Maintenance and Service Guide

HP Pavilion dv1400 Entertainment Notebook PC
HP Compaq nx4820 Notebook PC
Compaq Presario V2400 Notebook PC

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November 2005

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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HP Pavilion dv1400 Entertainment Notebook PC
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Compaq Presario V2400 Notebook PC
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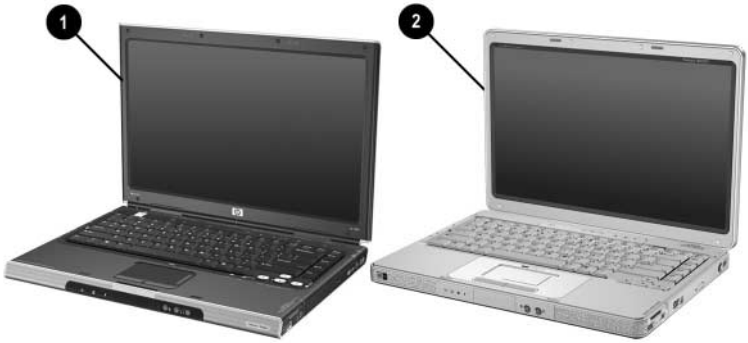
Product Description

The HP Pavilion dv1400 Entertainment Notebook PC ❶ and the HP Compaq nx4820 Notebook PC and Compaq Presario V2400 Notebook PC (both represented by ❷) offer advanced modularity, Intel® Pentium® M and Celeron® M processors, and extensive multimedia support.



HP Pavilion dv1400, HP Compaq nx4820, and Compaq Presario V2400

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1.1 Features

- The following processors are available, varying by computer model:
  - ❏ Intel Pentium M 770 (2.13-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 760 (2.0-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 750 (1.8-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 740 (1.7-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 735a (1.7-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 730 (1.6-GHz) with 400-MHz FSB
  - ❏ Intel Pentium M 725 (1.6-GHz) with 400-MHz FSB
  - ❏ Intel Celeron M 380 (1.6-GHz) with 400-MHz FSB
  - ❏ Intel Celeron M 370 (1.4-GHz) with 400-MHz FSB
  - ❏ Intel Celeron M 360 (1.4-GHz) with 400-MHz FSB
  - ❏ Intel Celeron M 350 (1.3-GHz) with 400-MHz FSB
- 14.0-inch WXGA (1280 × 768) TFT display with over 16.7 million colors, varying by computer model
- 80-, 60-, or 40-GB high-capacity hard drive, varying by computer model
- 256-MB DDR synchronous DRAM (SDRAM) at 266 MHz, expandable to 2.0 GB on models with Intel Mobile Pentium M processors and 1.0 GB on models with Intel Celeron M processors
- Microsoft® Windows® XP Home Edition or Windows XP Professional, or Free DOS, varying by computer model
- Full-size Windows keyboard with embedded numeric keypad
- TouchPad pointing device with on button and dedicated two-way scroll region
- Integrated 10/100 BASE-T Ethernet local area network (LAN) network interface card (NIC) with RJ-45 jack
- Integrated high-speed 56K modem with RJ-11 jack

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- Integrated wireless support for Mini PCI IEEE 802.11b and 802.11b/g WLAN device
- Support for one Type II PC Card slots, 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:
  - DVD+RW/R and CD-RW Double Layer Combo Drive with LightScribe
  - DVD+RW/R and CD-RW Double Layer Combo Drive
  - DVD/CD-RW Combo Drive
  - DVD-ROM Drive
- Connectors:
  - External monitor
  - Universal Serial Bus (USB) v. 2.0
  - RJ-11 (modem)
  - RJ-45 (network)
  - Audio-out (headphone)
  - Audio-in (microphone)
  - Power
  - IEEE 1394 digital (select models only)
  - S-Video-out (select models only)
  - Infrared (HP Pavilion models only)
  - Parallel
  - Serial
  - Docking (select models only)
  - Digital memory card reader (select models only)

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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 5.16, "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.

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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 button
- Advanced Configuration and Power Management (ACPM) compliance

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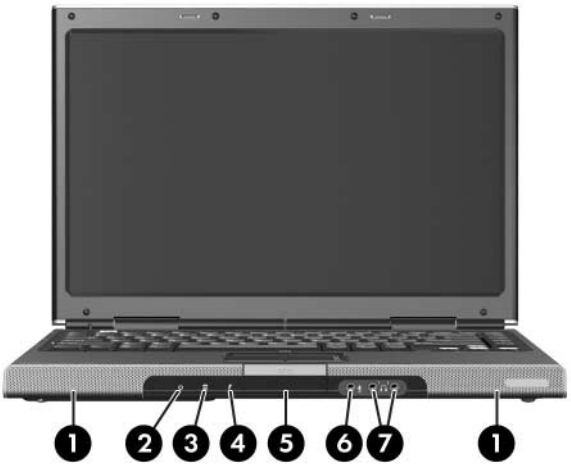
1.4 External Components

The external components on the front of the HP Pavilion dv1400 are shown below and described in Table 1-1.



Front Components, HP Pavilion dv1400

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Table 1-1

Front Components

HP Pavilion dv1400

Item	Component	Function
1	Speakers (2)	Produce stereo sound.
2	Power light	■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off.
3	IDE (Integrated Drive Electronics) drive light	On or blinking: The internal hard drive or an optical drive is being accessed.
4	Battery light	■ Amber: The battery pack is charging. ■ Green: The battery pack is fully charged. ■ Off: The battery pack is discharging or not inserted.
5	Display release latch	Opens the computer.
6	Audio-in (microphone) jack	Connects an optional monaural (single sound channel) microphone.
7	Audio-out (headphone) jack (2)	Connect optional headphones or powered stereo speakers. Also connect the audio function of an audio/video device such as a television or VCR.

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The external components on the front of the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-2.

Front Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 1-2

Front Components

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	Speakers (2)	Produce stereo sound.
2	Wireless button light (select models only)	On: An integrated wireless device is hardware enabled.
3	Power light	■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off.
4	IDE (Integrated Drive Electronics) drive light	■ On or blinking: The internal hard drive or an optical drive is being accessed.
5	Battery light	■ Amber: The battery pack is charging. ■ Green: The battery pack is fully charged. ■ Off: The battery pack is discharging or not inserted.
6	Display release latch	Opens the computer.
7	Audio-in (microphone) jack	Connects an optional monaural (single sound channel) microphone.
8	Audio-out (headphone) jack (2 on HP Pavilion dv1400 models)	Connect optional headphones or powered stereo speakers. Also connect the audio function of an audio/video device such as a television or VCR.

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The external components on the right side of the HP Pavilion dv1400 are shown below and described in Table 1-3.

Right-Side Components, HP Pavilion dv1400

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Table 1-3

Right-Side Components

HP Pavilion dv1400

Item	Component	Function
1	USB connectors (2)	Connect an optional USB device.
2	6-in-1 Digital Media Reader (select models only)	In Windows, supports digital memory cards.
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.

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The external components on the right side of the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-4.

Right-Side Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 1-4

Right-Side Components

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	USB connectors (2)	Connect an optional USB device.
2	Digital memory card reader (select models only)	In Windows, supports digital memory cards.
3	1394 port (select models only)	Connects an optional 1394 device such as a scanner, digital camera, or digital camcorder.
4	Digital memory card 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.

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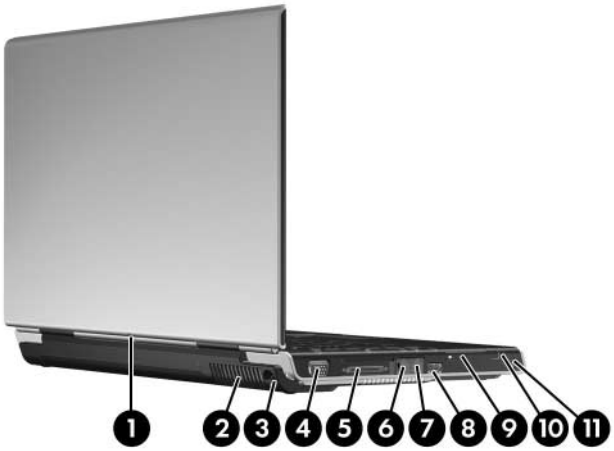
The external components on the rear and left side of the HP Pavilion dv1400 are shown below and described in Table 1-5.



Rear and Left-Side Components, HP Pavilion dv1400

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Table 1-5

Rear and Left-Side Components

HP Pavilion dv1400

Item	Component	Function
1	Wireless light (select models only)	On: An integrated wireless device is hardware enabled.
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.
3	Power connector	Connects an AC adapter cable.
4	External monitor port	Connects an optional VGA external monitor or projector.
5	Expansion port	Connects the computer to an optional expansion base.
6	RJ-45 (network) jack	Connects an optional network cable.
7	RJ-11 (modem) jack	Connects the modem cable.
8	USB connector	Connects an optional USB device.
9	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card. Also serves as a storage location for the optional HP Mobile Remote Control.
10	PC Card eject button	Ejects an optional PC Card from the PC Card slot.
11	Security cable slot	Attaches an optional security cable to the computer.

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The external components on the rear and left side of the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-6.

Rear and Left-Side Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 1-6

Rear and Left-Side Components

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	Exhaust vent	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.
2	Power connector	Connects an AC adapter cable.
3	External monitor port	Connects an optional VGA external monitor or projector.
4	Expansion port	Connects the computer to an optional expansion base.
5	RJ-45 (network) jack	Connects an optional network cable.
6	RJ-11 (modem) jack	Connects the modem cable.
7	USB connector	Connects an optional USB device.
8	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
9	PC Card eject button	Ejects an optional PC Card from the PC Card slot.
10	Security cable slot	Attaches an optional security cable to the computer.

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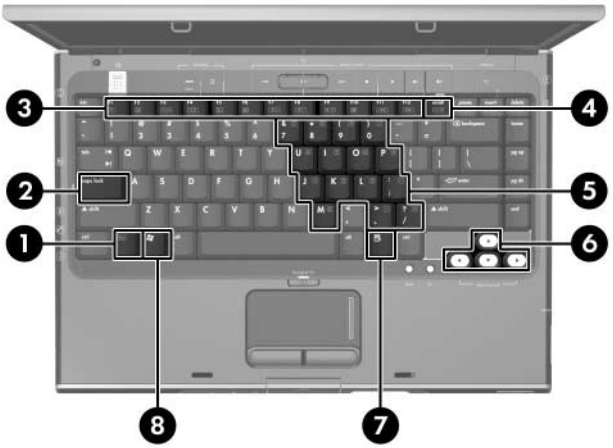
The keyboard components on the HP Pavilion dv1400 are shown below and described in Table 1-7.



Keyboard Components, HP Pavilion dv1400

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Table 1-7

Keyboard Components

HP Pavilion dv1400

Item	Component	Function
1	**fn** key	Combines with other keys to perform system tasks. For example, pressing **fn+f7** decreases screen brightness.
2	**caps lock** key	Enables caps lock and turns on the caps lock light.
3	**f1** to **f12** keys (12)	Perform system and application tasks. When combined with the **fn** key, several keys and buttons perform additional tasks as hotkeys.
4	**num lock** key	Enables numeric lock, turns on the embedded numeric keypad, and turns on the num lock light.
5	Keypad keys (15)	In Windows, can be used like the keys on an external numeric keypad.
6	Arrow keys	Move the cursor around the screen.
7	Windows applications key	In Windows, displays a shortcut menu for items beneath the pointer.
8	Windows logo key	In Windows, displays the Windows Start menu.

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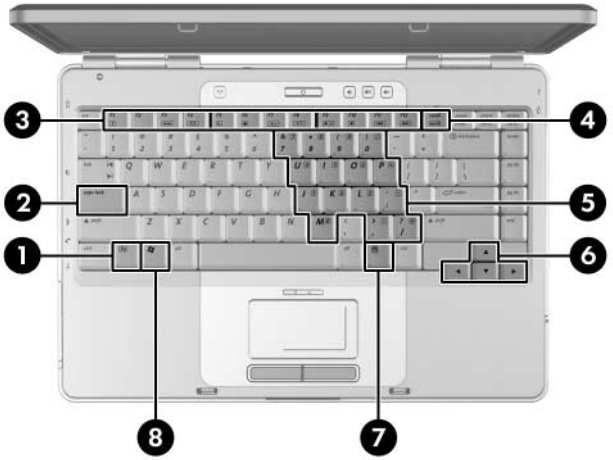
The keyboard components on the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-8.



Keyboard Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 1-8

Keyboard Components

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	**fn** key	Combines with other keys to perform system tasks. For example, pressing **fn+f7** decreases screen brightness.
2	**caps lock** key	Enables caps lock and turns on the caps lock light.
3	**f1** to **f12** keys (12)	Perform system and application tasks. When combined with the **fn** key, several keys and buttons perform additional tasks as hotkeys.
4	**num lock** key	Enables numeric lock, turns on the embedded numeric keypad, and turns on the num lock light.
5	Keypad keys (15)	In Windows, can be used like the keys on an external numeric keypad.
6	Arrows keys	Move the cursor around the screen.
7	Windows applications key	In Windows, displays a shortcut menu for items beneath the pointer.
8	Windows logo key	In Windows, displays the Windows Start menu.

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The top components on the HP Pavilion dv1400 are shown below and described in Table 1-9.

Top Components, Part 1, HP Pavilion dv1400

Table 1-9

Top Components, Part 1

HP Pavilion dv1400

Item	Component	Function
1	Display switch	If the computer is closed while on, turns off the display.
2	Power button	When the computer is ■ 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.

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Table 1-9

Top Components, Part 1

HP Pavilion dv1400 *(Continued)*

Item	Component	Function
3	DVD button	When the computer is ■ Off, opens QuickPlay DVD mode. ■ On in Windows, opens the default Windows DVD application. ■ On in QuickPlay music mode, opens QuickPlay DVD mode. ■ On in QuickPlay DVD mode, displays the DVD setup menu. ■ In Standby, resumes from Standby into Windows. ■ In Hibernation, opens QuickPlay DVD mode.
4	Music button	When the computer is ■ Off, opens QuickPlay music mode. ■ On in Windows, opens the default Windows music application. ■ On in QuickPlay DVD mode, opens QuickPlay music mode. ■ In Standby, resumes from Standby into Windows. ■ In Hibernation, opens QuickPlay music mode.
5	Previous/Rewind Button	When a disc is in the optical drive: ■ Press to play the previous track or chapter. ■ Press **fn+**this button to rewind.
6	Play/Pause button	When a disc is in the optical drive and is: ■ Not playing, press to play the disc. ■ Playing, press to pause the disc.

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The top components on the HP Pavilion dv1400 are shown below and described in Table 1-10.

Top Components, Part 2, HP Pavilion dv1400

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Table 1-10

Top Components, Part 2

HP Pavilion dv1400

Item	Component	Function
1	Next/Fast Forward button	When a disc is in the optical drive: ■ Press once to play the next track or chapter. ■ Press **fn+**this button to fast forward.
2	Stop button	When a disc is in the optical drive, press to stop the current disc activity.
3	Volume down button	Decreases system volume.
4	Volume mute button Mute light	Mutes or restores volume. On: Volume is muted.
5	Volume up button	Increases system volume.
6	Wireless button	Enables/disables an internal wireless device.

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The top components on the HP Pavilion dv1400 are shown below and described in Table 1-11.

Top Components, Part 3, HP Pavilion dv1400

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Table 1-11

Top Components, Part 3

HP Pavilion dv1400

Item	Component	Function
1	TouchPad	Moves the pointer.
2	TouchPad light	On: TouchPad is enabled.
3	Caps lock light	On: Caps lock is on.
4	Power/ button light	■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off.
5	Wireless light	On: an integrated wireless device is hardware enabled.
6	Num lock light	On: Num lock or the internal keypad is on.
7	Back button	■ In Windows, emulates the “back” function of the alt+left arrow command in the active application. ■ In QuickPlay, moves up one directory level in an on-screen menu.
8	OK button	Selects an item you have chosen on the screen.
9	TouchPad on/off button	Enables/disables the TouchPad.
10	TouchPad vertical scroll region	Scrolls upward or downward.
11	Left and right TouchPad buttons	Function like the left and right buttons on an external mouse.

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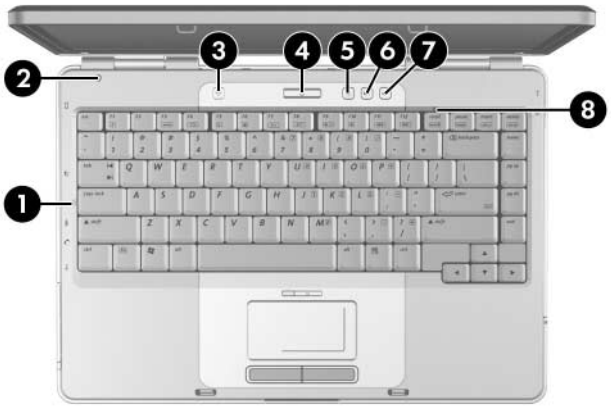
The top components on the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-12.



Top Components, Part 1, HP Compaq nx4820 and Compaq Presario V2400

Table 1-12

Top Components, Part 1

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	Caps lock light	On: Caps lock is on.
2	Display switch	If the computer is closed while on, turns off the display.

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Table 1-12

Top Components, Part 1

HP Compaq nx4820 and Compaq Presario V2400 *(Continued)*

Item	Component	Function
3	Wireless button	Enables/disables an internal wireless device.
	Wireless light	On: an integrated wireless device is hardware enabled.
4	Power button	When the computer is ■ 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.
	Power light	■ On: Computer is turned on. ■ Blinking: Computer is in standby. ■ Off: Computer is off.
5	Volume down button	Decreases system volume.
6	Volume mute button	Mutes or restores volume.
	Mute light	On: Volume is muted.
7	Volume up button	Increases system volume.
8	Num lock light	On: Num lock or the internal keypad is on.

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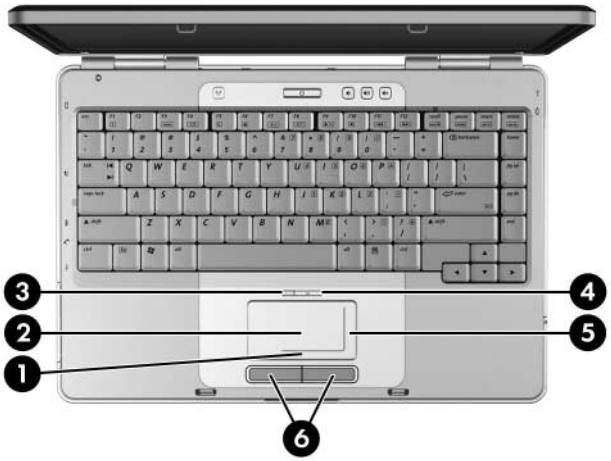
The top components on the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-13.



Top Components, Part 2, HP Compaq nx4820 and Compaq Presario V2400

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Table 1-13

Top Components, Part 2

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	TouchPad horizontal scrolling region	Scrolls toward left side or right side.
2	TouchPad	Moves the pointer.
3	TouchPad light	On: TouchPad is enabled.
4	TouchPad on/off button	Enables/disables the TouchPad.
5	TouchPad vertical scroll region	Scrolls upward or downward.
6	Left and right TouchPad buttons	Function like the left and right buttons on an external mouse.

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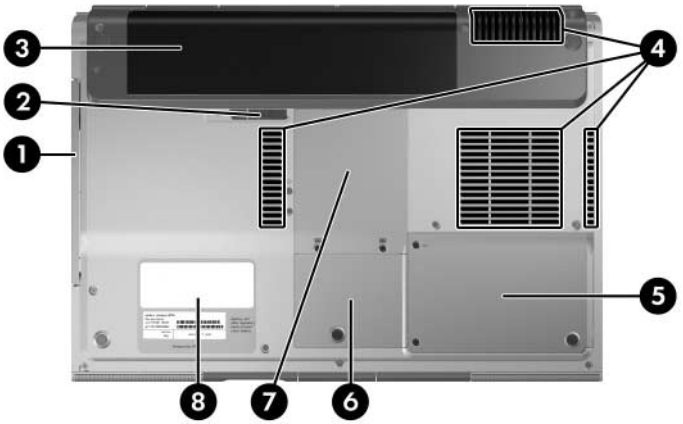
The external components on the bottom of the HP Pavilion dv1400 are shown below and described in Table 1-14.



Bottom Components, HP Pavilion dv1400

Table 1-14

Bottom Components

HP Pavilion dv1400

Item	Component	Function
1	Optical drive	Supports an optical disc.
2	Battery pack release latch	Releases a battery pack from the battery bay.
3	Battery pack	Holds a battery pack.

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Table 1-14

Bottom Components

HP Pavilion dv1400 *(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	Hard drive bay	Holds the internal hard drive.
6	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 your 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.
7	Memory module compartment	Contains two memory slots that support replaceable memory modules. The number of preinstalled memory modules varies by computer model.
8	Label areas (2)	Contain the computer serial number and other applicable regulatory labels.

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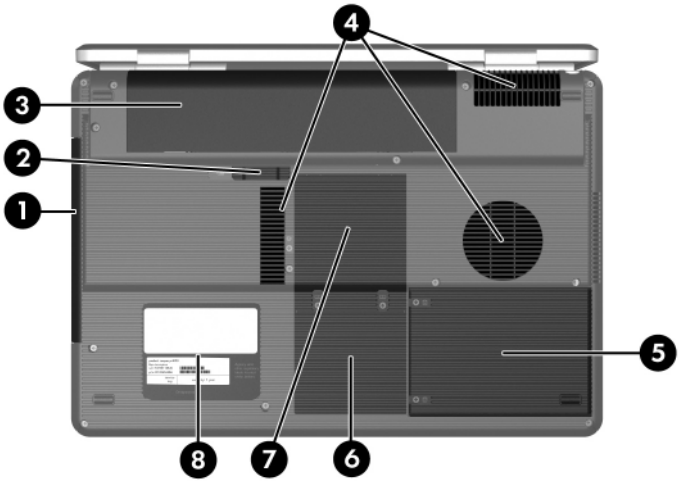
The external components on the bottom of the HP Compaq nx4820 and Compaq Presario V2400 are shown below and described in Table 1-15.



Bottom Components, HP Compaq nx4820 and Compaq Presario V2400

Table 1-15

Bottom Components

HP Compaq nx4820 and Compaq Presario V2400

Item	Component	Function
1	Optical drive	Supports an optical disc.
2	Battery pack release latch	Releases a battery pack from the battery bay.
3	Battery pack	Holds a battery pack.

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Table 1-15

Bottom Components

HP Compaq nx4820 and Compaq Presario V2400 *(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	Hard drive bay	Holds the internal hard drive.
6	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 your 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.
7	Memory module compartment	Contains 2 memory slots that support replaceable memory modules. The number of preinstalled memory modules varies by computer model.
8	Label areas (2)	Contain the computer serial number and other applicable regulatory labels.

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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:

- Memory module
- Mini PCI communications devices
- Hard drive
- Display
- Keyboard and TouchPad
- Audio
- Intel Pentium M and Celeron M processors
- Fan
- 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.

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2

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.

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Accessing Computer Setup

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

1. Open Computer Setup by turning on or restarting the computer. Press **f10** while the F10 = Based Setup message is displayed in the lower-left corner of the screen.
   - ❏ To change the language, press **f2**.
   - ❏ To view navigation information, press **f1**.
   - ❏ To return to the Computer Setup menu, press **esc**.
2. Select the **File**, **Security**, **Tools**, or **Advanced** menu.
3. To exit Computer Setup, choose one of the following:
   - ❏ To exit without saving any changes, use the arrow keys to select **File > Ignore changes and exit**, and then follow the instructions on the screen.
   - ❏ To exit and save all the settings you have entered, use the arrow keys to select **File > Save changes and exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and go into 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 F10 = Based Setup message is displayed in the lower-left corner of the screen.
   - ❏ To change the language, press **f2**.
   - ❏ To view navigation information, press **f1**.
2. Use the arrow keys to select **File > Restore defaults**.
3. Select the **Restore Defaults** check box.

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4. To confirm the restoration, press **f10**.
5. Select **File > Save changes and exit**, 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 File Menu

Table 2-1

File Menu

Select	To Do This
System Information	■ View identification information about the computer and any battery packs in the system. ■ View specification information about the processor, memory and cache size, video revision, keyboard controller version, and system ROM.
Save to floppy	Save system configuration settings to a diskette.
Restore to floppy	Restore system configuration settings from a diskette.
Restore defaults	Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.)
Ignore changes and exit	Cancel changes entered during the current session. Then exit and restart the computer.
Save changes and exit	Save changes entered during the current session. Then exit and restart the computer. The changes you save are to into effect when the computer restarts.

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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.
Password options	■ Enable/Disable stringent security. ■ Enable/Disable required password on restart.
DriveLock passwords	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.
Smart Card Security	Enable/disable power-on support for smart cards. ✎ This feature is supported by select smart card readers only.
Embedded Security	■ Enable/Disable the embedded security chip. ■ Restore embedded security chip to factory settings. ■ Enable/Disable power-on authentication support. ■ Enable/Disable automatic DriveLock. ■ Reset power-on authentication credential ✎ Embedded Security settings are accessible only if the computer is equipped with an embedded security chip.
Device security	Enable/Disable devices in the system. Enable NIC for inclusion in MultiBoot.
System IDs	Enter user-defined identification values.

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Selecting from the Tools Menu

Table 2-3

Tools Menu

Select	To Do This
HDD Self Test options	Run a quick or comprehensive self-test on any hard drive in the system.
Battery Information	View information about any battery packs in the computer.
Memory Check	■ Run a self-test on memory modules in the computer. ■ View information about memory modules installed in the computer.

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Selecting from the Advanced Menu

Table 2-4

Advanced Menu

Select	To Do This
Language (or press **f2**)	Change the Computer Setup language.
Boot options	■ Enable/Disable MultiBoot, which sets a startup sequence that can include most bootable devices and media in the system. ■ Set the boot order.
Device options	■ Swap the functions of the **fn** key and left **ctrl** key. ■ Enable/Disable multiple pointing devices at startup. (To set the computer to support only a single, usually nonstandard, pointing device at startup, select **Disable**.) ■ Enable/Disable USB legacy support for a USB keyboard, mouse, and hub. When USB legacy support is enabled ❒ A USB keyboard, mouse, and hub work even when a Windows operating system is not loaded. ❒ The computer starts from a bootable hard drive, diskette drive diskette, or CD, CD-RW, or DVD inserted into a drive connected by a USB connector to the computer or to an optional docking device. ■ Select a parallel port mode: EPP (Enhanced Parallel Port), standard, bidirectional, or ECP (Enhanced Capabilities Port). ■ Enable/Disable all settings in the **SpeedStep** window. (When Disable is selected, the computer runs in Battery Optimized mode.)

