. See "Opening the cover" on page 5.
2. Pivot the drive bay assembly upward to gain access to the power supply.



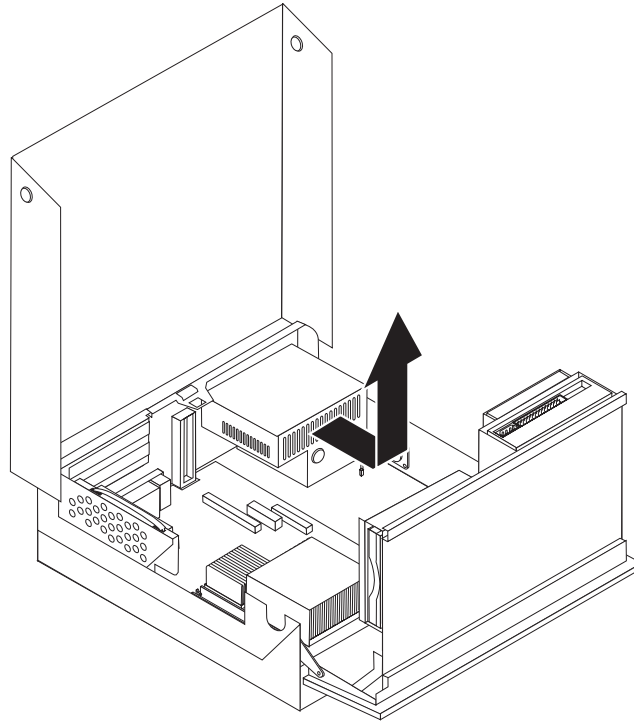
3. Remove the four screws at the rear of the chassis securing the power supply.



4. Disconnect the power supply cables from the system board connectors **1** and **2** and from all drives.



5. Remove the power supply assembly from the computer.



6. Install the new power supply assembly into the chassis so that the screw holes in the power supply assembly align with those in the chassis.

**Note:** Use only the screws provided by Lenovo.

7. Install and tighten the four screws at the rear of the chassis to secure the power supply assembly.
8. Reconnect all the power supply cables to the drives and the system board.
9. Go to “Completing the parts replacement” on page 30.

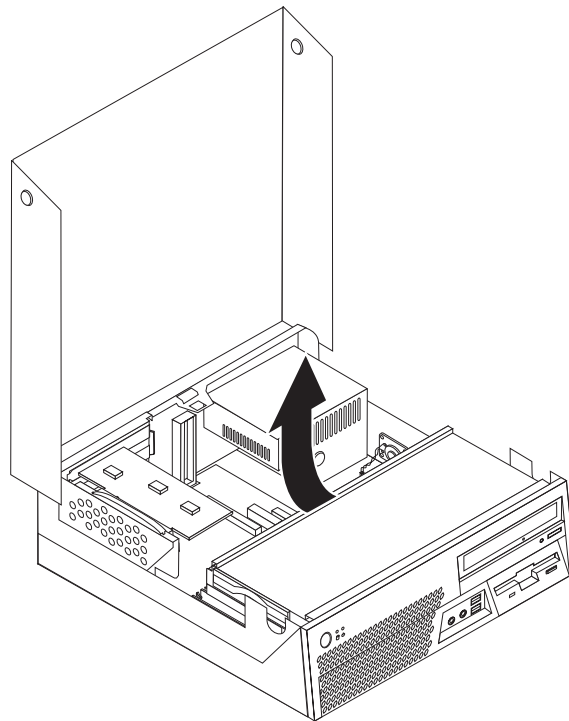
## Replacing the system board

### Attention

Do not open your computer or attempt any repair before reading the "Important safety information" in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

This section provides instructions on how to replace the system board.

1. Open the computer cover. See "Opening the cover" on page 5.
2. Pivot the drive bay assembly upward to gain access to the system board.

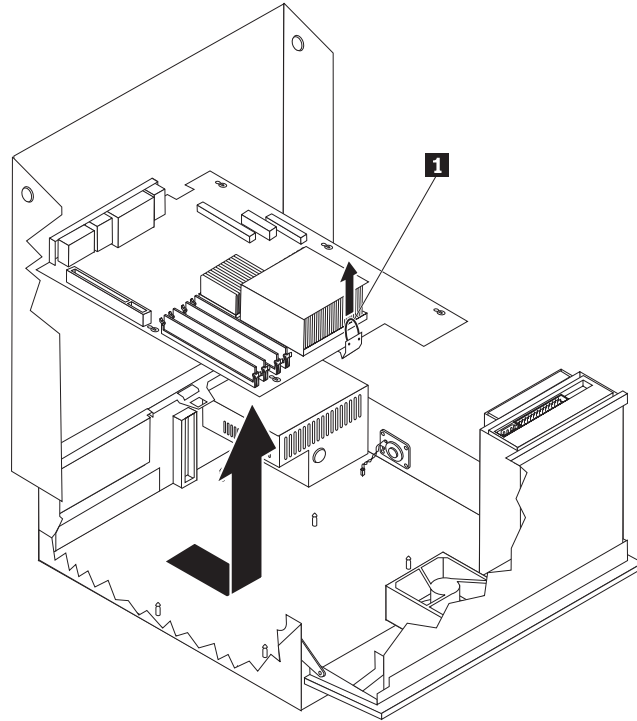


3. Remove the PCI riser. See "Replacing a PCI adapter" on page 25.
4. Carefully take note of the location of all cable connections on the system board. It will be necessary to reconnect them properly when installing a new system board.
5. Disconnect all cables connected to the system board. See "Identifying parts on the system board" on page 4.



6. Pull upward on the blue handle **1** to release the system board from the front latch, slide the system board toward the drive bay assembly, and then carefully lift the system board out of the chassis.

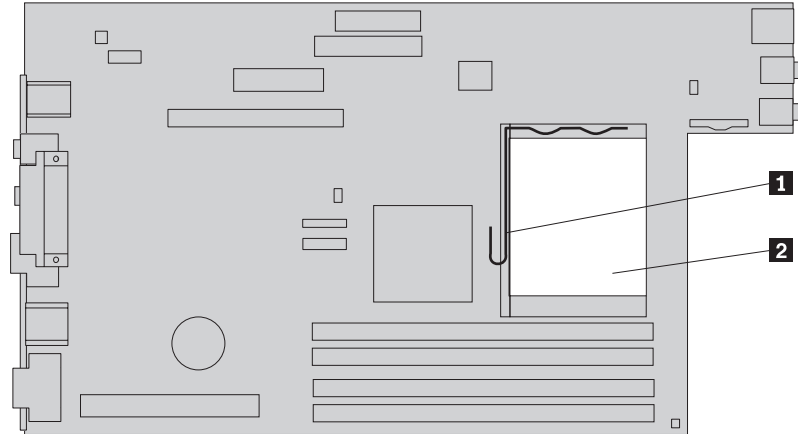
**Note:** You might have to tilt the front end of the system board between the diskette drive and the fan assembly to remove it completely from the chassis.



