HP Pavilion 17 TouchSmart Notebook PC
HP Pavilion 17 Notebook PC

Maintenance and Service Guide

Third Edition: January 2014

First Edition: April 2013

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Product notice

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

Not all features are available in all editions
of Windows 8. This computer may require
upgraded and/or separately purchased
hardware, drivers, and/or software to take
full advantage of Windows 8 functionality.
See http://www.microsoft.com for details.

Software terms

By installing, copying, downloading, or
otherwise using any software product
preinstalled on this computer, you agree to
be bound by the terms of the HP End User
License Agreement (EULA). If you do not
accept these license terms, your sole
remedy is to return the entire unused
product (hardware and software) within 14
days for a refund subject to the refund
policy of your place of purchase.

For any further information or to request a
full refund of the computer, please contact
your local point of sale (the seller).

Important Notice about Customer Self-Repair Parts

⚠ **CAUTION:** Your computer includes Customer Self-Repair parts and parts that should only be accessed by an authorized service provider. See Chapter 5, "Removal and replacement procedures for Customer Self-Repair parts," for details. Accessing parts described in Chapter 6, "Removal and replacement procedures for Authorized Service Provider only parts," can damage the computer or void your warranty.

Safety warning notice

⚠ **WARNING!**   To reduce the possibility of heat-related injuries or of overheating the device, do not place the device directly on your lap or obstruct the device air vents. Use the device only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The device and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950).

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1 Product description

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Product Name	HP Pavilion 17 TouchSmart Notebook PC	√	√
	HP Pavilion 17 Notebook PC		
Processors	**AMD**	√	
	● AMD® A10-5750M 2.50 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)		
	● AMD A10-4600M 2.30 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)		
	● AMD A8-5550M 2.10 GHz processor (turbo up to 3.10 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)		
	● AMD A8-4500M 1.90 GHz processor (turbo up to 2.80 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)		
	● AMD A6-5350M 2.90 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W), not supported for use on computer models equipped with Windows® 8.1		
	● AMD A6-5200 2.0 GHz processor (1600 MHz, 2 MB L2 cache, DDR3L, quad core, 25 W)		
	● AMD A6-4400M 2.70 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)		
	● AMD A4-5150M 2.70 GHz processor (turbo up to 3.30 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W); not supported for use on computer models equipped with Windows 8.1		
	● AMD A4-5000 1.5 GHz processor (1600MHz, 2 MB L2 cache DDR3L, quad core, 15 W)		
	● AMD E1-2500 1.4 GHz processor (1600MHz, 1 MB L2 cache, DDR3L, dual core 15 W)		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Processors (continued)	**4th Generation Intel Core**		√
	● Intel® Core® i7-4702MQ 2.20 GHz processor (SC turbo up to 2.90 GHz; 1600 MHz FSB, 6.0 MB L3 cache, quad core, 37 W)		
	● Intel Core i5-4200M 2.5 GHz processor (SC turbo up to 3.10 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W)		
	● Intel Core i3-4000M 2.40 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W)		
	● Intel Pentium® 3550M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 37 W)		
	● Intel Celeron® 2950M 2.00 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, 37 W)		
	3rd Generation Intel Core		
	● Intel Core i7-3632QM (2.2 GHz processor (SC turbo up to 3.2GHz, 1600 MHz, 6 MB L3 Cache, DDR3, quad core, 35 W)		
	● Intel Core i5-3230M 2.60 GHz processor (SC turbo up to 3.20 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)		
	● Intel Core i3-3130M 2.60 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)		
	● Intel Core i3-3110M 2.40 GHz processor (1333 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)		
	● Intel Pentium 2030M 2.50 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 35 W)		
	● Intel Pentium 2020M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 35 W)		
	● Intel Celeron 1005M 1.90 GHz processor (1600 MHz, 2.0 MB L3 cache, dual core, 35 W)		
Chipset	AMD A76M fusion controller hub	√	
	Intel HM86 Express Chipset		√
	Intel HM76 Express Chipset		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Graphics	**Internal graphics:**	√	
	● AMD Radeon™ HD 8650G graphics on computer models equipped with an AMD A10-5750M processor		
	● AMD Radeon HD 8550G graphics on computer models equipped with an AMD A8-5550M processor		
	● AMD Radeon HD 8450G graphics on computer models equipped with an AMD A6-5350M processor; not supported for use on computer models equipped with Windows 8.1		
	● AMD Radeon HD 8350G graphics on computer models equipped with an AMD A4-5150M processor; not supported for use on computer models equipped with Windows 8.1		
	● AMD Radeon HD 8400 graphics on computer models equipped with an AMD A6-5200 processor		
	● AMD Radeon HD 8330 graphics on computer models equipped with an AMD A4-5000 processor		
	● AMD Radeon HD 8240 graphics on computer models equipped with an AMD E1-2500 processor		
	● AMD Radeon HD 7660G on computer models equipped with an A10-4600M processor		
	● AMD Radeon HD 7640G on computer models equipped with an AMD A8-4500M processor		
	● AMD Radeon HD 7520G on computer models equipped with an AMD A6-4400M processor		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Graphics (continued)	**Switchable graphics:**	√	
	● AMD Radeon HD 8670M with 1 GB of dedicated video memory (128 M x 16 DDR3 1 GHz x 4 pcs; 1 GHz downgrade to 900 MHz)		
	● AMD Radeon HD 8670M with 2 GB of dedicated video memory (256 M x 16 DDR3 1 GHz x 4 pcs; 1 GHz downgrade to 900 MHz)		
	Support for HD decode, DX11, and HDMI		
	Support for PX5.5 (supported for use on computer models equipped with Windows 8.0)		
	Support for PX7.0 (supported for use on computer models equipped with Windows 8.1)		
	AMD Start Now (AMD IOIC) 1.0 on computer models equipped with an AMD A10-5750, A8-5550, A6-5350, or A4-5150 processor		
	Dual graphics:	√	
	● AMD Radeon HD 8650G + HD 8670M dual graphics on computer models equipped with an AMD A10-5750 processor		
	● AMD Radeon HD 8550G + HD 8670M dual graphics on computer models equipped with an AMD A8-5550 processor		
	● AMD Radeon HD 8450G + HD 8670M dual graphics on computer models equipped with an AMD A6-5350 processor; not supported for use on computer models equipped with Windows 8.1		
	● AMD Radeon HD 7660G + HD 8670M dual graphics on computer models equipped with an AMD A10-4600M processor		
	● AMD Radeon HD 7640G + HD 8670M dual graphics on computer models equipped with an A8-4500M processor		
	● AMD Radeon HD 7520G + HD 8670M Dual Graphics dual graphics on computer models equipped with an A6-4400M processor		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Graphics *(continued)*	**Internal graphics:**		√
	• Intel HD Graphics 4600 on computer models equipped with an Intel 4th Generation Core processor		
	• Intel HD Graphics 4000 on computer models equipped with an Intel 3rd Generation Core processor		
	• Intel HD Graphics on computer models equipped with an Intel Pentium or Celeron processor		
	Switchable Discrete Graphics:		
	• AMD Radeon HD 8670M (64 bit), M2 package, 28 nm, 25 W, 4 pcs of dedicated video memory (2 GB VRAM, 256 MB×16, DDR3, 1 GHz×4 pcs)		
	• AMD Radeon HD 8670M (64 bit), M2 package, 28 nm, 25 W, 4 pcs of dedicated video memory (1 GB VRAM, 128 MB×16, DDR3, 1 GHz×4 pcs, 1 GHz bridge to 900 MHz)		
	Support for HD decode, DX11, and HDMI		
	Support for PX5.5 (supported for use on computer models equipped with Windows 8.0)		
	Support for MS Hybrid Graphic		
Panel	• 17.3 in, high-definition+ (HD+), white light-emitting diode (WLED), BrightView (1600×900), wedge (6.0 mm), SVA, typical brightness 200 nits, 16:9 ultra wide aspect ratio	√	√
	• 17.3 in, HD+ WLED AntiGlare (1600x900) wedge (6.0 mm) SVA touchscreen solution with flush glass, multitouch enabled		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Memory	Two customer-accessible/upgradable memory module slots	√	√
	Support for DDR3L (1600 MHz) dual channel		
	Support for DDR3L-1600 MHz single channel (for use on computer models equipped with an AMD A6-5200, A4-500, or E1-2500 processor)		
	Support for up to 12288 MB of system RAM in the following configurations:		
	● 12288 MB (8192 MB x 1+ 4096 MB x 1), not supported for use on computer models equipped with a 32 bit OS		
	● 8192 MB (8192 MB×1, 4096 MB×2), not supported for use on computer models equipped with a 32 bit OS		
	● 6144 MB (4096 MB+2048 MB), not supported for use on computer models equipped with a 32 bit OS		
	● 4096 MB (4096 MB×1)		
Hard drive	Support for 6.35 cm (2.5 in) hard drives in 7.0 mm (.28 in) and 9.5 mm (.37 in) thickness	√	√
	Support for Serial ATA		
	Support for HP 3D DriveGuard hard drive protection		
	Support for the following hard drives:		
	● 1 TB, 5400 rpm, 9.5 mm		
	● 750 GB, 5400 rpm, 9.5 mm		
	● 640 GB, 5400 rpm, 9.5 mm (supported for use on computer models equipped with Intel processors and supported for use on computer models equipped with AMD processors with Windows 8.0)		
	● 500 GB, 5400 rpm, 9.5, and 7.0 mm		
Optical drive	9.5 mm tray load	√	√
	SATA		
	Fixed (not modular)		
	DVD±RW Double Layer SuperMulti Drive		

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Audio and video	Dual speakers	√	√
	Single digital microphone		
	HD Audio		
	DTS sound+		
	Integrated HP TrueVision HD webcam (fixed [no tilt], activity LED, 1280×720 by 30 frames per second)		
Ethernet	Integrated 10/100 network interface card (NIC)	√	√
Wireless	Integrated wireless local area network (WLAN) options by way of wireless module	√	√
	Two WLAN antennas built into display assembly		
	Compatible with Miracast-certified devices.		
	Support for the following WLAN formats:		
	● Qualcomm Atheros QCA9485 802.11b/g/n WiFi Adapter		
	● Qualcomm Atheros AR9565 802.11b/g/n 1×1 WiFi + Bluetooth 4.0 Combo Adapter		
	● Ralink RT3290LE 802.11b/g/n 1×1 WiFi and Bluetooth 4.0 Combo Adapter		
	● Realtek RTL8188EE 802.11b/g/n WiFi Adapter		
	● Intel Centrino Wireless-N 2230 Combo Adapter (not supported for use on computer models equipped with Windows 8.1)		√
	● Intel Wireless-N 7260BN 802.11b/g/n 2×2 WiFi + Bluetooth 4.0 Combo Adapter		
	Antenna support for 802.11a/b/g/n - Multiple-Input and Multiple-Output (MIMO) support 2x2		
External media cards	HP 2 in-1 multiformat Digital Media Reader Slot with push-push technology. Reads data from and writes data to digital memory cards such as Secure Digital (SD).	√	√

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Ports	● AC adapter, HP Smart	√	√
	● Audio in (mono microphone)/audio-out (stereo headphone) combo jack		
	● HDMI v1.4 supporting up to 1920×1080 @ 60Hz		
	● RJ-45 (Ethernet)		
	● USB: two USB 3.0 ports, one USB 2.0 port		
	● VGA (Dsub 15 pin) supporting:		
	◦ 1920×1600 external resolution @ 60 Hz		
	◦ 2048×1536 @ 75Hz (computer models equipped with an Intel processor only)		
	◦ Hot plug and unplug		
	◦ Autodetection for correct output to wide-aspect versus standard aspect video		
Keyboard/pointing devices	Full-size, island-style keyboard with numeric keypad in black or white finish	√	√
	Gesture support: MultiTouch gestures enabled, two-finger scrolling, and pinch-zoom as default		
	Taps enabled by default		
	Support for Windows 8 modern trackpad		
Power requirements	Support for the following AC adapters:	√	√
	● 90 W HP Smart AC adapter (PFC, 4.5 mm)		
	● 65 W HP Smart AC adapter (non-PFC, 4.5 mm)		
	Support for the following batteries:	√	√
	● 6 cell, 62 Wh, 2.80 Ah, Li-ion battery		
	● 6 cell, 47 Wh, 2.20 Ah, Li-ion battery		
Security	Security cable lock	√	√

Category	Description	Computer models equipped with an AMD processor	Computer models equipped with an Intel processor
Operating system	**Preinstalled:**	√	√
	● Windows 8.1 Standard		
	● Windows 8 Standard		
	● FreeDOS		
Serviceability	**End user replaceable parts:**	√	√
	● AC adapter		
	● Battery (system)		
	● Hard drive		
	● Memory modules (expansion and primary)		
	● Optical drive		
	● WLAN module		

2 External component identification

Finding your hardware and software information

Locating hardware

To find out what hardware is installed on your computer:

1. From the Start screen, type `control panel`, and then select **Control Panel**.

2. Select **System and Security**, and then in the **System** area, click **Device Manager** in the left column.

   A list reveals all the devices installed in your computer.

Display
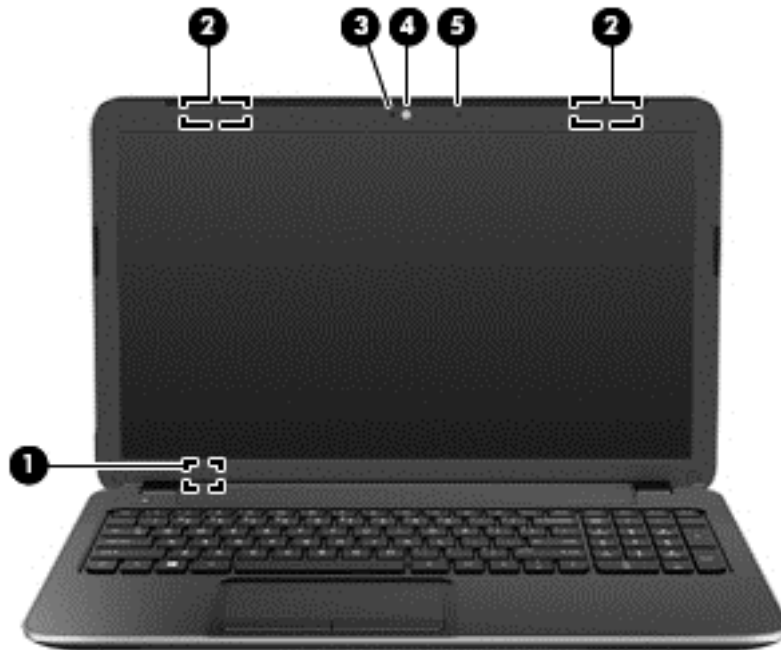
Item	Component	Description
(1)	Internal display switch	Turns off the display and initiates Sleep if the display is closed while the power is on. **NOTE:** The internal display switch is not visible from the outside of the computer.
(2)	WLAN antennas (2)*	Send and receive wireless signals to communicate with WLANs.
(3)	Webcam light	On: The webcam is in use.
(4)	Webcam	Records video and captures still photographs.

Item	Component	Description
(5)	Internal microphone	Records sound.

*The antennas are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennas free from obstructions. For wireless regulatory notices, see the section of the *Regulatory, Safety, and Environmental Notices* that applies to your country or region. To access this guide, from the Start screen, type `support`, select the **HP Support Assistant app**.

Buttons and speakers

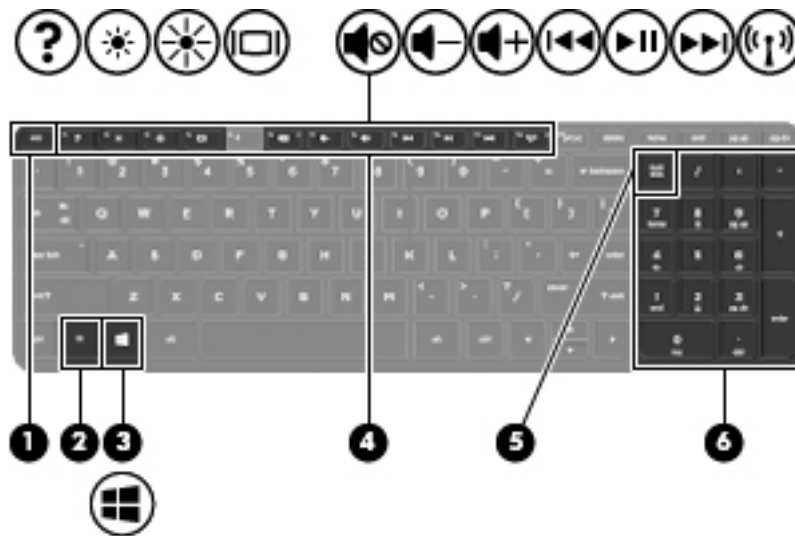| Item	Component	Description
(1)	Power button	- When the computer is off, press the button to turn on the computer. - When the computer is on, press the button briefly to initiate Sleep. - When the computer is in the Sleep state, press the button briefly to exit Sleep. - When the computer is in Hibernation, press the button briefly to exit Hibernation. **CAUTION:** Pressing and holding down the power button will result in the loss of unsaved information. If the computer has stopped responding and Microsoft® Windows shutdown procedures are ineffective, press and hold the power button down for at least 5 seconds to turn off the computer. **NOTE:** For select models, the Intel Rapid Start Technology feature is enabled at the factory. Rapid Start Technology allows your computer to resume quickly from inactivity.
(2)	Speakers (2)	Produce sound.

Keys

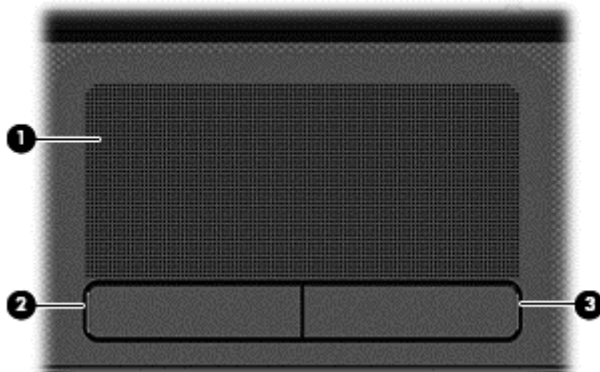| Item	Component	Description
(1)	esc key	Reveals system information when pressed in combination with the fn key.
(2)	fn key	Reveals system information when pressed in combination with the esc key.
(3)	Windows key	Returns you to the Start screen from an open app or the Windows desktop. **NOTE:** Pressing the Windows logo key again will return you to the previous screen.
(4)	Action keys	Execute frequently used system functions.
(5)	num lk key	Controls the function of the integrated numeric keypad. Press the key to alternate between the standard numeric function found on an external keypad (this function is turned on at the factory) and the navigational function (indicated by the directional arrows on the keys). **NOTE:** The keypad function that is active when the computer is turned off is reinstated when the computer is turned back on.
(6)	Integrated numeric keypad	Set at the factory to function like an external numeric keypad. To alternate between this numeric function and the navigational function (indicated by the directional arrows on the keys), press the num lock key.

Lights

Item	Component	Description
(1)	Power light	● White: The computer is on.
		● Blinking white: The computer is in the Sleep state, which is an energy-saving mode. The computer shuts off power to the display and other unneeded components.
		● Off: The computer is off or in Hibernation. Hibernation is an energy-saving mode that uses the least amount of power.
		NOTE: For select models, the Intel Rapid Start Technology feature is enabled at the factory. Rapid Start Technology allows your computer to resume quickly from inactivity.
(2)	Mute light	● Amber: Computer sound is off.
		● Off: Computer sound is on.
(3)	Wireless light	On: An integrated wireless device, such as a WLAN device and/or a Bluetooth device, is on.
		NOTE: On some models, the wireless light is amber when all wireless devices are off.
(4)	Caps lock light	On: Caps lock is on, which switches the keys to all capital letters.

TouchPad

Item	Component	Description
(1)	TouchPad zone	Moves the on-screen pointer and selects or activates items on the screen. **NOTE:** The TouchPad also supports edge-swipe gestures.
(2)	Left TouchPad button	Functions like the left button on an external mouse.
(3)	Right TouchPad button	Functions like the right button on an external mouse.

Left side
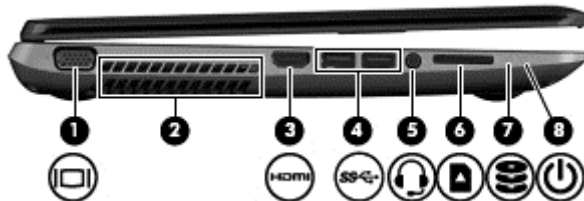
Item	Component	Description
(1)	External monitor port	Connects an external VGA monitor or projector.
(2)	Vent	Enables airflow to cool internal components. **NOTE:** The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
(3)	HDMI port	Connects an optional video or audio device, such as a high-definition television, any compatible digital or audio component, or a high-speed HDMI device.
(4)	USB 3.0 ports (2)	Connect optional USB 3.0 devices and provide enhanced USB power performance.

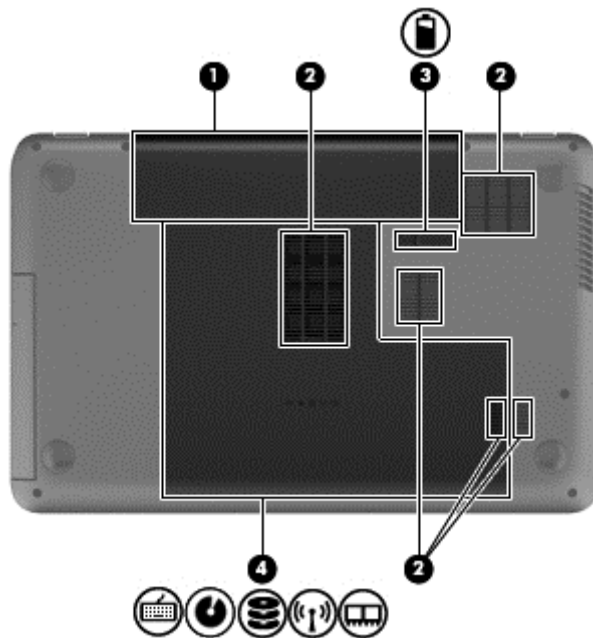| Item	Component	Description
(5)	Audio-out (headphone) jack/Audio in (microphone) jack	Connects optional powered stereo speakers, headphones, earbuds, a headset, or a television audio cable. Also connects an optional headset microphone. This jack does not support optional microphone-only devices.
		WARNING! To reduce the risk of personal injury, adjust the volume before putting on headphones, earbuds, or a headset. For additional safety information, refer to the Regulatory, Safety, and Environmental Notices. To access this guide, from the Start screen, type `support`, select the **HP Support Assistant** app, select **My computer**, and then select **User guides**.
		NOTE: When a device is connected to the jack, the computer speakers are disabled.
		NOTE: Be sure that the device cable has a 4-conductor connector that supports both audio-out (headphone) and audio in (microphone).
(6)	Media Card Reader	Reads data from and writes data to digital memory cards such as Secure Digital (SD).
(7)	Hard drive light	● Blinking white: The hard drive is being accessed. ● Amber: HP 3D DriveGuard has temporarily parked the hard drive.
(8)	Power light	● White: The computer is on. ● Blinking white: The computer is in the Sleep state, which is an energy-saving mode. The computer shuts off power to the display and other unneeded components. ● Off: The computer is off or in Hibernation. Hibernation is an energy-saving mode that uses the least amount of power. **NOTE:** For select models, the Intel Rapid Start Technology feature is enabled at the factory. Rapid Start Technology allows your computer to resume quickly from inactivity.