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2.2 Troubleshooting Flowcharts

Table 2-5

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”

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Table 2-5

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”

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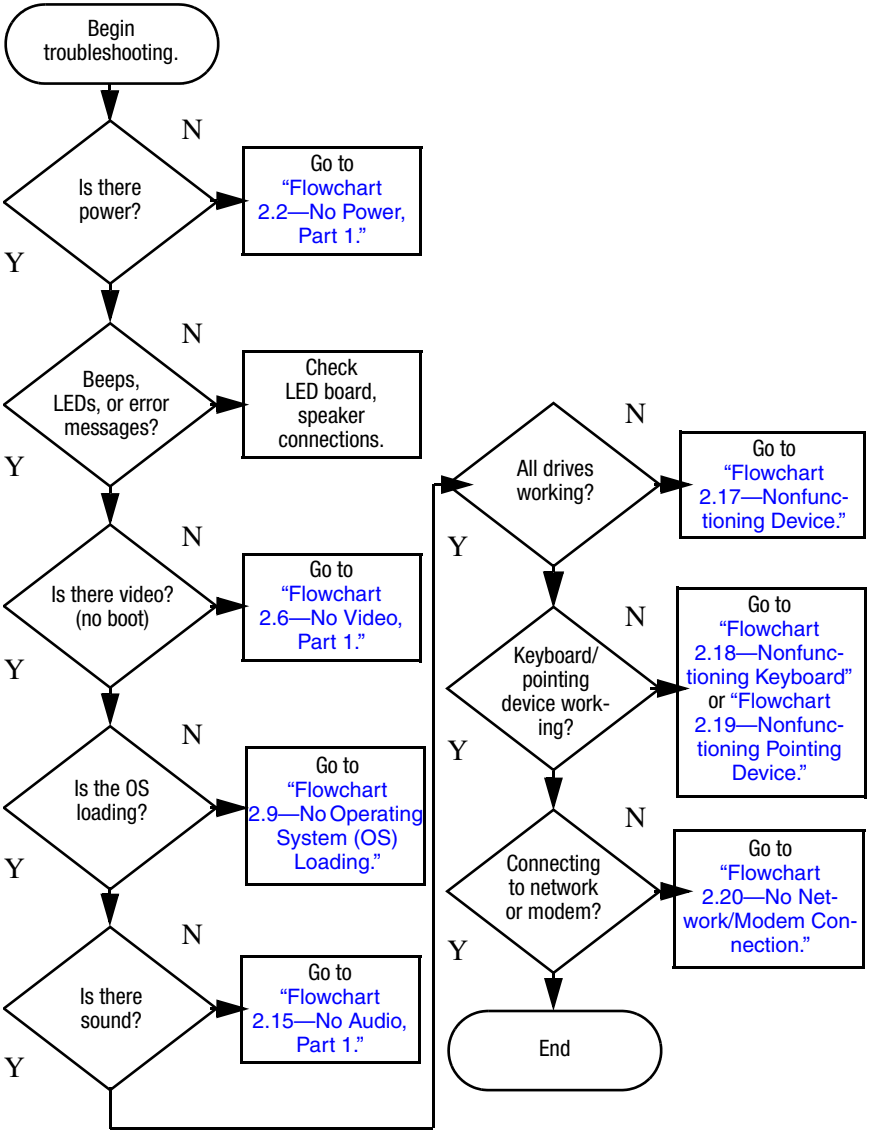
Flowchart 2.1—Initial Troubleshooting



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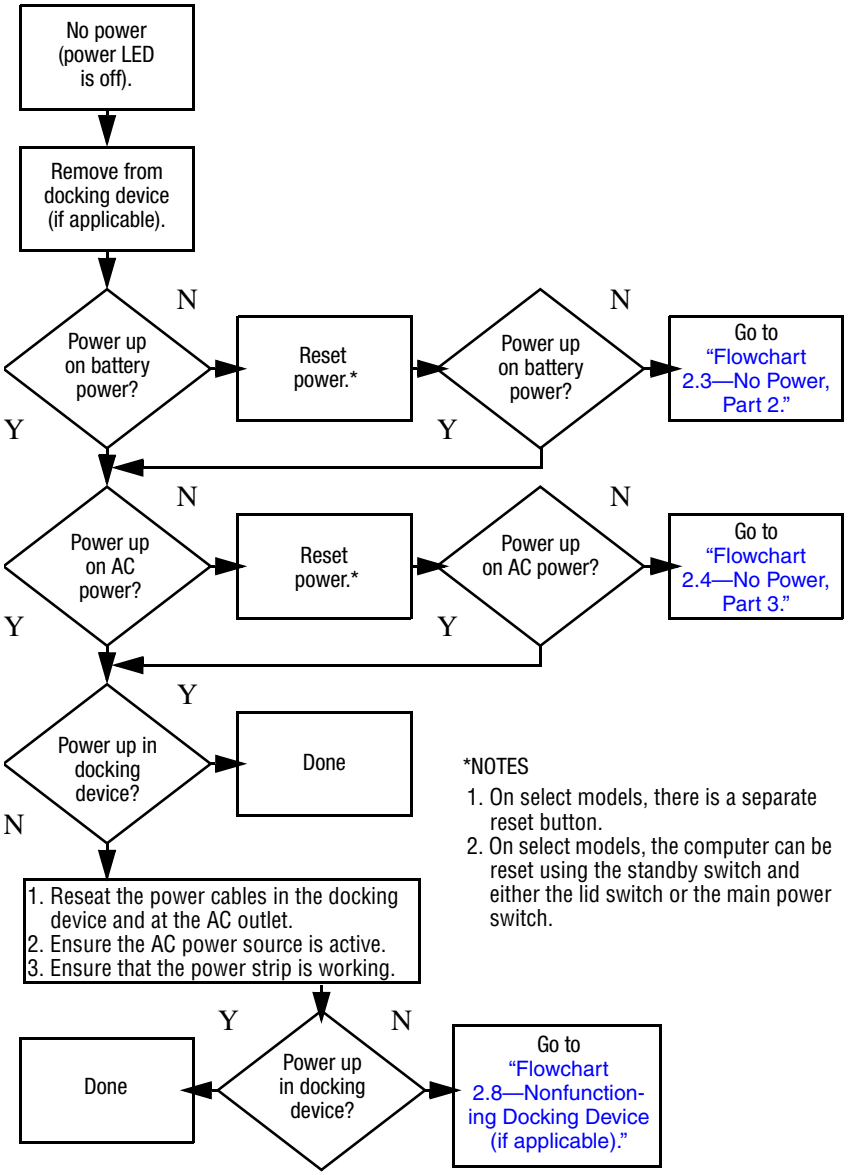
Flowchart 2.2—No Power, Part 1



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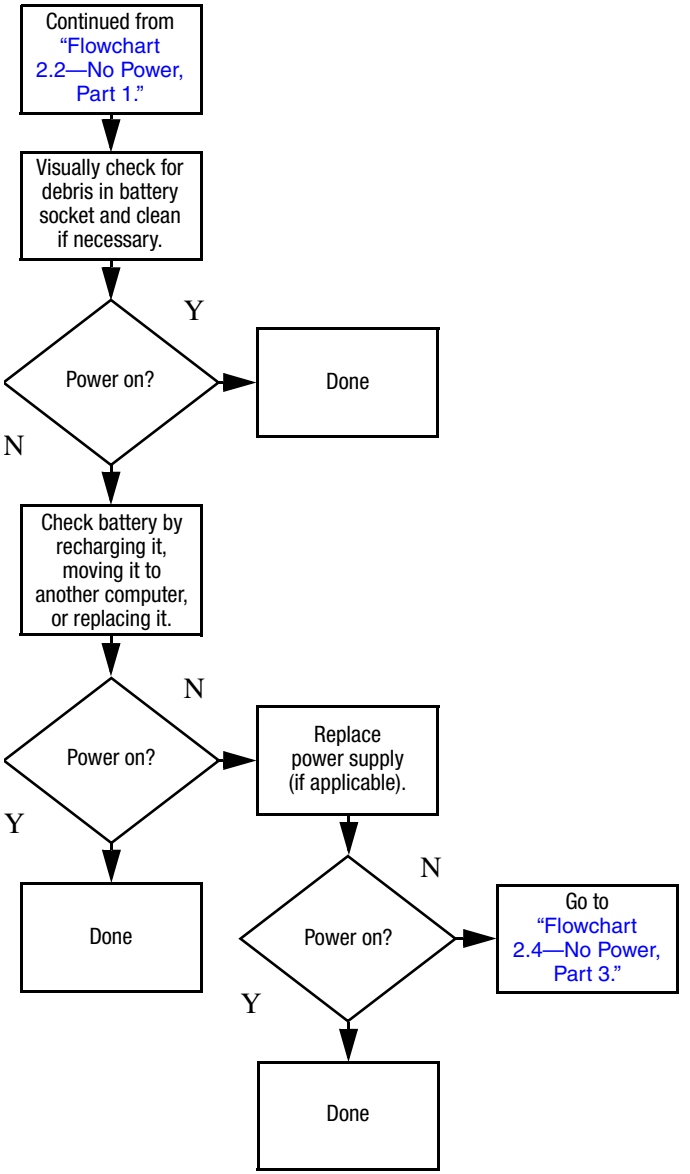
Flowchart 2.3—No Power, Part 2



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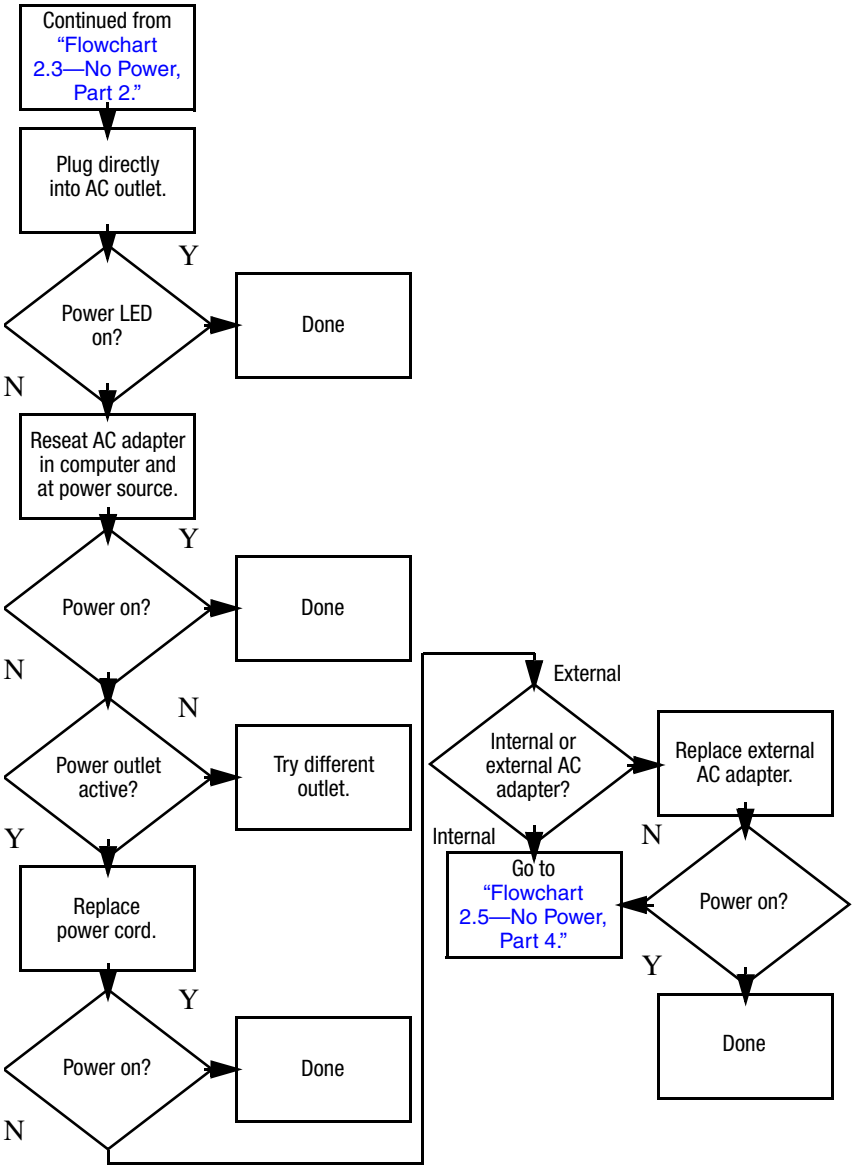
Flowchart 2.4—No Power, Part 3



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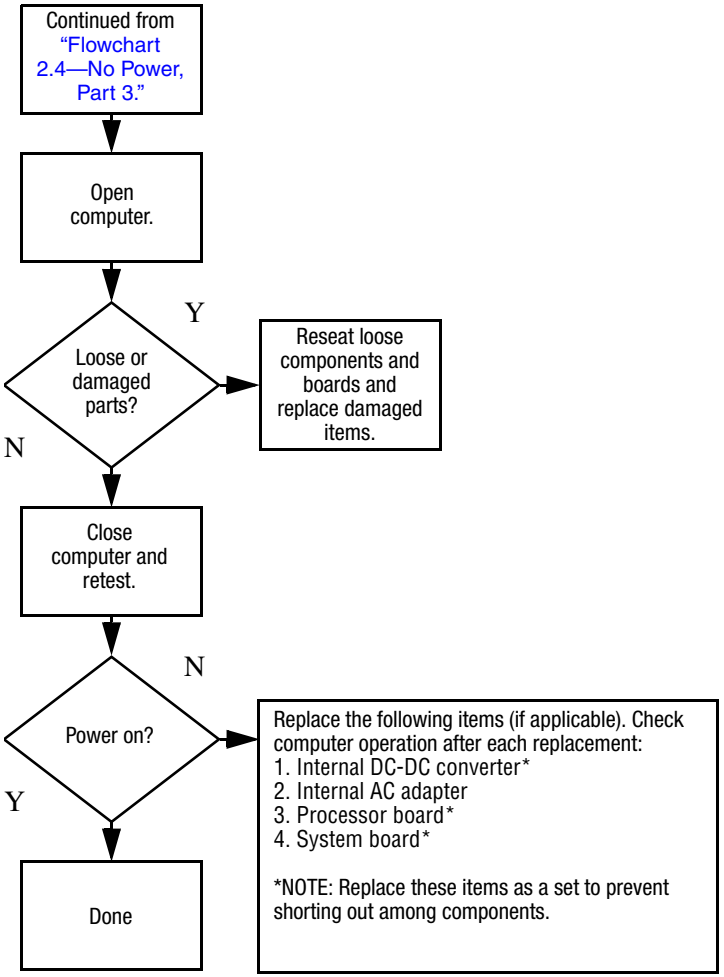
Flowchart 2.5—No Power, Part 4



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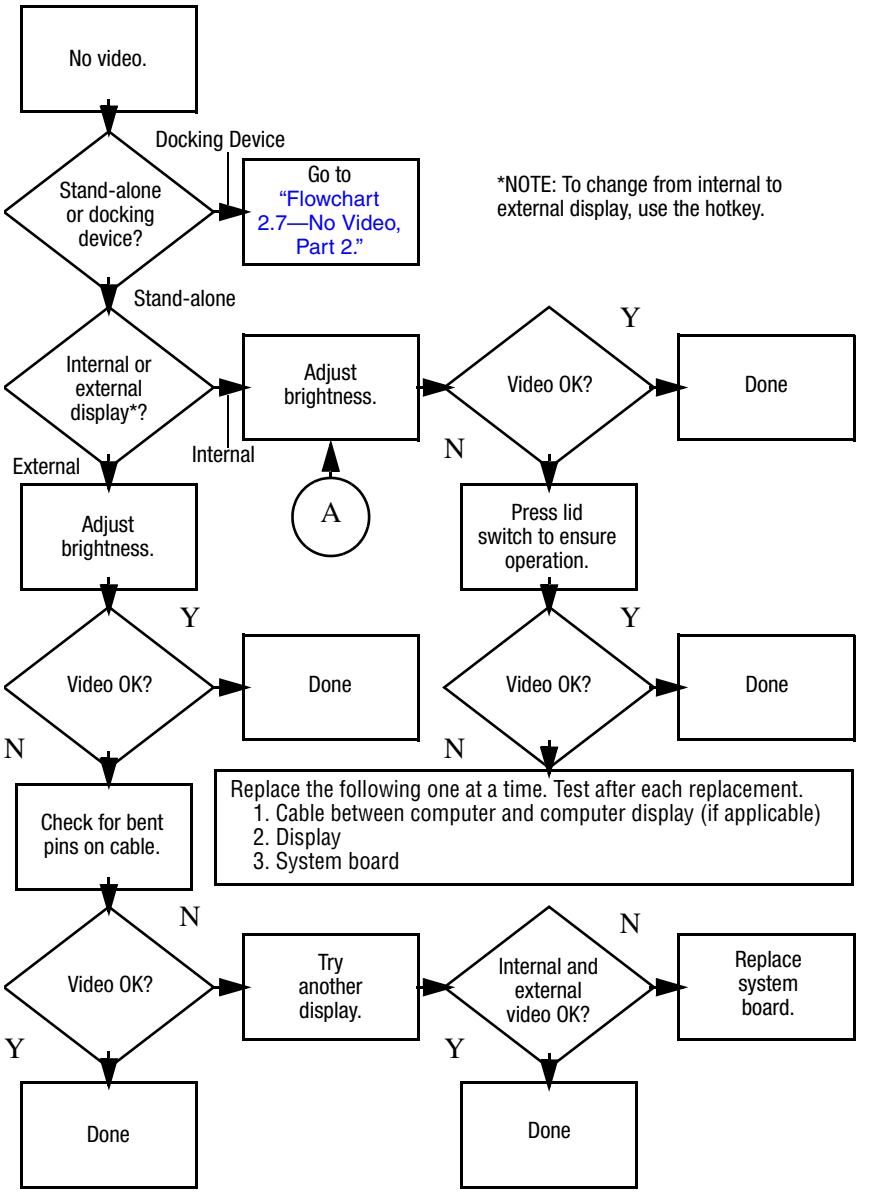
Flowchart 2.6—No Video, Part 1



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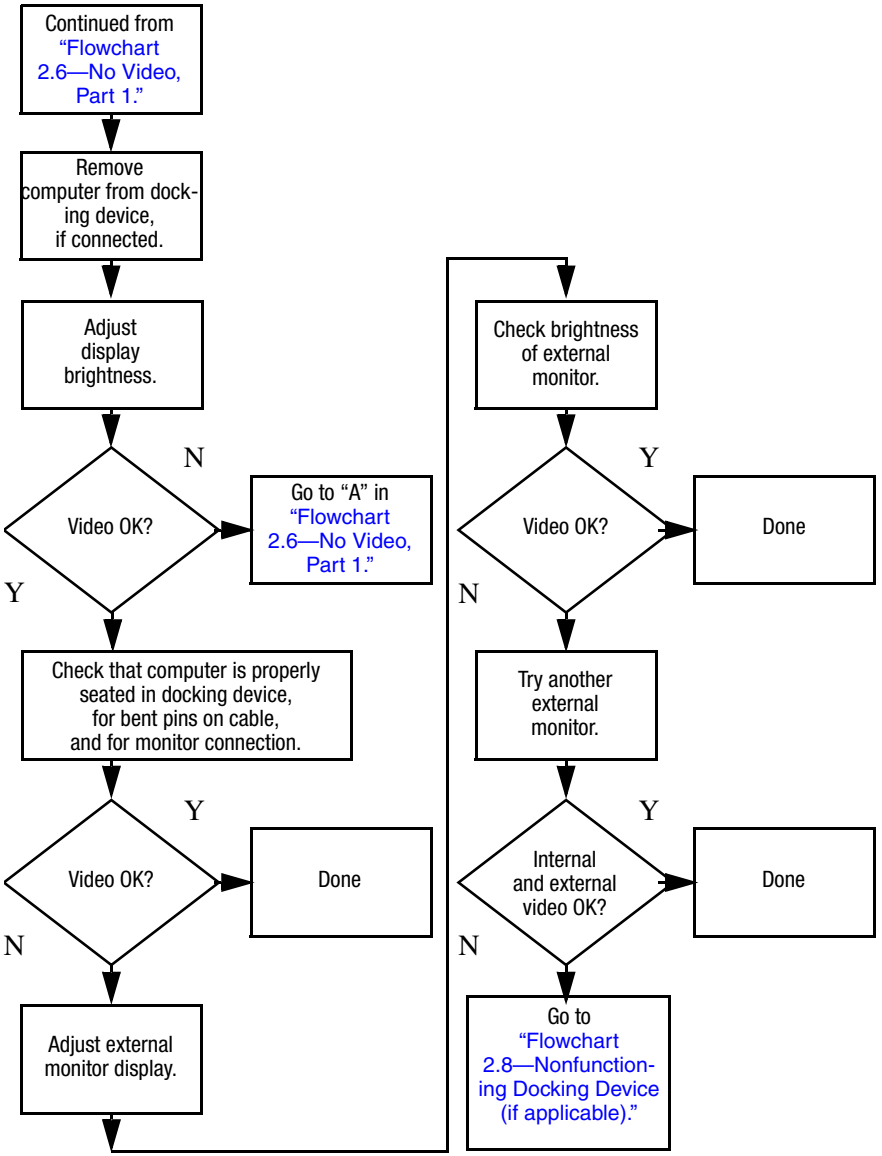
Flowchart 2.7—No Video, Part 2



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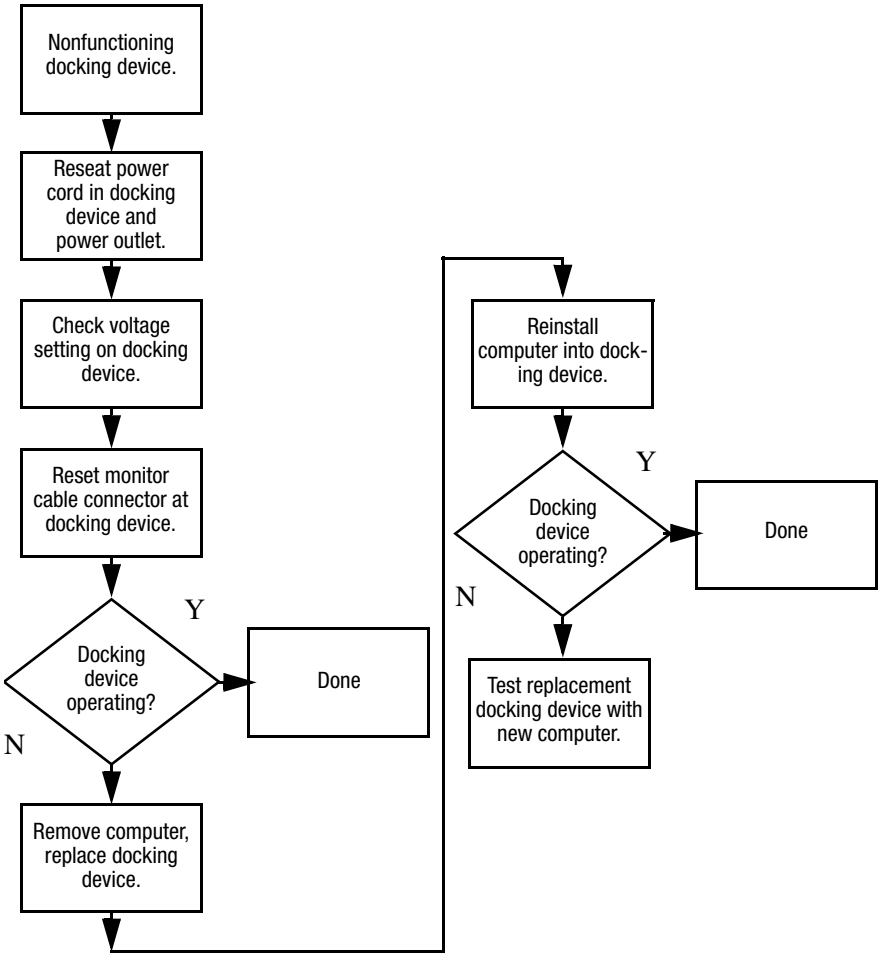
Flowchart 2.8—Nonfunctioning Docking Device (if applicable)



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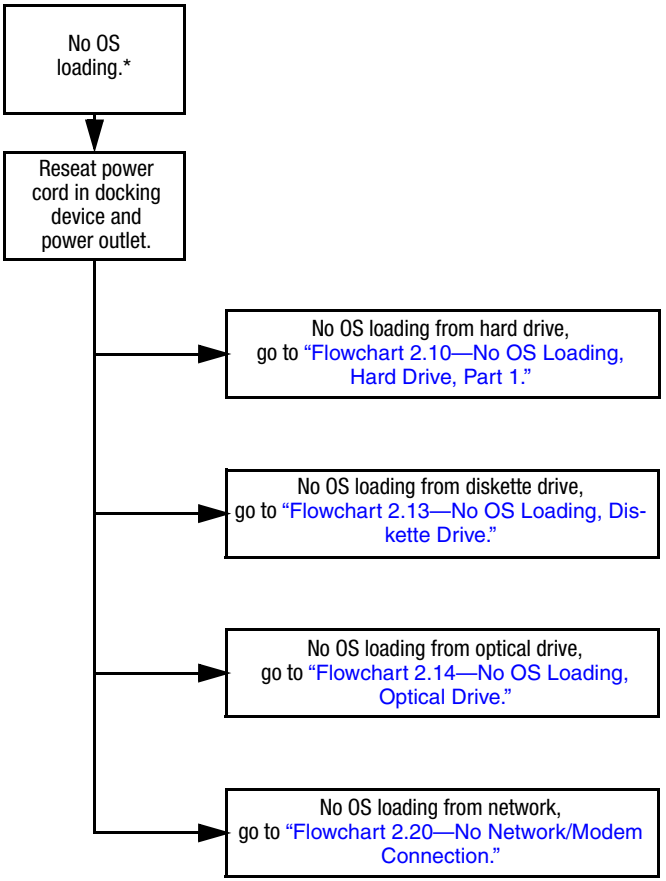
Flowchart 2.9—No Operating System (OS) Loading



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

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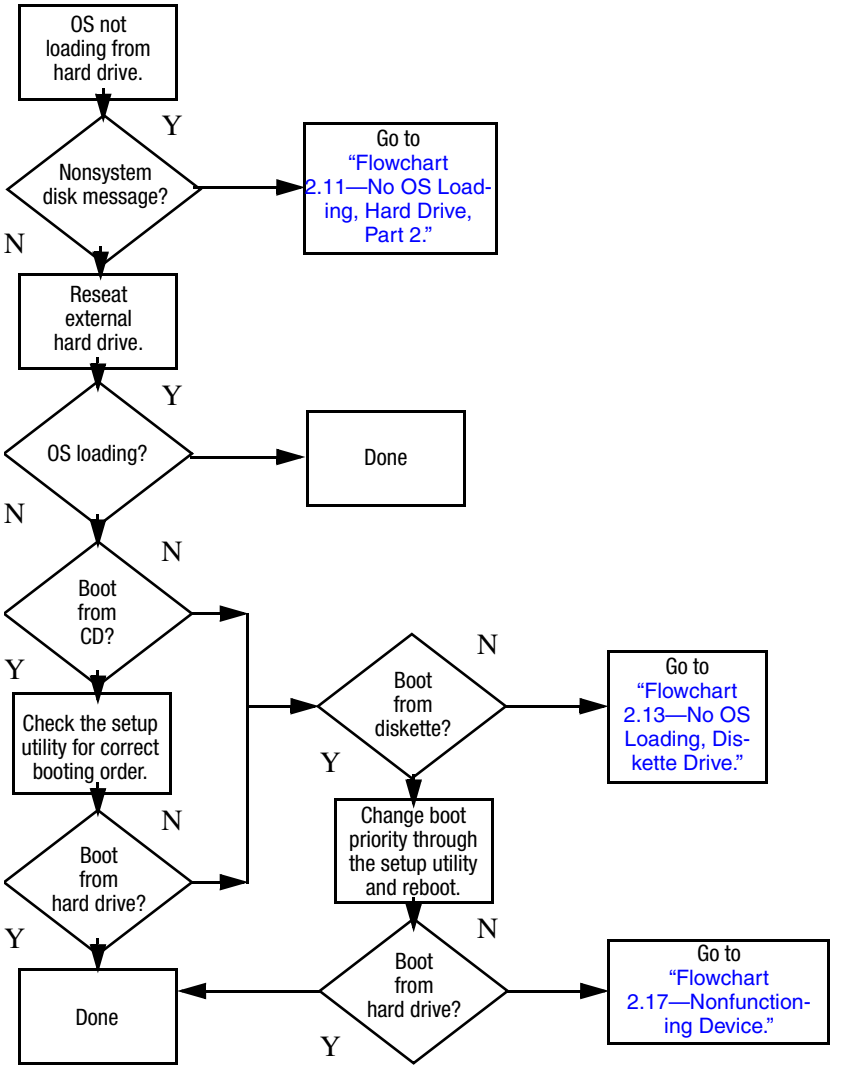
Flowchart 2.10—No OS Loading, Hard Drive, Part 1



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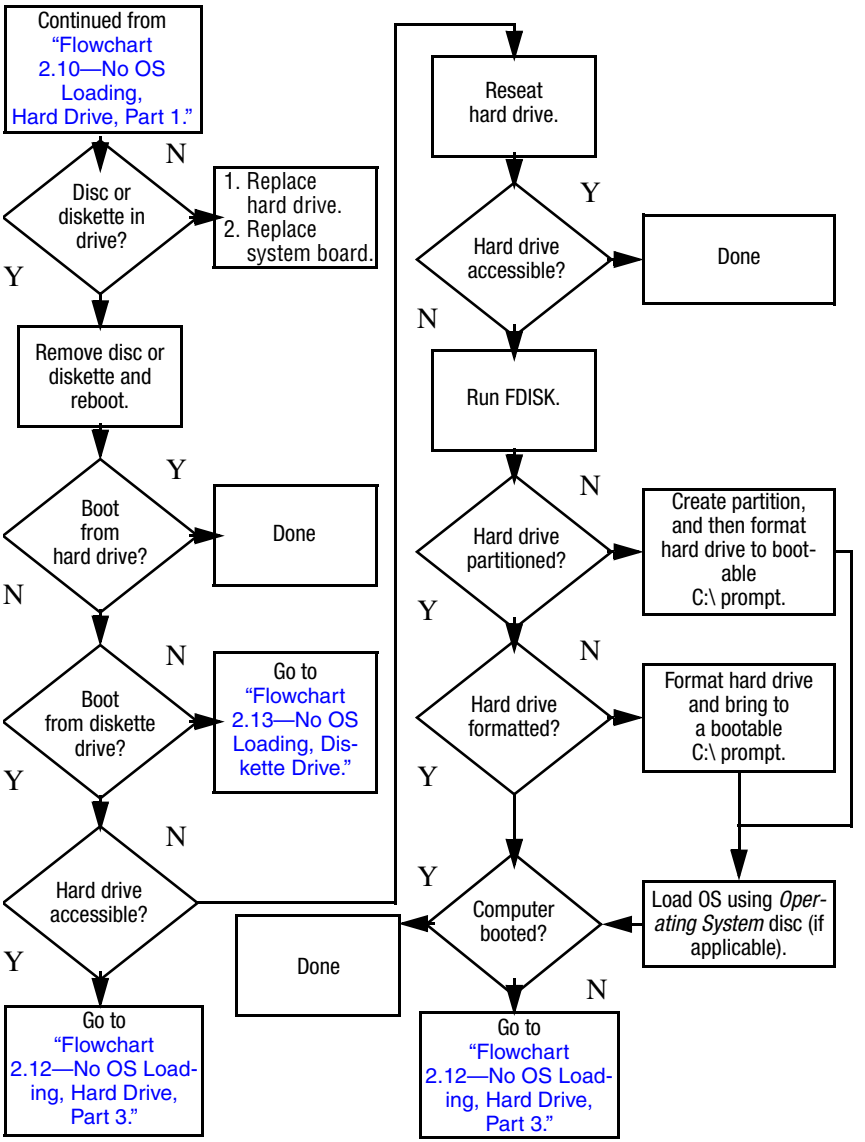
Flowchart 2.11—No OS Loading, Hard Drive, Part 2



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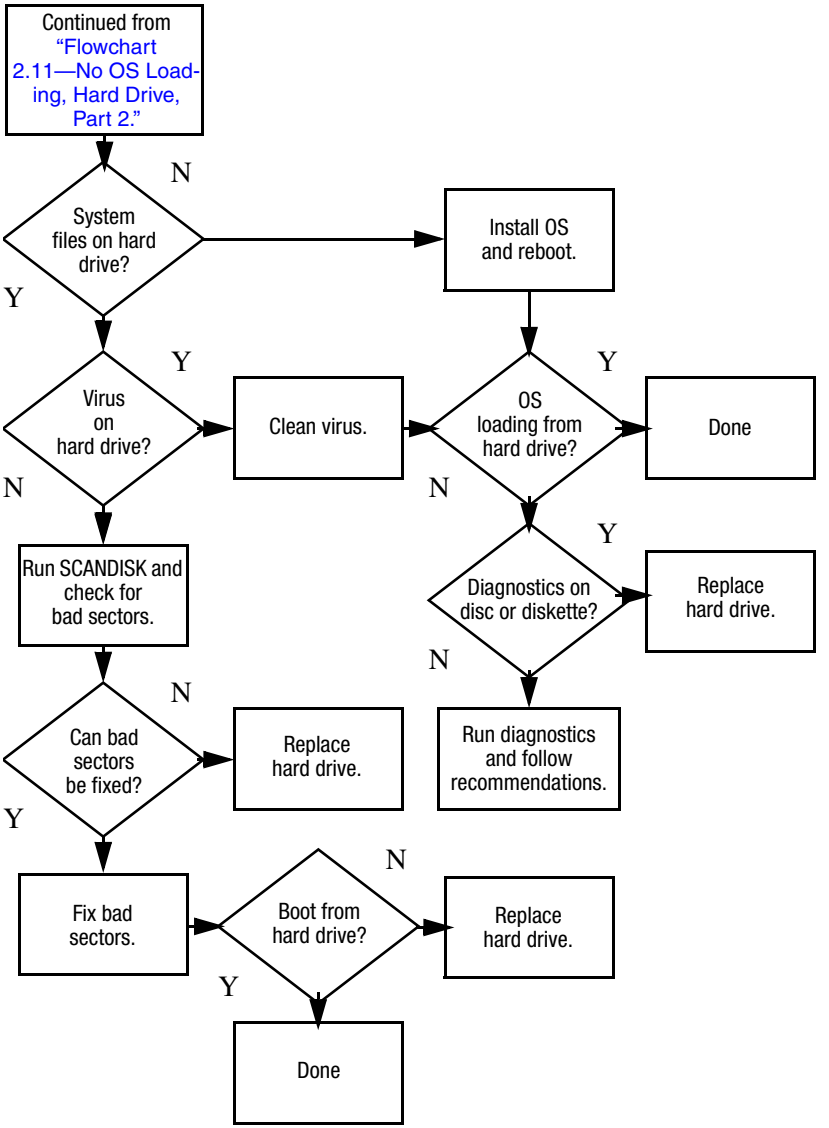
Flowchart 2.12—No OS Loading, Hard Drive, Part 3



