Drives
User Guide

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Product notice

This user guide describes features that are common to most models. Some features may not be available on your computer.

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1 Handling drives

Drives are fragile computer components that must be handled with care. Refer to the following cautions before handling drives. Additional cautions are included with the procedures to which they apply.

△ **CAUTION:** To reduce the risk of damage to the computer, damage to a drive, or loss of information, observe these precautions:

Before you move a computer that is connected to an external hard drive, initiate Suspend and allow the screen to clear, or properly disconnect the external hard drive.

Before handling a drive, discharge static electricity by touching the unpainted metal surface of the drive.

Do not touch the connector pins on a removable drive or on the computer.

Handle a drive carefully; do not drop a drive or place items on it.

Before removing or inserting a drive, shut down the computer. If you are unsure whether the computer is off, in Suspend, or in Hibernation, turn the computer on, and then shut it down through the operating system.

Do not use excessive force when inserting a drive into a drive bay.

Do not type on the keyboard or move the computer while the optical drive (select models only) is writing to a disc. The write process is sensitive to vibration.

When the battery is the only source of power, be sure that the battery is sufficiently charged before writing to media.

Avoid exposing a drive to temperature or humidity extremes.

Avoid exposing a drive to liquids. Do not spray the drive with cleaning products.

Remove media from a drive before removing the drive from the drive bay, or traveling with, shipping, or storing a drive.

If a drive must be mailed, place the drive in a bubble-pack mailer or other suitable protective packaging and label the package “FRAGILE.”

Avoid exposing a drive to magnetic fields. Security devices with magnetic fields include airport walk-through devices and security wands. The airport security devices that check carry-on luggage, such as conveyor belts, use X-rays instead of magnetism and will not damage a drive.

2 Using an optical drive

Your computer includes an optical drive that expands the functionality of the computer. Identify what kind of device is installed in your computer to see its capabilities. The optical drive allows you to read data discs, play music, and watch movies. If your computer includes a Blu-ray Disc, also known as BD, drive, then you can also watch high-definition video from disc.

Identifying the installed optical drive

▲ To view the drives installed on the computer, select **Computer**.

Look under **Status** for a list of installed drives.

You will see a list of all the devices installed on your computer, including your optical drive. You may have one of the following types of drives:

- DVD-ROM Drive
- DVD+/-RW SuperMulti Double-Layer LightScribe Drive
- Blu-ray ROM DVD+/-RW SuperMulti Double-Layer LightScribe Drive

NOTE: Some of the drives listed above may not be supported by your computer.

Using optical discs

An optical drive, such as a DVD-ROM drive, supports optical discs (CDs and DVDs). These discs store information, such as music, photos, and movies. DVDs have a higher storage capacity than CDs.

Your optical drive can read standard CD and DVD discs. If your optical drive is a Blu-ray Disc ROM drive, it can also read Blu-ray discs (BDs).

NOTE: Some of the optical drives listed may not be supported by your computer. The listed drives are not necessarily all of the supported optical drives.

Some optical drives can also write to optical discs as described in the following table.

Optical drive type	Write to CD-RW	Write to DVD±RW/R	Write to DVD±RW DL	Write label to LightScribe CD or DVD ±RW/R
DVD+/-RW SuperMulti Double-Layer LightScribe Drive*†	Yes	Yes	Yes	Yes
Blu-ray ROM DVD+/-RW SuperMulti Double-Layer LightScribe Drive*†	Yes	Yes	Yes	Yes

*Double-layer discs can store more data than single-layer discs. However, double-layer discs burned with this drive may not be compatible with many single-layer DVD drivers and players.

†LightScribe discs must be purchased separately. LightScribe creates a grayscale image similar to black-and-white photography.

△ **CAUTION:** To prevent possible audio and video degradation, loss of information, or loss of audio or video playback functionality, do not initiate Suspend or Hibernation while reading a CD, DVD, or BD, or writing to a CD or DVD.

Selecting the right disc (CDs, DVDs, and BDs)

An optical drive supports optical discs (CDs, DVDs, and BDs). CDs, used to store digital data, are also used for commercial audio recordings and are convenient for your personal storage needs. DVDs and BDs are used primarily for movies, software, and data backup purposes. DVDs and BDs are the same form factor as CDs but have a much higher storage capacity.

NOTE: The optical drive on your computer may not support all the types of optical discs discussed in this section.

CD-R discs

Use CD-R (write-once) discs to create permanent archives and to share files with virtually anyone. Typical uses include the following:

- Distributing large presentations
- Sharing scanned and digital photos, video clips, and written data
- Making your own music CDs
- Keeping permanent archives of computer files and scanned home records
- Offloading files from your hard drive to free up disk space

After data is recorded, it cannot be erased or written over.

CD-RW discs

Use a CD-RW disc (a rewritable version of a CD) to store large projects that must be updated frequently. Typical uses include the following:

- Developing and maintaining large documents and project files
- Transporting work files
- Making weekly backups of hard drive files
- Updating photos, video, audio, and data continuously

DVD±R discs

Use blank DVD±R discs to permanently store large amounts of information. After data is recorded, it cannot be erased or written over.