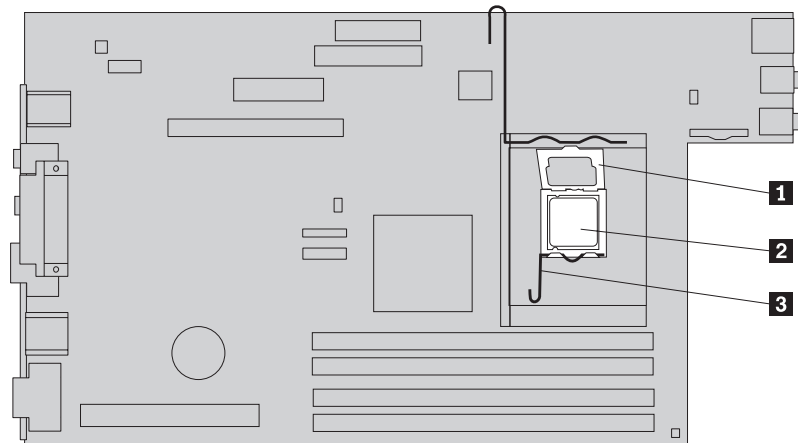
7. Place the failing system board next to the new system board on a clean, flat surface.
8. Remove all memory modules from the failing system board and install them in the same connectors on the new system board. See “Replacing a memory module” on page 23. Return here after installing the memory modules on the new system board.

- Remove the heat sink **2** from the failing system board by pivoting the lever **1** securing the heat sink until it is fully in the up position. Carefully lift the heat sink off of the failing system board.

**Note:** Place the heat sink on its side on a clean, flat surface so the thermal interface on the bottom of the heat sink does not touch the surface and become contaminated.

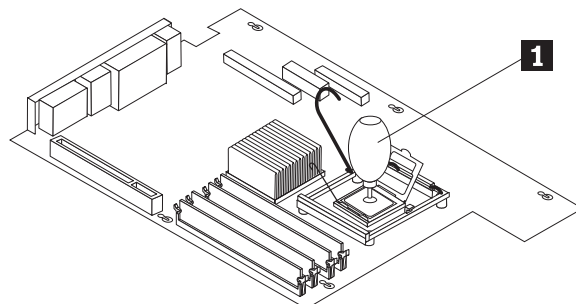


- To remove the microprocessor from the failing system board, release the lever **3** securing the microprocessor **2** then pivot the microprocessor retainer **1** until it is fully open.



- Use the vacuum pen **1** to remove the microprocessor from the system board socket by lifting it out of the socket.

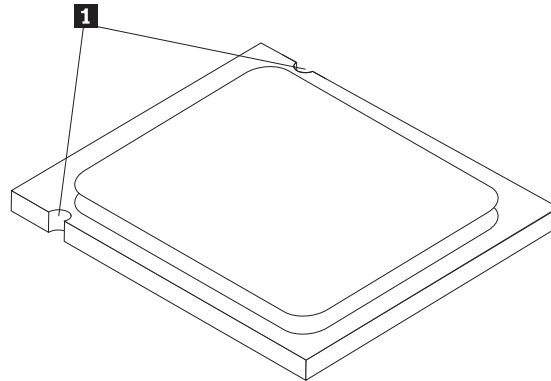
**Note:** When you are replacing a failing microprocessor, you will receive a vacuum pen with the new microprocessor.



**Important**

Do not touch the gold contacts on the bottom of the microprocessor. If you must touch the microprocessor, touch only the sides.

- a. Take notice of the orientation of the notches **1** on the microprocessor. This is important when installing the microprocessor on the new system board.

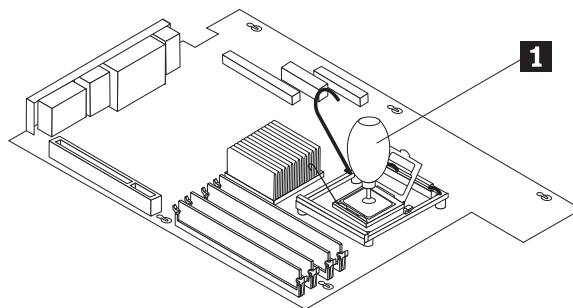


- b. Do not drop anything on the socket while it is open. Keep all contacts as clean as possible.
12. On the new system board, release the lever securing the microprocessor retainer and then pivot the retainer until it is fully open.
13. Position the microprocessor so that the notches on the microprocessor are aligned with the tabs in the microprocessor socket.

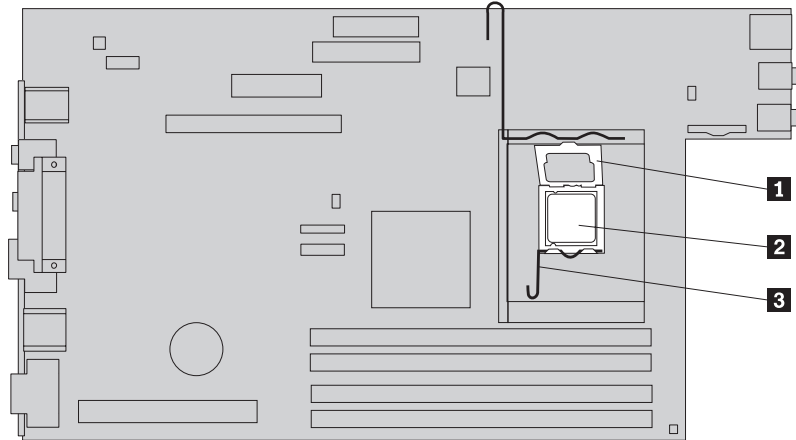
**Important**

To avoid damaging the microprocessor contacts, do not tilt the microprocessor when installing it into the socket.

14. Use the vacuum pen **1** to lower the microprocessor straight down into the system board socket of the new system board.

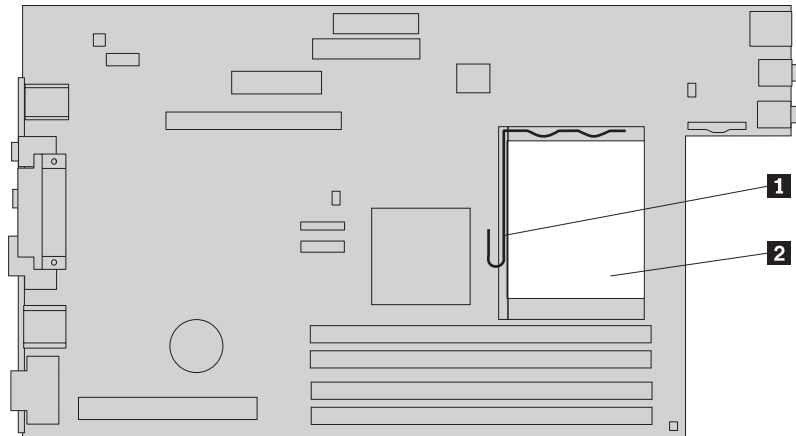


15. Lower the microprocessor retainer **1** and then lower the lever **3** to secure the retainer. Make sure the lever is securely locked into position.