Right side
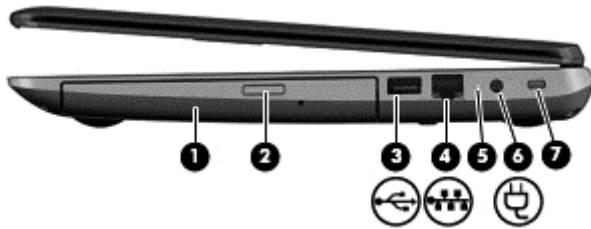
Item	Component	Description
(1)	Optical drive	Reads and writes to an optical disc.
(2)	Optical drive eject button	Releases the disc tray.
(3)	USB 2.0 port	Connects an optional USB device.
(4)	RJ-45 (network) jack	Connects a network cable.
(5)	AC adapter light	- White: The AC adapter is connected and the battery is charged. - Amber: The AC adapter is connected and the battery is charging. - Off: The computer is using DC power.
(6)	Power connector	Connects an AC adapter.
(7)	Security cable slot	Attaches an optional security cable to the computer. **NOTE:** The security cable is designed to act as a deterrent, but it may not prevent the computer from being mishandled or stolen.

Bottom

| Item	Component	Description
(1)	Battery bay	Holds the battery.
(2)	Vents (5)	Enable airflow to cool internal components.
		NOTE: The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
(3)	Battery release latch	Releases the battery from the battery bay.
(4)	Service cover	Provides access to the hard drive bay, the WLAN module slot, and the memory module slots.
		CAUTION: To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module to restore computer functionality, and then contact support through Help and Support. From the Start screen, type h, and then select **Help and Support**.

Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer.

IMPORTANT: All labels described in this section will be located in one of 3 places depending on your computer model: Affixed to the bottom of the computer, located in the battery bay, or under the service door.

- Service label—Provides important information to identify your computer. When contacting support, you will probably be asked for the serial number, and possibly for the product number or the model number. Locate these numbers before you contact support.

  NOTE: Your service labels will resemble one of the examples shown below. Refer to the illustration that most closely matches the service label on your computer.
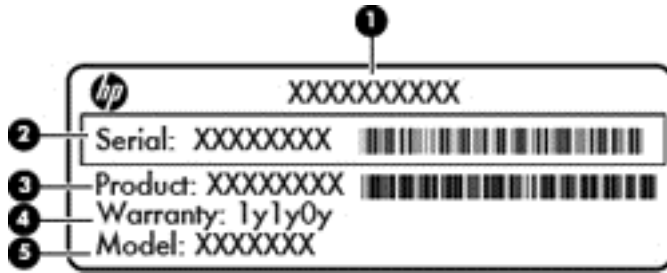
Component		
(1)	Product name
(2)	Serial number
(3)	Product number
(4)	Warranty period
(5)	Model number (select models only)

Component		
(1)	Serial number
(2)	Product number
(3)	Warranty period
(4)	Model number (select models only)
(5)	Revision number

- Regulatory label(s)—Provide(s) regulatory information about the computer.

- Wireless certification label(s)—Provide(s) information about optional wireless devices and the approval markings for the countries or regions in which the devices have been approved for use.

3 Illustrated parts catalog

Computer major components
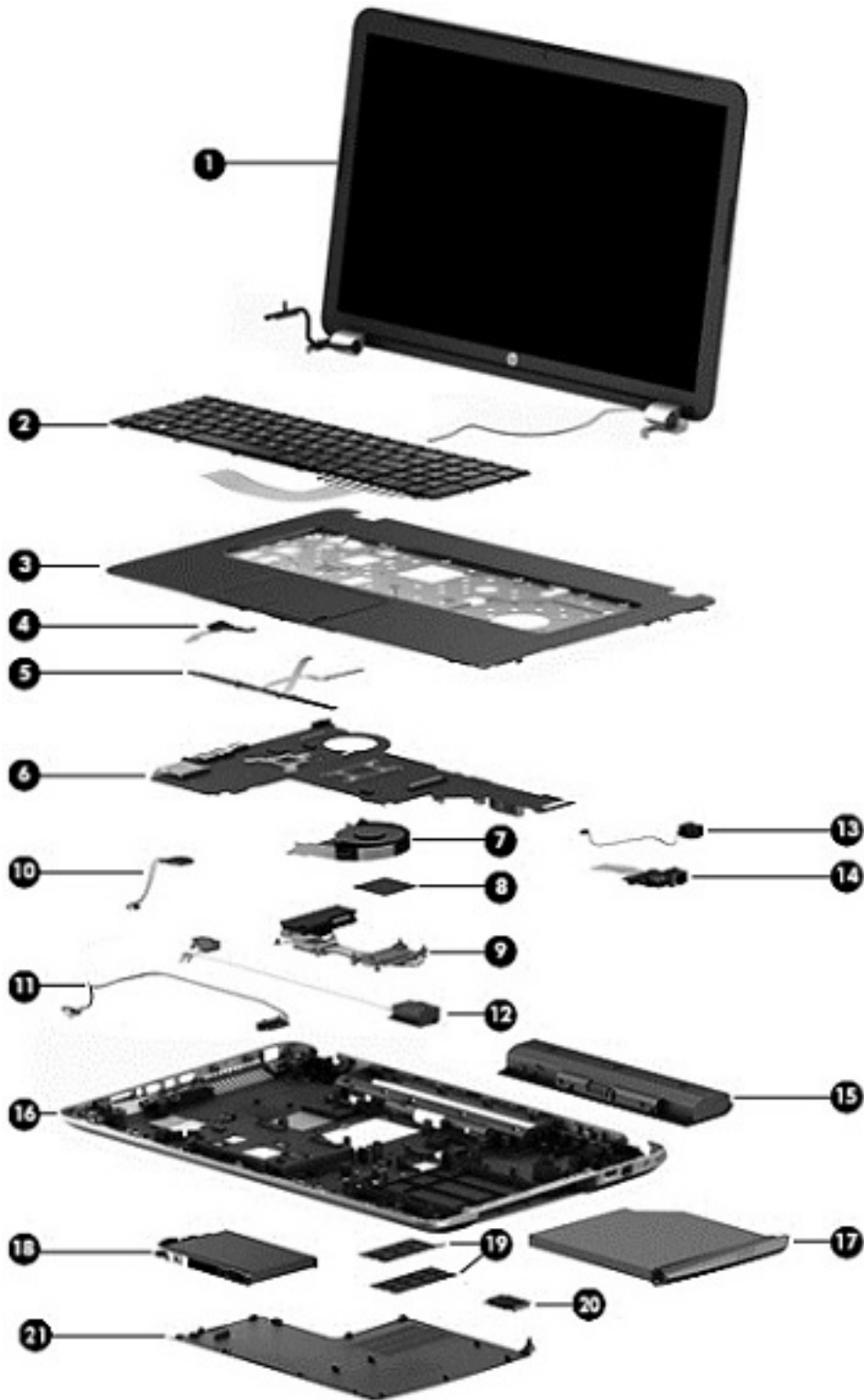
Item	Component	Spare part number
(1)	**Display assembly**:	
	17.3 in (43.94 cm), HD+, WLED, BrightView, AG, SVA, LED TouchSmart display assembly for HP Pavilion 17 TouchSmart Notebook models	749970-001
	17.3 in (43.94 cm), HD+, WLED, BrightView, AG, SVA, LED display assembly for HP Pavilion 17 Notebook models. This display assembly is spared at the subcomponent level only. For more display assembly spare part information, see Display assembly subcomponents on page 28.	
(2)	**Keyboard** (includes keyboard cable):	
	In black finish for use on all computer models in Belgium	720670-A41
	In black finish for use only on computer models equipped with an Intel processor in Bulgaria	720670-261
	In black finish for use on all computer models in Canada	720670-DB1
	In black finish for use on all computer models in the Czech Republic and Slovakia	720670-FL1
	In black finish for use on all computer models in Denmark, Finland, Norway, and Sweden	720670-DH1
	In black finish for use on all computer models in France	720670-051
	In black finish for use on all computer models in Germany	720670-041
	In black finish for use on all computer models in Greece	720670-151
	In black finish for use on all computer models in Hungary	720670-211
	In black finish for use only on computer models equipped with an Intel processor in Israel	720670-BB1
	In black finish for use on all computer models in Italy	720670-061
	In black finish for use on all computer models Internationally	720670-B31
	In black finish for use only on computer models equipped with an AMD processor in Portugal	720670-131
	In black finish for use on all computer models in Romania	720670-271
	In black finish for use on all computer models in Russia	720670-251
	In black finish for use only on computer models equipped with an Intel processor in Saudi Arabia	720670-171
	In black finish for use on all computer models the Adriatic Region	720670-BA1
	In black finish for use on all computer models in Spain	720670-071
	In black finish for use on all computer models in Switzerland	720670-BG1
	In black finish for use on all computer models in Turkey	720670-141
	In black finish for use on all computer models in the United Kingdom	720670-031
	In black finish for use on all computer models in the United States	720670-001
	In white finish for use on all computer models in Belgium	724535-A41
	In white finish for use only on computer models equipped with an Intel processor in Bulgaria	724535-261
	In white finish for use on all computer models in Canada	724535-DB1

Item	Component	Spare part number
	In white finish for use on all computer models in the Czech Republic and Slovakia	724535-FL1
	In white finish for use on all computer models in Denmark, Finland, Norway, and Sweden	724535-DH1
	In white finish for use on all computer models in France	724535-051
	In white finish for use on all computer models in Germany	724535-041
	In white finish for use on all computer models in Greece	724535-151
	In white finish for on all computer models in Hungary	724535-211
	In white finish for use only on computer models equipped with an Intel processor in Israel	724535-BB1
	In white finish for use on all computer models in Italy	724535-061
	In white finish for use on all computer models Internationally	724535-B31
	In white finish for use only on computer models equipped with an AMD processor in Portugal	724535-131
	In white finish for use on all computer models in Romania	724535-271
	In white finish for use on all computer models in Russia	724535-251
	In white finish for use only on computer models equipped with an Intel processor in Saudi Arabia	724535-171
	In white finish for use on all computer models in the Adriatic Region	724535-BA1
	In white finish for use on all computer models in Spain	724535-071
	In white finish for use on all computer models in Switzerland	724535-BG1
	In white finish for use on all computer models in Turkey	724535-141
	In white finish for use on all computer models in the United Kingdom	724535-031
	In white finish for use on all computer models in the United States	724535-001
(3)	**Top cover** (includes TouchPad):	
	In flyer red finish for use on all computer models	720681-001
	In goji berry finish for use on all computer models	748414-001
	In hazel berry finish for use on all computer models	748413-001
	In mineral black finish for use on all computer models	733516-001
	In pearl white finish for use on all computer models	720680-001
	In regal purple finish for use on all computer models	720683-001
	In revolutionary blue finish for use on all computer models	720682-001
	In sparkling black and silver finish for use on all computer models	720684-001
(4)	**Power button board** (includes cable)	
	For use with HP Pavilion 17 Notebook computer models only	720673-001
	For use with HP Pavilion 17 TouchSmart Notebook computer models only	749969-001

Item	Component	Spare part number
(5)	**TouchPad button board** (includes TouchPad board cable and TouchPad button board cable)	720672-001
(6)	**System board** (includes replacement thermal material):	
	HP Pavilion 17 Notebook computer models	
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	737131-501
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	737131-001
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	720692-501
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	720692-001
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	720691-501
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	720691-001
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	726634-501
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	726634-001
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	726633-501
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	726633-001
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	747002-501
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	747002-001
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the Windows 8 Standard operating system	731534-501
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the FreeDOS operating system	731534-001
	For use only on computer models equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	737452-501
	For use only on computer models equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	737452-001

Item	Component	Spare part number
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	713256-501
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	713256-001
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	735080-501
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	735080-001
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	713255-501
	For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	713255-001
	For use only on computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	720459-501
	For use only on computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	720459-001
	For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	713258-501
	For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	713258-001
	For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	713257-501
	For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	713257-001
	For use only on computer models equipped with an Intel Core i3-3110M 2.40 GHz processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	729844-501
	For use only on computer models equipped with an Intel Core i3-3110M 2.40 GHz processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	729844-001
	For use only on computer models equipped with an Intel Core i3-3110M 2.40 GHz processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	729843-501
	For use only on computer models equipped with an Intel Core i3-3110M 2.40 GHz processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	729843-001
	HP Pavilion 17 TouchSmart Notebook computer models	
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	749966-001

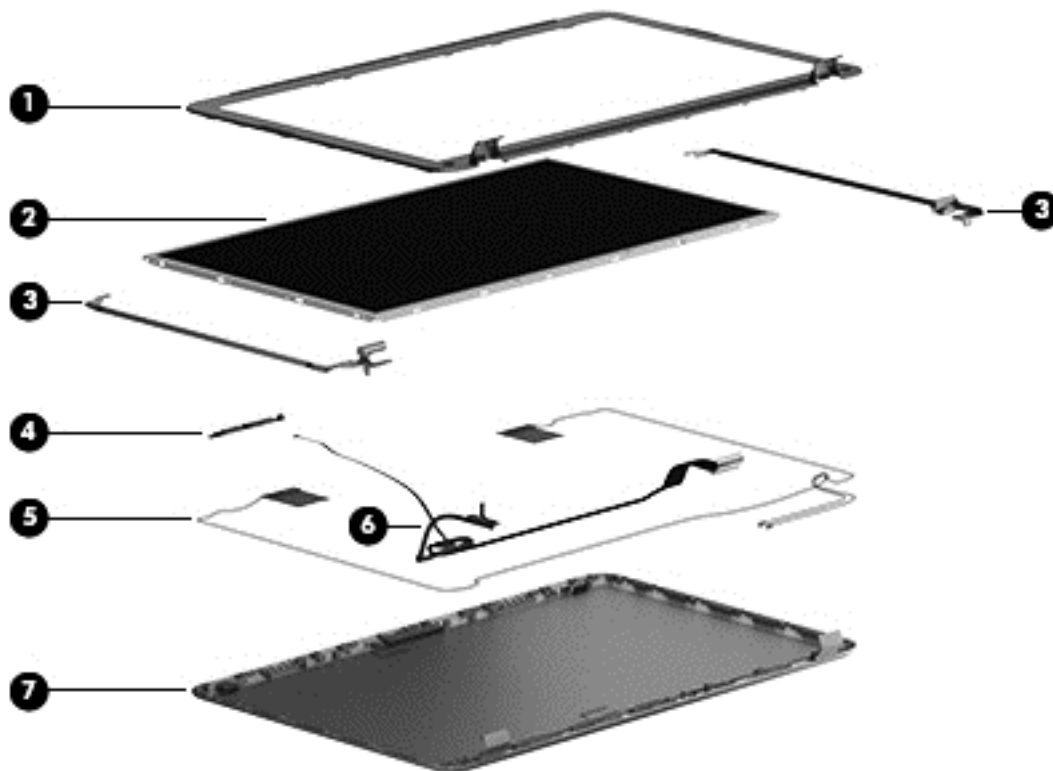| Item	Component	Spare part number
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749966-501
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749967-001
	For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749967-501
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	749968-001
	For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749968-501
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	758897-001
	For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	758897-501
	For use only on computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749983-001
	For use only on computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749983-501
	For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	749984-001
	For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749984-501
	For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749985-001
	For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749985-501
	Thermal Material Kit (includes thermal replacement material)	719864-001
(7)	**Fan** (includes cable)	719860-001
(8)	**Processor** (includes replacement thermal material):	
	AMD A10-5750M 2.50 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	713548-001
	AMD A10-4600M 2.30 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	683046-001
	AMD A8-5550M 2.10 GHz processor (turbo up to 3.10 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	713551-001
	AMD A8-4500M 1.90 GHz processor (turbo up to 2.80 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	683048-001

Item	Component	Spare part number
	AMD A6-5350M 2.90 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)	713550-001
	AMD A6-4400M 2.70 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)	683047-001
	AMD A4-5150M 2.70 GHz processor (turbo up to 3.30 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W); not supported for use on computer models equipped with Windows 8.1	713549-001
	Intel Core i7-4702MQ 2.20 GHz processor (SC turbo up to 2.90 GHz; 1600 MHz FSB, 6.0 MB L3 cache, quad core, 37 W)	723522-001
	Intel Core i5-4200M 2.5 GHz processor (SC turbo up to 3.10 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W)	737328-001
	Intel Core i5-3230M 2.60 GHz processor (SC turbo up to 3.20 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)	711903-001
	Intel Core i3-4000M 2.40 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W)	737327-001
	Intel Core i3-3130M 2.60 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)	713163-001
	Intel Core i3-3110M 2.40 GHz processor (1333 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)	682417-001
	Intel Pentium i7-3632QM 2.2 GHz processor (SC turbo up to 3.2 GHz, 1600 MHz, 6 MB L3 cache, DDR3, quad core, 35 W)	701658-001
	Intel Pentium 3550M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 37 W)	737329-001
	Intel Pentium 2030M 2.50 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 35 W)	700588-002
	Intel Pentium 2020M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 35 W)	700628-001
	Intel Celeron 2950M 2.00 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, 37 W)	737326-001
	Intel Celeron 1005M 1.90 GHz processor (1600 MHz, 2.0 MB L3 cache, dual core, 35 W)	739356-001
	Thermal Material Kit (includes thermal replacement material)	719864-001
(9)	**Heat sink** (includes replacement thermal material):	
	For use only on computer models equipped with an AMD A10, A8, A6-4400M, or A4 processor and a graphics subsystem with discrete memory	720690-001
	For use only on computer models equipped with an AMD A10, A8, A4, or E1-2500 processor and a graphics subsystem with UMA memory	720689-001
	For use only on computer models equipped with an AMD A6-5200 and a graphics subsystem with discrete memory	724885-001
	For use only on computer models equipped with an AMD A6-5200 and a graphics subsystem with UMA memory	724884-001
	For use only on computer models equipped with an Intel processor and a graphics subsystem with discrete memory	719862-001
	For use only on computer models equipped with an Intel processor and a graphics subsystem with UMA memory	719861-001

Item	Component	Spare part number
	For use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with discrete memory	736176-001
	For use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with UMA memory	736175-001
	PCH heat sink	719863-001
	Thermal Material Kit (includes thermal replacement material)	719864-001
(10)	**RTC battery** (includes cable and double-sided tape)	
	RTC battery for use all on computer models except those equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor	637193-001
	RTC battery for use only on computer models equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor	741976-001
(11)	**Optical drive connector cable**	720668-001
(12)	**Speakers** (include left and right speakers and cables)	720679-001
(13)	**Power connector cable**	719859-001
(14)	**RJ-45/USB board** (includes cable)	720674-001
(15)	**Battery:**	
	6 cell, 62 Wh, 2.80 Ah, Li-ion battery	710417-001
	6 cell, 47 Wh, 2.20 Ah, Li-ion battery	710416-001
(16)	**Base enclosure** (includes 4 rubber feet, battery lock latch, battery release latch, and RJ-45 cover)	
	For use only on HP Pavilion 17 Notebook computer models	720665-001
	For use only on HP Pavilion 17 TouchSmart Notebook computer models	753890-001
	Rubber Kit (not illustrated, includes front and rear rubber feet and display bezel rubber screw covers)	720677-001
(17)	**DVD±RW Double Layer SuperMulti Drive**	720671-001
(18)	**Hard drive** (does not include hard drive bracket or hard drive connector cable):	
	1 TB, 5400 rpm, 9.5 mm	676521-001
	750 GB, 5400 rpm, 9.5 mm	634250-001
	640 GB, 5400 rpm, 9.5 mm (supported for use on computer models equipped with Intel processors and supported for use on computer models equipped with AMD processors with Windows 8.0)	669300-001
	500 GB, 5400 rpm, 7.0 mm	683802-001
	Hard Drive Hardware Kit (not illustrated, includes hard drive bracket and hard drive connector cable)	716179-001
(19)	**Memory module** (PC3L, 12800, 1600 MHz):	
	8 GB	693374-001
	4 GB	691740-001
	2 GB	691739-001

Item	Component	Spare part number
(20)	**WLAN module:**	
	Qualcomm Atheros QCA9485 802.11b/g/n WiFi Adapter for use on all computer models	675794-001
	Qualcomm Atheros AR9565 802.11b/g/n 1×1 WiFi + Bluetooth 4.0 Combo Adapter for use on all computer models	733476-001
	Ralink RT3290LE 802.11b/g/n 1×1 WiFi and Bluetooth 4.0 Combo Adapter for use on all computer models	690020-001
	Realtek RTL8188EE 802.11b/g/n WiFi Adapter for use on all computer models	709848-001
	Intel Centrino Wireless-N 2230 Combo Adapter for use only on computer models equipped with an Intel processor (not supported on computer models equipped with Windows 8.1)	670290-001
	Intel Wireless-N 7260BN 802.11b/g/n 2×2 WiFi + Bluetooth 4.0 Combo Adapter for use only on computer models equipped with an Intel processor	717384-001
(21)	**Service cover**	720675-001

Display assembly subcomponents

> **NOTE:** The display assembly subcomponents are for the HP Pavilion 17 Notebook non-touch screen models only. The HP Pavilion 17 TouchSmart Notebook models are spared at the display assembly only.

