



Maintenance and Service Guide

HP Pavilion ze2000 Notebook PC
Compaq Presario M2000 Notebook PC



The information and procedures included in this *Maintenance and Service Guide* apply to HP Pavilion ze2000 Notebook PC and Compaq Presario M2000 Notebook PC models equipped with AMD processors.

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This guide is a troubleshooting reference used for maintaining and servicing the computer. It provides comprehensive information on identifying computer features, components, and spare parts; troubleshooting computer problems; and performing computer disassembly procedures.

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Maintenance and Service Guide
HP Pavilion ze2000 Notebook PC
Compaq Presario M2000 Notebook PC
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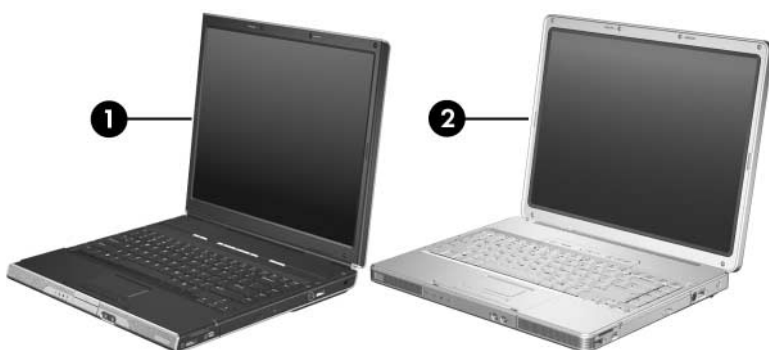
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Product Description

The HP Pavilion ze2000 Notebook PC ❶ and the Compaq Presario M2000 Notebook PC ❷ offer advanced modularity, AMD Mobile Turion™ and Mobile AMD Sempron™ processors, and extensive multimedia support.



HP Pavilion ze2000 and Compaq Presario M2000 with AMD Processors

1.1 Features



Numerous references are made throughout this *Maintenance and Service Guide* to “full-featured” and “defeatured” computer models. A model is considered to be full-featured if it has 3 Universal Serial Bus ports and the following components:

- S-Video-out jack
- Expansion port 2
- 6-in-1 Digital Media Reader slot or 6-in-1 Memory Reader slot
- Bluetooth® wireless communications support
- IEEE 1394 digital port

A computer model is considered to be defeatured if it has only 2 Universal Serial Bus ports and none of the components in the preceding list.

-
- The following processors are available, varying by computer model:
 - AMD Mobile Turion 64, ML-34 (1.80-GHz)
 - AMD Mobile Turion 64, ML-30 (1.60-GHz)
 - AMD Mobile Turion 64, ML-28 (1.60-GHz)
 - Mobile AMD Sempron 3000+ (1.80-GHz)
 - Mobile AMD Sempron 2800+ (1.60-GHz)
 - 15.0-inch XGA (1024 × 768) TFT display with over 16.7 million colors
 - 80-, 60-, or 40-GB high-capacity hard drive, varying by computer model
 - 256-MB DDR2 synchronous DRAM (SDRAM) at 400 MHz, expandable to 1.0 GB
 - Microsoft® Windows® XP Home Edition or Windows XP Professional, varying by computer model
 - Full-size Windows keyboard with embedded numeric keypad

- TouchPad pointing device with dedicated vertical scroll region
- Integrated 10Base-T/100 Base-TX Ethernet local area network (LAN) network interface card (NIC) with RJ-45 jack
- Integrated high-speed 56K modem with RJ-11 jack
- Integrated wireless support for Mini PCI IEEE 802.11b/g WLAN device
- Support for one Type I or II PC Card slot, with support for both 32-bit (CardBus) and 16-bit PC Cards
- External 65-watt AC adapter with 3-wire power cord
- 6-cell or 12-cell Li-Ion battery pack
- Stereo speakers with volume up and down buttons
- Support for the following optical drives:
 - 8X DVD-ROM drive
 - 24X DVD/CD-RW Combo Drive
 - 8X DVD±RW/R and CD-RW Combo Drive
- Connectors:
 - External monitor port
 - Universal Serial Bus (USB) v. 2.0 (up to 3 ports)
 - RJ-11 (modem) jack
 - RJ-45 (network) jack
 - Audio-out (headphone) jack
 - Audio-in (microphone) jack
 - Power
 - IEEE 1394 digital port
 - S-Video-out jack (select models only)
 - Expansion port 2 (select models only)
 - 6-in-1 Digital Media Reader slot (select models only)
 - 6-in-1 Memory Reader slot (select models only)

1.2 Resetting the Computer

If the computer you are servicing has an unknown password, follow these steps to clear the password. These steps also clear CMOS:

1. Prepare the computer for disassembly (refer to [Section 5.3, “Preparing the Computer for Disassembly,”](#) for more information).
2. Remove the real-time clock (RTC) battery (refer to [Section 5.14, “RTC Battery,”](#) for more information).
3. Wait approximately 5 minutes.
4. Replace the RTC battery and reassemble the computer.
5. Connect AC power to the computer. Do not reinsert any battery packs at this time.
6. Turn on the computer.

All passwords and all CMOS settings have been cleared.

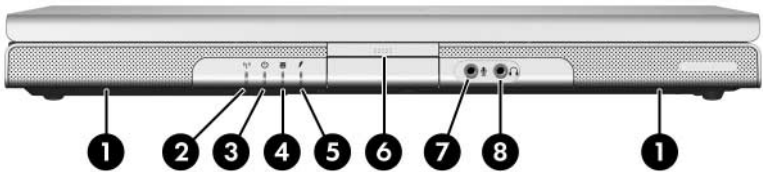
1.3 Power Management

The computer comes with power management features that extend battery operating time and conserve power. The computer supports the following power management features:

- Standby
- Hibernation
- Setting customization by the user
- Hotkeys for setting the level of performance
- Battery calibration
- Lid switch standby/resume
- Power/standby button
- Advanced Configuration and Power Management (ACPM) compliance

1.4 External Components

The external components on the front of the HP Pavilion ze2000 are shown below and described in Table 1-1.

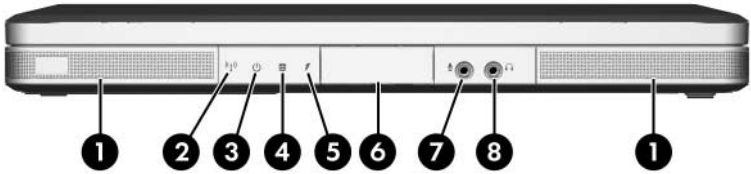


Front Components, HP Pavilion ze2000

Table 1-1
Front Components
HP Pavilion ze2000

Item	Component	Function
1	Speakers (2)	Produce stereo sound.
2	Wireless light (select models only)	On: One or more optional internal wireless devices, such as a WLAN and/or a Bluetooth device (select models only), are turned on.
3	Power/standby light	<ul style="list-style-type: none"> ■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off or in hibernation.
4	IDE (Integrated Drive Electronics) drive light	On or blinking: The internal hard drive or an optical drive is being accessed.
5	Battery light	<ul style="list-style-type: none"> ■ On: The battery pack is charging. ■ Blinking: The battery pack has reached a low-battery condition. ■ Off: The battery pack is fully charged or not inserted.
6	Display release button	Opens the computer.
7	Audio-in (microphone) jack	Connects an optional monaural (single sound channel) microphone.
8	Audio-out (headphone) jack	Connects optional headphones or powered stereo speakers. Also connects the audio function of an audio/video device such as a television or VCR.

The external components on the front of the Compaq Presario M2000 are shown below and described in Table 1-2.



Front Components, Compaq Presario M2000

Table 1-2
Front Components
Compaq Presario M2000


Item	Component	Function
1	Speakers (2)	Produce stereo sound.
2	Wireless light (select models only)	On: One or more optional internal wireless devices, such as a WLAN and/or a Bluetooth device (select models only), are turned on.
3	Power/standby light	<ul style="list-style-type: none"> ■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off or in hibernation.
4	IDE (Integrated Drive Electronics) drive light	On or blinking: The internal hard drive or an optical drive is being accessed.
5	Battery light	<ul style="list-style-type: none"> ■ On: The battery pack is charging. ■ Blinking: The battery pack has reached a low-battery condition. ■ Off: The battery pack is fully charged or not inserted.
6	Display release button	Opens the computer.
7	Audio-in (microphone) jack	Connects an optional monaural (single sound channel) microphone.
8	Audio-out (headphone) jack	Connects optional headphones or powered stereo speakers. Also connects the audio function of an audio/video device such as a television or VCR.

The external components on the right side of the HP Pavilion ze2000 are shown below and described in Table 1-3.

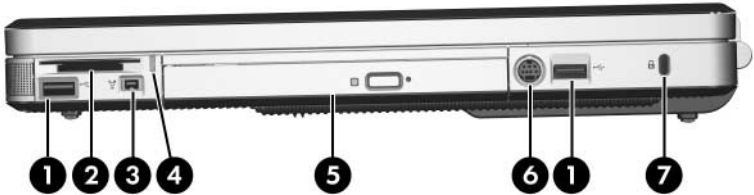


Right-Side Components, HP Pavilion ze2000

Table 1-3
Right-Side Components
HP Pavilion ze2000


Item	Component	Function
1	USB ports (1 or 2 depending on the computer model)	Connect an optional USB device.
2	6-in-1 Digital Media Reader slot (select models only)	Supports an optional digital memory card.
3	1394 port (select models only)	Connects an optional 1394a device such as a scanner, digital camera, or digital camcorder.
4	6-in-1 Digital Media Reader light (select models only)	On: A digital memory card is being accessed.
5	Optical drive	Supports an optical disc.
6	S-Video-out jack (select models only)	Connects an optional S-Video device, such as a television, VCR, camcorder, projector, or video capture card.
7	Security cable slot	Attaches an optional security cable to the computer.
		 Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

The external components on the right side of the Compaq Presario M2000 are shown below and described in Table 1-4.

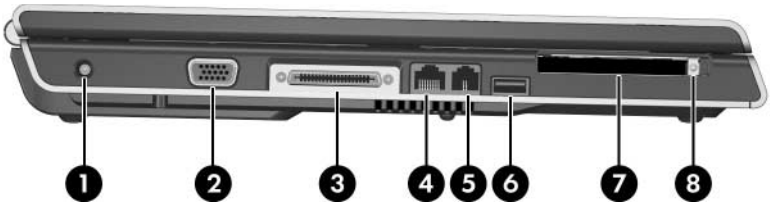


Right-Side Components, Compaq Presario M2000

Table 1-4
Right-Side Components
Compaq Presario M2000

Item	Component	Function
1	USB ports (1 or 2 depending on the computer model)	Connect optional USB devices.
2	6-in-1 Digital Media Reader slot (select models only)	Supports an optional digital memory card.
3	1394 port (select models only)	Connects an optional 1394a device such as a scanner, digital camera, or digital camcorder.
4	6-in-1 Digital Media light (select models only)	On: A digital memory card is being accessed.
5	Optical drive	Supports an optical disc.
6	S-Video-out jack (select models only)	Connects an optional S-Video device, such as a television, VCR, camcorder, projector, or video capture card.
7	Security cable slot	Attaches an optional security cable to the computer.
		 Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

The external components on the left side of the HP Pavilion ze2000 are shown below and described in Table 1-5.



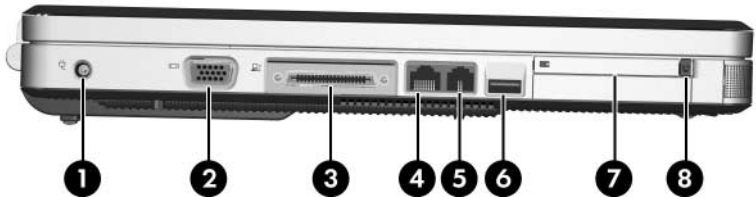
Left-Side Components, HP Pavilion ze2000

Table 1-5
Left-Side Components
HP Pavilion ze2000

Item	Component	Function
1	Power connector	Connects an AC adapter cable.
2	Monitor port	Connects an optional VGA monitor or projector.
3	Expansion port 2* (select models only)	Connects the computer to an optional docking device.
4	RJ-45 jack	Connects an optional network cable.
5	RJ-11 jack	Connects the modem cable.
6	USB port	Connects an optional USB device.
7	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
8	PC Card eject button	Ejects an optional PC Card from the PC Card slot.

*The computer has only one expansion port. The term *expansion port 2* describes the type of expansion port.

The external components on the left side of the Compaq Presario M2000 are shown below and described in Table 1-6.



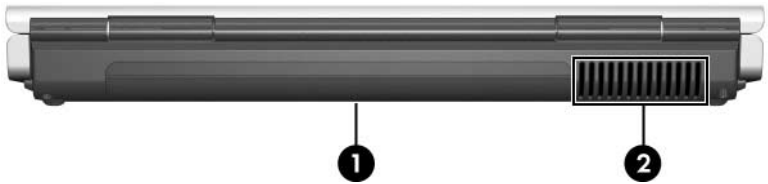
Left-Side Components, Compaq Presario M2000

Table 1-6
Left-Side Components
Compaq Presario M2000

Item	Component	Function
1	Power connector	Connects an AC adapter cable.
2	Monitor port	Connects an optional VGA monitor or projector.
3	Expansion port 2* (select models only)	Connects the computer to an optional docking device.
4	RJ-45 (network) jack	Connects an optional network cable.
5	RJ-11 (modem) jack	Connects the modem cable.
6	USB port	Connects an optional USB device.
7	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
8	PC Card eject button	Ejects an optional PC Card from the PC Card slot.

*The computer has only one expansion port. The term *expansion port 2* describes the type of expansion port.

The external components on the rear panel of the HP Pavilion ze2000 are shown below and described in Table 1-7.



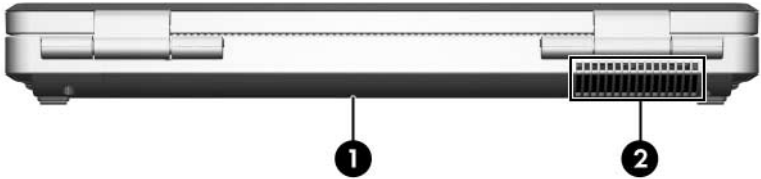
Rear Panel Components, HP Pavilion ze2000

Table 1-7
Rear Panel Components
HP Pavilion ze2000

Item	Component	Function
1	Battery bay	Holds a battery pack.
2	Exhaust vent	Provides airflow to cool internal components.

△ To prevent overheating, do not obstruct vents. Do not allow a hard surface, such as a printer, or a soft surface, such as pillows, thick rugs, or clothing, to block airflow.

The external components on the rear panel of the Compaq Presario M2000 are shown below and described in Table 1-8.



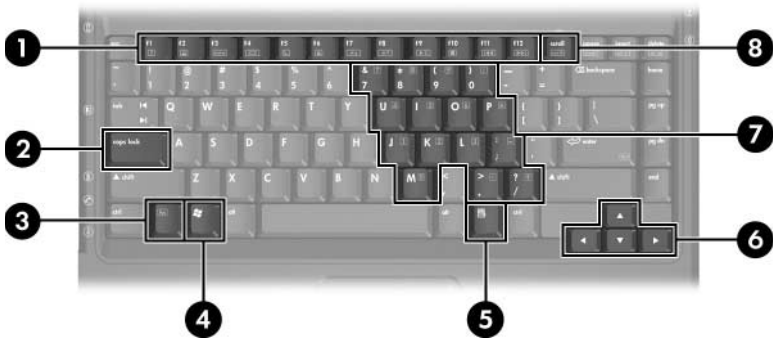
Rear Panel Components, Compaq Presario M2000

Table 1-8
Rear Panel Components
Compaq Presario M2000

Item	Component	Function
1	Battery bay	Holds a battery pack.
2	Exhaust vent	Provides airflow to cool internal components.

△ To prevent overheating, do not obstruct vents. Do not allow a hard surface, such as a printer, or a soft surface, such as pillows, thick rugs, or clothing, to block airflow.

The keyboard components on the HP Pavilion ze2000 are shown below and described in Table 1-9.

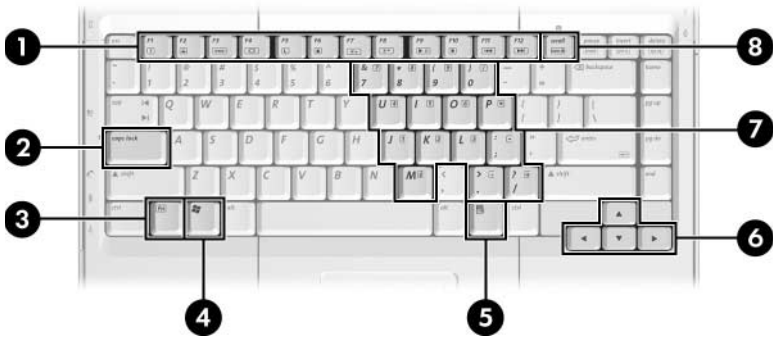


Keyboard Components, HP Pavilion ze2000

Table 1-9
Keyboard Components
HP Pavilion ze2000

Item	Component	Function
1	Function keys (12)	Perform system and application tasks. When combined with the fn key, several keys perform additional tasks as hotkeys.
2	caps lock key	Enables caps lock and turns on the caps lock light.
3	fn key	Combines with other keys to perform system tasks. For example, pressing fn+f7 decreases screen brightness.
4	Windows logo key	Displays the Windows Start menu.
5	Windows applications key	Displays a shortcut menu for items beneath the pointer.
6	Arrow keys	Move the cursor around the screen.
7	Keypad keys (15)	Can be used like the keys on an external numeric keypad.
8	num lock key	On: Enables numeric lock, turns on the embedded numeric keypad, and turns on the num lock light.

The keyboard components on the Compaq Presario M2000 are shown below and described in Table 1-10.



Keyboard Components, Compaq Presario M2000

Table 1-10
Keyboard Components
Compaq Presario M2000

Item	Component	Function
1	Function keys (12)	Perform system and application tasks. When combined with the Fn key, the function keys perform additional tasks as hotkeys.
2	caps lock key	Enables caps lock and turns on the caps lock light.
3	Fn key	Combines with other keys to perform system tasks. For example, pressing Fn+F7 decreases screen brightness.
4	Windows logo key	Displays the Windows Start menu.
5	Windows applications key	Displays a shortcut menu for items beneath the pointer.
6	Arrow keys	Move the cursor around the screen.
7	Keypad keys (15)	Can be used like the keys on an external numeric keypad.
8	num lock key	Enables numeric lock, turns on the embedded numeric keypad, and turns on the num lock light.

The top components on the HP Pavilion ze2000 are shown below and described in Table 1-11.




Top Components, HP Pavilion ze2000

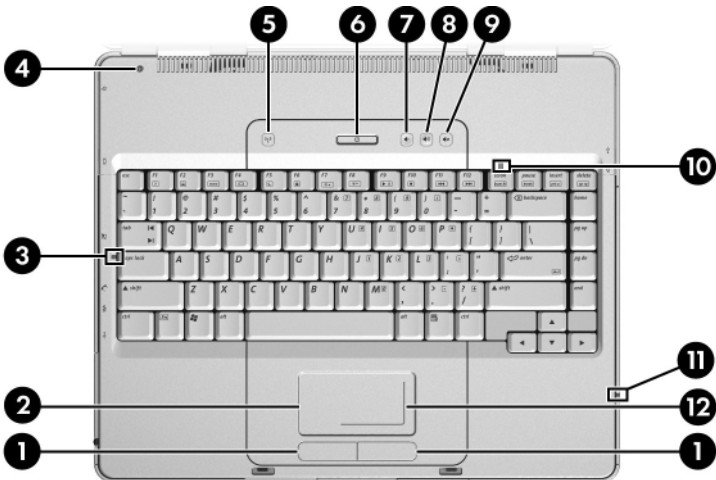
Table 1-11
Top Components
HP Pavilion ze2000

Item	Component	Function
1	Left and right TouchPad buttons	Function like the left and right buttons on an external mouse.
2	TouchPad	Moves the pointer.
3	Caps lock light	On: Caps lock is on.
4	Display switch	If the computer is closed while on, initiates standby.

Table 1-11
Top Components
HP Pavilion ze2000 (Continued)

Item	Component	Function
5	Power/standby button	<p>When the computer is</p> <ul style="list-style-type: none"> ■ Off, press to turn on the computer. ■ On, briefly press to initiate hibernation. ■ In standby, briefly press to resume from standby. ■ In hibernation, briefly press to restore from hibernation. <p> If the system has stopped responding and Windows shutdown procedures cannot be used, press and hold for at least 4 seconds to turn off the computer.</p>
6	Volume down button	Decreases system volume.
7	Volume mute button Mute light	Mutes or restores volume. On: Volume is muted.
8	Volume up button	Increases system volume.
9	Wireless button (select models only) Wireless light (select models only)	Turns the wireless functionality on or off but does not create a wireless connection. On: One or more optional internal wireless devices are turned on.
10	Num lock light	On: Num lock or the embedded keypad is on.
11	6-in-1 Digital Media Reader light (select models only)	On: A digital memory card is being accessed.
12	TouchPad vertical scrolling region	Scrolls upward or downward.

The top components on the Compaq Presario M2000 are shown below and described in Table 1-12.




Top Components, Compaq Presario M2000

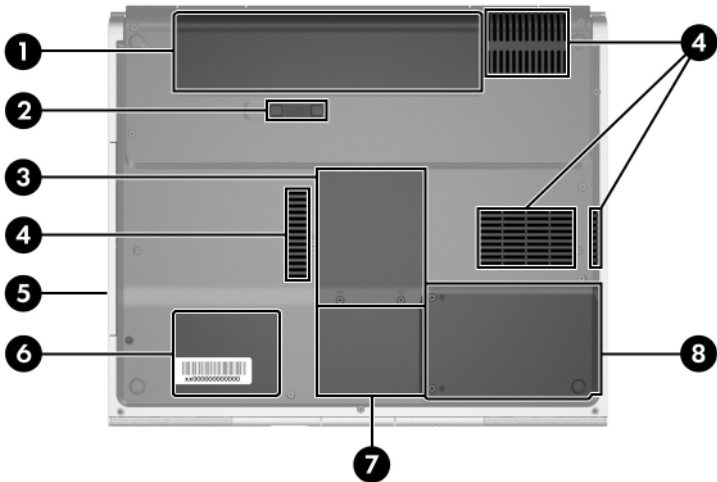
Table 1-12
Top Components
Compaq Presario M2000

Item	Component	Function
1	Left and right TouchPad buttons	Function like the left and right buttons on an external mouse.
2	TouchPad	Moves the pointer.
3	Caps lock light	On: Caps lock is on.
4	Display switch	If the computer is closed while on, initiates standby.

Table 1-12
Top Components
Compaq Presario M2000 (Continued)

Item	Component	Function
5	Wireless button (select models only) Wireless light (select models only)	Turns the wireless functionality on or off but does not create a wireless connection. On: One or more optional internal wireless devices are turned on.
6	Power/standby button	When the computer is <ul style="list-style-type: none"> ■ Off, press to turn on the computer. ■ On, briefly press to initiate hibernation. ■ In standby, briefly press to resume from standby. ■ In hibernation, briefly press to restore from hibernation.  If the system has stopped responding and Windows shutdown procedures cannot be used, press and hold for at least 4 seconds to turn off the computer.
7	Volume down button	Decreases system volume.
8	Volume up button	Increases system volume.
9	Volume mute button Mute light	Mutes or restores volume. On: Volume is muted.
10	Num lock light	On: Num lock or the embedded keypad is on.
11	6-in-1 Digital Media Reader light (select models only)	On: A digital memory card is being accessed.
12	TouchPad vertical and horizontal scroll regions	Scroll upward or downward and left or right.

The external components on the bottom of the HP Pavilion ze2000 are shown below and described in Table 1-13.





Bottom Components, HP Pavilion ze2000

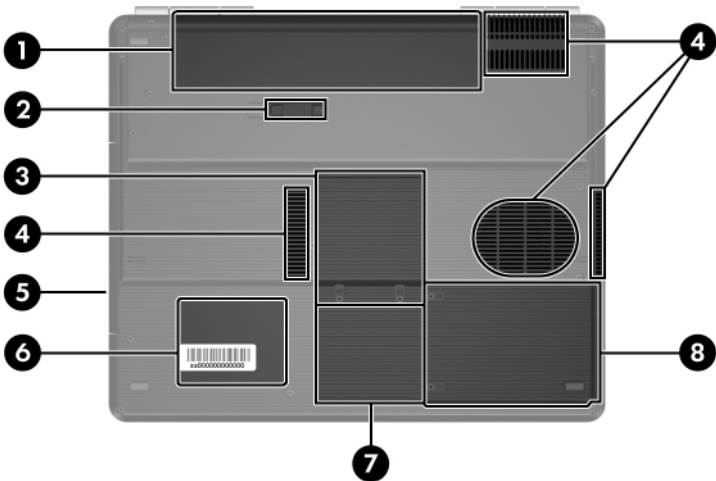
Table 1-13
Bottom Components
HP Pavilion ze2000

Item	Component	Function
1	Battery bay	Holds a battery pack.
2	Battery pack release latch	Releases a battery pack from the battery bay.
3	Memory module compartment	Contains two memory module slots that support replaceable memory modules. The number of preinstalled memory modules varies by computer model.

Table 1-13
Bottom Components
HP Pavilion ze2000 (Continued)

Item	Component	Function
4	Exhaust vents (4)	<p>Provide airflow to cool internal components.</p> <p> To prevent overheating, do not obstruct vents. Do not allow a hard surface, such as a printer, or a soft surface, such as pillows, thick rugs or clothing, to block airflow.</p>
5	Optical drive	Supports an optical disc.
6	Label area	Contains the computer serial number and other applicable regulatory labels.
7	Mini PCI compartment	<p>Holds an optional wireless LAN device.</p> <p> To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in the computer by the governmental agency that regulates wireless devices in your country. If you install a device and then receive a warning message, remove the device to restore computer functionality. Then contact Customer Care.</p>
8	Hard drive bay	Holds the internal hard drive.

The external components on the bottom of the Compaq Presario M2000 are shown below and described in Table 1-14.





Bottom Components, Compaq Presario M2000

Table 1-14
Bottom Components
Compaq Presario M2000

Item	Component	Function
1	Battery bay	Holds a battery pack.
2	Battery pack release latch	Releases a battery pack from the battery bay.
3	Memory module compartment	Contains two memory module slots that support replaceable memory modules. The number of preinstalled memory modules varies by computer model.

Table 1-14
Bottom Components
Compaq Presario M2000 (Continued)

Item	Component	Function
4	Exhaust vents (4)	Provide airflow to cool internal components.  To prevent overheating, do not obstruct vents. Do not allow a hard surface, such as a printer, or a soft surface, such as pillows, thick rugs, or clothing, to block airflow.
5	Optical drive	Supports an optical disc.
6	Label area	Contains the computer serial number and other applicable regulatory labels.
7	Mini PCI compartment	Holds an optional wireless LAN device.  To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in the computer by the governmental agency that regulates wireless devices in your country. If you install a device and then receive a warning message, remove the device to restore computer functionality. Then contact Customer Care.
8	Hard drive bay	Holds the internal hard drive.

1.5 Design Overview

This section presents a design overview of key parts and features of the computer. Refer to [Chapter 3, “Illustrated Parts Catalog,”](#) to identify replacement parts, and [Chapter 5, “Removal and Replacement Procedures,”](#) for disassembly steps.

The system board provides the following device connections:

- AMD Mobile Turion 64 and Mobile AMD Sempron processors
- Audio
- Display assembly
- Fan
- Hard drive
- Keyboard and TouchPad
- Memory module
- Mini PCI communications devices
- PC Card



CAUTION: To properly ventilate the computer, allow at least a 7.6-cm (3-inch) clearance on the left and right sides of the computer.

The computer uses an electric fan for ventilation. The fan is controlled by a temperature sensor and is designed to be turned on automatically when high temperature conditions exist. These conditions are affected by high external temperatures, system power consumption, power management/battery conservation configurations, battery fast charging, and software applications. Exhaust air is displaced through the ventilation grill located on the left side of the computer.

Troubleshooting



WARNING: Only authorized technicians trained by HP should repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly-/module-level repair. Because of the complexity of the individual boards and subassemblies, do not attempt to make repairs at the component level or modifications to any printed wiring board. Improper repairs can create a safety hazard. Any indication of component replacement or printed wiring board modification may void any warranty or exchange allowances.

2.1 Computer Setup

Computer Setup is a preinstalled, ROM-based utility that can be used even when the operating system is not working or will not load. If the operating system is working, the computer restarts the operating system after you exit Computer Setup.



Pointing devices are not supported in Computer Setup; you must use the keyboard to navigate and make selections.

The menu tables later in this chapter provide an overview of Computer Setup options.

Accessing Computer Setup

The information and settings in Computer Setup are accessed from the **Main**, **Security**, **Advanced**, **Tools**, and **Exit** menus.

1. Open Computer Setup by turning on or restarting the computer. Press **f10** while the “Press <F10> to enter Setup” message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, use the arrow keys to select the **Advanced** menu, select **Language Support**, and then press **f5** or **f6** until the appropriate language is highlighted. Press **f10** to save your selection and exit the **Advanced** menu.
 - ❑ To view navigation information, press **f1**.
 - ❑ To return to the Computer Setup menu, press **esc**.
2. Select the **Main**, **Security**, **Advanced**, **Tools**, and **Exit** menus.
3. To exit Computer Setup, choose one of the following:
 - ❑ To exit without saving any changes, use the arrow keys to select **Exit > Exit Discarding Changes**, and then follow the instructions on the screen.
 - ❑ To exit and save all the settings you have entered, use the arrow keys to select **Exit > Exit Saving Changes**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the computer restarts.

Computer Setup Defaults

To return all settings in Computer Setup to the values that were set at the factory:

1. Open Computer Setup by turning on or restarting the computer. Press **f10** while the “Press <F10> to enter Setup” message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, use the arrow keys to select the **Advanced** menu, select **Language Support**, and then press **f5** or **f6** until the appropriate language is highlighted. Press **f10** to save your selection and exit the **Advanced** menu.
 - ❑ To view navigation information, press **f1**.
2. Use the arrow keys to select **Exit > Load Setup Defaults**.
3. Press **f9**.
4. Press enter to confirm the return to default configuration.
5. To confirm the restoration, press **f10**.
6. Select **Exit > Exit Saving Changes**, and then follow the instructions on the screen.

When the computer restarts, the factory settings are restored, and any identification information you have entered is saved.


Selecting from the Main Menu

Table 2-1
Main Menu

Select	To Do This
System Information	<ul style="list-style-type: none">■ View identification information about the computer.■ View specification information about the processor, memory and cache size, keyboard controller version, and system BIOS.

Selecting from the Security Menu

Table 2-2
Security Menu

Select	To Do This
Administrator password	Enter, change, or delete an HP Administrator password.
Power-on password	Enter, change, or delete a power-on password.
DriveLock password	Enable/disable DriveLock; change a DriveLock user or master password.  DriveLock Settings are accessible only when you enter Computer Setup by turning on (not restarting) the computer.
Device security	Enable diskette drive or optical drive for inclusion in MultiBoot.

Selecting from the Advanced Menu

Table 2-3
Advanced Menu

Select	To Do This
Video Graphic Mode	Select UMA, SidePort, or UMA+SidePort video memory modes.
Dedicated Video Memory	View the size of the on-board video memory.
Total Video Memory	View the size of the total system video memory.
Language Support	Change the Computer Setup language.
Boot Order	Set the boot order.
Accessibility Options	Provides access to electronic and information technology to a wide range of people with disabilities.
Embedded WLAN device	Enable/disable a wireless local area network device.
Embedded Bluetooth device	Enable/disable a Bluetooth device.