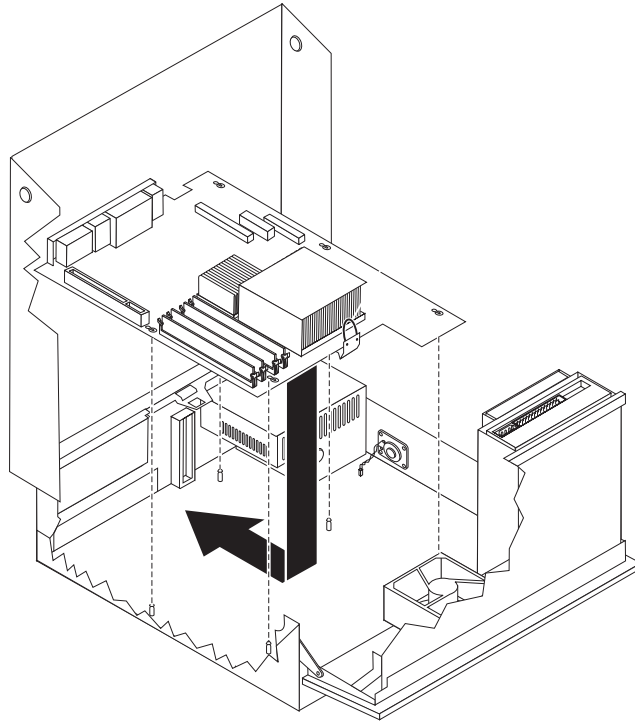
**Note:** There will be a black plastic cover on the microprocessor retainer to protect the socket on the new system board. When you lock the microprocessor in position, remove the black plastic cover. Place the black plastic cover on the microprocessor retainer of the failing system board.

16. Place the heat sink **2** into position and lower the lever **1** to secure the heat sink.



17. To install the new system board into the chassis, tilt the front end of the system board between the diskette drive and the fan assembly, and position it so that the slots in the new system board are aligned with the pins on the chassis.

- Slide the system board toward the rear of the computer until the front latch snaps into position.



- Reconnect all cables that were disconnected from the system board. See “Identifying parts on the system board” on page 4.
- Reinstall the PCI riser that was removed. See “Replacing a PCI adapter” on page 25.
- Go to “Completing the parts replacement” on page 30.

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## Replacing the microprocessor

### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

### Important

When you receive a new microprocessor, you also receive a new heat sink and vacuum pen. You must use the new heat sink with the new microprocessor. If you use the old heat sink with the new microprocessor, your computer might over heat and could cause intermittent problems.

### Important

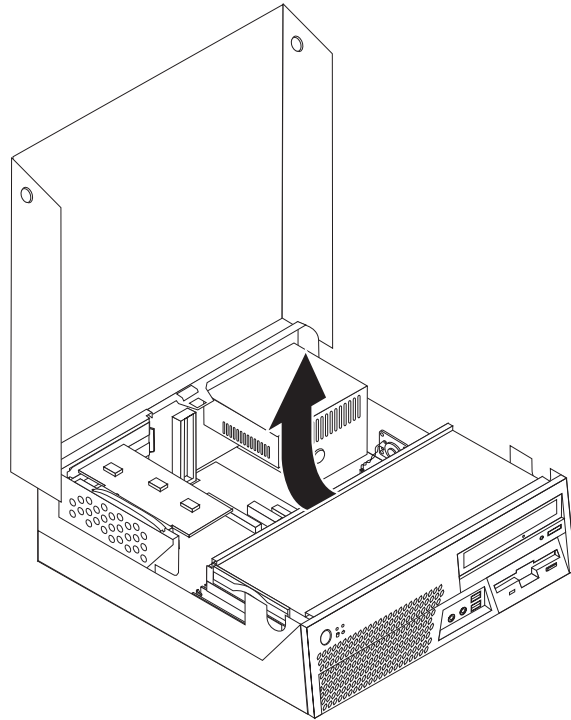
Do not touch the gold contacts on the bottom of the microprocessor. Use the vacuum pen provided to remove and install the microprocessor. If you must touch the microprocessor, touch only the sides.

This section provides instructions on how to replace the microprocessor.

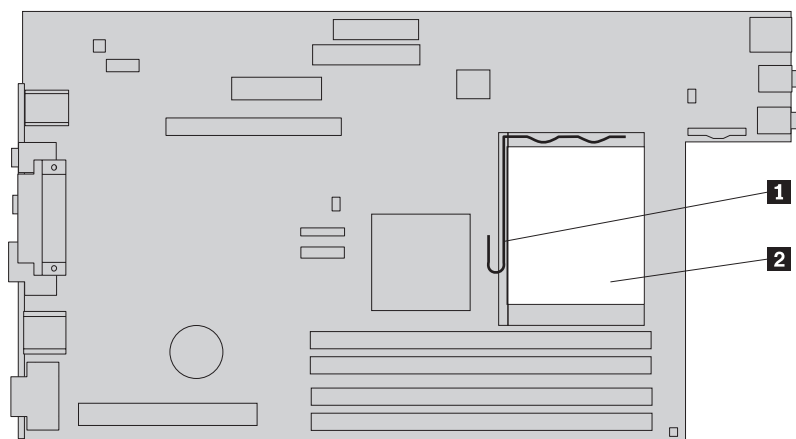
**Important**

Leave your computer turned off for at least one hour before removing the microprocessor to allow the thermal interface between the microprocessor and the heat sink time to cool down.

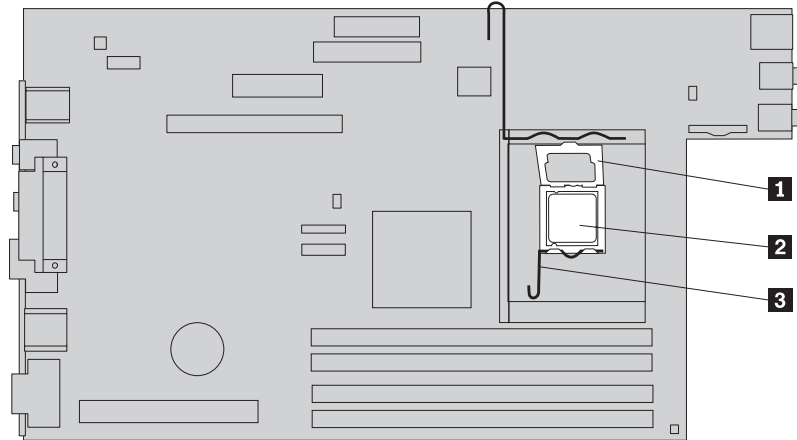
1. Open the computer cover. See “Opening the cover” on page 5.
2. Pivot the drive bay assembly upward to gain access to the system board.



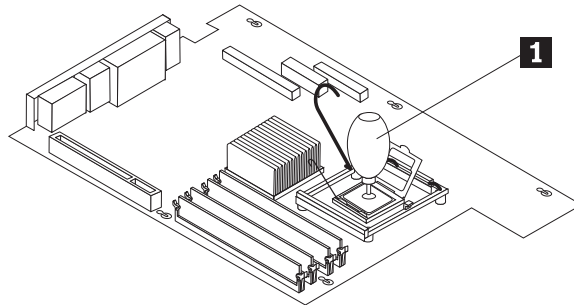
3. Remove the heat sink **2** from the system board by pivoting the lever **1** securing the heat sink until it is fully in the up position. Carefully lift the heat sink off of the system board.



4. Release the lever **3** securing the microprocessor **2** then pivot the microprocessor retainer **1** until it is fully open.