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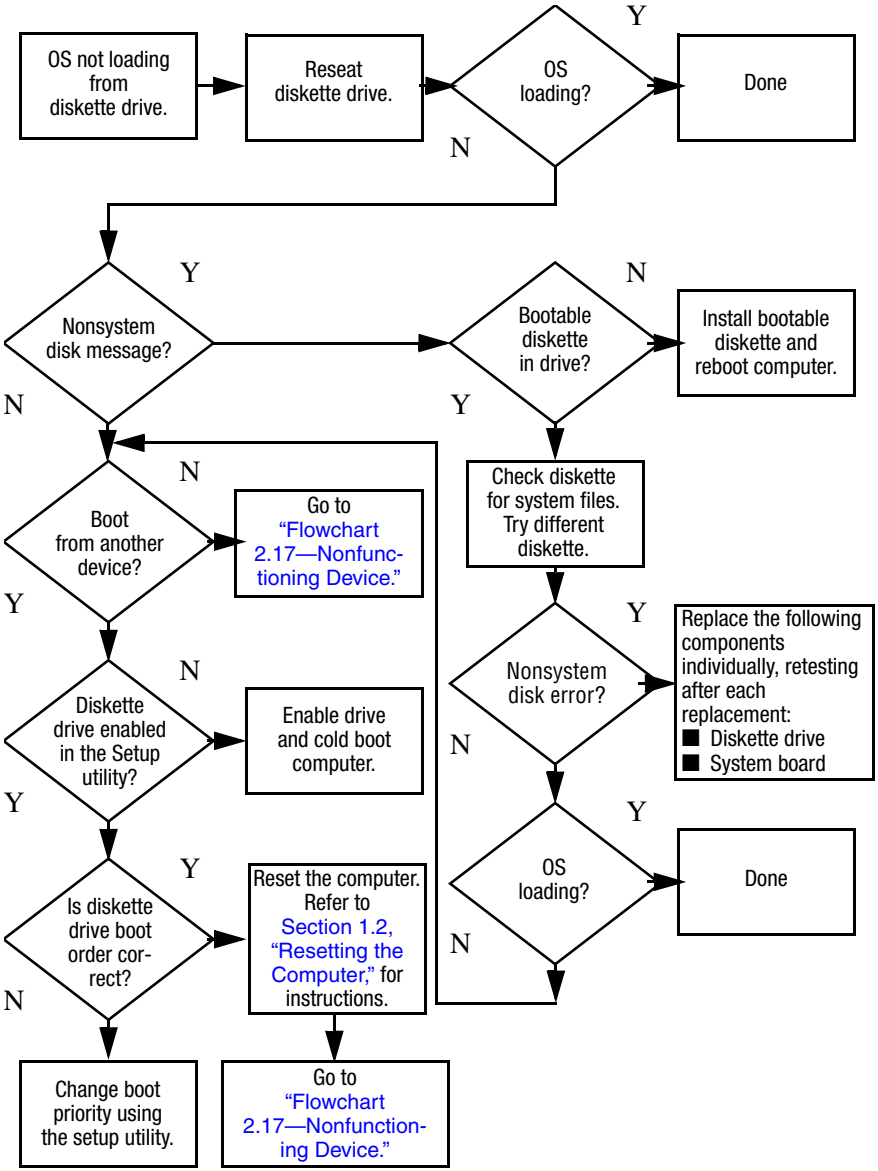
Flowchart 2.13—No OS Loading, Diskette Drive



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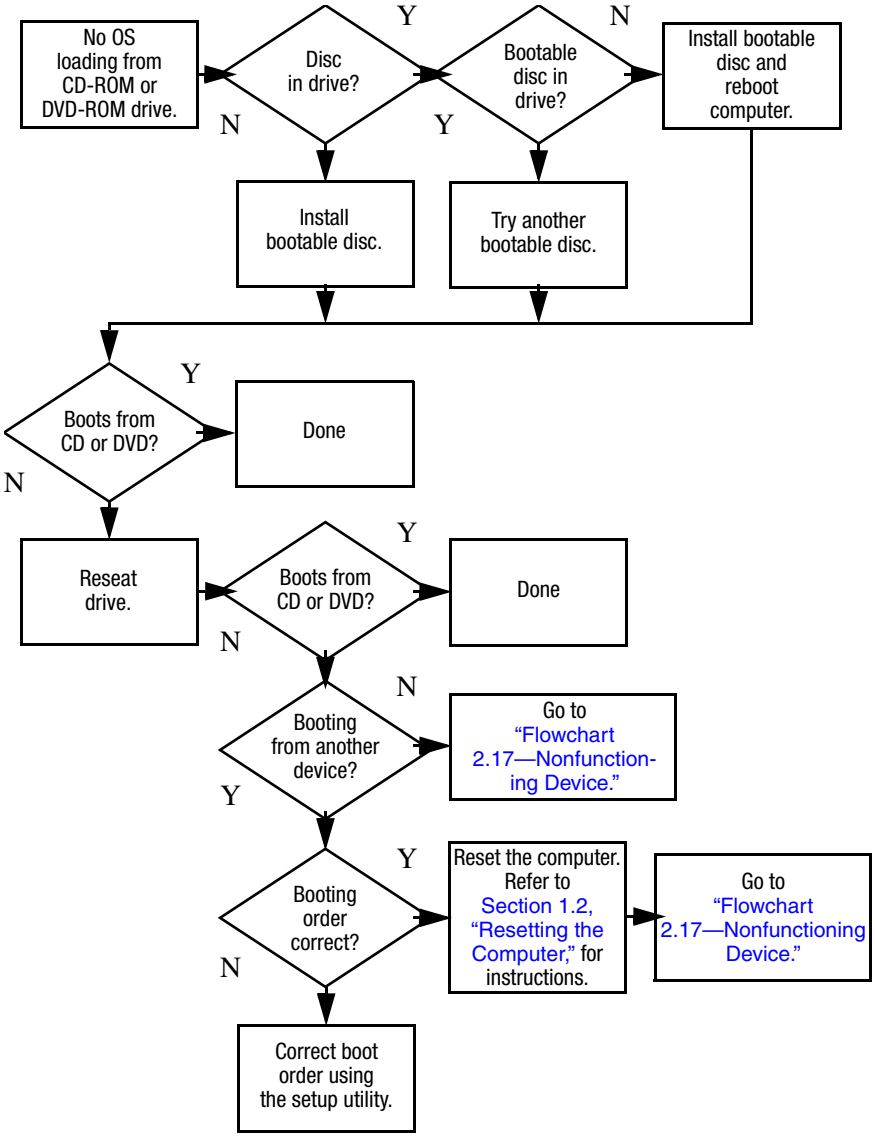
Flowchart 2.14—No OS Loading, Optical Drive



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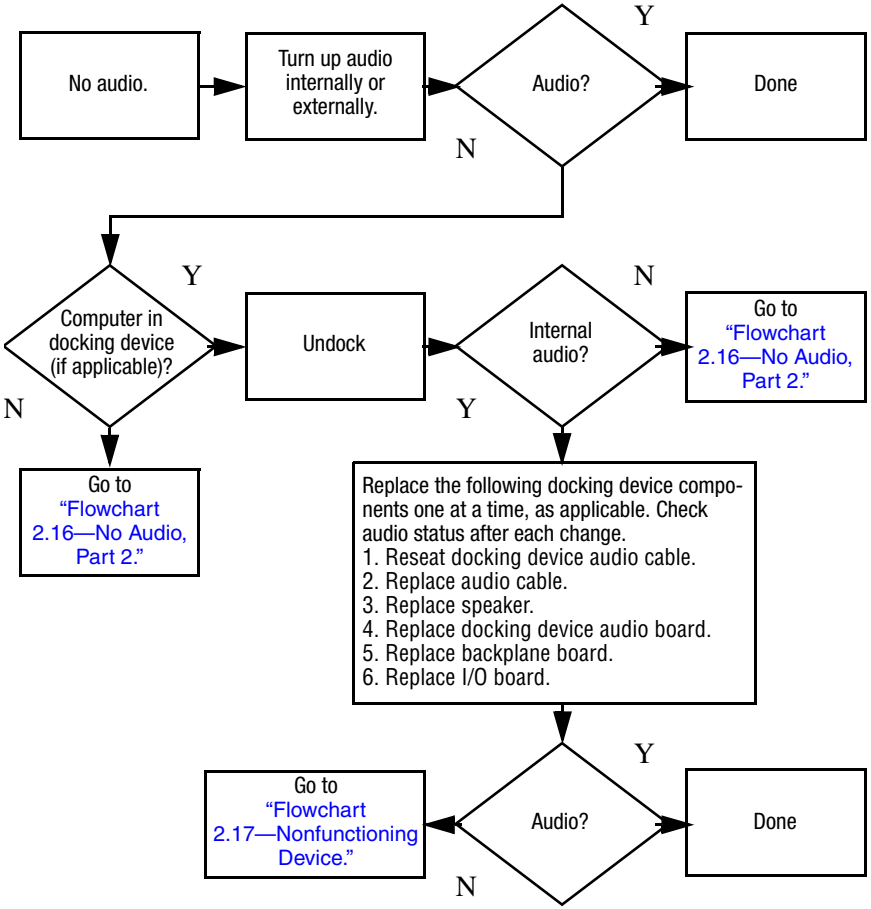
Flowchart 2.15—No Audio, Part 1



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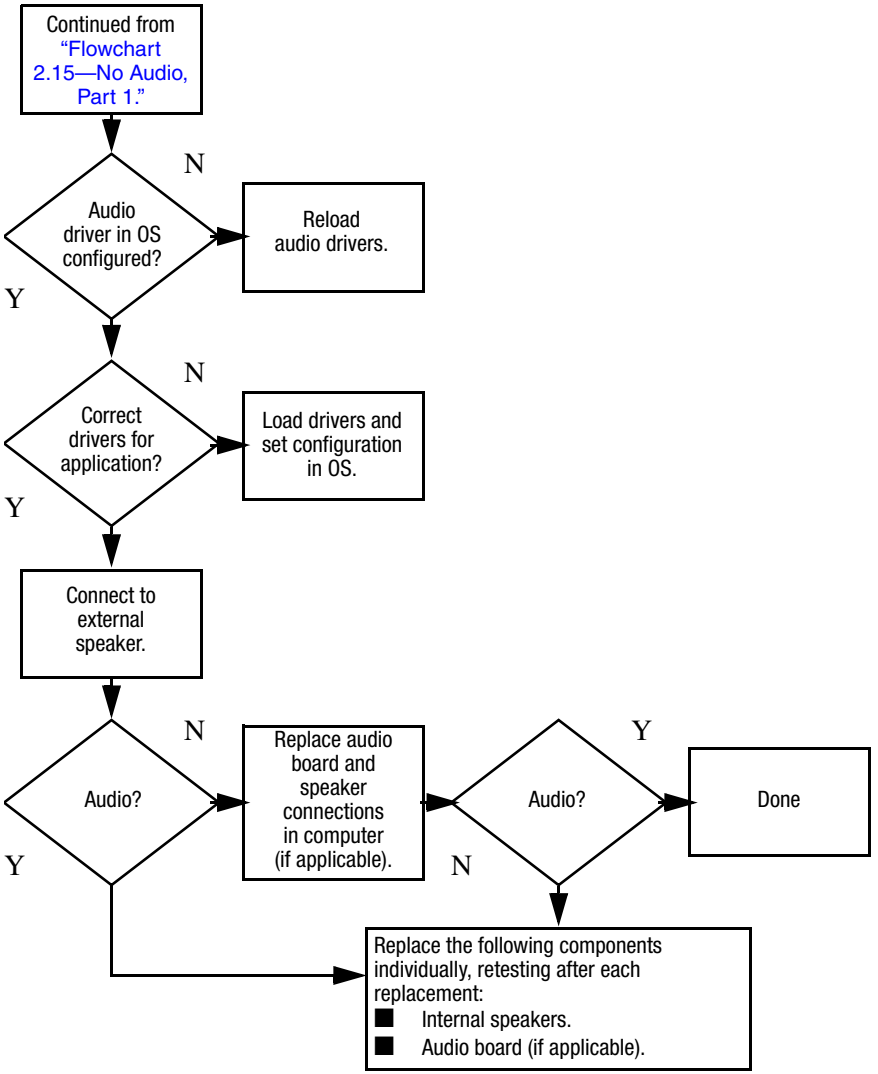
Flowchart 2.16—No Audio, Part 2



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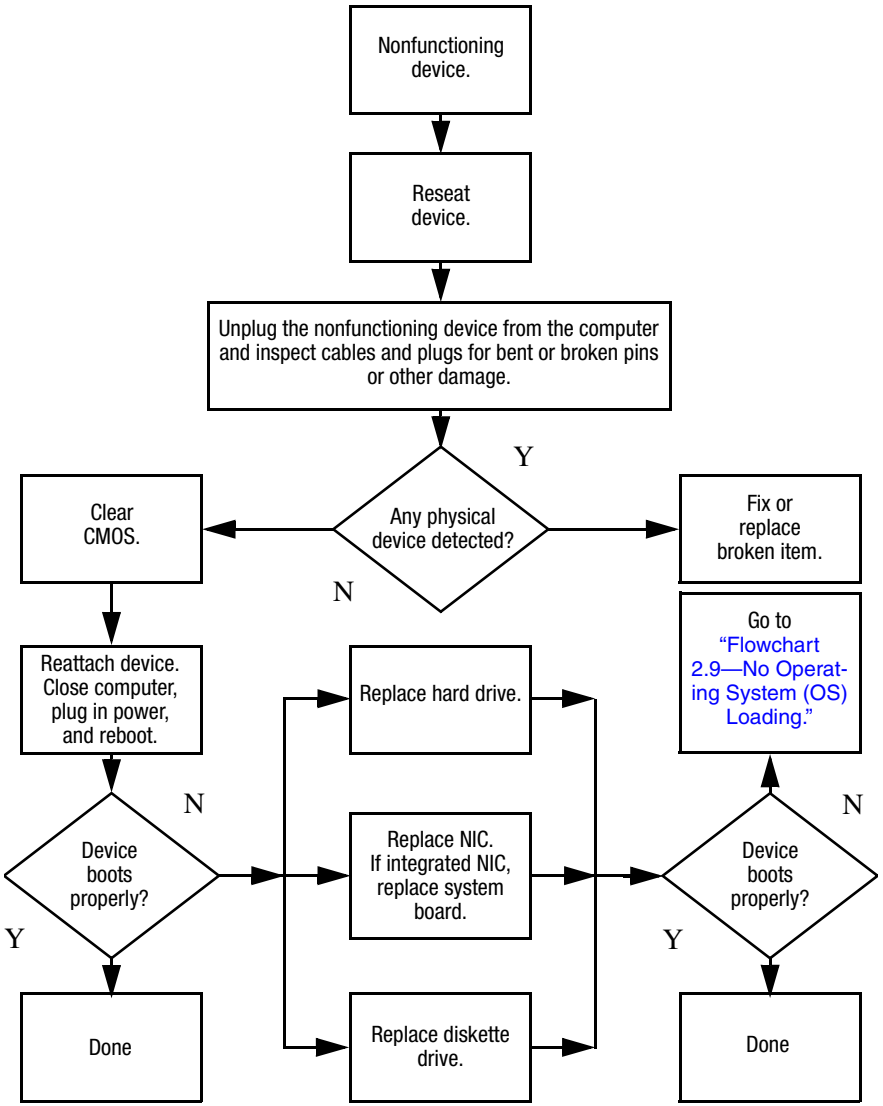
Flowchart 2.17—Nonfunctioning Device



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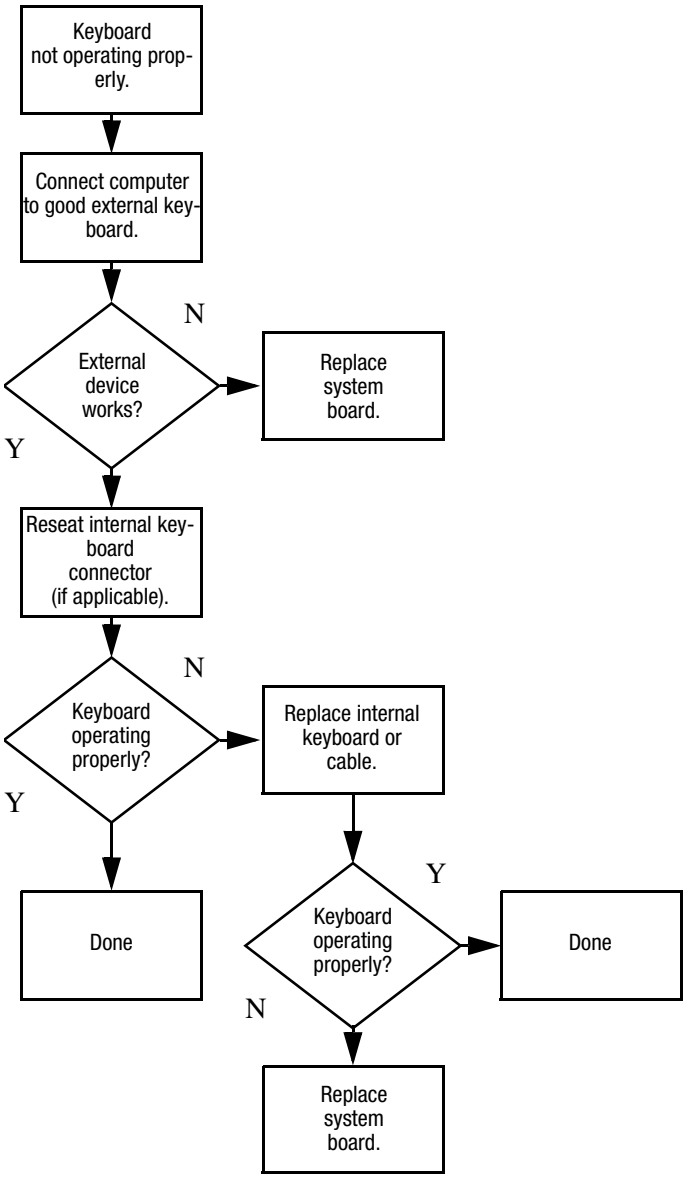
Flowchart 2.18—Nonfunctioning Keyboard



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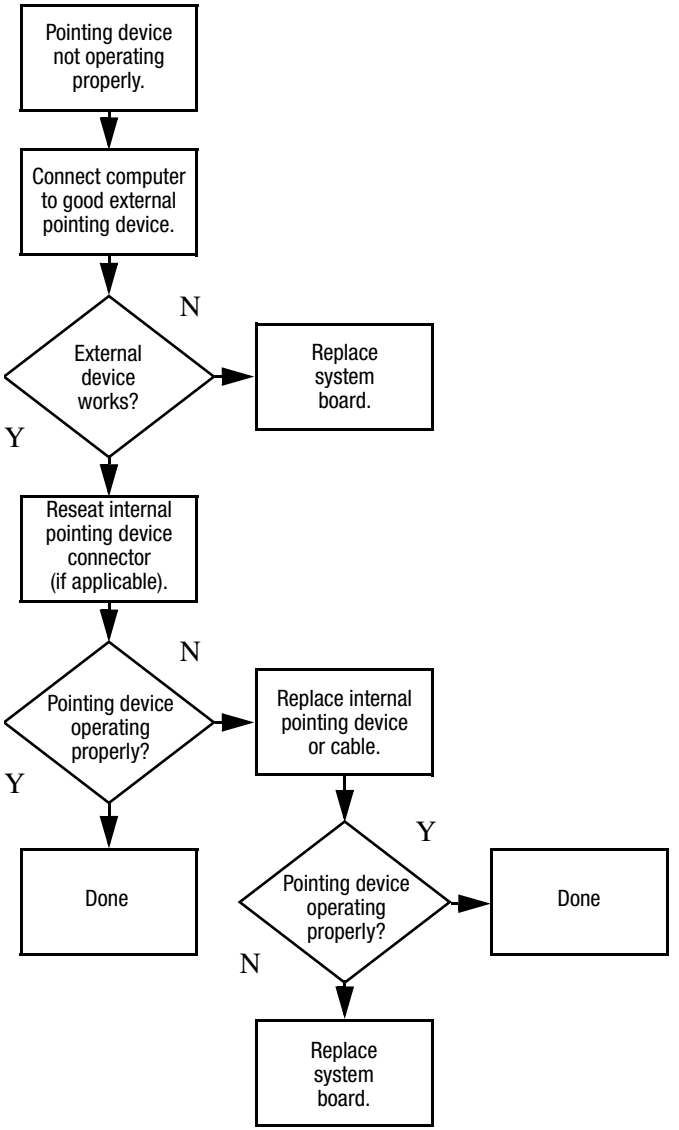
Flowchart 2.19—Nonfunctioning Pointing Device



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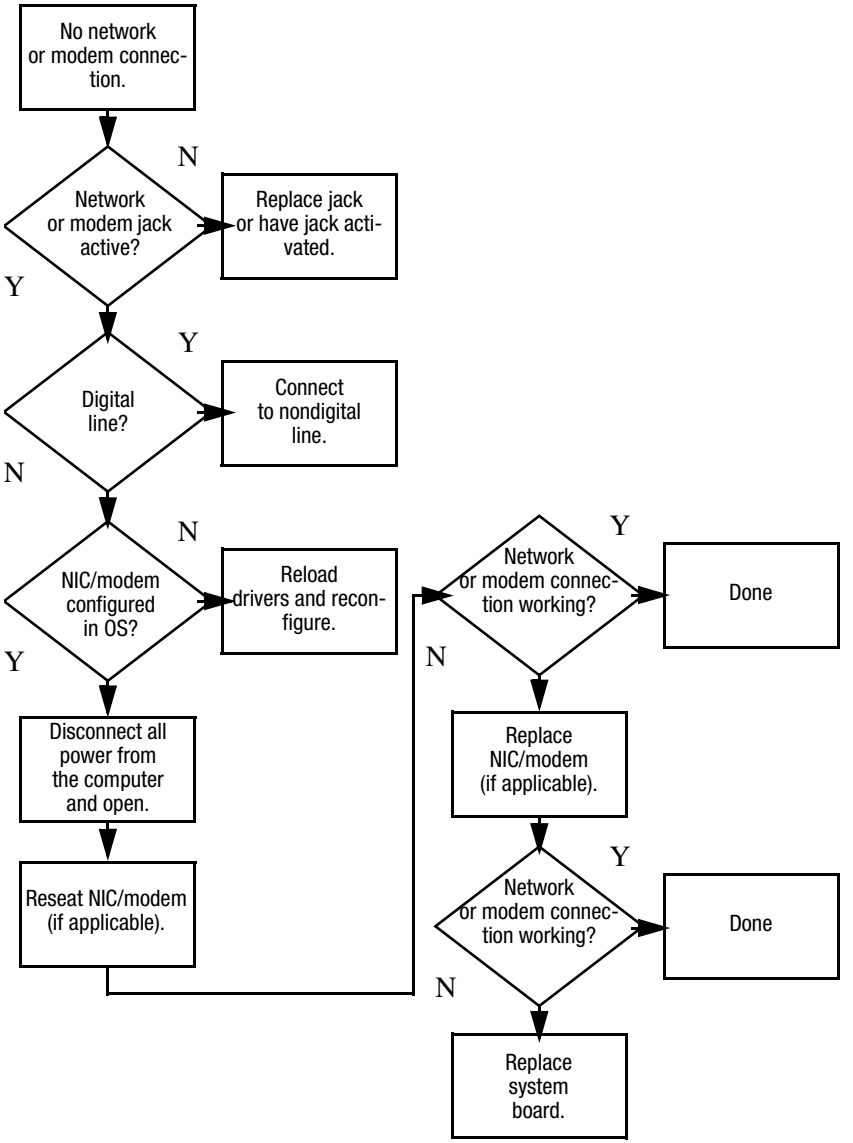
Flowchart 2.20—No Network/Modem Connection



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3

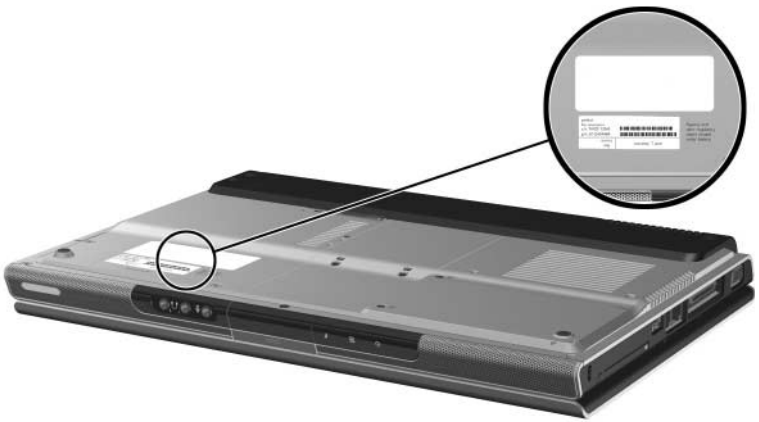
Illustrated Parts Catalog

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

Reference is made throughout this chapter to "Best Buy 1" and "Best Buy 2" computer models. These references apply to HP Pavilion dv1400 models that are sold in Best Buy retail stores that use plastic components with different colors.

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

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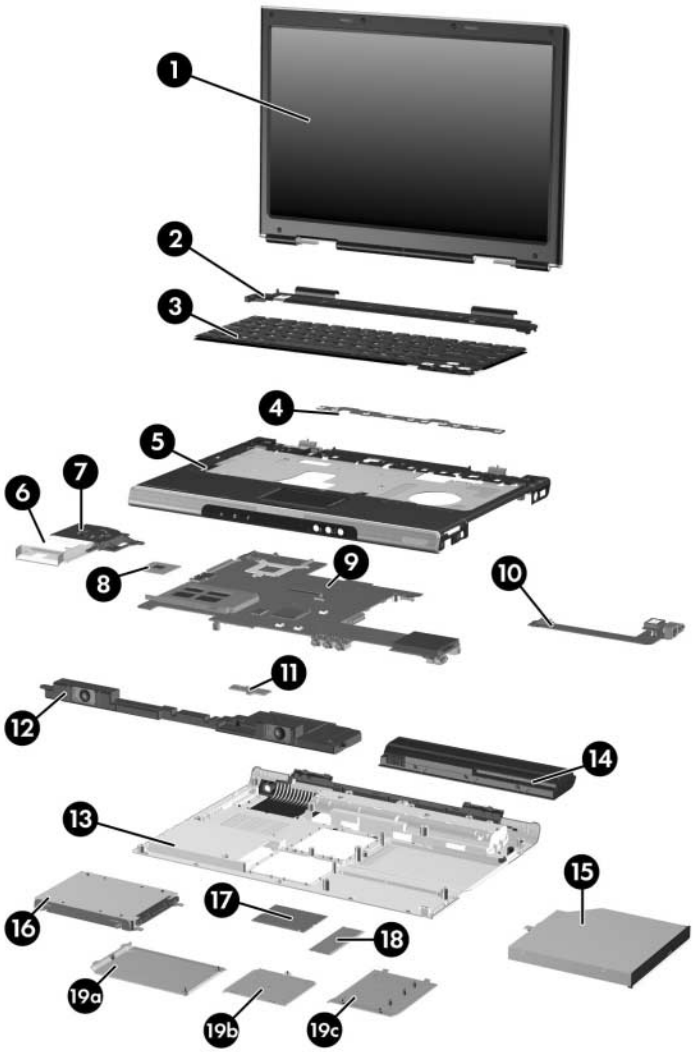
3.2 Computer Major Components



Computer Major Components, HP Pavilion dv1400

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Table 3-1

Spare Parts: Computer Major Components

Item	Description	Spare Part Number
1	**Display assemblies** (include wireless antenna transceivers and cables)	
	For use on HP Pavilion dv1400 models	
	14.0-inch, WXGA, SVA with Brightview	373054-001
	14.0-inch, WXGA	367783-001
	For use on HP Compaq nx4820 models	
	14.0-inch, WXGA, SVA with Brightview	373060-001
	14.0-inch, WXGA	373528-001
	For use on Compaq Presario V2400 models	
	14.0-inch, WXGA, SVA with Brightview	373055-001
	14.0-inch, WXGA	367784-001
	For use on Best Buy 1 models	
	14.0-inch, WXGA, SVA with Brightview	399232-001
	For use on Best Buy 2 models	
	14.0-inch, WXGA, SVA with Brightview	409218-001
	Left and right display hinge covers and brackets	
	For use on HP Pavilion dv1400 models	382077-001 and 405290-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	382078-001
	For use on HP Pavilion dv1400 models	382077-001

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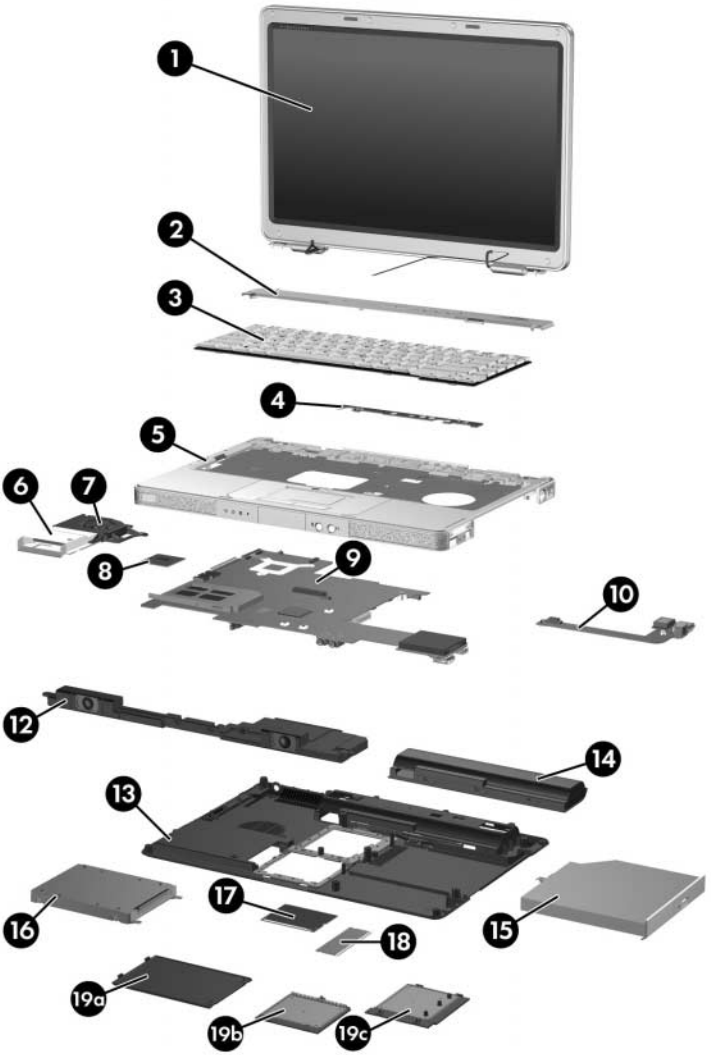