Selecting from the Tools Menu

Table 2-4
Tools Menu

Select	To Do This
HDD Self-test	Run a quick or comprehensive self-test on any hard drive in the system.

Table 2-5
Exit Menu

Select	To Do This
Exit Saving Changes	Save changes entered during the current session. Then exit and restart the computer. The changes you save are in effect when the computer restarts.
Exit Discarding Changes	Cancel changes entered during the current session. Then exit and restart the computer.
Load Setup Defaults	Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.)

2.2 Troubleshooting Flowcharts

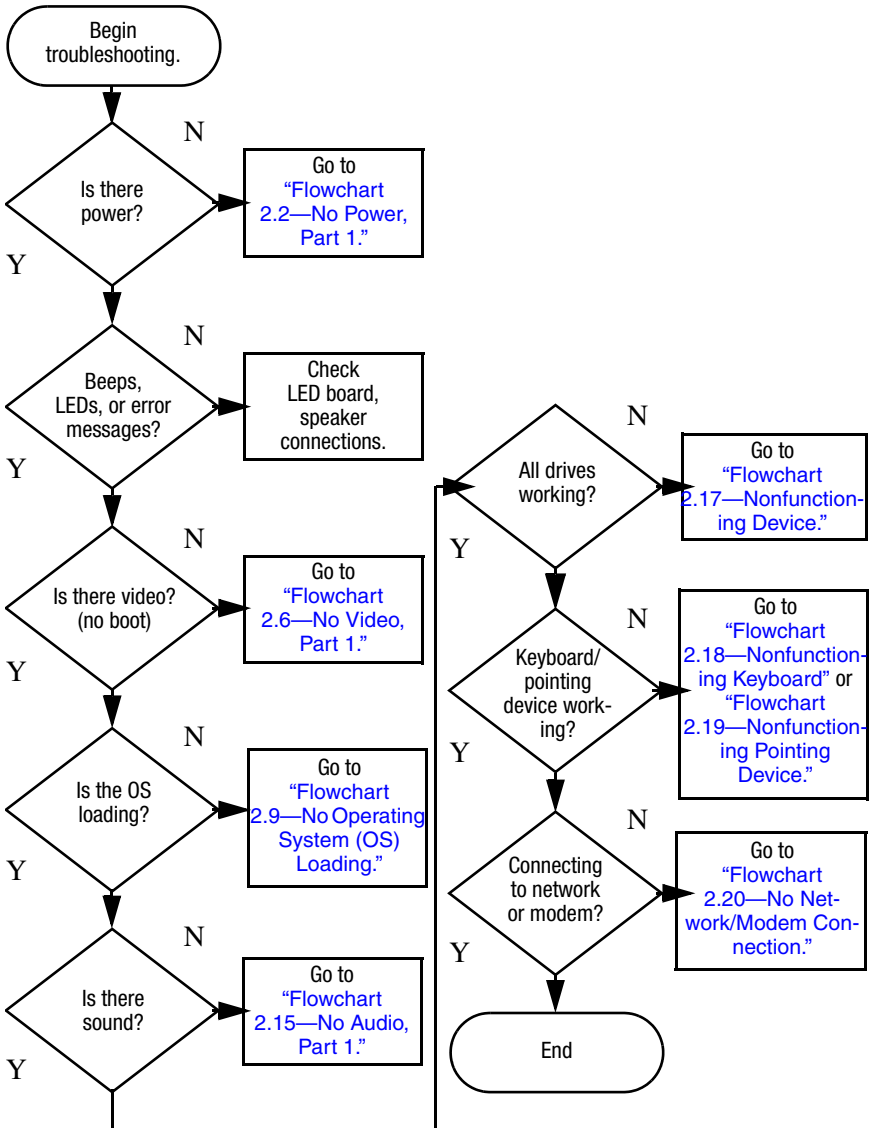
Table 2-6
Troubleshooting Flowcharts Overview

Flowchart	Description
2.1	"Flowchart 2.1—Initial Troubleshooting"
2.2	"Flowchart 2.2—No Power, Part 1"
2.3	"Flowchart 2.3—No Power, Part 2"
2.4	"Flowchart 2.4—No Power, Part 3"
2.5	"Flowchart 2.5—No Power, Part 4"
2.6	"Flowchart 2.6—No Video, Part 1"
2.7	"Flowchart 2.7—No Video, Part 2"
2.8	"Flowchart 2.8—Nonfunctioning Docking Device (if applicable)"
2.9	"Flowchart 2.9—No Operating System (OS) Loading"
2.10	"Flowchart 2.10—No OS Loading, Hard Drive, Part 1"
2.11	"Flowchart 2.11—No OS Loading, Hard Drive, Part 2"
2.12	"Flowchart 2.12—No OS Loading, Hard Drive, Part 3"
2.13	"Flowchart 2.13—No OS Loading, Diskette Drive"

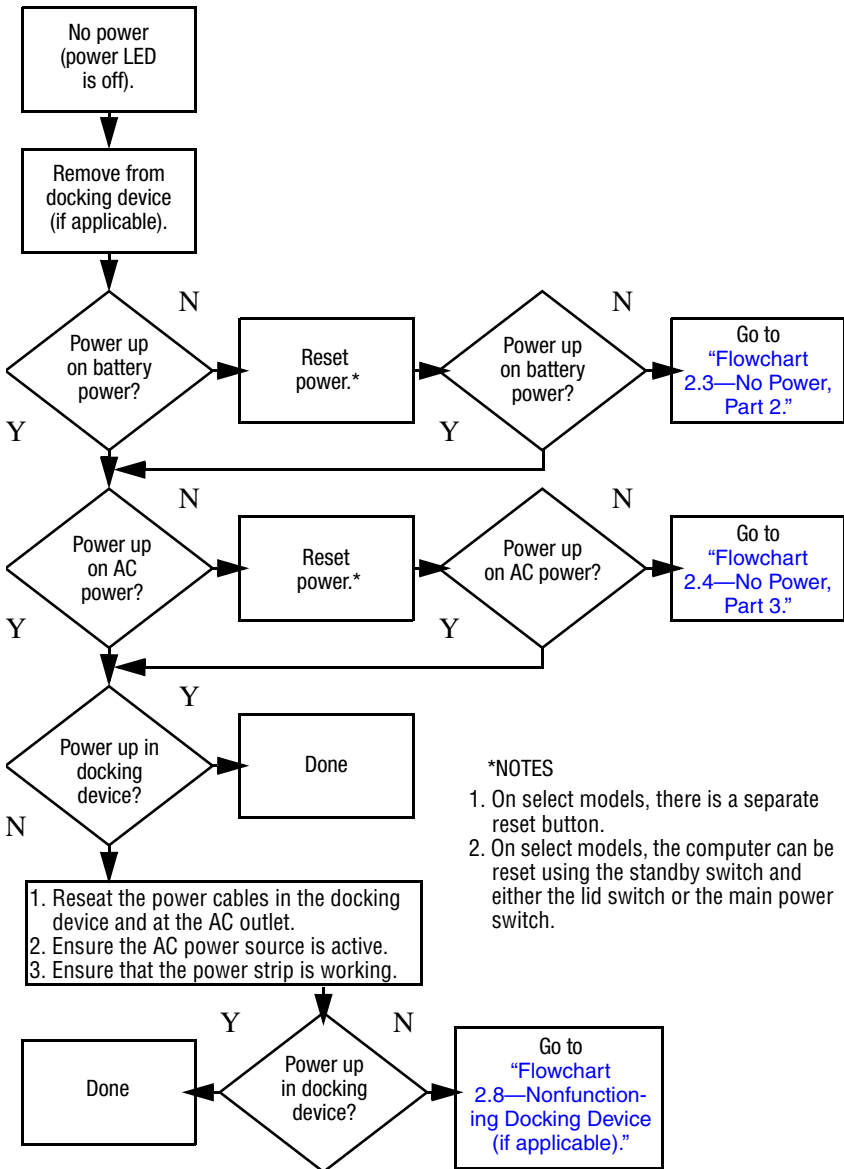
Table 2-6
Troubleshooting Flowcharts Overview (*Continued*)

Flowchart	Description
2.14	"Flowchart 2.14—No OS Loading, Optical Drive"
2.15	"Flowchart 2.15—No Audio, Part 1"
2.16	"Flowchart 2.16—No Audio, Part 2"
2.17	"Flowchart 2.17—Nonfunctioning Device"
2.18	"Flowchart 2.18—Nonfunctioning Keyboard"
2.19	"Flowchart 2.19—Nonfunctioning Pointing Device"
2.20	"Flowchart 2.20—No Network/Modem Connection"

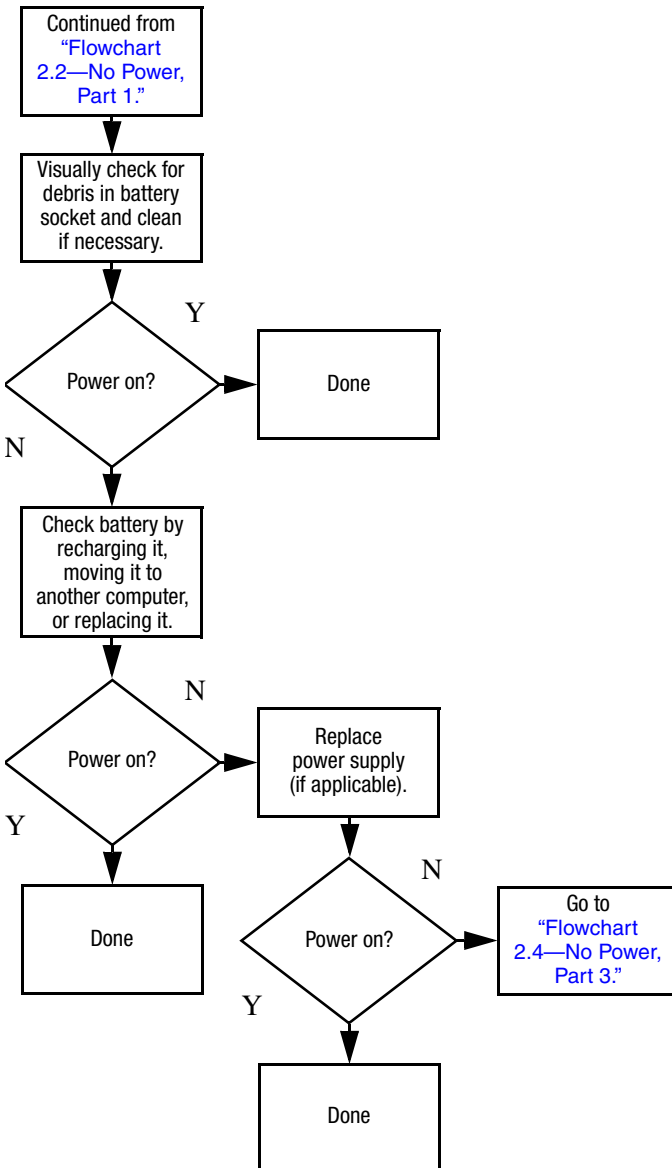
Flowchart 2.1 – Initial Troubleshooting



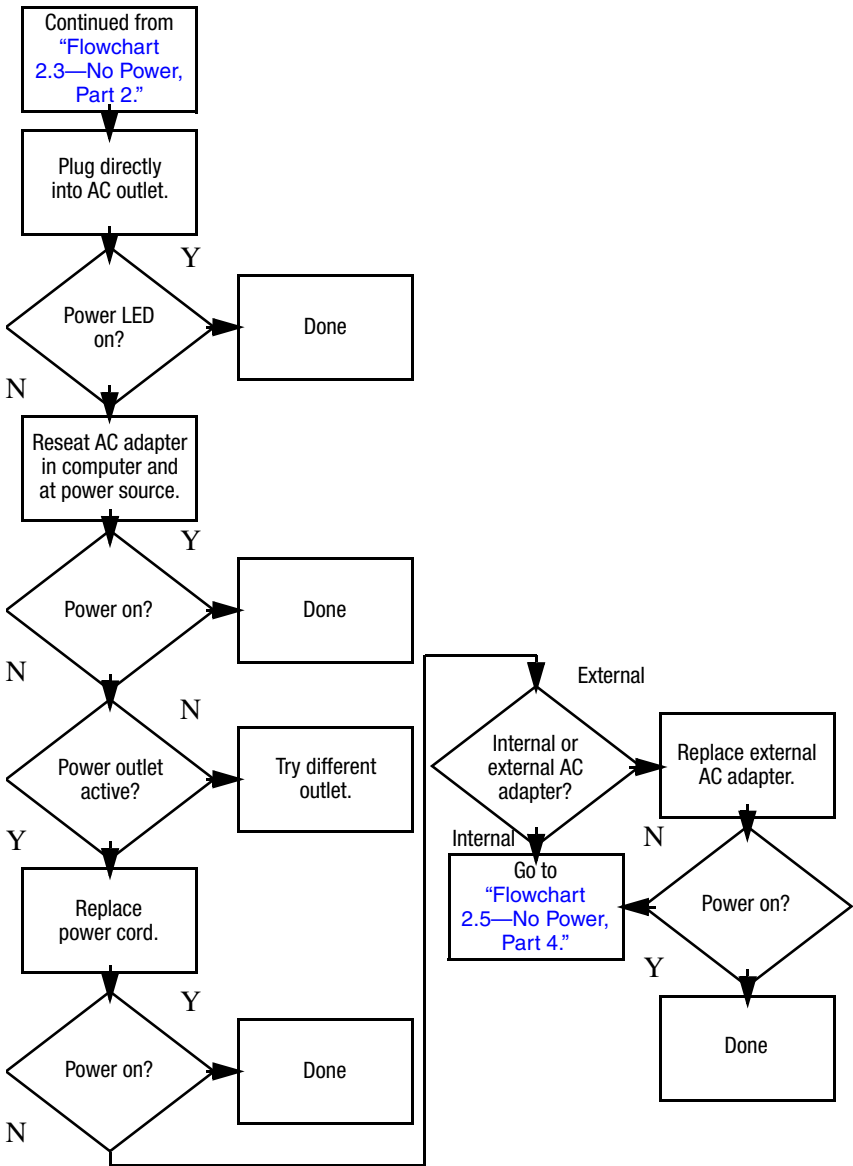
Flowchart 2.2—No Power, Part 1



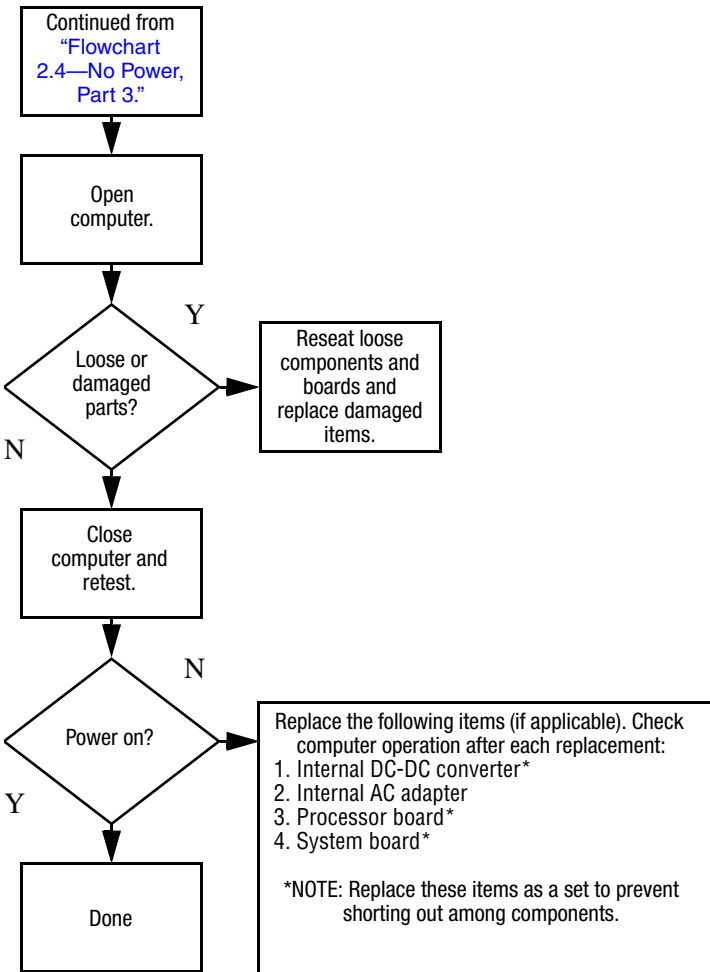
Flowchart 2.3—No Power, Part 2



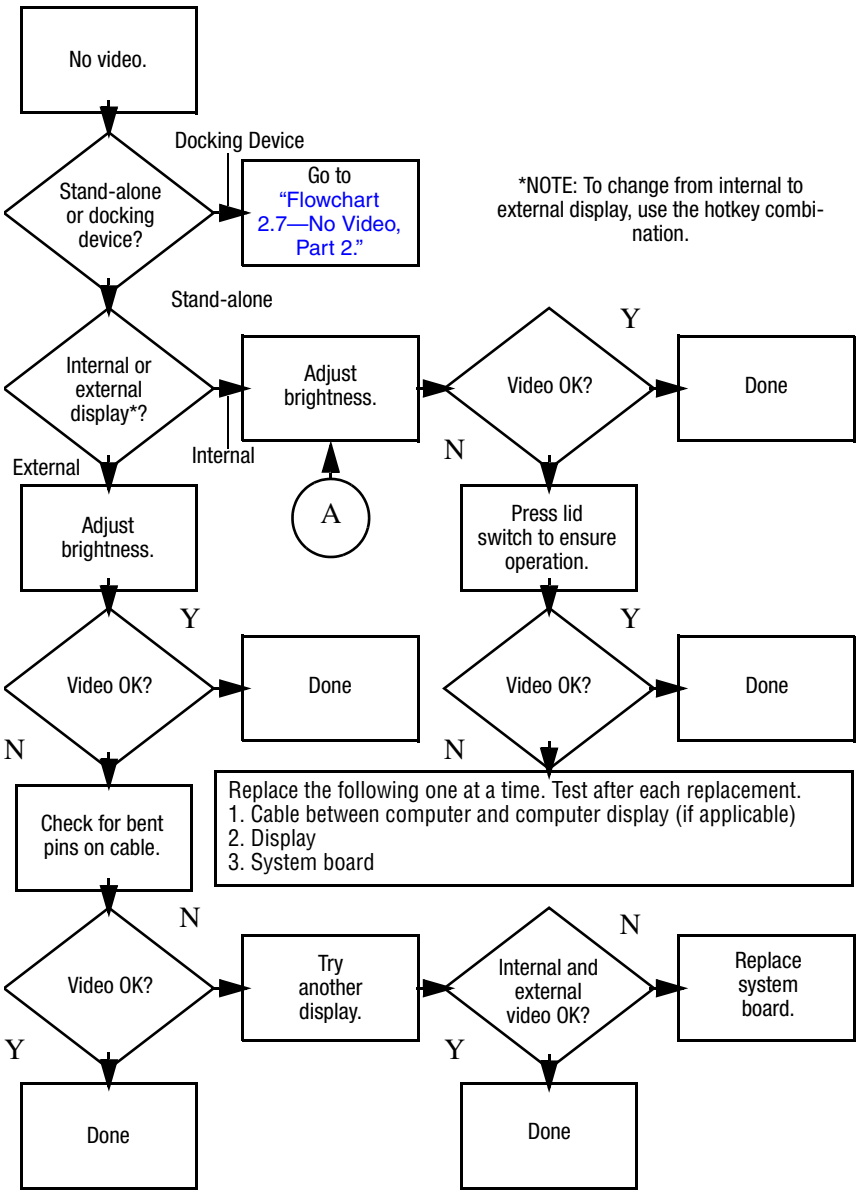
Flowchart 2.4—No Power, Part 3



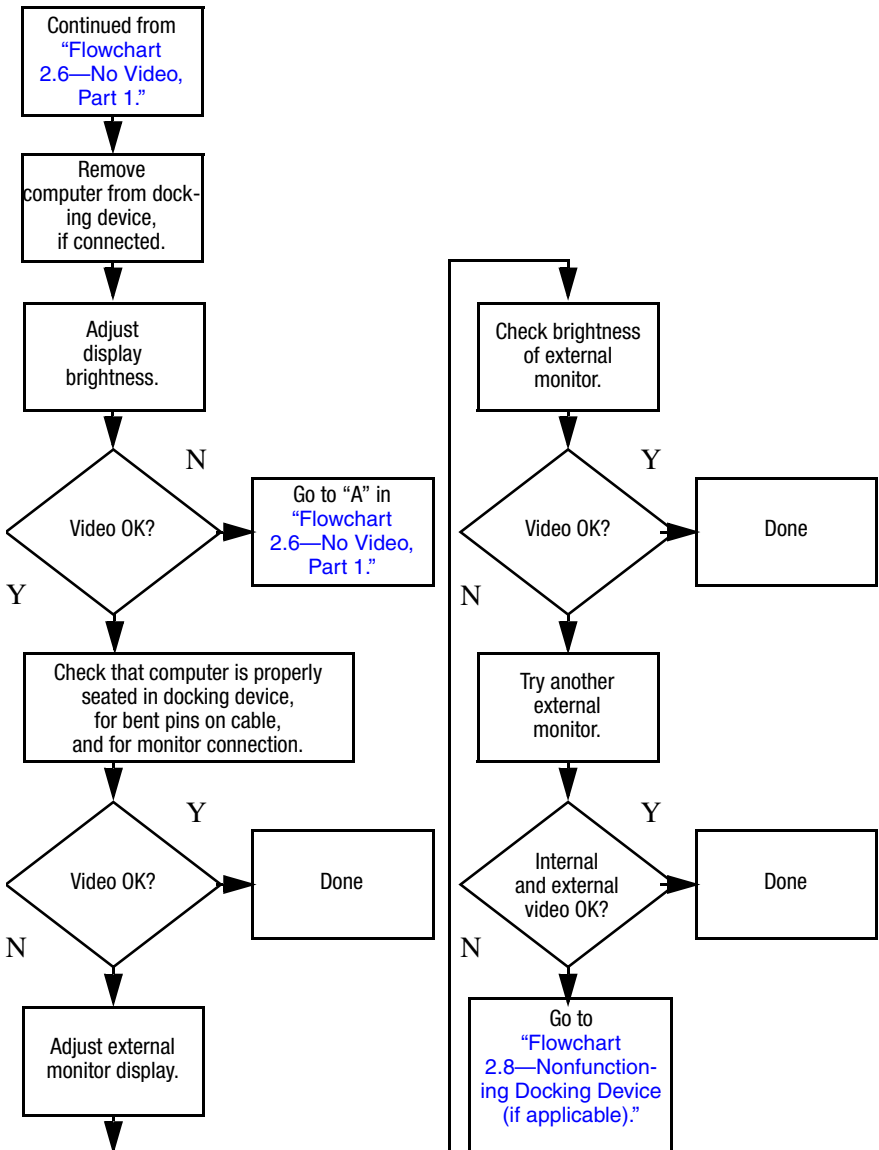
Flowchart 2.5—No Power, Part 4



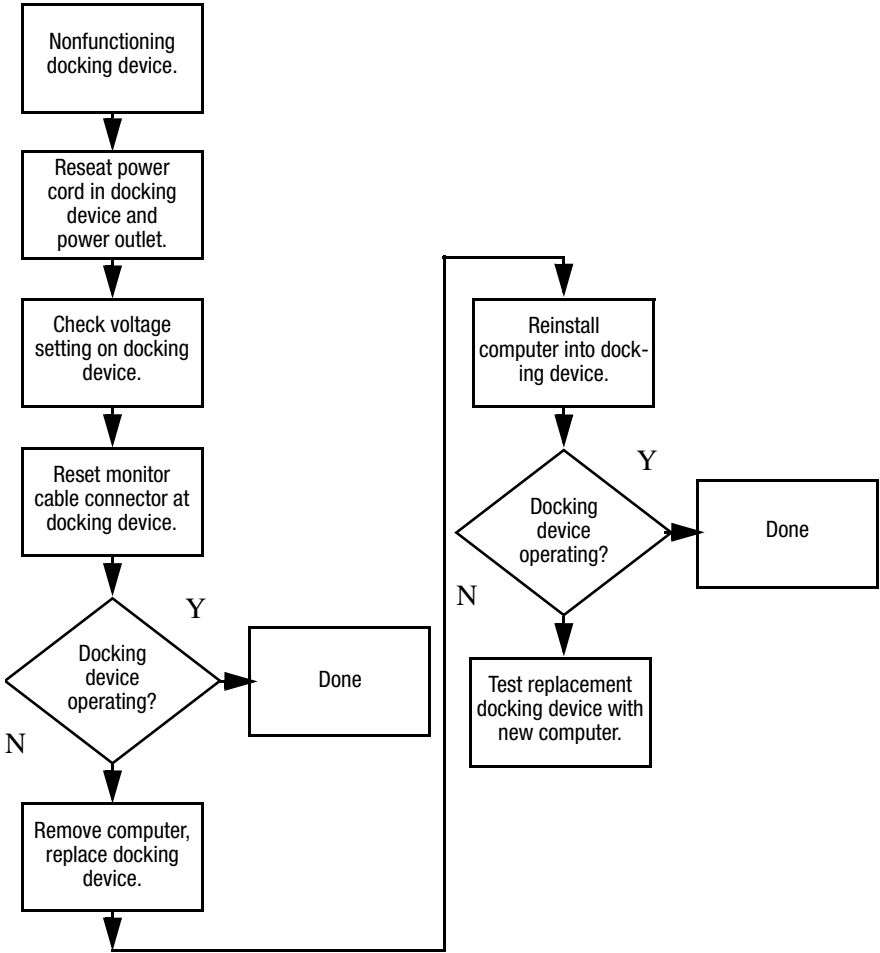
Flowchart 2.6—No Video, Part 1



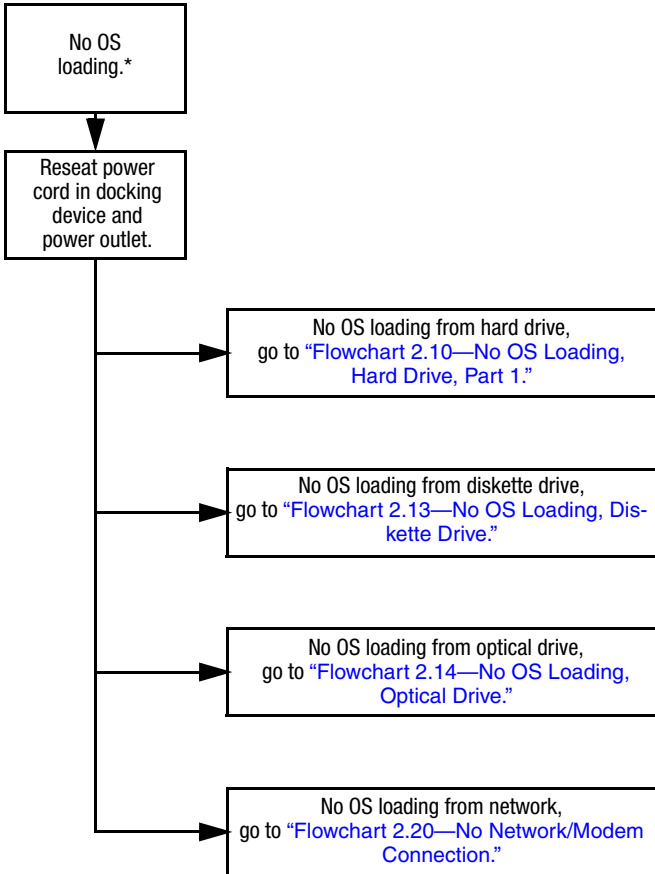
Flowchart 2.7—No Video, Part 2



Flowchart 2.8—Nonfunctioning Docking Device (if applicable)

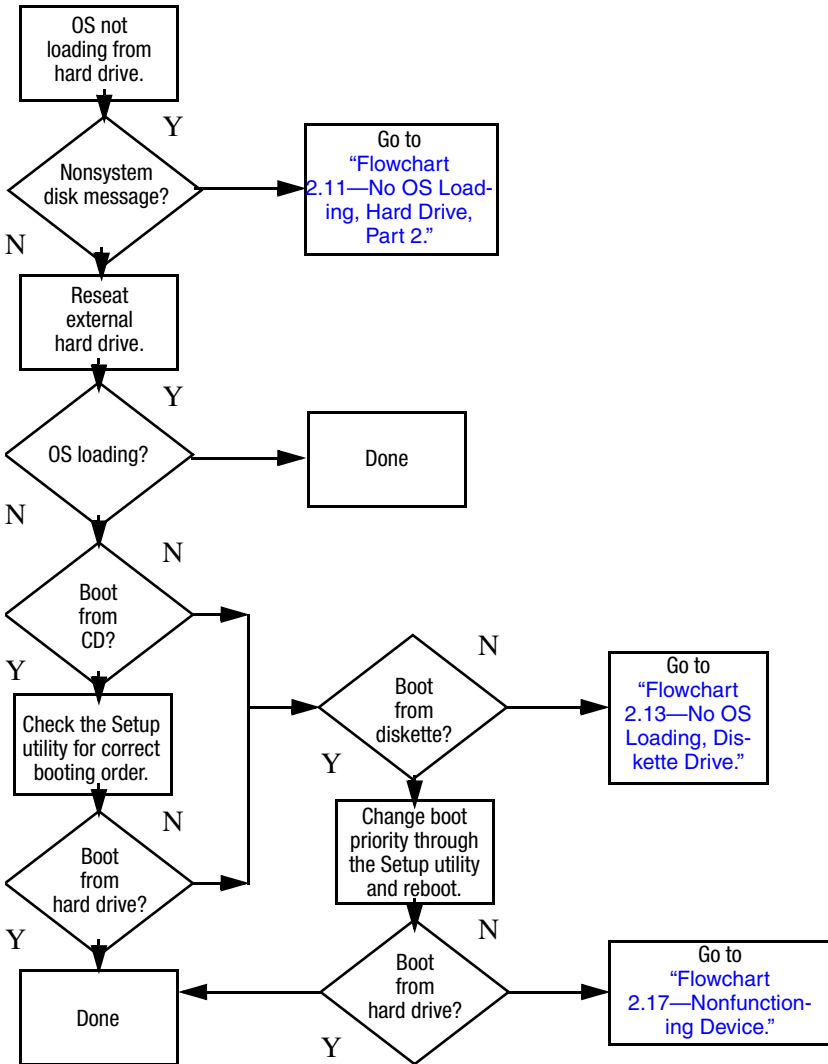


Flowchart 2.9—No Operating System (OS) Loading

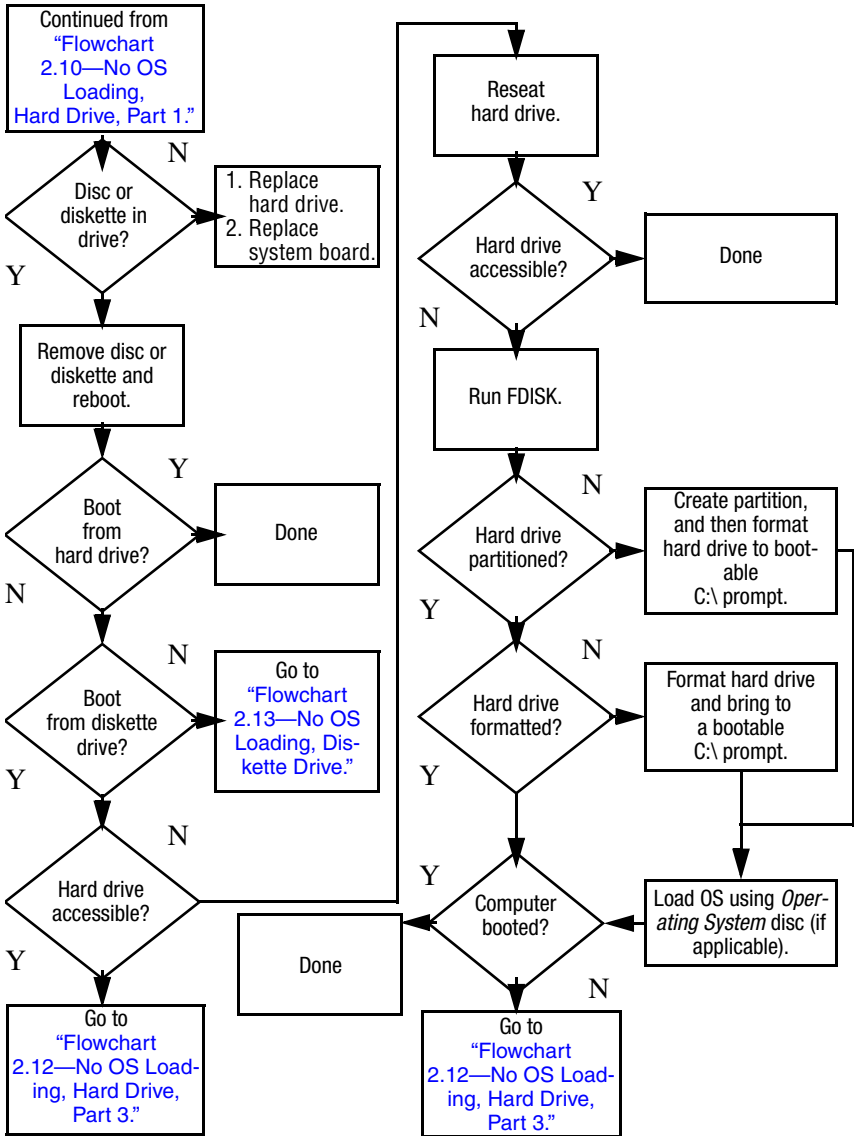


*NOTE: Before beginning troubleshooting, always check cable connections, cable ends, and drives for bent or damaged pins.