Item	Component	Spare part number
(1)	**Display bezel**	720666-001
(2)	**17.3 in (43.94 cm), BrightView, HD, LED, display panel**	720676-001
(3)	**Display hinges** (includes left and right hinges and hinge brackets)	720669-001
(4)	**Webcam/microphone module** (includes double-sided adhesive)	719845-001
(5)	**Antenna Kit** (includes left and right wireless antenna cables and transceivers)	720659-001
(6)	**Display panel cable** (includes webcam/microphone module cable)	720667-001
(7)	**Display enclosure:**	
	In flyer red finish	720661-001
	In goji berry finish	748412-001
	In hazel berry finish	748411-001
	In mineral black finish	733515-001
	In pearl white finish	720660-001
	In regal purple finish	720663-001
	In revolutionary blue finish	720662-001
	In sparkling black and silver finish	720664-001

Mass storage devices
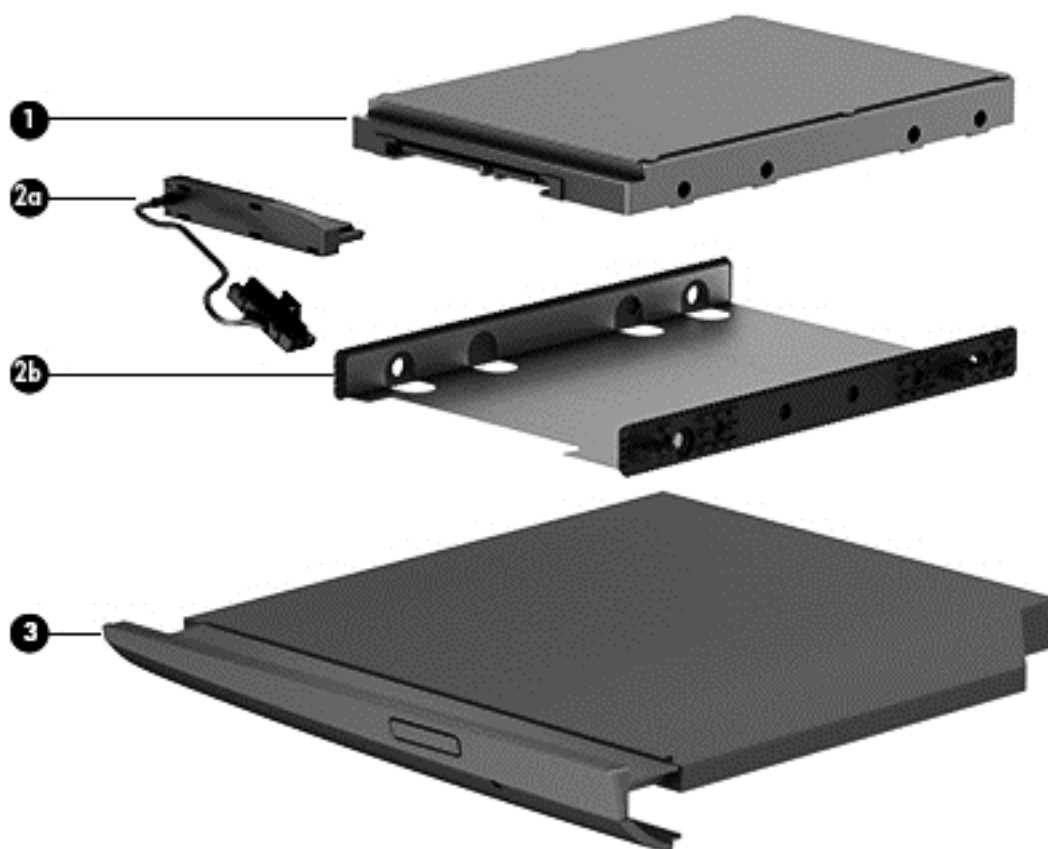
Item	Component	Spare part number
(1)	**Hard drive** (does not include hard drive bracket or hard drive connector cable):	
	1 TB, 5400 rpm, 9.5 mm	676521-001
	750 GB, 5400 rpm, 9.5 mm	634250-001
	640 GB, 5400 rpm, 9.5 mm (supported for use on computer models equipped with Intel processors and supported for use on computer models equipped with AMD processors with Windows 8.0)	669300-001
	500 GB, 5400 rpm, 7.0 mm	683802-001
	Hard Drive Hardware Kit, includes:	716179-001
(2a)	Hard drive connector cable	
(2b)	Hard drive bracket	
(3)	**External DVD±RW Double-Layer with SuperMulti Drive**	720671-001

Miscellaneous parts

Component	Spare part number
AC adapter:	
65 W HP Smart AC adapter (non-PFC, 4.5 mm) for use on all computer models	710412-001
90 W HP Smart AC adapter (PFC, 4.5 mm) for use on all computer models	710413-001
Power cord (3 pin, black, 1.83 m):	
For use on all computer models in Denmark	490371-081
For use on all computer models in Europe	490371-021
For use only on computer models equipped with an Intel processor in India	490371-BB1
For use on all computer models in North America	490371-001
For use only on computer models equipped with an Intel processor in Northwest Africa	490371-AR1
For use on all computer models in Switzerland	490371-111
For use only on computer models equipped with an Intel processor in the United Kingdom and Singapore	490371-031
Screw Kit	720678-001

Sequential part number listing

Spare part number	Description
490371-001	Power cord for use on all computer models in North America (3 pin, black, 1.83 m)
490371-021	Power cord for use on all computer models in Europe (3 pin, black, 1.83 m)
490371-031	Power cord for use on all computer models in the United Kingdom and Singapore (3 pin, black, 1.83 m)
490371-081	Power cord for use on all computer models in Denmark (3 pin, black, 1.83 m)
490371-111	Power cord for use on all computer models in Switzerland (3 pin, black, 1.83 m)
490371-AR1	Power cord for use only on computer models equipped with an Intel processor in South Africa (3 pin, black, 1.83 m)
490371-BB1	Power cord for use only on computer models equipped with an Intel processor in Israel (3 pin, black, 1.83 m)
634250-001	750 GB, 5400 rpm, SATA, 9.5 mm hard drive (does not include hard drive bracket or hard drive connector cable) **NOTE:** The hard drive bracket and screws are included in the Hard Drive Hardware Kit, spare part number 716179-001.
637193-001	RTC battery for use all on computer models except those equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor (includes cable and double-sided tape)

Spare part number	Description
669300-001	640 GB, 5400 rpm, SATA, 9.5 mm hard drive (does not include hard drive bracket or hard drive connector cable); supported for use on computer models equipped with Intel processors and supported for use on computer models equipped with AMD processors with Windows 8.0 **NOTE:** The hard drive bracket and screws are included in the Hard Drive Hardware Kit, spare part number 716179-001.
670290-001	Intel Centrino Wireless-N 2230 Combo Adapter for use only on computer models equipped with an Intel processor (not supported on computer models equipped with Windows 8.1)
675794-001	Qualcomm Atheros QCA9485 802.11b/g/n WiFi Adapter for use on all computer models
676521-001	1 TB, 5400 rpm, SATA, 9.5 mm hard drive (does not include hard drive bracket or hard drive connector cable) **NOTE:** The hard drive bracket and screws are included in the Hard Drive Hardware Kit, spare part number 716179-001.
682417-001	Intel Core i3-3110M 2.40 GHz processor (1333 MHz FSB, 3.0 MB L3 cache, dual core, 35 W; includes replacement thermal material))
683046-001	AMD A10-4600M 2.30 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W; includes replacement thermal material)
683047-001	AMD A6-4400M 2.70 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W; includes replacement thermal material)
683048-001	AMD A8-4500M 1.90 GHz processor (turbo up to 2.80 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W; includes replacement thermal material)
683802-001	500 GB, 5400 rpm, SATA, 7.0 mm hard drive (does not include hard drive bracket or hard drive connector cable) **NOTE:** The hard drive bracket and screws are included in the Hard Drive Hardware Kit, spare part number 716179-001.
690020-001	Ralink RT3290LE 802.11b/g/n 1×1 WiFi and Bluetooth 4.0 Combo Adapter for use on all computer models
691739-001	2 GB memory module (PC3L, 12800, 1600 MHz)
691740-001	4 GB memory module (PC3L, 12800, 1600 MHz)
693374-001	8 GB memory module (PC3L, 12800, 1600 MHz)
700588-002	Intel Pentium 2030M 2.50 GHz processor (1600 MHz FSB, 2.0 MB L2 cache, dual core, 35 W; includes replacement thermal material)
700628-001	Intel Pentium 2020M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L2 cache, dual core, 35 W; includes replacement thermal material)
709848-001	Realtek RTL8188EE 802.11b/g/n WiFi Adapter for use on all computer models
701658-001	Intel Core i7-3632QM 2.2 GHz processor (SC turbo up to 3.2GHz, 1600 MHz, 6 MB L3 cache, DDR3, quad core, 35 W; includes replacement thermal material)
710412-001	65 W HP Smart AC adapter (non-PFC, 4.5 mm) for use on all computer models
710413-001	90 W HP Smart AC adapter (PFC, 4.5 mm) for use on all computer models
710416-001	6 cell, 47 Wh, 2.20 Ah, Li-ion battery
710417-001	6 cell, 62 Wh, 2.80 Ah, Li-ion battery
711903-001	Intel Core i5-3230M 2.60 GHz processor (SC turbo up to 3.20 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W; includes replacement thermal material)

Spare part number	Description
713163-001	Intel Core i3-3130M 2.60 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W; includes replacement thermal material)
713255-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes replacement thermal material)
713255-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes replacement thermal material)
713256-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system (includes replacement thermal material)
713256-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system (includes replacement thermal material)
713257-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes replacement thermal material)
713257-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes replacement thermal material)
713258-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes replacement thermal material)
713258-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system (includes replacement thermal material)
713548-001	AMD A10-5750M 2.50 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)
713549-001	AMD A4-5150M 2.70 GHz processor (turbo up to 3.30 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)
713550-001	AMD A6-5350M 2.90 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)
713551-001	AMD A8-5550M 2.10 GHz processor (turbo up to 3.10 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)
716179-001	Hard Drive Hardware Kit
717384-001	Intel Wireless-N 7260BN 802.11b/g/n 2×2 WiFi + Bluetooth 4.0 Combo Adapter for use only on computer models equipped with an Intel processor
719845-001	Webcam/microphone module (includes double-sided adhesive)
719859-001	Power connector cable
719860-001	Fan (includes cable)
719861-001	Heat sink for use only on computer models equipped with an Intel processor and a graphics subsystem with UMA memory (includes thermal replacement material)
719862-001	Heat sink for use only on computer models equipped with an Intel processor and a graphics subsystem with discrete memory (includes thermal replacement material)
719863-001	PCH heat sink (includes thermal replacement material)

Spare part number	Description
719864-001	Thermal Material Kit (includes thermal replacement material)
720459-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
720459-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
720659-001	Wireless Antenna Kit (includes left and right wireless antenna cables and transceivers)
720660-001	Display enclosure in pearl white finish
720661-001	Display enclosure in flyer red finish
720662-001	Display enclosure in revolutionary blue finish
720663-001	Display enclosure in regal purple finish
720664-001	Display enclosure in sparkling black and silver finish
720665-001	Base enclosure for use only on HP Pavilion 17 Notebook computer models
720666-001	Display bezel
720667-001	Display panel cable (includes webcam/microphone module cable)
720668-001	Optical drive connector cable
720669-001	Display hinges (includes left and right hinges and hinge brackets)
720670-001	Keyboard with backlight in black finish for use on all computer models in the United States (includes backlight cable and keyboard cable)
720670-031	Keyboard with backlight in black finish for use on all computer models in the United Kingdom (includes backlight cable and keyboard cable)
720670-041	Keyboard with backlight in black finish for use on all computer models in Germany (includes backlight cable and keyboard cable)
720670-051	Keyboard with backlight in black finish for use on all computer models in France (includes backlight cable and keyboard cable)
720670-061	Keyboard with backlight in black finish for use on all computer models in Italy (includes backlight cable and keyboard cable)
720670-071	Keyboard with backlight in black finish for use on all computer models in Spain (includes backlight cable and keyboard cable)
720670-131	Keyboard with backlight in black finish for use only on computer models equipped with an AMD processor in Portugal (includes backlight cable and keyboard cable)
720670-141	Keyboard with backlight in black finish for use on all computer models in Turkey (includes backlight cable and keyboard cable)
720670-151	Keyboard with backlight in black finish for use on all computer models in Greece (includes backlight cable and keyboard cable)
720670-171	Keyboard with backlight in black finish for use only on computer models equipped with an Intel processor in Saudi Arabia (includes backlight cable and keyboard cable)
720670-211	Keyboard with backlight in black finish for use on all computer models in Hungary (includes backlight cable and keyboard cable)

Spare part number	Description
720670-251	Keyboard with backlight in black finish for use on all computer models in Russia (includes backlight cable and keyboard cable)
720670-261	Keyboard with backlight in black finish for use only on computer models equipped with an Intel processor in Bulgaria (includes backlight cable and keyboard cable)
720670-271	Keyboard with backlight in black finish for use on all computer models in Romania (includes backlight cable and keyboard cable)
720670-A41	Keyboard with backlight in black finish for use on all computer models in Belgium (includes backlight cable and keyboard cable)
720670-B31	Keyboard with backlight in black finish for use on all computer models Internationally (includes backlight cable and keyboard cable)
720670-BA1	Keyboard with backlight in black finish for use on all computer models the Adriatic Region (includes backlight cable and keyboard cable)
720670-BB1	Keyboard with backlight in black finish for use only on computer models equipped with an Intel processor in Israel (includes backlight cable and keyboard cable)
720670-BG1	Keyboard with backlight in black finish for use on all computer models in Switzerland (includes backlight cable and keyboard cable)
720670-DB1	Keyboard with backlight in black finish for use on all computer models in Canada (includes backlight cable and keyboard cable)
720670-DH1	Keyboard with backlight in black finish for use on all computer models in Denmark, Finland, Norway, and Sweden (includes backlight cable and keyboard cable)
720670-FL1	Keyboard with backlight in black finish for use on all computer models in the Czech Republic and Slovakia (includes backlight cable and keyboard cable)
720671-001	DVD±RW Double Layer SuperMulti Drive
720672-001	TouchPad button board (includes TouchPad board cable and TouchPad button board cable)
720673-001	Power button board for use with HP Pavilion 17 Notebook computer models only (includes cable)
720674-001	RJ-45/USB board (includes cable)
720675-001	Service cover
720676-001	17.3 in, BrightView, HD, LED, display panel
720677-001	Rubber Kit
720678-001	Screw Kit
720679-001	Speaker Kit (includes left and right speakers and cables)
720680-001	Top cover in pearl white finish (includes TouchPad)
720681-001	Top cover in flyer red finish (includes TouchPad)
720682-001	Top cover in revolutionary blue finish (includes TouchPad)
720683-001	Top cover in regal purple finish (includes TouchPad)
720684-001	Top cover in sparkling black and silver finish (includes TouchPad)
720689-001	Heat sink for use only on computer models equipped with an AMD A10, A8, A4, or E1-2500 processor and a graphics subsystem with UMA memory (includes thermal replacement material)
720690-001	Heat sink for use only on computer models equipped with an AMD A10, A8, A6-4400M, or A4 processor and a graphics subsystem with discrete memory (includes thermal replacement material)

Spare part number	Description
720691-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
720691-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes thermal replacement material)
720692-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
720692-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
723522-001	Intel Quad Core i7-4702MQ 2.20 GHz processor (SC turbo up to 2.90 GHz; 1600 MHz FSB, 6.0 MB L3 cache, 37 W; includes thermal replacement material)
724535-001	Keyboard with backlight in white finish for use on all computer models in the United States (includes backlight cable and keyboard cable)
724535-031	Keyboard with backlight in white finish for use on all computer models in the United Kingdom (includes backlight cable and keyboard cable)
724535-041	Keyboard with backlight in white finish for use on all computer models in Germany (includes backlight cable and keyboard cable)
724535-051	Keyboard with backlight in white finish for use on all computer models in France (includes backlight cable and keyboard cable)
724535-061	Keyboard with backlight in white finish for use on all computer models in Italy (includes backlight cable and keyboard cable)
724535-071	Keyboard with backlight in white finish for use on all computer models in Spain (includes backlight cable and keyboard cable)
724535-131	Keyboard with backlight in white finish for use only on computer models equipped with an AMD processor in Portugal (includes backlight cable and keyboard cable)
724535-141	Keyboard with backlight in white finish for use on all computer models in Turkey (includes backlight cable and keyboard cable)
724535-151	Keyboard with backlight in white finish for use on all computer models in Greece (includes backlight cable and keyboard cable)
724535-171	Keyboard with backlight in white finish for use only on computer models equipped with an Intel processor in Saudi Arabia (includes backlight cable and keyboard cable)
724535-211	Keyboard with backlight in white finish for use on all computer models in Hungary (includes backlight cable and keyboard cable)
724535-251	Keyboard with backlight in white finish for use on all computer models in Russia (includes backlight cable and keyboard cable)
724535-261	Keyboard with backlight in white finish for use only on computer models equipped with an Intel processor in Bulgaria (includes backlight cable and keyboard cable)
724535-271	Keyboard with backlight in white finish for use on all computer models in Romania (includes backlight cable and keyboard cable)
724535-A41	Keyboard with backlight in white finish for use on all computer models in Belgium (includes backlight cable and keyboard cable)
724535-B31	Keyboard with backlight in white finish for use on all computer models Internationally (includes backlight cable and keyboard cable)

Spare part number	Description
724535-BA1	Keyboard with backlight in white finish for use on all computer models in the Adriatic Region (includes backlight cable and keyboard cable)
724535-BB1	Keyboard with backlight in white finish for use only on computer models equipped with an Intel processor in Israel (includes backlight cable and keyboard cable)
724535-BG1	Keyboard with backlight in white finish for use on all computer models in Switzerland (includes backlight cable and keyboard cable)
724535-DB1	Keyboard with backlight in white finish for use on all computer models in Canada (includes backlight cable and keyboard cable)
724535-DH1	Keyboard with backlight in white finish for use on all computer models in Denmark, Finland, Norway, and Sweden (includes backlight cable and keyboard cable)
724535-FL1	Keyboard with backlight in white finish for use on all computer models in the Czech Republic and Slovakia (includes backlight cable and keyboard cable)
724884-001	Heat sink for use only on computer models equipped with an AMD A6-5200 processor and a graphics subsystem with UMA memory (includes thermal replacement material)
724885-001	Heat sink for use only on computer models equipped with an AMD A6-5200 processor and a graphics subsystem with discrete memory (includes thermal replacement material)
726633-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
726633-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes thermal replacement material)
726634-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
726634-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
729843-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel i3-3110M processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
729843-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes thermal replacement material)
729844-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
729844-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
731534-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the FreeDOS operating system (includes thermal replacement material)
731534-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the Windows 8 Standard operating system (includes thermal replacement material)

Spare part number	Description
733476-001	Qualcomm Atheros AR9565 802.11b/g/n 1×1 WiFi + Bluetooth 4.0 Combo Adapter for use on all computer models
733515-001	Display enclosure in mineral black finish for use on all computer models
733516-001	Top cover in mineral black finish for use on all computer models (includes TouchPad)
735080-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
735080-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
736175-001	Heat sink for use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with UMA memory (includes thermal replacement material)
736176-001	Heat sink for use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with discrete memory (includes thermal replacement material)
737131-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
737131-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system (includes thermal replacement material)
737326-001	Intel Celeron 2950M 2.00 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, 37 W; includes thermal replacement material)
737327-001	Intel Core i3-4000M 2.40 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W; includes thermal replacement material)
737328-001	Intel Core i5-4200M 2.5 GHz processor (SC turbo up to 3.10 GHz; 1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W; includes thermal replacement material)
737329-001	Intel Pentium 3550M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 37 W; includes thermal replacement material)
737452-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
737452-501	System board for use only on computer HP Pavilion 17 Notebook computer equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system (includes thermal replacement material)
739356-001	Intel Celeron 1005M 1.90GHz processor (1600 MHz, 2.0 MB L3 cache, dual core, 35 W)
741976-001	RTC battery for use only on computer models equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor (includes cable and double-sided tape)
747002-001	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
747002-501	System board for use only on HP Pavilion 17 Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system (includes thermal replacement material)
748411-001	Display enclosure in hazel berry finish
748412-001	Display enclosure in goji berry finish

Spare part number	Description
748413-001	Top cover in hazel berry finish for use on all computer models (includes TouchPad)
748414-001	Top cover in goji berry finish for use on all computer models (includes TouchPad)
749966-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
749966-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system (includes thermal replacement material)
749967-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes thermal replacement material)
749967-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system (includes thermal replacement material)
749968-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
749968-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system (includes thermal replacement material)
749969-001	Power button board for use with HP Pavilion 17 TouchSmart Notebook computer models only (includes cable)
749970-001	**17.3 in** (43.94 cm) display assembly, HD+, WLED, BrightView, AG, SVA, LED TouchSmart display assembly for use only on HP Pavilion 17 TouchSmart Notebook computer models (includes webcam/microphone module and wireless antenna cables)
749983-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes replacement thermal material)
749983-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system (includes replacement thermal material)
749984-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system (includes replacement thermal material)
749984-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system (includes replacement thermal material)
749985-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system
749985-501	System board for use only on HP Pavilion 17 TouchSmart Notebook models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system
753890-001	Base enclosure for use only on HP Pavilion 17 TouchSmart Notebook computer models

Spare part number	Description
758897-001	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system (includes thermal replacement material)
758897-501	System board for use only on HP Pavilion 17 TouchSmart Notebook computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system (includes thermal replacement material)

4 Removal and replacement procedures preliminary requirements

Tools required

You will need the following tools to complete the removal and replacement procedures:

- Flat-bladed screw driver
- Magnetic screw driver
- Phillips P0 and P1 screw drivers

Service considerations

The following sections include some of the considerations that you must keep in mind during disassembly and assembly procedures.

NOTE: As you remove each subassembly from the computer, place the subassembly (and all accompanying screws) away from the work area to prevent damage.

Plastic parts

CAUTION: Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic parts. Apply pressure only at the points designated in the maintenance instructions.

Cables and connectors

> **CAUTION:** When servicing the computer, be sure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the computer.

Cables must be handled with extreme care to avoid damage. Apply only the tension required to unseat or seat the cables during removal and insertion. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing cables. Be sure that cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced. Handle flex cables with extreme care; these cables tear easily.

Drive handling

> **CAUTION:** Drives are fragile components that must be handled with care. To prevent damage to the computer, damage to a drive, or loss of information, observe these precautions:

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

Before handling a drive, be sure that you are discharged of static electricity. While handling a drive, avoid touching the connector.

Before removing a diskette drive or optical drive, be sure that a diskette or disc is not in the drive and be sure that the optical drive tray is closed.

Handle drives on surfaces covered with at least one inch of shock-proof foam.

Avoid dropping drives from any height onto any surface.

After removing a hard drive, an optical drive, or a diskette drive, place it in a static-proof bag.

Avoid exposing an internal hard drive to products that have magnetic fields, such as monitors or speakers.

Avoid exposing a drive to temperature extremes or liquids.

If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package "FRAGILE."

Grounding guidelines

Electrostatic discharge damage

Electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases, ESD contains enough power to alter device parameters or melt silicon junctions.

A discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Even if the spark is neither felt nor heard, damage may have occurred.

An electronic device exposed to ESD may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

CAUTION: To prevent damage to the computer when you are removing or installing internal components, observe these precautions:

Keep components in their electrostatic-safe containers until you are ready to install them.

Before touching an electronic component, discharge static electricity by using the guidelines described in this section.

Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

If you remove a component, place it in an electrostatic-safe container.

The following table shows how humidity affects the electrostatic voltage levels generated by different activities.

CAUTION: A product can be degraded by as little as 700 V.

Typical electrostatic voltage levels			
	Relative humidity		
Event	10%	40%	55%
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPS from plastic tube	2,000 V	700 V	400 V
Removing DIPS from vinyl tray	11,500 V	4,000 V	2,000 V
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PCB	26,500 V	20,000 V	7,000 V
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V

Packaging and transporting guidelines

Follow these grounding guidelines when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe tubes, bags, or boxes.