Computer Major Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
2	**Switch covers** (include wireless button and light)	
	For use on HP Pavilion dv1400 models with wireless capability	367781-001
	For use on HP Pavilion dv1400 models without wireless capability	367780-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, digital memory card reader, with wireless capability	367782-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, and digital memory card reader without wireless capability	367779-001
	For use on Best Buy 1 models	399237-001
	For use on Best Buy 2 models with wireless capability	409223-001
	For use on Best Buy 2 models without wireless capability	409224-001

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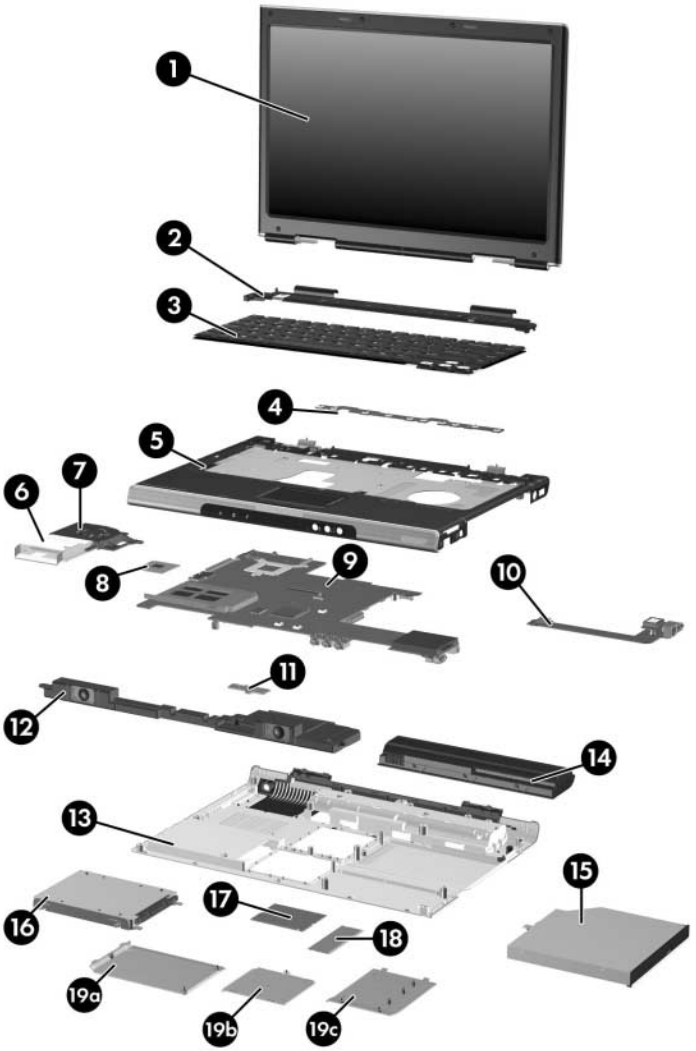

Computer Major Components, HP Pavilion dv1400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description			Spare Part Number
3	**Keyboards**			
	For use on HP Pavilion dv1400 models			
	Belgium	367778-A41	Saudi Arabia	367778-171
	Brazil	367778-201	Spain	367778-071
	Denmark	367778-081	Sweden/Finland	367778-B71
	France	367778-051	Switzerland	367778-111
	French Canada	367778-121	Taiwan	367778-AB1
	Germany	367778-041	Thailand	367778-281
	Greece	367778-DJ1	United Kingdom	367778-031
	Israel	367778-BB1	Asia Pacific, Australia, Canada, Hong Kong, People's Republic of China, and the United States	367778-001
	International	367778-B31		
	Italy	367778-061		
	Korea	367778-AD1		
	Latin America	367778-161		
	Europe and the Netherlands	367778-331		
	Norway	367778-091		
	Portugal	367778-131		
	For use on HP Compaq nx4820 models			
	Japan	367777-291		
	For use on Compaq Presario V2400 models			
	Korea	367777-ad1	Asia Pacific, Australia, Hong Kong, People's Republic of China, and the United States	367777-001
	Taiwan	367777-AB1		
	Thailand	367777-281		

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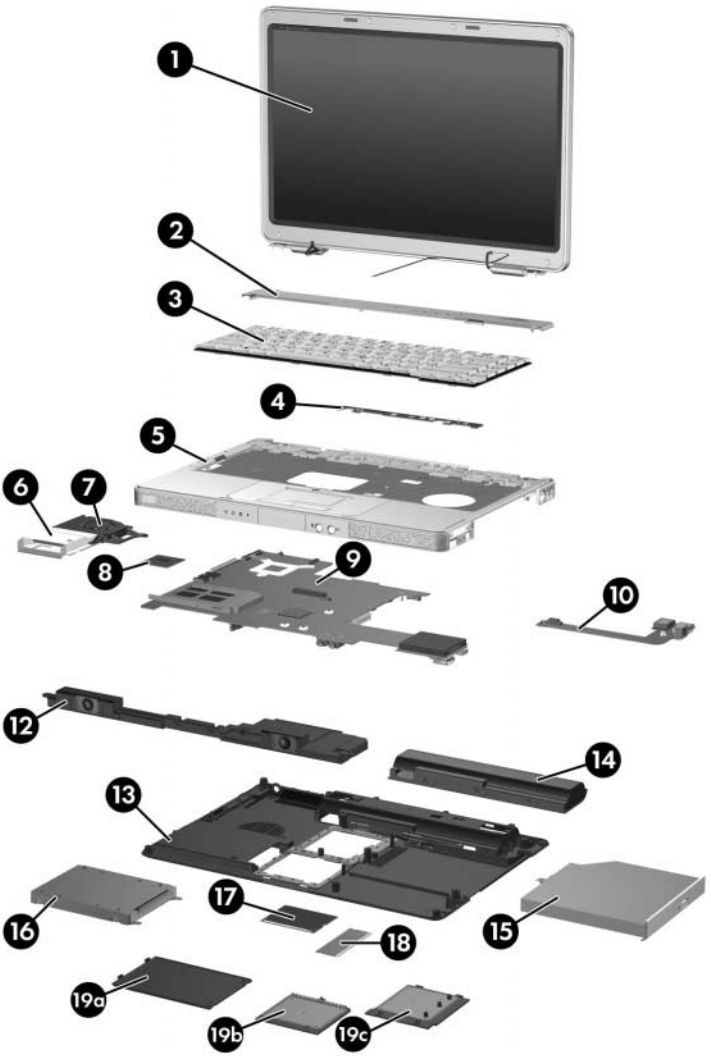

Computer Major Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
4	**LED boards** (include cable, not illustrated)	
	For use on HP Pavilion dv1400 models	367797-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	367798-001
5	**Top covers** (include TouchPad)	
	For use on HP Pavilion dv1400 models	394905-001
	For use on HP Compaq nx4820 models	406031-001
	For use on full-featured Compaq Presario V2400 models	394906-001
	For use on defeatured Compaq Presario V2400 models	404686-001
	For use on Best Buy 1 models	399234-001
	For use on Best Buy 2 models	409220-001
6	**Heat sink** (includes thermal pad)	395436-001
7	**Fan** (includes thermal pad)	367795-001

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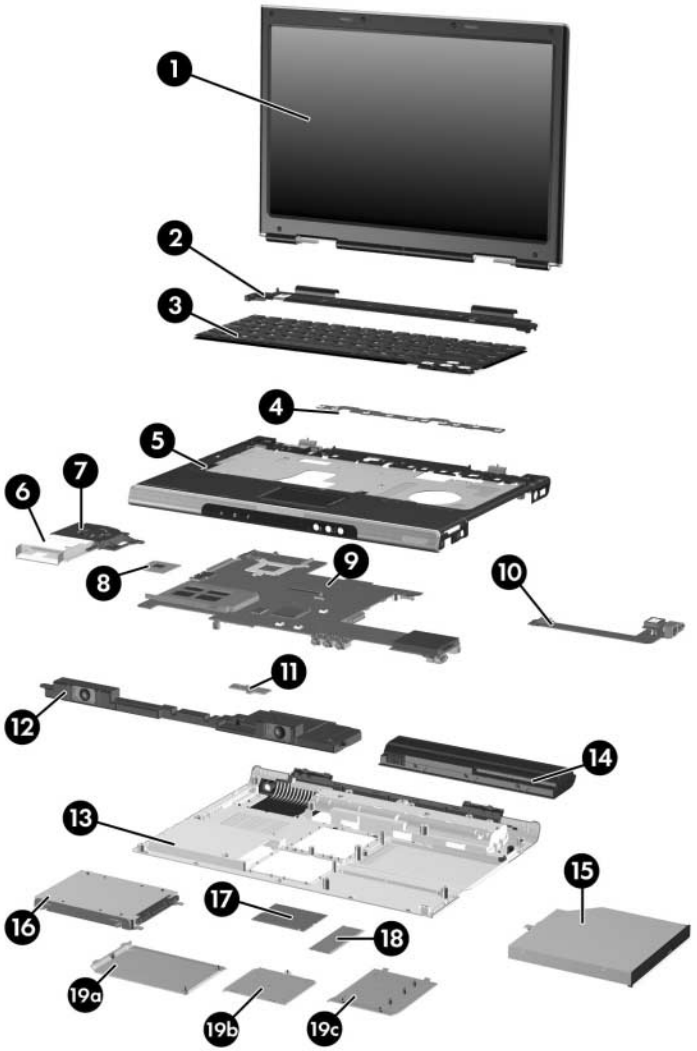

Computer Major Components, HP Pavilion dv1400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
8	**Processors** (include thermal pad)	
	Intel Pentium M 770 (2.13-GHz) with 400-MHz FSB	394829-001
	Intel Pentium M 760 (2.0-GHz) with 400-MHz FSB	394828-001
	Intel Pentium M 750 (1.8-GHz) with 400-MHz FSB	394827-001
	Intel Pentium M 740 (1.7-GHz) with 400-MHz FSB	394826-001
	Intel Pentium M 735a (1.7-GHz) with 400-MHz FSB	397100-001
	Intel Pentium M 730 (1.6-GHz) with 400-MHz FSB	407315-001
	Intel Pentium M 725 (1.6-GHz) with 400-MHz FSB	394825-001
	Intel Celeron M 380 (1.6-GHz) with 400-MHz FSB	397344-001
	Intel Celeron M 370 (1.4-GHz) with 400-MHz FSB	383876-001
	Intel Celeron M 360 (1.4-GHz) with 400-MHz FSB	380033-001
	Intel Celeron M 350 (1.3-GHz) with 400-MHz FSB	380032-001
9	**System boards** (include disk cell RTC battery)	
	915GM, for use on full-featured HP Pavilion dv1400 models	393655-001
	910GM, for use on defeatured HP Pavilion dv1400 models	393656-001
	915GM, for use on full-featured HP Compaq nx4820 and Compaq Presario V2400 models	395135-001
	910GM, for use on defeatured HP Compaq nx4820 and Compaq Presario V2400 models	404608-001
10	**USB/S-Video controller board**	367794-001
11	**Menu control button board** (includes bracket and cable, for use on HP Pavilion dv1400 models)	373535-001

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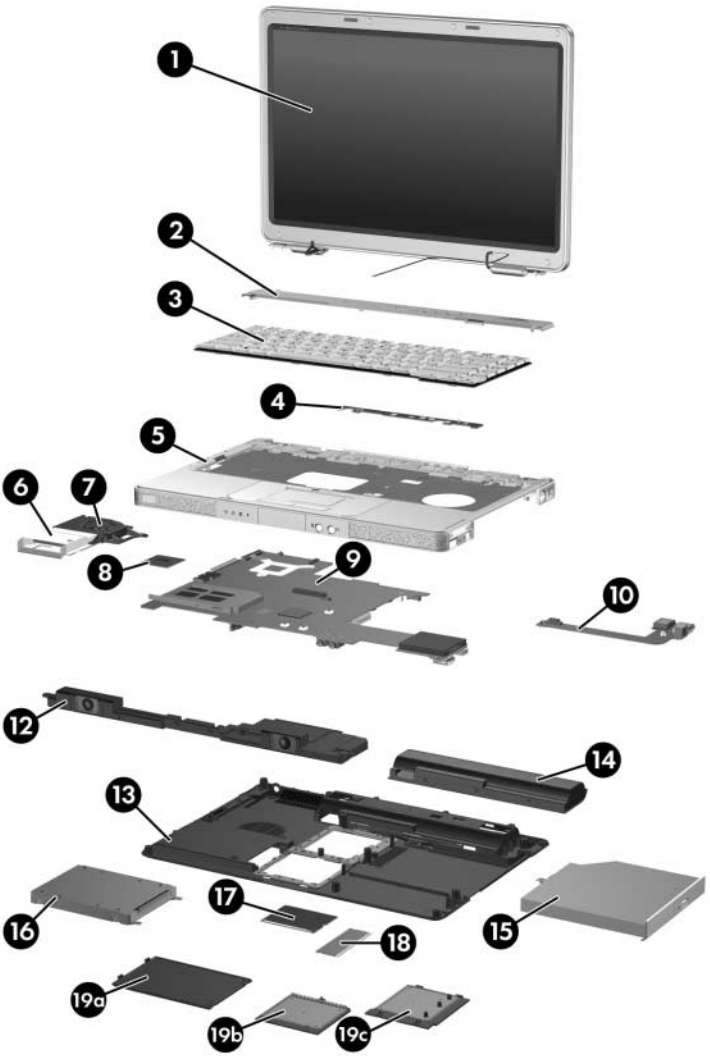

Computer Major Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
12	**Speaker assemblies**	
	For use on HP Pavilion dv1400 models	367793-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	374625-001
13	**Base enclosures**	
	For use on HP Pavilion dv1400 models	367763-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	367764-001
	For use on Best Buy 1 models	399235-001
	For use on Best Buy 2 models	409221-001
14	**Battery packs**	
	12-cell, 8.8-AHr	367760-001 and 396603-001
	6-cell, 4.4-AHr	367759-001 and 398832-001
	6-cell, 4.0-AHr	398065-001 and 396602-001

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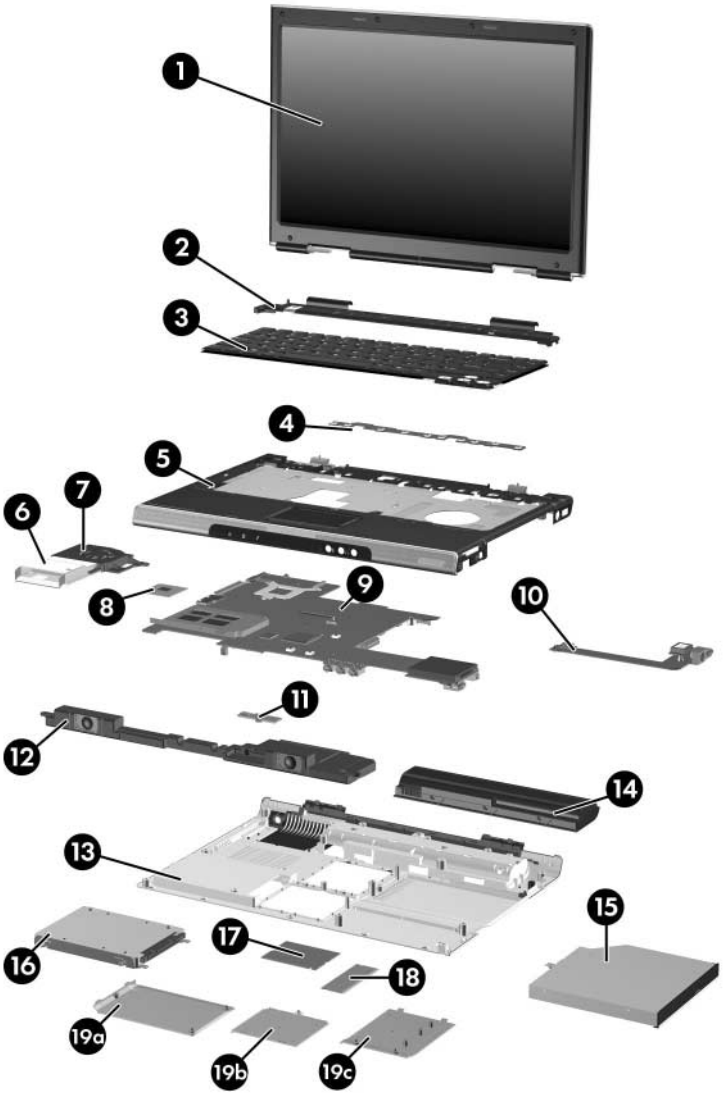

Computer Major Components, HP Pavilion dv1400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
15	**Optical drives** (include bezel)	
	For use on HP Pavilion dv1400 models	
	8X DVD-ROM Drive	367789-001
	24X DVD/CD-RW Combo Drive	367790-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive	389896-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394830-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive	389897-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394832-001
	For use on Best Buy 1 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001
	For use on Best Buy 2 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001

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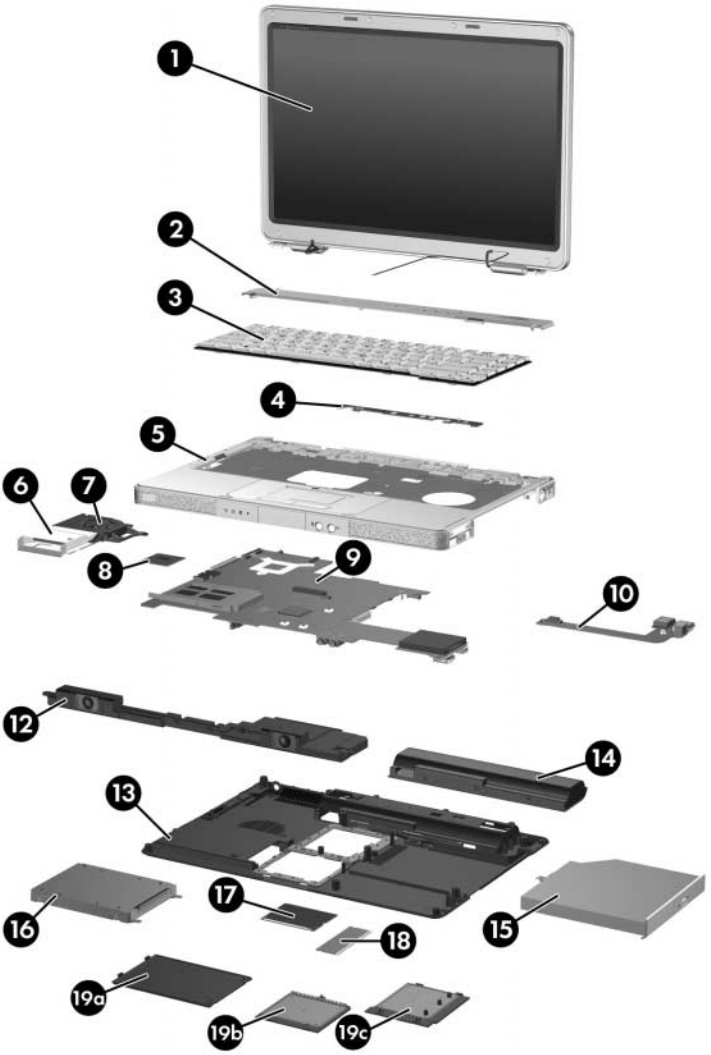

Computer Major Components, HP Compaq nx4820 and Compaq Presario V2400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
16	**Hard drives** (include frame and connector)	
	5400-rpm	
	80-GB	377651-001
	60-GB	375980-001
	40-GB	393659-001
	4200-rpm	
	100-GB	381721-001
	80-GB	367788-001
	60-GB	367787-001
	40-GB	367786-001
17	**Mini PCI communications cards**	
	802.11b/g Broadcomm (for use in most of the world)	373047-001
	802.11b/g Broadcomm (for use in the rest of the world)	373048-001
	802.11b/g Broadcomm (for use on HP Compaq nx4820 models in Japan)	373061-291
	802.11b/g FRVL (for use in most of the world)	390622-001
	802.11b/g FRVL (for use in the rest of the world)	390622-002
	802.11b/g Intel (for use in most of the world)	373026-001
	802.11b/g Intel (for use in the rest of the world)	373025-001
	802.11b/g Titus (for use in the United States)	392591-001
	802.11b/g Titus (for use in the rest of the world)	392591-002
	802.11b/g Titus (for use in Japan)	392591-291
	Bluetooth module (not illustrated)	376651-001 and 399777-001

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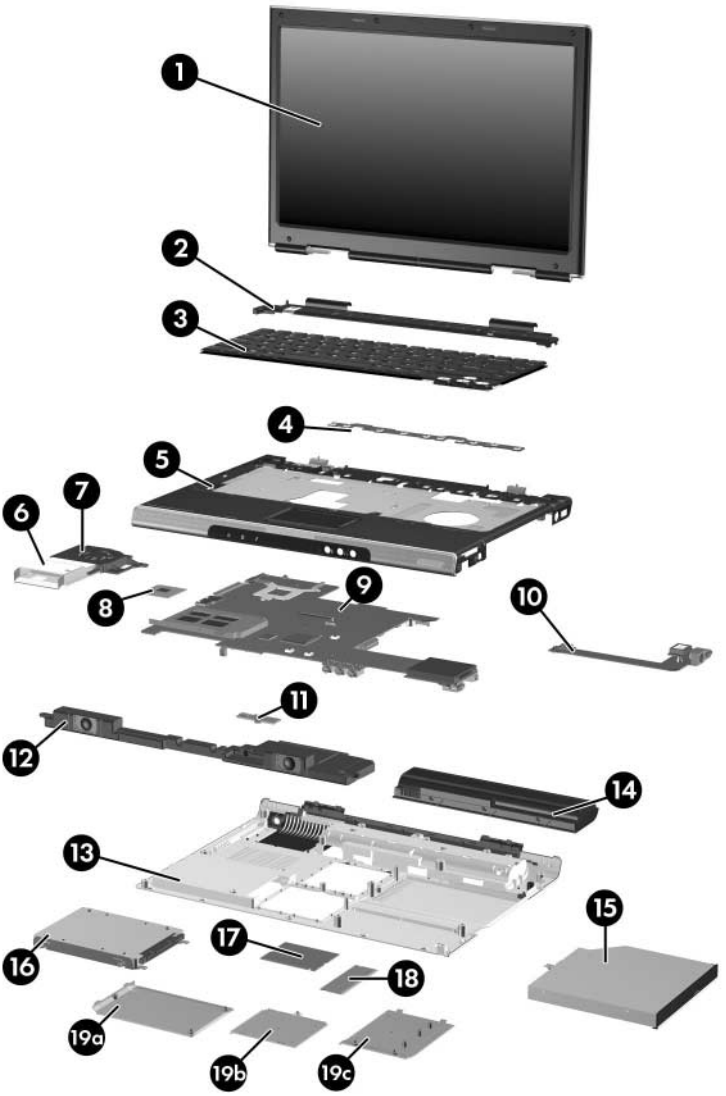

Computer Major Components, HP Pavilion dv1400

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Table 3-1

Spare Parts: Computer Major Components *(Continued)*

Item	Description	Spare Part Number
18	**Memory modules** (266 MHz)	
	1024-MB	367775-001
	512-MB	367774-001
	256-MB	367773-001
	SC Card memory modules (not illustrated)	
	256-MB	403573-001
	128-MB	403572-001
	Miscellaneous Plastics Kit	
	For use on HP Pavilion dv1400 models	367765-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	367766-001
	For use on Best Buy 1 models	399236-001
	For use on Best Buy 2 models	409222-001
	Includes:	
19a	Hard drive cover (includes two captive screws)	
19b	Memory module compartment cover (includes 2 captive screws)	
19c	Mini PCI compartment cover (includes 2 captive screws)	
	Computer feet (not illustrated)	

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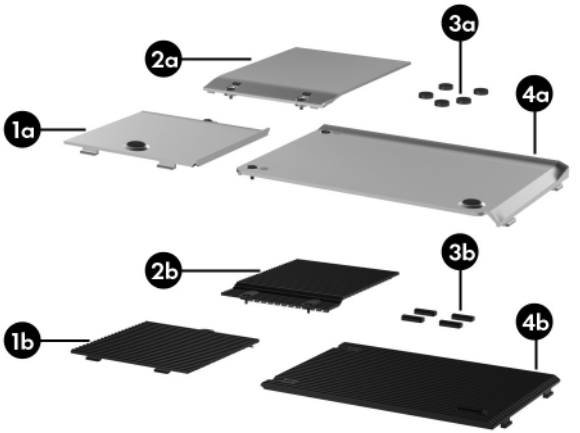
3.3 Miscellaneous Plastics Kit



Miscellaneous Plastics Kit

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Table 3-2
Miscellaneous Plastics Kit
Spare Part Number Information

Item	Description	Spare Part Number
	Miscellaneous Plastics Kit	
	For use on HP Pavilion dv1400 models	367765-001
	Includes:	
1a	Mini PCI compartment cover	
2a	Memory module compartment cover	
3a	Computer feet (5)	
4a	Hard drive cover	
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	367766-001
	Includes:	
1b	Mini PCI compartment cover	
2b	Memory module compartment cover	
3b	Computer feet (4)	
4b	Hard drive cover	
	For use on Best Buy 1 models (not illustrated, contains the same components as the Miscellaneous Plastics Kits listed above)	399236-001
	For use on Best Buy 2 models (not illustrated, contains the same components as the Miscellaneous Plastics Kits listed above)	409222-001

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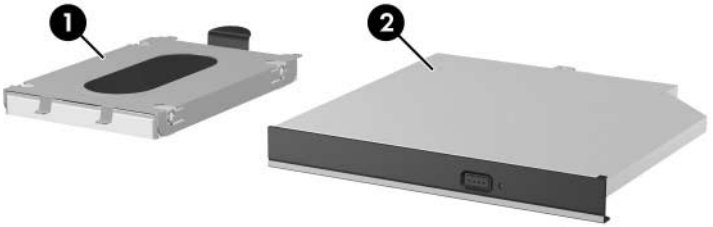
3.4 Mass Storage Devices



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)	
	5400-rpm	
	80-GB	377651-001
	60-GB	375980-001
	40-GB	393659-001

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Table 3-3

Mass Storage Devices

Spare Part Number Information *(Continued)*

Item	Description	Spare Part Number
1	**Hard drives** *(Continued)*	
	4200-rpm	
	100-GB	381721-001
	80-GB	367788-001
	60-GB	367787-001
	40-GB	367786-001
2	**Optical drives**	
	For use on HP Pavilion dv1400 models	
	8X DVD-ROM Drive	367789-001
	24X DVD/CD-RW Combo Drive	367790-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive	389896-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394830-001
	For use on HP Compaq nx4820 and Compaq Presario V2400 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive	389897-001
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394832-001
	For use on Best Buy 1 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001
	For use on Best Buy 2 models	
	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001
	USB digital drive (not illustrated)	364727-001

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Table 3-3

Mass Storage Devices

Spare Part Number Information *(Continued)*

Item	Description	Spare Part Number
	HP USB pocket drive (not illustrated)	338796-001

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3.5 Miscellaneous

Table 3-4

Miscellaneous (not illustrated)

Spare Part Information

Description	Spare Part Number
Logo Kits	
For use on HP Pavilion dv1400 models	373058-001
For use on HP Compaq nx4820 models	395199-001
For use on Compaq Presario V2400 models	373059-001
Wired headset with volume control	371693-001
HP backpack	405527-001
HP remote control (for use on HP dv1400 models)	371694-001
USB travel mouse	309674-001
Notebook entertainment cable and Y-cable	379452-001
65-watt AC adapter	371790-001 and 403551-001
Screw Kit (includes the following screws; refer to Appendix C, "Screw Listing," for more information on screw specifications and usage)	
For use on HP Pavilion dv1400 models	367776-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	373534-001
■ Phillips PM2.5×4.0 screw ■ Phillips PM2.0×7.0 round head screw ■ Phillips PM2.0×7.0 screw ■ Phillips PM2.0×5.0 screw	■ Phillips PM2.0×4.0 screw ■ Phillips PM2.0×3.0 screw ■ Phillips PM1.5×2.0 screw

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Table 3-4

Miscellaneous (not illustrated)

Spare Part Information *(Continued)*

Description	Spare Part Number
Power cords	
For use in:	
Australia and New Zealand	373979-011
Brazil	373979-201
Belgium, Europe, Finland, France, Germany, Greece, the Netherlands, Norway, Portugal, Spain, and Sweden	373979-021
Canada, French Canada, Latin America, Thailand, and the United States	373979-001
Denmark	373979-081
Hong Kong and the United Kingdom	373979-031
India	373979-DJ1
Israel	373979-BB1
Italy	373979-061
Japan	373979-291
Korea	373979-AD1
People's Republic of China	373979-AA1
Switzerland	373979-111
Taiwan	373979-AB1

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3.6 Sequential Part Number Listing

Table 3-5

Sequential Spare Part Number Listing

Spare Part Number	Description
309674-001	USB travel mouse
364727-001	USB digital drive
367759-001	Battery pack, 6-cell, 4.4-AHr
367760-001	Battery pack, 12-cell, 8.8-AHr
367763-001	Base enclosure for use on HP Pavilion dv1400 models
367764-001	Base enclosure for use on HP Compaq nx4820 and Compaq Presario V2400 models
367765-001	Miscellaneous Plastics Kit for use on HP Pavilion dv1400 models
367766-001	Miscellaneous Plastics Kit for use on HP Compaq nx4820 and Compaq Presario V2400 models
367773-001	Memory module, 256-MB (266 MHz)
367774-001	Memory module, 512-MB (266 MHz)
367775-001	Memory module, 1024-MB (266 MHz)
367776-001	Screw Kit for use on HP Pavilion dv1400 models
367777-001	Keyboard for use on Compaq Presario V2400 models in Asia Pacific, Australia, Hong Kong, People's Republic of China, and the United States
367777-281	Keyboard for use on Compaq Presario V2400 models in Thailand
367777-291	Keyboard for use on HP Compaq nx4820 models in Japan
367777-AB1	Keyboard for use on Compaq Presario V2400 models in Taiwan

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
367777-AD1	Keyboard for use on Compaq Presario V2400 models in Korea
367778-001	Keyboard for use on HP Pavilion dv1400 models in Asia Pacific, Australia, Canada, Hong Kong, People's Republic of China, and the United States
367778-031	Keyboard for use on HP Pavilion dv1400 models in the United Kingdom
367778-041	Keyboard for use on HP Pavilion dv1400 models in Germany
367778-051	Keyboard for use on HP Pavilion dv1400 models in France
367778-061	Keyboard for use on HP Pavilion dv1400 models in Italy
367778-071	Keyboard for use on HP Pavilion dv1400 models in Spain
367778-081	Keyboard for use on HP Pavilion dv1400 models in Denmark
367778-091	Keyboard for use on HP Pavilion dv1400 models in Norway
367778-111	Keyboard for use on HP Pavilion dv1400 models in Switzerland
367778-121	Keyboard for use on HP Pavilion dv1400 models in French Canada
367778-131	Keyboard for use on HP Pavilion dv1400 models in Portugal
367778-161	Keyboard for use on HP Pavilion dv1400 models in Latin America
367778-171	Keyboard for use on HP Pavilion dv1400 models in Saudi Arabia
367778-201	Keyboard for use on HP Pavilion dv1400 models in Brazil
367778-281	Keyboard for use on HP Pavilion dv1400 models in Thailand
367778-331	Keyboard for use on HP Pavilion dv1400 models in Europe and the Netherlands