DVD±RW discs

Use DVD±RW discs if you want to be able to erase or write over data that you saved earlier. This type of disc is ideal for testing audio or video recordings before you burn them to a CD or DVD that cannot be changed.

LightScribe DVD+R discs

Use LightScribe DVD+R discs for sharing and storing data, home videos, and photos. These discs are read-compatible with most DVD-ROM drives and DVD video players. With a LightScribe-enabled drive and LightScribe software, you can write data to the disc and then add a designer label to the outside of the disc.

Blu-ray Discs (BD)

BD is a high-density optical disc format for the storage of digital information, including high-definition video. A single-layer Blu-ray Disc can store 25 GB, over 5 times the storage capacity of a single-layer DVD at 4.7 GB. A dual-layer Blu-ray Disc can store 50 GB, almost 6 times the storage capacity of a dual-layer DVD at 8.5 GB.

Typical uses include the following:

- Storage of large amounts of data
- High-definition video playback and storage
- Video games

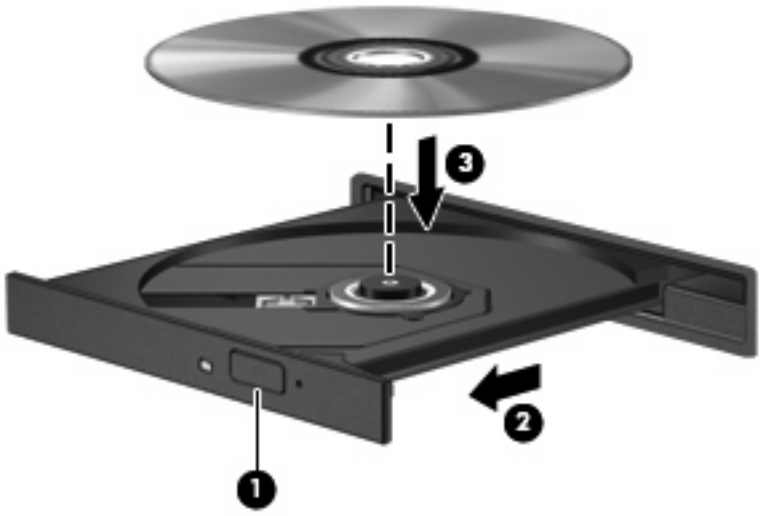
NOTE: As Blu-ray is a new format containing new technologies, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed.

Playing a CD, DVD, or BD

1. Turn on the computer.
2. Press the release button **(1)** on the drive bezel to release the disc tray.
3. Pull out the tray **(2)**.
4. Hold the disc by the edges to avoid touching the flat surfaces and position the disc label-side up over the tray spindle.

   NOTE: If the tray is not fully accessible, tilt the disc carefully to position it over the spindle.

5. Gently press the disc **(3)** down onto the tray spindle until the disc snaps into place.



6. Close the disc tray.

NOTE: For best results, be sure that your AC adapter is plugged into an external power source while playing a BD.

Observing the copyright warning

It is a criminal offense, under applicable copyright laws, to make unauthorized copies of copyright-protected material, including computer programs, films, broadcasts, and sound recordings. Do not use this computer for such purposes.

△ **CAUTION:** To prevent loss of information or damage to a disc, observe the following guidelines:

Before writing to a disc, connect the computer to a reliable external power source. Do not write to a disc while the computer is running on battery power.

Before writing to a disc, close all open programs except the disc software you are using.

Do not copy directly from a source disc to a destination disc or from a network drive to a destination disc. Save the information to your hard drive, and then burn from your hard drive to the destination disc.

Do not use the computer keyboard or move the computer while the computer is writing to a disc. The write process is sensitive to vibration.

NOTE: For details about using software included with the computer, refer to the software manufacturer's instructions, which may be provided on disc, in the software Help, or on the manufacturer's Web site.

Copying or creating a CD or DVD

1. Select **Computer > More Applications**, and access Brasero.
2. In the left pane, click **Disc copy**.
3. Insert the disc you want to copy into the optical drive.
4. Follow on-screen instructions to copy or create a CD or DVD.

Removing a CD, DVD, or BD

1. Press the release button **(1)** on the drive bezel to release the disc tray, and then gently pull out the tray **(2)** until it stops.
2. Remove the disc **(3)** from the tray by gently pressing down on the spindle while lifting the outer edges of the disc. Hold the disc by the edges and avoid touching the flat surfaces.