- Protect ESD-sensitive parts and assemblies with conductive or approved containers or packaging.

- Keep ESD-sensitive parts in their containers until the parts arrive at static-free workstations.

- Place items on a grounded surface before removing items from their containers.

- Always be properly grounded when touching a component or assembly.

- Store reusable ESD-sensitive parts from assemblies in protective packaging or nonconductive foam.

- Use transporters and conveyors made of antistatic belts and roller bushings. Be sure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

Workstation guidelines

Follow these grounding workstation guidelines:

- Cover the workstation with approved static-shielding material.

- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.

- Use conductive field service tools, such as cutters, screw drivers, and vacuums.

- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.

- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.

- Handle ESD-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.

- Avoid contact with pins, leads, or circuitry.

- Turn off power and input signals before inserting or removing connectors or test equipment.

Equipment guidelines

Grounding equipment must include either a wrist strap or a foot strap at a grounded workstation.

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm ±10% resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, use alligator clips to connect a wrist strap.

- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one megohm resistance between the operator and ground. To be effective, the conductive must be worn in contact with the skin.

The following grounding equipment is recommended to prevent electrostatic damage:

- Antistatic tape
- Antistatic smocks, aprons, and sleeve protectors
- Conductive bins and other assembly or soldering aids
- Nonconductive foam
- Conductive tabletop workstations with ground cords of one megohm resistance
- Static-dissipative tables or floor mats with hard ties to the ground
- Field service kits
- Static awareness labels
- Material-handling packages
- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

The following table lists the shielding protection provided by antistatic bags and floor mats.

Material	Use	Voltage protection level
Antistatic plastics	Bags	1,500 V
Carbon-loaded plastic	Floor mats	7,500 V
Metallized laminate	Floor mats	5,000 V

5 Removal and replacement procedures for Customer Self-Repair parts

NOTE: The Customer Self-Repair program is not available in all locations. Installing a part not supported by the Customer Self-Repair program may void your warranty. Check your warranty to determine if Customer Self-Repair is supported in your location.

Component replacement procedures

NOTE: Please read and follow the procedures described here to access and replace Customer Self-Repair parts successfully.

NOTE: Details about your computer, including model, serial number, product key, and length of warranty, are on the labels on your computer. See Labels on page 18 for details.

This chapter provides removal and replacement procedures for Customer Self-Repair parts.

There are as many as 9 screws that must be removed, replaced, and/or loosened when servicing Customer Self-Repair parts. Make special note of each screw size and location during removal and replacement.

Battery

Description	Spare part number
6-cell, 62-Wh, 2.80-Ah, Li-ion battery	710417-001
6-cell, 47-Wh, 2.20-Ah, Li-ion battery	710416-001

Before removing the battery, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

Remove the battery:

WARNING! To reduce potential safety issues, use only the user-replaceable battery provided with the computer, a replacement battery provided by HP, or a compatible battery purchased from HP.

CAUTION: Removing a user-replaceable battery that is the sole power source for the computer can cause loss of information. To prevent loss of information, save your work or shut down the computer through Windows before removing the battery.

1. Turn the computer upside down on a flat surface.

2. Slide the battery release latch **(1)** to release the battery.

NOTE: The battery release latch automatically returns to its original position.

3. Pivot the battery **(2)** upward.

4. Remove the battery **(3)** from the computer.
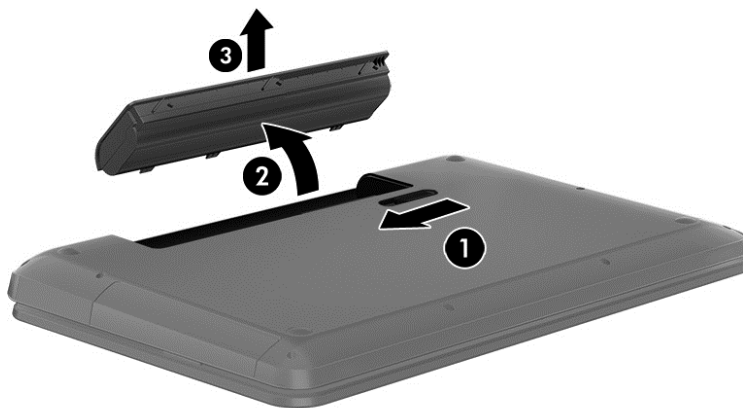
Reverse this procedure to install the battery.

Optical drive

NOTE: This section applies only to computer models equipped with an Intel processor.

Description	Spare part number
DVD±RW Double Layer SuperMulti Drive	720671-001

Before removing the optical drive, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47).

Remove the optical drive:

1. Loosen the Phillips PM3.0×10.5 captive screw **(1)** that secures the service cover to the computer.

2. Slide the service cover **(2)** forward until it disengages from the computer.

3. Remove the service cover **(3)**.

   The service cover is available using spare part number 720675-001.
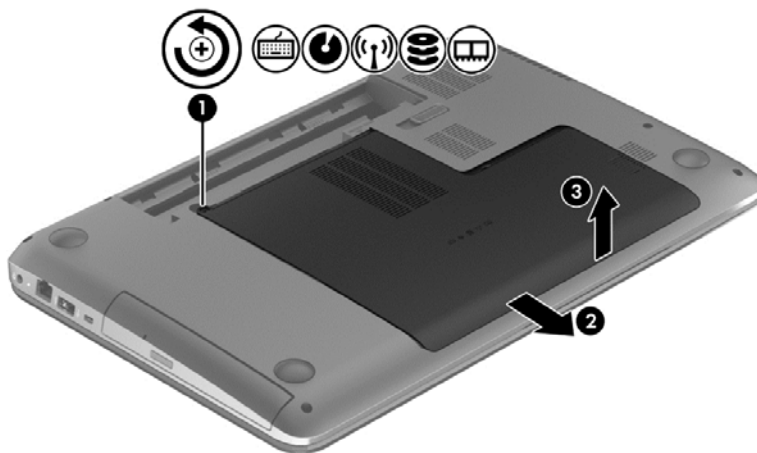
4. Position the computer with the left side toward you.

5. Remove the Phillips PM2.5×7.0 screw **(1)** that secures the optical drive to the computer.

6. Insert a flat-bladed screwdriver or similar tool into the optical drive tab access **(2)** and press the tab to the left to release the optical drive from the computer.

7. Remove the optical drive **(3)**.
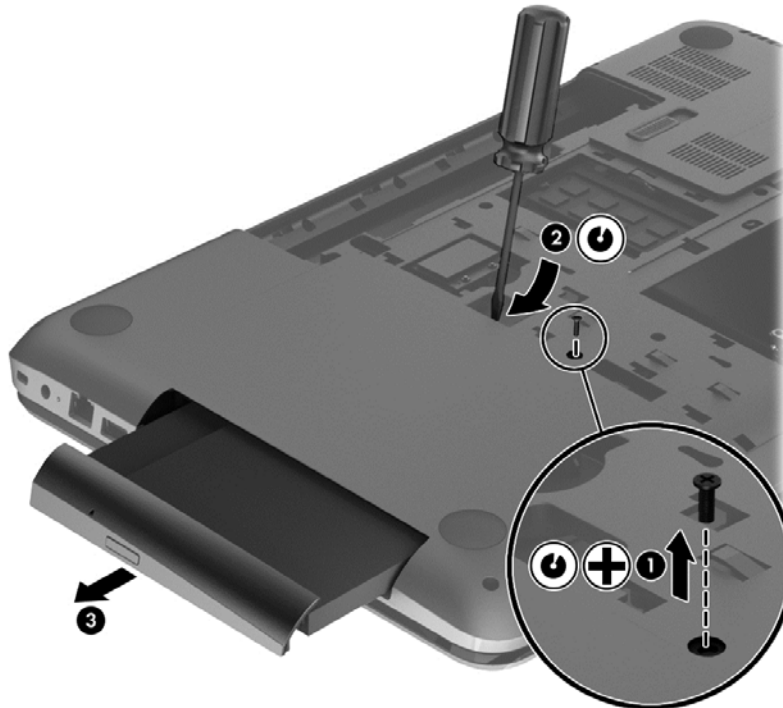
Reverse this procedure to install the optical drive.

Hard drive

NOTE: The hard drive spare part kit does not include the hard drive bracket, hard drive connector cable, and screws. These components are included in the Hard Drive Hardware Kit, spare part number 716179-001.

Description	Spare part number
1 TB, 5400 rpm, 9.5 mm	676521-001
750 GB, 5400 rpm, 9.5 mm	634250-001
640 GB, 5400 rpm, 9.5 mm (supported for use on computer models equipped with Intel processors and supported for use on computer models equipped with AMD processors with Windows 8.0)	669300-001
500 GB, 5400 rpm, 7.0 mm	683802-001

Before removing the hard drive, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47).

5. Remove the service cover (see Optical drive on page 48).

Remove the hard drive:

1. Remove the two Phillips PM2.5×5.75 screws **(1)** that secure the hard drive to the computer.

2. Disconnect the hard drive connector cable **(2)** from the system board.
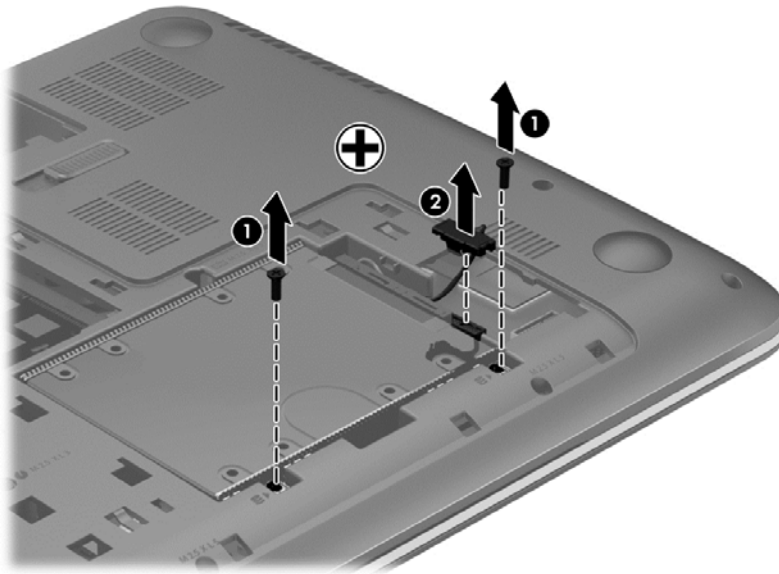
3. Lift up on the hard drive tab **(1)** to release the hard drive from the hard drive bay.

4. Remove the hard drive **(2)**.
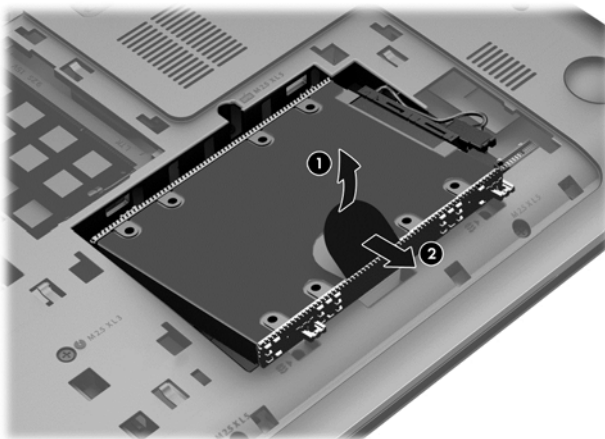
5. If it is necessary to disassemble the hard drive, perform the following steps:

   a. Position the hard drive with the connector toward you.

   b. Disconnect the hard drive connector cable **(1)** from the hard drive.

   c. Remove the four Phillips PM2.5×3.25 screws **(2)** that secure the hard drive bracket to the hard drive.

   d. Remove the hard drive bracket **(3)** from the hard drive.

   The hard drive bracket, hard drive connector cable, and screws are available in the Hard Drive Hardware Kit, spare part number 716179-001.
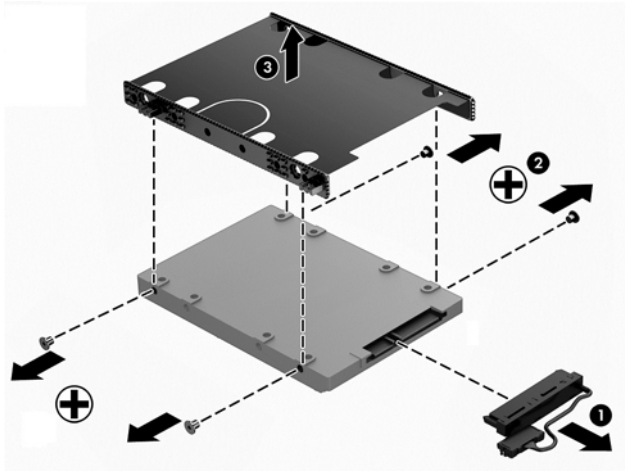
Reverse this procedure to install the hard drive.

WLAN module

Description	Spare part number
Qualcomm Atheros QCA9485 802.11b/g/n WiFi Adapter for use on all computer models	675794-001
Qualcomm Atheros AR9565 802.11b/g/n 1×1 WiFi + Bluetooth 4.0 Combo Adapter for use on all computer models	733476-001
Ralink RT3290LE 802.11b/g/n 1×1 WiFi and Bluetooth 4.0 Combo Adapter for use on all computer models	690020-001
Realtek RTL8188EE 802.11b/g/n WiFi Adapter for use on all computer models	709848-001
Intel Centrino Wireless-N 2230 Combo Adapter for use only on computer models equipped with an Intel processor (not supported on computer models equipped with Windows 8.1)	670290-001
Intel Wireless-N 7260BN 802.11b/g/n 2×2 WiFi + Bluetooth 4.0 Combo Adapter for use only on computer models equipped with an Intel processor	717384-001

⚠ **CAUTION:** To prevent an unresponsive system, replace the wireless module only with a wireless module authorized for use in the computer by the governmental agency that regulates wireless devices in your country or region. If you replace the module and then receive a warning message, remove the module to restore device functionality, and then contact technical support.

Before removing the WLAN module, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see).

5. Remove the service cover (see).

Remove the WLAN module:

1. Disconnect the WLAN antenna cables **(1)** from the terminals on the WLAN module.

   NOTE: The WLAN antenna cable labeled "1" connects to the WLAN module "Main" terminal labeled "1". The WLAN antenna cable labeled "2" connects to the WLAN module "Aux" terminal labeled "2".

2. Remove the Phillips PM2.5×3.25 screw **(2)** that secures the WLAN module to the system board. (The WLAN module tilts up.)

3. Remove the WLAN module **(3)** by pulling the module away from the slot at an angle.
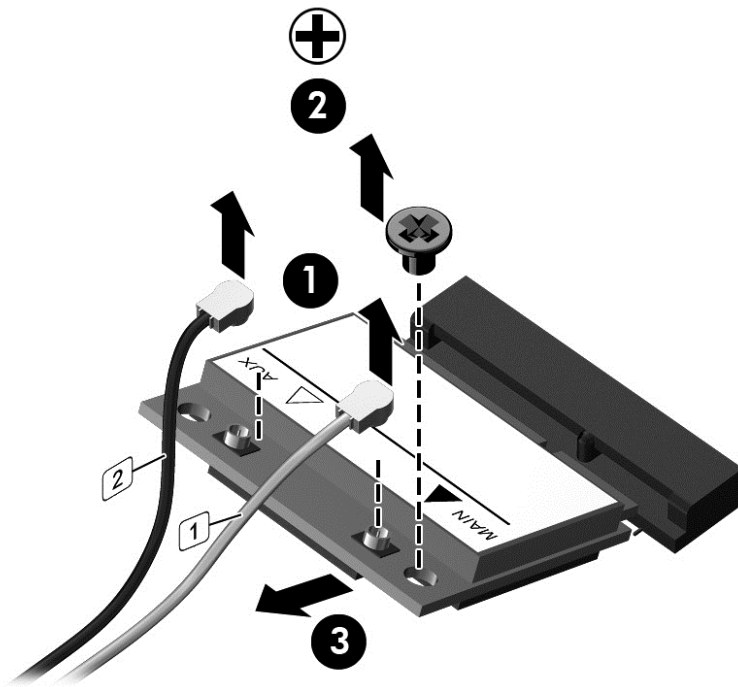
NOTE: If the WLAN antenna cables are not connected to the terminals on the WLAN module, the protective sleeves must be installed on the antenna connectors, as shown in the following illustration.
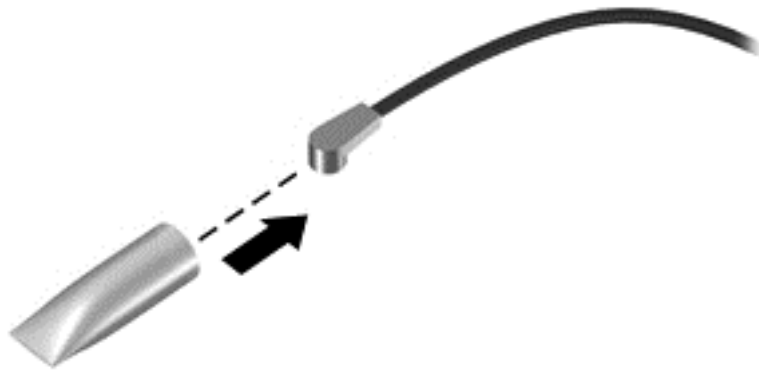
Reverse this procedure to install the WLAN module.

Memory module

Description	Spare part number
8 GB (PC3L, 12800, 1600 MHz)	693374-001
4 GB (PC3L, 12800, 1600 MHz)	691740-001
2 GB (PC3L, 12800, 1600 MHz)	691739-001

NOTE: Before adding new memory, make sure you update the computer to the latest BIOS. Refer to .

Before removing a memory module, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see).

5. Remove the service cover (see).

Remove the memory module:

1. Spread the retaining tabs **(1)** on each side of the memory module slot to release the memory module. (The memory module tilts up.)

2. Remove the memory module **(2)** by pulling the module away from the slot at an angle.
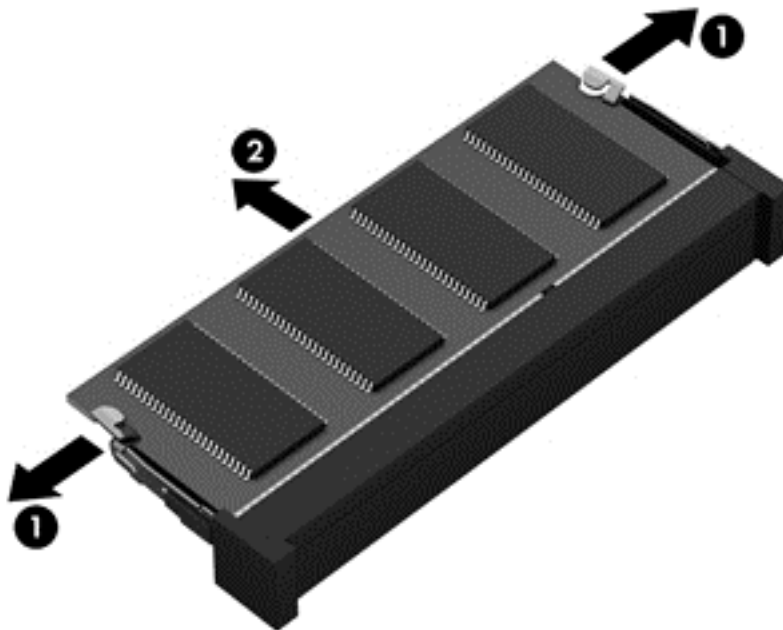
Reverse this procedure to install a memory module.

6 Removal and replacement procedures for Authorized Service Provider parts

⚠ **CAUTION:** Components described in this chapter should only be accessed by an authorized service provider. Accessing these parts can damage the computer or void the warranty.

Component replacement procedures

This chapter provides removal and replacement procedures for Authorized Service Provider only parts.

There are as many as 62 screws that must be removed, replaced, and/or loosened when servicing the computer. Make special note of each screw size and location during removal and replacement.

Keyboard

NOTE: The keyboard spare part kit includes a keyboard cable.

For use in country/region	Spare part number		Spare part number
In black finish for use on all computer models in Belgium	720670-A41	In black finish for use on all computer models Internationally	720670-B31
In black finish for use only on computer models equipped with an Intel processor in Bulgaria	720670-261	In black finish for use only on computer models equipped with an AMD processor in Portugal	720670-131
In black finish for use on all computer models in Canada	720670-DB1	In black finish for use on all computer models in Romania	720670-271
In black finish for use on all computer models in the Czech Republic and Slovakia	720670-FL1	In black finish for use on all computer models in Russia	720670-251
In black finish for use on all computer models in Denmark, Finland, Norway, and Sweden	720670-DH1	In black finish for use only on computer models equipped with an Intel processor in Saudi Arabia	720670-171
In black finish for use on all computer models in France	720670-051	In black finish for use on all computer models the Adriatic Region	720670-BA1
In black finish for use on all computer models in Germany	720670-041	In black finish for use on all computer models in Spain	720670-071
In black finish for use on all computer models in Greece	720670-151	In black finish for use on all computer models in Switzerland	720670-BG1
In black finish for use on all computer models in Hungary	720670-211	In black finish for use on all computer models in Turkey	720670-141
In black finish for use only on computer models equipped with an Intel processor in Israel	720670-BB1	In black finish for use on all computer models in the United Kingdom	720670-031
In black finish for use on all computer models in Italy	720670-061	In black finish for use on all computer models in the United States	720670-001
In white finish for use on all computer models in Belgium	724535-A41	In white finish for use on all computer models Internationally	724535-B31
In white finish for use only on computer models equipped with an Intel processor in Bulgaria	724535-261	In white finish for use only on computer models equipped with an AMD processor in Portugal	724535-131
In white finish for use on all computer models in Canada	724535-DB1	In white finish for use on all computer models in Romania	724535-271
In white finish for use on all computer models in the Czech Republic and Slovakia	724535-FL1	In white finish for use on all computer models in Russia	724535-251
In white finish for use on all computer models in Denmark, Finland, Norway, and Sweden	724535-DH1	In white finish for use only on computer models equipped with an Intel processor in Saudi Arabia	724535-171

For use in country/region		Spare part number	
In white finish for use on all computer models in France	724535-051	In white finish for use on all computer models the Adriatic Region	724535-BA1
In white finish for use on all computer models in Germany	724535-041	In white finish for use on all computer models in Spain	724535-071
In white finish for use on all computer models in Greece	724535-151	In white finish for use on all computer models in Switzerland	724535-BG1
In white finish for use on all computer models in Hungary	724535-211	In white finish for use on all computer models in Turkey	724535-141
In white finish for use only on computer models equipped with an Intel processor in Israel	724535-BB1	In white finish for use on all computer models in the United Kingdom	724535-031
In white finish for use on all computer models in Italy	724535-061	In white finish for use on all computer models in the United States	724535-001

Before removing the keyboard, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47).