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
367778-A41	Keyboard for use on HP Pavilion dv1400 models in Belgium
367778-AB1	Keyboard for use on HP Pavilion dv1400 models in Taiwan
367778-AD1	Keyboard for use on HP Pavilion dv1400 models in Korea
367778-B31	Keyboard for use on International HP Pavilion dv1400 models
367778-B71	Keyboard for use on HP Pavilion dv1400 models Finland and Sweden
367778-BB1	Keyboard for use on HP Pavilion dv1400 models in Israel
367778-DJ1	Keyboard for use on HP Pavilion dv1400 models in Greece
367779-001	Switch cover for use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, and Memory Reader without wireless capability
367780-001	Switch cover for use on HP Pavilion dv1400 models without wireless capability
367781-001	Switch cover for use on HP Pavilion dv1400 models with wireless capability
367782-001	Switch cover for use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, and Memory Reader with wireless capability
367783-001	Display assembly, 14.0-inch, WXGA for use on HP Pavilion dv1400 models
367784-001	Display assembly, 14.0-inch, WXGA for use on Compaq Presario V2400 models
367786-001	Hard drive, 60-GB, 4200-rpm (includes frame and connector)
367787-001	Hard drive, 40-GB, 4200-rpm (includes frame and connector)
367788-001	Hard drive, 80-GB, 4200-rpm (includes frame and connector)

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
367789-001	8X DVD-ROM Drive for use on HP Pavilion dv1400 models
367790-001	24X DVD/CD-RW Combo Drive for use on HP Pavilion dv1400 models
367793-001	Speaker assembly for use on HP Pavilion dv1400 models
367794-001	USB/S-Video controller board
367795-001	Fan (includes thermal pad)
367797-001	LED board for use on HP Pavilion dv1400 models (includes LED board cable)
367798-001	LED board for use on HP Compaq nx4820 and Compaq Presario V2400 models (includes LED board cable)
371693-001	Wired headset with volume control
371694-001	HP remote control (for use on HP dv1400 models)
371790-001	65-watt AC adapter
373025-001	Mini PCI communications card, 802.11b/g Intel for use in the rest of the world
373026-001	Mini PCI communications card, 802.11b/g Intel for use in most of the world
373047-001	Mini PCI communications card, 802.11b/g Broadcomm for use in most of the world
373048-001	Mini PCI communications card, 802.11b/g Broadcomm for use in the rest of the world
373054-001	Display assembly, 14.0-inch, WXGA, SVA with Brightview for use on HP Pavilion dv1400 models
373055-001	Display assembly, 14.0-inch, WXGA, SVA with Brightview for use on Compaq Presario V2400 models
373058-001	Logo Kit for use on HP Pavilion dv1400 models

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
373059-001	Logo Kit for use on Compaq Presario V2400 models
373060-001	Display assembly, 14.0-inch, WXGA, SVA with Brightview for use on HP Compaq nx4820 models
373061-291	Mini PCI communications card, 802.11b/g Broadcomm for use in Japan
373524-001	8X DVD-ROM Drive for use on HP Compaq nx4820 and Compaq Presario V2400 models
373525-001	24X DVD/CD-RW Combo Drive for use on HP Compaq nx4820 and Compaq Presario V2400 models
373528-001	Display assembly, 14.0-inch, WXGA, SVA for use on HP Compaq nx4820 models
373534-001	Screw Kit for use on HP Compaq nx4820 and Compaq Presario V2400 models
373535-001	Menu control button board (includes bracket and cable, for use on HP Pavilion dv1400 models)
373979-001	Power cord for use in Canada, French Canada, Latin America, Thailand, and the United States
373979-011	Power cord for use in Australia and New Zealand
373979-021	Power cord for use in Belgium, Europe, Finland, France, Germany, Greece, the Netherlands, Norway, Portugal, Spain, and Sweden
373979-031	Power cord for use in Australia, Hong Kong, New Zealand, and the United Kingdom
373979-061	Power cord for use in Italy
373979-081	Power cord for use in Denmark
373979-111	Power cord for use in Switzerland
373979-201	Power cord for use in Brazil

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
373979-291	Power cord for use in Japan
373979-AA1	Power cord for use in People's Republic of China
373979-AB1	Power cord for use in Taiwan
373979-AD1	Power cord for use in Korea
373979-BB1	Power cord for use in Israel
373979-DJ1	Power cord for use in India
374625-001	Speaker assembly for use on HP Compaq nx4820 and Compaq Presario V2400 models
375759-001	Notebook entertainment cable and Y-cable
375980-001	Hard drive, 60-GB, 5400-rpm (includes frame and connector)
376651-001	Bluetooth module
377651-001	Hard drive, 80-GB, 5400-rpm (includes frame and connector)
379452-001	Audio Y-cable
380032-001	Processor, Intel Celeron M 350 (1.3-GHz) with 400-MHz FSB (includes thermal pad)
380033-001	Processor, Intel Celeron M 360 (1.4-GHz) with 400-MHz FSB (includes thermal pad)
381721-001	Hard drive, 100-GB, 4200-rpm (includes frame and connector)
382077-001	Left and right display hinge covers and brackets for use on HP Pavilion dv1400 models
382078-001	Left and right display hinge covers and brackets for use on HP Compaq nx4820 and Compaq Presario V2400 models
383876-001	Intel Celeron M 370 (1.4-GHz) with 400-MHz FSB
389896-001	8X DVD±RW/R and CD-RW Combo Drive, Double Layer for use on HP Pavilion dv1400 models

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
389897-001	8X DVD±RW/R and CD-RW Combo Drive, Double Layer for use on HP Compaq nx4820 and Compaq Presario V2400 models
390622-001	Mini-PCI communications card, 802.11b/g FRVL for use in the United States
390622-002	Mini-PCI communications card, 802.11b/g FRVL for use in the rest of the world
392591-001	Mini-PCI communications card, 802.11b/g Titus for use in the United States
392591-002	Mini-PCI communications card, 802.11b/g Titus for use in the rest of the world
392591-291	Mini-PCI communications card, 802.11b/g Titus for use in Japan
393655-001	System board, 915GM, for use on full-featured HP Pavilion dv1400 models
393656-001	System board, 910GM, for use on defeatured HP Pavilion dv1400 models
394825-001	Processor, Intel Pentium M 725 (1.6-GHz) with 400-MHz FSB (includes thermal pad)
394826-001	Processor, Intel Pentium M 740 (1.7-GHz) with 400-MHz FSB (includes thermal pad)
394827-001	Processor, Intel Pentium M 750 (1.8-GHz) with 400-MHz FSB (includes thermal pad)
394828-001	Processor, Intel Pentium M 760 (2.00-GHz) with 400-MHz FSB (includes thermal pad)
394829-001	Processor, Intel Pentium M 770 (2.13-GHz) with 400-MHz FSB (includes thermal pad)

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
394905-001	Top cover for use on HP Pavilion dv1400 models (includes TouchPad)
394906-001	Top cover for use on full-featured Compaq Presario V2400 models
395135-001	915GM, for use on full-featured HP Compaq nx4820 and Compaq Presario V2400 models
395199-001	Label Kit for use on HP Compaq nx4820 models
395436-001	Heat sink (includes thermal pad)
396602-001	6-cell, 4.0-Amp hour battery pack
396603-001	12-cell, 8.8-Amp hour battery pack
397100-001	Intel Pentium M 730 (1.6-GHz) with 400-MHz FSB
397344-001	Intel Celeron M 380 (1.6-GHz) with 400-MHz FSB
398065-001	6-cell, 4.0-Amp hour battery pack
398832-001	6-cell, 4.4-Amp hour battery pack
399232-001	Display assembly, 14.0-inch, WXGA, SVA with Brightview for use on Best Buy 1 models
399233-001	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe for use on Best Buy 1 models
399234-001	Top cover for use on Best Buy 1 models (includes TouchPad)
399235-001	Base enclosure for use on Best Buy 1 models
399236-001	Miscellaneous Plastics Kit for use on Best Buy 1 models
399237-001	Switch cover for use on Best Buy 1 models with wireless capability
399777-001	Bluetooth module
403551-001	65-watt AC adapter

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Table 3-5

Sequential Spare Part Number Listing *(Continued)*

Spare Part Number	Description
403572-001	SD Card memory module, 128-MB (266 MHz)
403573-001	SD Card memory module, 256-MB (266 MHz)
404608-001	910GM system board for use on defeatured HP Compaq nx4820 and Compaq Presario V2400 models
404686-001	Top cover for use on Compaq Presario V2400 models
405290-001	Left and right display hinge covers and brackets for use on HP Pavilion dv1400 models
405527-001	HP backpack
406031-001	Top cover for use on HP Compaq nx4820 models
407315-001	Processor, Intel Pentium M 735a (1.7-GHz) with 400-MHz FSB (includes thermal pad)
409218-001	Display assembly, 14.0-inch, WXGA, SVA with Brightview for use on Best Buy 2 models
409219-001	8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe for use on Best Buy 2 models
409220-001	Top cover for use on Best Buy 2 models (includes TouchPad)
409221-001	Base enclosure for use on Best Buy 2 models
409222-001	Miscellaneous Plastics Kit for use on Best Buy 2 models
409223-001	Switch cover for use on Best Buy 2 models with wireless capability
409224-001	Switch cover for use on Best Buy 2 models without wireless capability

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4

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
- Flat-bladed screwdriver
- Tool kit—includes connector removal tool, loopback plugs, and case utility tool

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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.

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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.”

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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.

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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.

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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 ±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.

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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

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

Table 4-1

Typical Electrostatic Voltage Levels

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

✎ 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

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5

Removal and Replacement Procedures

This chapter provides removal and replacement procedures.

There are 62 screws, in 8 different sizes, that must 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.

Reference is made throughout this chapter to "Best Buy 1" and "Best Buy 2" computer models. These references apply to HP Pavilion dv1400 models that are sold in Best Buy retail stores that use plastic components with different colors.

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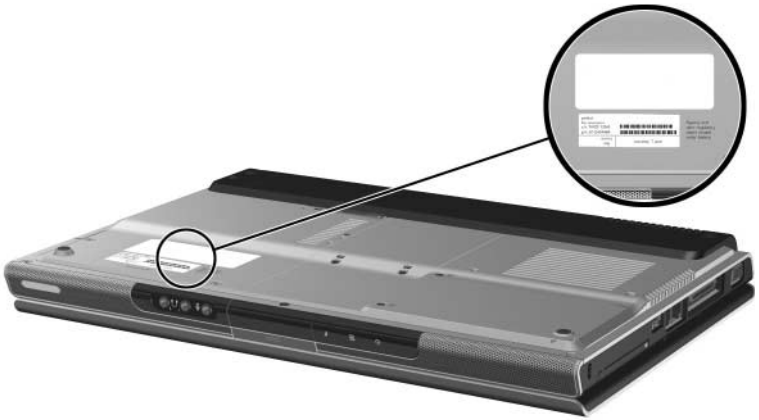
5.1 Serial Number

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

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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	Memory Module	2 loosened
5.7	Mini PCI Communications Module	1 loosened
	⚠ To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in your 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.	
5.8	Optical Drive	1
5.9	Switch Cover	HP Pavilion dv1400 = 3 HP Compaq nx4820 and Compaq Presario V2400 = 2
5.10	Keyboard	HP Pavilion dv1400 = 2 HP Compaq nx4820 and Compaq Presario V2400 = 4

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Disassembly Sequence Chart *(Continued)*

Section	Description	# of Screws Removed
5.11	Display Assembly	4
5.12	Base Enclosure	HP Pavilion dv1400 = 20 HP Compaq nx4820 and Compaq Presario V2400 = 18
5.13	USB/S-Video Controller Board	2
5.14	Bluetooth Module	2
5.15	Speaker Assembly	0
5.16	RTC Battery	0
5.17	Menu Control Button Board	4
5.18	Heat Sink	3
5.19	Fan	2
5.20	Processor	1
5.21	System Board	4
5.22	LED Board	HP Pavilion dv1400 = 3 HP Compaq nx4820 and Compaq Presario V2400 = 2

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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	367760-001 and 396603-001
6-cell, 4.4-AHr	367759-001 and 398832-001
6-cell, 4.0-AHr	398065-001 and 396602-001

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

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b. Slide and hold the battery release latch ❶ to the left. (The front edge of the battery pack disengages from the computer.)

c. Lift the front edge of the battery pack ❷ up and swing it back.

d. Remove the battery pack.

Removing the Battery Pack

Reverse the above procedure to install the battery pack.

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5.4 Hard Drive

Hard Drive Spare Part Number Information	
Frame and connector included.	
5400-rpm	
80-GB	377651-001
60-GB	375980-001
40-GB	393659-001
4200-rpm	
100-GB	381721-001
80-GB	367788-001
60-GB	367787-001
40-GB	367786-001

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

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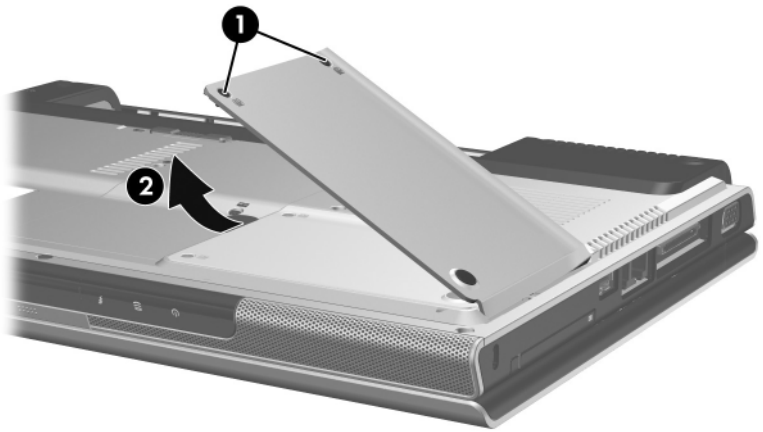
2. Loosen the two black PM2.0×5.0 screws ❶ that secure the hard drive cover to the computer.
3. Lift the left side of the cover ❷ and swing it to the right.
4. Remove the hard drive cover.

The hard drive cover is included in the Miscellaneous Plastics Kits, which are available using the following spare part numbers:

- 367765-001 (for use on HP Pavilion dv1400 models)
- 367766-001 (for use on HP Compaq nx4820 and Compaq Presario V2400 models)
- 399236-001 (for use on Best Buy 1 models)
- 409222-001 (for use on Best Buy 2 models)



Removing the Hard Drive Cover

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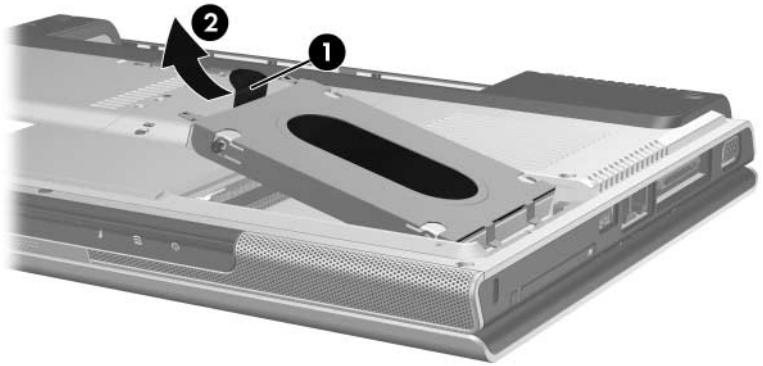
5. Use the mylar tab ❶ to lift the hard drive ❷ until it disconnects from the computer.
6. Remove the hard drive from the hard drive bay.



Removing the Hard Drive

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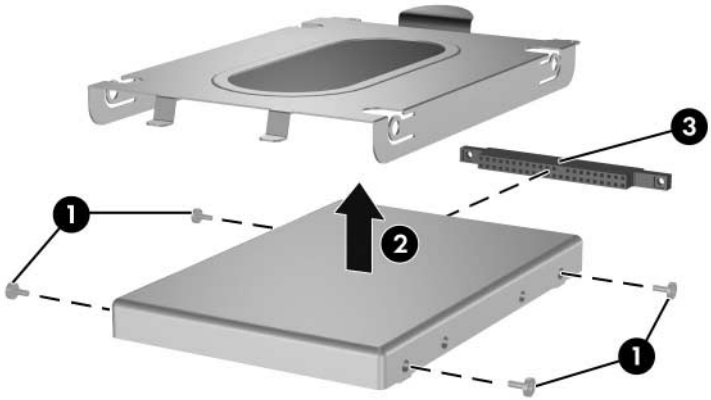
7. Remove the four PM2.5×4.0 screws ❶ that secure the hard drive frame to the hard drive.
8. Lift the frame ❷ straight up to remove if from the hard drive.
9. Slide the hard drive connector ❸ off the hard drive.



Removing the Hard Drive Frame and Connector

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

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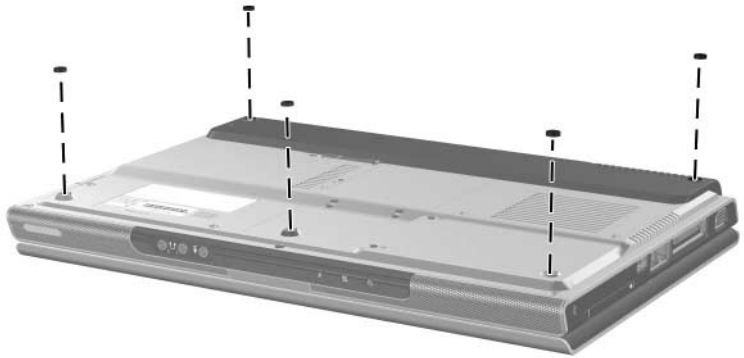
5.5 Computer Feet

The computer feet are adhesive-backed rubber pads. The feet are included in the Miscellaneous Plastics Kits, which are available using the following spare part numbers:

- 367765-001 (for use on HP Pavilion dv1400 models)
- 367766-001 (for use on HP Compaq nx4820 and Compaq Presario V2400 models)
- 399236-001 (for use on Best Buy 1 models)
- 409222-001 (for use on Best Buy 2 models)



Replacing the Computer Feet

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5.6 Memory Module

Memory Module Spare Part Number Information	
1024-MB	367775-001
512-MB	367774-001
256-MB	367773-001

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

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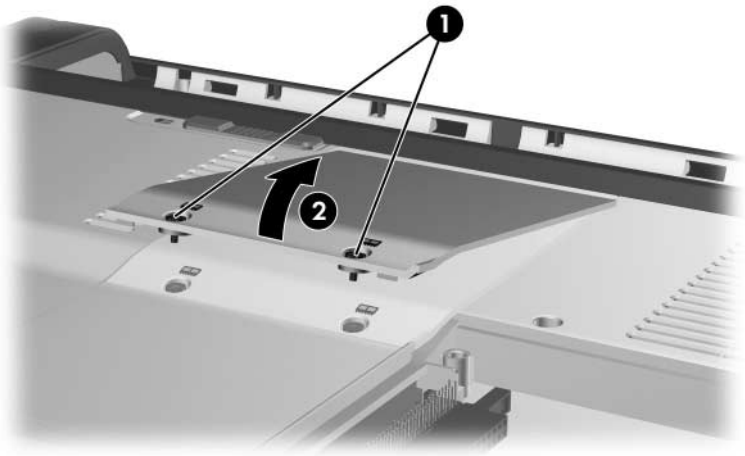
2. Loosen the two black PM2.0×5.0 screws ❶ that secure the memory module compartment cover to the computer.
3. Lift the front edge of the memory module compartment cover ❷ up and swing it back.
4. Remove the memory module compartment cover.

The memory module compartment cover is included in the Miscellaneous Plastics Kits, which are available using the following spare part numbers:

- 367765-001 (for use on HP Pavilion dv1400 models)
- 367766-001 (for use on HP Compaq nx4820 and Compaq Presario V2400 models)
- 399236-001 (for use on Best Buy 1 models)
- 409222-001 (for use on Best Buy 2 models)



Removing the Memory Module Compartment Cover

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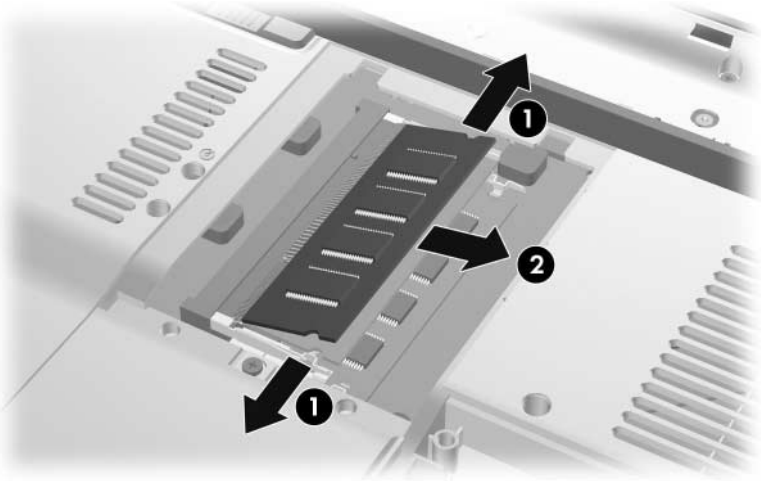
5. Spread the retaining tabs ❶ on each side of the memory module socket to release the memory module. (The right side of the module rises away from the computer.)
6. Slide the module ❷ away from the socket at an angle.

Memory modules are slotted to prevent incorrect installation into the memory module socket.



Removing the Memory Module

Reverse the above procedure to install a memory module.

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5.7 Mini PCI Communications Module

Mini PCI Communications Module Spare Part Number Information	
802.11b/g Broadcomm (for use in most of the world)	373047-001
802.11b/g Broadcomm (for use in the rest of the world)	373048-001
802.11b/g Broadcomm (for use on HP Compaq nx4820 models in Japan)	373061-291
802.11b/g FRVL (for use in most of the world)	390622-001
802.11b/g FRVL (for use in the rest of the world)	390622-002
802.11b/g Intel (for use in most of the world)	373026-001
802.11b/g Intel (for use in the rest of the world)	373025-001
802.11b/g Titus (for use in the United States)	392591-001
802.11b/g Titus (for use in the rest of the world)	392591-002
802.11b/g Titus (for use in Japan)	392591-291

1. Prepare the computer for disassembly (Section 5.3).

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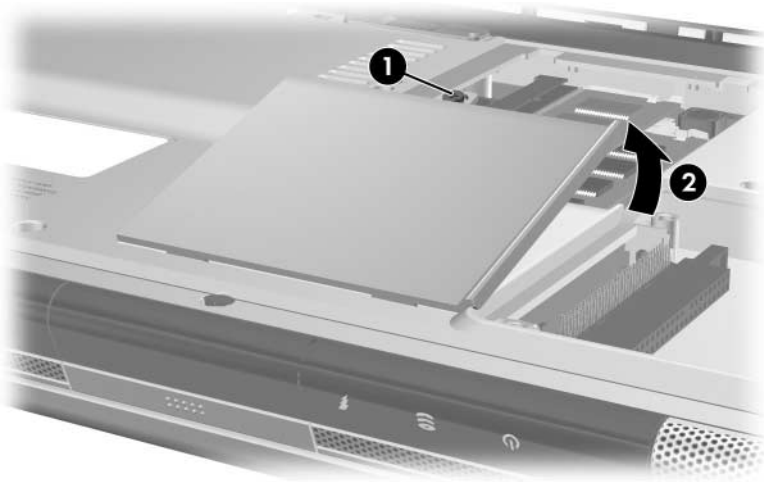
2. Loosen the black PM2.0×5.0 screw ❶ that secures the Mini PCI compartment cover to the computer.
3. Lift the rear edge of the Mini PCI compartment cover ❷ up, and then swing it forward.
4. Remove the Mini PCI compartment cover.

The Mini PCI compartment cover is included in the Miscellaneous Plastics Kits, which are available using the following spare part numbers:

- 367765-001 (for use on HP Pavilion dv1400 models)
- 367766-001 (for use on HP Compaq nx4820 and Compaq Presario V2400 models)
- 399236-001 (for use on Best Buy 1 models)
- 409222-001 (for use on Best Buy 2 models)



Removing the Mini PCI Compartment Cover

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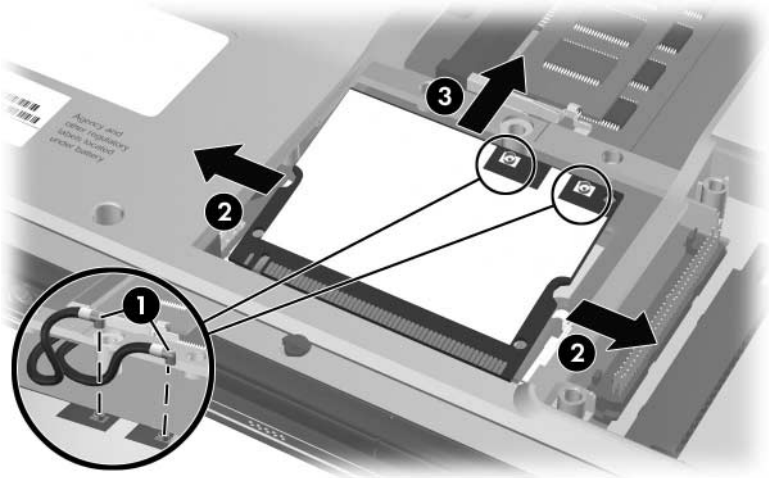
Make note of which wireless antenna cable is attached to which antenna clip on the Mini PCI communications module before disconnecting the cables.

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



Removing a Mini PCI Communications Card

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

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5.8 Optical Drive

Optical Drive Spare Part Number Information	
For use on HP Pavilion dv1400 models	
8X DVD-ROM Drive	367789-001
24X DVD/CD-RW Combo Drive	367790-001
8X DVD±RW/R and CD-RW Double Layer Combo Drive	389896-001
8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394830-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	
8X DVD±RW/R and CD-RW Double Layer Combo Drive	389897-001
8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	394832-001
For use on Best Buy 1 models	
8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001
For use on Best Buy 2 models	
8X DVD±RW/R and CD-RW Double Layer Combo Drive, LightScribe	399233-001

1. Prepare the computer for disassembly (Section 5.3).

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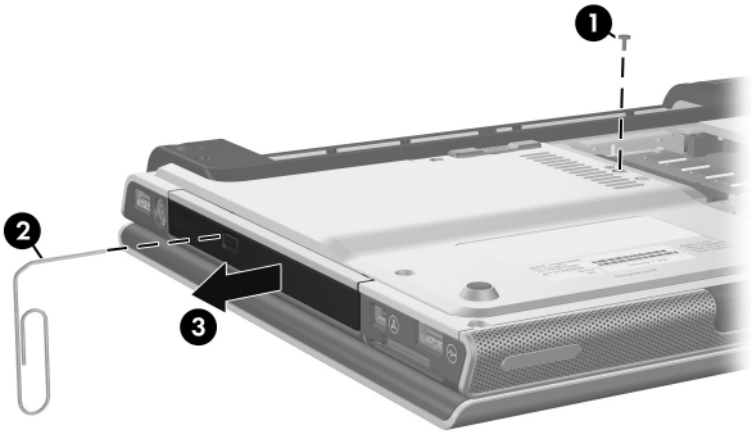
2. Remove the PM2.0×8.5 screw ❶ that secures the optical drive to the computer.
3. Insert a thin tool, such as a paper clip, into the media tray release hole ❷. (The optical drive media tray releases from the optical drive.)
4. Use the media tray frame to slide the optical drive ❸ to the left.
5. Remove the optical drive.



Removing the Optical Drive

Reverse the above procedure to install an optical drive.

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5.9 Switch Cover

Switch Cover Spare Part Number Information	
For use on HP Pavilion dv1400 models with wireless capability	367781-001
For use on HP Pavilion dv1400 models without wireless capability	367780-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, digital memory card reader, with wireless capability	367782-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models with a 1394 port, S-Video-out jack, expansion port, and digital memory card reader without wireless capability	367779-001
For use on Best Buy 1 models	399237-001
For use on Best Buy 2 models with wireless capability	409223-001
For use on Best Buy 2 models without wireless capability	409224-001

1. Prepare the computer for disassembly (Section 5.3).

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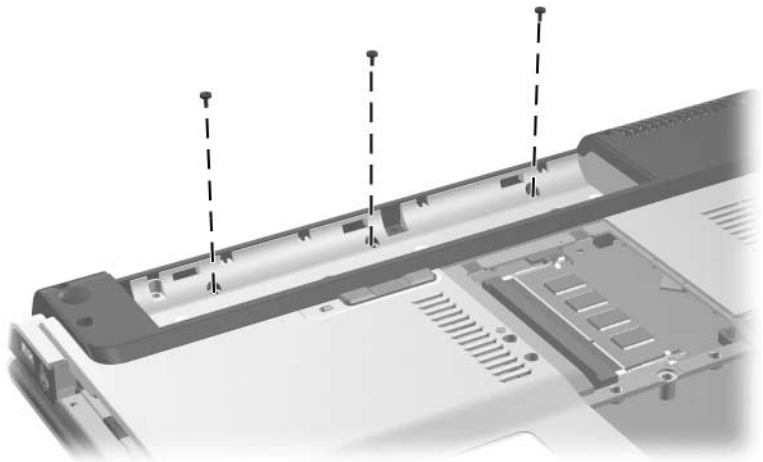
2. Position the computer with the rear panel toward you.

Steps 3 through 9 apply only to HP Pavilion dv1400 models. See steps 10 through 14 in this section for information on removing the switch cover on HP Compaq nx4820 and Compaq Presario V2400 models.

3. Remove the three silver PM2.0×5.0 screws that secure the switch cover to the computer.



Removing the Switch Cover Screws, HP Pavilion dv1400 Models Only

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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 screwdriver under the outside edges of the display hinge covers.
7. Lift up on the outside edges of the hinge covers ❶ until the switch cover ❷ disengages from the computer.

Releasing the Switch Cover, HP Pavilion dv1400 Models Only

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8. Swing the rear edge of the switch cover forward.