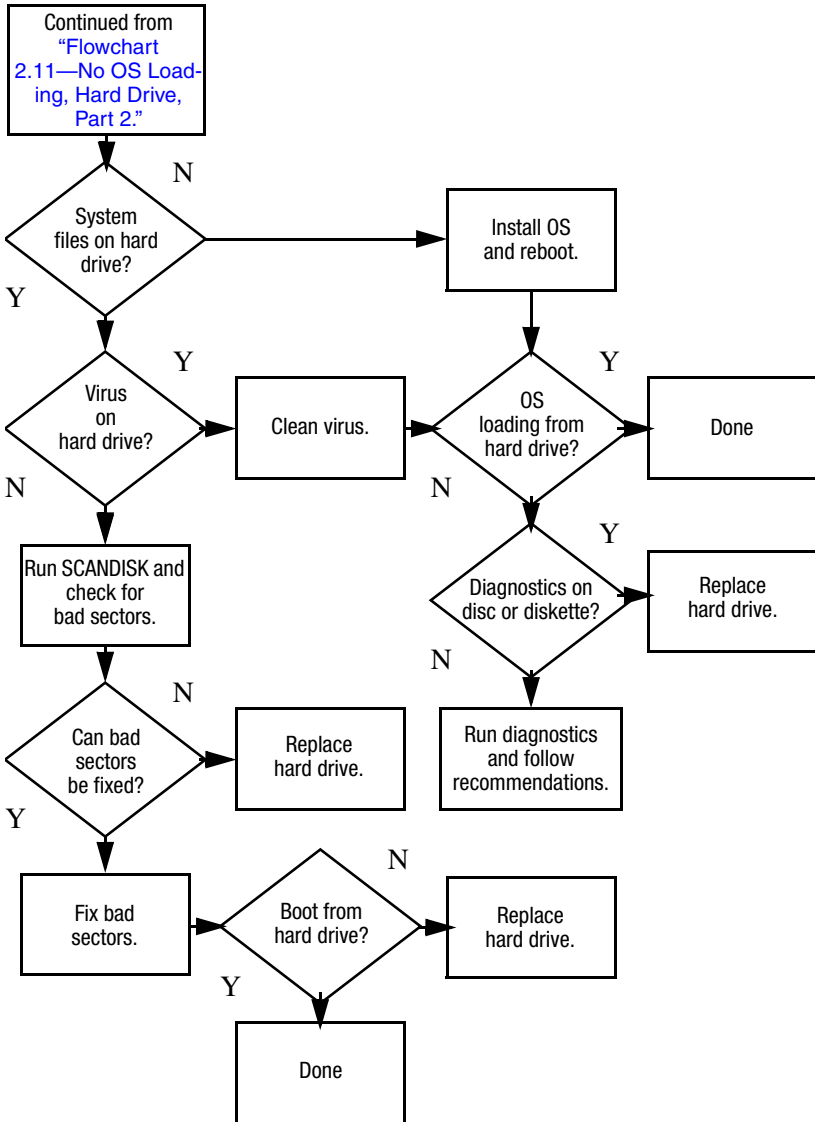
Flowchart 2.10—No OS Loading, Hard Drive, Part 1



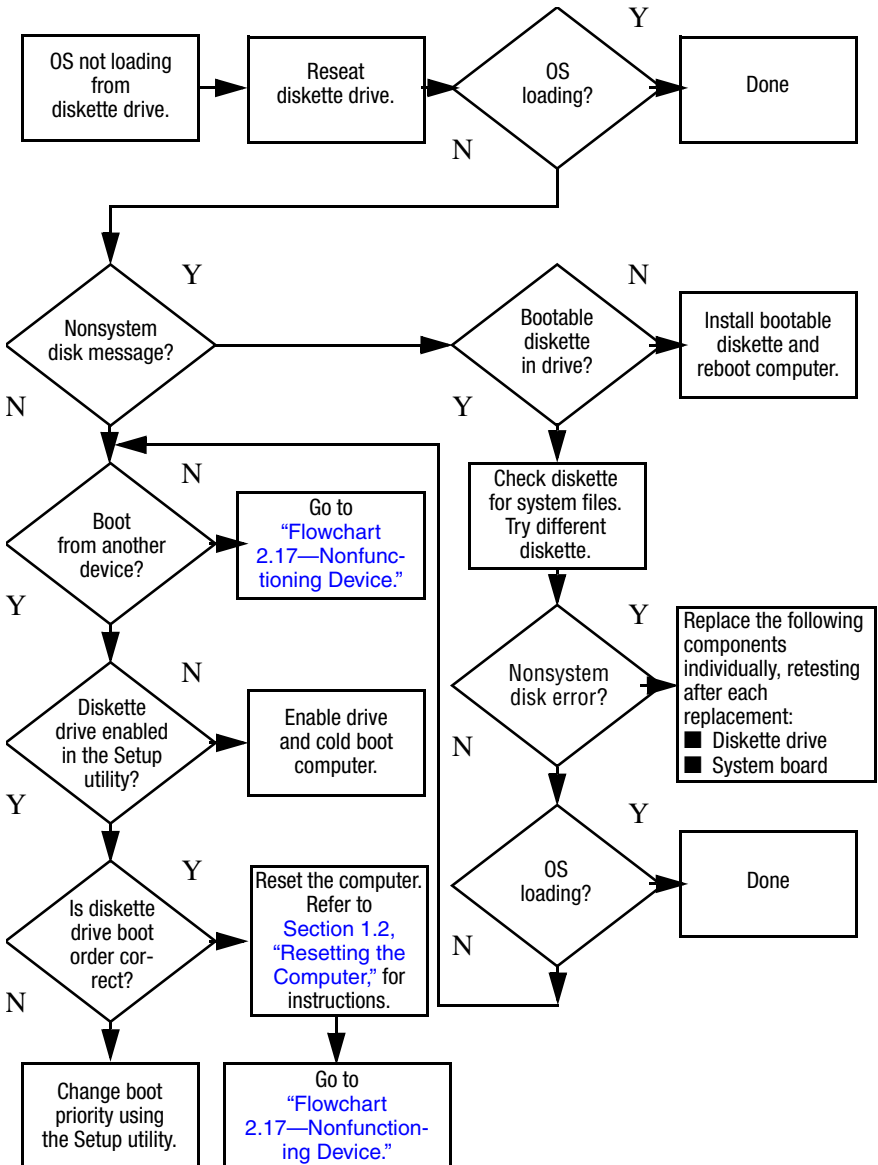
Flowchart 2.11 – No OS Loading, Hard Drive, Part 2



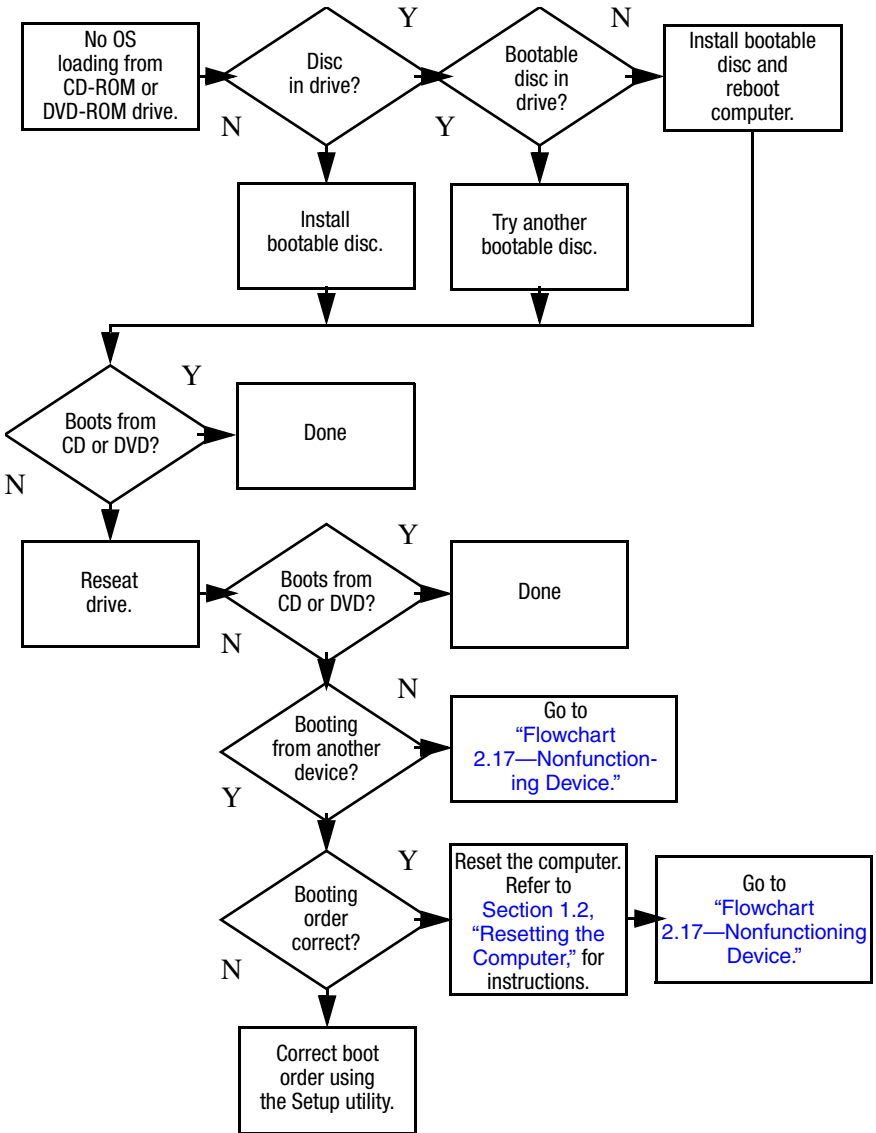
Flowchart 2.12—No OS Loading, Hard Drive, Part 3



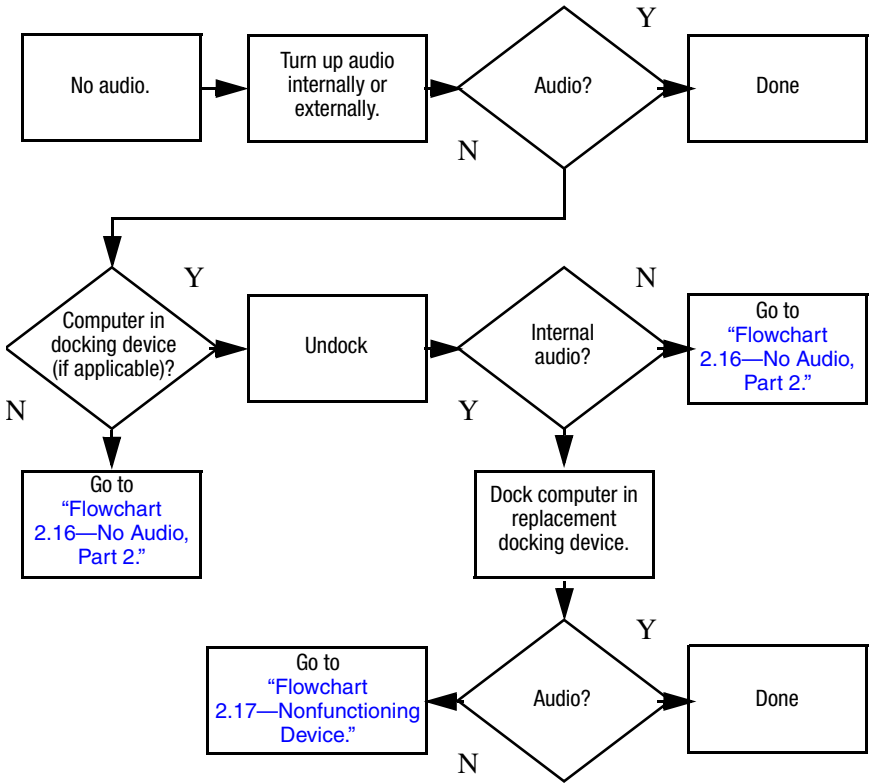
Flowchart 2.13—No OS Loading, Diskette Drive



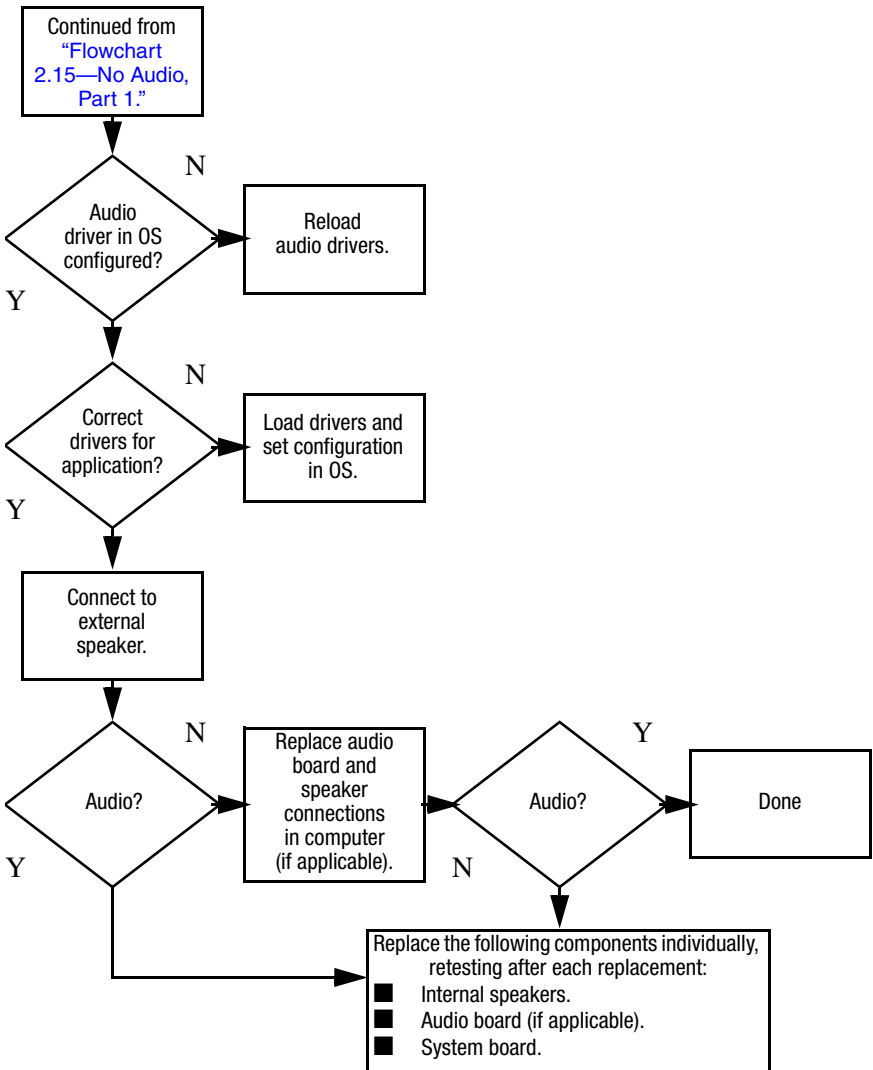
Flowchart 2.14—No OS Loading, Optical Drive



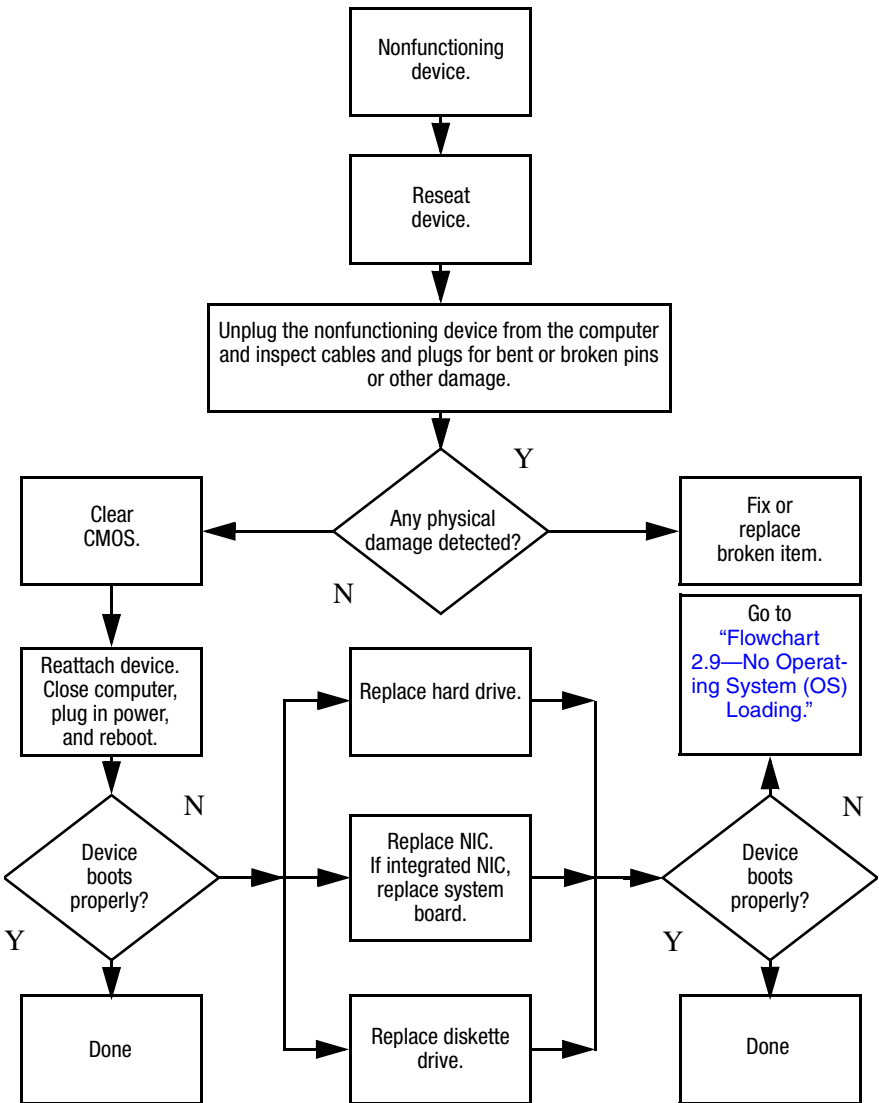
Flowchart 2.15—No Audio, Part 1



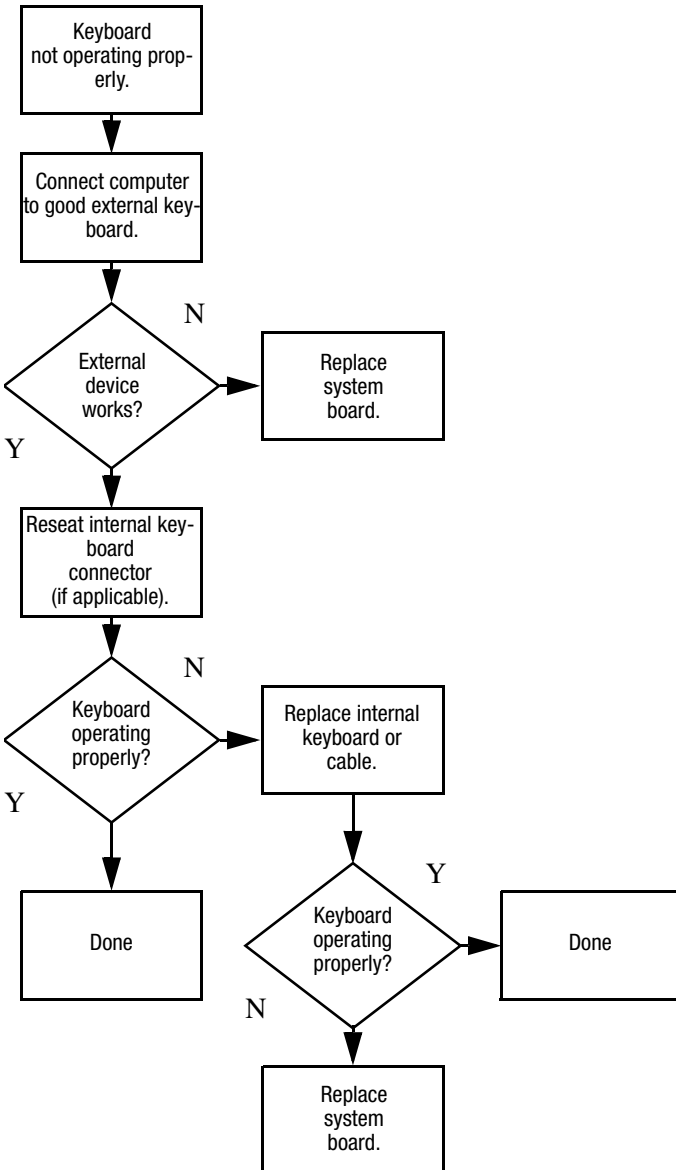
Flowchart 2.16—No Audio, Part 2



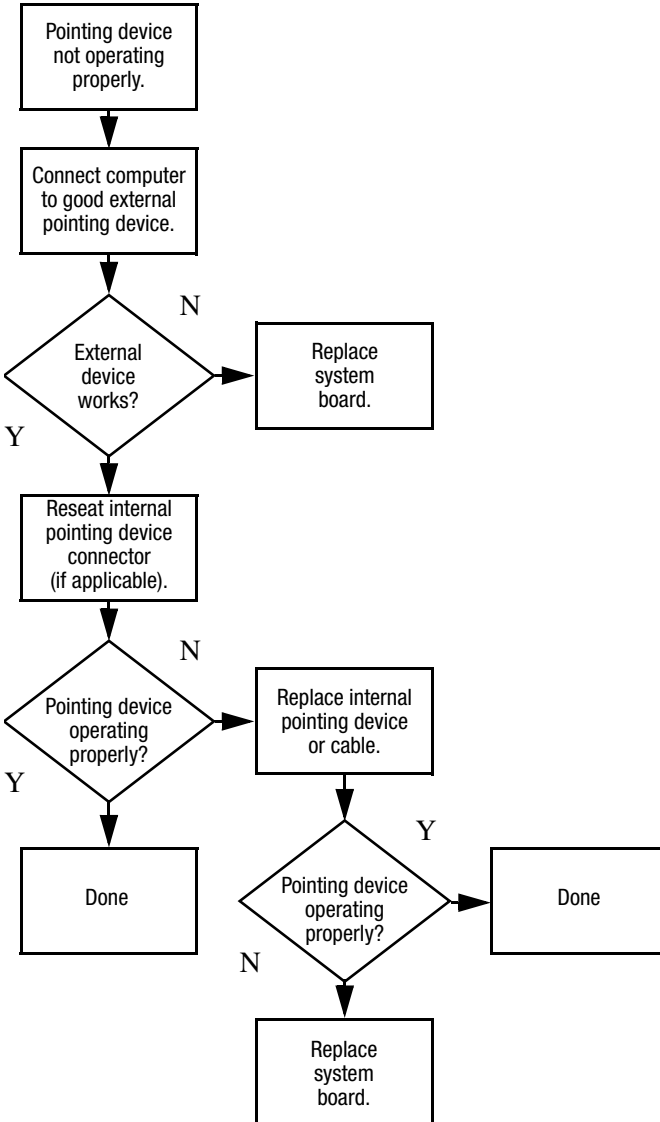
Flowchart 2.17—Nonfunctioning Device



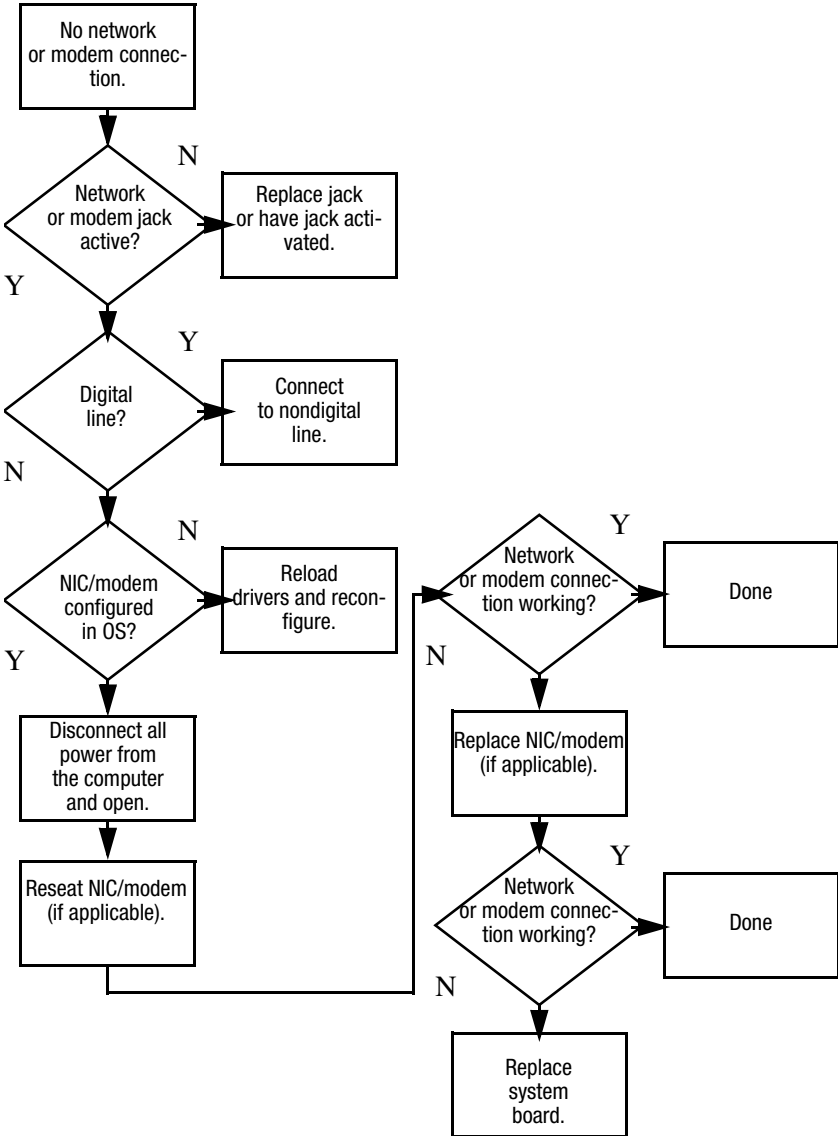
Flowchart 2.18—Nonfunctioning Keyboard



Flowchart 2.19—Nonfunctioning Pointing Device



Flowchart 2.20—No Network/Modem Connection



3

Illustrated Parts Catalog

This chapter provides an illustrated parts breakdown and a reference for spare part numbers and option part numbers.

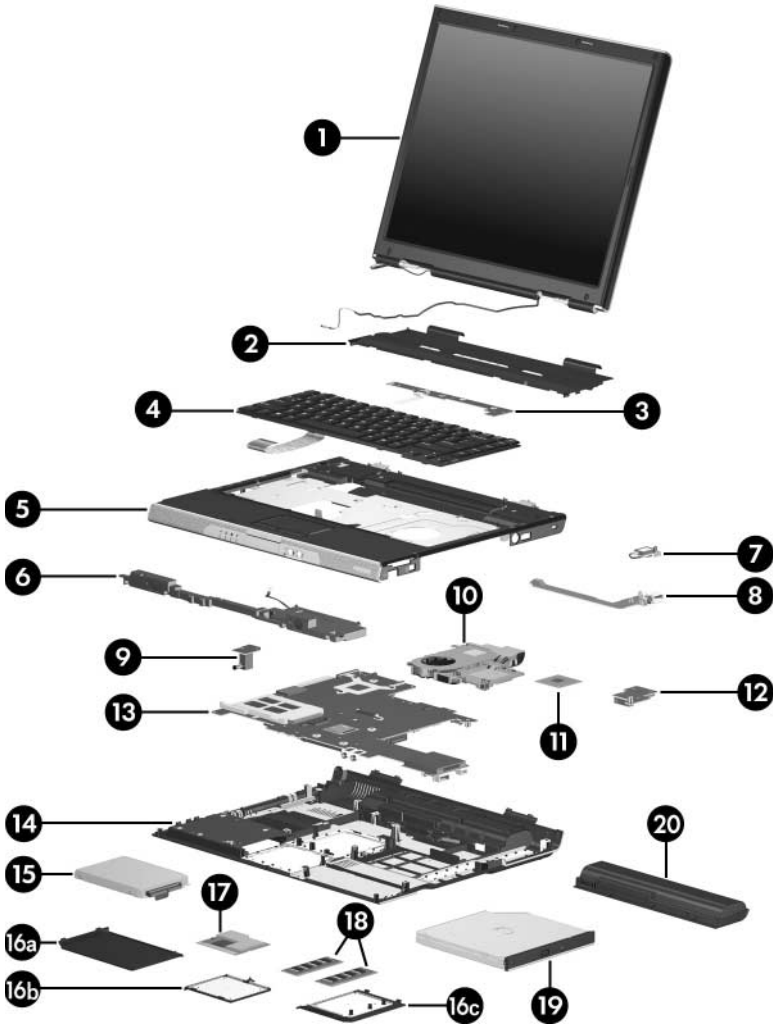
3.1 Serial Number Location

When ordering parts or requesting information, provide the computer serial number and model number located on the bottom of the computer.