5. Remove the service cover (see Optical drive on page 48).

Remove the keyboard:

1. Remove the two Phillips PM2.5×7.0 screws that secure the keyboard to the computer.
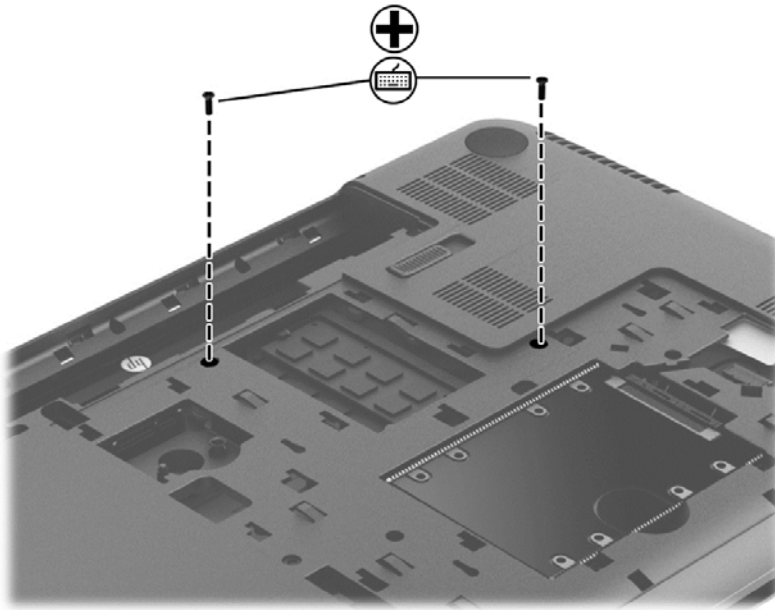
2. Partially open the computer.

3. Rest and secure the computer on its left side.

4. Insert a thin tool into the keyboard release hole, and then press on the back of the keyboard until the keyboard disengages from the computer.
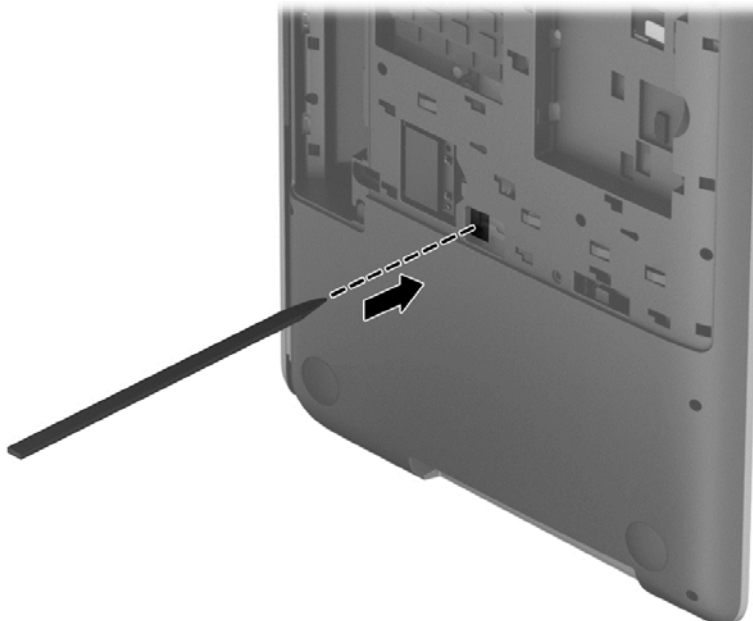
5. Turn the computer right-side up, with the front toward you.

6. Open the computer as far as it will open.

7. Lift the rear edge of the keyboard until it rests at an angle.

8. Swing the rear edge of the keyboard **(1)** up and forward until it rests upside down on the palm rest.

9. Release the zero insertion force (ZIF) connector **(2)** to which the keyboard ribbon cable is attached, and then disconnect the keyboard ribbon cable **(3)** from the system board.

10. Remove the keyboard **(4)**.
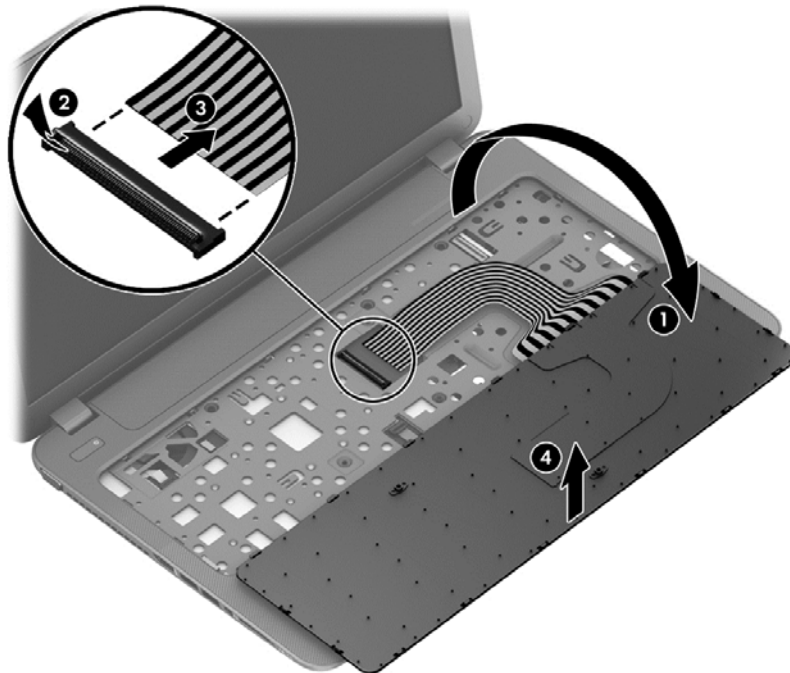
Reverse this procedure to install the keyboard.

Top cover

NOTE: The top cover spare part kit includes the TouchPad.

Description	Spare part number
In flyer red finish for use on all computer models	720681-001
In goji berry finish for use on all computer models	748414-001
In hazel berry finish for use on all computer models	748413-001
In mineral black finish for use on all computer models	733516-001
In pearl white finish for use on all computer models	720680-001
In regal purple finish for use on all computer models	720683-001
In revolutionary blue finish for use on all computer models	720682-001
In sparkling black and silver finish for use on all computer models	720684-001

Before removing the top cover, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. Keyboard (see Keyboard on page 56)

NOTE: When replacing the top cover, be sure to remove the following components from the defective top cover and install them on the replacement top cover:

- Power button board (see Power button board on page 63)

- TouchPad button board (see TouchPad button board on page 64)

Remove the top cover:

1. Close the computer.

2. Turn the computer upside down with the front toward you.

3. Remove the 15 Phillips PM2.5×7.0 screws that secure the top cover to the computer.
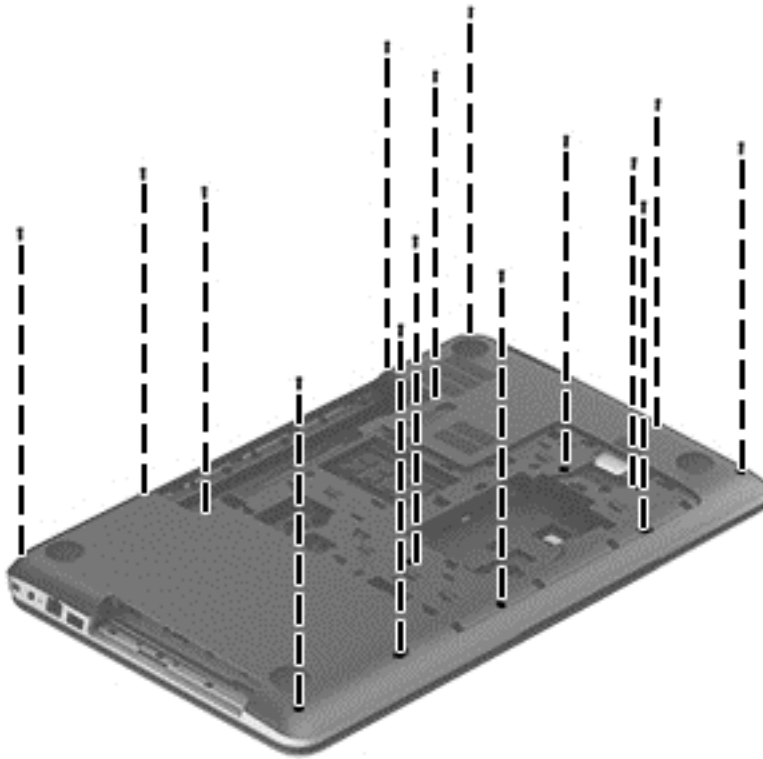
4. Remove the six Phillips PM2.0×3.0 screws that secure the top cover to the computer.
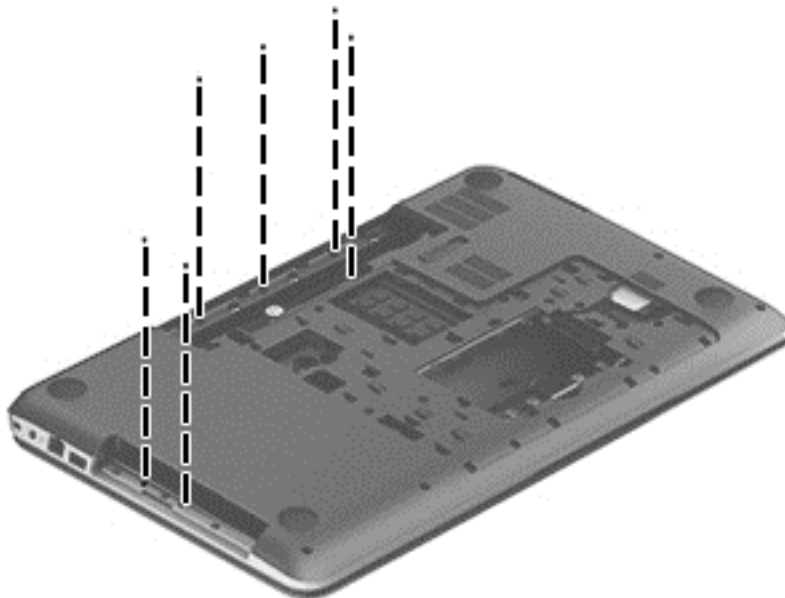
5. Turn the computer right side up with the front toward you.

6. Open the computer.

7. Release the ZIF connector **(1)** to which the power button board ribbon cable is attached, and then disconnect the power button board ribbon cable from the system board.

8. Release the ZIF connector **(2)** to which the TouchPad button board ribbon cable is attached, and then disconnect the TouchPad button board ribbon cable from the system board.

9. Remove the three Phillips PM2.5×7.0 screws that secure the top cover to the computer.
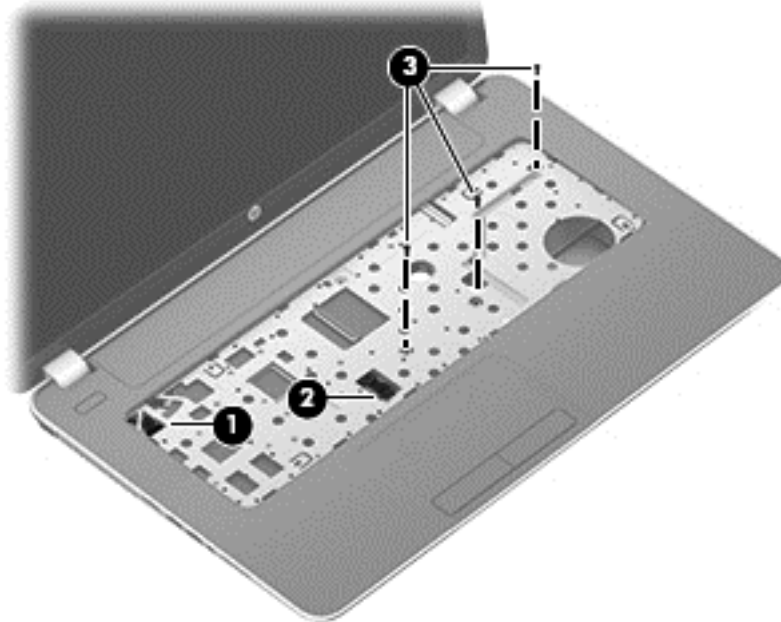
10. Lift the rear edge of the top cover **(1)** until the left and right sides detach from the computer.

11. Remove the top cover **(2)**.
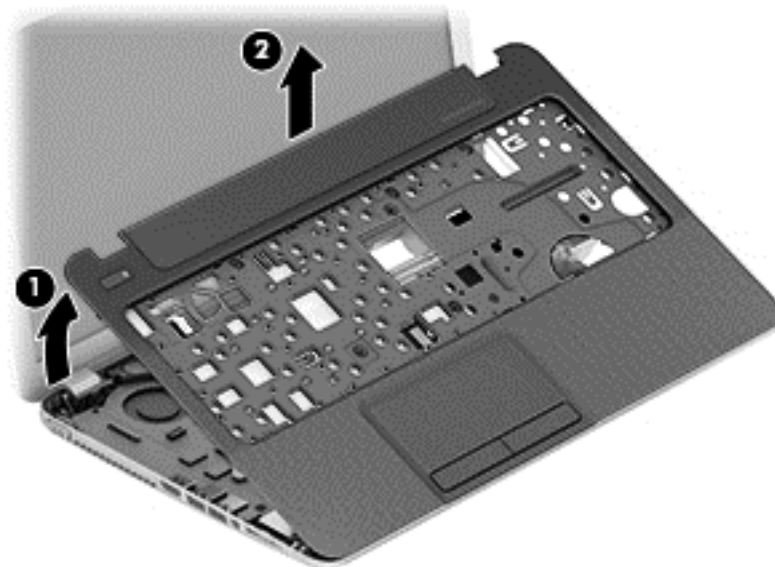
Reverse this procedure to install the top cover.

Power button board

Description	Spare part number
Power button board (includes cable)	
For use only with HP Pavilion 17 Notebook computer models	720673-001
For use only with HP Pavilion 17 TouchSmart Notebook computer models	749969-001

Before removing the power button board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. Keyboard (see Keyboard on page 56)

   d. Top cover (see Top cover on page 60)

Remove the power button board:

1. Turn the top cover upside down, with the front toward you.

2. Remove the Phillips PM2.5×3.0 screw **(1)** that secures the power button board to the top cover.

3. Release the clips **(2)** that secure the power button board to the top cover.

4. Remove the power button board **(3)** and cable.
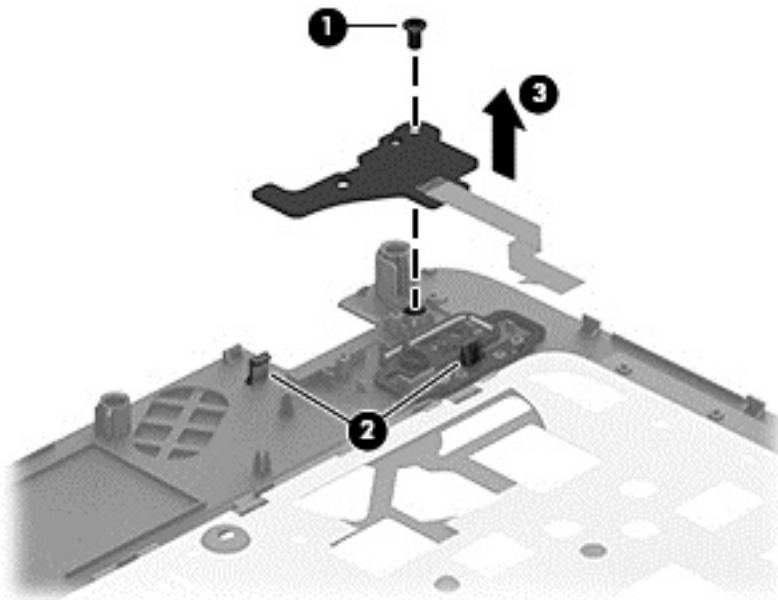
Reverse this procedure to install the power button board.

TouchPad button board

Description	Spare part number
TouchPad button board (includes TouchPad button board cable and TouchPad cable)	720672-001

Before removing the TouchPad button board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

    a. Optical drive (see Optical drive on page 48)

    b. Hard drive (see Hard drive on page 49)

    c. Keyboard (see Keyboard on page 56)

    d. Top cover (see Top cover on page 60)

Remove the TouchPad button board:

1. Turn the top cover upside down with the front toward you.

2. Release the ZIF connector **(1)** to which the TouchPad board ribbon cable is attached, and then disconnect the TouchPad board ribbon cable from the TouchPad board.

3. Detach the TouchPad button board ribbon cable **(2)** from the TouchPad board. (The TouchPad button board ribbon cable is attached to the TouchPad board with double-sided adhesive.)

4. Release the two clips **(3)** that secure the TouchPad button board to the top cover.

5. Remove the TouchPad button board **(4)**.
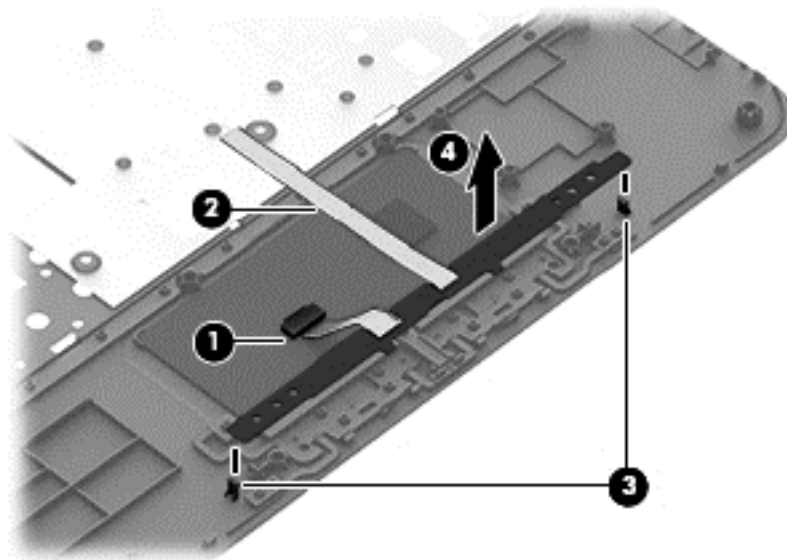
Reverse this procedure to install the TouchPad button board.

Display assembly

NOTE: The HP Pavilion 17 TouchSmart Notebook models are spared at the display assembly only. For removal procedures for the HP Pavilion 17 Notebook non-touch screen models display assembly subcomponents, see Display assembly subcomponents on page 67.

Component	Spare part number
17.3 in (43.94 cm) display assembly, HD+, WLED, BrightView, AG, SVA, LED TouchSmart display assembly for HP Pavilion 17 TouchSmart Notebook models (includes webcam/microphone module and wireless antenna cables)	749970-001

To remove the display assembly, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

Remove the display assembly:

1. Disconnect the display panel cable **(1)** from the system board.

2. Release the display panel cable from the clips built into the base enclosure **(2)**.

3. Release the wireless antenna cables from the clips built into the base enclosure **(3)**.

4. Remove the four Phillips PM2.5×7.0 screws **(1)** that secure the display assembly to the base enclosure.

5. Remove the display assembly **(2)** from the computer.

Reverse this procedure to reassemble and install the display assembly.

Display assembly subcomponents

NOTE: The display assembly subcomponents are for the HP Pavilion 17 Notebook non-touch screen models only. For removal procedures for an HP Pavilion 17 TouchSmart Notebook model display assembly; see Display assembly on page 65.

Component	Spare part number
Antenna Kit (includes left and right wireless antenna cables and transceivers)	720659-001
Display bezel	720666-001
Display enclosure:	
In flyer red finish	720661-001
In goji berry finish	748412-001
In hazel berry finish	748411-001
In mineral black finish	733515-001
In pearl white finish	720660-001
In regal purple finish	720663-001
In revolutionary blue finish	720662-001
In sparkling black and silver finish	720664-001
Display hinges (includes left and right hinges and hinge brackets)	720669-001
Display panel, 17.3 in (43.94 cm), BrightView, HD, LED, display panel	720676-001
Display panel cable (includes webcam/microphone module cable)	720667-001
Webcam/microphone module (includes double-sided adhesive)	719845-001

To remove the display assembly and access the display assembly subcomponents, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

Remove the display assembly:

1. Disconnect the display panel cable **(1)** from the system board.

2. Release the display panel cable from the clips built into the base enclosure **(2)**.

3. Release the wireless antenna cables from the clips built into the base enclosure **(3)**.

4. Remove the four Phillips PM2.5×7.0 screws **(1)** that secure the display assembly to the base enclosure.

5. Remove the display assembly **(2)** from the computer.

6. If it is necessary to replace the display bezel or any of the display assembly subcomponents:

   a. Remove the two screw covers **(1)** and the two Phillips PM2.5×5.5 screws **(2)** that secure the display bezel to the display assembly.