Removing the Switch Cover, HP Pavilion dv1400 Models Only

9. Remove the switch cover.

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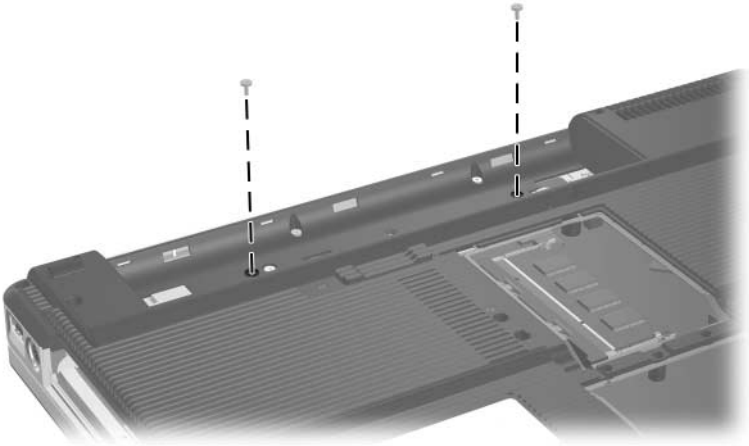
Steps 10 through 14 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

10. Remove the two silver PM2.0×5.0 screws that secure the switch cover to the computer.



Removing the Switch Cover Screws, HP Compaq nx4820 and Compaq Presario V2400 Models Only

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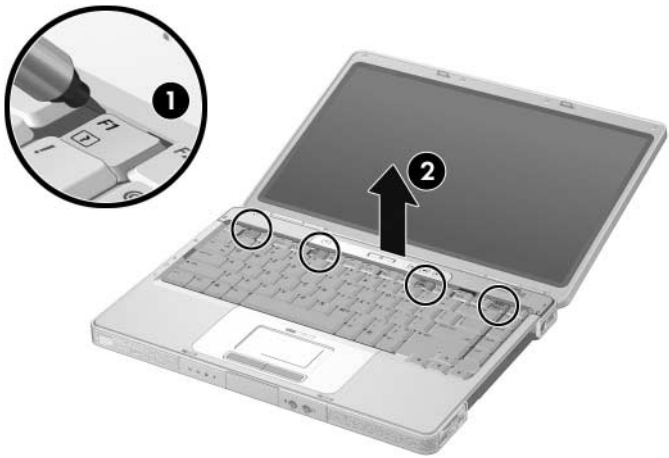
11. Turn the computer display-side up with the front panel toward you.
12. Open the computer as far as possible.
13. Insert a flat-blade screwdriver into the slots located behind the **F1, F5, F11,** and **insert** keys ❶ and lift up on the front edge of the switch cover ❷ until it disengages from the computer.
14. Remove the switch cover.



Removing the Switch Cover, HP Compaq nx4820 and Compaq Presario V2400 Models Only

Reverse the above procedure to install the switch cover.

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5.10 Keyboard

Keyboard Spare Part Number Information

For use on HP Pavilion dv1400 models

Belgium	367778-A41	Norway	367778-091
Brazil	367778-201	Portugal	367778-131
Denmark	367778-081	Saudi Arabia	367778-171
France	367778-051	Spain	367778-071
French Canada	367778-121	Sweden/Finland	367778-b71
Germany	367778-041	Switzerland	367778-111
Greece	367778-DJ1	Taiwan	367778-ab1
International	367778-b31	Thailand	367778-281
Israel	367778-bb1	United Kingdom	367778-031
Italy	367778-061	Asia Pacific, Australia, Hong Kong, People's Republic of China, and the United States	367778-001
Korea	367778-ad1		
Latin America	367778-161		
Europe and the Netherlands	367778-331		

For use on HP Compaq nx4820 models

Japan	3677777-291

For use on Compaq Presario V2400 models

Korea	367777-ad1	Asia Pacific, Australia, Hong Kong, People's Republic of China, and the United States	367777-001
Taiwan	367777-AB1		
Thailand	367777-281		

1. Prepare the computer for disassembly (Section 5.3).
2. Remove the optical drive (Section 5.8).
3. Remove the switch cover (Section 5.9).
4. Close the computer.
5. Turn the computer upside down with the front toward you.

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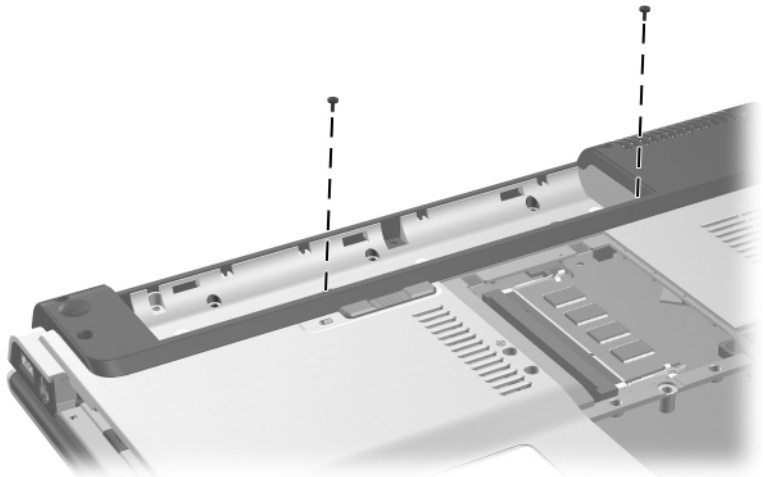
Steps 6 through 11 apply only to HP Pavilion dv1400 models. See steps 12 through 15 in this section for information on removing the keyboard on HP Compaq nx4820 and Compaq Presario V2400 models.

6. Remove the two silver PM2.0×5.0 screws that secure the keyboard to the computer.



Removing the Keyboard Screws, HP Pavilion dv1400 Models Only

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7. Turn the computer display-side up with the front panel toward you.
8. Open the computer as far as possible.
9. Lift the rear edge of the keyboard and swing it forward until it rests on the palm rest.

Releasing the Keyboard, HP Pavilion dv1400 Models Only

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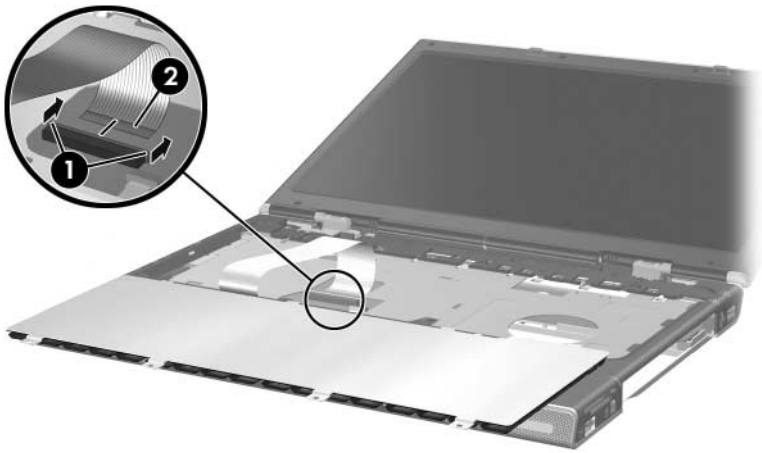
10. Release the zero insertion force (ZIF) connector ❶ to which the keyboard cable is connected and disconnect the keyboard cable ❷ from the system board.



Disconnecting the Keyboard Cable, HP Pavilion dv1400 Models Only

11. Remove the keyboard.

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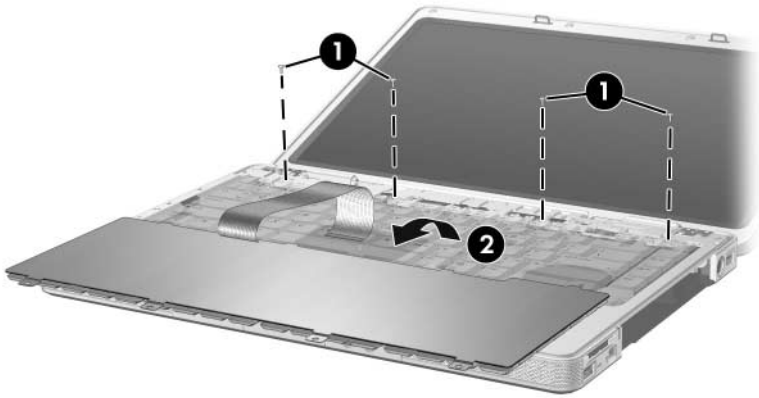
Steps 12 through 15 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

12. Remove the four PM2.0×3.0 screws ❶ that secure the keyboard to the computer.
13. Swing the rear edge of the keyboard ❷ up and forward until it rests on the palm rest.



Releasing the Keyboard, HP Compaq nx4820 and Compaq Presario V2400 Models Only

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

Disconnecting the Keyboard Cable, HP Compaq nx4820 and Compaq Presario V2400 Models Only

15. Remove the keyboard.

Reverse the above procedure to install the keyboard.

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5.11 Display Assembly

Display Assembly Spare Part Number Information	
For use on HP Pavilion dv1400 models	
14.0-inch, WXGA, SVA with Brightview	373054-001
14.0-inch, WXGA	367783-001
For use on HP Compaq nx4820 models	
14.0-inch, WXGA, SVA with Brightview	373060-001
14.0-inch, WXGA	373528-001
For use on Compaq Presario V2400 models	
14.0-inch, WXGA, SVA with Brightview	373055-001
14.0-inch, WXGA	367784-001
For use on Best Buy 1 models	
14.0-inch, WXGA, SVA with Brightview	399232-001
For use on Best Buy 2 models	
14.0-inch, WXGA, SVA with Brightview	409218-001
Left and right display hinge covers and brackets	
For use on HP Pavilion dv1400 models	382077-001 and 405290-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	382078-001
For use on HP Pavilion dv1400 models	382077-001

1. Prepare the computer for disassembly (Section 5.3).
2. Remove the memory module compartment (Section 5.6) and Mini PCI compartment covers (Section 5.7).

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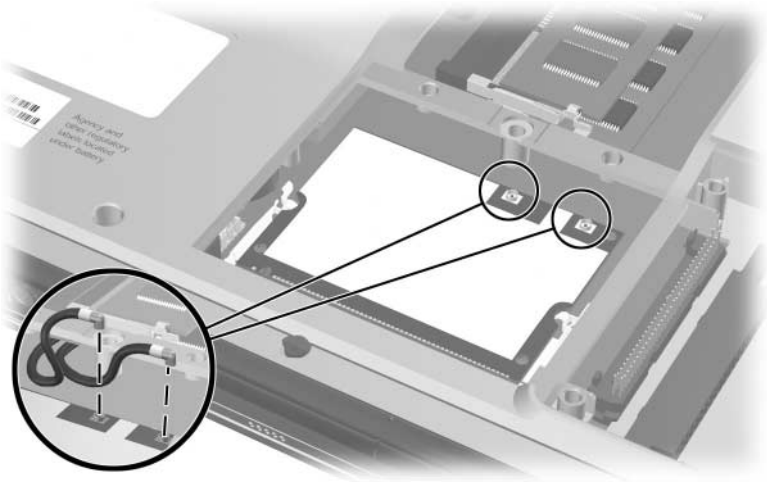
3. Disconnect the wireless antenna cables from the Mini PCI communications card.



Disconnecting the Wireless Antenna Cables

4. Remove the wireless antenna cables from the Mini PCI and memory module compartments.
5. Remove the switch cover (Section 5.9).
6. Remove the keyboard (Section 5.10).
7. Turn the computer display-side up with the front panel toward you.
8. Open the display as far as possible.

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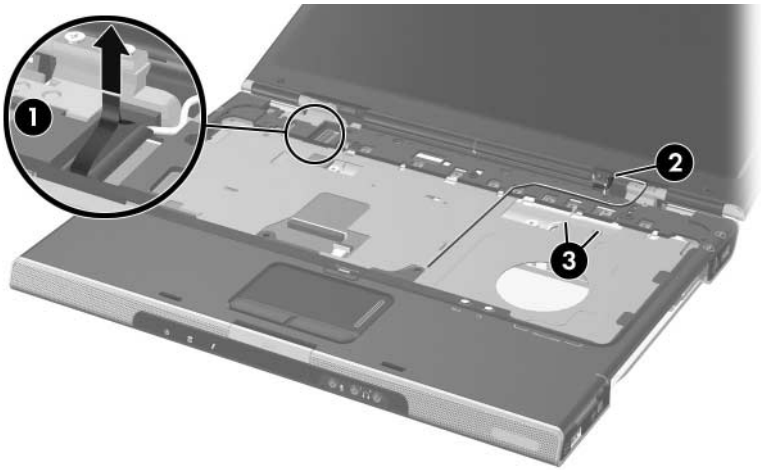
9. Disconnect the display cable ❶ from the system board.
10. Remove the tape ❷ that secures the wireless antenna cables to the top cover.
11. Remove the cables from the clips ❸ in the top cover.



Disconnecting the Display Cable and Removing the Wireless Antenna Cables

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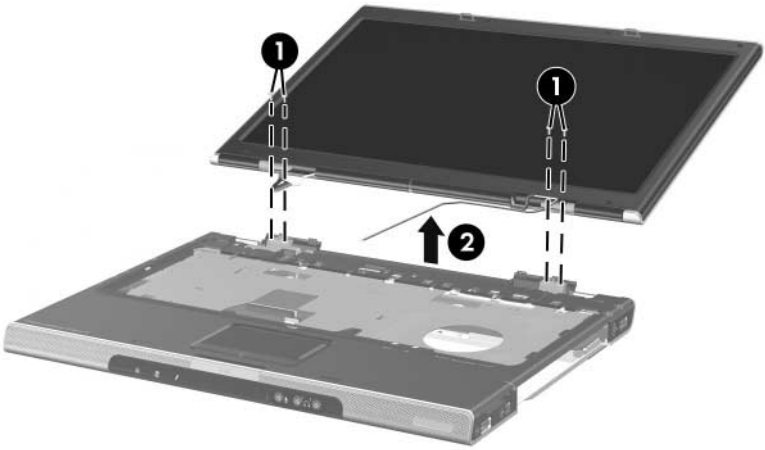
Steps 12 and 13 apply only to HP Pavilion dv1400 models. See steps 14 and 15 in this section for information on removing the display assembly on HP Compaq nx4820 and Compaq Presario V2400 models.

CAUTION: Support the display assembly when removing the following screws. Failure to support the display assembly can result in damage to the display assembly and other computer components.

12. Remove the four PM2.0×7.0 screws ❶ that secure the display assembly to the computer.
13. Remove the display assembly ❷.



Removing the Display Assembly, HP Pavilion dv1400 Models Only

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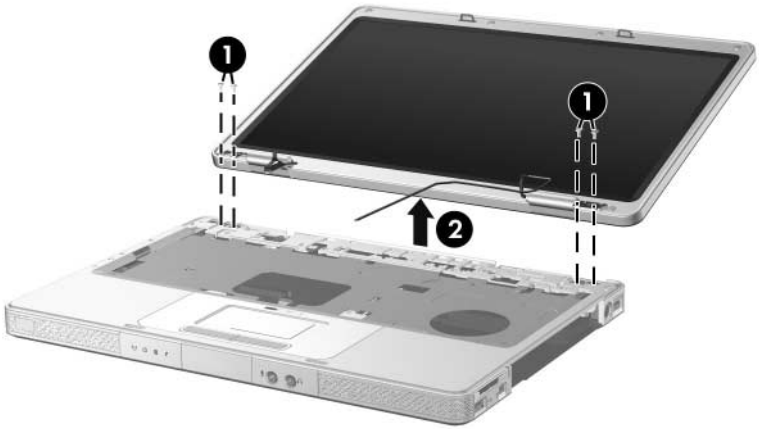
Steps 14 and 15 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

CAUTION: Support the display assembly when removing the following screws. Failure to support the display assembly can result in damage to the display assembly and other computer components.

14. Remove the four black PM2.0×5.0 screws ❶ that secure the display assembly to the computer.
15. Remove the display assembly ❷.



Removing the Display Assembly, HP Compaq nx4820 and Compaq Presario V2400 Models Only

Reverse the above procedure to install the display assembly

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5.12 Base Enclosure

Base Enclosure Spare Part Number Information	
For use on HP Pavilion dv1400 models	367763-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	367764-001
For use on Best Buy 1 models	399235-001
For use on Best Buy 2 models	409221-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Hard drive (Section 5.4)
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)

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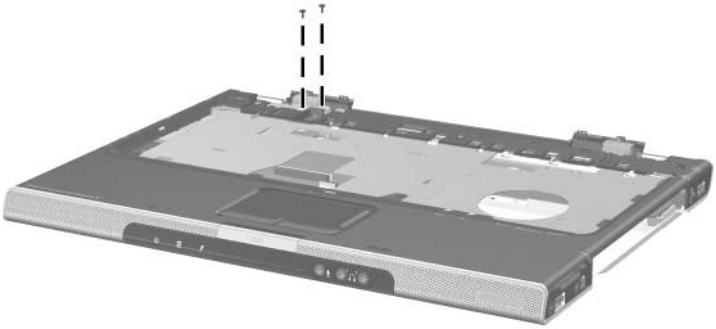
Steps 2 through 8 apply only to HP Pavilion dv1400 models. See steps 9 through 11 in this section for information on removing the base enclosure on HP Compaq nx4820 and Compaq Presario V2400 models.

2. Remove the two PM2.0×8.5 screws that secure the base enclosure to the computer



Removing the Base Enclosure Screws, Part 1, HP Pavilion dv1400 models Only

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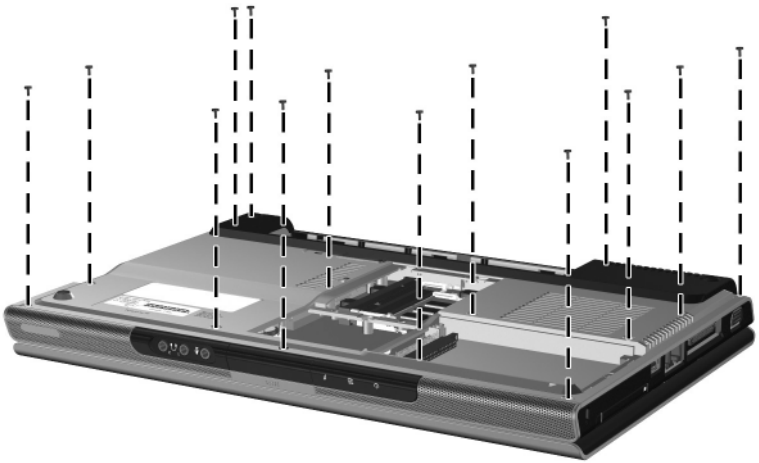
3. Turn the computer upside down with the front toward you.
4. Remove the fourteen PM2.0×8.5 screws that secure the base enclosure to the computer.



Removing the Base Enclosure Screws, Part 2, HP Pavilion dv1400 models Only

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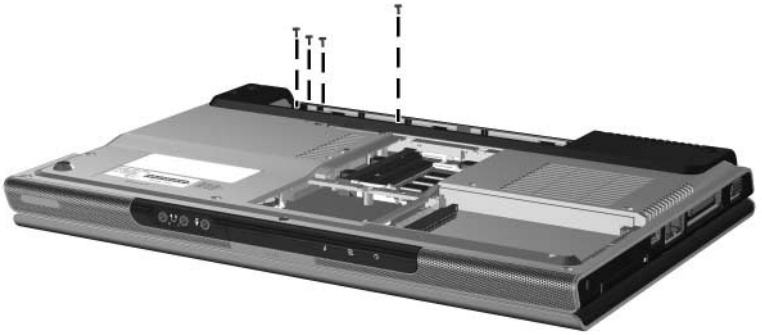
5. Remove the four silver PM2.0×5.0 screws that secure the base enclosure to the computer.



Removing the Base Enclosure Screws, Part 3, HP Pavilion dv1400 models Only

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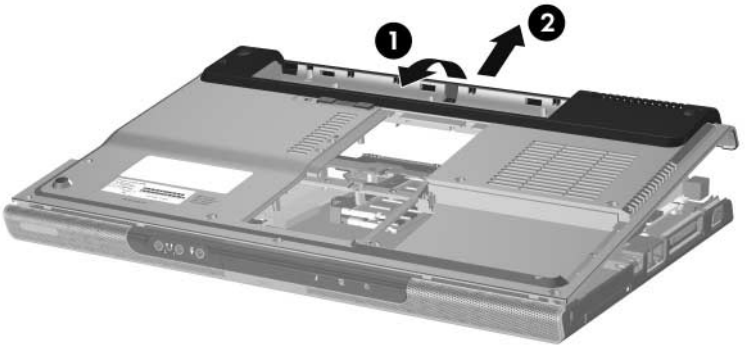
6. Swing the rear edge ❶ of the base enclosure straight up and forward until it rests at an angle.
7. Slide the base enclosure ❷ back at an angle.
8. Remove the base enclosure.



Removing the Base Enclosure, HP Pavilion dv1400 models Only

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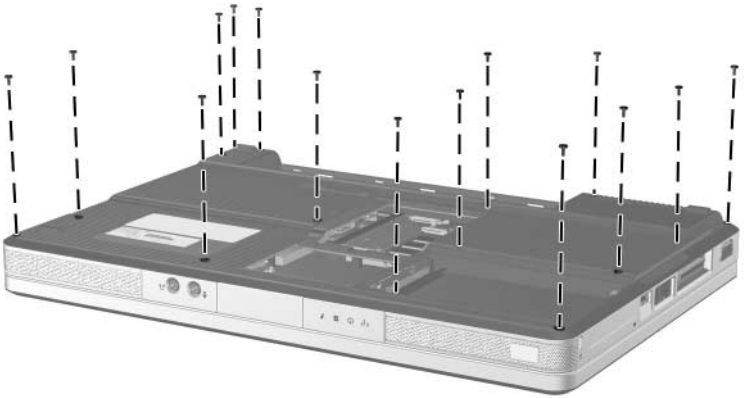
Steps 9 through 11 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

9. Remove the fifteen PM2.0×8.5 screws that secure the base enclosure to the computer.



Removing the Base Enclosure Screws, HP Compaq nx4820 and Compaq Presario V2400 Models Only

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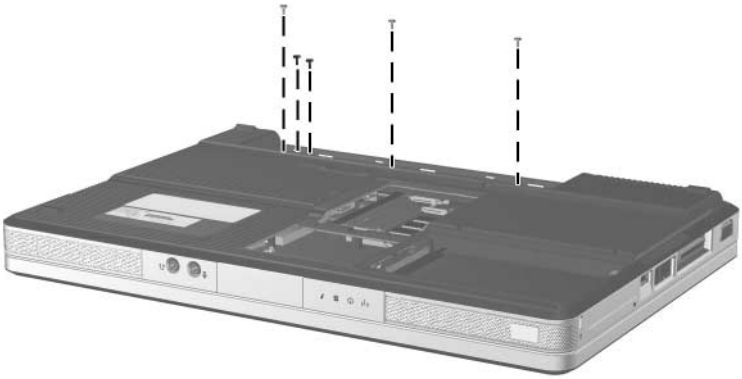
10. Remove the five silver PM2.0×5.0 screws that secure the base enclosure to the computer.
11. Lift the base enclosure straight up and remove it.



Removing the Base Enclosure, HP Compaq nx4820 and Compaq Presario V2400 Models Only

Reverse the above procedure to install the base enclosure.

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5.13 USB/S-Video Controller Board

USB/S-Video Controller Board Spare Part Number Information	
USB/S-Video Controller Board	367794-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)

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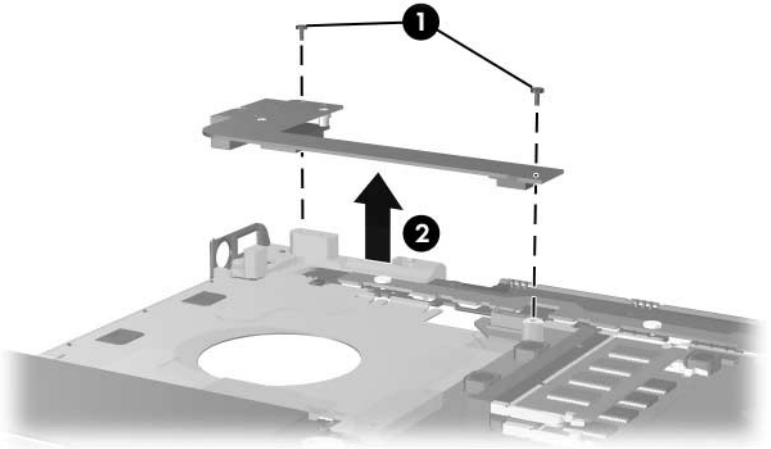
2. Remove the two silver PM2.0×5.0 screws ❶ that secure the USB/S-Video controller board to the top cover.
3. Lift up on the right side of the board ❷ to disconnect it from the system board.
4. Remove the USB/S-Video controller board.



Removing the USB/S-Video Controller Board

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

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5.14 Bluetooth Module

Bluetooth Module Spare Part Number Information	
Bluetooth module	376651-001 and 399777-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)
   - ❏ USB/S-Video controller board (Section 5.13)

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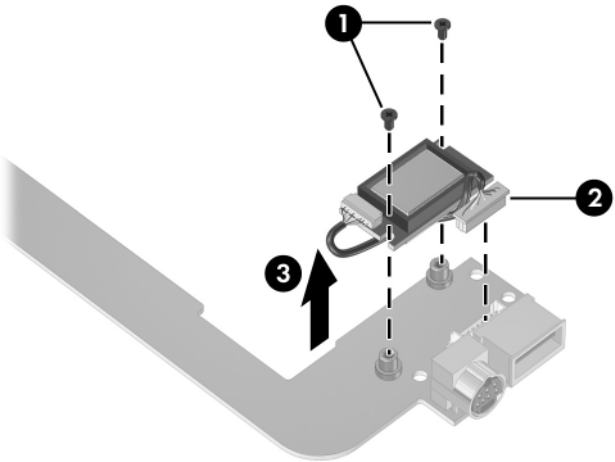
2. Turn the USB/S-Video controller board upside down with the USB port facing you.
3. Remove the two PM1.5×3.5 screws ❶ that secure the Bluetooth module to the USB/S-Video controller board.
4. Disconnect the Bluetooth module cable ❷ from the USB/S-Video controller board.
5. Remove the Bluetooth module ❸.



Removing the Bluetooth Module

Reverse the above procedure to install the Bluetooth module.

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5.15 Speaker Assembly

Speaker Assembly Spare Part Number Information	
For use on HP Pavilion dv1400 models	367793-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	374625-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)

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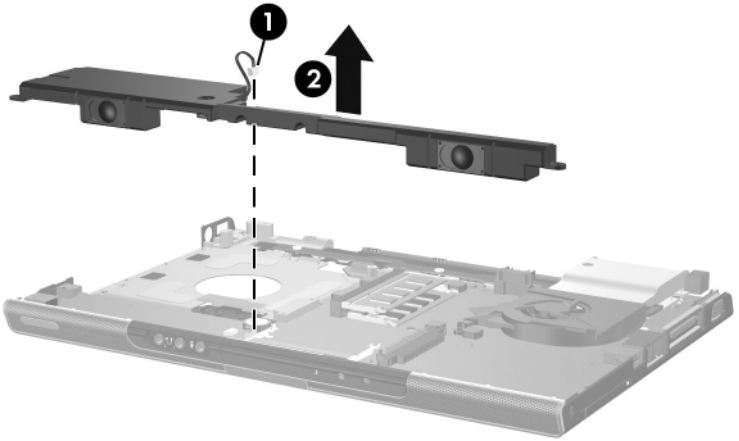
2. Disconnect the speaker cable ❶ from the system board.
3. Lift the speaker ❷ straight up to remove it from the top cover.



Removing the Speaker Assembly

Reverse the above procedure to install the speaker assembly.

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5.16 RTC Battery

The RTC battery is included with the system board. Refer to Section 5.21, "System Board," for spare part number information.

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)

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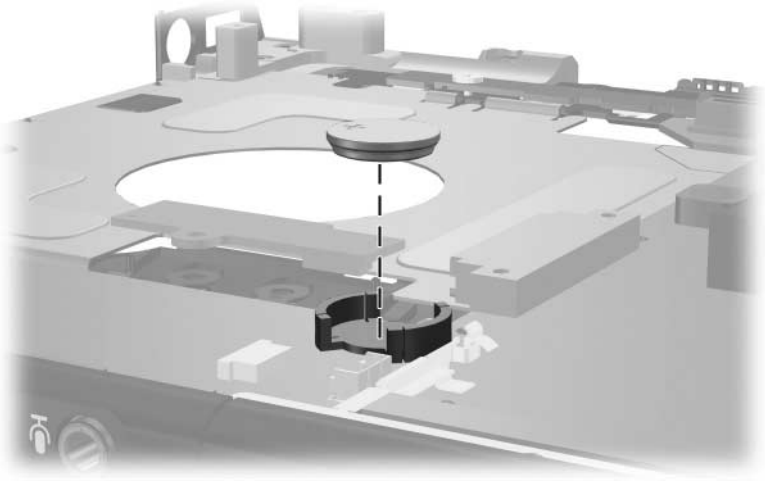
2. Remove the RTC battery from the socket on the system board.



Removing the RTC Battery

Reverse the above procedure to install the RTC battery. Make sure the RTC battery is installed with the "+" sign facing up.

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5.17 Menu Control Button Board

This section applies only to HP Pavilion dv1400 models.

Menu Control Button Board Spare Part Number Information	
Menu control button board (includes bracket and cable, for use only on HP Pavilion dv1400 models)	373535-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)
2. Position the top cover with the front panel toward you.

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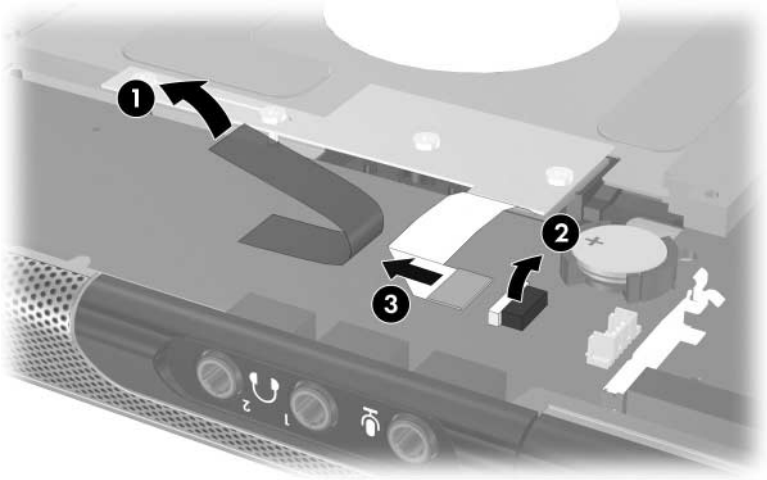
3. Remove the tape ❶ that secures the menu control button board cable to the system board.
4. Release the ZIF connector ❷ to which the menu control button board cable is connected and disconnect the cable ❸.