Serial Number Location

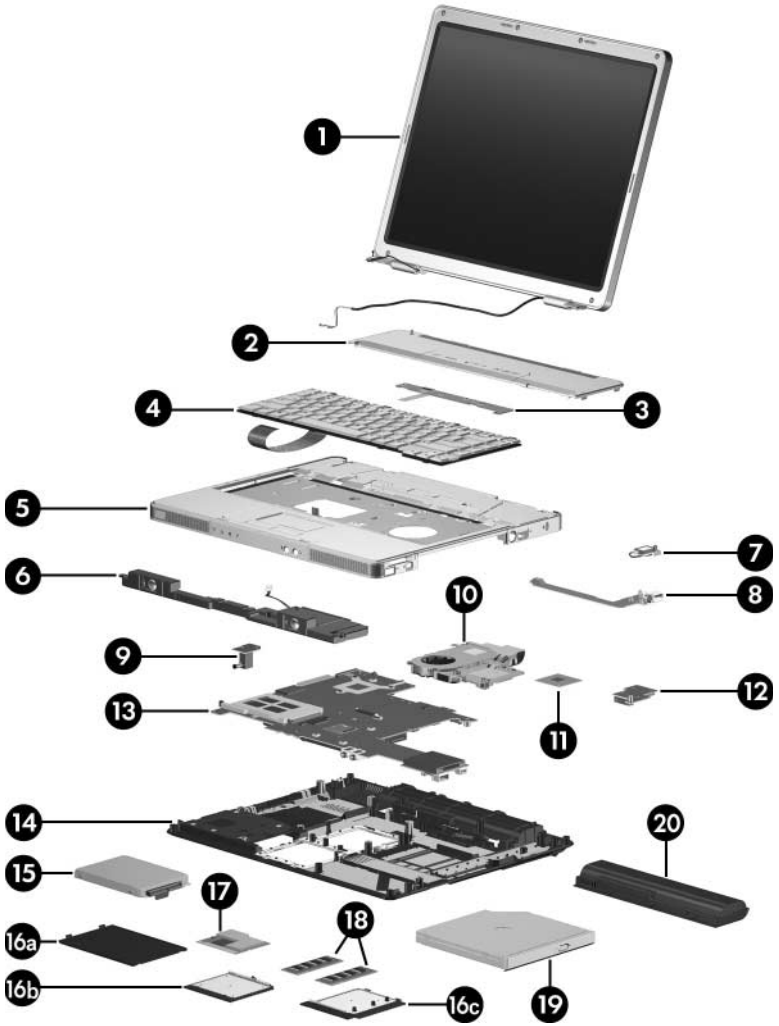
3.2 Computer Major Components



Computer Major Components, HP Pavilion ze2000

Table 3-1
Spare Parts: Computer Major Components

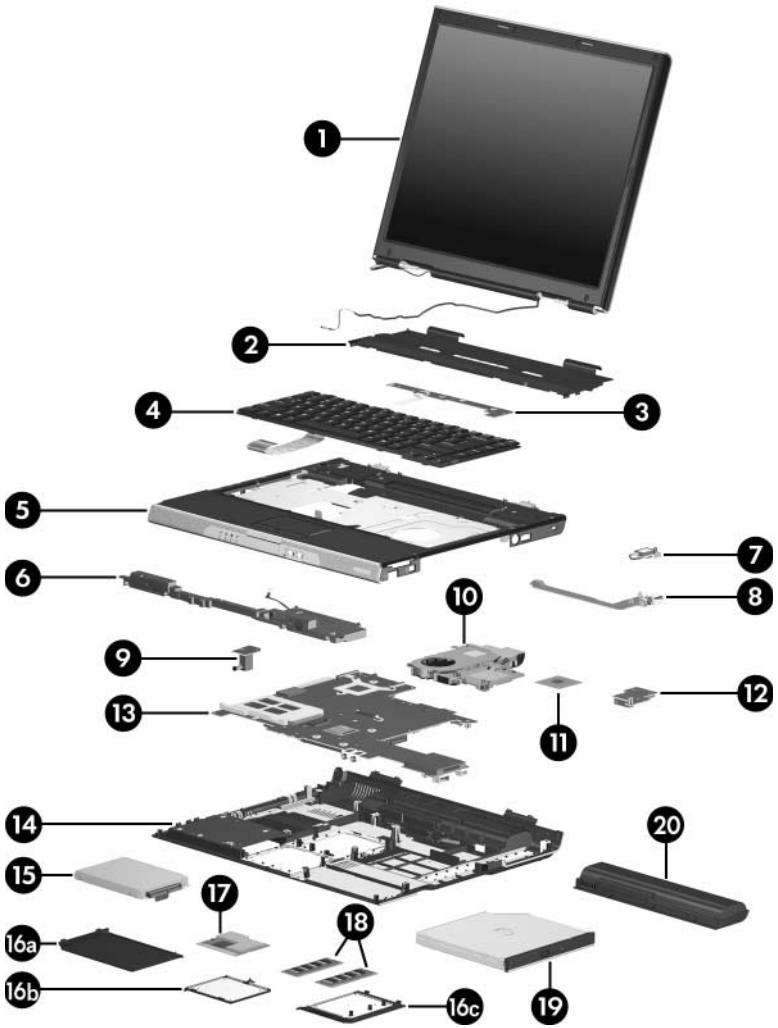
Item	Description	Spare Part Number
1	Display assemblies (include wireless antenna boards and cables)	
	15.0-inch, XGA TFT with BrightView, for use on HP Pavilion ze2000 models	394262-001
	15.0-inch, XGA TFT, for use on HP Pavilion ze2000 models	394260-001
	15.0-inch, XGA TFT with BrightView, for use on Compaq Presario M2000 models	394263-001
	15.0-inch, XGA TFT, for use on Compaq Presario M2000 models	394261-001
	Display hinge brackets (not illustrated)	
	For use on HP Pavilion ze2000 models	394304-001
	For use on Compaq Presario M2000 models	394305-001
	Display hinge covers (not illustrated)	394306-001
	2	Keyboard covers (include wireless button and light)
For use on HP Pavilion ze2000 models with wireless capability		394292-001
For use on HP Pavilion ze2000 models without wireless capability		394294-001
For use on Compaq Presario M2000 models with wireless capability		394293-001
For use on Compaq Presario M2000 models without wireless capability		394295-001



Computer Major Components, Compaq Presario M2000

Table 3-1**Spare Parts: Computer Major Components (Continued)**

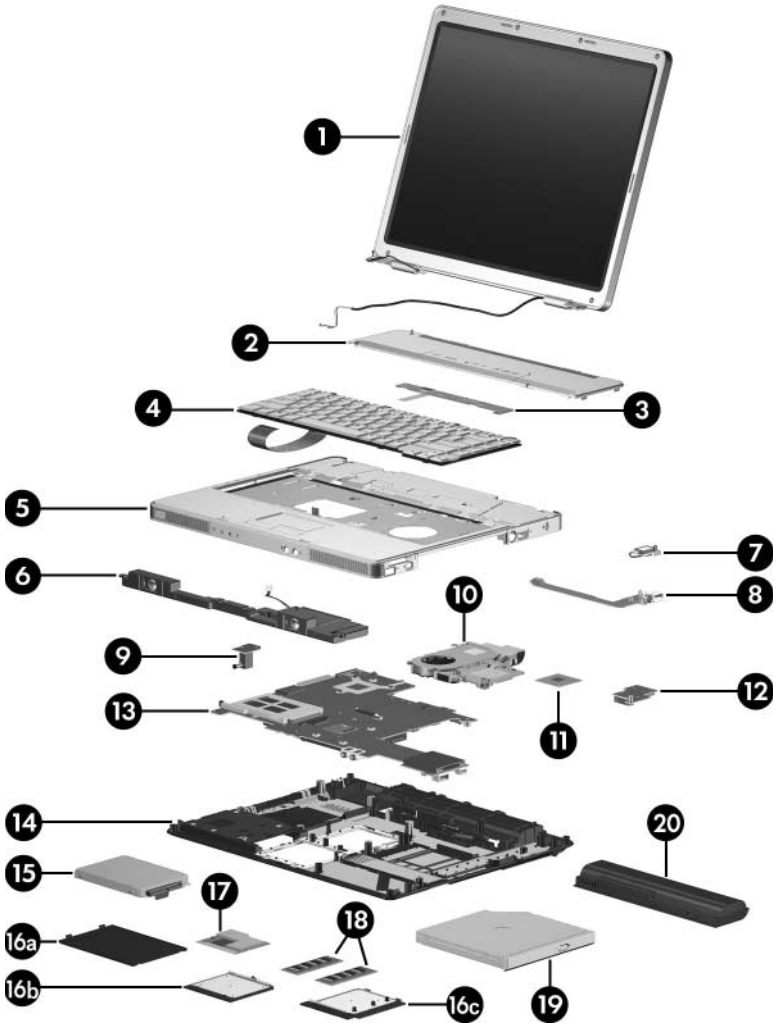
Item	Description	Spare Part Number
3	LED boards (include cable, not illustrated)	
	For use on HP Pavilion ze2000 models	394301-001
	For use on Compaq Presario M2000 models	394302-001
4	Keyboards	
	For use on HP Pavilion ze2000 models in:	
	Belgium	394276-A41
	Denmark	394276-081
	France	394276-051
	French Canada	394276-121
	Germany	394276-041
	International	394276-B31
	Italy	394276-061
	Latin America	394276-161
	Norway	394276-091
	Portugal	394276-131
	Spain	394276-071
	Sweden/Finland	394276-101
	Switzerland	394276-111
	United Kingdom	394276-031
	Asia Pacific, Australia, Canada, Hong Kong, People's Republic of China, and the United States	394276-001
	For use on Compaq Presario M2000 models in:	
	Denmark	394277-081
	France	394277-051
	French Canada	394277-121
	International	394277-B31
	Italy	394277-061
	Korea	394277-AD1
	Latin America	394277-161
	Norway	394277-091
	Spain	394277-071
	Sweden/Finland	394277-101
	Taiwan	394277-AB1
	Thailand	394277-281
	United Kingdom	394277-031
	United States	394277-001



Computer Major Components, HP Pavilion ze2000

Table 3-1**Spare Parts: Computer Major Components (Continued)**

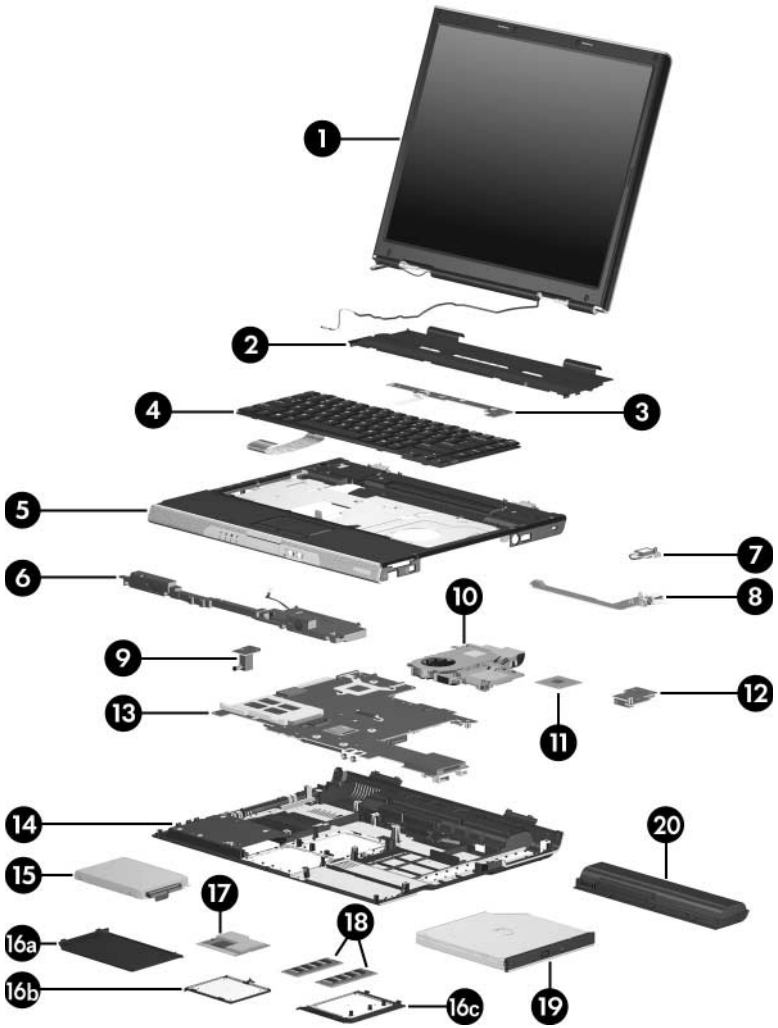
Item	Description	Spare Part Number
5	Top covers (include TouchPad)	
	For use on full-featured HP Pavilion ze2000 models	394280-001
	For use on defeatured HP Pavilion ze2000 models	394281-001
	For use on full-featured Compaq Presario M2000 models	394282-001
	For use on defeatured Compaq Presario M2000 models	394283-001
6	Speaker assemblies	
	For use on HP Pavilion ze2000 models	394296-001
	For use on Compaq Presario M2000 models	394297-001
7	Broadcomm Bluetooth Wireless LAN board	394254-001
8	USB/S-Video controller boards	
	For use on full-featured models	394303-001
	For use on defeatured models	395373-001
9	Power connector board	394300-001
10	Fan assembly (includes heat sink and thermal pad)	394298-001



Computer Major Components, Compaq Presario M2000

Table 3-1**Spare Parts: Computer Major Components (Continued)**

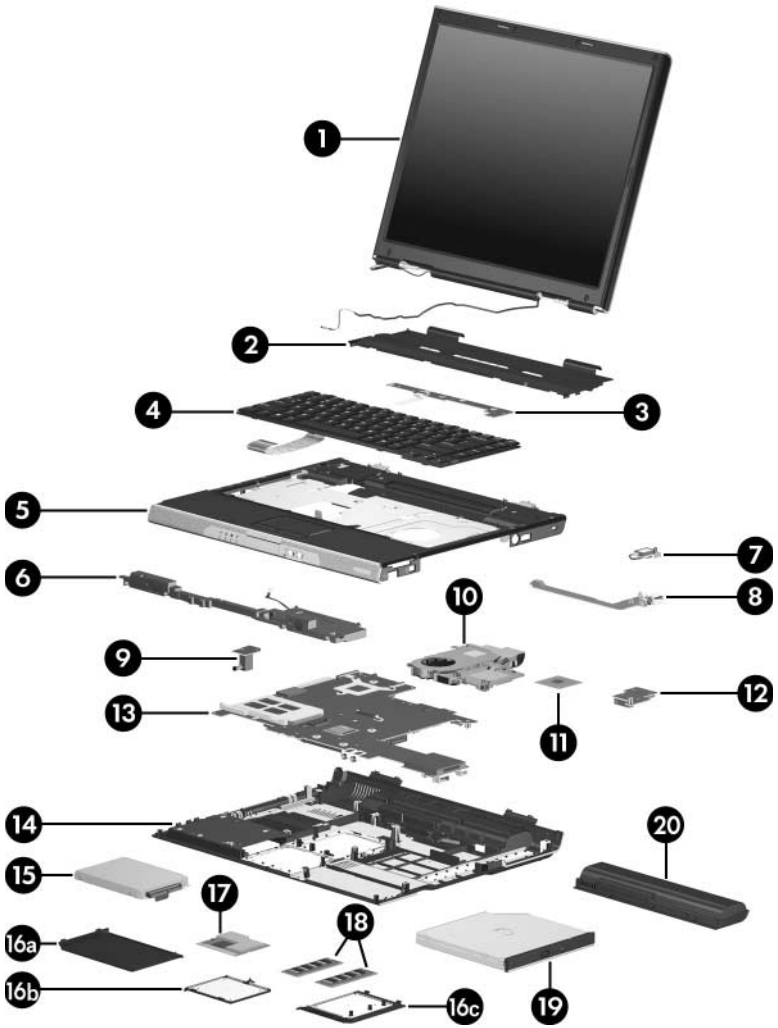
Item	Description	Spare Part Number
11	Processors (include thermal pad)	
	AMD Mobile Turion 64, ML-37 (2.0-GHz)	394347-001
	AMD Mobile Turion 64, ML-34 (1.80-GHz)	394259-001
	AMD Mobile Turion 64, ML-32 (1.80-GHz)	397346-001
	AMD Mobile Turion 64, ML-30 (1.60-GHz)	394258-001
	AMD Mobile Turion 64, ML-28 (1.60-GHz)	394257-001
	Mobile AMD Sempron 3300+ (2.00-GHz)	397345-001
	Mobile AMD Sempron 3000+ (1.80-GHz)	394256-001
	Mobile AMD Sempron 2800+ (1.60-GHz)	394255-001
12	Battery connector board	394299-001
13	System boards (include disk cell RTC battery)	
	ATI RS480M for use on full-featured models	394253-001
	For use on defeatured models, ATI RS480M	394252-001
	PC Card assembly (not illustrated)	396657-001
14	Base enclosures	
	For use on HP Pavilion ze2000 models	394284-001
	For use on Compaq Presario M2000 models	394285-001



Computer Major Components, HP Pavilion ze2000

Table 3-1**Spare Parts: Computer Major Components (Continued)**

Item	Description	Spare Part Number
15	Hard drives (include frame and connector)	
	4200 rpm, 80 GB	394268-001
	4200 rpm, 60 GB	394267-001
	5400 rpm, 40 GB	394266-001
	Miscellaneous Plastics Kit	
	For use on HP Pavilion ze2000 models	394286-001
	For use on Compaq Presario M2000 models	394287-001
	Includes:	
16a	Hard drive cover (includes 2 captive screws)	
16b	Mini PCI compartment cover (includes 1 captive screw)	
16c	Memory module compartment cover (includes 2 captive screws)	
	Not illustrated:	
	PC Card slot space saver	
	Computer feet (4)	
17	Mini PCI communications modules	
	802.11b/g wireless local access network (WLAN) card for use in the United States	394462-001
	802.11b/g WLAN card for use in the rest of the world	394462-002 and 397791-001
18	Memory modules (333 MHz, DDR1, PC2700)	
	512-MB	394265-001
	256-MB	394264-001

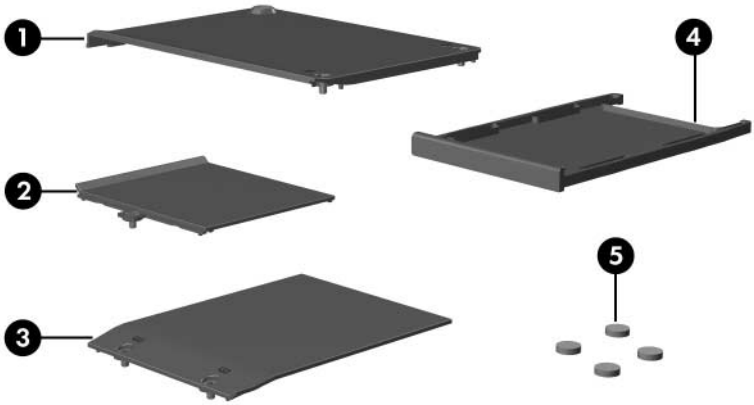


Computer Major Components, HP Pavilion ze2000

Table 3-1**Spare Parts: Computer Major Components (Continued)**

Item	Description	Spare Part Number
19	Optical drives (include bezel)	
	For use on HP Pavilion ze2000 models:	
	8X DVD-ROM drive	394269-001
	24X DVD/CD-RW Combo Drive	394271-001
	8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394273-001
	For use on Compaq Presario M2000 models:	
	8X DVD-ROM drive	394270-001
	24X DVD/CD-RW Combo Drive	394272-001
	8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394274-001
20	Battery packs	
	12-cell, 8.8-AHr	394275-001
	6-cell, 4.4-AHr	391883-001

3.3 Miscellaneous Plastics Kit

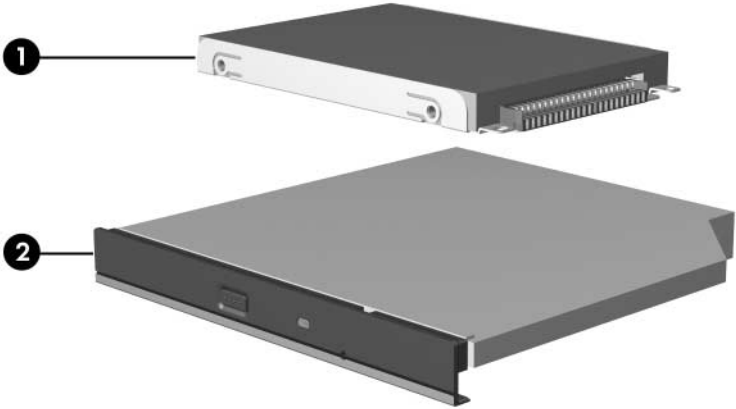


Miscellaneous Plastics Kit

Table 3-2
Miscellaneous Plastics Kit
Spare Part Number Information

Item	Description	Spare Part Number
	Miscellaneous Plastics Kit	
	For use on HP Pavilion ze2000 models	394286-001
	For use on Compaq Presario M2000 models	394287-001
	Includes:	
1	Hard drive cover	
2	Mini PCI compartment cover	
3	Memory module compartment cover	
4	PC Card slot space saver	
5	Computer feet (4)	

3.4 Mass Storage Devices



Mass Storage Devices

Table 3-3
Mass Storage Devices
Spare Part Number Information

Item	Description	Spare Part Number
1	Hard drives (include frame and connector)	
	4200 rpm, 80 GB	394268-001
	4200 rpm, 60 GB	394267-001
	5400 rpm, 40 GB	394266-001
2	Optical drives	
	For use on HP Pavilion ze2000 models:	
	8X DVD-ROM drive	394269-001
	24X DVD/CD-RW Combo Drive	394271-001
	8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394273-001
	For use on Compaq Presario M2000 models:	
	8X DVD-ROM drive	394270-001
	24X DVD/CD-RW Combo Drive	394272-001
	8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394274-001
	USB digital drive (not illustrated)	364727-001

3.5 Miscellaneous

Table 3-4
Spare Parts: Miscellaneous (not illustrated)

Description	Spare Part Number
65-watt AC adapter	394278-001
Power cords	
For use in:	
Australia and New Zealand	394279-011
Belgium, Europe, Finland, France, Germany, Greece, the Netherlands, Norway, Portugal, Spain, and Sweden	394279-021
Canada, French Canada, Latin America, Thailand, and the United States	394279-001
Denmark	394279-081
Hong Kong and the United Kingdom	394279-031
Italy	394279-061
Korea	394279-AD1
Switzerland	394279-111
Taiwan	394279-AB1
The People's Republic of China	394279-AA1
All-in-one media cable	375759-001

Table 3-4

Spare Parts: Miscellaneous (not illustrated) (Continued)

Description	Spare Part Number
Audio Y-cable	379452-001
HP Remote Control	371694-001
Logo Kits	
For use on HP Pavilion ze2000 models	394290-001
For use on Compaq Presario M2000 models	394291-001
USB travel mouse	309674-001
Wired headset with volume control	371693-001
Screw Kit (refer to Appendix C, "Screw Listing," for more information on screw specifications and usage)	
For use on HP Pavilion ze2000 models	394288-001
For use on Compaq Presario M2000 models	394289-001
Includes:	
■ Phillips PM3.0×4.0 screw	■ Phillips PM2.0×4.0 screw
■ Phillips PM2.0×6.0 captive screw (includes C-clips)	■ Phillips PM1.5×9.0 captive spring-loaded, shoulder screw (includes C-clips)
■ Phillips PM2.0×6.0 screw	■ Phillips PM1.5×2.0 screw
■ Phillips PM2.0×8.0 screw	

3.6 Sequential Part Number Listing

Table 3-5
Spare Parts: Sequential Part Number Listing

Spare Part Number	Description
309674-001	USB travel mouse
364727-001	USB digital drive
371693-001	Wired headset with volume control
371694-001	HP Remote Control
375759-001	All-in-one media cable
379452-001	Audio Y-cable
391883-001	6-cell, 4.4-AHr battery pack
394252-001	ATI RS480M system board for use on defeatured models (includes disk cell RTC battery)
394253-001	ATI RS480M system board for use on full-featured models (includes disk cell RTC battery)
394254-001	Broadcomm Bluetooth Wireless LAN board
394255-001	Mobile AMD Sempron 2800+ (1.60-GHz) processor (includes thermal pad)
394256-001	Mobile AMD Sempron 3000+ (1.80-GHz) processor (includes thermal pad)
394257-001	AMD Mobile Turion 64, ML-28 (1.60-GHz) processor (includes thermal pad)
394258-001	AMD Mobile Turion 64, ML-30 (1.60-GHz) processor (includes thermal pad)
394259-001	AMD Mobile Turion 64, ML-34 (1.80-GHz) processor (includes thermal pad)

Table 3-5**Spare Parts: Sequential Part Number Listing (Continued)**

Spare Part Number	Description
394260-001	15.0-inch, XGA TFT display assembly for use on HP Pavilion ze2000 models (includes wireless antenna boards and cables)
394261-001	15.0-inch, XGA TFT display assembly for use on Compaq Presario M2000 models (includes wireless antenna boards and cables)
394262-001	15.0-inch, XGA TFT with BrightView display assembly for use on HP Pavilion ze2000 models (includes wireless antenna boards and cables)
394263-001	15.0-inch, XGA TFT with BrightView display assembly for use on Compaq Presario M2000 models (includes wireless antenna boards and cables)
394264-001	256-MB memory module (333 MHz, DDR1, PC2700)
394265-001	512-MB memory module (333 MHz, DDR1, PC2700)
394266-001	5400-rpm, 40-GB hard drive (includes frame and connector)
394267-001	4200-rpm, 60-GB hard drive (includes frame and connector)
394268-001	4200-rpm, 80-GB hard drive (includes frame and connector)
394269-001	8X DVD-ROM drive for use on HP Pavilion ze2000 models
394270-001	8X DVD-ROM drive for use on Compaq Presario M2000 models
394271-001	24X DVD/CD-RW Combo Drive for use on HP Pavilion ze2000 models
394272-001	24X DVD/CD-RW Combo Drive for use on Compaq Presario M2000 models
394273-001	8X DVD±RW/R and CD-RW Combo Dual Layer Drive for use on HP Pavilion ze2000 models
394274-001	8X DVD±RW/R and CD-RW Combo Dual Layer Drive for use on Compaq Presario M2000 models

Table 3-5

Spare Parts: Sequential Part Number Listing (*Continued*)

Spare Part Number	Description
394275-001	12-cell, 8.8-AHr battery pack
394276-001	Keyboard for use on HP Pavilion ze2000 models in Asia Pacific, Australia, Canada, Hong Kong, People's Republic of China, and the United States
394276-031	Keyboard for use on HP Pavilion ze2000 models in the United Kingdom
394276-041	Keyboard for use on HP Pavilion ze2000 models in Germany
394276-051	Keyboard for use on HP Pavilion ze2000 models in France
394276-061	Keyboard for use on HP Pavilion ze2000 models in Italy
394276-071	Keyboard for use on HP Pavilion ze2000 models in Spain
394276-081	Keyboard for use on HP Pavilion ze2000 models in Denmark
394276-091	Keyboard for use on HP Pavilion ze2000 models in Norway
394276-101	Keyboard for use on HP Pavilion ze2000 models in Sweden/Finland
394276-111	Keyboard for use on HP Pavilion ze2000 models in Switzerland
394276-121	Keyboard for use on HP Pavilion ze2000 models in French Canada
394276-131	Keyboard for use on HP Pavilion ze2000 models in Portugal
394276-161	Keyboard for use on HP Pavilion ze2000 models in Latin America
394276-A41	Keyboard for use on HP Pavilion ze2000 models in Belgium
394276-B31	Keyboard for use on International HP Pavilion ze2000 models
394277-001	Keyboard for use on Compaq Presario M2000 models in the United States
394277-031	Keyboard for use on Compaq Presario M2000 models in the United Kingdom

Table 3-5**Spare Parts: Sequential Part Number Listing (*Continued*)**

Spare Part Number	Description
394277-051	Keyboard for use on Compaq Presario M2000 models in France
394277-061	Keyboard for use on Compaq Presario M2000 models in Italy
394277-071	Keyboard for use on Compaq Presario M2000 models in Spain
394277-081	Keyboard for use on Compaq Presario M2000 models in Denmark
394277-091	Keyboard for use on Compaq Presario M2000 models in Norway
394277-101	Keyboard for use on Compaq Presario M2000 models in Sweden/Finland
394277-121	Keyboard for use on Compaq Presario M2000 models in French Canada
394277-161	Keyboard for use on Compaq Presario M2000 models in Latin America
394277-281	Keyboard for use on Compaq Presario M2000 models in Thailand
394277-AB1	Keyboard for use on Compaq Presario M2000 models in Taiwan
394277-AD1	Keyboard for use on Compaq Presario M2000 models in Korea
394277-B31	Keyboard for use on International Compaq Presario M2000 models
394278-001	65-watt AC adapter
394279-001	Power cord for use in Canada, French Canada, Latin America, Thailand, and the United States
394279-011	Power cord for use in Australia and New Zealand

Table 3-5

Spare Parts: Sequential Part Number Listing (*Continued*)

Spare Part Number	Description
394279-021	Power cord for use in Belgium, Europe, Finland, France, Germany, Greece, the Netherlands, Norway, Portugal, Spain, and Sweden
394279-031	Power cord for use in Hong Kong and the United Kingdom
394279-061	Power cord for use in Italy
394279-081	Power cord for use in Denmark
394279-111	Power cord for use in Switzerland
394279-AA1	Power cord for use in the People's Republic of China
394279-AB1	Power cord for use in Taiwan
394279-AD1	Power cord for use in Korea
394280-001	Top cover for use on full-featured HP Pavilion ze2000 models (includes TouchPad)
394281-001	Top cover for use on defeatured HP Pavilion ze2000 models (includes TouchPad)
394282-001	Top cover for use on full-featured Compaq Presario M2000 models (includes TouchPad)
394283-001	Top cover for use on defeatured Compaq Presario M2000 models (includes TouchPad)
394284-001	Base enclosure for use on HP Pavilion ze2000 models
394285-001	Base enclosure for use on Compaq Presario M2000 models
394286-001	Miscellaneous Plastics Kit for use on HP Pavilion ze2000 models
394287-001	Miscellaneous Plastics Kit for use on Compaq Presario M2000 models
394288-001	Screw Kit for use on HP Pavilion ze2000 models
394289-001	Screw Kit for use on Compaq Presario M2000 models

Table 3-5**Spare Parts: Sequential Part Number Listing (Continued)**

Spare Part Number	Description
394290-001	Logo Kit for use on HP Pavilion ze2000 models
394291-001	Logo Kit for use on Compaq Presario M2000 models
394292-001	Keyboard cover for use on HP Pavilion ze2000 models with wireless capability (includes wireless button and light)
394293-001	Keyboard cover for use on Compaq Presario M2000 models with wireless capability (includes wireless button and light)
394294-001	Keyboard cover for use on HP Pavilion ze2000 models without wireless capability (includes wireless button and light)
394295-001	Keyboard cover for use on Compaq Presario M2000 models without wireless capability (includes wireless button and light)
394296-001	Speakers for use on HP Pavilion ze2000 models (includes TouchPad)
394297-001	Speakers for use on Compaq Presario M2000 models (includes TouchPad)
394298-001	Fan assembly (includes heat sink and thermal pad)
394299-001	Battery connector board
394300-001	Power connector board
394301-001	LED board for use on HP Pavilion ze2000 models (includes cable)
394302-001	LED board for use on Compaq Presario M2000 models (includes cable)
394303-001	USB/S-Video controller board for use on full-featured models
394304-001	Display hinge brackets for use on HP Pavilion ze2000 models
394305-001	Display hinge brackets for use on Compaq Presario M2000 models

Table 3-5

Spare Parts: Sequential Part Number Listing (*Continued*)

Spare Part Number	Description
394306-001	Display hinge covers for use on Compaq Presario M2000 models
394347-001	AMD Mobile Turion 64, ML-37 (2.00-GHz) processor (includes thermal pad)
394462-001	802.11b/g WLAN Mini PCI communications module for use in the United States
394462-002	802.11b/g WLAN Mini PCI communications module for use in the rest of the world
395373-001	USB/S-Video controller board for use on defeatured models
396657-001	PC Card assembly
397345-001	Mobile AMD Sempron 3300+ (2.00-GHz) processor (includes thermal pad)
397346-001	AMD Mobile Turion 64, ML-32 (1.80-GHz) processor (includes thermal pad)
397791-001	802.11b/g WLAN Mini PCI communications module for use in the rest of the world

Removal and Replacement Preliminaries

This chapter provides essential information for proper and safe removal and replacement service.