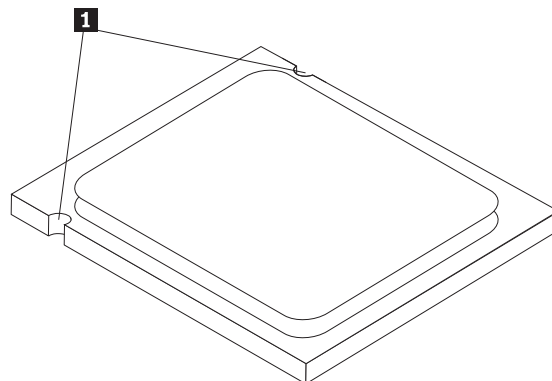
5. Use the vacuum pen **1** to remove the microprocessor from the system board socket by lifting it out of the socket.



**Important**

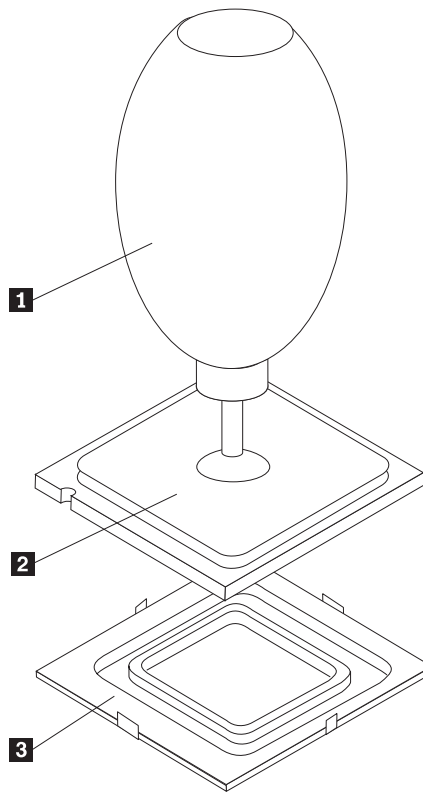
Do not touch the gold contacts on the bottom of the microprocessor. If you must touch the microprocessor, touch only the sides.

- a. Take notice of the orientation of the notches **1** on the microprocessor. This is important when reinstalling the microprocessor on the system board.



- b. Do not drop anything on the socket while it is open. Keep all contacts as clean as possible.
6. Make sure that the lever on the microprocessor retainer is fully open.

7. Loosen the black cover **3** that protects the gold contacts on the microprocessor **2**, but do not remove it. Use the vacuum pen **1** to pick up the new microprocessor then completely remove the black cover. Place the black cover on the old microprocessor.

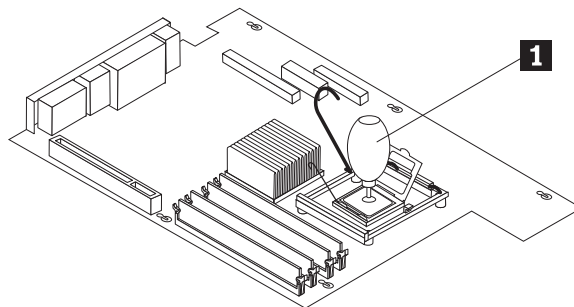


8. Position the microprocessor so that the notches on the microprocessor are aligned with the tabs in the microprocessor socket.

**Important**

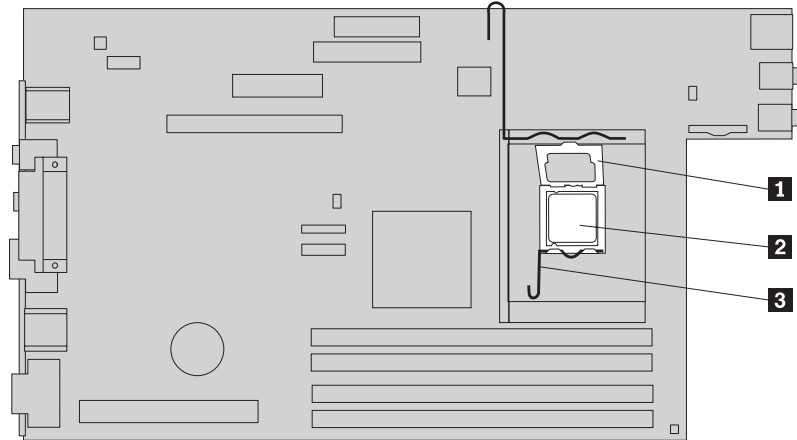
To avoid damaging the microprocessor contacts, do not tilt the microprocessor when installing it into the socket.

9. Use the vacuum pen **1** to lower the microprocessor straight down into the system board socket.

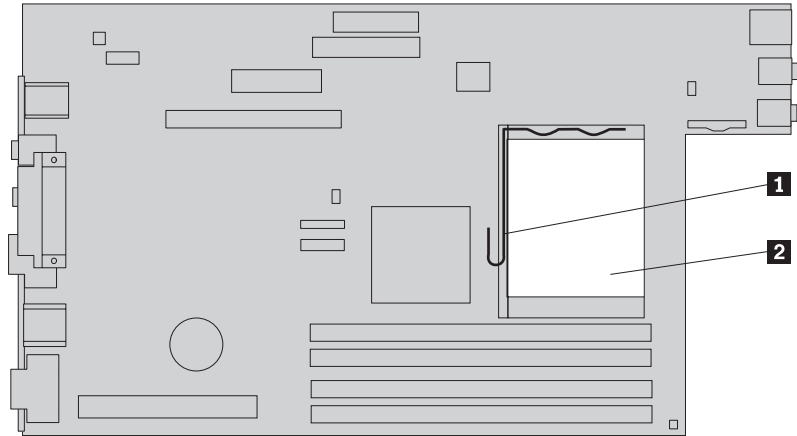




10. Lower the microprocessor retainer **1** and then lower the lever **3** to secure the retainer. Make sure the lever is securely locked into position.



11. Place the **new** heat sink **2** into position and lower the lever **1** to secure the heat sink.



12. Go to “Completing the parts replacement” on page 30.

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## Replacing the hard disk drive

### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

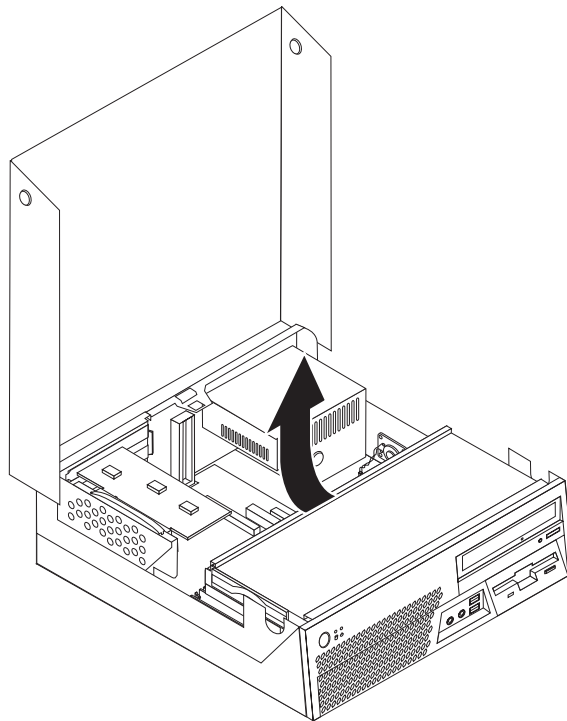
This section provides instructions on how to replace the hard disk drive.