Disconnecting the Menu Control Button Board Cable

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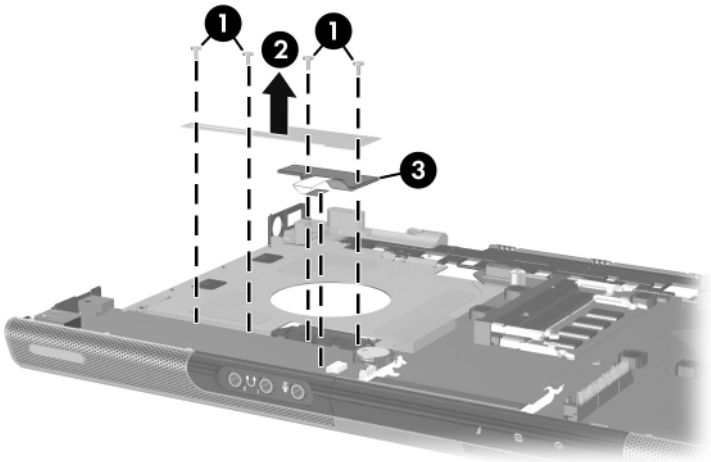
5. Remove the four PM2.0×3.0 screws ❶ that secure the menu control button board and shield to the top cover.
6. Remove the menu control button board shield ❷ and board ❸.



Removing the Menu Control Button Board and Shield

Reverse the above procedure to install the menu control button board and shield.

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5.18 Heat Sink

Heat Sink Spare Part Number Information	
Heat sink (includes thermal pad)	395436-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)
2. Turn the computer upside down with the front toward you.

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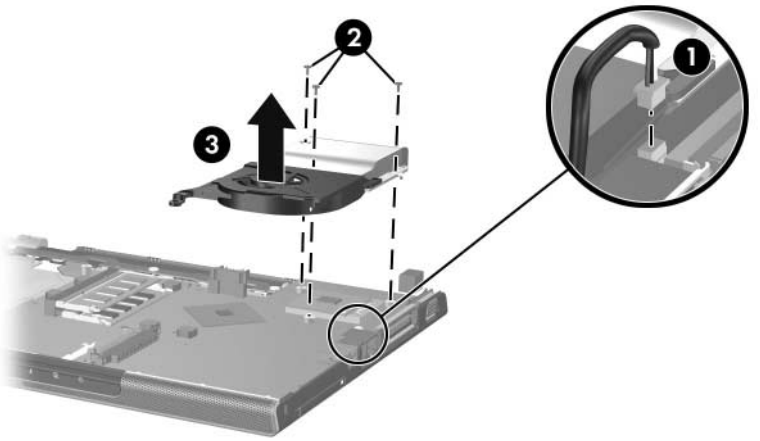
3. Disconnect the fan cable ❶ from the system board.
4. Remove the three silver PM2.0×5.0 screws ❷ that secure the heat sink to the top cover.
5. Remove the heat sink ❸.



Removing the Heat Sink

Reverse the above procedure to install the heat sink.

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5.19 Fan

Fan Spare Part Number Information	
Fan (includes thermal pad)	367795-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)
   - ❏ Heat sink (Section 5.18)
2. Turn the heat sink upside down with the front toward you.

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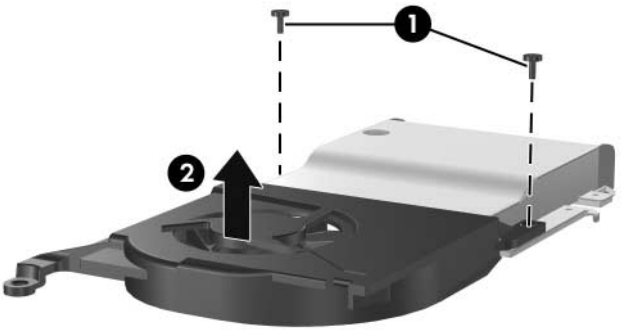
3. Remove the two silver PM2.0×5.0 screws ❶ that secure the fan to the heat sink.
4. Remove the fan ❷.



Removing the Fan

Reverse the above procedure to install the fan.

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5.20 Processor

Processor Spare Part Number Information	
Intel Pentium M 770 (2.13-GHz) with 400-MHz FSB	394829-001
Intel Pentium M 760 (2.0-GHz) with 400-MHz FSB	394828-001
Intel Pentium M 750 (1.8-GHz) with 400-MHz FSB	394827-001
Intel Pentium M 740 (1.7-GHz) with 400-MHz FSB	394826-001
Intel Pentium M 735a (1.7-GHz) with 400-MHz FSB	397100-001
Intel Pentium M 730 (1.6-GHz) with 400-MHz FSB	407315-001
Intel Pentium M 725 (1.6-GHz) with 400-MHz FSB	394825-001
Intel Celeron M 380 (1.6-GHz) with 400-MHz FSB	397344-001
Intel Celeron M 370 (1.4-GHz) with 400-MHz FSB	383876-001
Intel Celeron M 360 (1.4-GHz) with 400-MHz FSB	380033-001
Intel Celeron M 350 (1.3-GHz) with 400-MHz FSB	380032-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosure (Section 5.12)
   - ❏ Heat sink (Section 5.18)
   - ❏ Fan (Section 5.19)

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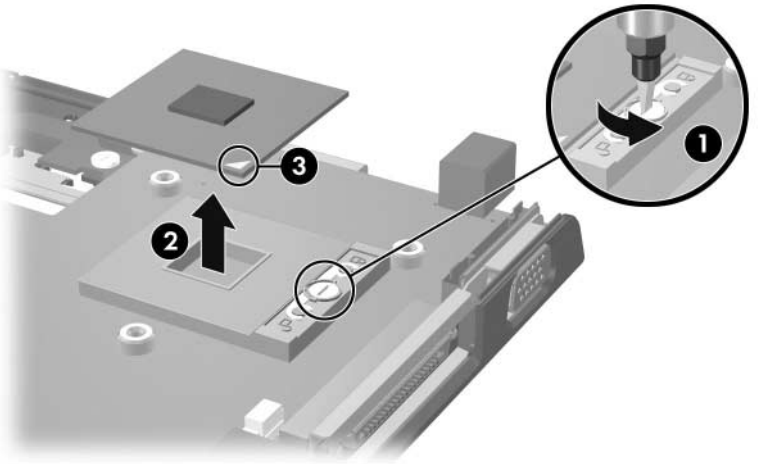
2. Turn the processor locking screw ❶ ¼-turn counterclockwise until you feel a click.
3. Lift the processor ❷ straight up and remove it.

The gold triangle ❸ 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.

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5.21 System Board

System Board Spare Part Number Information	
915GM, for use on full-featured HP Pavilion dv1400 models	393655-001
910GM, for use on defeatured HP Pavilion dv1400 models	393656-001
915GM, for use on full-featured HP Compaq nx4820 and Compaq Presario V2400 models	395135-001
910GM, for use on defeatured HP Compaq nx4820 and Compaq Presario V2400 models	404608-001

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 5.6)
- Mini PCI communications module (Section 5.7)
- RTC battery (Section 5.16)
- Menu control button board (Section 5.17)
- Heat sink (Section 5.18)
- Processor (Section 5.20)

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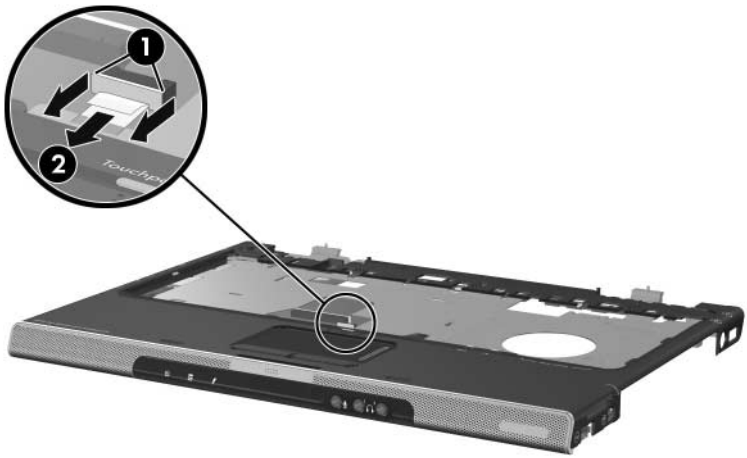
1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Hard drive (Section 5.4)
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosoure (Section 5.12)
   - ❏ USB/S-Video controller board (Section 5.13)
   - ❏ Speaker assembly (Section 5.15)
2. Turn the top cover right-side up with the front toward you.
3. Release the ZIF connector ❶ to which the TouchPad cable is connected and disconnect the cable ❷ from the system board.



Disconnecting the TouchPad Cable

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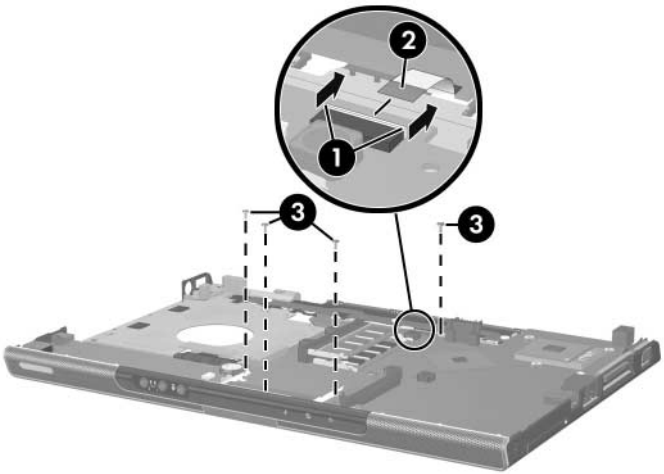
4. Turn the top cover upside down with the front toward you.

Steps 5 and 6 apply only to HP Pavilion dv1400 models. See steps 7 and 8 in this section for information on removing the system board on HP Compaq nx4820 and Compaq Presario V2400 models.

5. Release the ZIF connector ❶ to which the LED board cable is connected and disconnect the cable ❷ from the system board.
6. Remove the four silver PM2.0×5.0 screws ❸ that secure the system board to the top cover.



Disconnecting the LED Board Cable and Removing the System Board Screws, HP Pavilion dv1400 models Only

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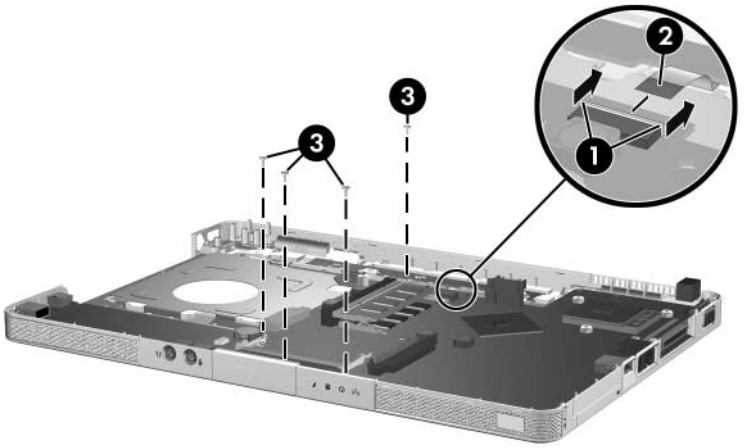
Steps 7 and 8 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

7. Release the ZIF connector ❶ to which the LED board cable is connected and disconnect the cable ❷ from the system board.
8. Remove the four silver PM2.0×5.0 screws ❸ that secure the system board to the top cover.



Disconnecting the LED Board Cable and Removing the System Board Screws, HP Compaq nx4820 and Compaq Presario V2400 models Only

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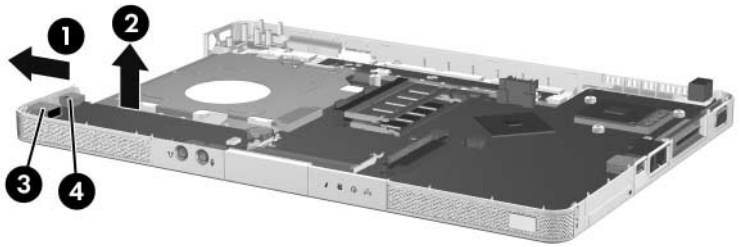
9. Flex and hold the left edge of the top cover ❶ to the left.
10. Lift the left side of the system board ❷ until the USB ❸ and 1394 connectors ❹ are clear.



Releasing the System Board, Part 1

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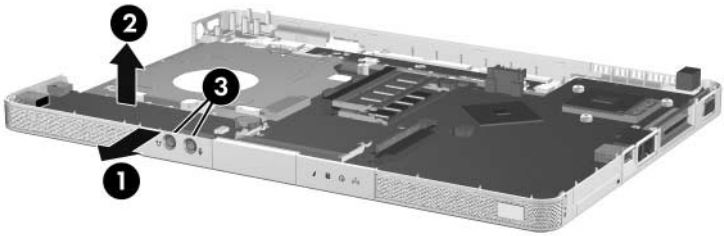
11. Flex and hold the front edge of the top cover ❶ forward.
12. Lift the front of the system board ❷ until the audio connectors ❸ are clear.



Releasing the System Board, Part 2

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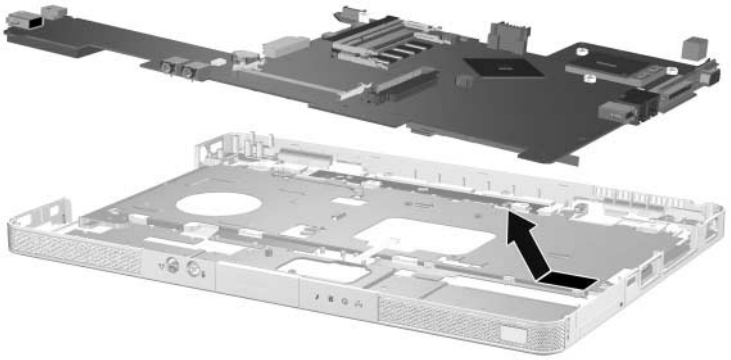
13. Slide the system board to the left at an angle and remove it from the top cover.



Removing the System Board

Reverse the above procedure to install the system board.

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5.22 LED Board

LED Board Spare Part Number Information	
For use on HP Pavilion dv1400 models	367797-001
For use on HP Compaq nx4820 and Compaq Presario V2400 models	367798-001

1. Prepare the computer for disassembly (Section 5.3) and remove the following components:
   - ❏ Optical drive (Section 5.8)
   - ❏ Switch cover (Section 5.9)
   - ❏ Keyboard (Section 5.10)
   - ❏ Display assembly (Section 5.11)
   - ❏ Base enclosoure (Section 5.12)
   - ❏ USB/S-Video controller board (Section 5.13)
   - ❏ Speaker assembly (Section 5.15)
   - ❏ System board (Section 5.21)
2. Turn the computer upside down with the front panel toward you.

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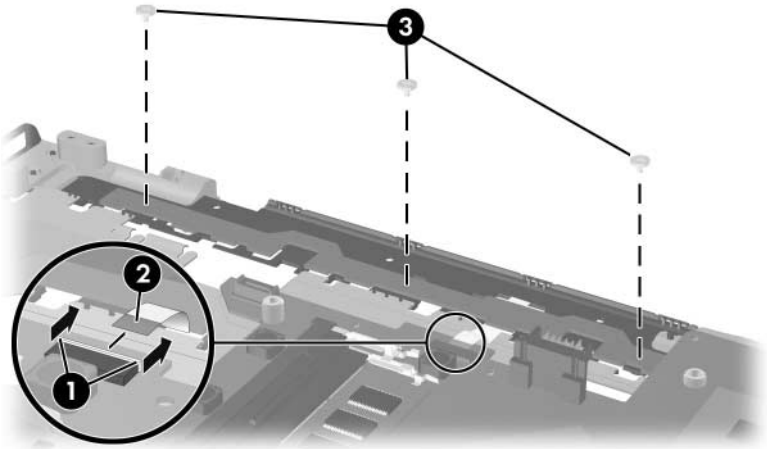
Steps 3 and 4 apply only to HP Pavilion dv1400 models. See steps 5 and 6 in this section for information on removing the LED board on HP Compaq nx4820 and Compaq Presario V2400 models.

3. Release the ZIF connector ❶ to which the LED board cable is connected and disconnect the cable ❷ from the system board.
4. Remove the three PM1.5×2.0 screws ❸ that secure the LED board to the top cover.



Removing the LED Board Screws, HP Pavilion dv1400 Models Only

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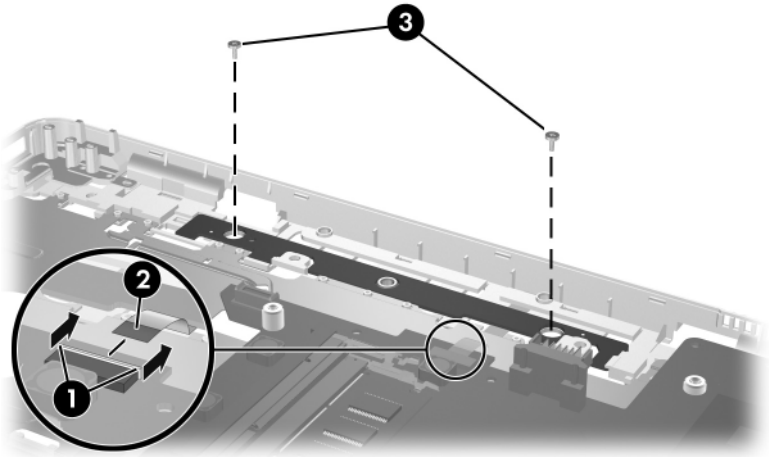
Steps 5 and 6 apply only to HP Compaq nx4820 and Compaq Presario V2400 models.

5. Release the ZIF connector ❶ to which the LED board cable is connected and disconnect the cable ❷ from the system board.
6. Remove the two PM2.0×3.0 screws ❸ that secure the LED board to the top cover.



Removing the LED Board Screws, HP Compaq nx4820 and Compaq Presario V2400 Models Only

7. Remove the LED board.

Reverse the above procedure to install the LED board.

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6

Specifications

This chapter provides physical and performance specifications.

Table 6-1

Computer

Dimensions		
HP Pavilion dv1400		
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
HP Compaq nx4820 and Compaq Presario V2400		
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 dv1400	2.44 kg	5.38 lb
HP Compaq nx4820 and Compaq Presario V2400	2.39 kg	5.26 lb
Stand-alone power requirements		
Nominal operating voltage	18.5 V DC @ 3.5 A	
Peak operating power	65 W	

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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.

* For HP Compaq nx4820 only:

Operating (not writing to optical disc)	0°C to 35°C	32°F to 95°F
Operating (writing to optical disc)	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F

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Table 6-2

14.0-inch, WXGA, SVA Display

Dimensions		
Height	27.94 cm	11.0 in
Width	20.83 cm	8.2 in
Diagonal	35.56 cm	14.0 in
Number of colors	Up to 16.8 million	
Contrast ratio	250:1	
Brightness	180 nits typical	
Pixel resolution		
Pitch	0.279 × 0.279 mm	
Format	1280 × 768	
Configuration	RGB vertical stripe	
Backlight	Edge lit	
Character display	80 × 25	
Total power consumption	4 W	
Viewing angle	+/-40° horizontal, +20/-40° vertical typical	

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Table 6-3

Hard Drives

	80-GB	60-GB	60-GB	40-GB
Dimensions				
Height	9.5 mm	9.5 mm	9.5 mm	9.5 mm
Width	70 mm	70 mm	70 mm	70 mm
Weight	99 g	102 g	99 g	99 g
Interface type	ATA-5	ATA-5	ATA-5	ATA-5
Transfer rate				
Synchronous (maximum)	100 MB/sec	100 MB/sec	100 MB/sec	100 MB/sec
Security	ATA security	ATA security	ATA security	ATA security
Seek times (typical read, including setting)				
Single track	3 ms	3 ms	3 ms	3 ms
Average	13 ms	13 ms	13 ms	13 ms
Maximum	24 ms	24 ms	24 ms	24 ms
Logical blocks†	156,301,488	117,210,240	117,210,240	78,140,160
Disk rotational speed	5400 rpm	5400 rpm	4200 rpm	4200 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. Accessible capacity is less.

†Actual drive specifications may differ slightly.

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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

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Table 6-5

DVD±RW/R and CD-RW Double Layer Combo Drive

Applicable disk	**Read:** 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	**Write:** CD-R and CD-RW DVD-R and DVD-RW
Center hole diameter	1.5 cm (0.59 in)	
Disk diameter		
Standard disc	12 cm (4.72 in)	
Mini disc	8 cm (3.15 in)	

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Table 6-5

DVD±RW/R and CD-RW Double Layer Combo Drive

Disk thickness	1.2 mm (0.047 in)	
Track pitch	0.74 µm	
Access time	CD media	DVD media
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	

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Table 6-6

DVD/CD-RW Combo Drive

Applicable disk	**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)	
Disk diameter		
Standard disc	12 cm (4.72 in)	
Mini disc	8 cm (3.15 in)	

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Table 6-6

DVD/CD-RW Combo Drive *(Continued)*

Disk thickness	1.2 mm (0.047 in)	
Track pitch	0.74 µm	
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	

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Table 6-7

DVD-ROM Drive

Applicable disk	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)
Disk diameter	
Standard disc	12 cm (4.72 in)
Mini disc	8 cm (3.15 in)
Disk thickness	1.2 mm (0.047 in)

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Table 6-7

DVD-ROM Drive *(Continued)*

Track pitch	0.74 µm	
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	

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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

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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.

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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 PCIxx21/x515 Cardbus Controller
IRQ20	TI OHCI Compliant IEEE 1394 Host Controller
IRQ21	TI Integrated PCIxx21 FlashMedia Controller
IRQ21	Broadcom 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.

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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

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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

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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 PCIxx21/x515 Cardbus Controller
0x0000FE00-0x0000FEFF	Texas Instruments PCIxx21/x515 Cardbus Controller

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Table 6-11

System Memory Map

Memory Map Address (hex)	**System Function** (shipping configuration)
0xD4100000-0xD41FFFFF	PCI standard PCI-to-PCI bridge
0xD4100000-0xD41FFFFF	ATI MOBILITY RADEON Xpress 200 Series
0xD8000000-0xDBFFFFFF	PCI standard PCI-to-PCI bridge
0xD8000000-0xDBFFFFFF	ATI MOBILITY RADEON Xpress 200 Series
0xFAC00000-0xFEBFFFFF	PCI standard PCI-to-PCI bridge
0xF6C00000-0xFABFFFFF	PCI standard PCI-to-PCI bridge
0xD4000000-0xD4000FFF	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
0xFFF80000-0xFFFFFFFF	System board
0xE0000000-0xE03FFFFF	System board
0xE0000000-0xE03FFFFF	System board resources
0x0000-0x0FFF	System board

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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	Broadcom 802.11b/g WLAN
0xFFEFF000-0xFFEFFFFF	Texas Instruments PCIxx21/x515 Cardbus Controller
0xFFEFE000-0xFFEFEFFF	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

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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

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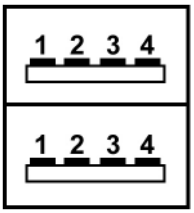
A

Connector Pin Assignments

Table A-1

Universal Serial Bus



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

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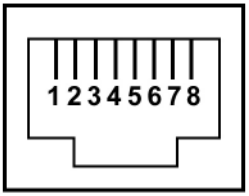
Table A-2

RJ-45 (Network)



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

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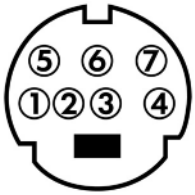
Table A-3

S-Video-Out



Pin	Signal	Pin	Signal
1	TV-Ground	5	TV-CD
2	TV-CVBS	6	TV-Ground
3	TV-Ground	7	TV-YD
4	TV-Ground		

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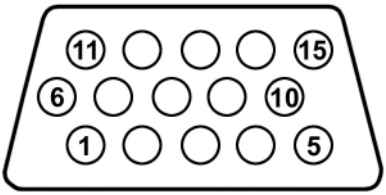
Table A-4

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		

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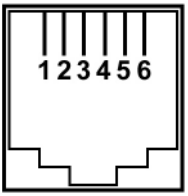
Table A-5

RJ-11 (Modem)



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

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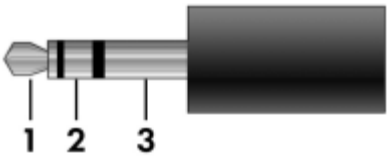
Table A-6

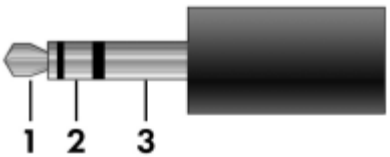
Audio-In (Microphone)



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		

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B

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.

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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.

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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.

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

Country/Region	Accredited Agency	Applicable Note Number
Korea	EK	4
The Netherlands	KEMA	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.

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C

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 367776-001 (for use on HP Pavilion dv1400 models) and 373534-001 (for use on HP Compaq nx4820 and Compaq Presario V2400 models).

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Table C-1

Black Phillips PM2.0×5.0 Screw

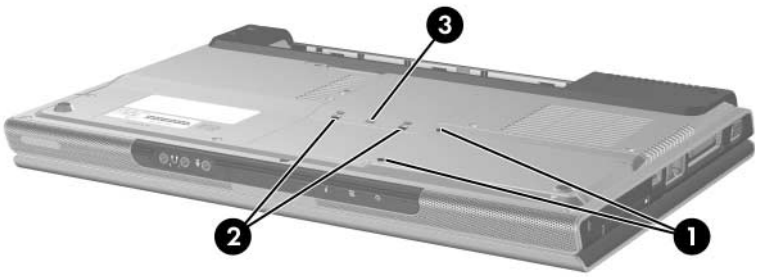
mm	Color	Qty.	Length	Thread	Head Width
	Black	9	5.0 mm	2.0 mm	4.0 mm

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 5.6)

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 5.7)



Black Phillips M2.0×5.0 Screw Locations

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Table C-1

Black Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	9	5.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the display assembly on the HP Compaq nx4820 and Compaq Presario V2400 computer (documented in Section 5.11)

Black Phillips M2.0×5.0 Screw Locations

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Table C-2

Phillips PM2.5×4.0 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Silver	4	4.0 mm	2.5 mm	4.0 mm

Where used:

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

Phillips M2.5×4.0 Screw Locations

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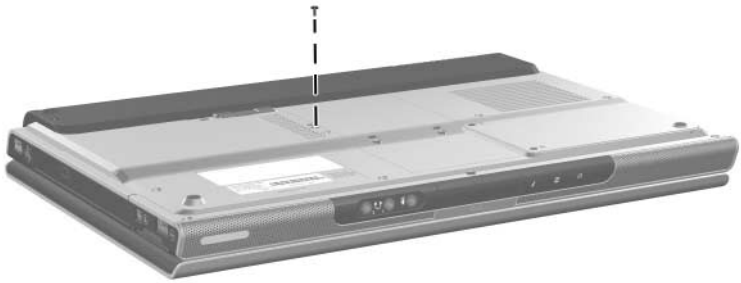
Table C-3

Phillips PM2.0×8.5 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Black	32	8.5 mm	2.0 mm	4.0 mm

Where used:

One screw that secures the optical drive to the computer (documented in Section 5.8)



Phillips M2.0×8.5 Screw Location

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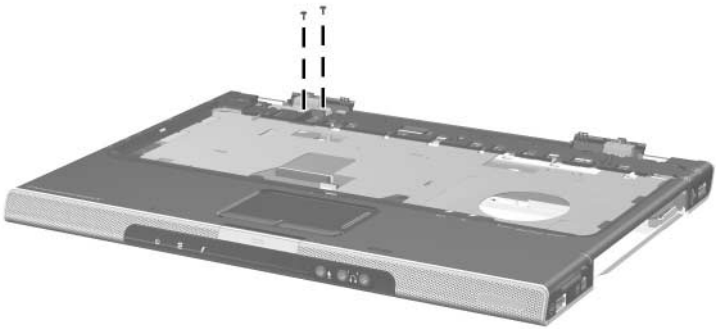
Table C-3

Phillips PM2.0×8.5 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	32	8.5 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the base enclosure on the HP Pavilion dv1400 (documented in Section 5.12)



Phillips M2.0×8.5 Screw Locations

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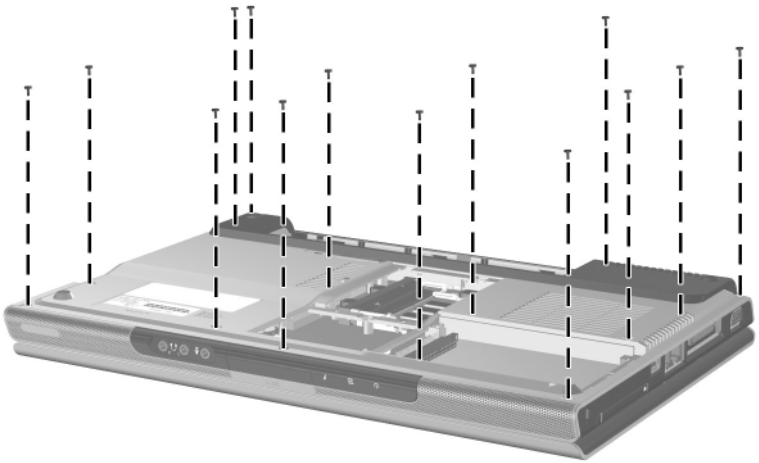
Table C-3

Phillips PM2.0×8.5 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	32	8.5 mm	2.0 mm	4.0 mm

Where used:

14 screws that secure the base enclosure on the HP Pavilion dv1400 (documented in Section 5.12)



Phillips M2.0×8.5 Screw Locations

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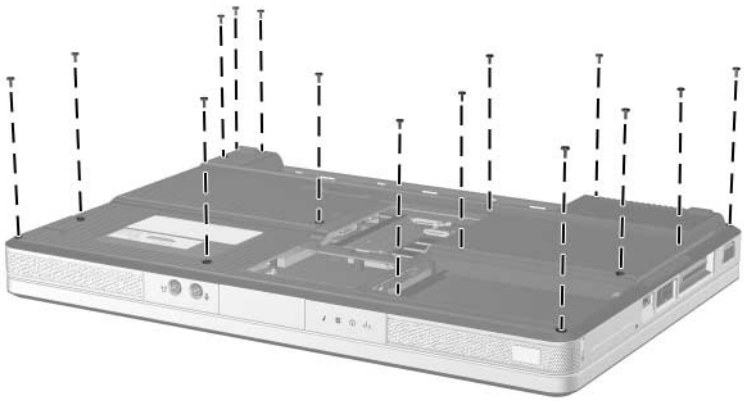
Table C-3

Phillips PM2.0×8.5 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	32	8.5 mm	2.0 mm	4.0 mm

Where used:

15 screws that secure the base enclosure on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.12)