4.1 Tools Required

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

- Magnetic screwdriver
- Phillips P0 screwdriver
- 2.0-mm hex wrench for processor socket locking screw
- Flat-bladed screwdriver
- Tool kit—includes connector removal tool, loopback plugs, and case utility tool

4.2 Service Considerations

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



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

Plastic Parts

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, ensure 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. Ensure 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.

4.3 Preventing Damage to Removable Drives

Removable drives are fragile components that must be handled with care. To prevent damage to the computer, damage to a removable drive, or loss of information, observe the following 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 removing a diskette drive or optical drive, ensure that a diskette or disc is not in the drive and ensure that the optical drive tray is closed.
- Before handling a drive, ensure that you are discharged of static electricity. While handling a drive, avoid touching the connector.
- 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 a 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: Handle With Care.”

4.4 Preventing Electrostatic Damage

Many 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, the discharge contains enough power to alter device parameters or melt silicon junctions.

A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs.

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

4.5 Packaging and Transporting Precautions

Use the following grounding precautions when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe containers, such as tubes, bags, or boxes.
- Protect all electrostatic-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic-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 sensitive component or assembly.
- Store reusable electrostatic-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyors made of antistatic belts and roller bushings. Ensure 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.

4.6 Workstation Precautions

Use the following grounding precautions at workstations:

- Cover the workstation with approved static-shielding material (refer to [Table 4-2, “Static-Shielding Materials”](#)).
- 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, screwdrivers, and vacuums.
- When using 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 electrostatic-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.

4.7 Grounding Equipment and Methods

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 $\pm 10\%$ 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 strips must be worn in contact with the skin.

Other grounding equipment recommended for use in preventing electrostatic damage includes:

- 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

Table 4-1 shows how humidity affects the electrostatic voltage levels generated by different activities.

Table 4-1
Typical Electrostatic Voltage Levels

Event	Relative Humidity		
	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



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

Table 4-2 lists the shielding protection provided by antistatic bags and floor mats.

Table 4-2
Static-Shielding Materials

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

5

Removal and Replacement Procedures

This chapter provides removal and replacement procedures.

There are as many as 66 screws, in 9 different sizes and types, that may need to be removed, replaced, or loosened when servicing the computer. Make special note of each screw size and location during removal and replacement.

Refer to [Appendix C, “Screw Listing,”](#) for detailed information on screw sizes, locations, and usage.

5.1 Serial Number

Report the computer serial number to HP when requesting information or ordering spare parts. The serial number is located on the bottom of the computer.




Serial Number Location

5.2 Disassembly Sequence Chart

Use the chart below to determine the section number to be referenced when removing computer components.

Disassembly Sequence Chart

Section	Description	# of Screws Removed
5.3	Preparing the Computer for Disassembly	
	Battery Pack	0
5.4	Hard Drive	2 loosened to remove the hard drive cover 4 removed to disassemble the hard drive
5.5	Computer Feet	0
5.6	Optical Drive	1
5.7	Memory Module	2 loosened to remove the memory module compartment cover
5.8	Mini PCI Communications Module	1 loosened to remove the Mini PCI compartment cover
	 To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in the computer by the governmental agency that regulates wireless devices in your country. If you install a device and then receive a warning message, remove the device to restore computer functionality. Then contact Customer Care.	
5.9	Keyboard Cover	2
5.10	LED Board	2
5.11	Keyboard	4

Disassembly Sequence Chart (*Continued*)

Section	Description	# of Screws Removed
5.12	Display Assembly	HP Pavilion ze2000 = 4 Compaq Presario M2000 = 6
5.13	Base Enclosure	HP Pavilion ze2000 = 24 Compaq Presario M2000 = 25
5.14	RTC Battery	0
5.15	Speaker Assembly	0
5.16	Fan Assembly	1 removed, 4 loosened
5.17	Processor	1 loosened
5.18	Battery Connector Board	2
5.19	Power Connector Board	2
5.20	USB/S-Video Controller Board	1
5.21	Bluetooth Board	2
5.22	System Board	HP Pavilion ze2000 = 3 Compaq Presario M2000 = 4

5.3 Preparing the Computer for Disassembly

Before you begin any removal or installation procedures:

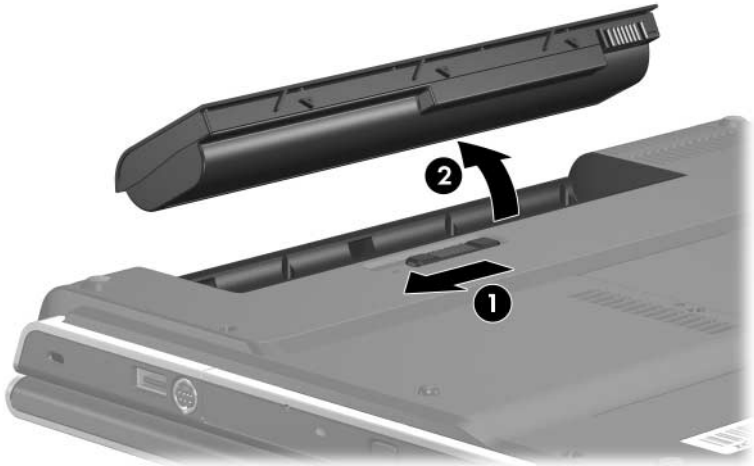
1. Shut down the computer. If you are unsure whether the computer is off or in hibernation, turn the computer on, and then shut it down through the operating system.
2. Disconnect all external devices connected to the computer.
3. Disconnect the power cord.

Battery Pack Spare Part Number Information

12-cell, 8.8-AHr	394275-001
6-cell, 4.4-AHr	391883-001

4. Remove the battery pack by following these steps:
 - a. Turn the computer upside down with the front panel toward you.

- b. Slide and hold the battery release latch **1** to the left.
(The front edge of the battery pack disengages from the computer.)
- c. Lift the front edge of the battery pack **2** up and swing it back.
- d. Remove the battery pack.



Removing the Battery Pack

Reverse the above procedure to install the battery pack.

5.4 Hard Drive

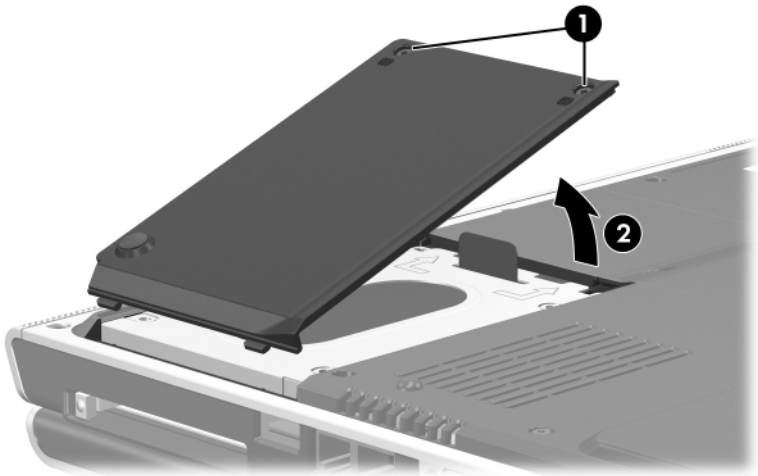
Hard Drive Spare Part Number Information

80-GB (4200-rpm; includes frame and connector)	394268-001
60-GB (4200-rpm; includes frame and connector)	394267-001
40-GB (5400-rpm; includes frame and connector)	394266-001

5. Remove the hard drive by following these steps:
 - a. Position the computer with the rear panel toward you.
 - b. Loosen the two PM2.0×6.0 captive screws ❶ that secure the hard drive cover to the computer.
 - c. Lift the right side of the cover ❷ and swing it to the left.
 - d. Remove the hard drive cover.

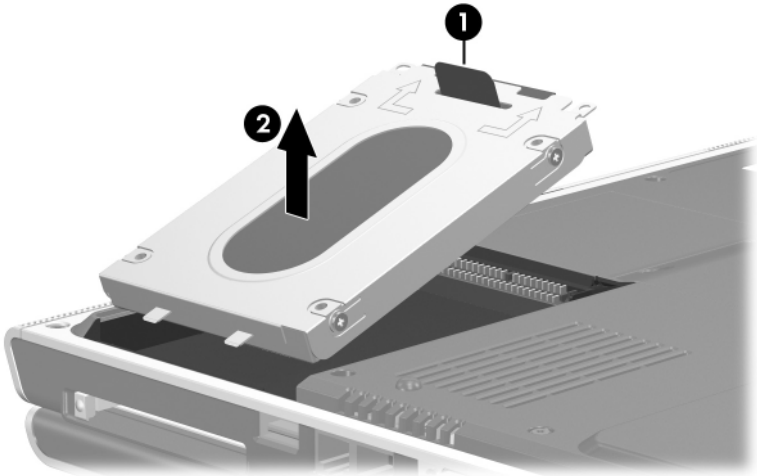


The hard drive cover is included in the Miscellaneous Plastics Kits, spare part numbers 394286-001 (for use on HP Pavilion ze2000 models) and 394287-001 (for use on Compaq Presario M2000 models).



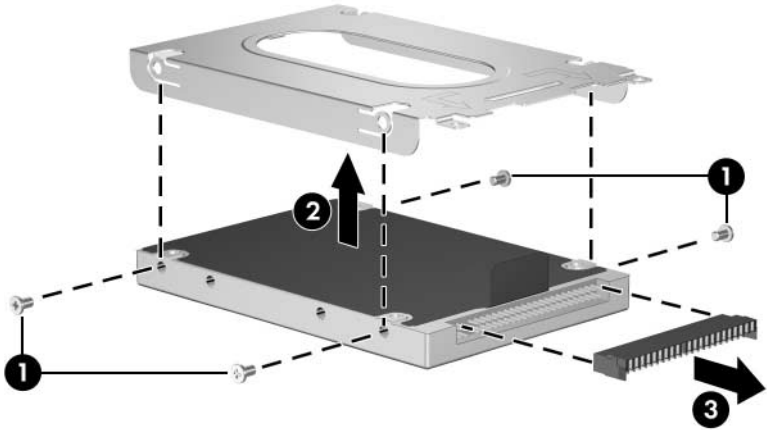
Removing the Hard Drive Cover

- e. Grasp the mylar tab ❶ on the right side of the hard drive and lift the right side of the hard drive until it disconnects from the computer.
- f. Lift the hard drive ❷ straight up and remove it from the hard drive bay.



Removing the Hard Drive

- g. Remove the four PM3.0×4.0 screws **1** that secure the hard drive frame to the hard drive.
- h. Lift the frame **2** to remove it from the hard drive.
- i. Slide the hard drive connector **3** toward you and remove it.

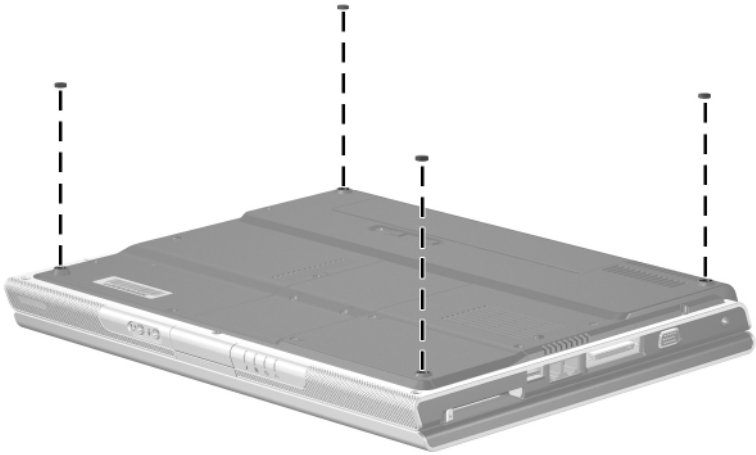


Removing the Hard Drive Frame and Connector

Reverse the above procedure to reassemble and install the hard drive.

5.5 Computer Feet

The computer feet are adhesive-backed rubber pads. The feet are included in the Miscellaneous Plastics Kits, spare part numbers 394286-001 (for use on HP Pavilion ze2000 models) and 394287-001 (for use on Compaq Presario M2000 models). The feet attach to the base enclosure as illustrated below.



Replacing the Computer Feet

5.6 Optical Drive

Optical Drive Spare Part Number Information

For use on HP Pavilion ze2000 models:

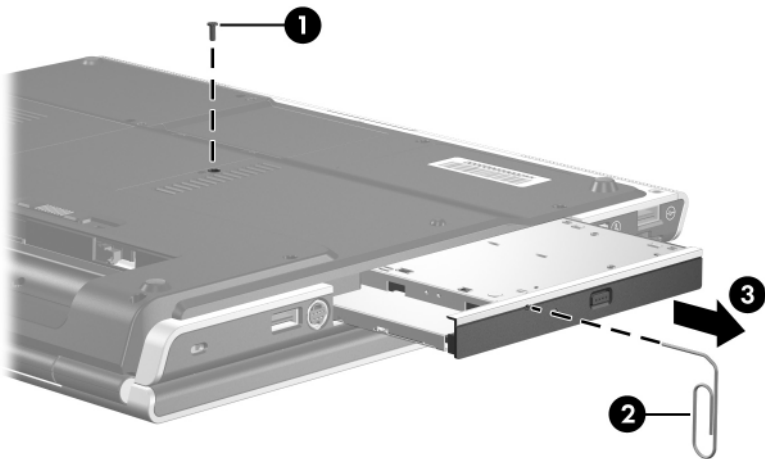
8X DVD-ROM drive	394269-001
24X DVD/CD-RW Combo Drive	394271-001
8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394273-001

For use on Compaq Presario M2000 models:

8X DVD-ROM drive	394270-001
24X DVD/CD-RW Combo Drive	394272-001
8X DVD±RW/R and CD-RW Combo Dual Layer Drive	394274-001

1. Prepare the computer for disassembly ([Section 5.3](#)).
2. Position the computer with the rear panel toward you.

3. Remove the PM2.0x8.0 screw **1** that secures the optical drive to the computer.
4. Insert a thin tool, such as a paper clip **2**, into the media tray release hole. (The optical drive media tray releases from the optical drive.)
5. Use the media tray frame **3** to slide the optical drive to the right.
6. Remove the optical drive.



Removing the Optical Drive

Reverse the above procedure to install an optical drive.

5.7 Memory Module

Memory Module Spare Part Number Information

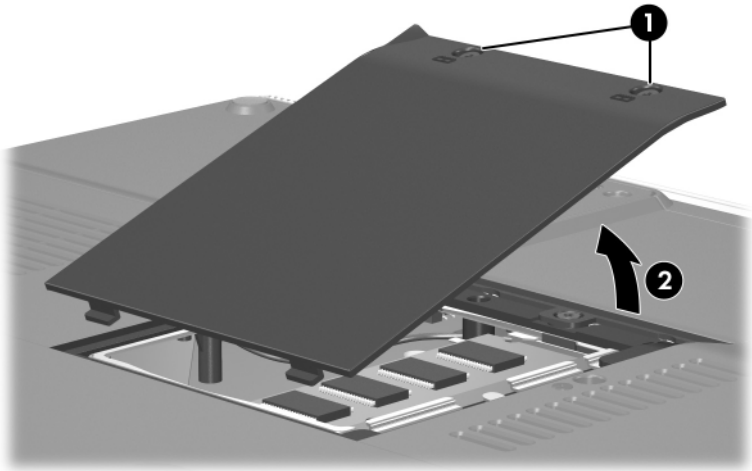
512-MB	394265-001
256-MB	394264-001

1. Prepare the computer for disassembly (refer to [Section 5.3](#)).

2. Position the computer with the rear panel toward you.
3. Loosen the two PM2.0×6.0 captive screws ❶ that secure the memory module compartment cover to the computer.
4. Lift the rear edge of the memory module compartment cover ❷ and swing it toward you.
5. Remove the memory module compartment cover.



The memory module compartment cover is included in the Miscellaneous Plastics Kits, spare part numbers 394286-001 (for use on HP Pavilion ze2000 models) and 394287-001 (for use on Compaq Presario M2000 models).

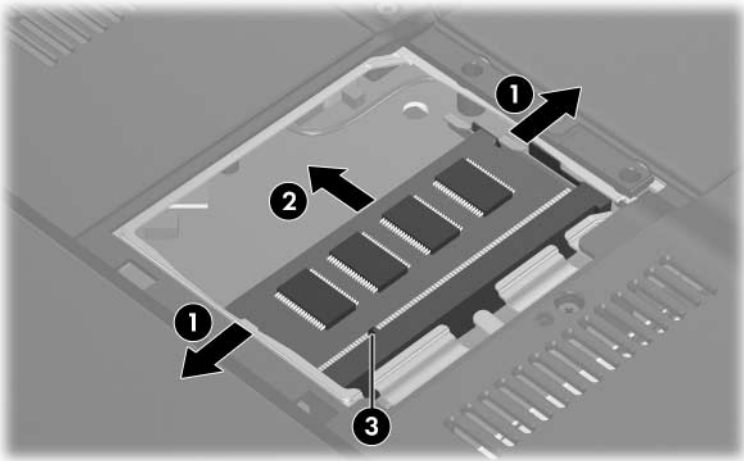


Removing the Memory Module Compartment Cover

6. Spread the retaining tabs **1** on each side of the memory module socket to release the memory module. (The right side of the module rises away from the computer.)
7. Slide the module **2** away from the socket at an angle.



Memory modules are designed with a notch **3** to prevent incorrect installation into the memory module socket.



Removing the Memory Module

Reverse the above procedure to install a memory module.

5.8 Mini PCI Communications Module

Mini PCI Communications Module Spare Part Number Information

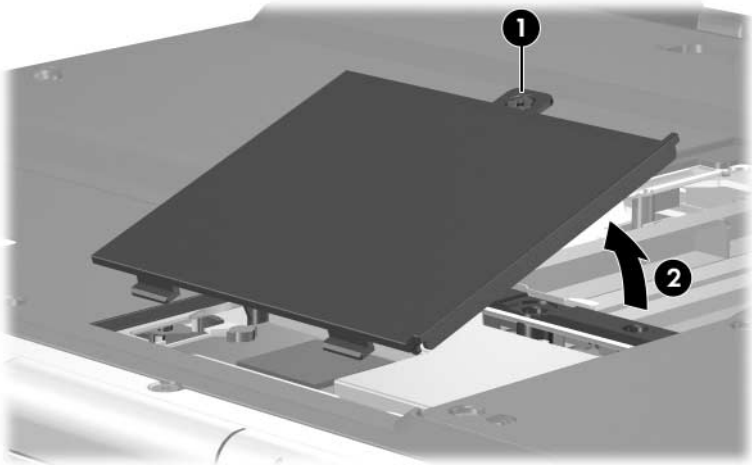
802.11b/g wireless local access network (WLAN) card for use in the United States	394462-001
802.11b/g WLAN card for use in the rest of the world	394462-002 and 397791-001

1. Prepare the computer for disassembly ([Section 5.3](#)).
2. Remove the memory module compartment cover ([Section 5.7](#)).
3. Position the computer with the front toward you.

4. Loosen the PM2.0×6.0 captive screw **1** that secures the Mini PCI compartment cover to the computer.
5. Lift the rear edge of the Mini PCI compartment cover **2** and then swing it toward you.
6. Remove the Mini PCI compartment cover.



The Mini PCI compartment cover is included in the Miscellaneous Plastics Kits, spare part numbers 394286-001 (for use on HP Pavilion ze2000 models) and 394287-001 (for use on Compaq Presario M2000 models).



Removing the Mini PCI Compartment Cover

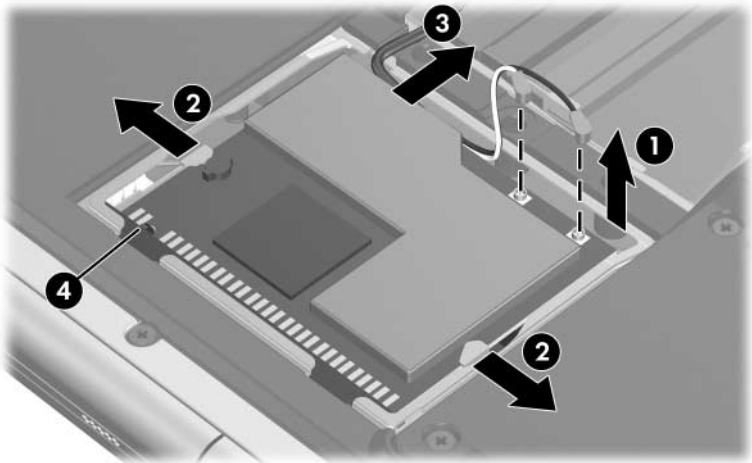


Before disconnecting the cables, make note of which wireless antenna cable is attached to which antenna clip on the Mini PCI communications module.

7. Disconnect the two wireless antenna cables ❶ from the Mini PCI communications module.
 8. Spread the two retaining tabs ❷ that secure the Mini PCI communications module to the communications compartment socket. (The front edge of the module rises up).
 9. Remove the wireless communications module ❸ by pulling the module away from the socket at a 45-degree angle.
-



Mini PCI communications modules are designed with a notch ❹ to prevent incorrect installation into the Mini PCI socket.



Removing a Mini PCI Communications Module

Reverse the above procedure to install a Mini PCI communications module.

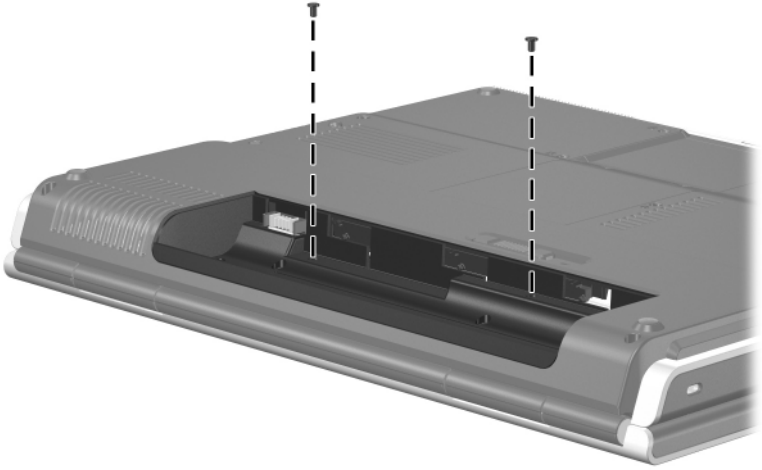
5.9 Keyboard Cover

Keyboard Cover Spare Part Number Information

For use on HP Pavilion ze2000 models with wireless capability (includes wireless button and light)	394292-001
For use on HP Pavilion ze2000 models without wireless capability (includes wireless button and light)	394294-001
For use on Compaq Presario M2000 models with wireless capability (includes wireless button and light)	394293-001
For use on Compaq Presario M2000 models without wireless capability (includes wireless button and light)	394295-001

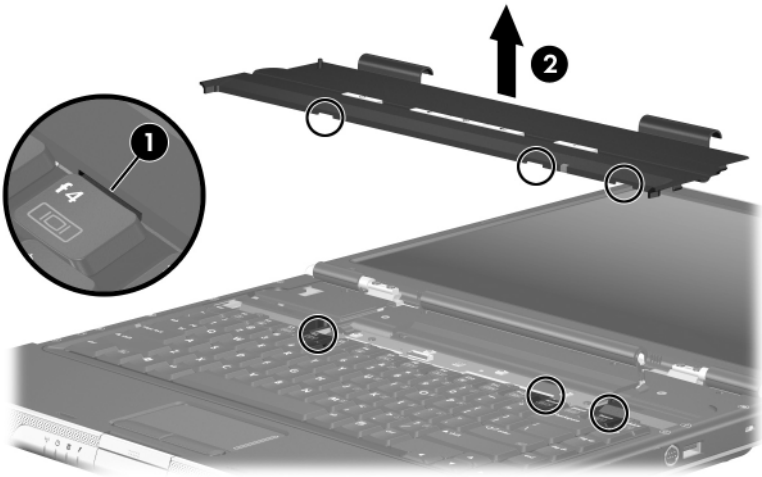
1. Prepare the computer for disassembly ([Section 5.3](#)).
2. Turn the computer upside down with the rear panel toward you.

3. Remove the two PM2.0×8.0 screws that secure the keyboard cover to the computer.



Removing the Keyboard Cover Screws

4. Turn the computer display-side up with the front panel toward you.
5. Open the computer as far as possible.
6. Insert a flat blade tool into the keyboard cover notches behind the **f4**, **f12**, and **insert** keys ❶ and lift up until the keyboard cover ❷ disengages from the computer.
7. Remove the keyboard cover.



Removing the Keyboard Cover

Reverse the above procedure to install the keyboard cover.

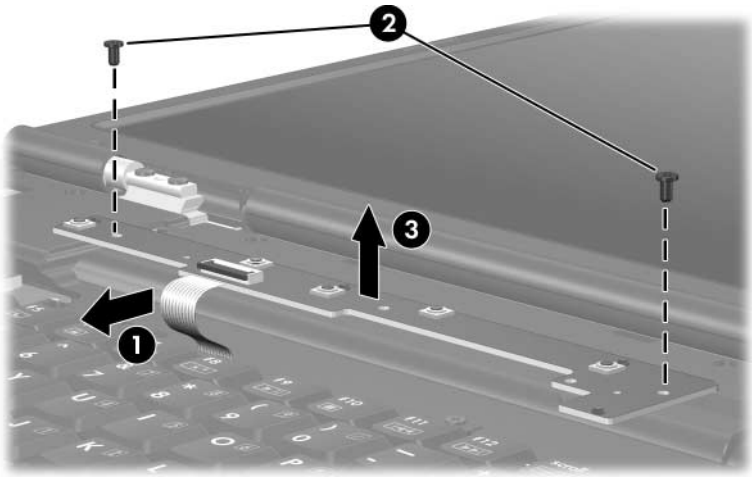
5.10 LED Board

LED Board Spare Part Number Information

For use on HP Pavilion ze2000 models	394301-001
For use on Compaq Presario M2000 models	394302-001

1. Prepare the computer for disassembly ([Section 5.3](#)).
2. Remove the keyboard cover ([Section 5.9](#)).

3. Release the zero insertion force (ZIF) connector to which the keyboard cable is connected and disconnect the keyboard cable ❶ from the system board.
4. Remove the two PM2.0×5.0 screws ❷ that secure the LED board to the computer.
5. Remove the LED board ❸.



Removing the LED Board

Reverse the above procedure to install the LED board.

5.11 Keyboard

Keyboard Spare Part Number Information

For use on HP Pavilion ze2000 models in:

Belgium	394276-A41	Portugal	394276-131
Denmark	394276-081	Spain	394276-071
France	394276-051	Sweden/Finland	394276-101
French Canada	394276-121	Switzerland	394276-111
Germany	394276-041	United Kingdom	394276-031
International	394276-B31	Asia Pacific, Australia, Canada, Hong Kong, the People's Republic of China, and the United States	394276-001
Italy	394276-061		
Latin America	394276-161		
Norway	394276-091		

For use on Compaq Presario M2000 models in:

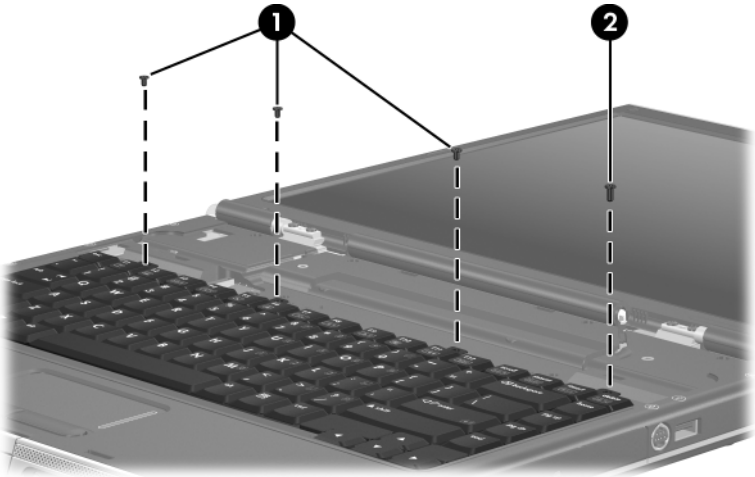
Denmark	394277-081	Norway	394277-091
France	394277-051	Spain	394277-071
French Canada	394277-121	Sweden/Finland	394277-101
International	394277-B31	Taiwan	394277-AB1
Italy	394277-061	Thailand	394277-281
Korea	394277-AD1	United Kingdom	394277-031
Latin America	394277-161	United States	394277-001

1. Prepare the computer for disassembly ([Section 5.3](#)).
2. Remove the keyboard cover ([Section 5.9](#)).

3. Remove the three PM2.0×4.0 screws **1** and the PM2.0×8.0 screw **2** that secure the keyboard to the computer.



Compaq Presario M2000 computers use four PM2.0×4.0 screws to secure the keyboard.



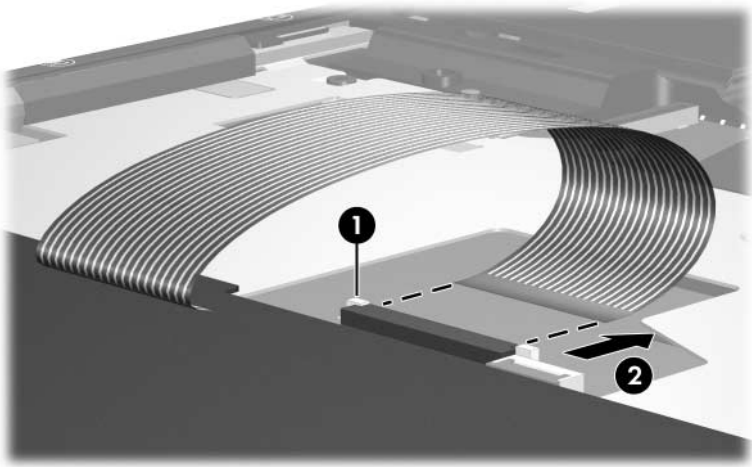
Removing the Keyboard Screws

4. Lift the rear edge of the keyboard and swing it toward you until it rests on the palm rest.



Releasing the Keyboard

5. Release the ZIF connector ❶ to which the keyboard cable is connected and disconnect the keyboard cable ❷ from the system board.
6. Remove the keyboard.



Disconnecting the Keyboard Cable

Reverse the above procedure to install the keyboard.