**Important**

When you receive a new hard disk drive, you also receive a set of *Product Recovery CDs*. The set of *Product Recovery CDs* will enable you to restore the contents of the hard disk to the same state as when your computer was originally shipped from the factory. For more information on recovering factory-installed software, refer to “Recovering software” in your *Quick Reference*.

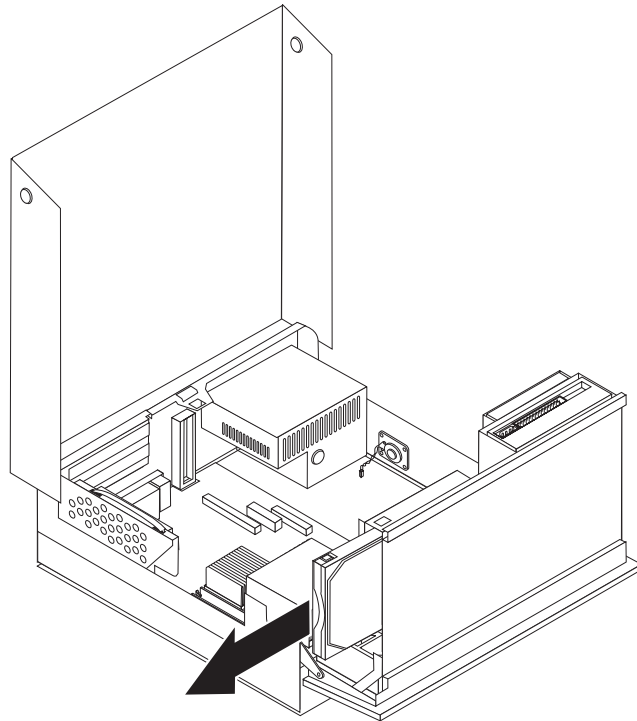
To replace a hard disk drive, do the following:

1. Open the computer cover. See “Opening the cover” on page 5.
2. Pivot the drive bay assembly upward to gain access to the hard disk drive.



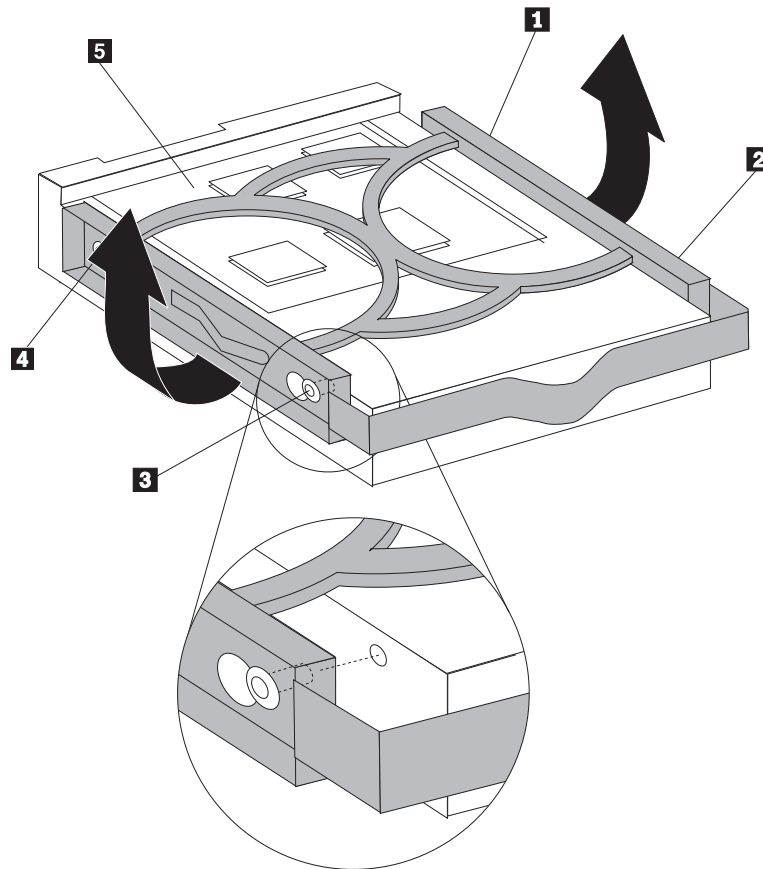
3. Pull the blue handle to slide the failing hard disk drive out the side of the drive bay far enough to disconnect the signal and power cables from the rear of the hard disk drive.

4. Completely remove the hard disk drive from the drive bay.



5. Remove the failing hard disk drive from the blue bracket by flexing the bracket enough to slide the drive out.

6. To install the new hard disk drive into the blue bracket, flex the bracket and align the pins **1** through **4** on the bracket with the holes in the hard disk drive. Do not touch the circuit board **5** on the bottom of the hard disk drive.



7. Insert the new hard disk drive into the drive bay far enough to connect the signal and power cables to the rear of the new hard disk drive.
8. Completely slide the new hard disk drive into the drive bay until the drive locks into position.
9. Go to "Completing the parts replacement" on page 30.

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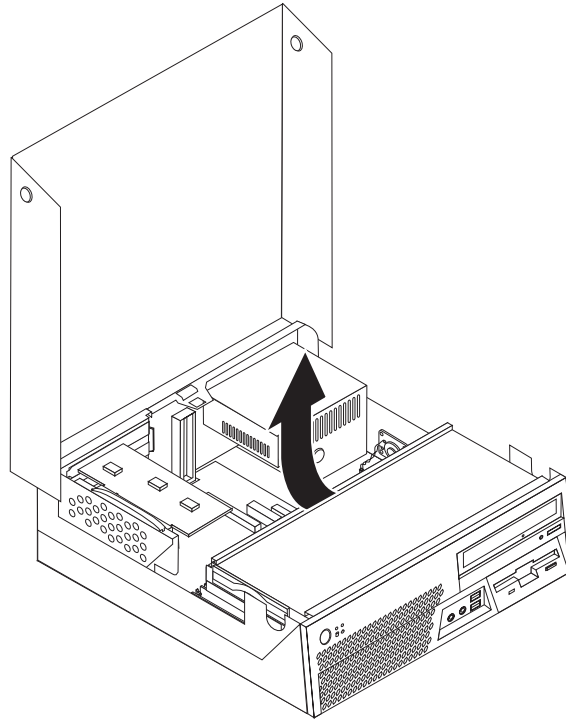
## Replacing the diskette drive

### Attention

Do not open your computer or attempt any repair before reading the "Important safety information" in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

