



# **Maintenance and Service Guide**

HP Compaq tc4200 Tablet PC

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

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Maintenance and Service Guide  
HP Compaq tc4200 Tablet PC  
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# 1

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## Product Description

The HP Compaq tc4200 Tablet PC offers advanced modularity, Intel® Pentium® M and Celeron® M processors, and extensive multimedia support.



*HP Compaq tc4200 Tablet PC*

## 1.1 Features

- Intel Pentium M 2.13-, 2.00-, 1.86-, 1.73-, or 1.60-GHz processors, or Intel Celeron M 1.50-GHz processor, varying by tablet PC model
- 12.1-inch, XGA, TFT (1024 × 768) display with over 16.8 million colors
- 80-, 60-, or 40-GB high-capacity hard drive, varying by tablet PC model
- 256-MB DDR2 synchronous DRAM (SDRAM) at 400 MHz, expandable to 2.0 GB
- Microsoft® Windows® XP Tablet Edition
- Full-size Windows keyboard with embedded numeric keypad
- TouchPad and pointing stick pointing devices, including a dedicated vertical scroll region
- Integrated 10Base-T/100Base-T/1000Base-T Ethernet local area network (LAN) network interface card (NIC) with RJ-45 jack
- Integrated high-speed 56K modem with RJ-11 jack
- Integrated wireless support for Mini PCI IEEE 802.11b/g and 802.11a/b/g WLAN device
- Support for one Type I or Type II PC Card slot, with support for both 32-bit (CardBus) and 16-bit PC Cards

- External 65-watt AC adapter with 3-wire power cord
- 6-cell Li-Ion battery pack, varying by tablet PC model
- Audio speaker
- Volume up, volume mute, and volume down buttons
- Connectors:
  - Infrared
  - Audio-out (headphone)
  - Audio-in (microphone)
  - Universal Serial Bus (USB) v. 2.0 (3 ports, 1 powered)
  - Power
  - External monitor
  - RJ-45 (network)
  - RJ-11 (modem)
  - S-Video-out
  - PC Card
  - SD Card
  - Primary battery
  - Travel battery
  - Docking connector

## 1.2 Resetting the Tablet PC

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

1. Prepare the tablet PC for disassembly (refer to [Section 6.3](#), “[Preparing the Tablet PC for Disassembly](#),” for more information).
2. Remove the real-time clock (RTC) battery (refer to [Section 6.24](#), “[RTC Battery](#),” for more information on removing and replacing the RTC battery).
3. Wait approximately 5 minutes.
4. Replace the RTC battery and reassemble the tablet PC.
5. Connect AC power to the tablet PC. Do not reinsert any battery packs at this time.
6. Turn on the tablet PC.

All passwords and all CMOS settings have been cleared.



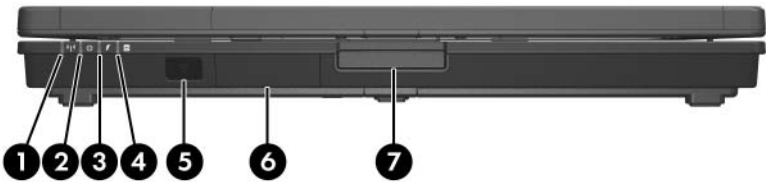
## 1.3 Power Management

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

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

## 1.4 External Components

The external components on the front of the tablet PC are shown below and described in Table 1-1.



*Front Components*

---

**Table 1-1**

**Front Components**

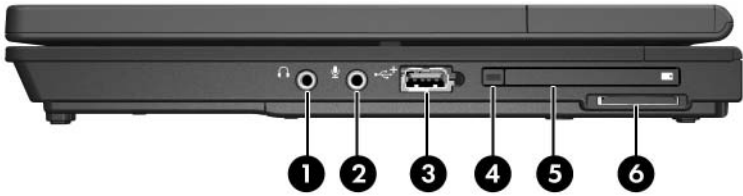
| Item | Component           | Function                                                                                                           |
|------|---------------------|--------------------------------------------------------------------------------------------------------------------|
| 1    | Wireless light      | On: One or more optional internal wireless devices, such as a WLAN device and/or Bluetooth® device, are turned on. |
| 2    | Power/standby light | ■ Green: The tablet PC is on.<br>■ Blinking green: The tablet PC is in standby mode.                               |

---

**Table 1-1**  
**Front Components (Continued)**

| <b>Item</b> | <b>Component</b>                               | <b>Function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3           | Battery light                                  | <ul style="list-style-type: none"> <li>■ Amber: A battery pack is charging.</li> <li>■ Green: A battery pack is close to full charge capacity.</li> <li>■ Blinking amber: A battery pack that is the only available power source has reached a low-battery condition. When the battery reaches a critical low-battery condition, the battery light begins blinking more quickly.</li> <li>■ Off: If the tablet PC is connected to an external power source, the light is turned off when all batteries in the tablet PC are fully charged. If the tablet PC is not connected to an external power source, the light is turned off until the battery reaches a low-battery condition, when the light begins blinking amber.</li> </ul> |
| 4           | Integrated Drive Electronics (IDE) drive light | On: A drive in the hard drive bay is being accessed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5           | Fast IrDA (select models only)                 | Links the tablet PC to an optional remote control.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 6           | Bluetooth module (select models only)          | Sends and receives Bluetooth device signals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 7           | Display release button                         | Opens the tablet PC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

The external components on the right side of the tablet PC are shown below and described in Table 1-2.

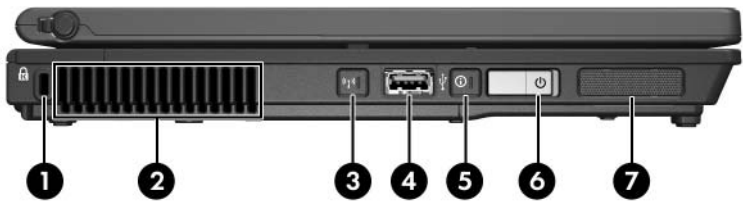


*Right-Side Components*

**Table 1-2**  
**Right-Side Components**

| <b>Item</b> | <b>Component</b>           | <b>Function</b>                                                                                                                                                                                                                                      |
|-------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Audio-out (headphone) jack | Connects an optional headphone or powered stereo speakers. Also connects the audio function of an audio/video device, such as a television or VCR.                                                                                                   |
| 2           | Audio-in (microphone) jack | Connects an optional monaural (single sound channel) or stereo (dual sound channel) microphone.                                                                                                                                                      |
| 3           | Powered USB port           | Connects USB 1.1- or 2.0-compliant devices to the tablet PC using a standard USB cable, or connects an optional external MultiBay or external MultiBay II to the tablet PC. This USB port is a powered port that can be used without external power. |
| 4           | PC Card slot eject button  | Ejects PC Cards from the PC Card slot.                                                                                                                                                                                                               |
| 5           | PC Card slot               | Supports optional Type I, Type II, 32-bit (CardBus), or 16-bit PC Cards.                                                                                                                                                                             |
| 6           | SD Card slot               | Accepts SD (Secure Digital) Memory Cards or MultiMediaCards.                                                                                                                                                                                         |

The external components on the left side of the tablet PC are shown below and described in Table 1-3.





*Left-Side Components*

---


**Table 1-3**

**Left-Side Components**

| Item | Component           | Function                                                                                                                                                                                                                                                                                            |
|------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Security cable slot | Attaches an optional security cable to the tablet PC.<br><br> The purpose of security solutions is to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.               |
| 2    | Vent                | Enables airflow to cool internal components.<br><br> To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow. |

---

**Table 1-3**  
**Left-Side Components (Continued)**

| <b>Item</b> | <b>Component</b>                     | <b>Function</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3           | Wireless button (select models only) | <p>Turns the wireless functionality of the WLAN or Bluetooth device on or off, but does not establish a connection.</p> <p> To establish a wireless connection, a wireless network must already be set up.</p>                                                                                                                                                                                                                                                                        |
| 4           | USB port                             | Connects a USB 1.1- and 2.0-compliant device to the tablet PC using a standard USB cable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5           | Info Center button                   | Enables you to view a list of commonly used software solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6           | Power switch                         | <p>When the tablet PC is</p> <ul style="list-style-type: none"> <li>■ Off, slide toward the front of the tablet PC and release to turn on the tablet PC.</li> <li>■ In standby, slide toward the front of the tablet PC and release to exit standby.</li> <li>■ In hibernation, slide toward the front of the tablet PC and release to exit hibernation.</li> </ul> <p>If the tablet PC has stopped responding and Microsoft Windows shutdown procedures cannot be used, slide toward the front of the tablet PC and hold for 4 seconds to turn off the tablet PC.</p> |
| 7           | Speaker                              | Enables you to listen to music and hear audio alerts and signals from programs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

The external components on the rear panel of the tablet PC are shown below and described in Table 1-4.