5.12 Display Assembly

Display Assembly Spare Part Number Information



All display assemblies include wireless antenna boards and cables

15.0-inch, XGA TFT with BrightView, for use on HP Pavilion ze2000 models	394262-001
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15.0-inch, XGA TFT, for use on HP Pavilion ze2000 models	394260-001
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15.0-inch, XGA TFT with BrightView, for use on Compaq Presario M2000 models	394263-001
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15.0-inch, XGA TFT, for use on Compaq Presario M2000 models	394261-001
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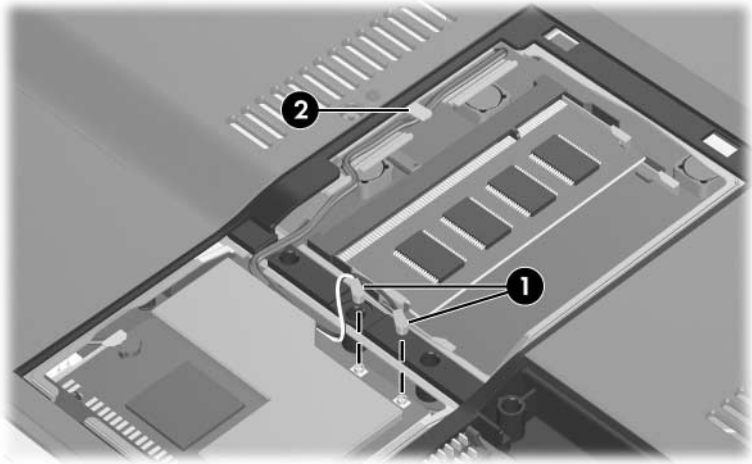
Display hinge brackets for use on HP Pavilion ze2000 models	394304-001
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Display hinge brackets for use on Compaq Presario M2000 models	394305-001
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Display hinge covers	394306-001
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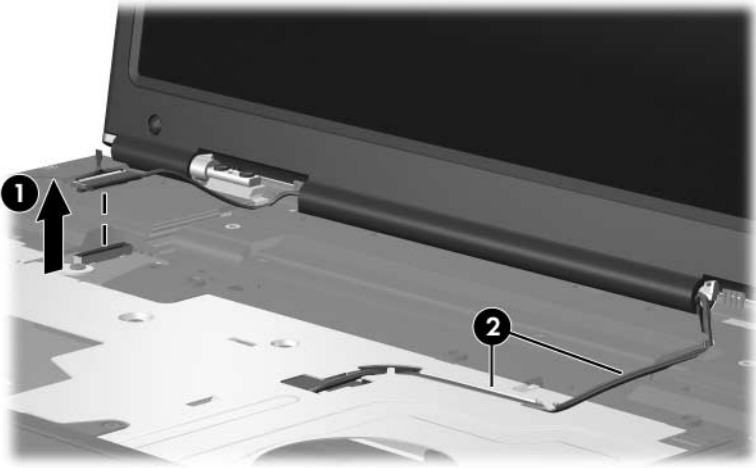
1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Memory module compartment cover ([Section 5.7](#))
 - b. Mini PCI compartment cover ([Section 5.8](#))
 - c. Keyboard cover ([Section 5.9](#))
 - d. Keyboard ([Section 5.11](#))

2. Turn the computer upside down with the front panel toward you.
3. Disconnect the two wireless antenna cables from the Mini PCI communications card **1**.
4. Remove the cables from the clip **2** in the base enclosure.



Disconnecting and Removing the Wireless Antenna Cables

5. Turn the computer display-side up with the front toward you.
6. Open the display.
7. Disconnect the display cable from the system board ❶.
8. Remove the wireless antenna cables ❷ from the clips in the top cover.



Disconnecting the Display Cables

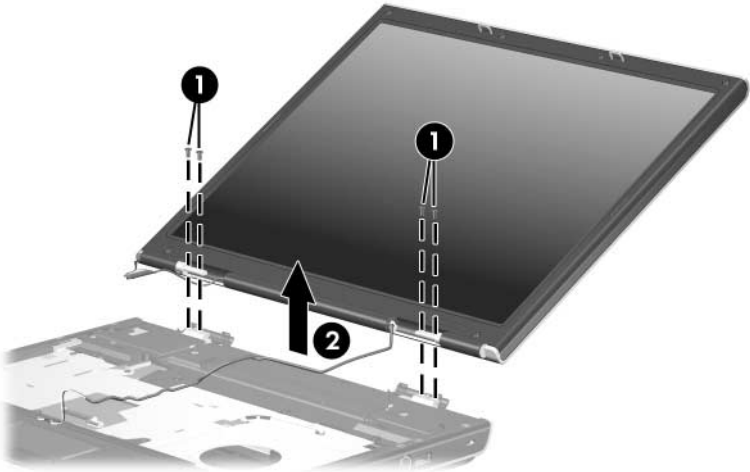


CAUTION: Support the display assembly when removing the following screws. Failure to follow this caution can result in damage to the display assembly.



Steps 9 and 10 apply only to HP Pavilion ze2000 models. See steps 11 and 12 in this section for information on removing the display assembly on Compaq Presario M2000 models.

9. Remove the four PM2.0x6.0 screws ❶ that secure the display assembly to the computer.
10. Remove the display assembly ❷.



*Removing the Display Assembly Screws,
HP Pavilion ze2000 Models Only*

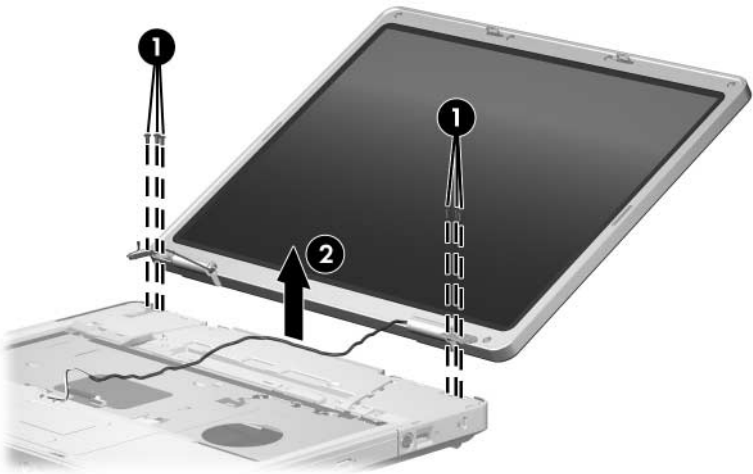


CAUTION: Support the display assembly when removing the following screws. Failure to follow this caution can result in damage to the display assembly.



Steps 11 and 12 apply only to Compaq Presario M2000 models.

11. Remove the six PM2.0×6.0 screws ❶ that secure the display assembly to the computer.
12. Remove the display assembly ❷.



*Removing the Display Assembly,
Compaq Presario M2000 Models Only*

Reverse the above procedure to install the display assembly.

5.13 Base Enclosure

Base Enclosure Spare Part Number Information

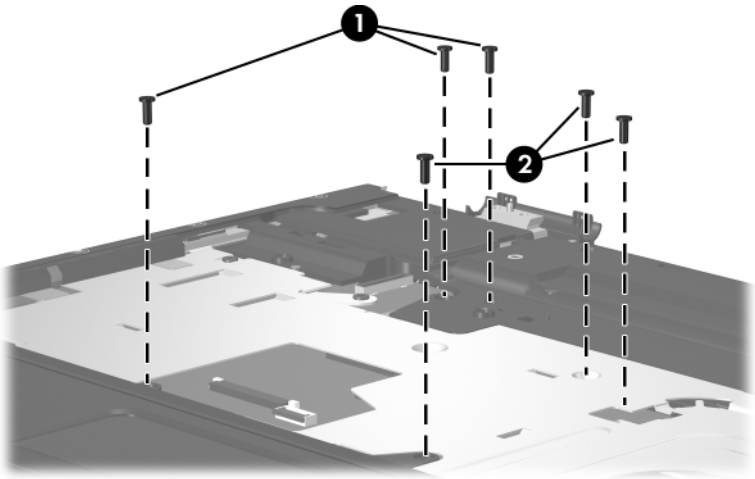
For use on HP Pavilion ze2000 models	394284-001
For use on Compaq Presario M2000 models	394285-001

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
2. Position the computer with the front panel toward you.



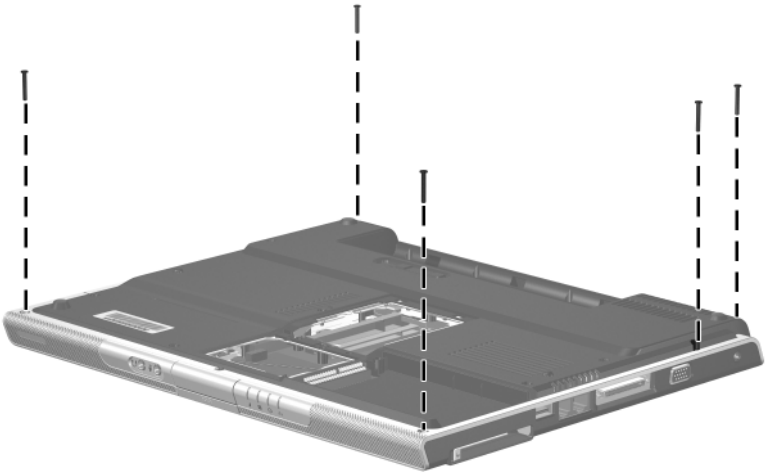
Steps 3 through 7 apply only to HP Pavilion ze2000 models. See steps 8 through 11 in this section for information on removing the base enclosure screws on Compaq Presario M2000 models.

3. Remove the three PM2.0×8.0 screws **1** and the three PM2.0×5.0 screws **2** that secure the base enclosure to the computer.



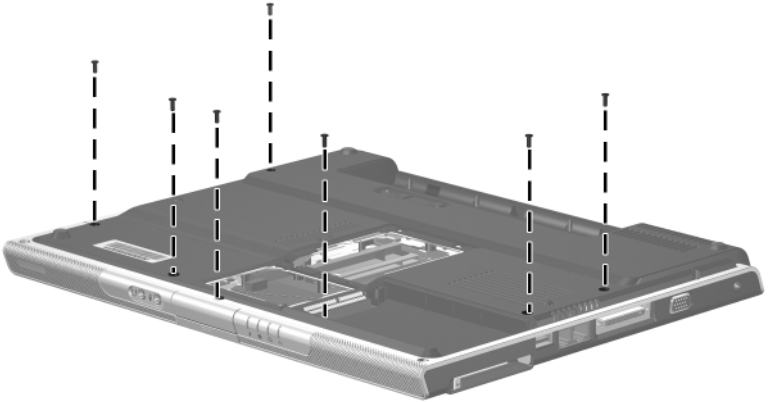
*Removing the Base Enclosure Screws, Part 1,
HP Pavilion ze2000 Models Only*

4. Turn the computer upside down with the front panel toward you.
5. Remove the five PM2.0×16.0 screws that secure the base enclosure to the computer.



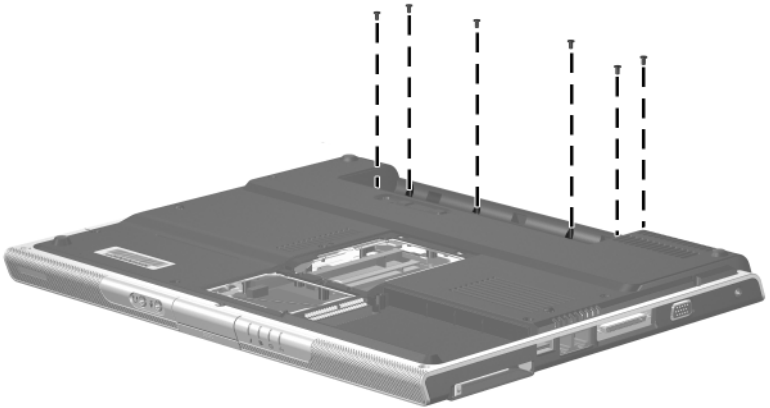
*Removing the Base Enclosure Screws, Part 2,
HP Pavilion ze2000 Models Only*

6. Remove the seven PM2.0×8.0 screws that secure the base enclosure to the computer.



*Removing the Base Enclosure Screws, Part 3,
HP Pavilion ze2000 Models Only*

7. Remove the six PM2.0×5.0 screws that secure the base enclosure to the computer.

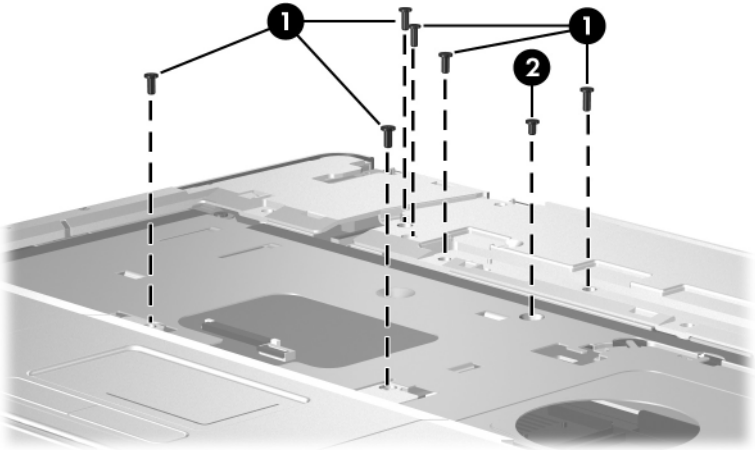


*Removing the Base Enclosure Screws, Part 4,
HP Pavilion ze2000 Models Only*



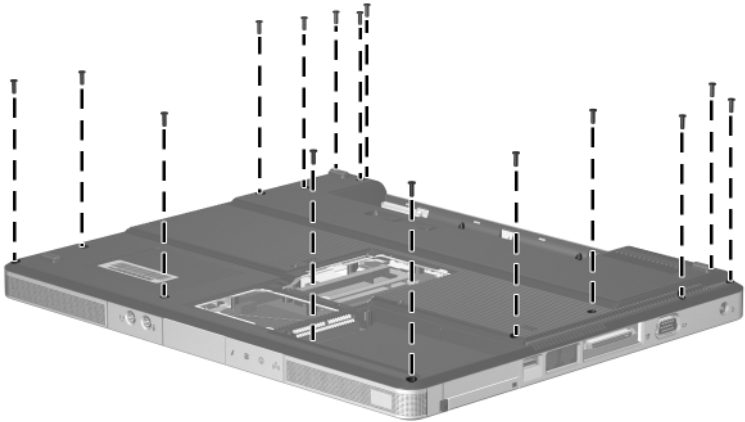
Steps 8 through 11 apply only to Compaq Presario M2000 models.

8. Remove the six PM2.0×8.0 screws **1** and the PM2.0×5.0 screw **2** that secure the base enclosure to the computer.



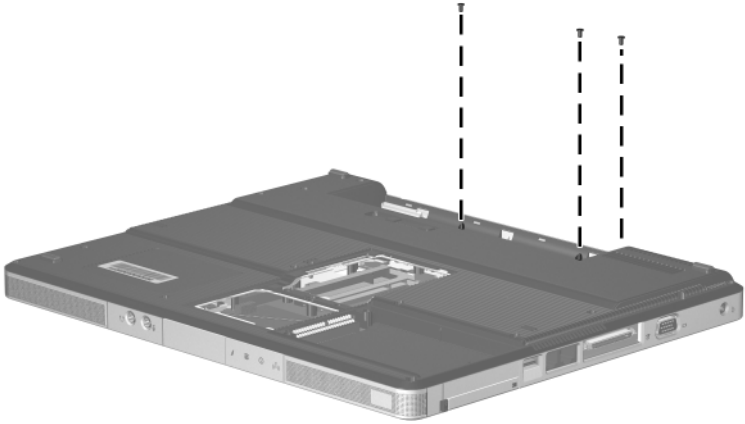
*Removing the Base Enclosure Screws, Part 1,
Compaq Presario M2000 Models Only*

9. Turn the computer upside down with the front panel toward you.
10. Remove the fifteen PM2.0×8.0 screws that secure the base enclosure to the computer.



*Removing the Base Enclosure Screws, Part 2,
Compaq Presario M2000 Models Only*

11. Remove the three PM2.0×5.0 screws that secure the base enclosure to the computer.

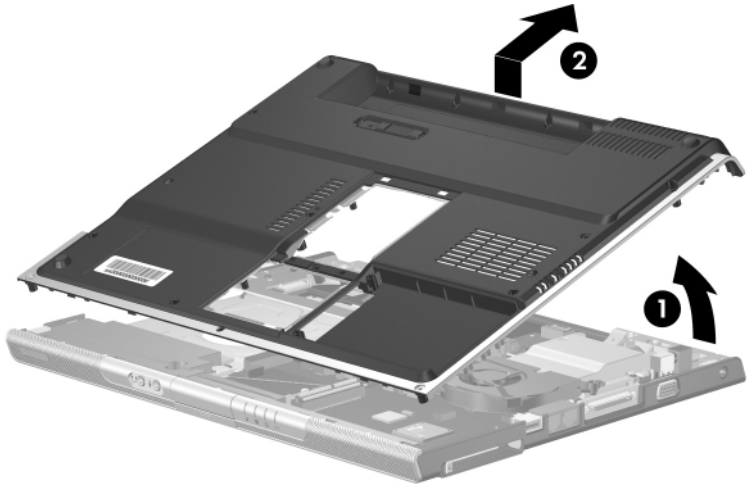


*Removing the Base Enclosure Screws, Part 3,
Compaq Presario M2000 Models Only*



Steps 12 and 13 apply to both HP Pavilion ze2000 and Compaq Presario M2000 models.

12. Lift the rear edge of the base enclosure **1** until it disengages from the computer.
13. Slide back the base enclosure **2** and remove it.



Removing the Base Enclosure

Reverse the above procedure to install the base enclosure.

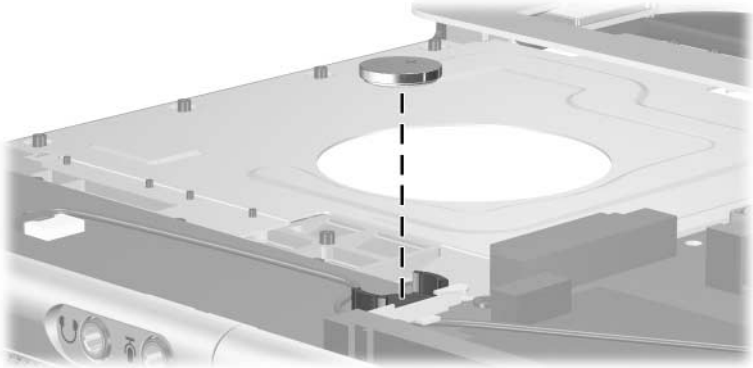
5.14 RTC Battery



The RTC battery is spared with the system board spare part kits. If the battery needs to be replaced, use an “ML1220” model battery.

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))

2. Remove the RTC battery from the socket on the system board.



Removing the RTC Battery

Reverse the above procedure to install the RTC battery. Make sure the battery is installed with the “+” side facing you.

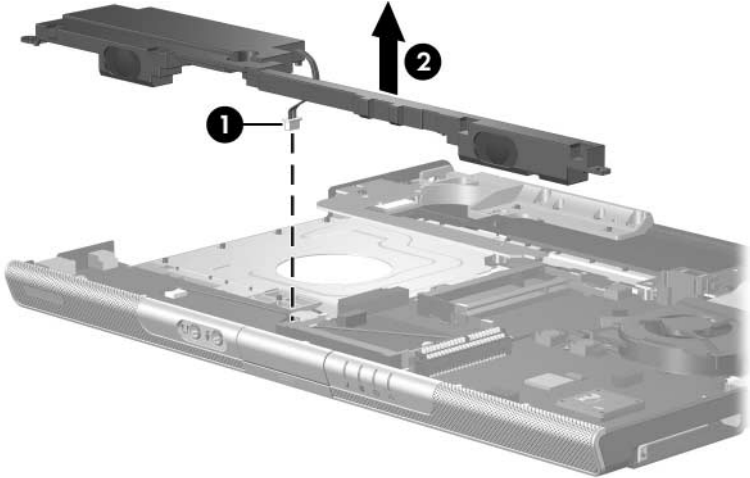
5.15 Speaker Assembly

Speaker Assembly Spare Part Number Information

For use on HP Pavilion ze2000 models	394296-001
For use on Compaq Presario M2000 models	394297-001

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))

2. Disconnect the speaker cable ❶ from the system board.
3. Lift the speaker ❷ straight up to remove it from the top cover.



Removing the Speaker Assembly

Reverse the above procedure to install the speaker assembly.

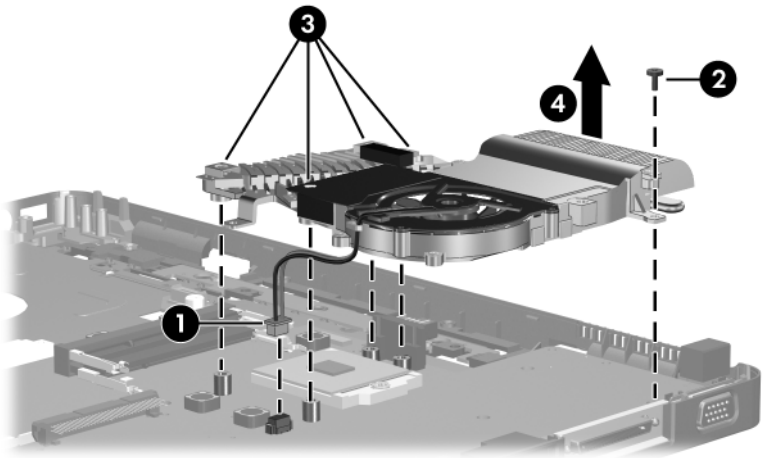
5.16 Fan Assembly

Fan Assembly Spare Part Number Information

Fan Assembly (includes fan, heat sink, and thermal pad)	394298-001
---	------------

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))

2. Disconnect the fan cable ❶ from the system board.
3. Remove the PM2.0×5.0 screw ❷ that secures the fan assembly to the system board.
4. Loosen the four PM1.5×9.0 captive spring-loaded shoulder screws ❸ that secure the fan assembly to the system board.
5. Remove the fan assembly ❹.



Removing the Fan Assembly

Reverse the above procedure to install the fan assembly.

5.17 Processor

Processor Spare Part Number Information

AMD Mobile Turion 64, ML-37 (2.00-GHz)	394347-001
AMD Mobile Turion 64, ML-34 (1.80-GHz)	394259-001
AMD Mobile Turion 64, ML-32 (1.80-GHz)	397346-001
AMD Mobile Turion 64, ML-30 (1.60-GHz)	394258-001
AMD Mobile Turion 64, ML-28 (1.60-GHz)	394257-001
Mobile AMD Sempron 3300+ (2.00-GHz)	397345-001
Mobile AMD Sempron 3000+ (1.80-GHz)	394256-001
Mobile AMD Sempron 2800+ (1.60-GHz)	394255-001



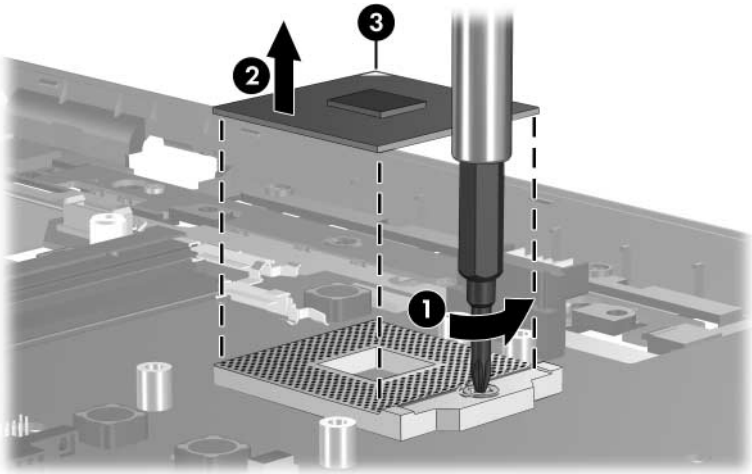
All processors include a thermal pad.

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))
 - j. Fan assembly ([Section 5.16](#))

2. Use a 2.0-mm hex wrench to turn the processor locking screw **1** one-half turn counterclockwise until you feel a click.
3. Lift the processor **2** straight up and remove it.



The gold triangle **3** on the processor should be aligned in the front right corner when you install the processor.



Removing the Processor

Reverse the above procedure to install a processor.

5.18 Battery Connector Board

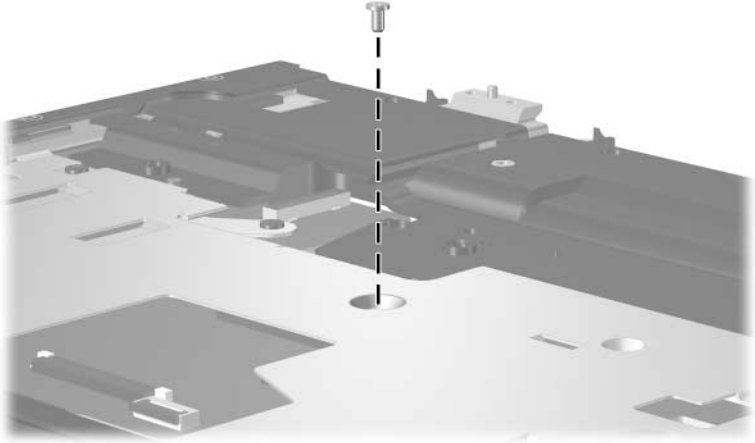
Battery Connector Board Spare Part Number Information

Battery connector board

394299-001

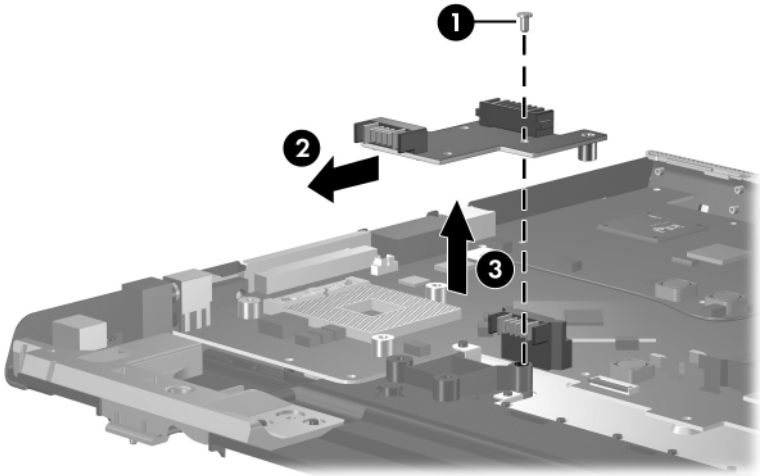
1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))
2. Turn the top cover top-side up with the front panel toward you.

3. Remove the PM2.0x5.0 screw that secures the battery connector board to the top cover.



Removing the Battery Connector Board Screw

4. Turn the top cover upside down with the front panel toward you.
5. Remove the PM2.0×5.0 screw **1** that secures the battery connector board to the top cover.
6. Slide the battery connector board **2** toward the rear panel until it disconnects from the system board.
7. Remove the battery connector board **3**.



Removing the Battery Connector Board

Reverse the above procedure to install the the battery connector board.

5.19 Power Connector Board

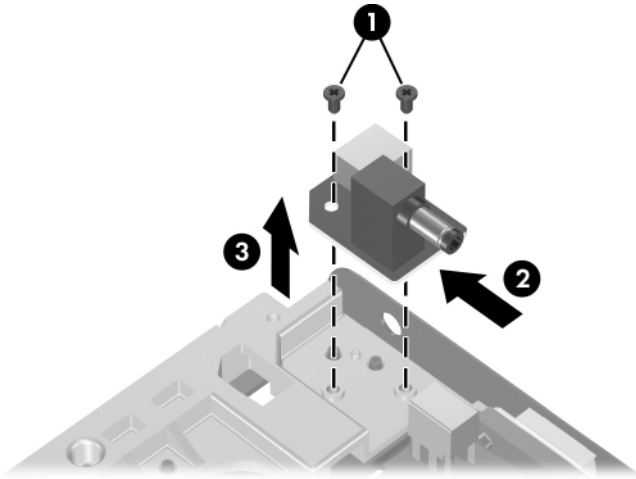
Power Connector Board Spare Part Number Information

Power connector board

394300-001

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))

2. Remove the two PM2.0×5.0 screws **1** that secure the power connector board to the top cover.
3. Slide the power connector board **2** toward the rear panel until it disconnects it from the system board.
4. Remove the power connector board **3**.



Removing the Power Connector Board

Reverse the above procedure to install the power connector board.

5.20 USB/S-Video Controller Board

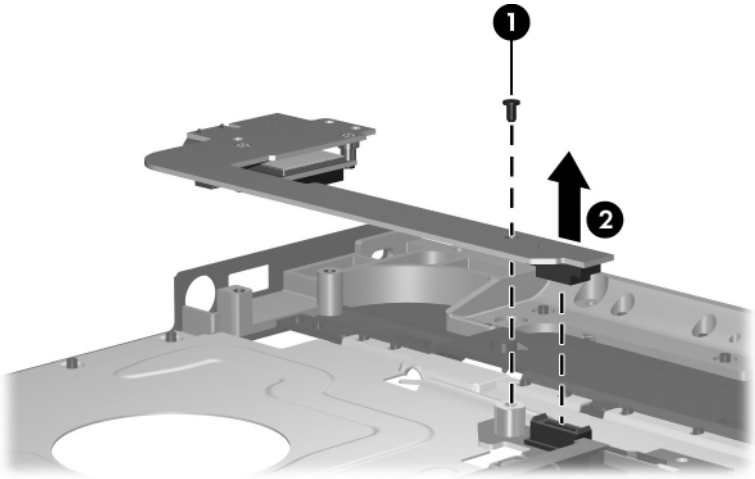
USB/S-Video Controller Board

Spare Part Number Information

For use with full-featured models	394303-001
For use with defeatured models	395373-001

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))

2. Remove the PM2.0x5.0 screw ❶ that secures the USB/S-Video controller board to the top cover.
3. Lift up on the right side of the board ❷ to disconnect it from the system board.
4. Remove the USB/S-Video controller board.



Removing the USB/S-Video Controller Board

Reverse the above procedure to install the USB/S-Video controller board.

5.21 Bluetooth Board



This section applies only to full-featured models.

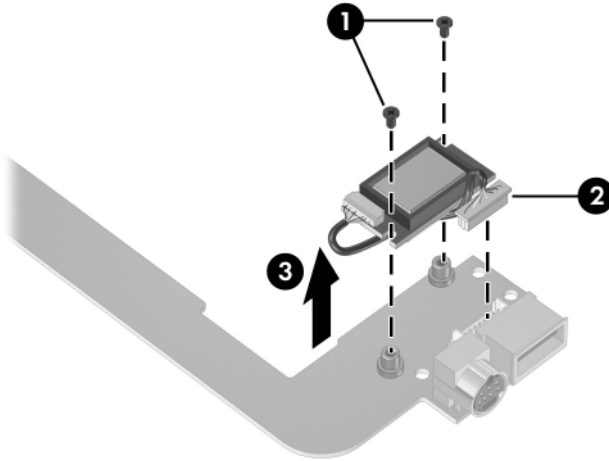
Bluetooth Board Spare Part Number Information

Broadcomm Bluetooth board

394254-001

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Memory module compartment cover ([Section 5.7](#))
 - d. Mini PCI compartment cover ([Section 5.8](#))
 - e. Keyboard cover ([Section 5.9](#))
 - f. LED board ([Section 5.10](#))
 - g. Keyboard ([Section 5.11](#))
 - h. Display assembly ([Section 5.12](#))
 - i. Base enclosure ([Section 5.13](#))
 - j. USB/S-Video controller board ([Section 5.20](#))
2. Turn the USB/S-Video controller board upside down with the USB port toward you.