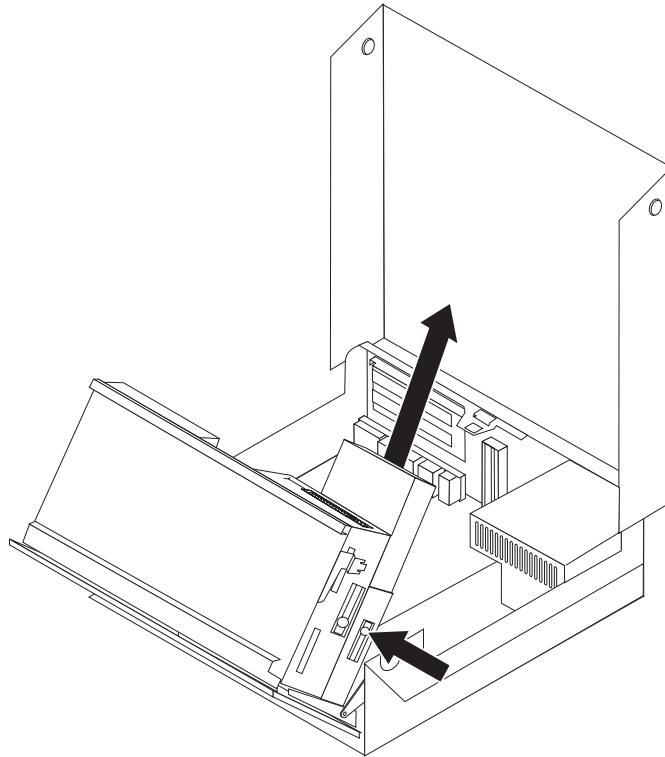
This section provides instructions on how to replace the diskette drive.

1. Open the computer cover. See “Opening the cover” on page 5.
2. Pivot the drive bay assembly upward to gain access to the diskette drive cables.

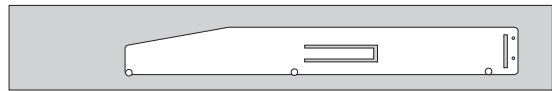


3. Disconnect the signal and power cables from the rear of the diskette drive.
4. Release the diskette drive by pressing inward on the blue retainer at the side of the drive.

5. Remove the diskette drive by sliding the drive out the rear of the drive bay.



6. Remove the retainer bracket from the failing diskette drive and install it on the new diskette drive.



7. Install the new diskette drive into the bay from the rear until the drive snaps into position.
8. Connect the signal and power cables to the new diskette drive.
9. Go to “Completing the parts replacement” on page 30.

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## Replacing the optical drive

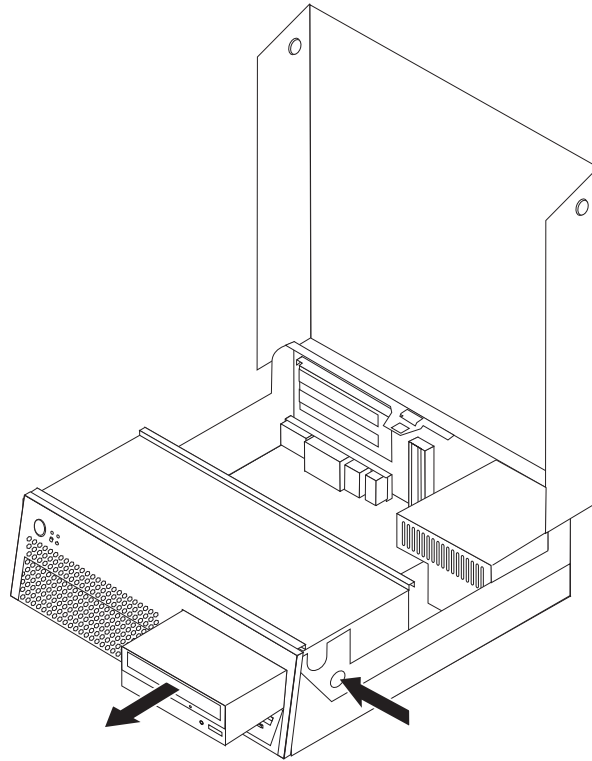
### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

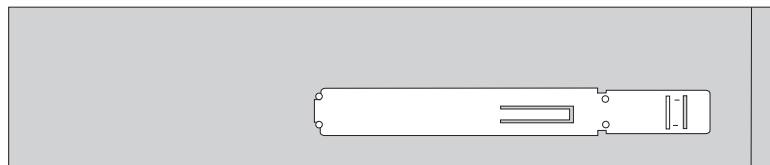
This section provides instructions on how to replace an optical drive.

1. Open the computer cover. See “Opening the cover” on page 5.
2. Disconnect the signal and power cables from the rear of the optical drive.
3. Release the optical drive by pressing inward on the blue retainer at the side of the chassis.

4. Remove the optical drive by sliding it out the front of the drive bay.



5. Make sure the drive that you are installing is set correctly as either a master or a slave device.  
Refer to the documentation that comes with your drive for master/slave jumper information.
6. Remove the retainer bracket from the failing optical drive and install it on the new optical drive.



7. Install the new optical drive into the bay until the drive locks into position.
8. Connect the signal and power cables to the new optical drive.
9. Go to “Completing the parts replacement” on page 30.

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## Replacing a memory module

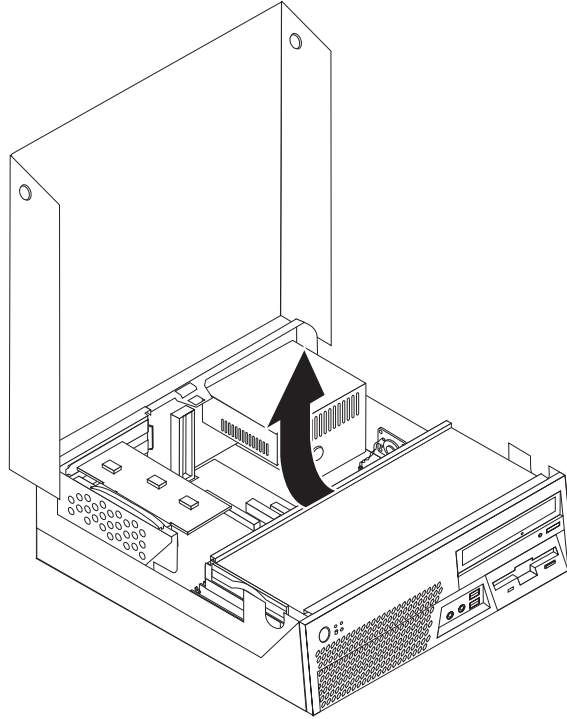
### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

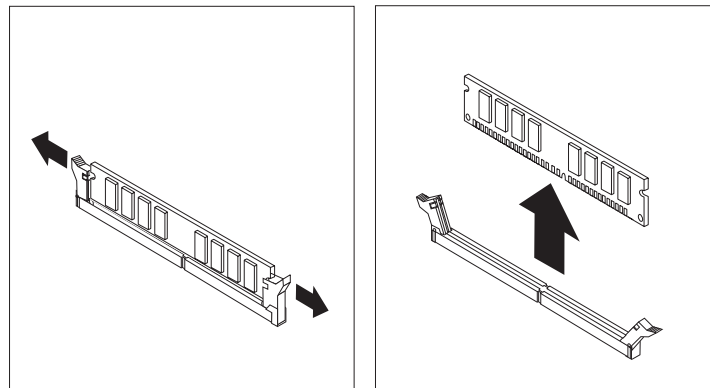
This section provides instructions on how to replace a memory module.