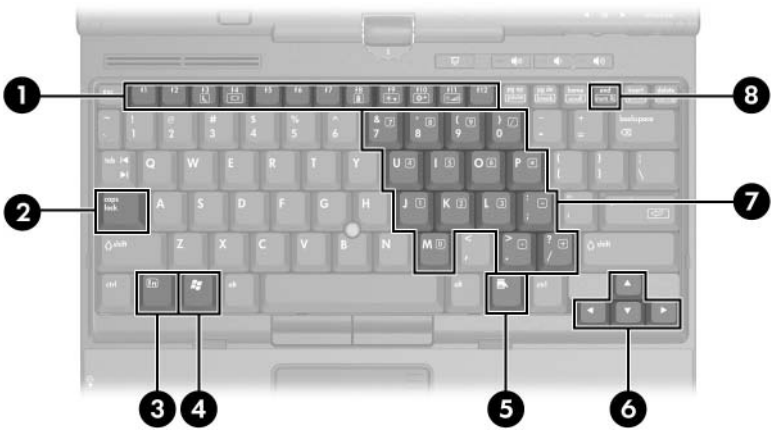
*Rear Panel Components*



**Table 1-4**  
**Rear Panel Components**

| <b>Item</b> | <b>Component</b>      | <b>Function</b>                                                                                                                                                                                                                                                                                                                     |
|-------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | USB port              | Connects USB 1.1- and 2.0-compliant devices to the tablet PC using a standard USB cable.                                                                                                                                                                                                                                            |
| 2           | RJ-11 (modem) jack    | Connects a modem cable. Enabled with 56K connectivity.                                                                                                                                                                                                                                                                              |
| 3           | RJ-45 (network) jack  | Connects a network cable. Enabled with 10/100/1000BaseT connectivity.                                                                                                                                                                                                                                                               |
| 4           | Power connector       | Connects an AC adapter, an optional AC adapter, or an optional power cable.                                                                                                                                                                                                                                                         |
| 5           | External monitor port | Connects an optional VGA external monitor or projector.                                                                                                                                                                                                                                                                             |
| 6           | S-Video-out jack      | <p>Is a 7-pin, dual-purpose jack.</p> <p>It connects an optional S-Video device, such as a television, VCR, camcorder, overhead projector, or video capture card, with an optional, standard (4-pin) S-Video cable.</p> <p>The extra 3 pins also enable an optional S-Video-to-composite adapter to be used with the tablet PC.</p> |

The standard keyboard components of the tablet PC are shown below and described in Table 1-5.



*Standard Keyboard Components*

**Table 1-5**  
**Standard Keyboard Components**


| <b>Item</b> | <b>Component</b>         | <b>Function</b>                                                                                                                                                                             |
|-------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Function keys (12)       | Perform system and application tasks. When combined with the <b>fn</b> key, the function keys <b>f3</b> , <b>f4</b> , and <b>f8</b> through <b>f11</b> perform additional tasks as hotkeys. |
| 2           | <b>caps lock</b> key     | Enables caps lock and turns on the caps lock light.                                                                                                                                         |
| 3           | <b>fn</b> key            | Executes frequently used system functions when pressed in combination with a function key or the <b>esc</b> key.                                                                            |
| 4           | Windows logo key         | Displays the Microsoft Windows Start menu.                                                                                                                                                  |
| 5           | Windows applications key | Displays a shortcut menu for items beneath the pointer.                                                                                                                                     |
| 6           | Arrow keys               | Moves the cursor around the screen.                                                                                                                                                         |
| 7           | Embedded numeric keypad  | Can be used like an external numeric keypad.                                                                                                                                                |
| 8           | <b>num lock</b> key      | Enables numeric lock, turns on the embedded numeric keypad, and turns on the num lock light.                                                                                                |

The tablet PC top components are shown below and described in Table 1-6.

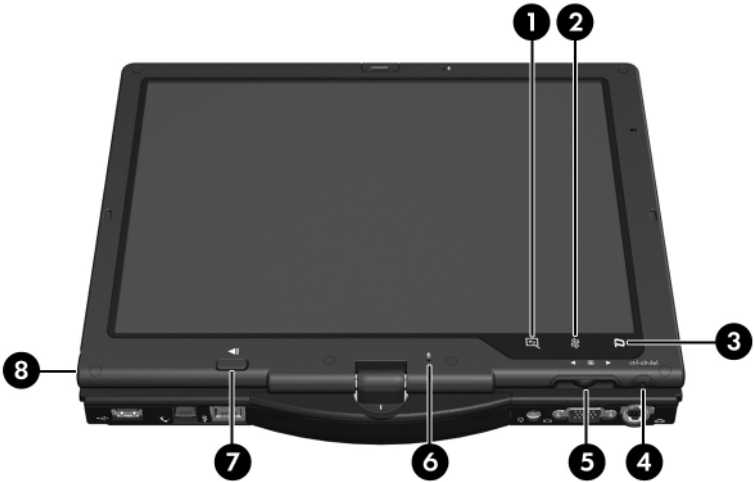


*Top Components*

**Table 1-6**  
**Top Components**

| Item | Component                                 | Function                                                                                                                                                                                                                                                                                                 |
|------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Left and right TouchPad buttons (2)       | Function like the left and right buttons on an external mouse.                                                                                                                                                                                                                                           |
| 2    | TouchPad                                  | Moves the pointer. Can be set to perform other mouse functions, such as scrolling, selecting, and double-clicking.                                                                                                                                                                                       |
| 3    | Left and right pointing stick buttons (2) | Function like the left and right buttons on an external mouse.                                                                                                                                                                                                                                           |
| 4    | Pointing stick                            | Moves the pointer.                                                                                                                                                                                                                                                                                       |
| 5    | Vent                                      | <p>Enables airflow to cool internal components.</p> <p> To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow.</p> |
| 6    | Presentation Mode button                  | Turns on Presentation mode.                                                                                                                                                                                                                                                                              |
| 7    | Volume mute button                        | Mutes or restores volume.                                                                                                                                                                                                                                                                                |
| 8    | Volume down button                        | Decreases tablet PC sound.                                                                                                                                                                                                                                                                               |
| 9    | Volume up button                          | Increases tablet PC sound.                                                                                                                                                                                                                                                                               |
| 10   | TouchPad scroll zone                      | Scrolls upward or downward.                                                                                                                                                                                                                                                                              |

The tablet PC display components are shown below and described in Table 1-7.

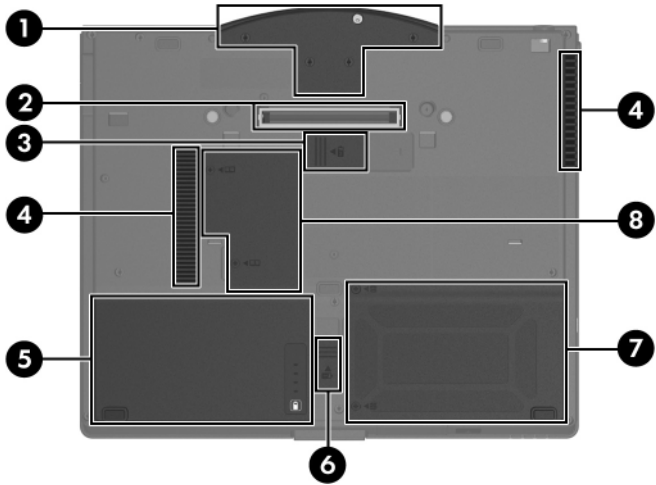


*Display Components*

**Table 1-7**  
**Display Components**

| <b>Item</b> | <b>Component</b>                    | <b>Function</b>                                                                                                                                                                                                                                                       |
|-------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Internal microphone                 | Records sound.                                                                                                                                                                                                                                                        |
| 2           | Tablet PC Input Panel Launch button | Opens the Microsoft Tablet PC Input Panel application, which includes a handwriting pad and an on-screen keyboard.                                                                                                                                                    |
| 3           | Rotate button                       | Switches the image between landscape and portrait orientation.                                                                                                                                                                                                        |
| 4           | Q button                            | Opens or closes the Q Menu.                                                                                                                                                                                                                                           |
| 5           | Windows Security button             | When pressed while: <ul style="list-style-type: none"> <li>■ Windows is open, enters the <b>ctrl+alt+delete</b> command.</li> <li>■ The Setup utility is open, enters the reset command.</li> </ul>                                                                   |
| 6           | Jog dial                            | Functions like the <b>enter</b> and the up and down arrow keys on a standard keyboard. <ul style="list-style-type: none"> <li>■ Press inward to enter a command.</li> <li>■ Rotate upward to scroll upward.</li> <li>■ Rotate downward to scroll downward.</li> </ul> |
| 7           | Pen eject button                    | Ejects the pen from the pen holder.                                                                                                                                                                                                                                   |
| 8           | Pen holder                          | Secures the pen to the tablet PC.                                                                                                                                                                                                                                     |


The external components on the bottom of the tablet PC are shown below and described in Table 1-8.