3. Remove the two PM1.5×3.5 screws ❶ that secure the Bluetooth board to the USB/S-Video controller board.
4. Disconnect the Bluetooth board cable ❷ from the USB/S-Video controller board.
5. Remove the Bluetooth board ❸.



Removing the Bluetooth Board

Reverse the above procedure to install the Bluetooth board.

5.22 System Board

System Board Spare Part Number Information

ATI RS480M for use on full-featured models	394253-001
ATI RS480M for use on defeatured models	394252-001
PC Card assembly	396657-001



All system board spares kits include a disk cell RTC battery.

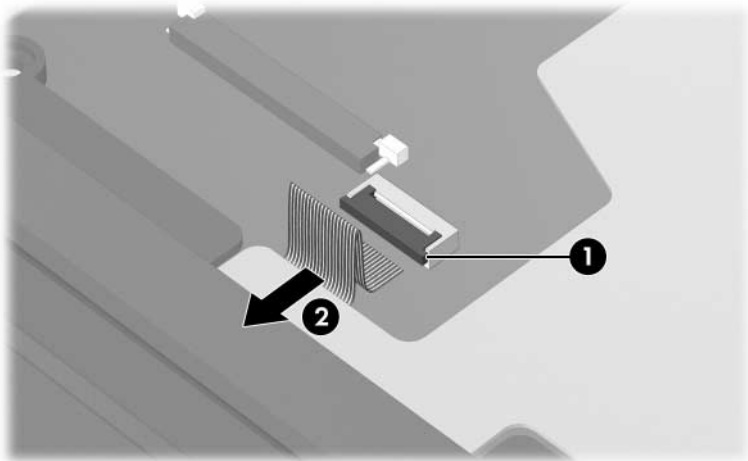


When replacing the system board, ensure that the following components are removed from the defective system board and installed on the replacement system board:

- Memory modules ([Section 5.7](#))
 - Mini PCI communications card ([Section 5.8](#))
 - RTC battery ([Section 5.14](#))
 - Fan assembly ([Section 5.16](#))
 - Processor ([Section 5.17](#))
-

1. Prepare the computer for disassembly ([Section 5.3](#)) and remove the following components:
 - a. Hard drive ([Section 5.4](#))
 - b. Optical drive ([Section 5.6](#))
 - c. Keyboard cover ([Section 5.9](#))
 - d. LED board ([Section 5.10](#))
 - e. Keyboard ([Section 5.11](#))
 - f. Display assembly ([Section 5.12](#))
 - g. Base enclosure ([Section 5.13](#))

- h. Speaker assembly ([Section 5.15](#))
 - i. Battery connector board ([Section 5.18](#))
 - j. Power connector board ([Section 5.19](#))
 - k. USB/S-Video controller board ([Section 5.20](#))
2. Turn the top cover top-side up with the front toward you.
 3. Release the ZIF connector **1** to which the TouchPad cable is connected and disconnect the cable **2** from the system board.



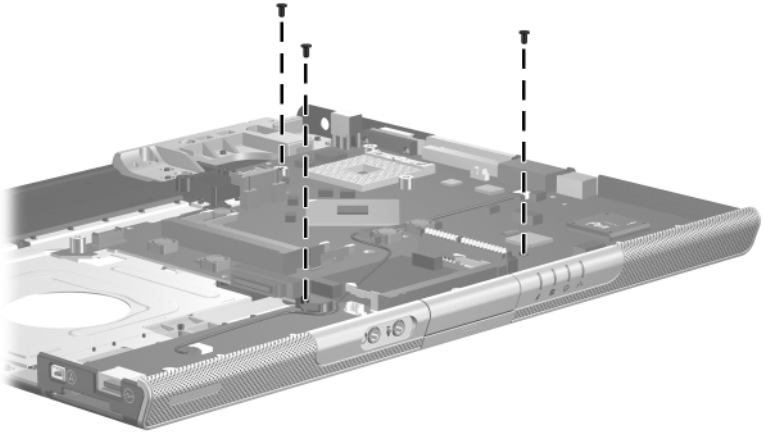
Disconnecting the TouchPad Cable

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



Step 5 applies only to HP Pavilion ze2000 models. See step 6 in this section for information on removing the system board screws on Compaq Presario M2000 models.

5. Remove the three PM2.0×5.0 screws that secure the system board to the top cover.

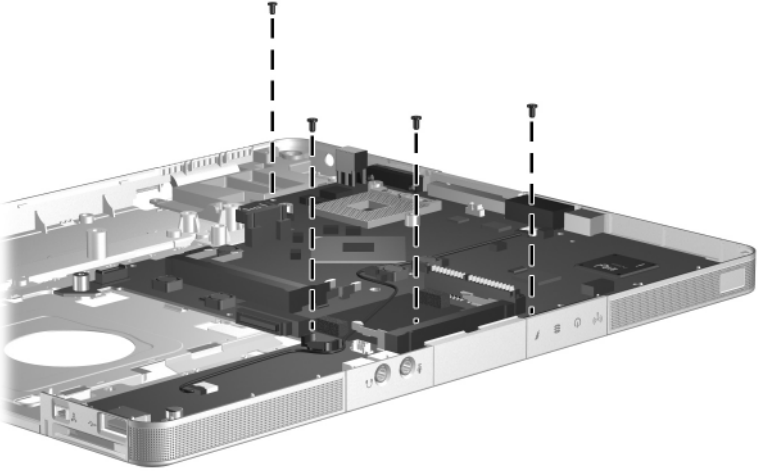


Removing the System Board Screws, HP Pavilion ze2000 Models Only



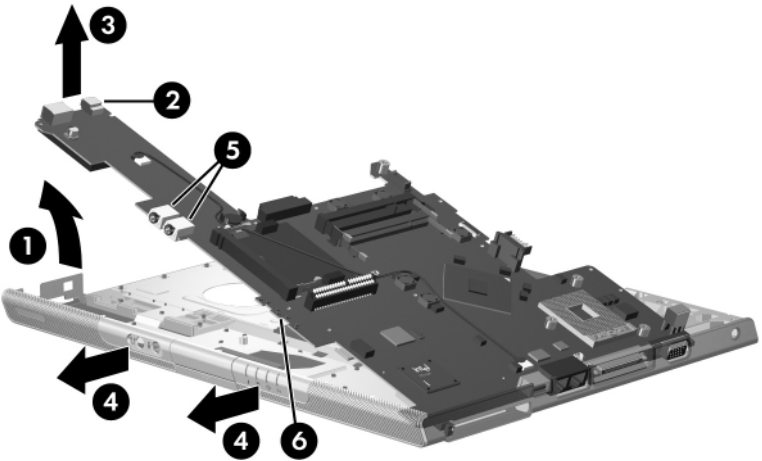
Step 6 applies only to Compaq Presario M2000 models.

6. Remove the four PM2.0x5.0 screws that secure the system board to the top cover.



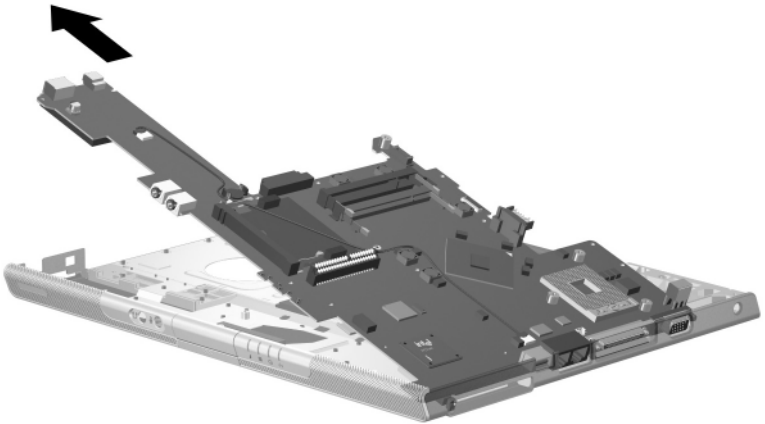
*Removing the System Board Screws,
Compaq Presario M2000 Models Only*

7. Flex the left edge of the top cover **1** until the 1394 connector **2** disengages from the top cover.
8. Lift the left side of the system board **3** until the 1394 connector is clear.
9. Flex the front edge of the top cover **4** until the audio connectors **5** and LED section **6** of the system board disengage from the top cover.



Releasing the System Board

10. Slide the system board to the left at an angle and remove it.



Removing the System Board

Reverse the above procedure to install the system board.

Specifications

This chapter provides physical and performance specifications.

Table 6-1
Computer

Dimensions

HP Pavilion ze2000

Height (varies from front to back)	3.01 cm to 3.86 cm	1.19 in to 1.52 in
Width	23.46 cm	9.24 in
Depth	33.40 cm	13.15 in

Compaq Presario M2000

Height (varies from front to back)	3.29 cm to 3.89 cm	1.30 in to 1.53 in
Width	23.06 cm	9.08 in
Depth	33.40 cm	13.15 in

Weight (varies by configuration)

HP Pavilion ze2000	2.44 kg	5.38 lb
Compaq Presario M2000	2.39 kg	5.26 lb

Stand-alone power requirements

Operating voltage	18.5V dc @ 3.5 A - 65 W
Operating current	3.5 A

Table 6-1
Computer (Continued)

Temperature		
Operating	10°C to 35°C	50°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%, 38.7°C (101.6°F) maximum wet bulb temperature	
Maximum altitude (unpressurized)		
Operating (14.7 to 10.1 psia)	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating (14.7 to 4.4 psia)	-15 m to 12,192 m	-50 ft to 40,000 ft
Shock		
Operating	125 g, 2 ms, half-sine	
Nonoperating	200 g, 2 ms, half-sine	
Random Vibration		
Operating	0.75 g zero-to-peak, 10 Hz to 500 Hz, 0.25 oct/min sweep rate	
Nonoperating	1.50 g zero-to-peak, 10 Hz to 500 Hz, 0.5 oct/min sweep rate	



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

Table 6-2
15.0-inch, XGA, Display

Dimensions		
Height	22.9 cm	9.0 in
Width	30.0 cm	11.8 in
Diagonal	38.1 cm	15.0 in
Number of colors	Up to 16.8 million	
Contrast ratio	250:1	
Brightness	150 nits typical	
Pixel resolution		
Pitch	0.264 × 0.264 mm	
Format	1024 × 768	
Configuration	RGB vertical stripe	
Backlight	Edge lit	
Character display	80 × 25	
Total power consumption	5.5 W	
Viewing angle	+/-35° horizontal, +15/-35° vertical typical	

Table 6-3
Hard Drives

	80-GB*	60-GB*	40-GB*
Dimensions			
Height	9.5 mm	9.5 mm	9.5 mm
Width	70 mm	70 mm	70 mm
Weight	99 g	102 g	99 g
Interface type			
	ATA-5	ATA-5	ATA-5
Transfer rate			
Synchronous (maximum)	100 MB/sec	100 MB/sec	100 MB/sec
Security	ATA security	ATA security	ATA security
Seek times (typical read, including setting)			
Single track	3 ms	3 ms	3 ms
Average	13 ms	13 ms	13 ms
Maximum	24 ms	24 ms	24 ms
Logical blocks [†]			
	156,301,488	117,210,240	78,140,160
Disk rotational speed			
	4200 rpm	4200 rpm	5400 rpm
Operating temperature			
	5°C to 55°C (41°F to 131°F)		



Certain restrictions and exclusions apply. Consult Customer Care for details.

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

[†]Actual drive specifications may differ slightly.

Table 6-4
Primary 6-cell, Li-Ion Battery Pack

Dimensions

Height	2.00 cm	0.79 in
Width	9.40 cm	3.70 in
Depth	13.40 cm	5.28 in
Weight	0.34 kg	0.75 lb

Energy

Voltage	11.1 V
Amp-hour capacity	4.4 Ah
Watt-hour capacity	48 Wh

Temperature

Operating	5°C to 45°C	41°F to 113°F
Nonoperating	0°C to 60°C	32°F to 140°F

Table 6-5
24X DVD/CD-RW Combo Drive

Applicable disc	Read:	Write:
	DVD-R, DVD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), CD-ROM (Mode 1 and 2) CD Digital Audio CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R, CD-RW Photo CD (single and multisession) CD-Bridge	CD-R and CD-RW
Center hole diameter	1.5 cm (0.59 in)	
Disc diameter		
Standard disc	12 cm (4.72 in)	
Mini disc	8 cm (3.15 in)	

Table 6-5
24X DVD/CD-RW Combo Drive (Continued)

Disc thickness	1.2 mm (0.047 in)	
Track pitch	0.74 μ m	
Access time	CD media	DVD media
Random	< 110 ms	< 130 ms
Full stroke	< 210 ms	< 225 ms
Audio output level	Line-out, 0.7 V rms	
Cache buffer	2 MB	
Data transfer rate		
CD-R (24X)	3600 KB/s (150 KB/s at 1X CD rate)	
CD-RW (10X)	1500 KB/s (150 KB/s at 1X CD rate)	
CD-ROM (24X)	3600 KB/s (150 KB/s at 1X CD rate)	
DVD (8X)	10,800 KB/s (1352 KB/s at 1X DVD rate)	
Multiword DMA mode 2	16.6 MB/s	
Startup time	< 15 seconds	
Stop time	< 6 seconds	

Table 6-6
8X DVD±RW/R and CD-RW Combo Drive

Applicable disc	Read:	Write:
	DVD-R, DVD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), CD-ROM (Mode 1 and 2) CD Digital Audio CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R, CD-RW Photo CD (single and multisession) CD-Bridge	CD-R and CD-RW DVD-R and DVD-RW
Center hole diameter	1.5 cm (0.59 in)	
Disc diameter		
Standard disc	12 cm (4.72 in)	
Mini disc	8 cm (3.15 in)	

Table 6-6
8X DVD±RW/R and CD-RW Combo Drive (Continued)

Disc thickness	1.2 mm (0.047 in)	
Track pitch	0.74 μm	
Access time	CD	DVD
Random	< 175 ms	< 230 ms
Full stroke	< 285 ms	< 335 ms
Audio output level	Audio-out, 0.7 Vrms	
Cache buffer	2 MB	
Data transfer rate		
CD-R (16X)	2,400 KB/s (150 KB/s at 1X CD rate)	
CD-RW (8X)	1,200 KB/s (150 KB/s at 1X CD rate)	
CD-ROM (24X)	3,600 KB/s (150 KB/s at 1X CD rate)	
DVD (8X)	10,800 KB/s (1,352 KB/s at 1X DVD rate)	
DVD-R (4X)	5,400 KB/s (1,352 KB/s at 1X DVD rate)	
DVD-RW (2X)	2,700 KB/s (1,352 KB/s at 1X DVD rate)	
Multiword DMA mode 2	16.6 MB/s	
Startup time	< 15 seconds	
Stop time	< 6 seconds	

Table 6-7
8X DVD-ROM Drive

Applicable disc	DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18) CD-ROM (Mode 1 and 2) CD Digital Audio CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R CD-RW Photo CD (single and multisession) CD-Bridge
Center hole diameter	1.5 cm (0.59 in)
Disc diameter	
Standard disc	12 cm (4.72 in)
Mini disc	8 cm (3.15 in)
Disc thickness	1.2 mm (0.047 in)

Table 6-7
8X DVD-ROM Drive (Continued)

Track pitch	0.74 μ m	
Access time	CD media	DVD media
Random	< 100 ms	< 125 ms
Full stroke	< 175 ms	< 225 ms
Audio output level	Line-out, 0.7 V rms	
Cache buffer	512 KB	
Data transfer rate		
CD-R (24X)	3600 KB/s (150 KB/s at 1X CD rate)	
CD-RW (10X)	1500 KB/s (150 KB/s at 1X CD rate)	
CD-ROM (24X)	3600 KB/s (150 KB/s at 1X CD rate)	
DVD (8X)	10,800 KB/s (1352 KB/s at 1X DVD rate)	
Multiword DMA mode 2	16.6 MB/s	
Startup time	< 10 seconds	
Stop time	< 3 seconds	

Table 6-8
System DMA

Hardware DMA	System Function
DMA0	Not applicable
DMA1	Not applicable
DMA2	Not applicable
DMA3	Not applicable
DMA4	Direct memory access controller
DMA5	Available for PC Card
DMA6	Not assigned
DMA7	Not assigned

Table 6-9
System Interrupts

Hardware IRQ	System Function
IRQ0	System timer
IRQ1	Quick Launch buttons
IRQ2	Cascaded
IRQ3	USB2 Enhanced Host Controller—24CD
IRQ4	COM1
IRQ5*	Conexant AC—Link Audio SMBus Controller—24C3 Data Fax Modem with SmartCP
IRQ6	Diskette drive
IRQ7*	Parallel port
IRQ8	System CMOS/real-time clock
IRQ9*	Microsoft ACPI-compliant system
IRQ10*	USB UHCI controller—24C2 GM/GME Graphic Controller Realtek RTL8139 Family PCI fast Ethernet Controller
IRQ11	USB EHCI controller—24CD USB UHCI controller—24C4 USB UHCI controller—24C7 Pro/Wireless 2200BG TI OHCI 1394 host controller TI PCI1410 CardBus controller

*Default configuration



PC Card may assert IRQ3, IRQ4, IRQ5, IRQ7, or IRQ20.

Table 6-9
System Interrupts (Continued)

Hardware IRQ	System Function
IRQ12	Synaptics PS/2 port pointing device
IRQ13	Numeric data processor
IRQ14	Primary IDE channel
IRQ15	Secondary IDE channel
IRQ17	Conexant AC -Link Audio
IRQ17	Soft V90 Data Fax Modem with SmartCP
IRQ17	ATi Mobility Radeon Xpress 200 Series
IRQ19	Standard Enhanced PCI to USB Host Controller
IRQ19	Standard OpenHCD USB Host Controller
IRQ19	Standard OpenHCD USB Host Controller
IRQ20	TI 6411 PC1xx21/x515 Cardbus Controller
IRQ20	TI OHCI Compliant IEEE 1394 Host Controller
IRQ21	TI Integrated PC1xx21 FlashMedia Controller
IRQ21	Broadcomm 802.11b/g WLAN
IRQ21	Microsoft ACPI-compliant system
IRQ22	Realtek RTL8100CL Family PCI fast Ethernet Controller
IRQ23	SDA Standard Compliant SD Host Controller

*Default configuration



PC Card may assert IRQ3, IRQ4, IRQ5, IRQ7, or IRQ20.

Table 6-10
System I/O Addresses

I/O Address (hex)	System Function (shipping configuration)
0x00000000-0x00000CF7	PCI bus
0x00000000-0x00000CF7	Direct memory access controller
0x00000020-0x00000021	Programmable interrupt controller
0x0000002E-0x0000002F	System board resources
0x00000040-0x00000043	System timer
0x00000060-0x00000060	Quick Launch Buttons
0x00000061-0x00000061	System speaker
0x00000062-0x00000062	Microsoft ACPI-Compliant Embedded Controller
0x00000064-0x00000064	Quick Launch Buttons
0x00000066-0x00000066	Microsoft ACPI-Compliant Embedded Controller
0x00000070-0x00000071	System CMOS/real-time clock
0x00000072-0x00000073	System board resources
0x00000080-0x0000008F	Direct memory access controller
0x00000092-0x00000092	System board resources
0x000000A0-0x000000A1	Programmable interrupt controller
0x000000B0-0x000000B1	System board resources
0x000000C0-0x000000DF	Direct memory access controller
0x000000F0-0x000000FE	Numeric data processor
0x00000170-0x00000177	Secondary IDE Channel

Table 6-10
System I/O Addresses (Continued)

I/O Address (hex)	System Function (shipping configuration)
0x000001F0-0x000001F7	Primary IDE Channel
0x00000220-0x0000022F	System board resources
0x00000274-0x00000277	ISAPNP Read Data Port
0x00000279-0x00000279	ISAPNP Read Data Port
0x00000280-0x00000293	System board resources
0x00000376-0x00000376	Secondary IDE Channel
0x000003B0-0x000003BB	PCI standard PCI-to-PCI bridge
0x000003B0-0x000003BB	ATI MOBILITY RADEON Xpress 200 Series
0x000003C0-0x000003DF	PCI standard PCI-to-PCI bridge
0x000003C0-0x000003DF	ATI MOBILITY RADEON Xpress 200 Series
0x000003F6-0x000003F6	Primary IDE Channel
0x0000040B-0x0000040B	System board resources
0x000004D0-0x000004D1	System board resources
0x000004D6-0x000004D6	System board resources
0x00000530-0x00000537	System board resources
0x00000870-0x0000087F	System board resources
0x00000A79-0x00000A79	ISAPNP Read Data Port
0x00000C00-0x00000C01	System board resources
0x00000C14-0x00000C14	System board resources
0x00000C50-0x00000C52	System board resources
0x00000C6C-0x00000C6C	System board resources

Table 6-10
System I/O Addresses (Continued)

I/O Address (hex)	System Function (shipping configuration)
0x00000C6F-0x00000C6F	System board resources
0x00000CD4-0x00000CD5	System board resources
0x00000CD6-0x00000CD7	System board resources
0x00000CD8-0x00000CDF	System board resources
0x00000D00-0x0000FFFF	PCI bus
0x00000F40-0x00000F47	System board resources
0x00001080-0x00001080	System board resources
0x00008000-0x0000805F	System board resources
0x00008100-0x000081FF	System board resources
0x00008400-0x0000840F	ATI SMBus
0x00008410-0x0000841F	Standard Dual Channel PCI IDE Controller
0x00009000-0x00009FFF	PCI standard PCI-to-PCI bridge
0x00009000-0x00009FFF	ATI MOBILITY RADEON Xpress 200 Series
0x0000A000-0x0000A0FF	Realtek RTL8139/810x Family Fast Ethernet NIC
0x0000F000-0x0000FFFF	PCI standard PCI-to-PCI bridge
0x0000FD00-0x0000FDFF	Texas Instruments PC1xx21/x515 Cardbus Controller
0x0000FE00-0x0000FEFF	Texas Instruments PC1xx21/x515 Cardbus Controller

Table 6-11
System Memory Map

Memory Map Address (hex)	System Function (shipping configuration)
0xD4100000-0xD41FFFFFF	PCI standard PCI-to-PCI bridge
0xD4100000-0xD41FFFFFF	ATI MOBILITY RADEON Xpress 200 Series
0xD8000000-0xDBFFFFFFF	PCI standard PCI-to-PCI bridge
0xD8000000-0xDBFFFFFFF	ATI MOBILITY RADEON Xpress 200 Series
0xFAC00000-0xFEBFFFFFF	PCI standard PCI-to-PCI bridge
0xF6C00000-0xFABFFFFFF	PCI standard PCI-to-PCI bridge
0xD4000000-0xD400FFF	Standard OpenHCD USB Host Controller
0xD4001000-0xD4001FFF	Standard OpenHCD USB Host Controller
0xD4002000-0xD4002FFF	Standard Enhanced PCI to USB Host Controller
0xD4003000-0xD40033FF	ATI SMBus
0xFFFF80000-0xFFFFFFFF	System board
0xE0000000-0xE03FFFFFF	System board
0xE0000000-0xE03FFFFFF	System board resources
0x0000-0x0FFF	System board

Table 6-11
System Memory Map (Continued)

Memory Map Address (hex)	System Function (shipping configuration)
0xD4208000-0xD42087FF	Texas Instruments OHCI Compliant IEEE 1394 Host Controller
0xD4200000-0xD4203FFF	Texas Instruments OHCI Compliant IEEE 1394 Host Controller
0xD4204000-0xD4205FFF	Broadcomm 802.11b/g WLAN
0xFFE00000-0xFFE00000	Texas Instruments PCIxx21/x515 Cardbus Controller
0xFFE00000-0xFFE00000	Texas Instruments PCIxx21/x515 Cardbus Controller
0xF2C00000-0xF6BFFFFF	Texas Instruments PCIxx21/x515 Cardbus Controller
0xD4206000-0xD4207FFF	Texas Instruments PCIxx21 Integrated FlashMedia Controller
0xD4209000-0xD42090FF	SDA Standard Compliant SD Host Controller
0xD4208C00-0xD4208CFF	SDA Standard Compliant SD Host Controller
0xD4208800-0xD42088FF	SDA Standard Compliant SD Host Controller

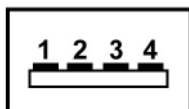
Table 6-11
System Memory Map (Continued)

Memory Map Address (hex)	System Function (shipping configuration)
0xD4209400-0xD42094FF	Realtek RTL8139/810x Family Fast Ethernet NIC
0xD4003400-0xD40034FF	Conexant AC-Link Audio
0xD4003800-0xD40038FF	SoftV90 Data Fax Modem with SmartCP
0xFEC00000-0xFEC00FFF	System board resources
0xFEE00000-0xFEE00FFF	System board resources
0xA0000-0xBFFFF	PCI bus
0xA0000-0xBFFFF	PCI standard PCI-to-PCI bridge
0xA0000-0xBFFFF	ATI MOBILITY RADEON Xpress 200 Series
0xD6000-0xD7FFF	PCI bus
0xDC000-0xDDFFF	PCI bus
0xDD000-0xDDFFF	Texas Instruments PCIxx21/x515 Cardbus Controller
0xE0000-0xFFFFF	System board
0x40000000-0xFFFFFFFF	PCI bus

A

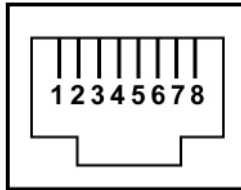
Connector Pin Assignments

Table A-1
Universal Serial Bus



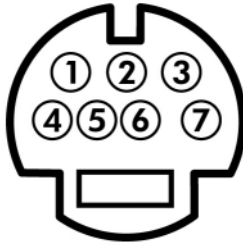
Pin	Signal	Pin	Signal
1	+5 VDC	3	Data +
2	Data -	4	Ground

Table A-2
RJ-45 (Network)



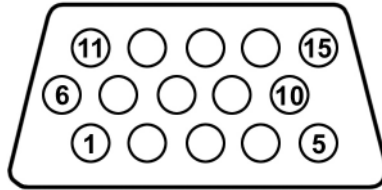
Pin	Signal	Pin	Signal
1	Transmit +	5	Unused
2	Transmit -	6	Receive -
3	Receive +	7	Unused
4	Unused	8	Unused

Table A-3
S-Video-Out



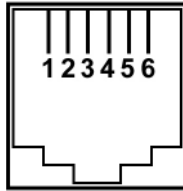
Pin	Signal	Pin	Signal
1	S-VHS color (C) signal	5	TV-CD
2	Composite video signal	6	S-VHS intensity ground
3	S-VHS intensity (Y) signal	7	Composite video ground
4	S-VHS color ground		

Table A-4
External Monitor



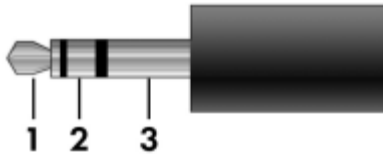
Pin	Signal	Pin	Signal
1	Red analog	9	+5 VDC
2	Green analog	10	Ground
3	Blue analog	11	Monitor detect
4	Not connected	12	DDC 2B data
5	Ground	13	Horizontal sync
6	Ground analog	14	Vertical sync
7	Ground analog	15	DDC 2B clock
8	Ground analog		

Table A-5
RJ-11 (Modem)



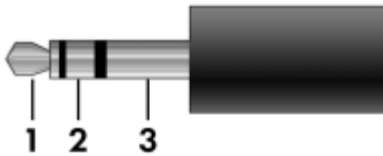
Pin	Signal	Pin	Signal
1	Unused	4	Unused
2	Tip	5	Unused
3	Ring	6	Unused

Table A-6
Audio-In (Microphone)



Pin	Signal	Pin	Signal
1	Audio signal in	3	Ground
2	Audio signal in		

Table A-7
Audio-Out (Headphone)



Pin	Signal	Pin	Signal
1	Audio out, left channel	3	Ground
2	Audio out, right channel		

Power Cord Set Requirements

3-Conductor Power Cord Set

The wide range input feature of the computer permits it to operate from any line voltage from 100 to 120 or 220 to 240 volts AC.

The power cord set included with the computer meets the requirements for use in the country where the equipment is purchased.

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

General Requirements

The requirements listed below are applicable to all countries.

- The length of the power cord set must be at least 1.5 m (5.0 ft) and a maximum of 2.0 m (6.5 ft).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord sets must have a minimum current capacity of 10 amps and a nominal voltage rating of 125 or 250 V AC, as required by each country's power system.
- 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.

Country-Specific Requirements

3-Conductor Power Cord Set Requirements

Country/Region	Accredited Agency	Applicable Note Number
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	FIMKO	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	METI	3



NOTES:

1. The flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 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 where it will be used.
2. The flexible cord must be Type SPT-3 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) or NEMA 6-15P (15 A, 250 V) configuration.
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 VCT or VCTF, 3-conductor, 1.00 mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) configuration.

3-Conductor Power Cord Set Requirements (*Continued*)

Country/Region	Accredited Agency	Applicable Note Number
Korea	EK	4
The Netherlands	KE A	1
Norway	NEMKO	1
People's Republic of China	CCC	5
Sweden	SEMKO	1
Switzerland	SEV	1
Taiwan	BSMI	4
United Kingdom	BSI	1
United States	UL	2



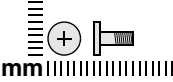
NOTES:

1. The flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 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 where it will be used.
 2. The flexible cord must be Type SPT-3 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) or NEMA 6-15P (15 A, 250 V) configuration.
 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 VCT or VCTF, 3-conductor, 1.00 mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) 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 certification mark of the agency responsible for evaluation in the country where it will be used.
 5. The flexible cord must be Type VCTF, 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 where it will be used.
-

Screw Listing

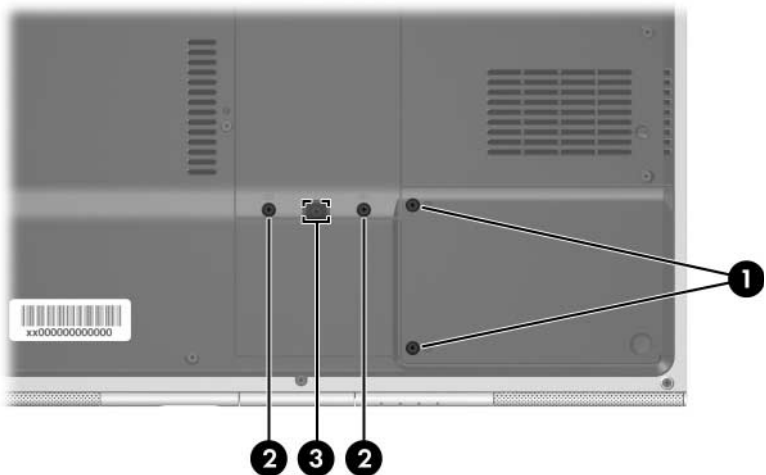
This appendix provides specification and reference information for the screws used in the computer. All screws listed in this appendix are available in the Miscellaneous Screw Kits, spare part numbers 394288-001 (for use on HP Pavilion ze2000 models) and 394289-001 (for use on Compaq Presario M2000 models).