   The screw covers are available in the Rubber Kit, spare part number 720677-001.
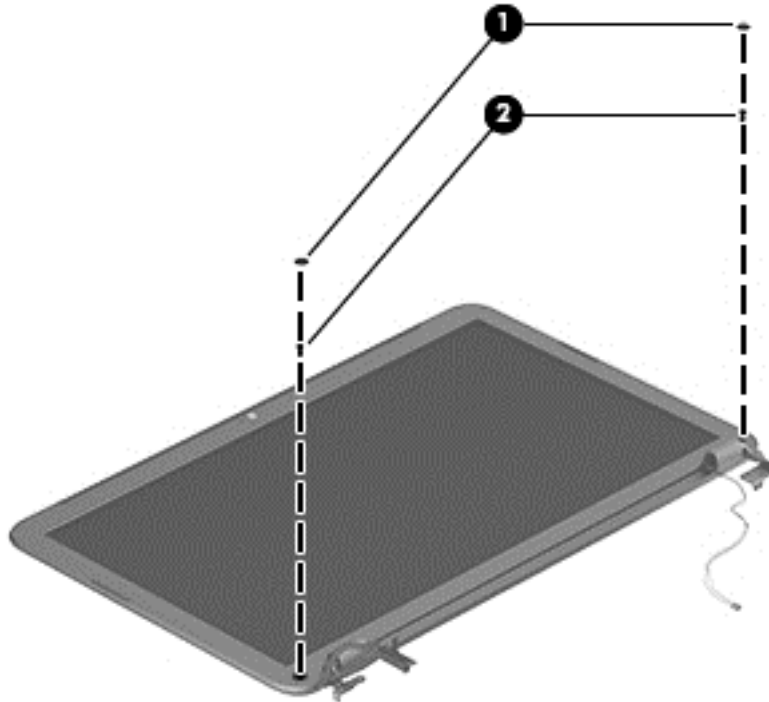
   b. Flex the inside edges of the top edge **(1)**, the left and right sides **(2)**, and the bottom edge **(3)** of the display bezel until the bezel disengages from the display enclosure.

c. Remove the display bezel **(4)**.
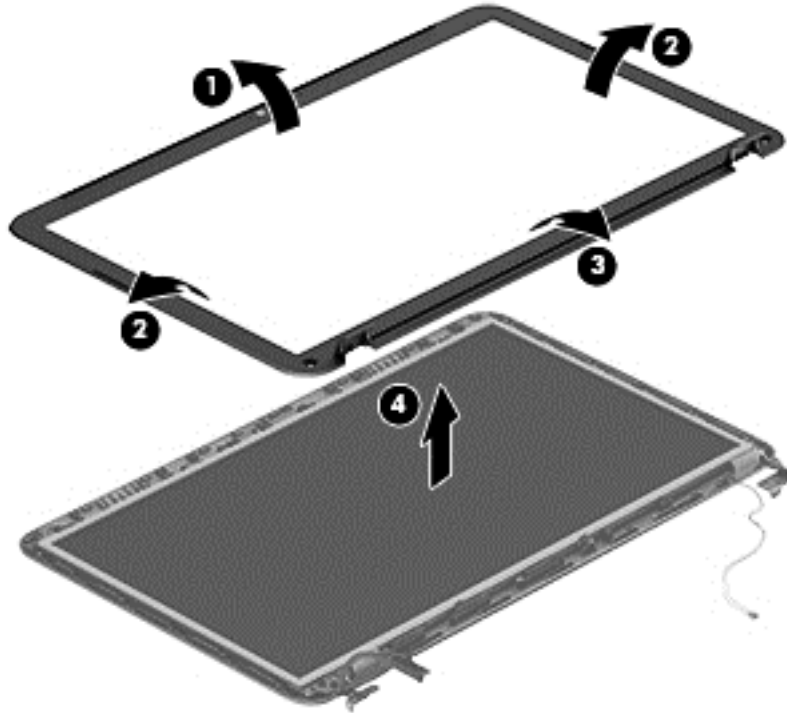
7. If it is necessary to replace the webcam/microphone module:

> ⚠ **CAUTION:** Handle the webcam/microphone module with caution. This module has a thin profile and is susceptible to damage when not handled carefully.

a. Detach the webcam/microphone module **(1)** from the display enclosure. (The webcam/microphone module is attached to the display enclosure with double-sided adhesive.)

b. Disconnect the webcam/microphone module cable **(1)** from the webcam/microphone module.
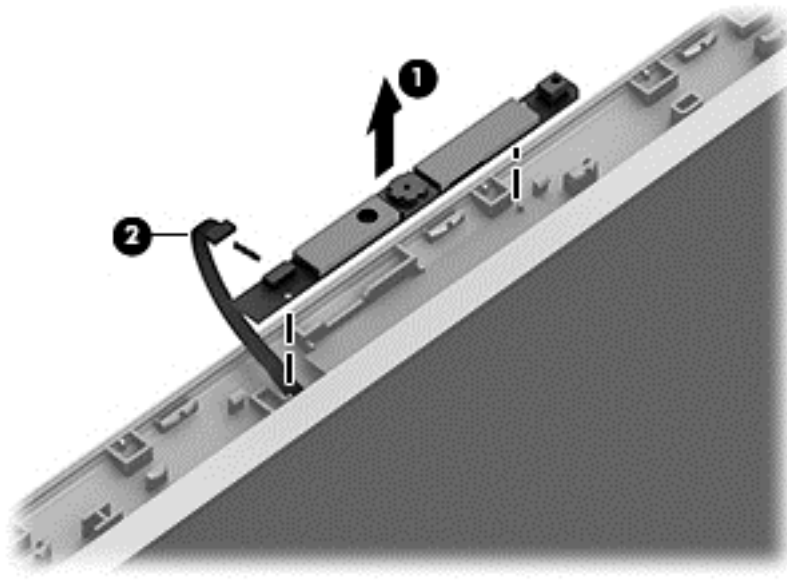
c. Remove the webcam/microphone module.

8. If it is necessary to replace the display panel:

   a. Remove the six Phillips PM2.5×4.5 screws that secure the display panel to the display enclosure.
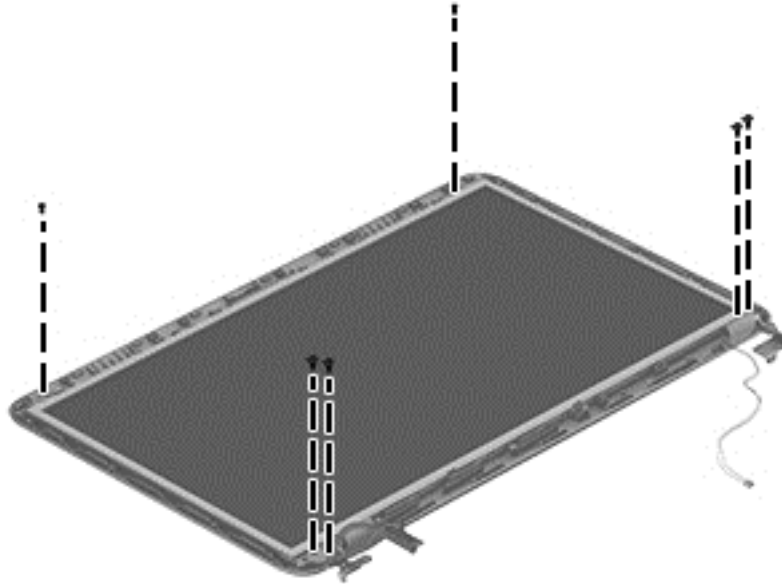
   ⚠ **CAUTION:** Before turning the display panel upside down, make sure the work surface is clear of tools, screws, and any other foreign objects. Failure to follow this caution can result in damage to the display panel.

   b. Lift the top edge of the display panel **(1)** and swing it up and forward until it rests upside down in front of the display enclosure.

   c. Release the adhesive strip **(2)** that secures the display panel cable connector **(3)** to the display panel.

   d. Disconnect the display panel cable **(4)** from the display panel.
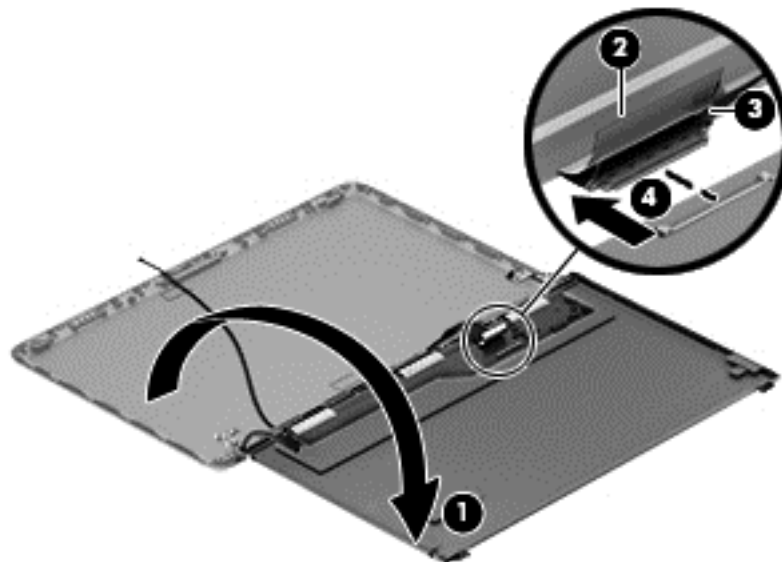
   e. Remove the display panel.

9. If it is necessary to replace the display hinges:

   a. Remove the four Phillips PM2.0×3.0 screws **(1)** that secure the display hinges to the display panel.

   b. Remove the display hinges **(2)**.
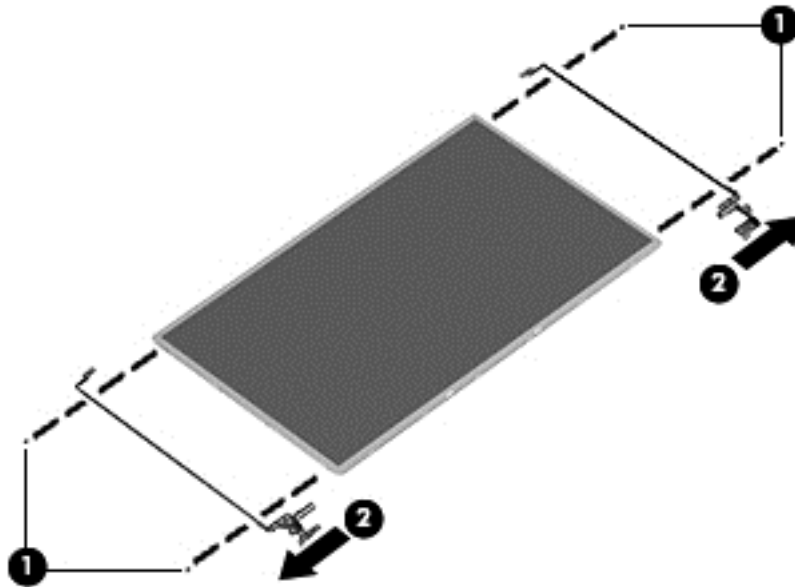
10. If it is necessary to replace the display panel cable:

    a. Release the webcam/microphone module cable from the adhesive **(1)** attached to the display enclosure.

    b. Release the display panel cable from the clips **(2)** and routing channel built into the display enclosure.

    c. Remove the display panel cable **(3)**.
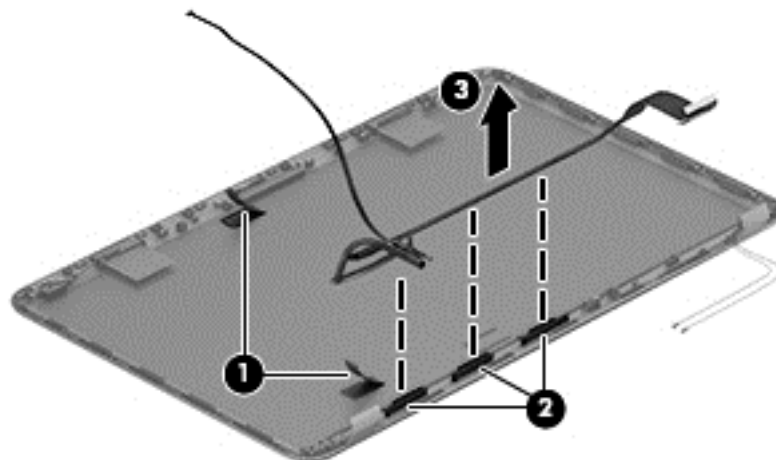
11. If it is necessary to replace the wireless antenna:

a. Detach the wireless antenna transceivers **(1)** from the display enclosure. (The wireless antenna transceivers are attached to the display enclosure with double-sided adhesive.)

b. Release the wireless antenna cables from the clips **(2)** and routing channel built into the left, right, and bottom edges of the display enclosure.

c. Remove the wireless antenna **(3)**.
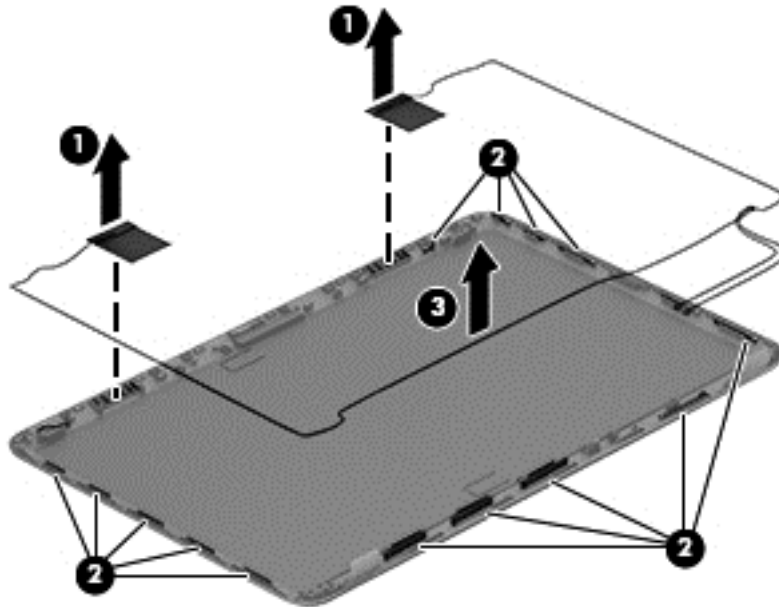
Reverse this procedure to reassemble and install the display assembly subcomponents.

System board

> NOTE: The system board spare part kit includes replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 719864-001.

Description	Spare part number
HP Pavilion 17 Notebook computer models	
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	737131-501
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	737131-001
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	720692-501
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	720692-001
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	720691-501
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	720691-001

Description	Spare part number
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	726634-501
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	726634-001
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	726633-501
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	726633-001
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	747002-001
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	747002-501
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the Windows 8 Standard operating system	731534-501
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with a UMA memory, and the FreeDOS operating system	731534-001
For use only on computer models equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	737452-501
For use only on computer models equipped with an AMD E1-2500 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	737452-001
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	713256-501
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	713256-001
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	735080-501
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	735080-001
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	713255-501
For use only on computer models equipped with the Intel HM86 chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	713255-001
For use only on computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the Windows 8 Standard operating system	720459-501
For use only on computer models equipped with the Intel HM76 chipset, a graphics subsystem with 2 GB of discrete memory, and the FreeDOS operating system	720459-001
For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	713258-501
For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	713258-001
For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	713257-501
For use only on computer models equipped with an Intel Core i5 or Pentium processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	713257-001

Description	Spare part number
For use only on computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with 1 GB of discrete memory, and the Windows 8 Standard operating system	729844-501
For use only on computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	729844-001
For use only on computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with UMA memory, and the Windows 8 Standard operating system	729843-501
For use only on computer models equipped with an Intel Core i3-3110M processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	729843-001
HP Pavilion 17 TouchSmart Notebook computer models	
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	749966-001
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749966-501
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749967-001
For use only on computer models equipped with the AMD A76M chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749967-501
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	749968-001
For use only on computer models equipped with an AMD A6-5200 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749968-501
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the FreeDOS operating system	758897-001
For use only on computer models equipped with an AMD A4-5000 processor, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	758897-501
For use only on computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749983-001
For use only on computer models equipped with the Intel HM76 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749983-501
For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with UMA memory, and the FreeDOS operating system	749984-001
For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with UMA memory, and the Windows 8.1 Standard operating system	749984-501
For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the FreeDOS operating system	749985-001
For use only on computer models equipped with the Intel HM86 Express chipset, a graphics subsystem with 1 GB of discrete memory, and the Windows 8.1 Standard operating system	749985-501

Before removing the system board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

NOTE: When replacing the system board, be sure that the following components are removed from the defective system board and installed on the replacement system board:

- Memory module (see Memory module on page 54)

- RTC battery (see RTC battery on page 78)

- Fan (see Fan on page 80)

- Heat sink (see Heat sink on page 81)

- Processor (see Processor on page 85)

Remove the system board:

1. Close the computer.

2. Turn the computer upside down with the front toward you.

3. Disconnect the optical drive connector cable from the system board.
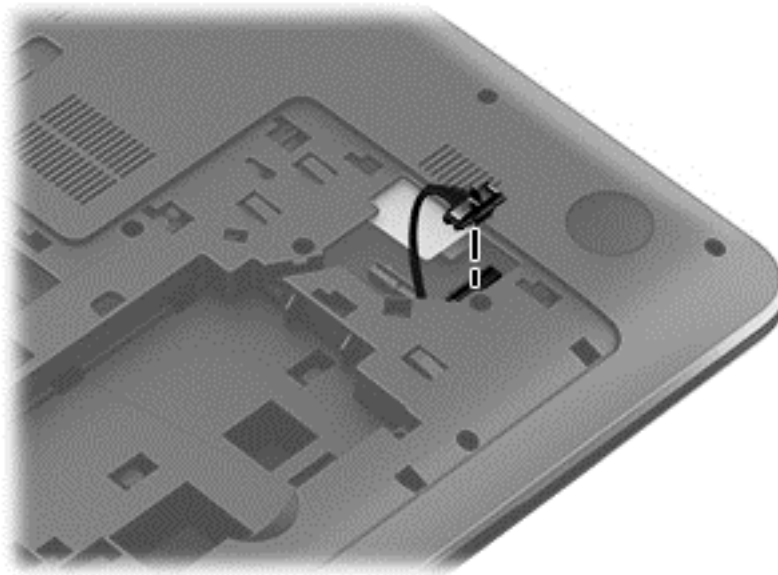
4. Turn the computer right side up with the front toward you.

5. Open the computer.

6. Disconnect the following cables from the system board:

   (1) Display panel cable

   (2) Speaker cable

(3) USB board ribbon cable

(4) Power connector cable

7. Remove the three Phillips PM2.5×7.0 screws **(5)** that secure the system board to the base enclosure.
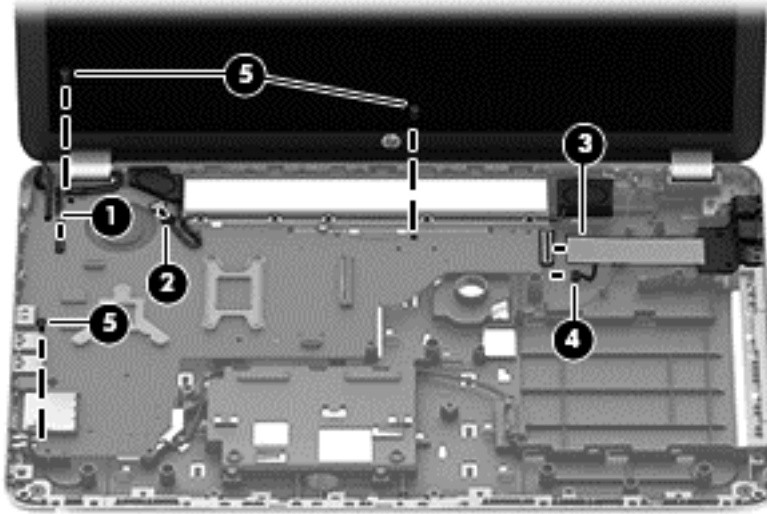
8. Lift the right side of the system board **(1)** until it rests at an angle.

9. Remove the system board **(2)** by sliding it up and to the right an angle.
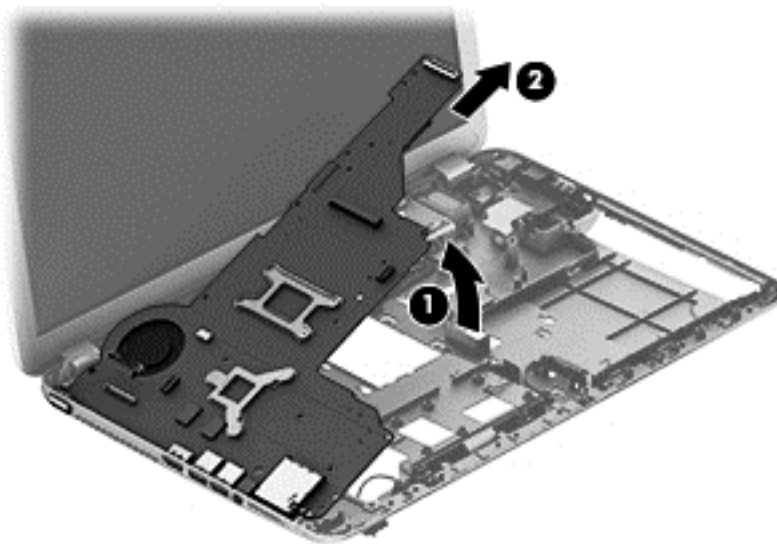
Reverse this procedure to install the system board.

RTC battery

Description	Spare part number
RTC battery (includes cable and double-sided tape)	
For use on all computer models except those equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor	637193-001
For use only on computer models equipped with an AMD A6-5200, AMD A4-5000, or AMD E1-2500 processor	741976-001

Before removing the RTC battery, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. System board (see System board on page 73)

Remove the RTC battery:

1. Turn the system board upside down with the front toward you.

2. Disconnect the RTC battery cable **(1)** from the system board.

3. Detach the RTC battery **(2)** from the system board. (The RTC battery is attached to the base enclosure by double-sided tape.)
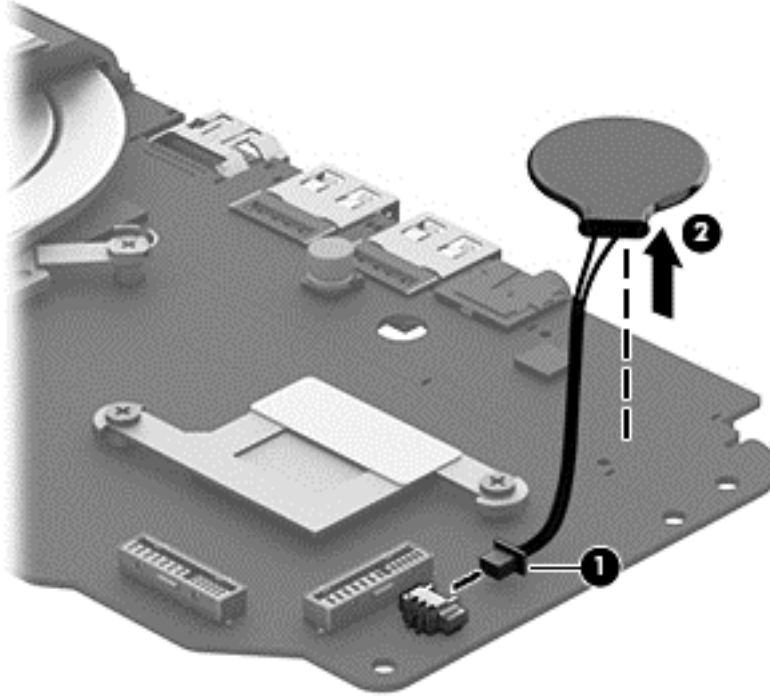
4. Remove the RTC battery.

Reverse this procedure to install the RTC battery.

Fan

Description	Spare part number
Fan (includes cable)	719860-001

Before removing the fan, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. System board (see System board on page 73)

Remove the fan:

1. Turn the system board upside down with the front toward you.

2. Disconnect the fan cable **(1)** from the system board.

3. Remove the Phillips PM2.0×5.0 screw **(2)** that secures the fan to the system board.

4. Remove the fan **(3)**.
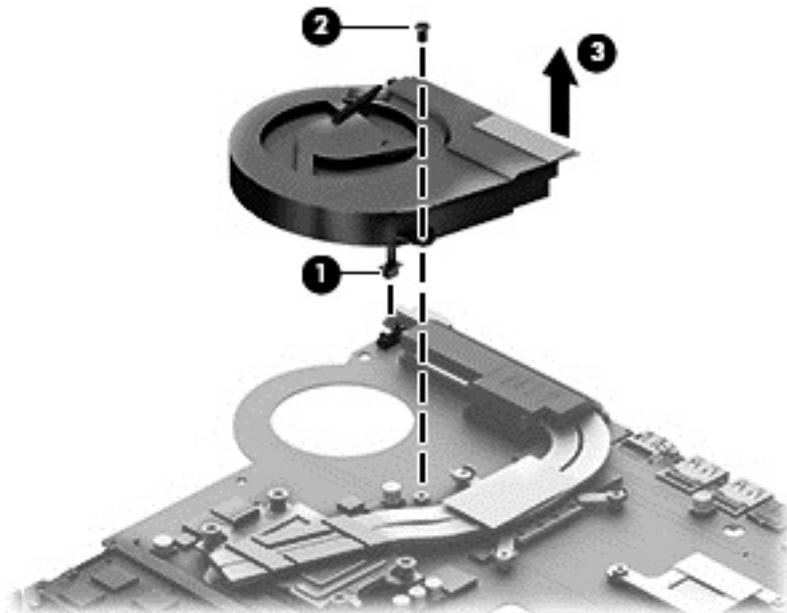
Reverse this procedure to install the fan.

Heat sink

NOTE: The heat sink spare part kit includes replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 719864-001.