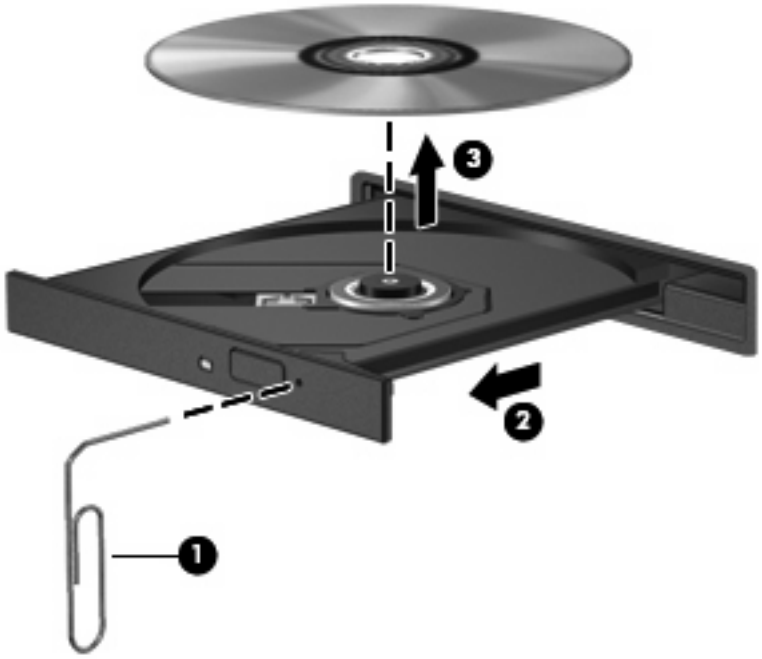
NOTE: If the tray is not fully accessible, tilt the disc carefully as you remove it.

3. Close the disc tray and place the disc in a protective case.

The optical disc tray does not open for removal of a CD, DVD, or BD

1. Insert the end of a paper clip **(1)** into the release access in the front bezel of the drive.
2. Press in gently on the paper clip until the tray is released, and then pull out the tray **(2)** until it stops.
3. Remove the disc **(3)** from the tray by gently pressing down on the spindle while lifting the outer edges of the disc. Hold the disc by the edges and avoid touching the flat surfaces.

NOTE: If the tray is not fully accessible, tilt the disc carefully as you remove it.



4. Close the disc tray and place the disc in a protective case.

3 Using external drives

Removable external drives expand your options for storing and accessing information. A USB drive can be added by connecting the drive to a USB port on the computer or on an optional docking device (select models only).

USB drives include the following types:

- 1.44-megabyte diskette drive
- Hard drive module (a hard drive with an adapter attached)
- DVD-ROM Drive
- DVD+/-RW SuperMulti Double-Layer LightScribe Drive
- Blu-ray ROM DVD+/-RW SuperMulti Double-Layer LightScribe Drive

Using optional external devices

NOTE: For more information about required software and drivers, or to learn which computer port to use, refer to the manufacturer's instructions.

To connect an external device to the computer:

CAUTION: To reduce the risk of damage to the equipment when connecting a powered drive, be sure that the AC power cord is unplugged.

1. Connect the device to the computer.
2. If you are connecting a powered device, plug the device power cord into a grounded AC outlet.

To disconnect a powered drive, disconnect it from the computer, and then unplug the AC power cord.

4 Replacing the hard drive

△ **CAUTION:** To prevent information loss or an unresponsive system:

Shut down the computer before removing the hard drive from the hard drive bay. Do not remove the hard drive while the computer is on, in Suspend, or in Hibernation.

If you are not sure whether the computer is off or in Hibernation, turn the computer on by pressing the power button. Then shut down the computer through the operating system.

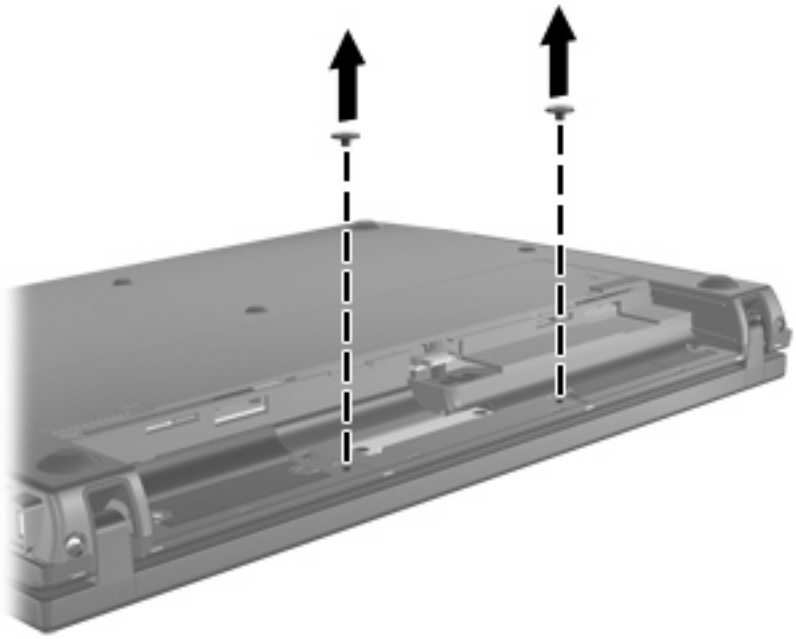
To remove a hard drive:

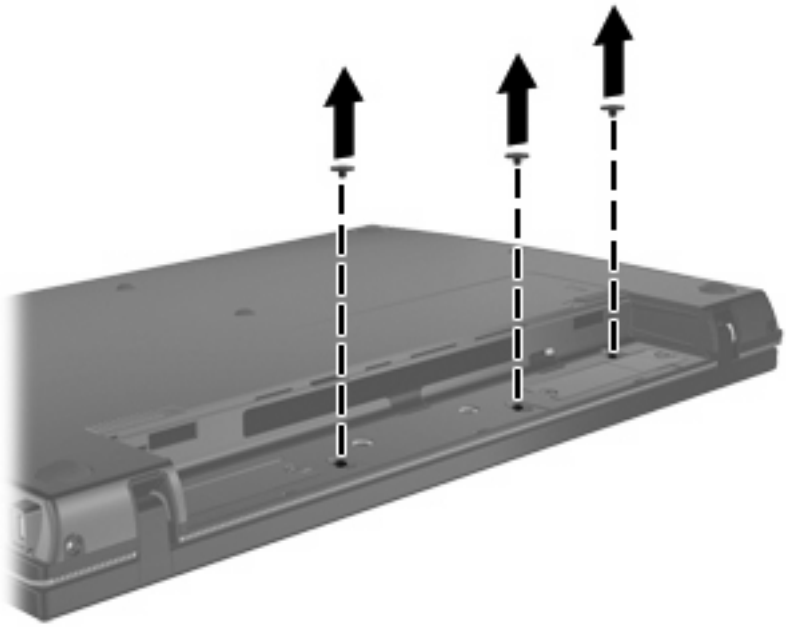
1. Save your work.
2. Shut down the computer and close the display.

   If you are not sure whether the computer is off or in Hibernation, turn the computer on by briefly pressing the power button. Then shut down the computer through the operating system.
3. Disconnect all external devices connected to the computer.
4. Unplug the power cord.
5. Turn the computer upside down on a flat surface, with the battery bay toward you.
6. Remove the battery from the computer.

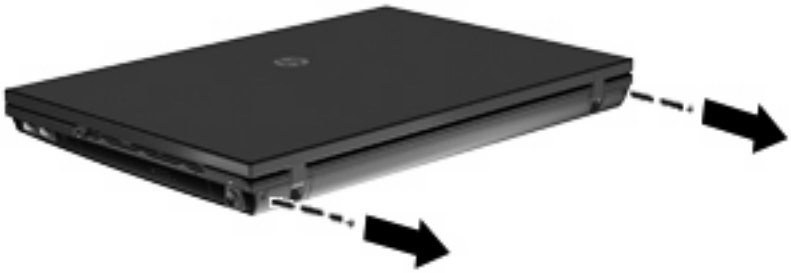
7. Remove the screws from the battery area. Your computer has either 2 or 3 screws that need to be removed.

NOTE: Refer to the illustration that most closely matches your computer.





8. Turn the computer display-side up, and then remove the 2 screws from the back edge of the computer.

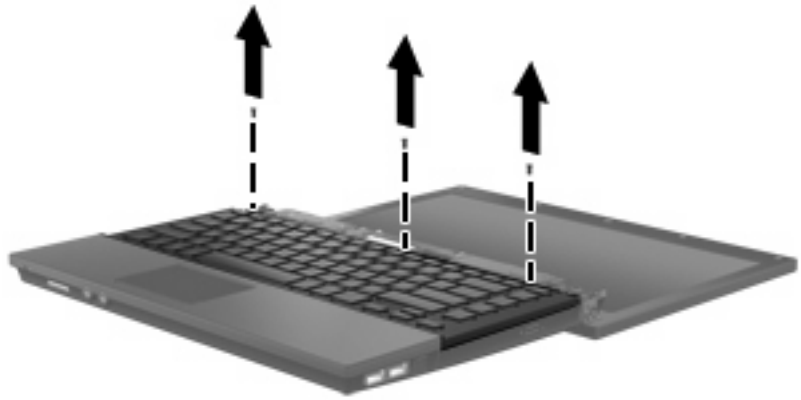


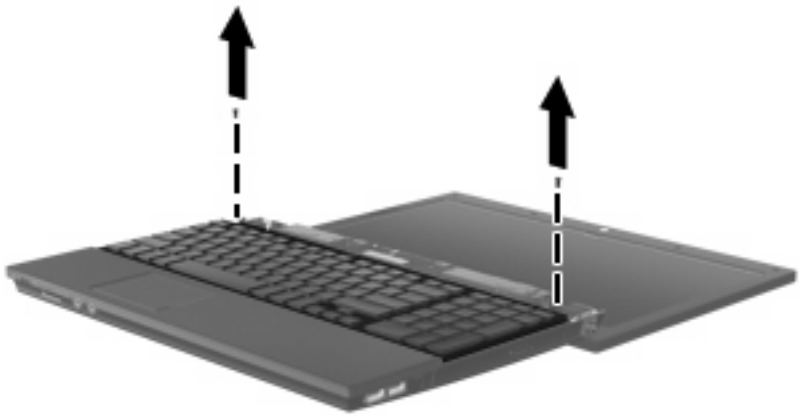
9. Open the computer as far as possible.