**Note:** Your computer has support for four memory modules.

1. Open the computer cover. See “Opening the cover” on page 5.
2. Pivot the drive bay assembly upward to gain access to the system board.

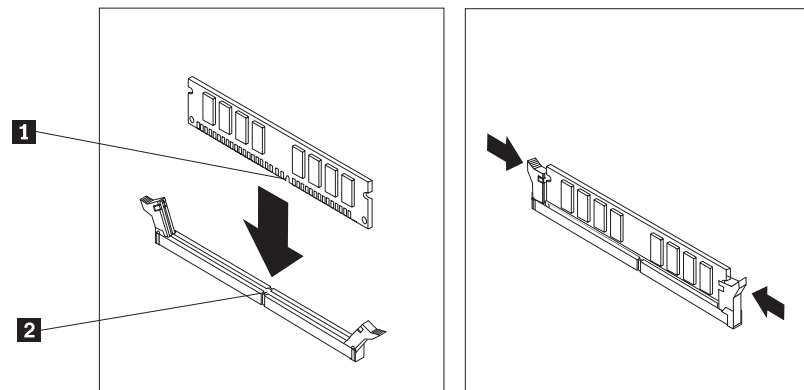


3. Remove any parts that might prevent access to the memory connectors.
4. Remove the PCI riser. See “Replacing a PCI adapter” on page 25.
5. Remove the memory module being replaced by opening the retaining clips as shown.





- Position the replacement memory module over the memory connector. Make sure that the notch **1** on the memory module aligns correctly with the connector key **2** on the system board. Push the memory module straight down into the memory connector until the retaining clips close.



- Go to “Completing the parts replacement” on page 30.

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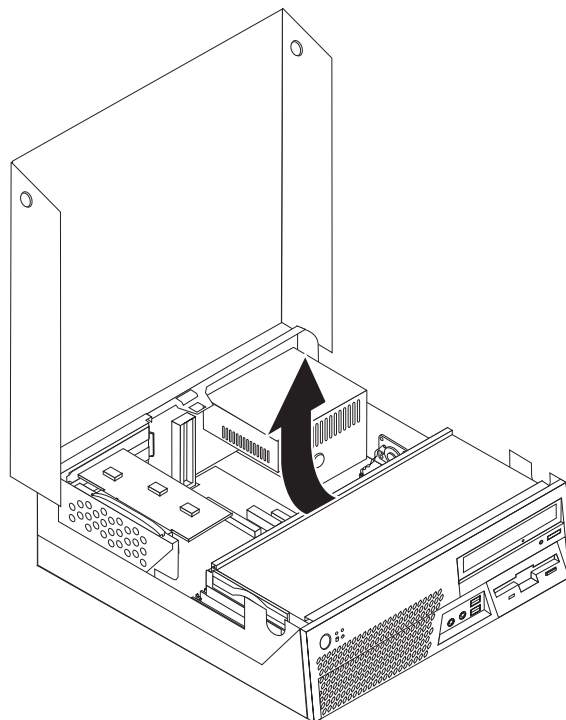
## Replacing a PCI adapter

### Attention

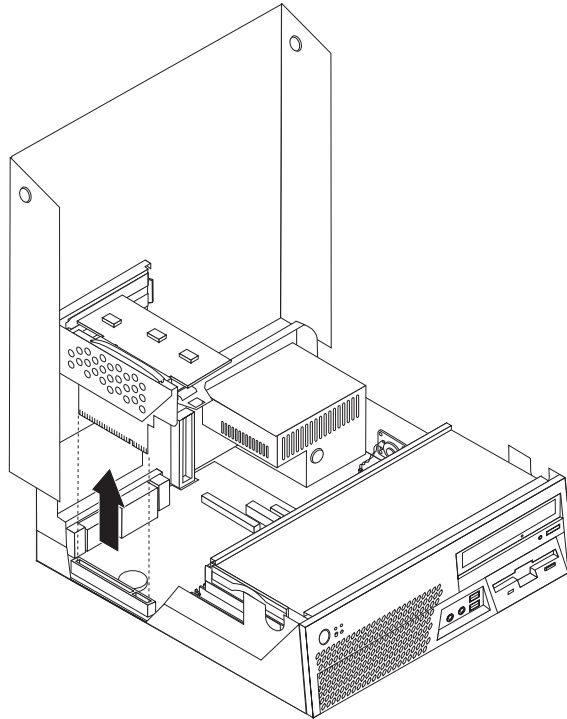
Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

This section provides instructions on how to replace a PCI adapter.

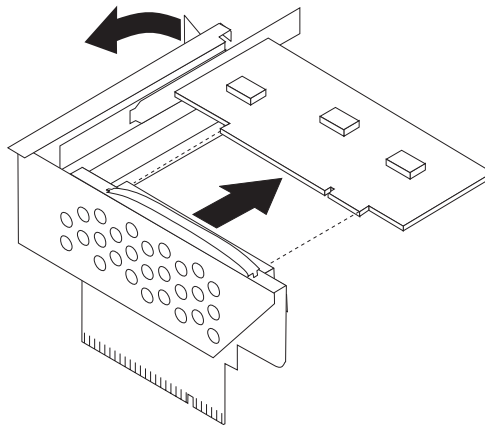
- Open the computer cover. See “Opening the cover” on page 5.
- Pivot the drive bay assembly upward to gain access to the system board.



3. Pull upward on the blue handle to remove the PCI riser from the computer.

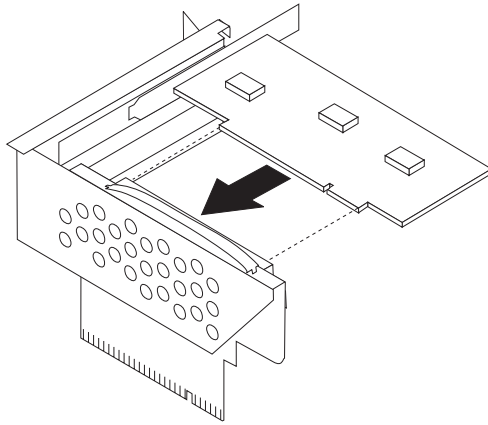


4. Open the adapter latch and remove the failing adapter.



5. Remove the new adapter from its static-protective package.

6. Install the new adapter into the expansion connector in the PCI riser.



7. Close the adapter latch to retain the adapter.
8. Reinstall the PCI riser into the system board.
9. Go to “Completing the parts replacement” on page 30.

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## Replacing the internal speaker

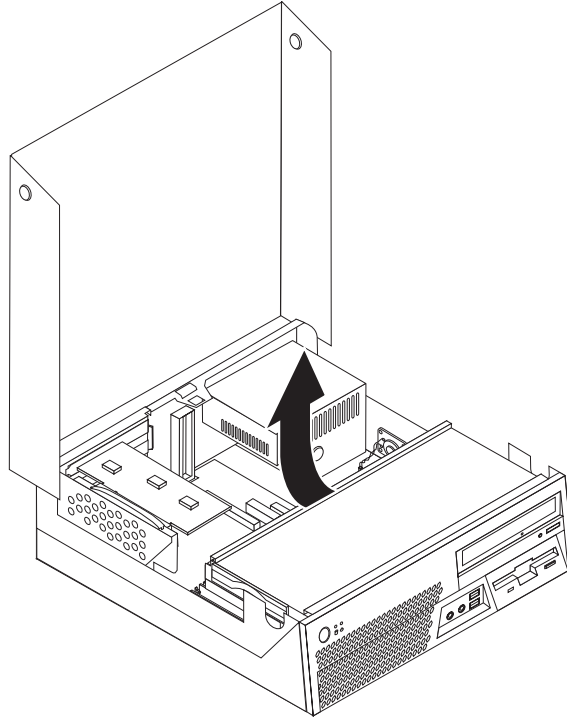
### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual (HMM)* for the computer. To obtain copies of the *Quick Reference* or *HMM*, go to <http://www.lenovo.com/think/support>.