*Bottom Components*



**Table 1-8**  
**Bottom Components**

| <b>Item</b> | <b>Component</b>                    | <b>Function</b>                                                                                                                                                                                                                                                                                         |
|-------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Base enclosure cover                | Covers the display cable connector.                                                                                                                                                                                                                                                                     |
| 2           | Docking connector                   | Connects the tablet PC to an optional docking device.                                                                                                                                                                                                                                                   |
| 3           | Travel battery connector            | Connects an optional travel battery.                                                                                                                                                                                                                                                                    |
| 4           | Vents (3)                           | <p>Enable airflow to cool internal components.</p> <p> To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow.</p> |
| 5           | Primary battery bay                 | Holds the primary battery pack.                                                                                                                                                                                                                                                                         |
| 6           | Primary battery release latch       | Releases the primary battery pack from the battery bay.                                                                                                                                                                                                                                                 |
| 7           | Hard drive cover                    | Holds the primary hard drive.                                                                                                                                                                                                                                                                           |
| 8           | Expansion memory module compartment | Contains one expansion memory module slot.                                                                                                                                                                                                                                                              |

## 1.5 Design Overview

This section presents a design overview of key parts and features of the tablet PC. Refer to [Chapter 4, “Illustrated Parts Catalog,”](#) to identify replacement parts, and [Chapter 6, “Removal and Replacement Procedures,”](#) for disassembly steps.

The system board provides the following device connections:

- Audio
- Display
- Hard drive
- Intel Pentium M and Celeron M processors
- Keyboard
- Memory module
- Mini PCI communications devices
- PC Card
- Pointing stick
- TouchPad
- Trusted platform module (TPM) security module



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

---

The tablet PC 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 tablet PC.

---

# 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 tablet PC restarts the operating system after you exit Computer Setup.



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

---

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

## Accessing Computer Setup

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

1. Open Computer Setup by turning on or restarting the tablet PC. 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 take effect when the tablet PC restarts.

## Restoring 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 tablet PC. 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.

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      | <ul style="list-style-type: none"> <li>■ View identification information about the tablet PC and any battery packs in the system.</li> <li>■ View specification information about the processor, memory and cache size, video revision, keyboard controller version, and system ROM.</li> </ul> |
| Save to floppy          | Save system configuration settings to a diskette.                                                                                                                                                                                                                                               |
| Restore from 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 tablet PC.                                                                                                                                                                                                         |
| Save changes and exit   | Save changes entered during the current session. Then exit and restart the tablet PC. The changes you save are in effect when the tablet PC restarts.                                                                                                                                           |

## 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       | <ul style="list-style-type: none"> <li>■ Enable/Disable stringent security.</li> <li>■ Enable/Disable required password on restart.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                     |
| DriveLock passwords    | <p>Enable/disable DriveLock; change a DriveLock user or master password.</p> <p> DriveLock Settings are accessible only when you enter Computer Setup by turning on (not restarting) the tablet PC.</p>                                                                                                                                                                                                                                           |
| Smart Card Security    | <p>Enable/disable power-on support for smart cards.</p> <p> This feature is supported by select smart card readers only.</p>                                                                                                                                                                                                                                                                                                                      |
| Embedded Security      | <ul style="list-style-type: none"> <li>■ Enable/Disable the embedded security chip.</li> <li>■ Restore embedded security chip to factory settings.</li> <li>■ Enable/Disable power-on authentication support.</li> <li>■ Enable/Disable automatic DriveLock.</li> <li>■ Reset power-on authentication credential</li> </ul> <p> Embedded Security settings are accessible only if the tablet PC is equipped with an embedded security chip.</p> |
| Device security        | <p>Enable/Disable devices in the system.</p> <p>Enable NIC for inclusion in MultiBoot.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| System IDs             | Enter user-defined identification values.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Selecting from the Tools Menu

**Table 2-3**  
**Tools Menu**

| <b>Select</b>         | <b>To Do This</b>                                                                                                                                                                                                                            |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 tablet PC.                                                                                                                                                                                   |
| Memory Check          | <ul style="list-style-type: none"> <li data-bbox="426 594 900 646">■ Run a self-test on memory modules in the tablet PC.</li> <li data-bbox="426 659 900 711">■ View information about memory modules installed in the tablet PC.</li> </ul> |

## Selecting from the Advanced Menu

**Table 2-4**  
**Advanced Menu**

| Select                         | To Do This                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Language (or press <b>f2</b> ) | Change the Computer Setup language.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Boot options                   | <ul style="list-style-type: none"> <li>■ Enable/Disable MultiBoot, which sets a startup sequence that can include most bootable devices and media in the system.</li> <li>■ Set the boot order.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Device options                 | <ul style="list-style-type: none"> <li>■ Swap the functions of the <b>fn</b> key and left <b>ctrl</b> key.</li> <li>■ Enable/Disable multiple pointing devices at startup. (To set the tablet PC to support only a single, usually nonstandard, pointing device at startup, select <b>Disable</b>.)</li> <li>■ Enable/Disable USB legacy support for a USB keyboard, mouse, and hub. When USB legacy support is enabled           <ul style="list-style-type: none"> <li><input type="checkbox"/> A USB keyboard, mouse, and hub work even when a Windows operating system is not loaded.</li> <li><input type="checkbox"/> The tablet PC 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 tablet PC or to an optional docking device.</li> </ul> </li> <li>■ Select a parallel port mode: EPP (Enhanced Parallel Port), standard, bidirectional, or ECP (Enhanced Capabilities Port).</li> <li>■ Enable/Disable all settings in the <b>SpeedStep</b> window. (When Disable is selected, the tablet PC runs in Battery Optimized mode.)</li> </ul> |



## 2.2 Troubleshooting Flowcharts

**Table 2-5**  
**Troubleshooting Flowcharts Overview**

| <b>Flowchart</b> | <b>Description</b>                                            |
|------------------|---------------------------------------------------------------|
| 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"                |

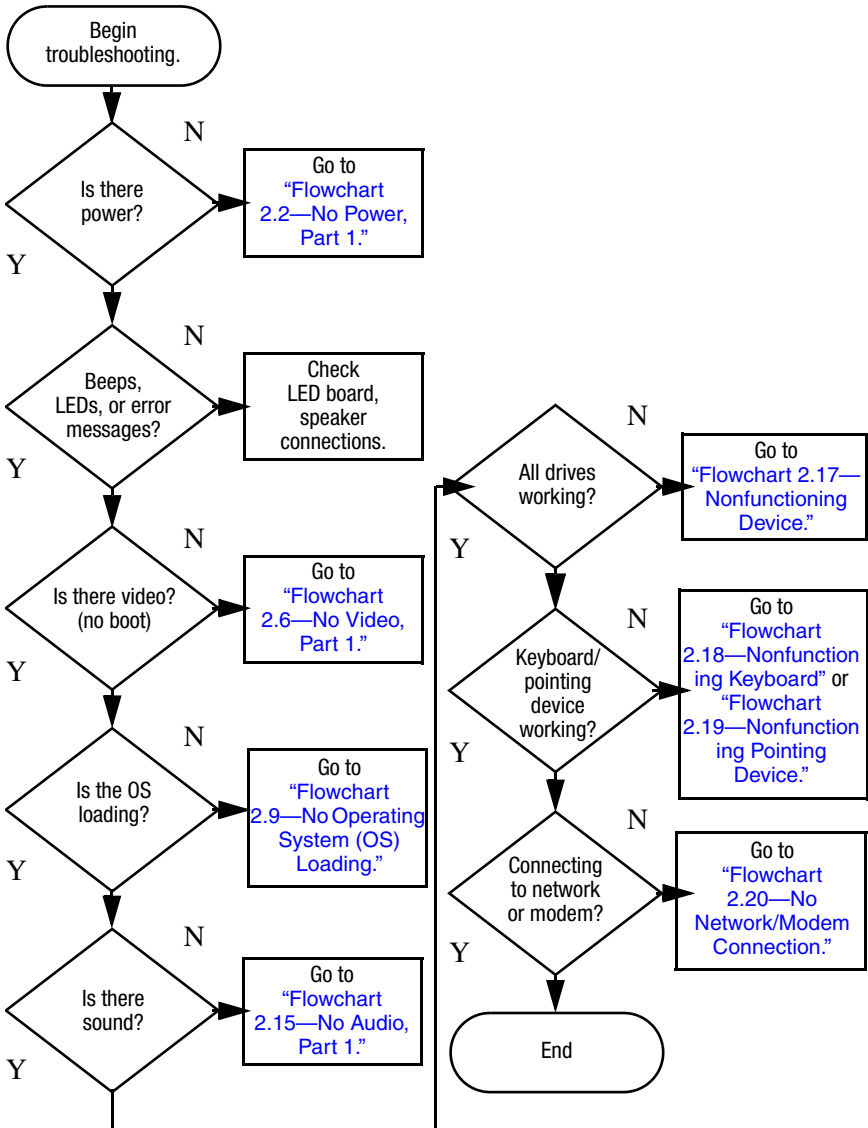
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**Table 2-5**  
**Troubleshooting Flowcharts Overview (*Continued*)**