10. Slide the switch cover straight back towards the display, and then remove the switch cover.

11. Remove the screws from the keyboard. Your computer has either 2 or 3 screws that need to be removed.

NOTE: Refer to the illustration that most closely matches your computer.

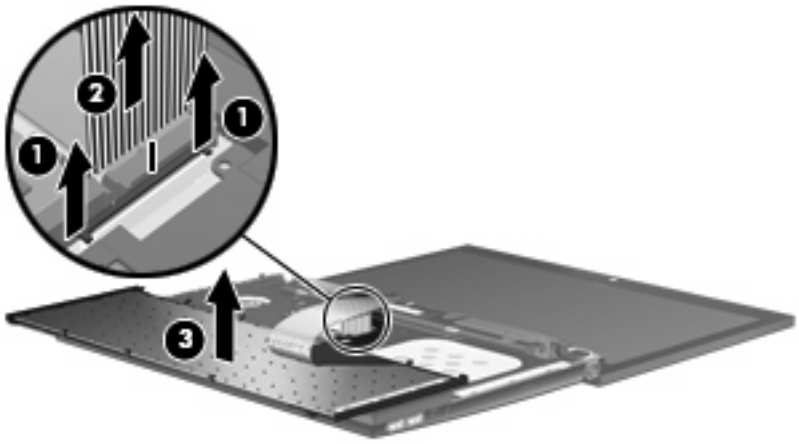




12. Slide the keyboard **(1)** towards the display assembly, and then turn the keyboard upside down **(2)** so that the keyboard cable is accessible.

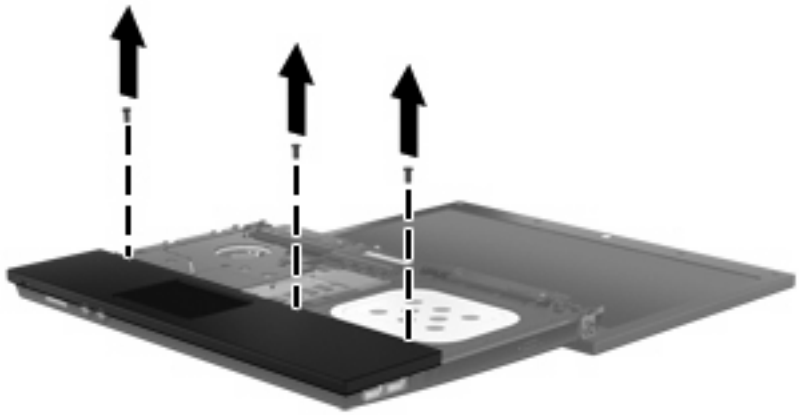
13. Release the ZIF connector **(1)** to which the keyboard cable is attached, and then disconnect the keyboard cable **(2)** from the system board by pulling upward.

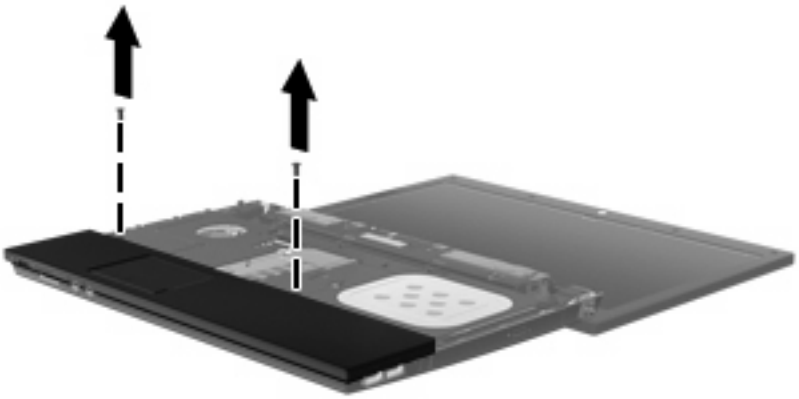
14. Remove the keyboard from the computer **(3)**.



15. Remove the screws from the top cover. Your computer has either 2 or 3 screws that need to be removed.

NOTE: Refer to the illustration that most closely matches your computer.

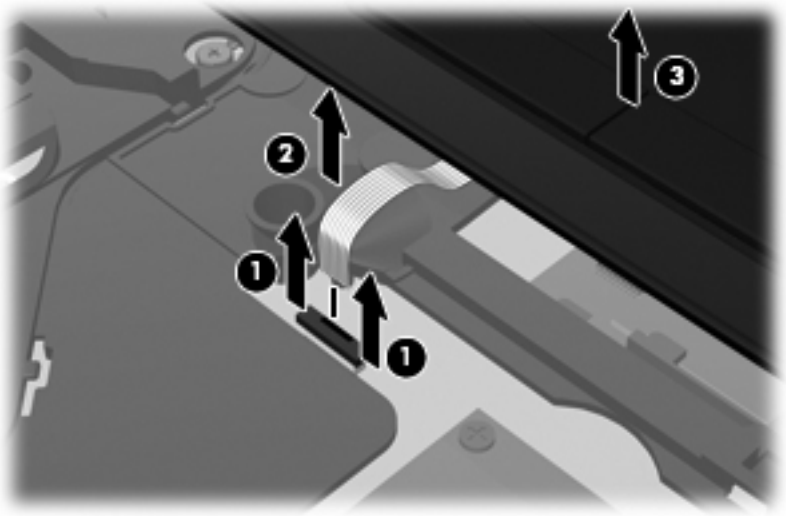




16. Slide the top cover back until it disengages from the base enclosure, and then rest the top cover on the computer so that the TouchPad cable is accessible.