Description	Spare part number
For use only on computer models equipped with an AMD A10, A8, A6-4400M, or A4 processor and a graphics subsystem with discrete memory	720690-001
For use only on computer models equipped with an AMD A10, A8, or A4 or E1-2500 processor and a graphics subsystem with UMA memory	720689-001
For use only on computer models equipped with an AMD A6-5200 and a graphics subsystem with discrete memory	724885-001
For use only on computer models equipped with an AMD A6-5200 and a graphics subsystem with UMA memory	724884-001
For use only on computer models equipped with Intel processor and a graphics subsystem with discrete memory	719862-001
For use only on computer models equipped with Intel processor and a graphics subsystem with UMA memory	719861-001
For use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with discrete memory	736176-001
For use only on computer models equipped with an Intel Core i3-3110M processor and a graphics subsystem with UMA memory	736175-001

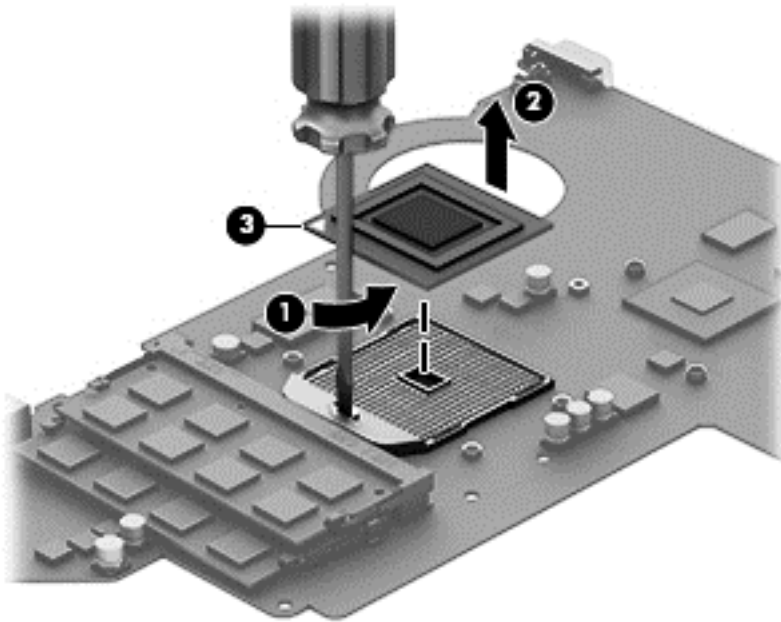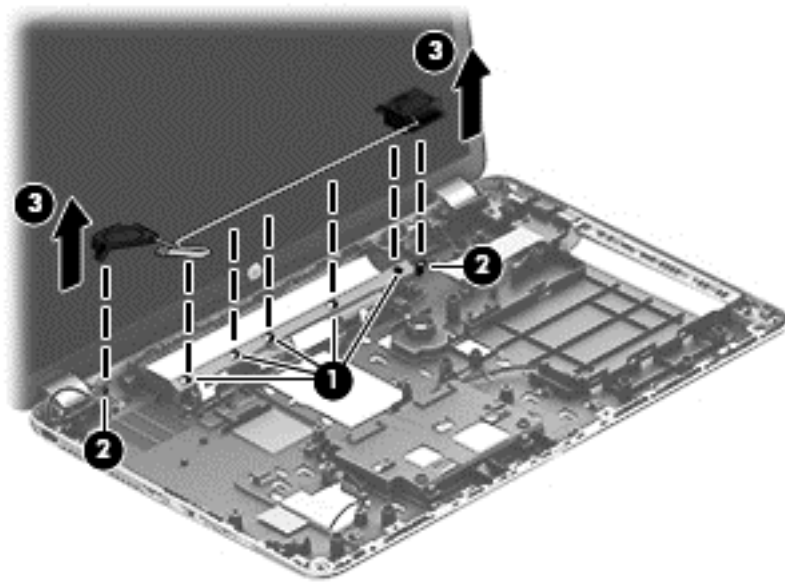Before removing the heat sink, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. System board (see System board on page 73)

   g. Fan (see Fan on page 80)

Remove the heat sink:

NOTE: Steps 1 and 2 apply to computer models equipped with a graphics subsystem with discrete memory.

1. Following the 1 through 7 sequence stamped into the heat sink, loosen the seven captive Phillips screws **(1)** that secure the heat sink to the system board.

2. Remove the heat sink **(2)**.

> **NOTE:** Due to the adhesive quality of the thermal material located between the heat sink and the system board components, it may be necessary to move the heat sink from side to side to detach it.
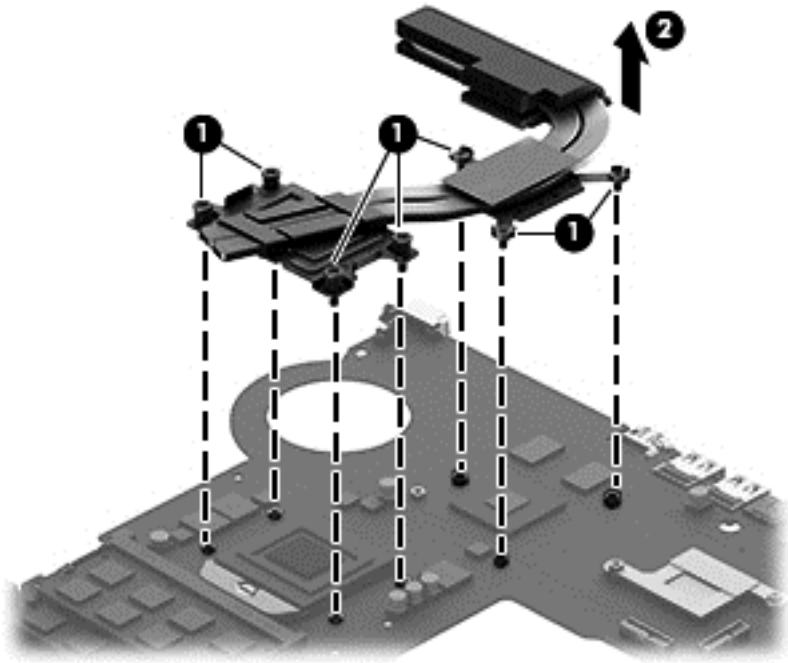
> **NOTE:** Steps 3 and 4 apply to computer models equipped with a graphics subsystem with UMA memory.

3. Following the 1 through 4 sequence stamped into the heat sink, loosen the four captive Phillips screws **(1)** that secure the heat sink to the system board.

4. Remove the heat sink **(2)**.

    NOTE: Due to the adhesive quality of the thermal material located between the heat sink and the system board components, it may be necessary to move the heat sink from side to side to detach it.
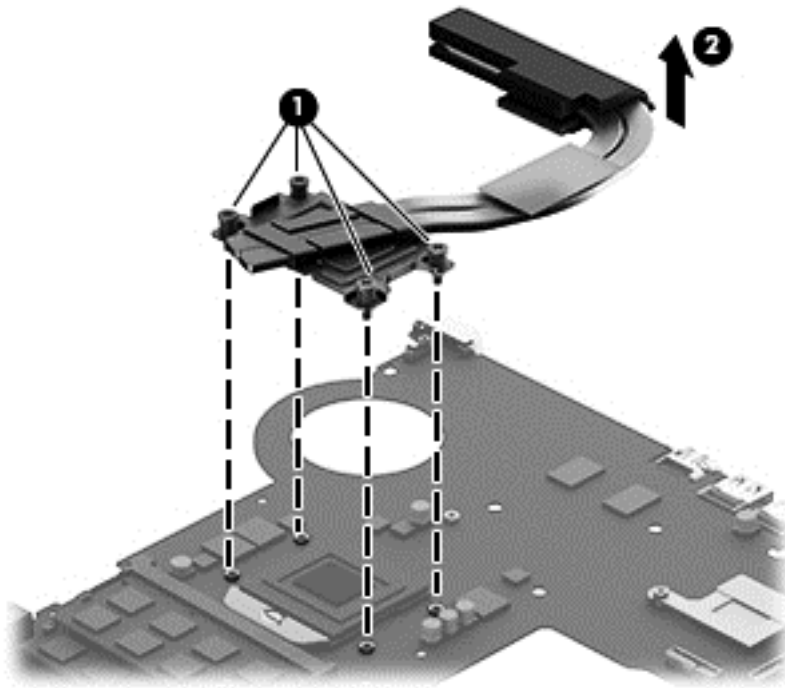
NOTE: The thermal material must be thoroughly cleaned from the surfaces of the heat sink and the system board components each time the heat sink is removed. Replacement thermal material is included with the heat sink, processor, and system board spare part kits.

●   Thermal paste is used on the processor **(1)** and the heat sink section **(2)** that services it

●   Thermal paste is used on the graphics chip **(3)** and the heat sink section **(4)** that services it
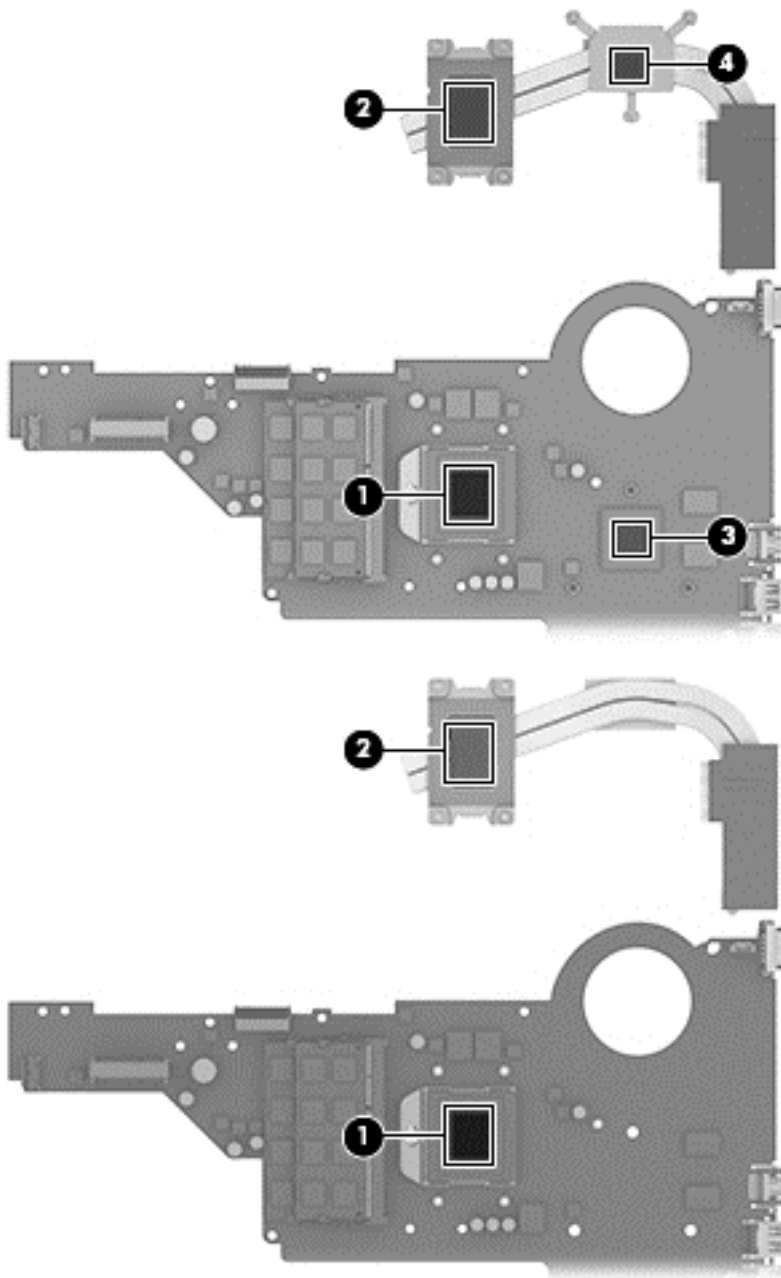
Reverse this procedure to install the heat sink.

Processor

NOTE: The processor spare part kit includes replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 719864-001.

Description	Spare part number
AMD A10-5750M 2.50 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	713548-001
AMD A10-4600M 2.30 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	683046-001
AMD A8-5550M 2.10 GHz processor (turbo up to 3.10 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	713551-001
AMD A8-4500M 1.90 GHz processor (turbo up to 2.80 GHz; 1600 MHz FSB, 4.0 MB L2 cache, DDR3, quad core, 35 W)	683048-001
AMD A6-5350M 2.90 GHz processor (turbo up to 3.50 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)	713550-001
AMD A6-4400M 2.70 GHz processor (turbo up to 3.20 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W)	683047-001
AMD A4-5150M 2.70 GHz processor (turbo up to 3.30 GHz; 1600 MHz FSB, 1.0 MB L2 cache, DDR3, dual core, 35 W); not supported for use on computer models equipped with Windows 8.1	713549-001
Intel Core i7-4702MQ 2.20 GHz processor (SC turbo up to 2.90 GHz; 1600 MHz FSB, 6.0 MB L3 cache, quad core, 37 W)	723522-001
Intel Core i3-4000M 2.40 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 37 W)	737327-001
Intel Core i3-3130M 2.60 GHz processor (1600 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)	713163-001
Intel Core i3-3110M 2.40 GHz processor (1333 MHz FSB, 3.0 MB L3 cache, dual core, 35 W)	682417-001
Intel Pentium i7-3632QM 2.2 GHz processor (SC turbo up to 3.2 GHz, 1600 MHz, 6 MB L3 cache, DDR3, quad core, 35 W)	701658-001
Intel Pentium 3550M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, dual core, 37 W)	737329-001
Intel Pentium 2030M 2.50 GHz processor (1600 MHz FSB, 2.0 MB L2 cache, dual core, 35 W)	700588-002
Intel Pentium 2020M 2.40 GHz processor (1600 MHz FSB, 2.0 MB L2 cache, dual core, 35 W)	700628-001
Intel Celeron 2950M 2.00 GHz processor (1600 MHz FSB, 2.0 MB L3 cache, 37 W)	737326-001
Intel Celeron 1005M 1.90GHz processor (1600 MHz, 2.0 MB L3 cache, dual core, 35 W)	739356-001

Before removing the processor, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

    a. Optical drive (see Optical drive on page 48)

    b. Hard drive (see Hard drive on page 49)

c. WLAN module (see)

d. Keyboard (see)

e. Top cover (see)

f. System board (see)

g. Fan (see)

h. Heat sink (see)

Remove the processor:

1. Use a flat-bladed screw driver **(1)** to turn the processor locking screw one-half turn counterclockwise, until you hear a click.

2. Lift the processor **(2)** straight up, and remove it.

> **NOTE:** The gold triangle **(3)** on the processor must be aligned with the triangle icon embossed on the processor socket when you install the processor.

Reverse this procedure to install the processor.

Speakers

| Description	Spare part number
Speakers (include left and right speakers and cables)	720679-001

Before removing the speakers, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. System board (see System board on page 73)

Remove the speakers:

1. Release the speaker cables from the clips **(1)** and routing channel built into the base enclosure.

2. Release the clips **(2)** that secure the speakers to the base enclosure.

3. Remove the speakers **(3)**.

Reverse this procedure to install the speakers.

RJ-45/USB board

Description	Spare part number
RJ-45/USB board (includes cable)	720674-001

Before removing the RJ-45/USB board, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

    a. Optical drive (see Optical drive on page 48)

    b. Hard drive (see Hard drive on page 49)

    c. WLAN module (see WLAN module on page 52)

    d. Keyboard (see Keyboard on page 56)

    e. Top cover (see Top cover on page 60)

Remove the RJ-45/USB board:

1. Release the ZIF connector **(1)** to which the RJ-45/USB board ribbon cable is attached, and then disconnect the RJ-45/USB board ribbon cable from the system board.

2. Remove the two Phillips PM2.5×7.0 screws **(2)** that secure the RJ-45/USB board to the base enclosure.

3. Remove the RJ-45/USB board **(3)**.
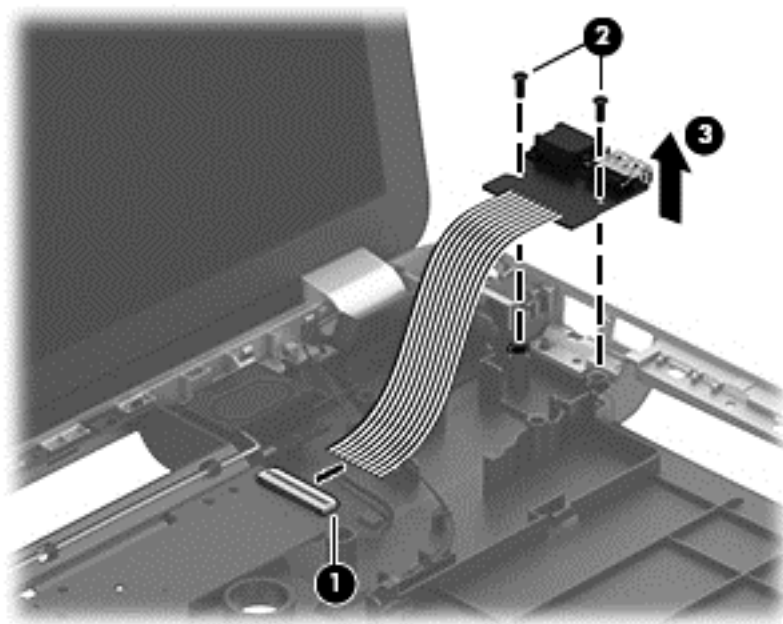
Reverse this procedure to install the RJ-45/USB board.

Power connector cable

Description	Spare part number
Power connector cable	719859-001

Before removing the power connector cable, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. RJ-45/USB board (see RJ-45/USB board on page 88)

Remove the power connector cable:

1. Disconnect the power connector cable **(1)** from the system board.

2. Release the power connector cable from the clips **(2)** built into the base enclosure.

3. Release the power connector **(3)** from the clips and mold built into the base enclosure.
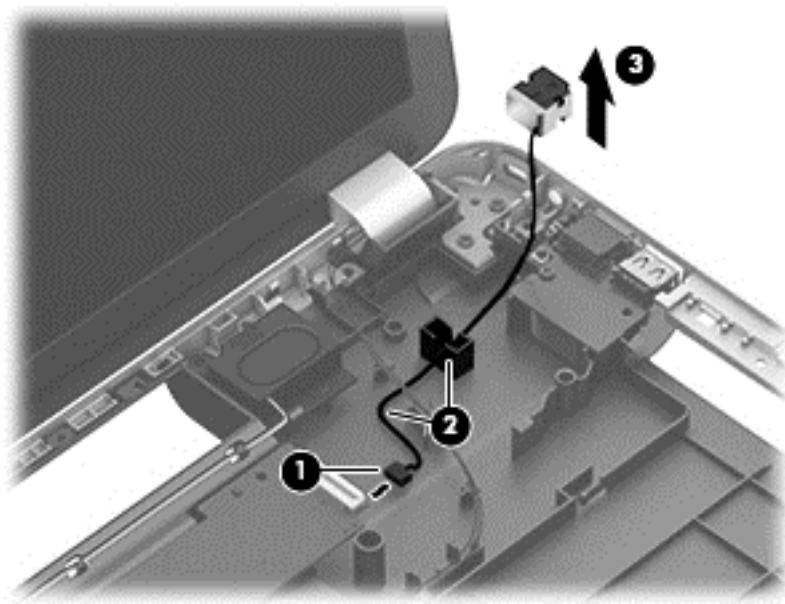
4. Remove the power connector cable.

Reverse this procedure to install the power connector cable.

Optical drive connector cable

Description	Spare part number
Optical drive connector cable	720668-001

Before removing the optical drive connector cable, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

   a. Optical drive (see Optical drive on page 48)

   b. Hard drive (see Hard drive on page 49)

   c. WLAN module (see WLAN module on page 52)

   d. Keyboard (see Keyboard on page 56)

   e. Top cover (see Top cover on page 60)

   f. System board (see System board on page 73)

Remove the optical drive connector cable:

1. Release the optical drive connector cable from the clips **(1)** and routing channel built into the base enclosure.

2. Remove the optical drive connector cable **(2)**.
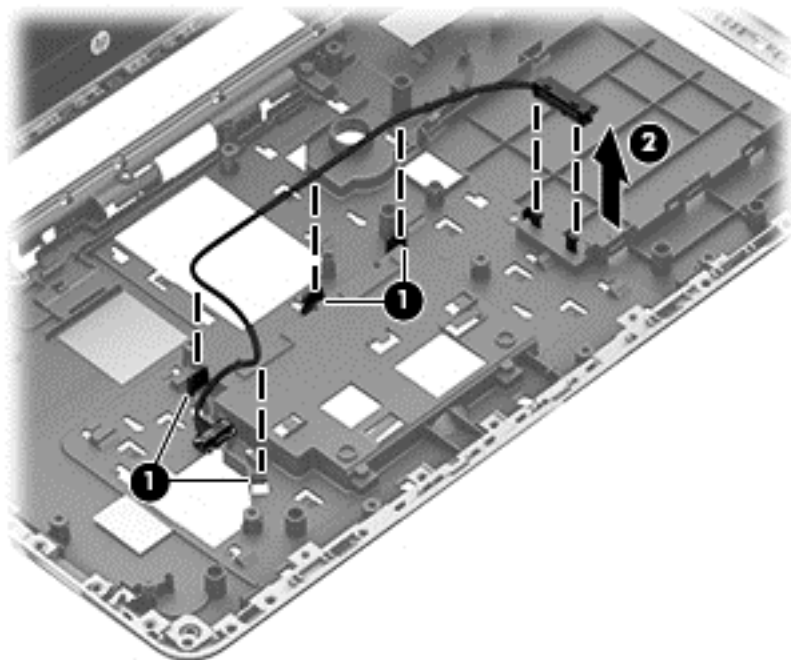
Reverse this procedure to install the optical drive connector cable.

PCH heat sink

NOTE: The post controller hub (PCH) heat sink spare part kit includes replacement thermal material. Replacement thermal material is also available in the Thermal Material Kit, spare part number 719864-001.