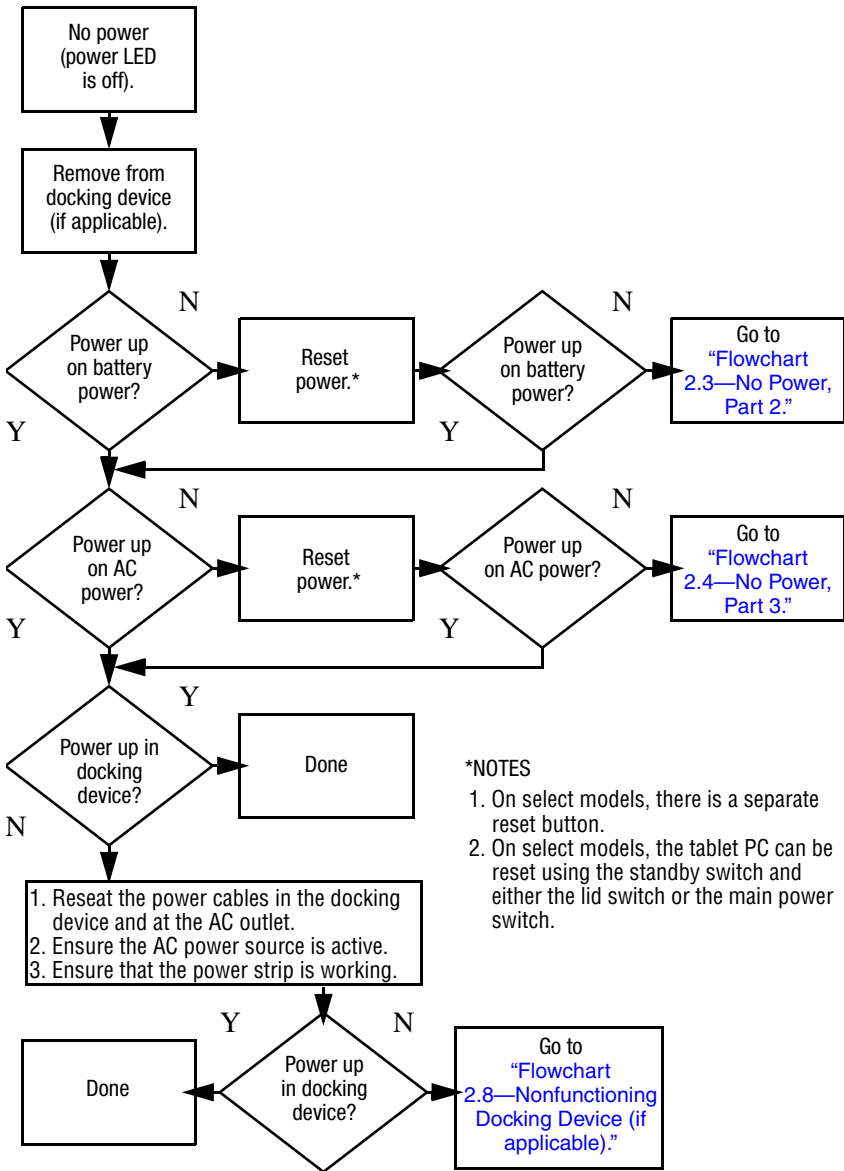
| <b>Flowchart</b> | <b>Description</b>                              |
|------------------|-------------------------------------------------|
| 2.14             | "Flowchart 2.14—No OS Loading, Optical Drive"   |
| 2.15             | "Flowchart 2.15—No Audio, Part 1"               |
| 2.16             | "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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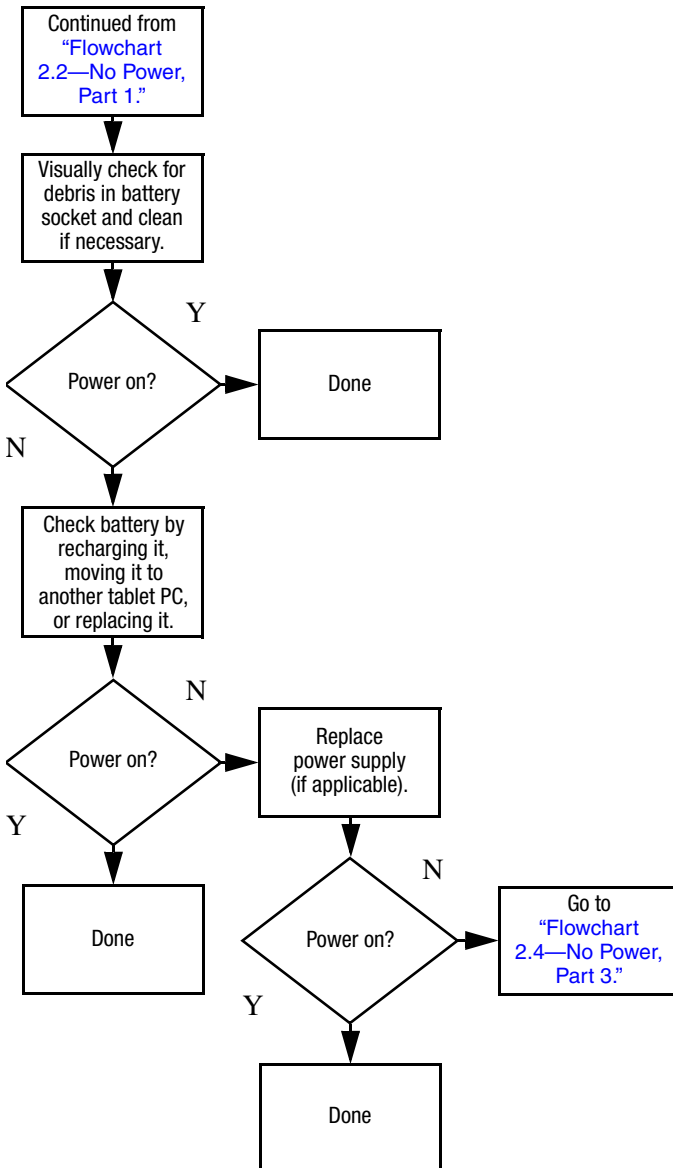
## Flowchart 2.1 – Initial Troubleshooting