17. Release the ZIF connector **(1)** to which the TouchPad cable is connected, and then disconnect the TouchPad cable from the system board **(2)** by pulling upward.

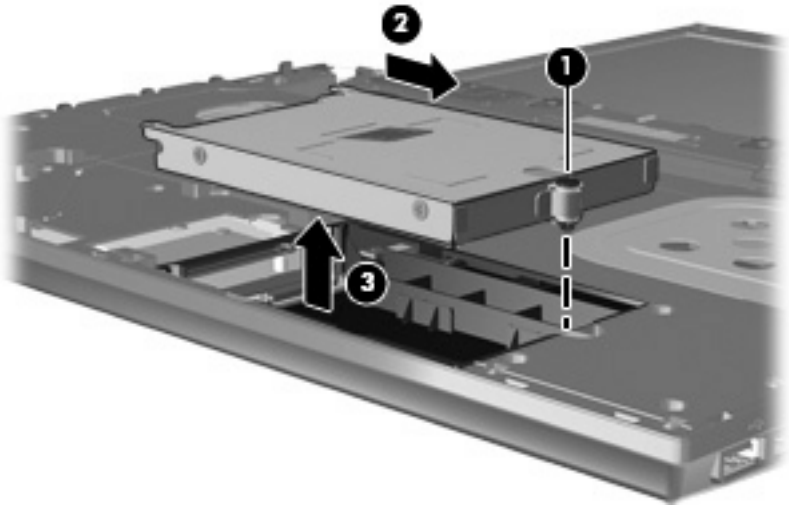
18. Remove the top cover **(3)** from the computer to expose the hard drive and WLAN compartment.



19. Remove the hard drive screw **(1)**.

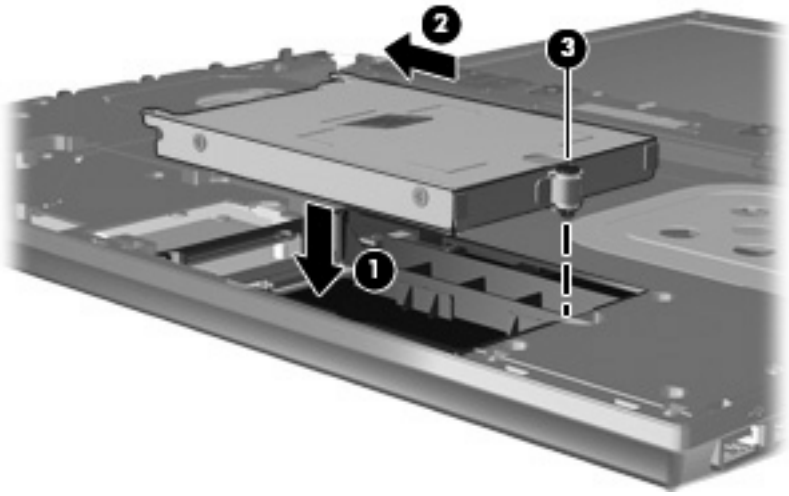
20. Use the Mylar tab **(2)** on the hard drive to slide the hard drive to the right to disconnect it from the system board.

21. Lift the hard drive **(3)** out of the hard drive bay.

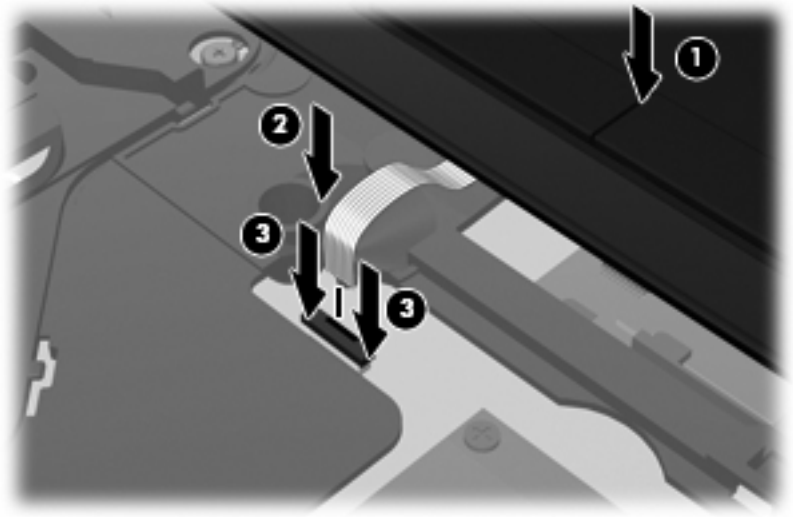


To install a hard drive:

1. Insert the hard drive into the hard drive bay **(1)**.
2. Use the Mylar tab **(2)** on the hard drive to slide the hard drive to the left to connect it to the system board.
3. Replace the hard drive screw **(3)** to secure the hard drive to the computer.