Description	Spare part number
PCH heat sink	719863-001

Before removing the PCH heat sink, follow these steps:

1. Turn off the computer. If you are unsure whether the computer is off or in Hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect the power from the computer by unplugging the power cord from the computer.

3. Disconnect all external devices from the computer.

4. Remove the battery (see Battery on page 47), and then remove the following components:

    a. Optical drive (see Optical drive on page 48)

    b. Hard drive (see Hard drive on page 49)

    c. WLAN module (see WLAN module on page 52)

    d. Keyboard (see Keyboard on page 56)

    e. Top cover (see Top cover on page 60)

    f. System board (see System board on page 73)

Remove the PCH heat sink:

1. Loosen the two captive Phillips screws **(1)** that secure the PCH heat sink to the system board.

2.   Remove the PCH heat sink **(2)**.

> **NOTE:**   Due to the adhesive quality of the thermal material located between the PCH heat sink and system board, it may be necessary to move the PCH heat sink from side to side to detach it.
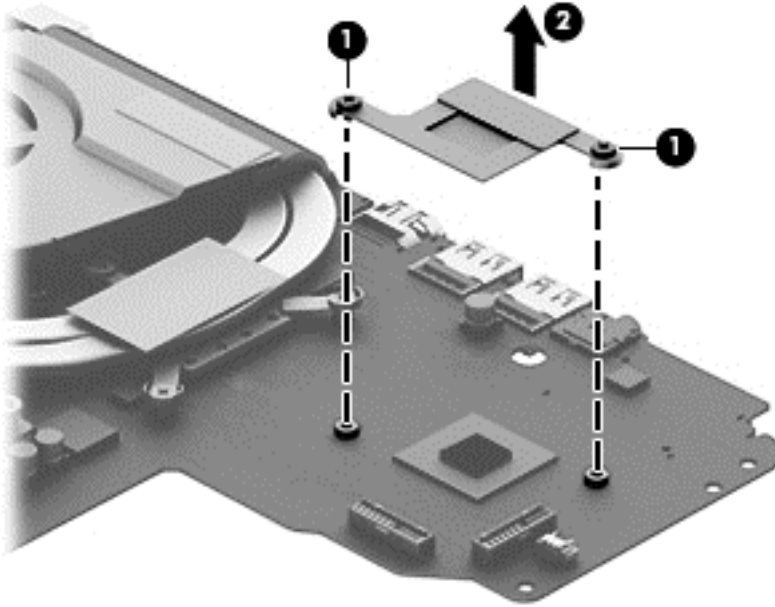
The thermal material must be thoroughly cleaned from the surfaces of the PCH heat sink and the PCH each time the PCH heat sink is removed. Replacement thermal material is included with the PCH heat sink and system board spare part kits.

> **NOTE:**   The following illustration shows the PCH heat sink replacement thermal material locations. A thermal pad is used on the PCA **(1)** and the PCH heat sink **(2)**.
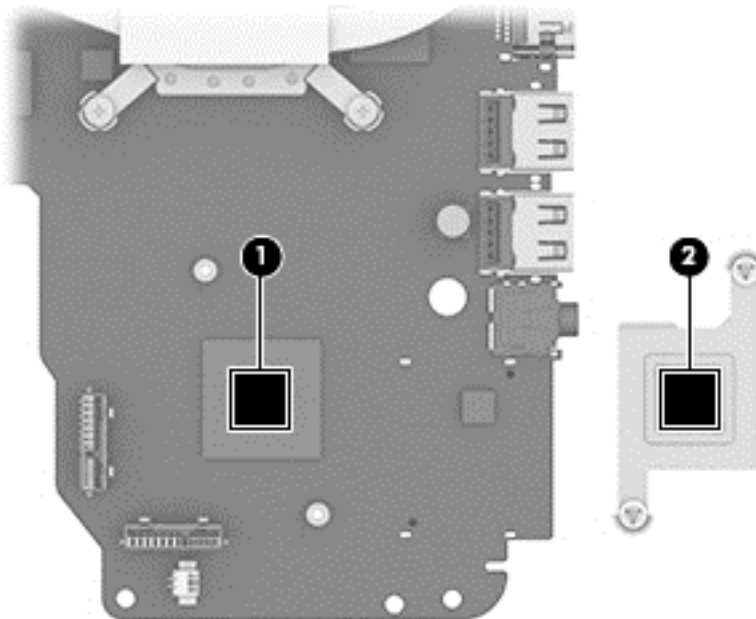
Reverse this procedure to install the PCH heat sink.

7 Using Setup Utility (BIOS) and HP PC Hardware Diagnostics (UEFI)

Setup Utility, or Basic Input/Output System (BIOS), controls communication between all the input and output devices on the system (such as disk drives, display, keyboard, mouse, and printer). Setup Utility (BIOS) includes settings for the types of devices installed, the startup sequence of the computer, and the amount of system and extended memory.

Starting Setup Utility (BIOS)

To start Setup Utility (BIOS), turn on or restart the computer, quickly press esc, and then press f10.

NOTE: Use extreme care when making changes in Setup Utility (BIOS). Errors can prevent the computer from operating properly.

Updating the BIOS

Updated versions of the BIOS may be available on the HP website.

Most BIOS updates on the HP website are packaged in compressed files called *SoftPaqs*.

Some download packages contain a file named Readme.txt, which contains information regarding installing and troubleshooting the file.

Determining the BIOS version

To determine whether available BIOS updates contain later BIOS versions than those currently installed on the computer, you need to know the version of the system BIOS currently installed.

BIOS version information (also known as *ROM date* and *System BIOS*) can be revealed by pressing fn+esc (if you are already in Windows) or by using Setup Utility (BIOS).

1. Start Setup Utility (BIOS) (see Starting Setup Utility (BIOS) on page 93).

2. Use the arrow keys to select **Main**.

3. To exit Setup Utility (BIOS) without saving your changes, use the arrow keys to select **Exit**, select **Exit Discarding Changes**, and then press **enter**.

4. Select **Yes**.

Downloading a BIOS update

⚠ **CAUTION:** To reduce the risk of damage to the computer or an unsuccessful installation, download and install a BIOS update only when the computer is connected to reliable external power using the AC adapter. Do not download or install a BIOS update while the computer is running on battery power, docked in an optional docking device, or connected to an optional power source. During the download and installation, follow these instructions:

Do not disconnect power from the computer by unplugging the power cord from the AC outlet.

Do not shut down the computer or initiate Sleep.

Do not insert, remove, connect, or disconnect any device, cable, or cord.

1. From the Start screen, type `support`, and then select the **HP Support Assistant** app.

2. Click **Updates and tune-ups**, and then click **Check for HP updates now**.

3. Follow the on-screen instructions.

4. At the download area, follow these steps:

   a. Identify the most recent BIOS update and compare it to the BIOS version currently installed on your computer. If the update is more recent than your BIOS, make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.

   b. Follow the on-screen instructions to download your selection to the hard drive.

   If the update is more recent than your BIOS, make a note of the path to the location on your hard drive where the BIOS update is downloaded. You will need to access this path when you are ready to install the update.

📝 **NOTE:** If you connect your computer to a network, consult the network administrator before installing any software updates, especially system BIOS updates.

BIOS installation procedures vary. Follow any instructions that are revealed on the screen after the download is complete. If no instructions are revealed, follow these steps:

1. From the Start screen, type `e`, and then select **File Explorer**.

2. Click your hard drive designation. The hard drive designation is typically Local Disk (C:).

3. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.

4. Double-click the file that has an .exe extension (for example, *filename*.exe).

   The BIOS installation begins.

5. Complete the installation by following the on-screen instructions.

📝 **NOTE:** After a message on the screen reports a successful installation, you can delete the downloaded file from your hard drive.

Using HP PC Hardware Diagnostics (UEFI)

HP PC Hardware Diagnostics is a Unified Extensible Firmware Interface (UEFI) that allows you to run diagnostic tests to determine whether the computer hardware is functioning properly. The tool runs outside the operating system so that it can isolate hardware failures from issues that are caused by the operating system or other software components.

To start HP PC Hardware Diagnostics UEFI:

1. Turn on or restart the computer, quickly press esc, and then press f2.

   The BIOS searches three places for the HP PC Hardware Diagnostics (UEFI) tools in the following order:

   a. Connected USB drive

      📝 **NOTE:** To download the HP PC Hardware Diagnostics (UEFI) tool to a USB drive, see Downloading HP PC Hardware Diagnostics (UEFI) to a USB device on page 95.

   b. Hard drive

   c. BIOS

2. When the diagnostic tool opens, use the keyboard arrow keys to select the type of diagnostic test you want to run, and then follow the on-screen instructions.

📝 **NOTE:** If you need to stop a diagnostic test, press esc.

Downloading HP PC Hardware Diagnostics (UEFI) to a USB device

📝 **NOTE:** The HP PC Hardware Diagnostics (UEFI) download instructions are provided in English only.

1. Go to http://www.hp.com.

2. Point to **Support**, and then click **Download Drivers**.

3. In the text box, enter the product name, and then click **Go**.

4. Select your computer model, and then select your operating system.

5. In the **Diagnostic** section, click **HP UEFI Support Environment**.

   – or –

   Click **Download**, and then select **Run**.

8 Specifications

Computer specifications

	Metric	U.S.
Dimensions		
Width	**42.0 cm**	16.5 in
Depth	**26.7 cm**	10.5 in
Height for HP Pavilion 17 Notebook (front to rear)	**2.9 to 3.3 cm**	1.2 to 1.3 in
Height for HP Pavilion 17 TouchSmart Notebook (front to rear)	**3.1 to 3.4 cm**	1.2 to 1.5 in
Weight for HP Pavilion 17 Notebook	**2.9 kg**	6.4 lbs
Weight for HP Pavilion 17 TouchSmart Notebook	**3.5 kg**	7.7 lbs
Input power		
Operating voltage and current	19.5 V dc @ 3.33 A – 65 W	
	19.5 V dc @ 4.62 A – 90 W	
Temperature		
Operating	**5°C to 35°C**	41°F to 95°F
Nonoperating	**-20°C to 60°C**	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	**-15 m to 3,048 m**	-50 ft to 10,000 ft
Nonoperating	**-15 m to 12,192 m**	-50 ft to 40,000 ft

NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The device operates well within this range of temperatures.

17.3 inch display specifications

	Metric	U.S.
Dimensions		
Height	**21.7 cm**	8.54 in
Width	**38.4 cm**	15.12 in
Diagonal	**43.9 cm**	17.29 in

	Metric	U.S.
Number of colors	Up to 16.8 million	
Contrast ratio	200:1 (typical)	
Brightness	200 nits (typical)	
Pixel resolution		
Pitch	**0.197 × 0.197 mm**	
Format	1600 × 900	
Configuration	RGB vertical stripe	
Backlight	LED	
Character display	80 × 25	
Total power consumption	2.00 W	
Viewing angle	±65° horizontal, ±50° vertical (typical)	

Hard drive specifications

	1 TB, 5400 rpm*	750 GB, 5400 rpm**	640 GB, 5400 rpm**	500 GB, 5400 rpm**
Dimensions				
Height	9.5 mm	9.5 mm	9.5 mm	9.5 mm
Length	100.4 mm	100.4 mm	100.4 mm	100.4 mm
Width	69.9 mm	69.9 mm	69.9 mm	69.9 mm
Weight	110 g	110 g	110 g	110 g
Interface type	SATA	SATA	SATA	SATA
Transfer rate				
Synchronous (maximum)	1.1 GB/sec	1.1 GB/sec	1.1 GB/sec	1.1 GB/sec
Security	ATA security	ATA security	ATA security	ATA security
Seek times (typical read, including setting)				
Single track	1.5 ms	1.5 ms	1.5 ms	1.5 ms
Average (read/write)	11/13 ms	11/13 ms	11/13 ms	11/13 ms
Maximum	22 ms	22 ms	22 ms	22 ms
Logical blocks	1,953,525,168	1,465,149,168	1,250,263,728	976,773,168
Disk rotational speed	5400 rpm			
Operating temperature	0°C to 60°C (32°F to 140°F)			

*1 TB = 1 trillion bytes when referring to hard drive storage capacity. Actual accessible capacity is less.

**1 GB = 1 billion bytes when referring to hard drive storage capacity. Actual accessible capacity is less.

NOTE: Certain restrictions and exclusions apply. Contact technical support for details.

9 Backing up, restoring, and recovering

Your computer includes tools provided by HP and Windows to help you safeguard your information and retrieve it if you ever need to. These tools will help you return your computer to a proper working state or even back to the original factory state, all with simple steps.

This chapter provides information about the following processes:

● Creating recovery media and backups

● Restoring and recovering your system

> **NOTE:** This chapter describes an overview of backing up, restoring and recovering options. For more details about the tools provided, see Help and Support. From the Start screen, type help, and then select **Help and Support**.

Creating recovery media and backups

1. After you successfully set up the computer, create HP Recovery media. This step creates a backup of the HP Recovery partition on the computer. The backup can be used to reinstall the original operating system in cases where the hard drive is corrupted or has been replaced.

   HP Recovery media you create will provide the following recovery options:

   ● System Recovery—Reinstalls the original operating system and the programs that were installed at the factory.

   ● Minimized Image Recovery—Reinstalls the operating system and all hardware-related drivers and software, but not other software applications.

   ● Factory Reset—Restores the computer to the state its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

   See Creating recovery media and backups on page 98.

2. Use the Windows tools to create system restore points and create backups of personal information. For more information and steps, see Windows Help and Support. From the Start screen, type help, and then select **Help and Support**.

Creating HP Recovery media

HP Recovery Manager is a software program that offers a way to create recovery media after you successfully set up the computer. HP Recovery media can be used to perform system recovery if the hard drive becomes corrupted. System recovery reinstalls the original operating system and the software programs installed at the factory, and then configures the settings for the programs. HP Recovery media can also be used to customize the system or restore the factory image if you replace the hard drive.

● Only one set of HP Recovery media can be created. Handle these recovery tools carefully, and keep them in a safe place.

● HP Recovery Manager examines the computer and determines the required storage capacity for the blank USB flash drive or the number of blank DVD discs that will be required.

- To create recovery discs, your computer must have an optical drive with DVD writer capability, and you must use only high-quality blank DVD-R, DVD+R, DVD-R DL, DVD+R DL discs. Do not use rewritable discs such as CD±RW, DVD±RW, double-layer DVD±RW, or BD-RE (rewritable Blu-ray) discs; they are not compatible with HP Recovery Manager software. Or instead you can use a high-quality blank USB flash drive.

- If your computer does not include an integrated optical drive with DVD writer capability, but you would like to create DVD recovery media, you can use an external optical drive (purchased separately) to create recovery discs, or you can obtain recovery discs for your computer from support. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information for the HP website. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html. If you use an external optical drive, it must be connected directly to a USB port on the computer; the drive cannot be connected to a USB port on an external device, such as a USB hub.

- Be sure that the computer is connected to AC power before you begin creating the recovery media.

- The creation process can take up to an hour or more. Do not interrupt the creation process.

- If necessary, you can exit the program before you have finished creating all of the recovery DVDs. HP Recovery Manager will finish burning the current DVD. The next time you start HP Recovery Manager, you will be prompted to continue, and the remaining discs will be burned.

To create HP Recovery media:

1. From the Start screen, type `recovery`, and then select **HP Recovery Manager**.

2. Select **Recovery Media Creation**, and follow the on-screen instructions to continue.

If you ever need to recover the system, see Recovering using HP Recovery Manager on page 100.

Restore and recovery

There are several options for recovering your system. Choose the method that best matches your situation and level of expertise:

- Windows offers several options for restoring from backup, refreshing the computer, and resetting the computer to its original state. For more information and steps, see Help and Support. From the Start screen, type help, and then select **Help and Support**.

- If you need to correct a problem with a preinstalled application or driver, use the Drivers and Applications Reinstall option of HP Recovery Manager to reinstall the individual application or driver.

   From the Start screen, type `recovery`, select **HP Recovery Manager**, and then select **Drivers and Applications Reinstall**, and follow the on-screen instructions.

- If you want to reset your computer using a minimized image, you can choose the HP Minimized Image Recovery option from the HP Recovery partition or HP Recovery media. Minimized Image Recovery installs only drivers and hardware-enabling applications. Other applications included in the image continue to be available for installation through the Drivers and Applications Reinstall option in HP Recovery Manager.

   For more information, see Recovering using HP Recovery Manager on page 100.

- If you want to recover the computer's original factory partitioning and content, you can choose the System Recovery option from HP Recovery partition (supported only for use on computer

models equipped with Windows 8.1) or use the HP Recovery media. For more information, see Recovering using HP Recovery Manager on page 100.

● If you have replaced the hard drive, you can use the Factory Reset option of HP Recovery media to restore the factory image to the replacement drive. For more information, see Recovering using HP Recovery Manager on page 100.

● If you wish to remove the recovery partition to reclaim hard drive space, HP Recovery Manager offers the Remove Recovery Partition option.

For more information, see .

Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the computer to its original factory state. Using the HP Recovery media you created, you can choose from one of the following recovery options:

● System Recovery—Reinstalls the original operating system, and then configures the settings for the programs that were installed at the factory.

● Minimized Image Recovery—Reinstalls the operating system and all hardware-related drivers and software, but not other software applications.

● Factory Reset—Restores the computer to the state its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

The HP Recovery partition allows System Recovery (supported only for use on computer models equipped with Windows 8.1) and Minimized Image Recovery.

What you need to know

● HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this computer, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.

● Recovery through HP Recovery Manager should be used as a final attempt to correct computer issues.

● HP Recovery media must be used if the computer hard drive fails.

● To use the Factory Reset or System Recovery options, you must use HP Recovery media.

● If the HP Recovery media do not work, you can obtain recovery media for your system from the HP website. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

IMPORTANT: HP Recovery Manager does not automatically provide backups of your personal data. Before beginning recovery, back up any personal data you wish to retain.

Using the HP Recovery partition

The HP Recovery partition allows you to perform a system recovery (supported only for use on computer models equipped with Windows 8.1) or minimized image recovery without the need for recovery discs or a recovery USB flash drive. This type of recovery can only be used if the hard drive is still working.

To start HP Recovery Manager from the HP Recovery partition:

1.   Press f11 while the computer boots.

     – or –

     Press and hold f11 as you press the power button.

2.   Select **Troubleshoot** from the boot options menu.

3.   Select **HP Recovery Manager**, and follow the on-screen instructions.

Using HP Recovery media to recover

You can use HP Recovery media to recover the original system. This method can be used if your system does not have an HP Recovery partition or if the hard drive is not working properly.

1.   If possible, back up all personal files.

2.   Insert the first HP Recovery disc you created into the optical drive on your computer or into an optional external optical drive, and then restart the computer.

     – or –

     Insert the HP Recovery USB flash drive you created into a USB port on your computer, and then restart the computer.

     NOTE: If the computer does not automatically restart in HP Recovery Manager, change the computer boot order. See Changing the computer boot order on page 101.

3.   Follow the on-screen instructions.

Changing the computer boot order

If computer does not restart in HP Recovery Manager, you can change the computer boot order, which is the order of devices listed in BIOS where the computer looks for startup information. You can change the selection for an optical drive or a USB flash drive.

To change the boot order:

1.   Insert the HP Recovery media you created.

2.   Restart the computer.

3.   Press and hold esc while the computer is restarting, and then press f9 for boot options.

4.   Select the optical drive or USB flash drive you want to boot from.

5.   Follow the on-screen instructions.

Removing the HP Recovery partition

HP Recovery Manager software allows you to remove the HP Recovery partition to free up hard drive space.

IMPORTANT: Removing the HP Recovery partition means you can no longer use Windows Refresh or the Windows option to remove everything and reinstall Windows. In addition, you will not be able to perform System Recovery or Minimized Image Recovery from the HP Recovery partition. Create HP Recovery media before removing the Recovery partition to ensure you have recovery options; see Creating HP Recovery media on page 98.

Follow these steps to remove the HP Recovery partition:

1. From the Start screen, type `recovery`, and then select **HP Recovery Manager**.

2. Select **Remove Recovery Partition**, and follow the on-screen instructions to continue.

10 Power cord set requirements

The wide-range input feature of the computer permits it to operate from any line voltage from 100 to 120 V ac, or from 220 to 240 V ac.

The 3-conductor power cord set included with the computer meets the requirements for use in the country or region where the equipment is purchased.

Power cord sets for use in other countries or regions must meet the requirements of the country and region where the computer is used.

Requirements for all countries

The following requirements are applicable to all countries and regions:

● The length of the power cord set must be at least **1.0 m** (3.3 ft) and no more than **2.0 m** (6.5 ft).

● All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country or region where the power cord set will be used.

● The power cord sets must have a minimum current capacity of 10 A and a nominal voltage rating of 125 or 250 V ac, as required by the power system of each country or region.

● The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector for mating with the appliance inlet on the back of the computer.

Requirements for specific countries and regions

Country/region	Accredited agency	Applicable note number
Argentina	IRAM	1
Australia	SAA	1
Austria	OVE	1
Belgium	CEBEC	1
Brazil	ABNT	1
Canada	CSA	2
Chile	IMQ	1
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
India	ISI	1
Israel	SII	1
Italy	IMQ	1
Japan	JIS	3
The Netherlands	KEMA	1
New Zealand	SANZ	1
Norway	NEMKO	1
The People's Republic of China	CCC	4
Saudi Arabia	SASO	7
Singapore	PSB	1
South Africa	SABS	1
South Korea	KTL	5
Sweden	SEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	6
Thailand	TISI	1
The United Kingdom	ASTA	1

Country/region	Accredited agency	Applicable note number
The United States	UL	2

1. The flexible cord must be Type HO5VV-F, 3-conductor, 0.75 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country or region where it will be used.

2. The flexible cord must be Type SVT/SJT or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V ac) or NEMA 6-15P (15 A, 250 V ac) configuration. CSA or C-UL mark. UL file number must be on each element.

3. The appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCTF, 3-conductor, 0.75 mm² or 1.25 mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V ac) configuration.

4. The flexible cord must be Type RVV, 3-conductor, 0.75 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the CCC certification mark.

5. The flexible cord must be Type H05VV-F 3-conductor, 0.75 mm² conductor size. KTL logo and individual approval number must be on each element. Corset approval number and logo must be printed on a flag label.

6. The flexible cord must be Type HVCTF 3-conductor, 1.25 mm² conductor size. Power cord set fittings (appliance coupler, cable, and wall plug) must bear the BSMI certification mark.

7. For 127 V ac, the flexible cord must be Type SVT or SJT 3-conductor, 18 AWG, with plug NEMA 5-15P (15 A, 125 V ac), with UL and CSA or C-UL marks. For 240 V ac, the flexible cord must be Type H05VV-F 3-conductor, 0.75 mm² or 1.00 mm2 conductor size, with plug BS 1363/A with BSI or ASTA marks.

11 Recycling

When a non-rechargeable or rechargeable battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for battery disposal.

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, see the HP Web site at http://www.hp.com/recycle.

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