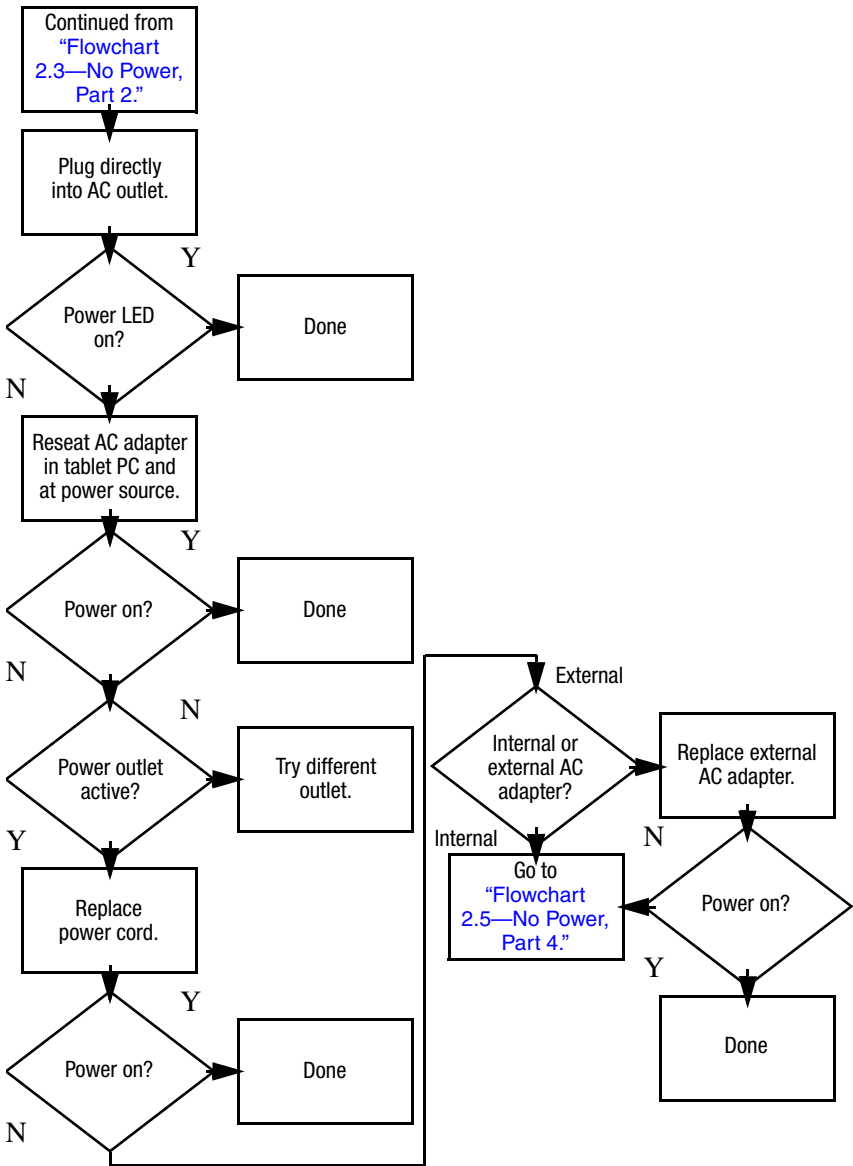
## Flowchart 2.2—No Power, Part 1



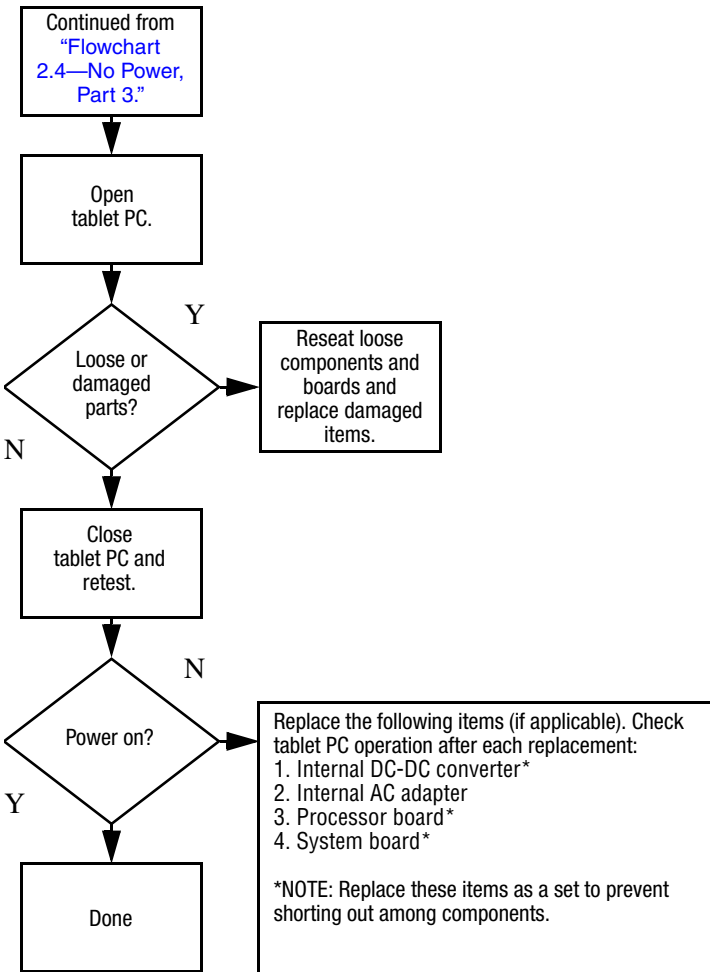
## Flowchart 2.3—No Power, Part 2



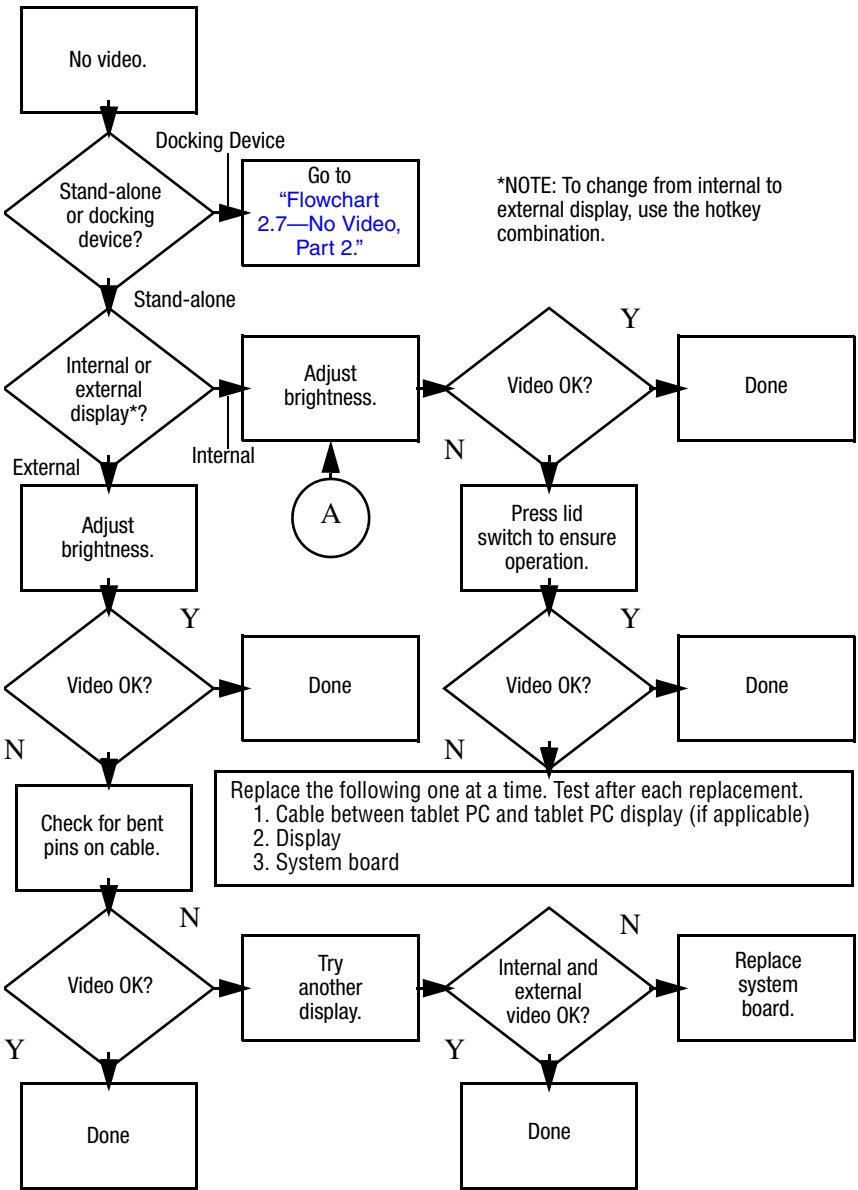
### Flowchart 2.4—No Power, Part 3



## Flowchart 2.5—No Power, Part 4

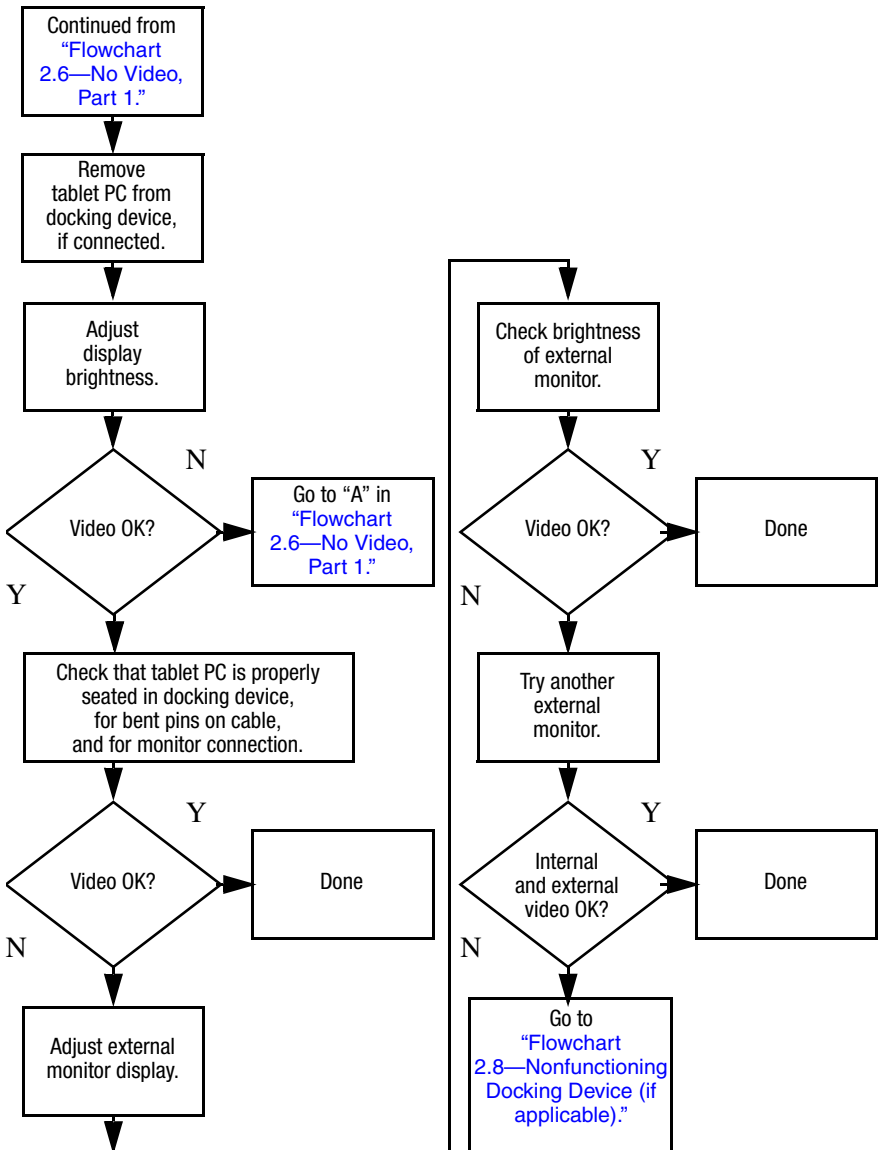