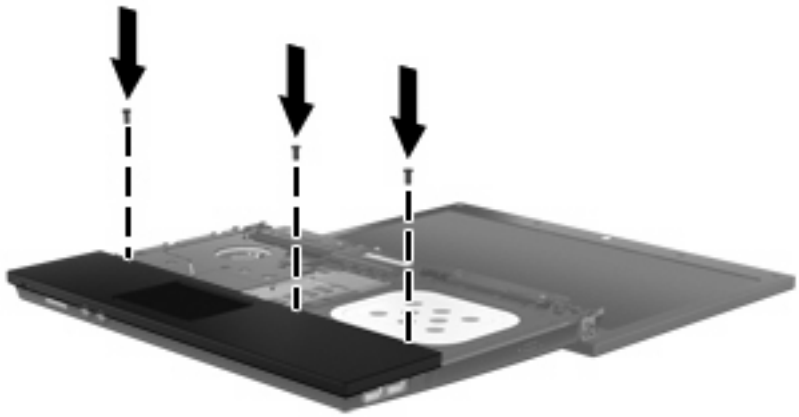
4. Place the top cover **(1)** on the computer, and then insert the TouchPad cable **(2)** into the ZIF connector **(3)** on the system board.

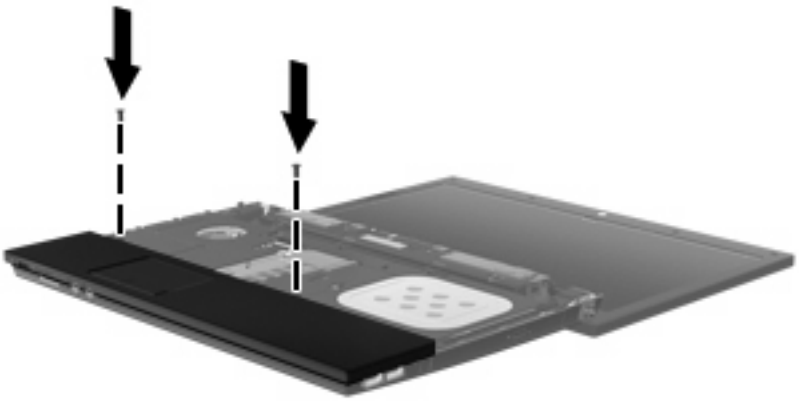


5. Slide the top cover into place.

6. Replace the screws to the top cover. Your computer has either 2 or 3 screws that need to be installed.

NOTE: Refer to the illustration that most closely matches your computer.





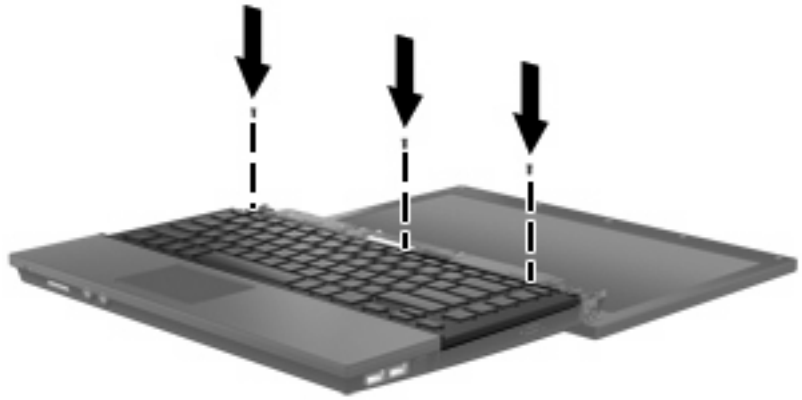
7. Place the keyboard upside down on the top cover of the computer **(1)**.

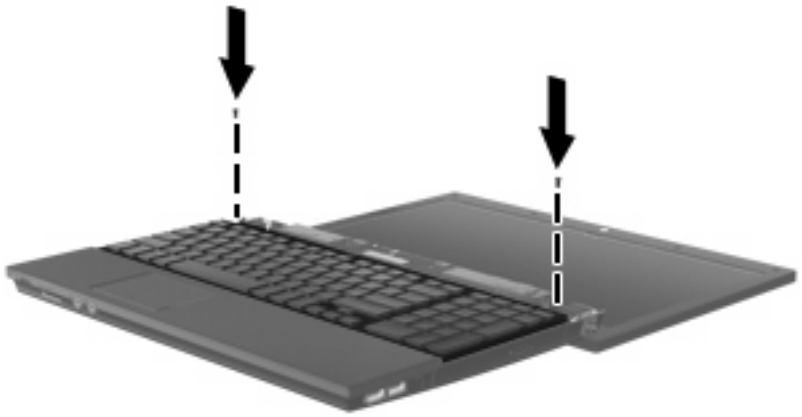
8. Insert the keyboard cable **(2)** into the ZIF connector **(3)** on the system board.