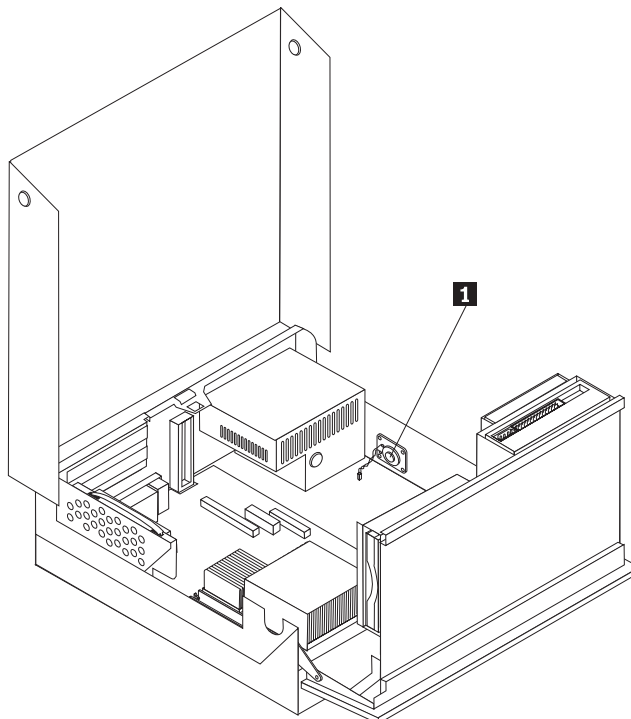
This section provides instructions on how to replace the internal speaker.

1. Open the computer cover. See “Opening the cover” on page 5.

2. Pivot the drive bay assembly upward to gain access to the internal speaker connector.



3. Locate the internal speaker connector on the system board. See “Identifying parts on the system board” on page 4.
4. Disconnect the internal speaker cable from the system board.
5. Slide the internal speaker **1** upward until the speaker is released from the metal tabs that secure it at the bottom. Then pivot the bottom of the internal speaker outward and remove the speaker from the chassis.



6. Position the bottom of the new internal speaker into the metal tabs and then pivot the top of the internal speaker inward until the speaker snaps into position.
7. Connect the internal speaker cable to the system board. See “Identifying parts on the system board” on page 4.
8. Go to “Completing the parts replacement” on page 30.

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## Replacing a keyboard

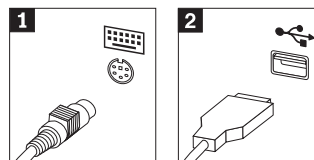
### Attention

Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual* (HMM) for the computer. To obtain copies of the *Quick Reference* or HMM, go to <http://www.lenovo.com/think/support>.

This section provides instructions on how to replace a keyboard.

1. Remove any media (diskettes, CDs, or tapes) from the drives, shut down your operating system, and turn off all attached devices.
2. Unplug all power cords from electrical outlets.
3. Locate the keyboard connector.

**Note:** Your keyboard might be connected to a standard keyboard connector **1** or a USB connector **2**. Depending on where your keyboard is connected, see “Locating the connectors on the rear of your computer” on page 2 or “Locating the connectors on the front of your computer” on page 1.



4. Disconnect the failing keyboard cable from the computer.
5. Connect the new keyboard to the appropriate connector on the computer.
6. Go to “Completing the parts replacement” on page 30.

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## Replacing a mouse

### Attention

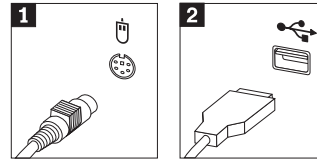
Do not open your computer or attempt any repair before reading the “Important safety information” in the *Quick Reference* that was included with your computer or in the *Hardware Maintenance Manual* (HMM) for the computer. To obtain copies of the *Quick Reference* or HMM, go to <http://www.lenovo.com/think/support>.

This section provides instructions on how to replace a mouse.

1. Remove any media (diskettes, CDs, or tapes) from the drives, shut down your operating system, and turn off all attached devices.
2. Unplug all power cords from electrical outlets.

3. Locate the mouse connector.

**Note:** Your mouse might be connected to a standard mouse connector **1** or a USB connector **2** in the front or rear of your computer. See “Locating the connectors on the rear of your computer” on page 2 or “Locating the connectors on the front of your computer” on page 1.



4. Disconnect the failing mouse cable from the computer.
5. Connect the new mouse to the appropriate connector on the computer.
6. Go to “Completing the parts replacement.”

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## Completing the parts replacement

After working with parts, you need to replace the computer cover and reconnect any cables, including telephone lines and power cords. Also, depending on the part that was replaced, you might need to confirm the updated information in the Setup Utility program.

1. Ensure that all components have been reassembled correctly and that no tools or loose screws are left inside your computer.
2. Reposition any cables that might impede the replacement of the cover.
3. Lower the drive bay assembly and close the computer cover.
4. Install any locking devices such as a cable lock as necessary.
5. Reconnect the external cables and power cords to the computer. See “Locating the connectors on the rear of your computer” on page 2.
6. If your computer is being placed in the vertical position, attach the floor stand.
7. If you are replacing the system board or microprocessor, you must update (flash) the BIOS, see “Updating (flashing) BIOS from a diskette or CD-ROM.”
8. To update the configuration, see “Starting the Setup Utility” in the *Quick Reference* that was included with your computer.

**Note:** In most areas of the world, Lenovo requires the return of the defective CRU. Information about this will come with the CRU or will come a few days after the CRU arrives.

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## Updating (flashing) BIOS from a diskette or CD-ROM

### Important

Start the Setup Utility program to view your system information. See “Starting the Setup Utility” in your *Quick Reference*. If the serial number and the machine type/model listed on the Main menu do not match what is printed on the label of your computer, you must update (flash) the BIOS to change the serial number and the machine type/model.

To update (flash) the BIOS from a diskette or CD-ROM, do the following:

1. Insert a system program update (flash) diskette or CD-ROM into the diskette drive or optical drive. System program updates are available at <http://www.lenovo.com/think/support> on the World Wide Web.
2. Turn on the computer. If it is on already, you must turn it off and back on again. The update begins.
3. When you are prompted to select a language, press the number on your keyboard that corresponds to the language and then press Enter.
4. When prompted to change the serial number, press Y.
5. Type in the seven character serial number of your computer and then press Enter.
6. When prompted to change the machine type/model, press Y.
7. Type in the seven character machine type/model of your computer and then press Enter.
8. Follow the instructions on the screen to complete the update.





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## Appendix. Notices

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