## Flowchart 2.6—No Video, Part 1

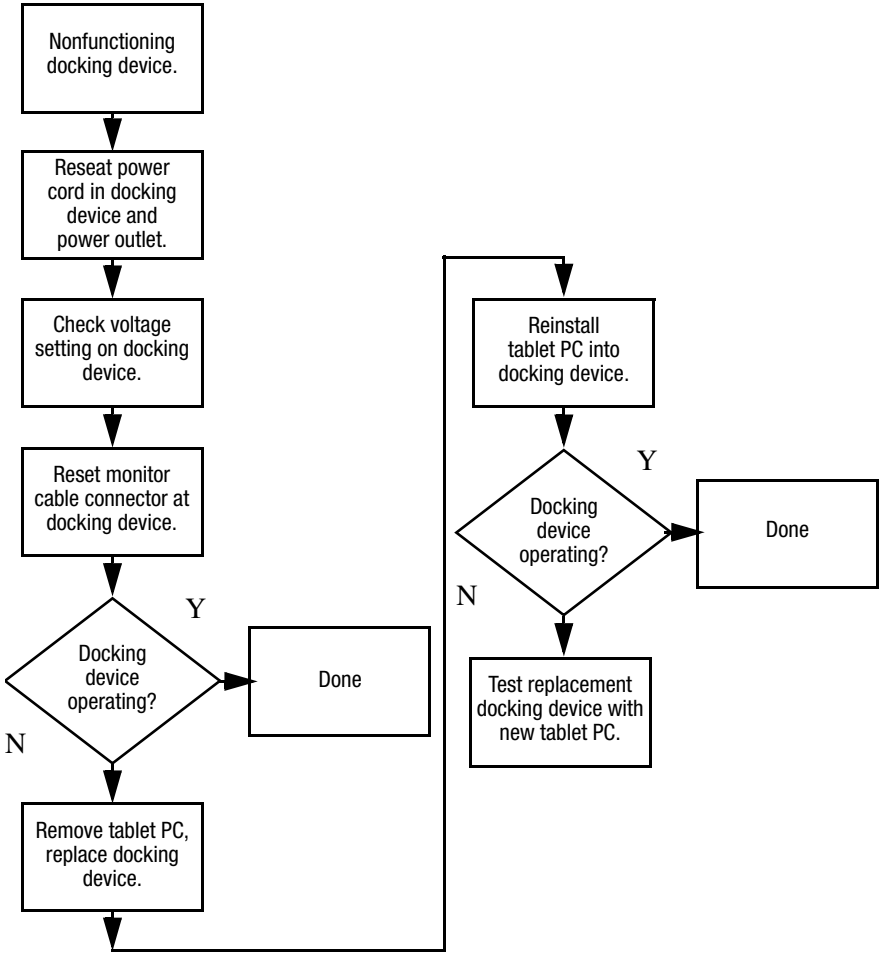




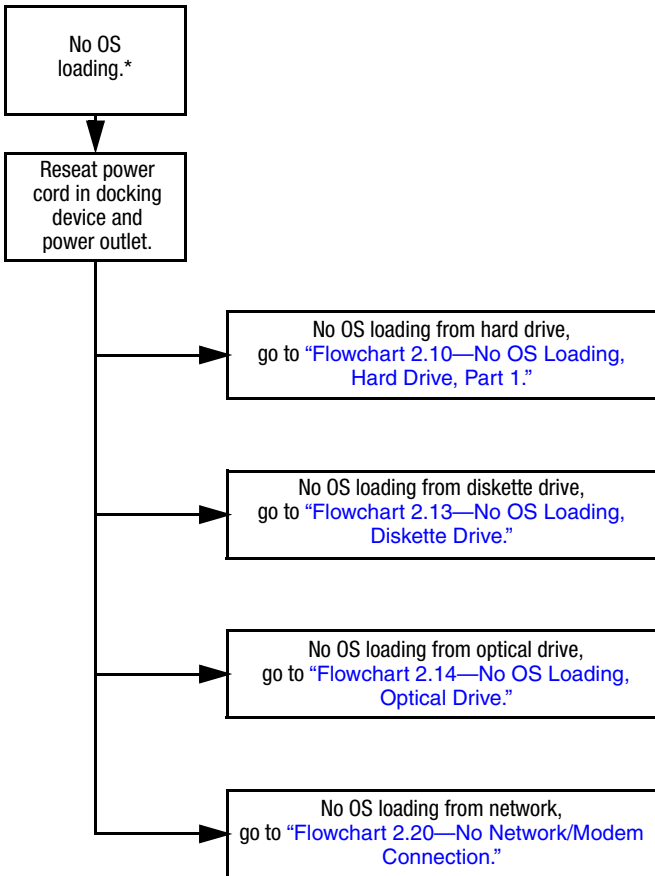
## Flowchart 2.7—No Video, Part 2



## Flowchart 2.8—Nonfunctioning Docking Device (if applicable)

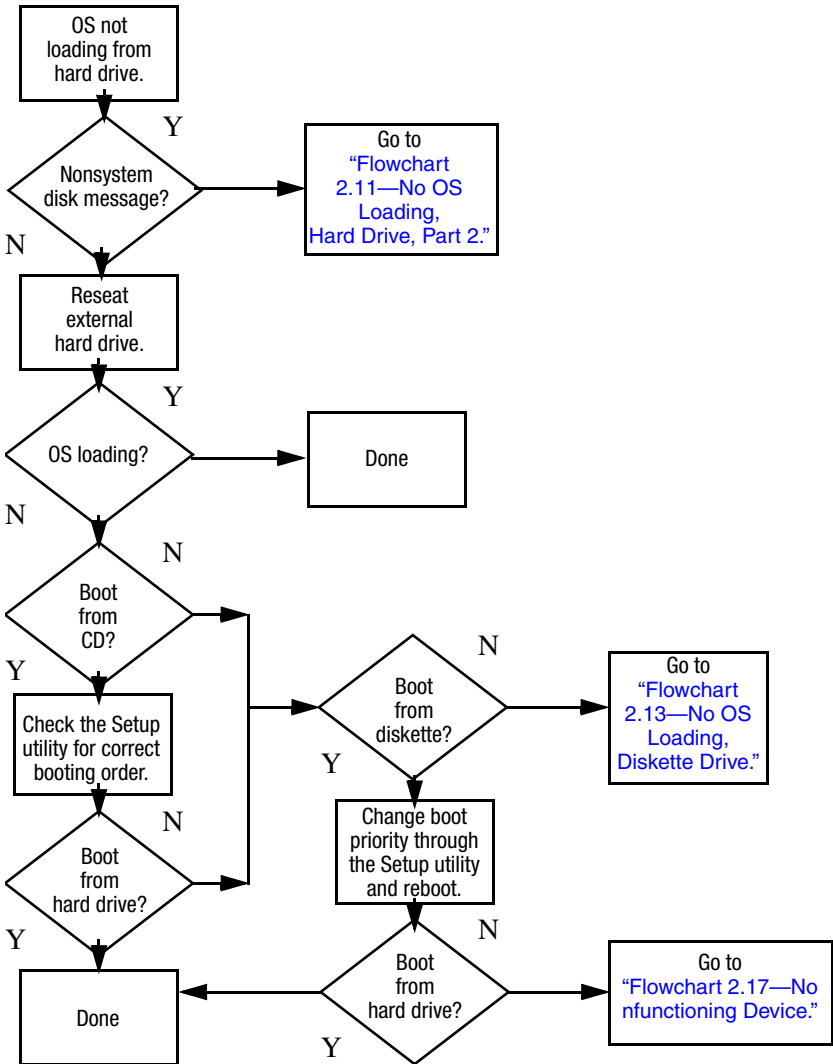