9. Turn over the keyboard **(1)** into the keyboard tray, and then slide the keyboard **(2)** into place.

10. Replace the screws on the keyboard. Your computer has either 2 or 3 screws that need to be replaced.

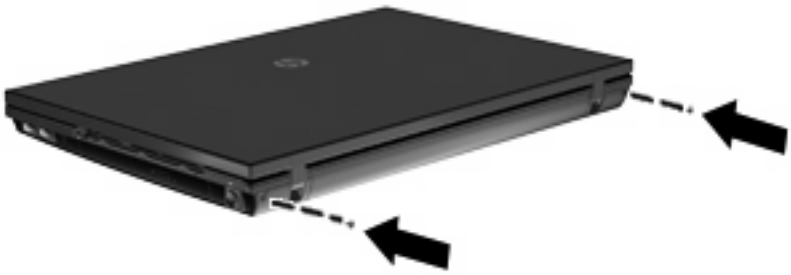
NOTE: Refer to the illustration that most closely matches your computer.





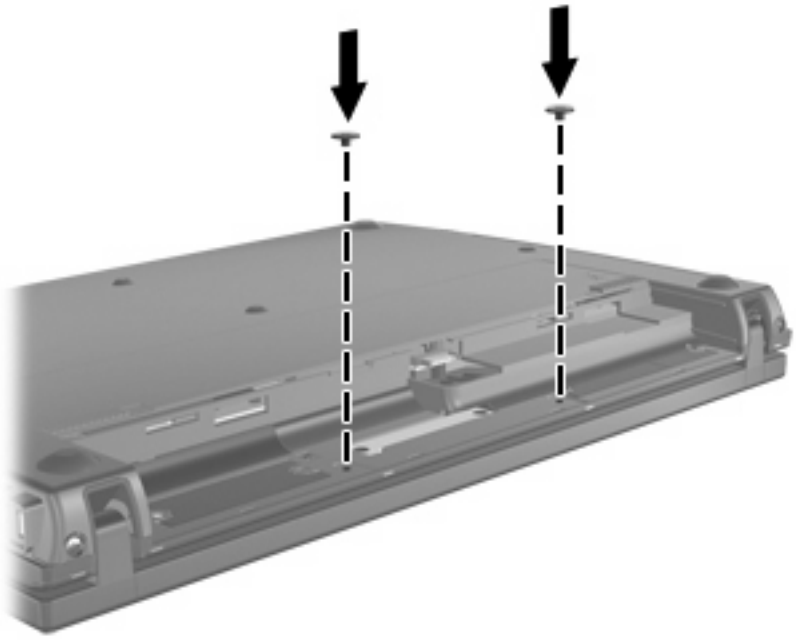
11. Slide the switch cover into place.

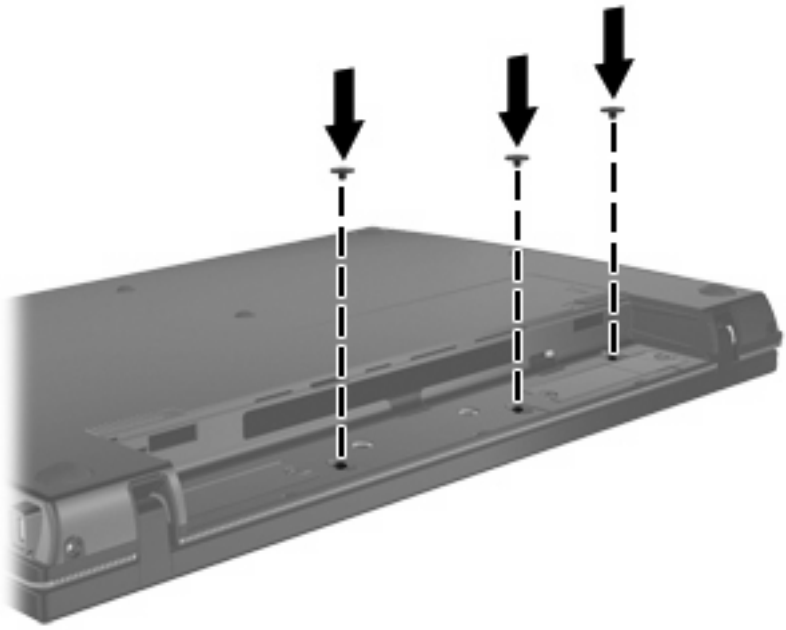
12. Close the computer display.
13. Replace the 2 screws on the back edge of the computer.



14. Replace the screws in the battery area. Your computer has either 2 or 3 screws that need to be replaced.

NOTE: Refer to the illustration that most closely matches your computer.





15. Turn the computer upside down on a flat surface and replace the battery.
16. Reconnect external power and external devices.
17. Turn on the computer.

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