Table C-1
Phillips PM2.0x6.0 Captive Screw

	Color	Qty.	Length	Thread	Head Width
	Black	5	6.0 mm	2.0 mm	5.0 mm

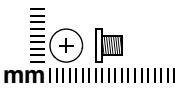
Where used:

- ❶ Two screws that secure the hard drive cover to the computer (screws are captured on the cover by C clips; documented in [Section 5.4](#))
- ❷ Two screws that secure the memory module compartment cover to the computer (screws are captured on the cover by C clips; documented in [Section 5.7](#))
- ❸ One screw that secures the Mini PCI compartment cover to the computer (screw is captured on the cover by C clips; documented in [Section 5.8](#))



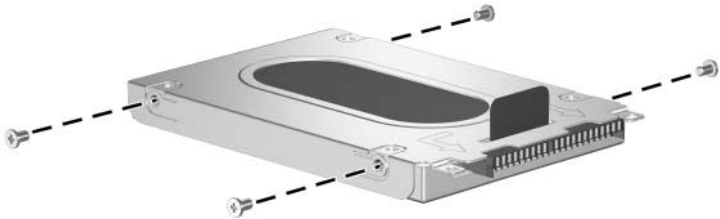
Phillips PM2.0x6.0 Captive Screw Locations

Table C-2
Phillips PM3.0×4.0 Screw

	Color	Qty.	Length	Thread	Head Width
	Silver	4	4.0 mm	3.0 mm	5.0 mm

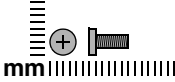
Where used:

4 screws that secure the hard drive frame to the hard drive (documented in [Section 5.4](#))



Phillips PM3.0×4.0 Screw Locations

Table C-3
Phillips PM2.0x6.0 Screw

	Color	Qty.	Length	Thread	Head Width
	Black	10	6.0 mm	2.0 mm	4.0 mm

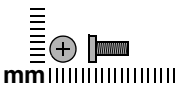
Where used:

4 screws that secure the display assembly on the HP Pavilion ze2000 (documented in [Section 5.12](#))



Phillips PM2.0x6.0 Screw Locations

Table C-3
Phillips PM2.0×6.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Black	10	6.0 mm	2.0 mm	4.0 mm

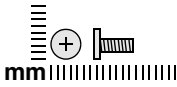
Where used:

6 screws that secure the display assembly on the Compaq Presario M2000 (documented in [Section 5.12](#))



Phillips PM2.0×6.0 Screw Locations

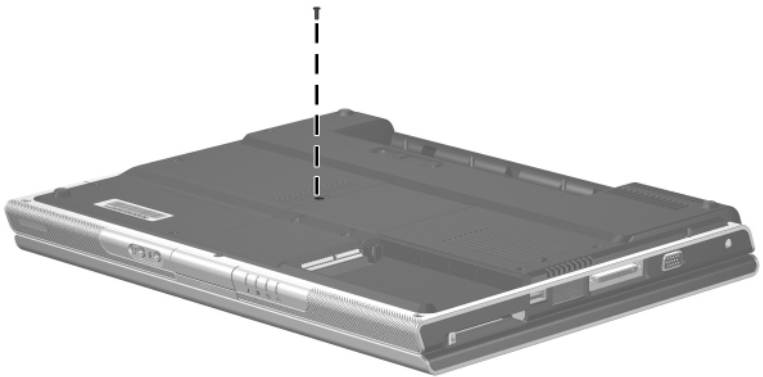
Table C-4
Phillips PM2.0x8.0 Screw



Color	Qty.	Length	Thread	Head Width
Black	35	8.0 mm	2.0 mm	4.5 mm

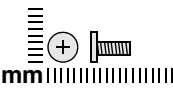
Where used:

One screw that secures the optical drive to the computer (documented in [Section 5.6](#))



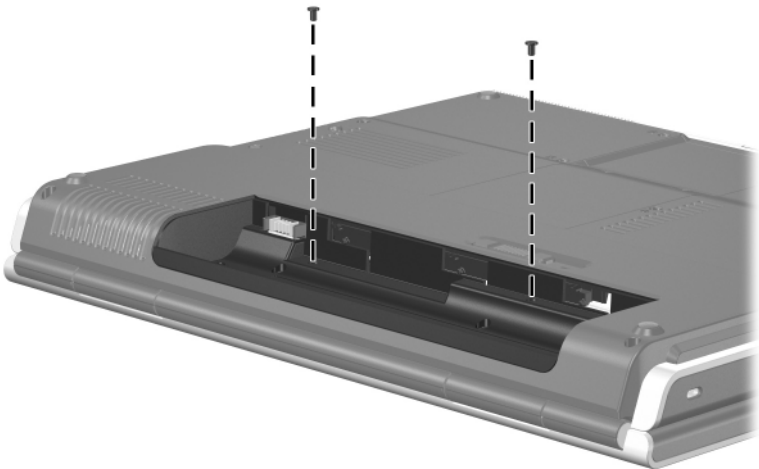
Phillips PM2.0x8.0 Screw Location

Table C-4
Phillips PM2.0×8.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Black	35	8.0 mm	2.0 mm	4.5 mm

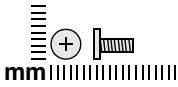
Where used:

2 screws that secure the keyboard cover to the computer (documented in [Section 5.9](#))



Phillips PM2.0×8.0 Screw Locations

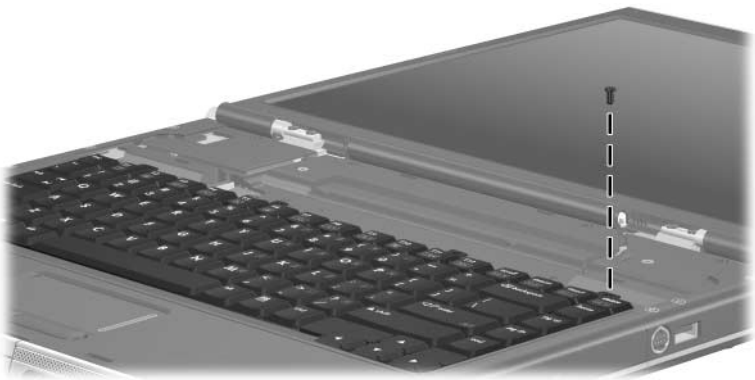
Table C-4
Phillips PM2.0×8.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Black	35	8.0 mm	2.0 mm	4.5 mm

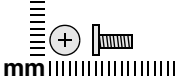
Where used:

One screw that secures the keyboard to the HP Pavilion ze2000 (documented in [Section 5.11](#))



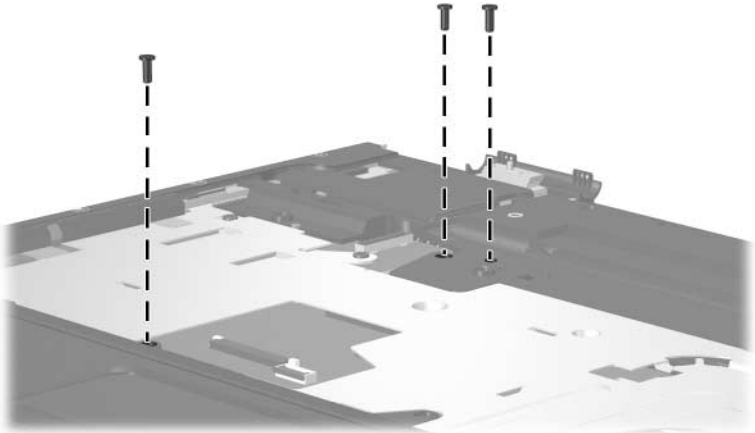
Phillips PM2.0×8.0 Screw Location

Table C-4
Phillips PM2.0×8.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Black	35	8.0 mm	2.0 mm	4.5 mm

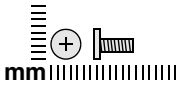
Where used:

3 screws that secure the base enclosure to the computer on the HP Pavilion ze2000 (documented in [Section 5.13](#))



Phillips PM2.0×8.0 Screw Locations

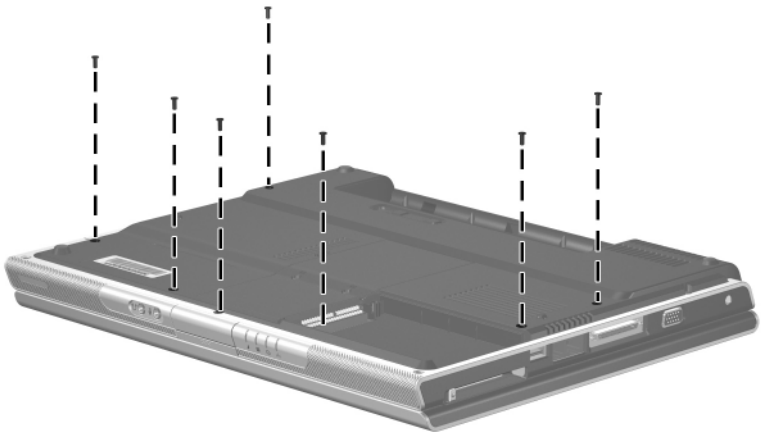
Table C-4
Phillips PM2.0x8.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Black	35	8.0 mm	2.0 mm	4.5 mm

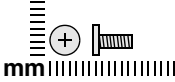
Where used:

7 screws that secure the base enclosure to the computer on the HP Pavilion ze2000 (documented in [Section 5.13](#))



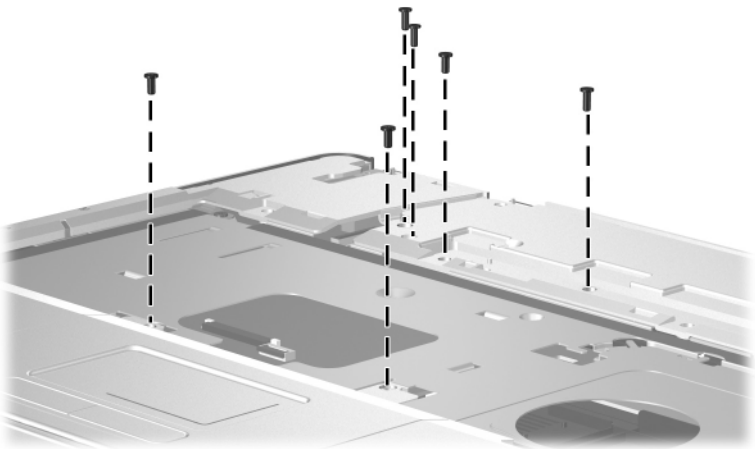
Phillips PM2.0x8.0 Screw Locations

Table C-4
Phillips PM2.0×8.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Black	35	8.0 mm	2.0 mm	4.5 mm

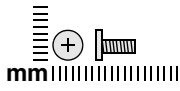
Where used:

6 screws that secure the base enclosure on the Compaq Presario M2000 (documented in [Section 5.13](#))



Phillips PM2.0×8.0 Screw Locations

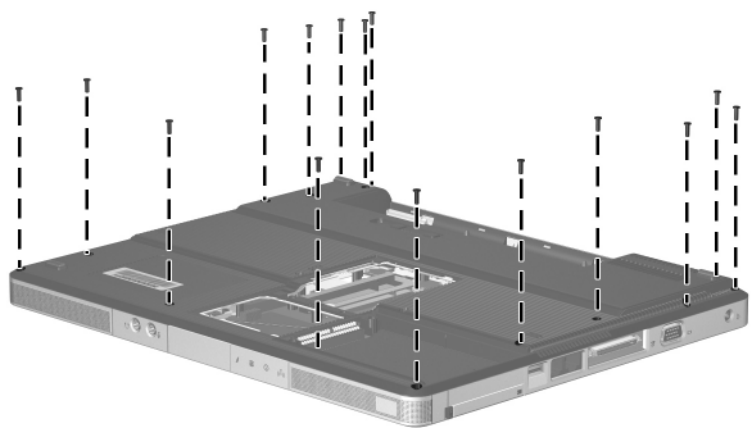
Table C-4
Phillips PM2.0x8.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Black	35	8.0 mm	2.0 mm	4.5 mm

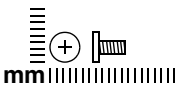
Where used:

15 screws that secure the base enclosure on the Compaq Presario M2000 (documented in [Section 5.13](#))



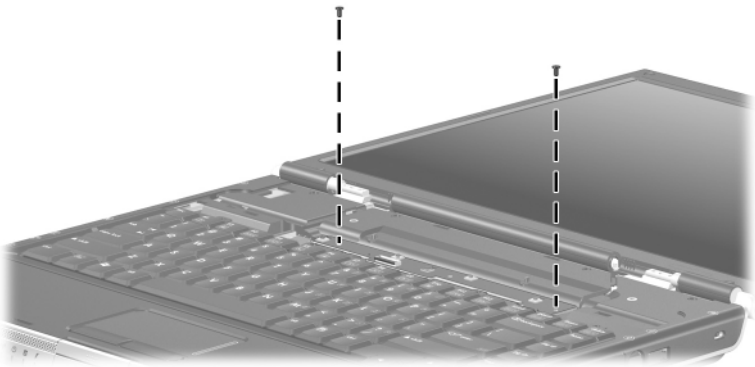
Phillips PM2.0x8.0 Screw Locations

Table C-5
Phillips PM2.0x5.0 Screw

	Color	Qty.	Length	Thread	Head Width
	Silver	28	5.0 mm	2.0 mm	4.5 mm

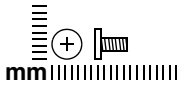
Where used:

2 screws that secure the LED board to the computer (documented in [Section 5.10](#))



Phillips PM2.0x5.0 Screw Locations

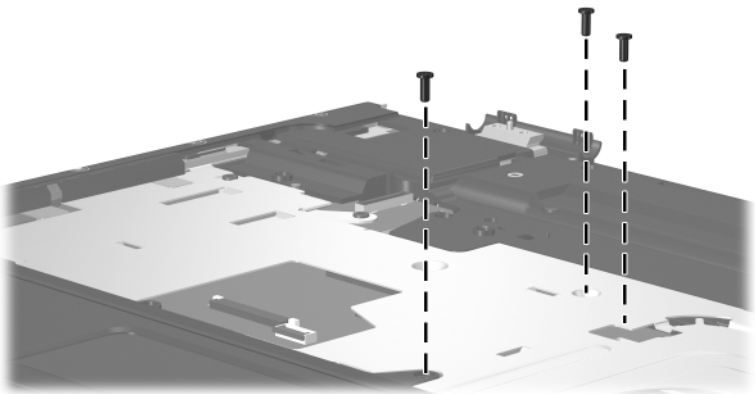
Table C-5
Phillips PM2.0x5.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Silver	28	5.0 mm	2.0 mm	4.5 mm

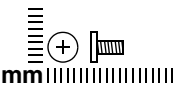
Where used:

3 screws that secure the base enclosure to the HP Pavilion ze2000 (documented in [Section 5.13](#))



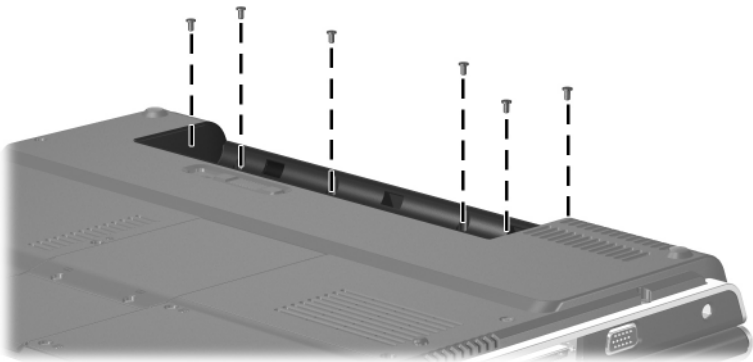
Phillips PM2.0x5.0 Screw Locations

Table C-5
Phillips PM2.0x5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Silver	28	5.0 mm	2.0 mm	4.5 mm

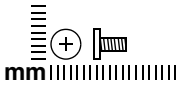
Where used:

6 screws that secure the base enclosure to the HP Pavilion ze2000
 (documented in [Section 5.13](#))



Phillips PM2.0x5.0 Screw Locations

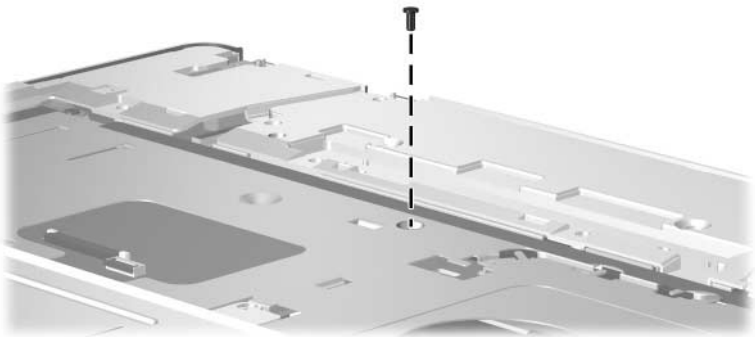
Table C-5
Phillips PM2.0x5.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Silver	28	5.0 mm	2.0 mm	4.5 mm

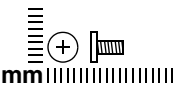
Where used:

One screw that secures the base enclosure to the Compaq Presario M2000 (documented in [Section 5.13](#))



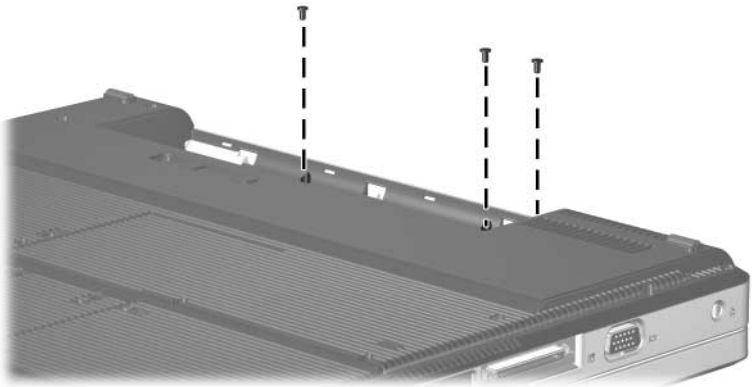
Phillips PM2.0x5.0 Screw Location

Table C-5
Phillips PM2.0x5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Silver	28	5.0 mm	2.0 mm	4.5 mm

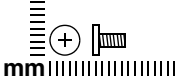
Where used:

3 screws that secure the base enclosure on the Compaq Presario M2000 (documented in [Section 5.13](#))



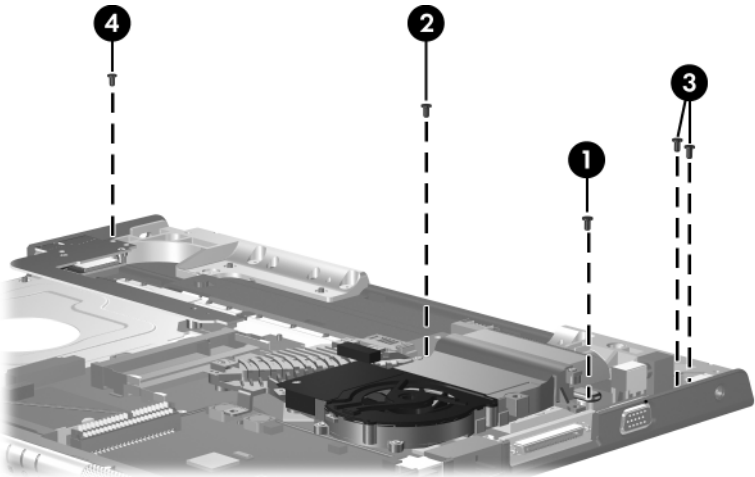
Phillips PM2.0x5.0 Screw Locations

Table C-5
Phillips PM2.0x5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
mm	Silver	28	5.0 mm	2.0 mm	4.5 mm

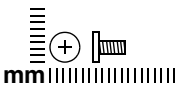
Where used:

- ❶ One screw that secures the fan assembly to the computer (documented in [Section 5.16](#))
- ❷ One screw that secures the battery connector board to the computer (documented in [Section 5.18](#))
- ❸ Two screws that secure the power connector board to the computer (documented in [Section 5.19](#))
- ❹ One screw that secures the USB/S-Video controller board to the computer (documented in [Section 5.20](#))



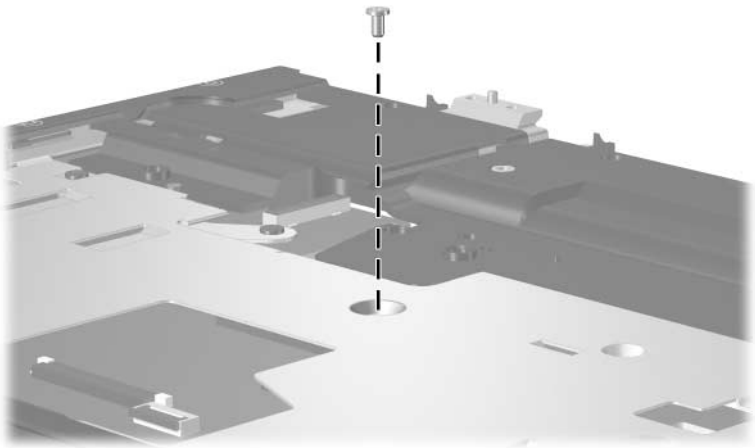
Phillips PM2.0x5.0 Screw Locations

Table C-5
Phillips PM2.0×5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Silver	28	5.0 mm	2.0 mm	4.5 mm

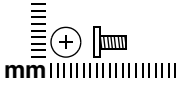
Where used:

One screw that secures the battery connector board to the computer (documented in [Section 5.18](#))



Phillips PM2.0×5.0 Screw Location

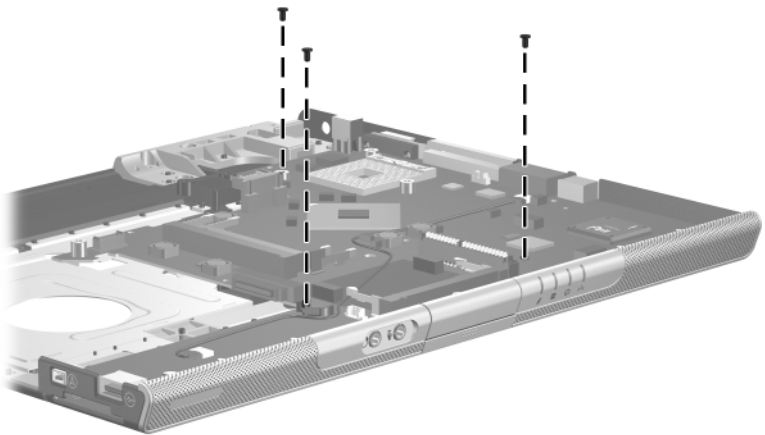
Table C-5
Phillips PM2.0x5.0 Screw (Continued)



Color	Qty.	Length	Thread	Head Width
Silver	28	5.0 mm	2.0 mm	4.5 mm

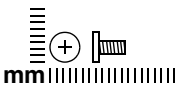
Where used:

3 screws that secure the system board on the HP Pavilion ze2000 (documented in [Section 5.22](#))



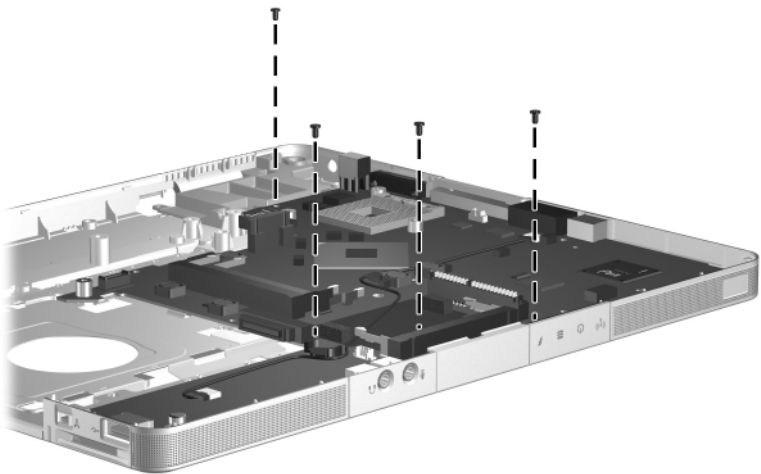
Phillips PM2.0x5.0 Screw Locations

Table C-5
Phillips PM2.0x5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Silver	28	5.0 mm	2.0 mm	4.5 mm

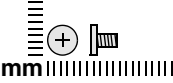
Where used:

4 screws that secure the system board on the Compaq Presario M2000 (documented in [Section 5.22](#))



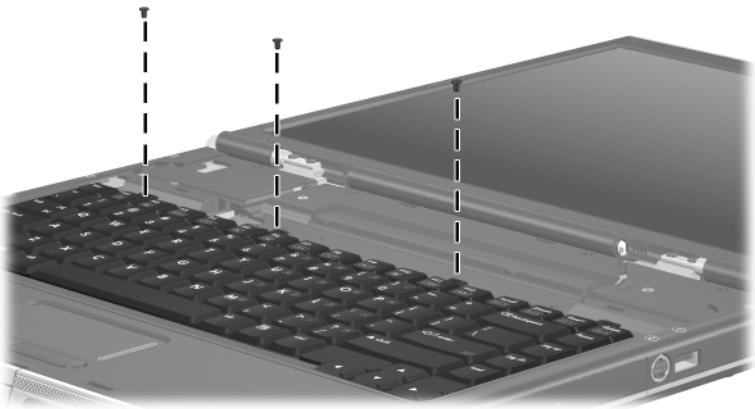
Phillips PM2.0x5.0 Screw Locations

Table C-6
Phillips PM2.0x4.0 Screw

	Color	Qty.	Length	Thread	Head Width
	Black	7	4.0 mm	2.0 mm	4.5 mm

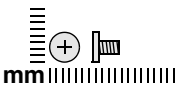
Where used:

3 screws that secure the keyboard to the HP Pavilion ze2000 (documented in [Section 5.11](#))



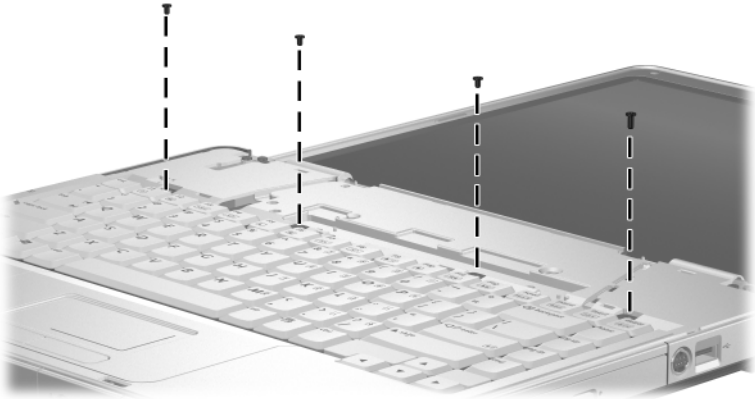
Phillips PM2.0x4.0 Screw Locations

Table C-6
Phillips PM2.0×4.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Black	7	4.0 mm	2.0 mm	4.5 mm

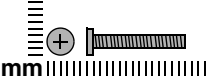
Where used:

4 screws that secure the keyboard to the Compaq Presario M2000 (documented in [Section 5.11](#))



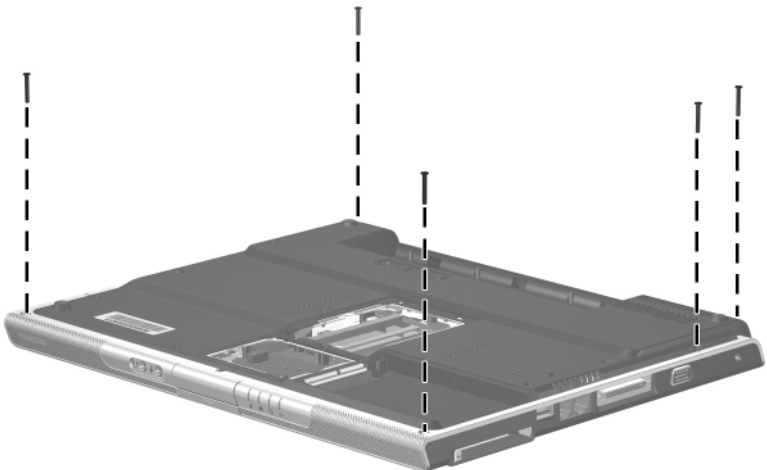
Phillips PM2.0×4.0 Screw Locations

Table C-7
Phillips PM2.0x16.0 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Black	5	16.0 mm	2.0 mm	4.5 mm

Where used:

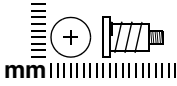
5 screws that secure the base enclosure on the HP Pavilion ze2000 (documented in [Section 5.13](#))



Phillips PM2.0x16.0 Screw Locations

Table C-8

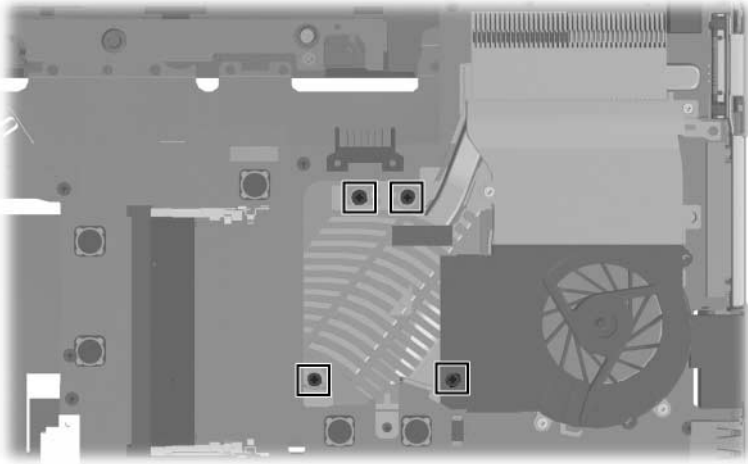
Phillips PM1.5x9.0 Captive Spring-Loaded Shoulder Screw



Color	Qty.	Length	Thread	Head Width
Silver	4	9.0 mm	1.5 mm	6.0 mm


Where used:

4 screws that secure the fan assembly to the computer (documented in [Section 5.17](#))



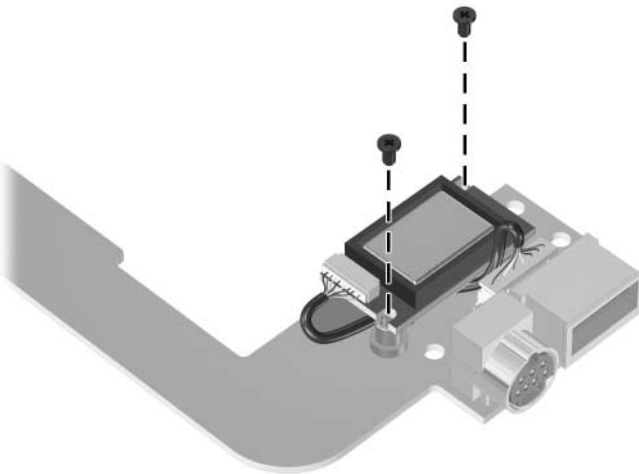
Phillips PM1.5x9.0 Captive Spring-Loaded Shoulder Screw Locations

Table C-9
Phillips PM1.5x3.5 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	2	3.5 mm	1.5 mm	3.0 mm

Where used:

2 screws that secure the Bluetooth board to the computer (documented in [Section 5.21](#))



Phillips PM1.5x3.5 Screw Locations

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