## Flowchart 2.9—No Operating System (OS) Loading

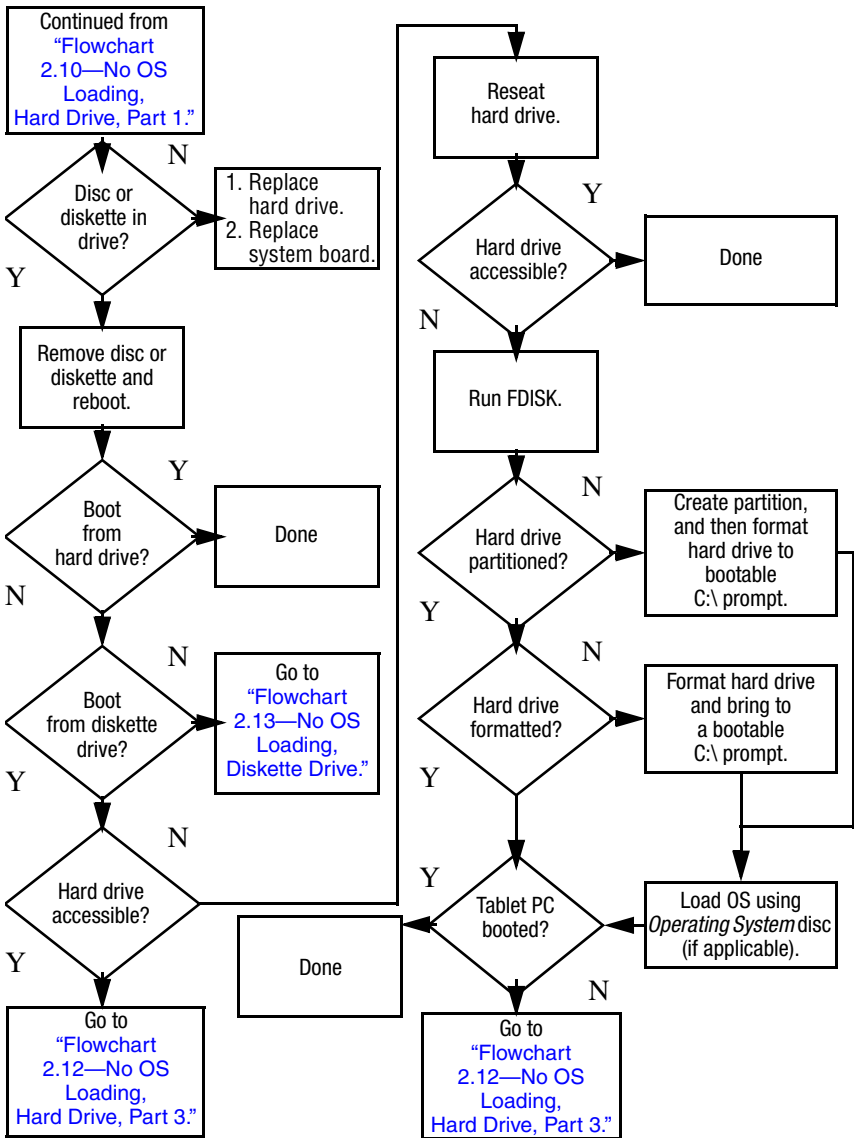


\*NOTE: Before beginning troubleshooting, always check cable connections, cable ends, and drives for bent or damaged pins.

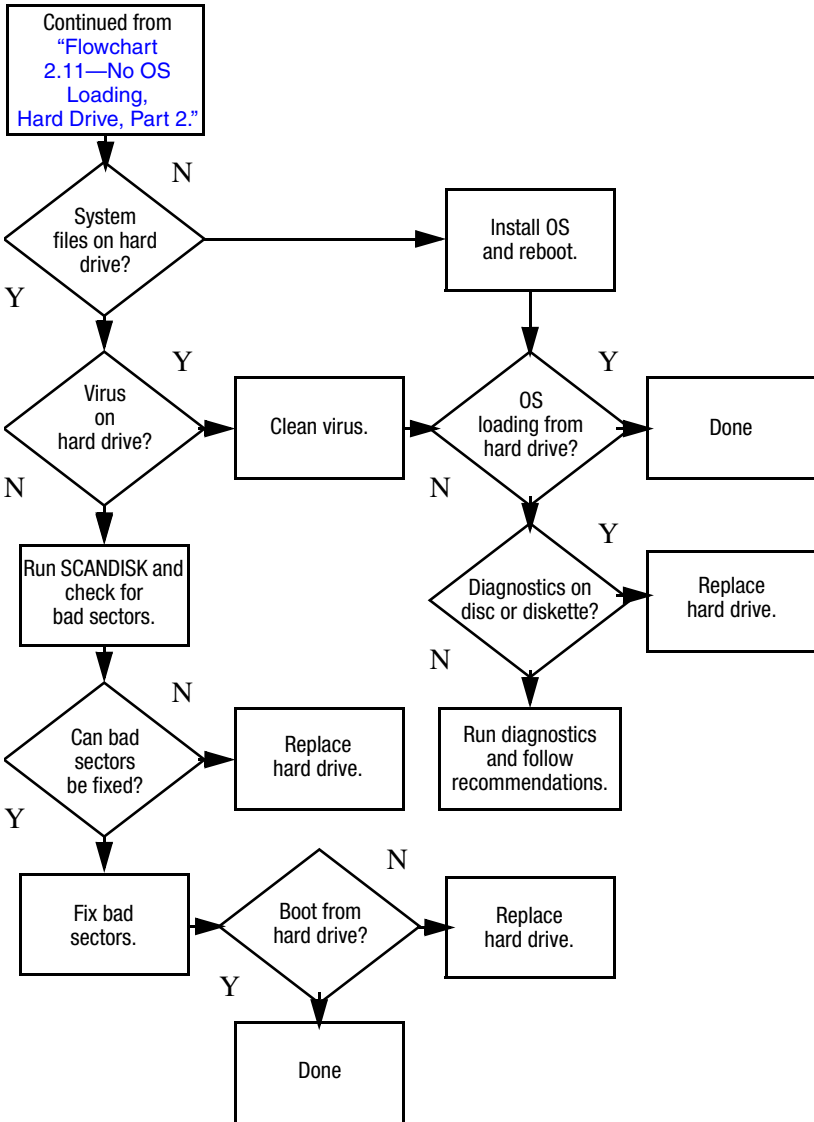
## Flowchart 2.10—No OS Loading, Hard Drive, Part 1