Phillips M2.0×8.5 Screw Locations

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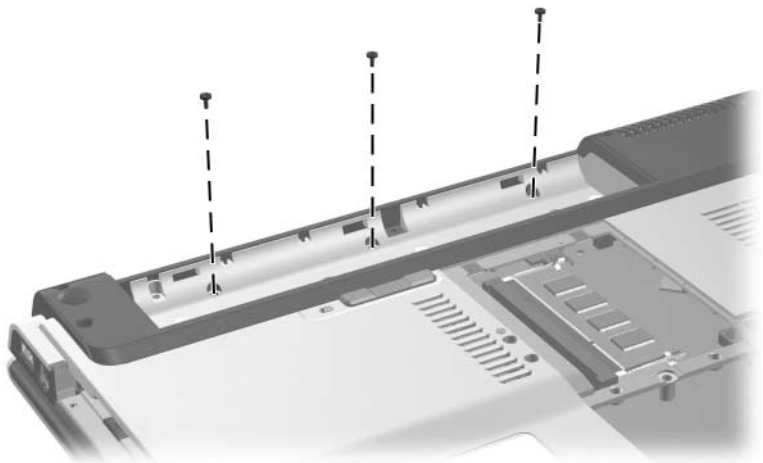
Table C-4

Silver Phillips PM2.0×5.0 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

3 screws that secure the switch cover on the HP Pavilion dv1400 (documented in Section 5.9)



Silver Phillips M2.0×5.0 Screw Locations

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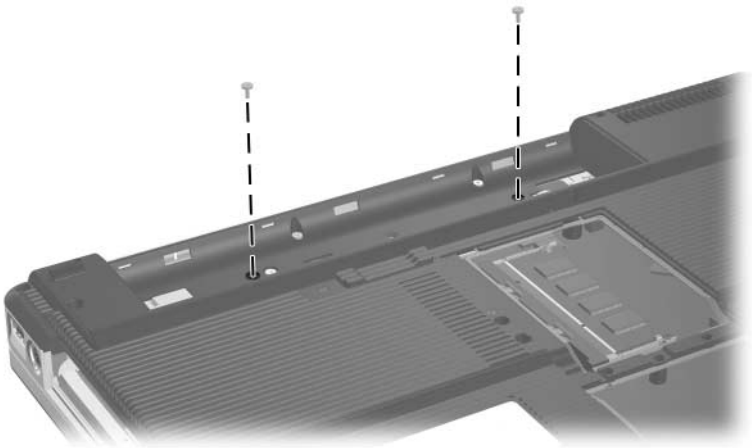
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

2 screws that secure the switch cover on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.9)



Silver Phillips M2.0×5.0 Screw Locations

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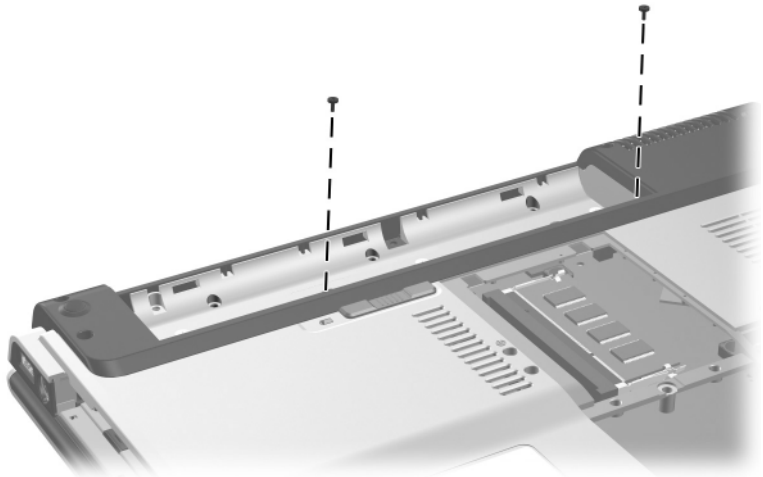
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

2 screws that secure the keyboard on the HP Pavilion dv1400 (documented in Section 5.10)



Silver Phillips M2.0×5.0 Screw Locations

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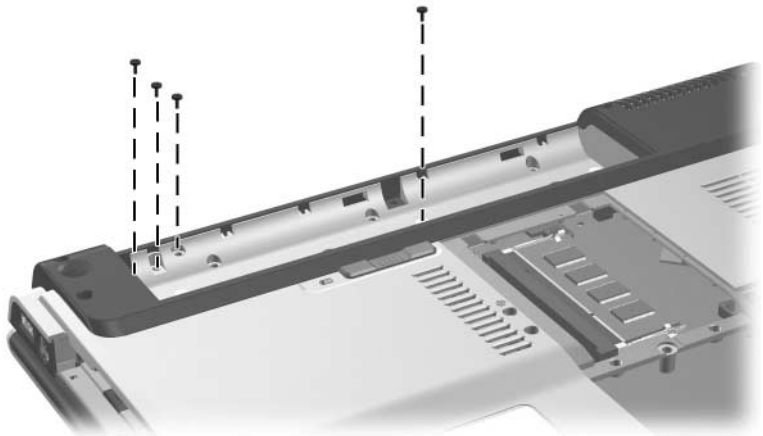
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the base enclosure on the HP Pavilion dv1400 (documented in Section 5.12)



Silver Phillips M2.0×5.0 Screw Locations

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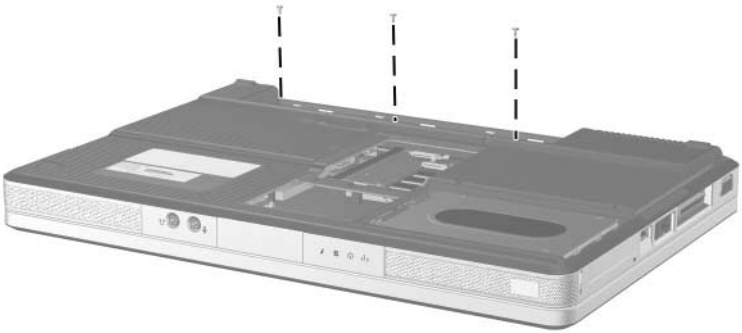
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

3 screws that secure the base enclosure on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.12)



Silver Phillips M2.0×5.0 Screw Locations

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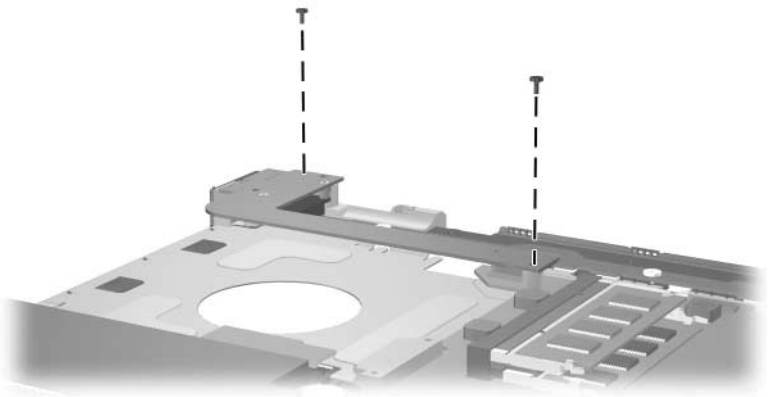
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

2 screws that secure the USB/S-Video controller board to the (documented in Section 5.13)



Silver Phillips M2.0×5.0 Screw Locations

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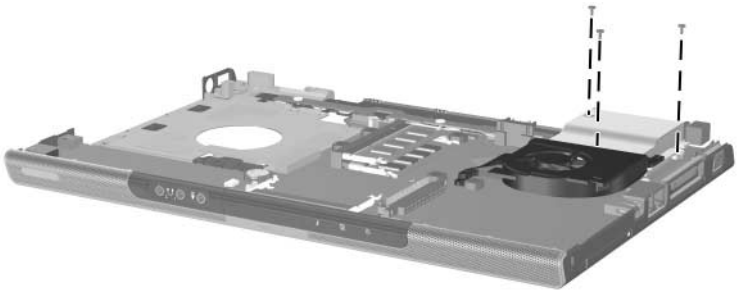
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

3 screws that secure the heat sink to the (documented in Section 5.18)



Silver Phillips M2.0×5.0 Screw Locations

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Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

2 screws that secure the fan to the heat sink (documented in Section 5.19)

Silver Phillips M2.0×5.0 Screw Locations

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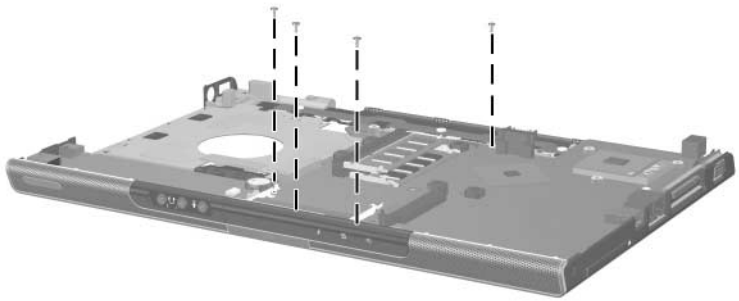
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the system board on the HP Pavilion dv1400 (documented in Section 5.21)



Silver Phillips M2.0×5.0 Screw Locations

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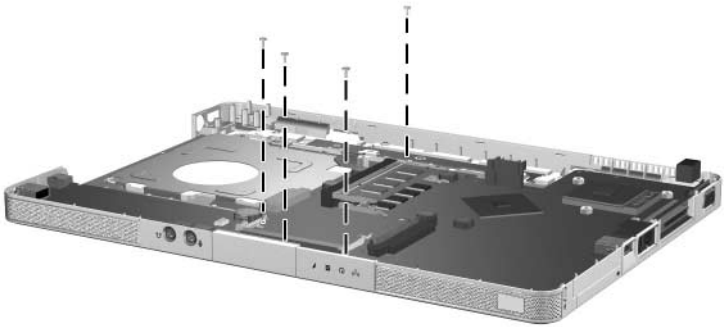
Table C-4

Silver Phillips PM2.0×5.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Silver	29	5.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the system board on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.21)



Silver Phillips M2.0×5.0 Screw Locations

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Table C-5

Phillips PM2.0×3.0 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Black	10	3.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the keyboard on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.10)

Phillips M2.0×3.0 Screw Locations

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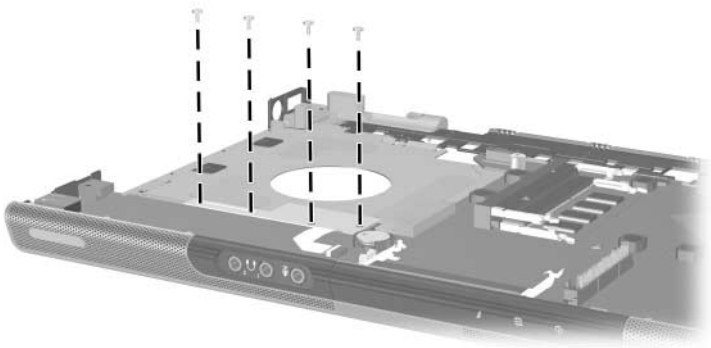
Table C-5

Phillips PM2.0×3.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	10	3.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the menu control button board on the HP Pavilion dv1400 (documented in Section 5.17)



Phillips M2.0×3.0 Screw Locations

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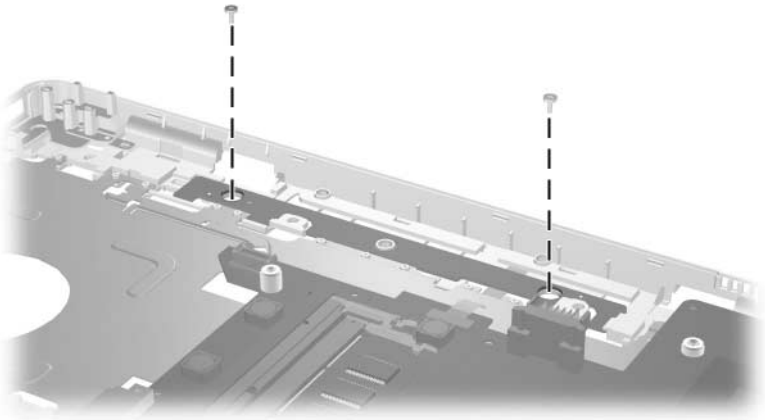
Table C-5

Phillips PM2.0×3.0 Screw *(Continued)*

mm	Color	Qty.	Length	Thread	Head Width
	Black	10	3.0 mm	2.0 mm	4.0 mm

Where used:

2 screws that secure the LED board on the HP Compaq nx4820 and Compaq Presario V2400 (documented in Section 5.22)



Phillips M2.0×3.0 Screw Locations

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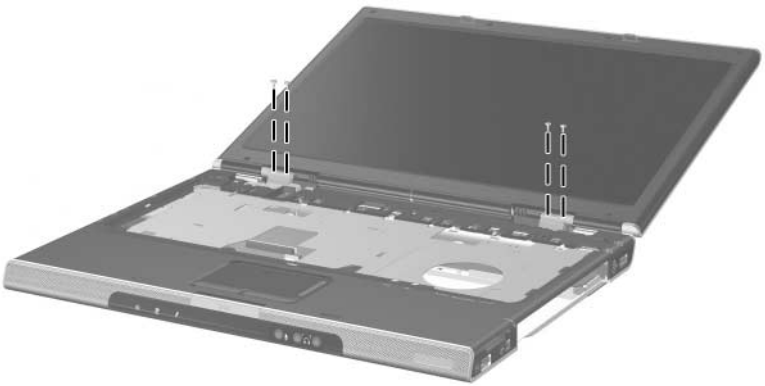
Table C-6

Phillips PM2.0×7.0 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Black	4	7.0 mm	2.0 mm	4.0 mm

Where used:

4 screws that secure the display assembly on the HP Pavilion dv1400 (documented in Section 5.11)



Phillips M2.0×7.0 Screw Locations

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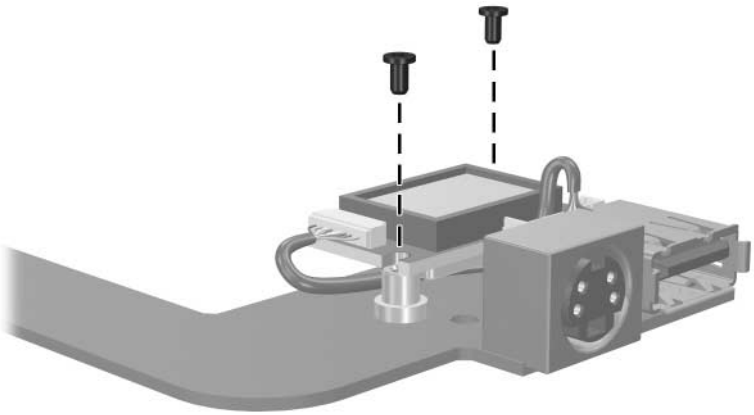
Table C-7

Phillips PM1.5×3.5 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 module to the USB/S-Video controller board (documented in Section 5.14)



Phillips M1.5×3.5 Screw Locations

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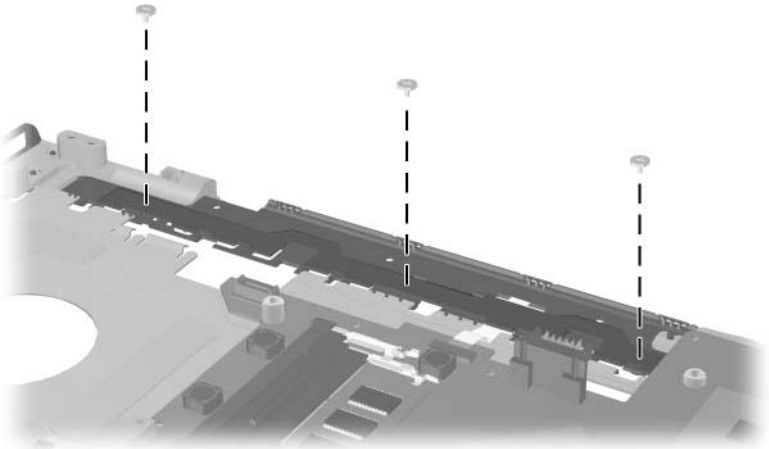
Table C-8

Phillips PM1.5×2.0 Screw

mm	Color	Qty.	Length	Thread	Head Width
	Silver	3	2.0 mm	1.5 mm	6.0 mm

Where used:

3 screws that secure the LED board on the HP Pavilion dv1400 (documented in Section 5.22)



Phillips M1.5×2.0 Screw Locations

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D

Display Component Recycling

WARNING: The backlight contains mercury. Caution should be exercised when removing and handling the backlight to avoid damaging this component and causing exposure to the mercury.

CAUTION: The procedures in this appendix can result in damage to display components. The only components intended for recycling purposes are the liquid crystal display (LCD) panel and the backlight. Careful handling should be exercised when removing these components.

Materials Disposal

This HP product contains mercury in the display assembly backlight and may require special handling at end-of-life.

Disposal of mercury may be regulated because of environmental considerations. For disposal or recycling information, contact your local authorities or visit the Electronic Industries Alliance (EIA) at http://www.eiae.org.

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This appendix provides disassembly instructions for the display assembly. The display assembly must be disassembled to gain access to the backlight ❶ and the LCD panel ❷.

Disassembly procedures differ from one display assembly to another. The procedures provided in this appendix are general disassembly instructions. Specific details, such as screw sizes, quantities, and locations, and component shapes and sizes, can vary from one computer model to another.

Refer to Section 5.11, "Display Assembly," for display assembly disassembly steps.

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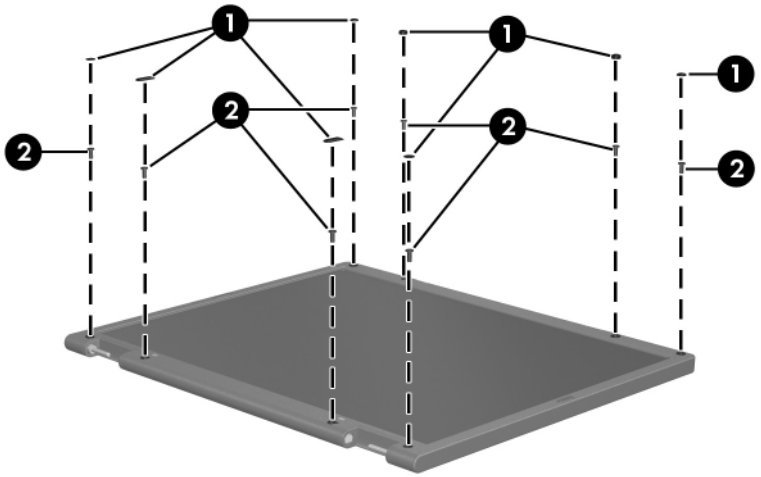
Perform the following steps to disassemble the display assembly:

1. Remove all screw covers ❶ and screws ❷ that secure the display bezel to the display assembly.



Removing the Display Bezel Screw Covers and Screws

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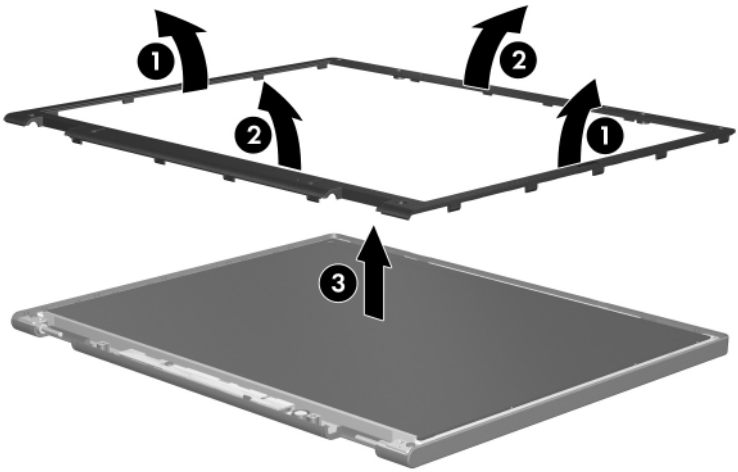
2. Lift up and out on the left and right inside edges ❶ and the top and bottom inside edges ❷ of the display bezel until the bezel disengages from the display assembly.
3. Remove the display bezel ❸.



Removing the Display Bezel

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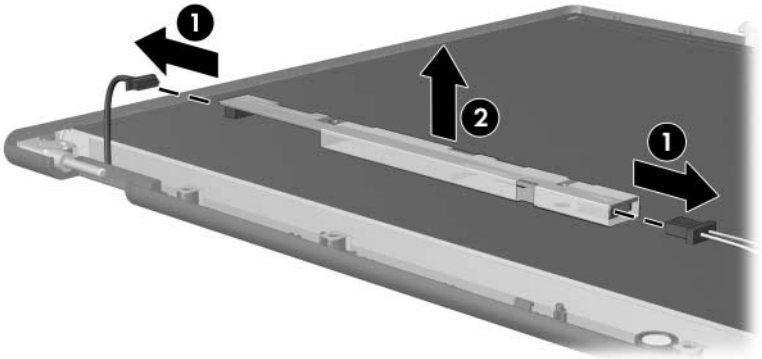
4. Disconnect all LCD panel cables ❶ from the display inverter and remove the inverter ❷.



Removing the Display Inverter

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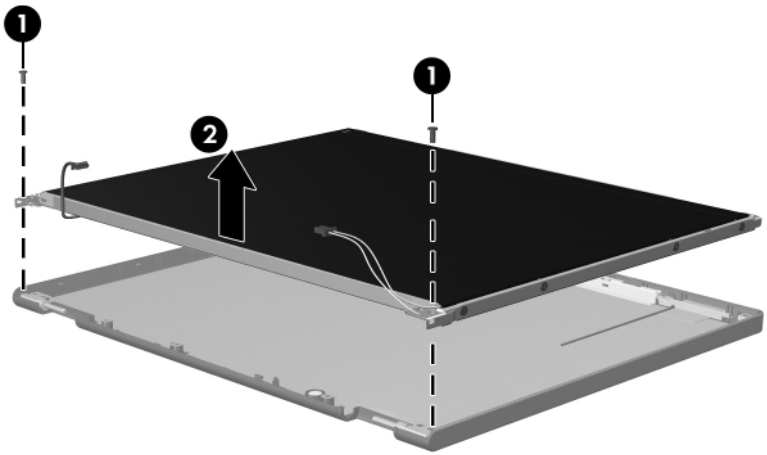
5. Remove all screws ❶ that secure the LCD panel to the display enclosure.
6. Remove the LCD panel ❷ from the display enclosure.



Removing the LCD Panel

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7. Turn the LCD panel upside down.
8. Remove all screws that secure the LCD panel frame to the LCD panel.

Removing the LCD Panel Frame Screws

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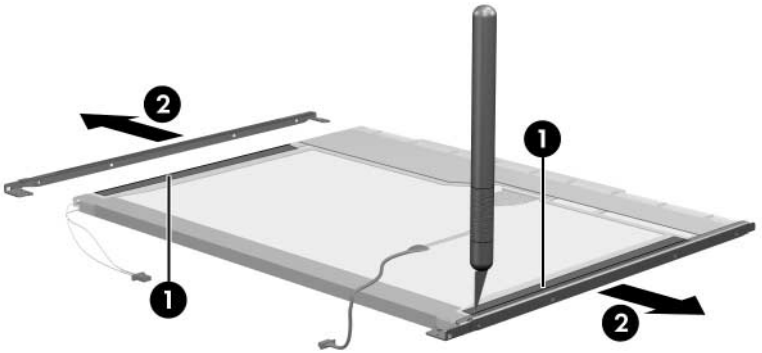
9. Use a sharp-edged tool to cut the tape ❶ that secures the side of the LCD panel to the LCD panel frame.
10. Remove the LCD panel frame ❷ from the display panel.



Removing the LCD Panel Frame

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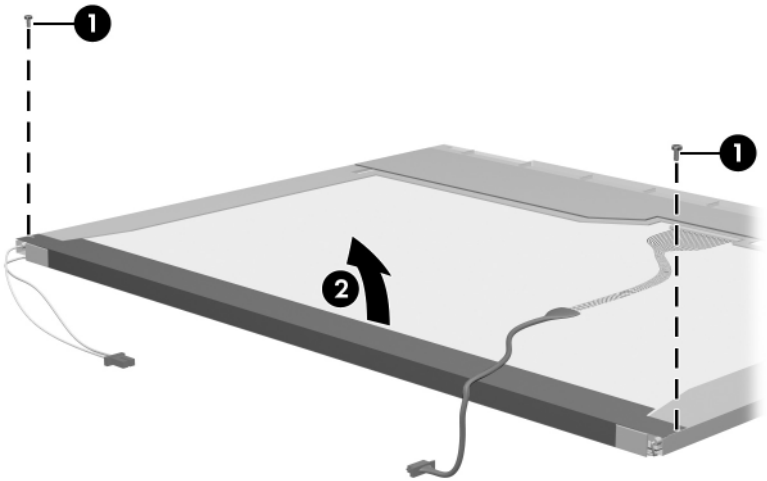
11. Remove the screws ❶ that secure the backlight cover to the LCD panel.
12. Lift the top edge of the backlight cover ❷ and swing it forward.
13. Remove the backlight cover.



Removing the Backlight Cover

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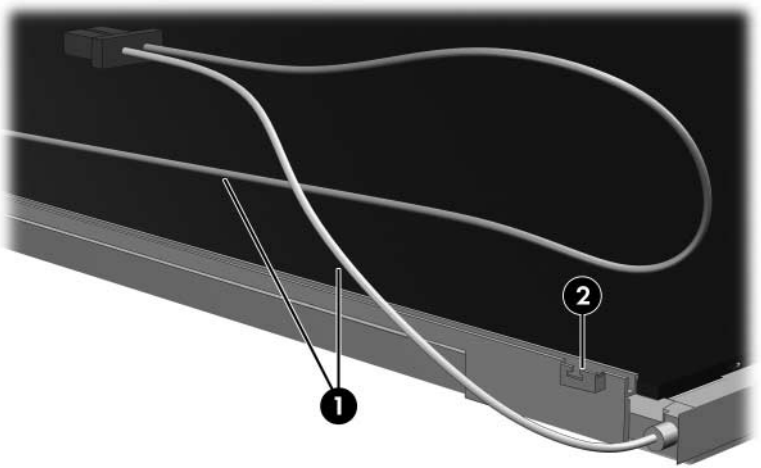
14. Turn the LCD panel right-side up.
15. Remove the backlight cables ❶ from the clip ❷ in the LCD panel.



Releasing the Backlight Cables

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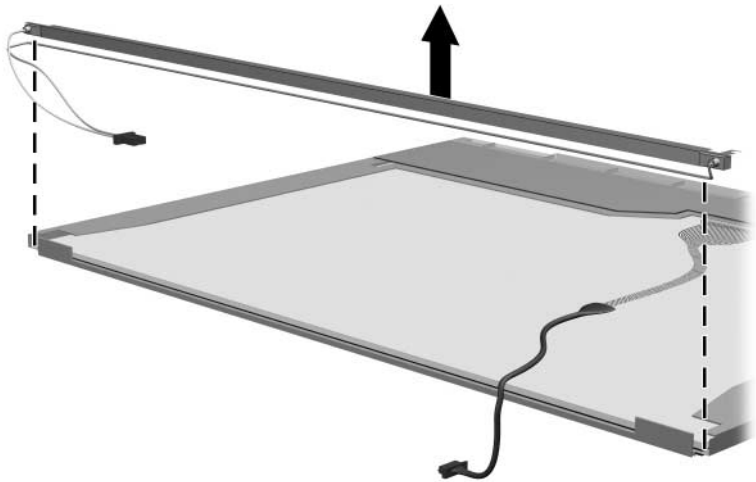
16. Turn the LCD panel upside down.
17. Remove the backlight frame from the LCD panel.



Removing the Backlight Frame

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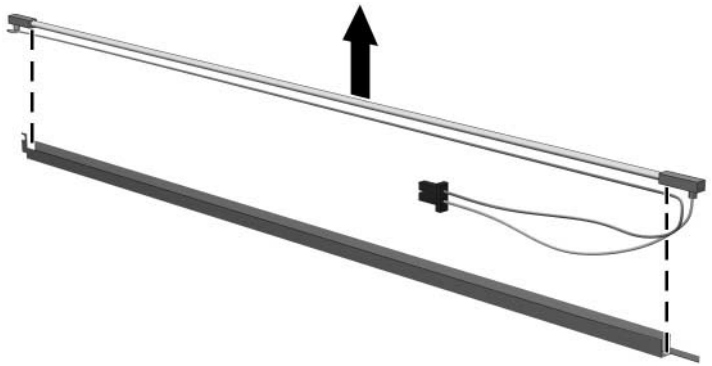
WARNING: The backlight contains mercury. Caution should be exercised when removing and handling the backlight to avoid damaging this component and causing exposure to the mercury.

18. Slide the backlight out of the backlight frame.



Removing the Backlight

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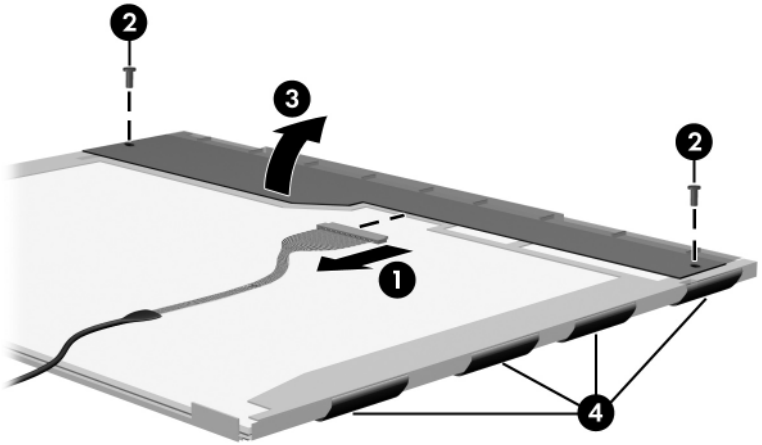
19. Disconnect the display cable ❶ from the LCD panel.
20. Remove the screws ❷ that secure the LCD panel to the LCD rear panel.
21. Release the LCD panel ❸ from the LCD rear panel.
22. Release the tape ❹ that secures the LCD panel to the LCD rear panel.



Releasing the LCD Panel

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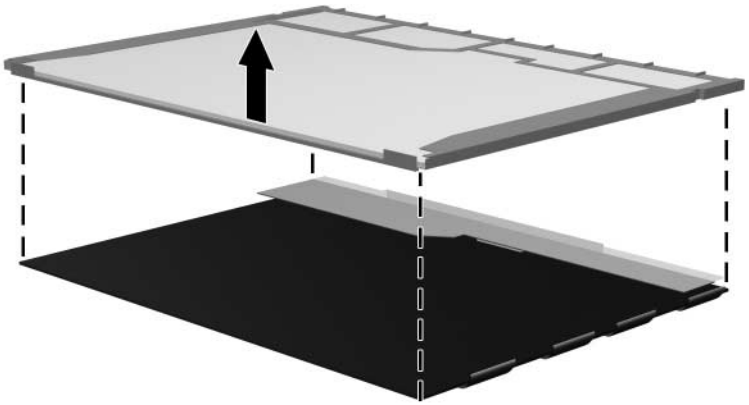
23. Remove the LCD panel.



Removing the LCD Panel

24. Recycle the backlight and LCD panel.

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