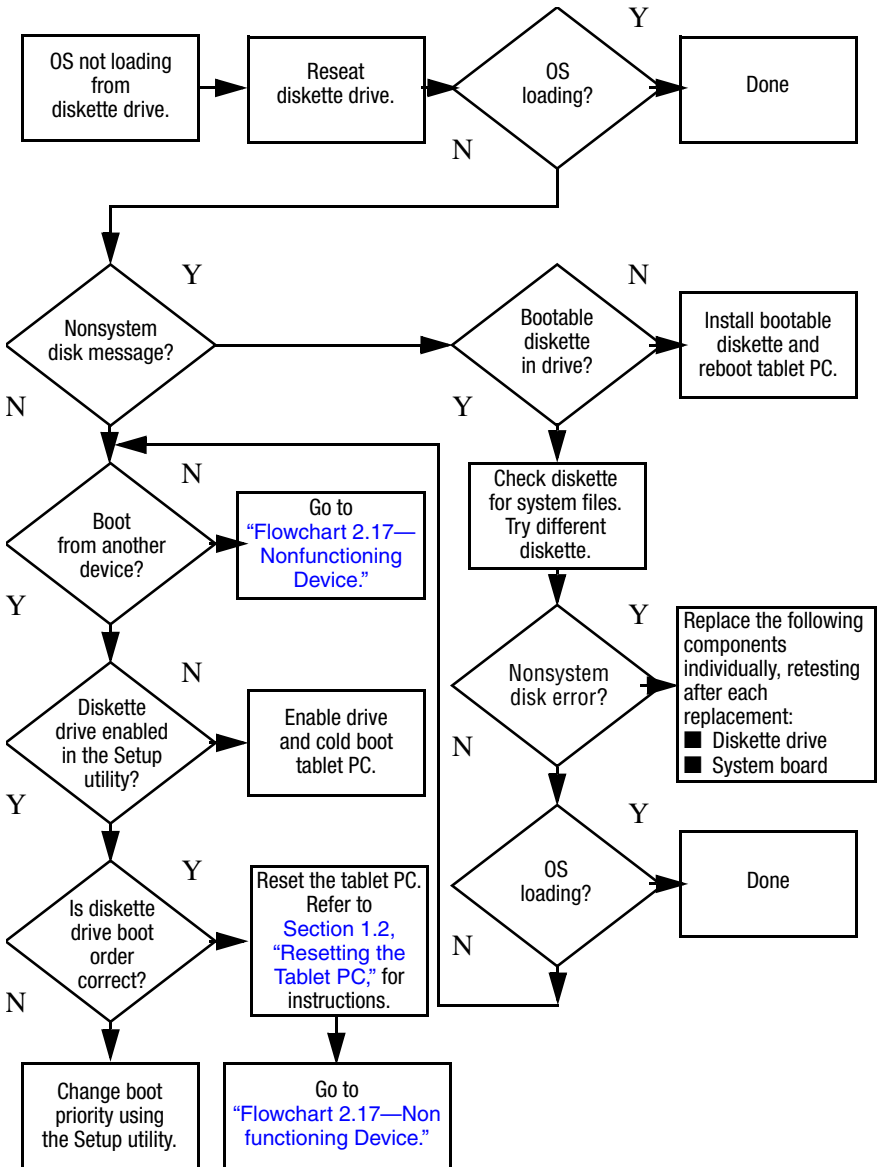
## Flowchart 2.11 – No OS Loading, Hard Drive, Part 2



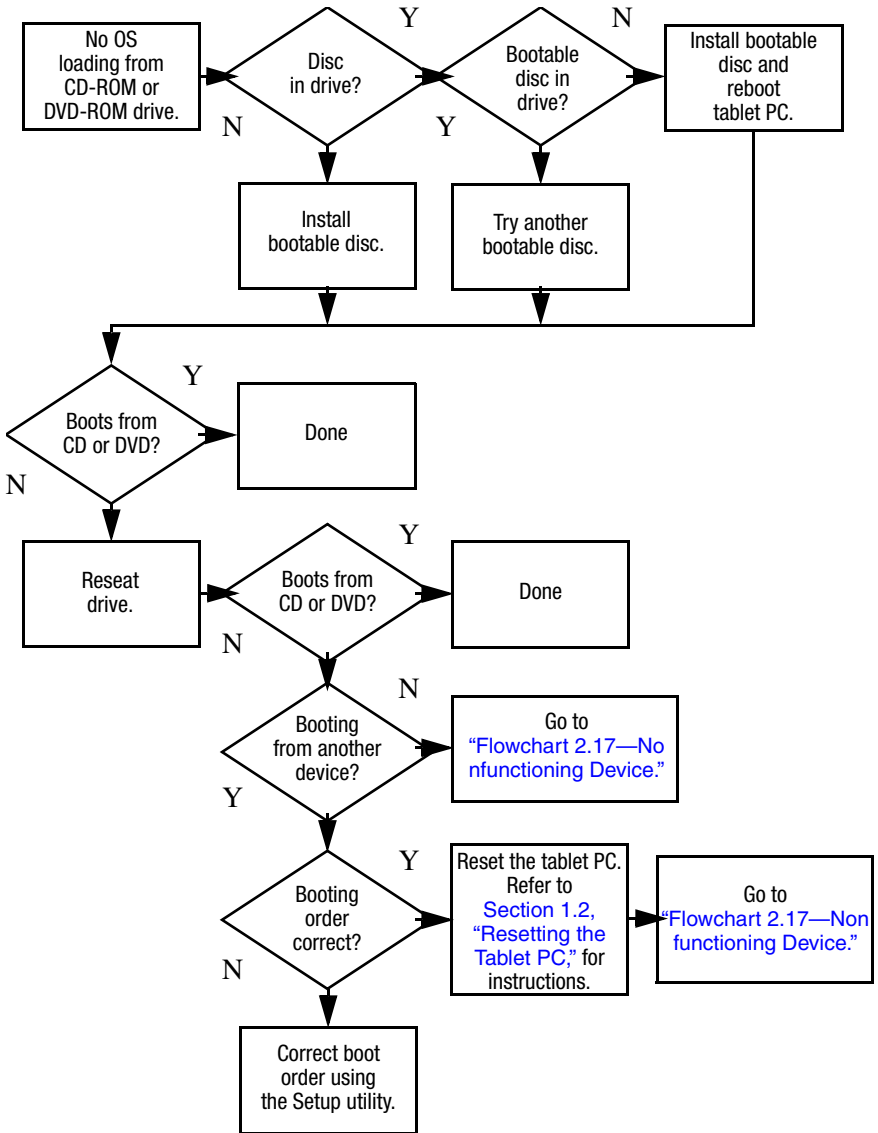
## Flowchart 2.12—No OS Loading, Hard Drive, Part 3



## Flowchart 2.13—No OS Loading, Diskette Drive

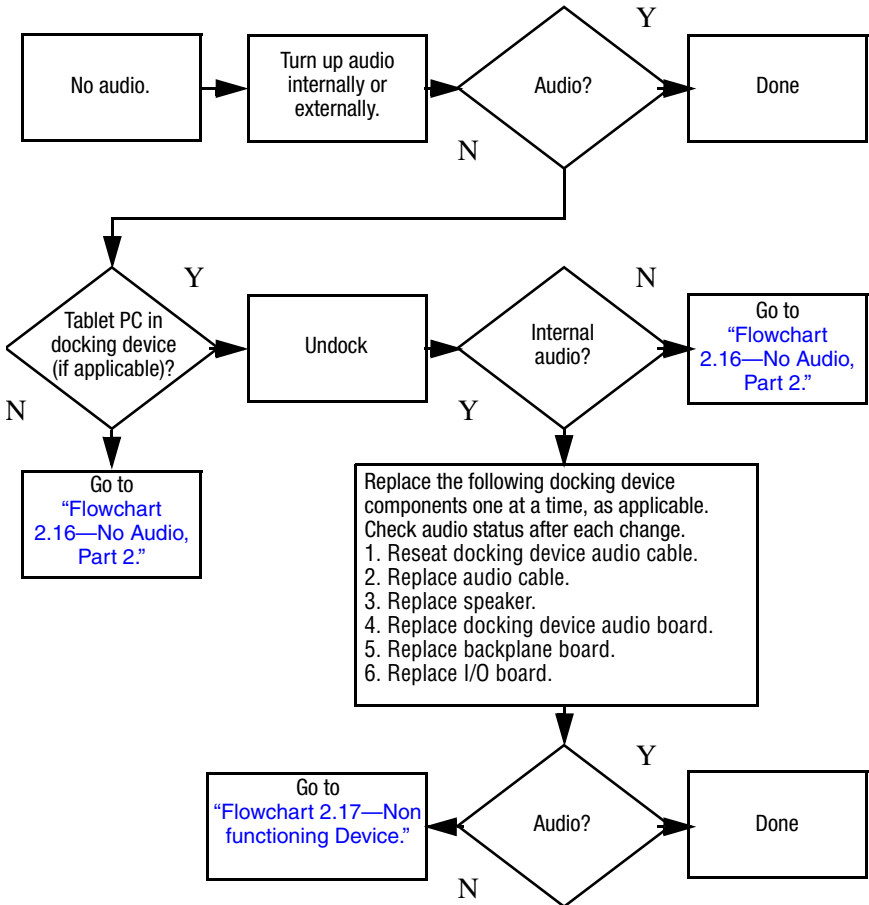


## Flowchart 2.14—No OS Loading, Optical Drive

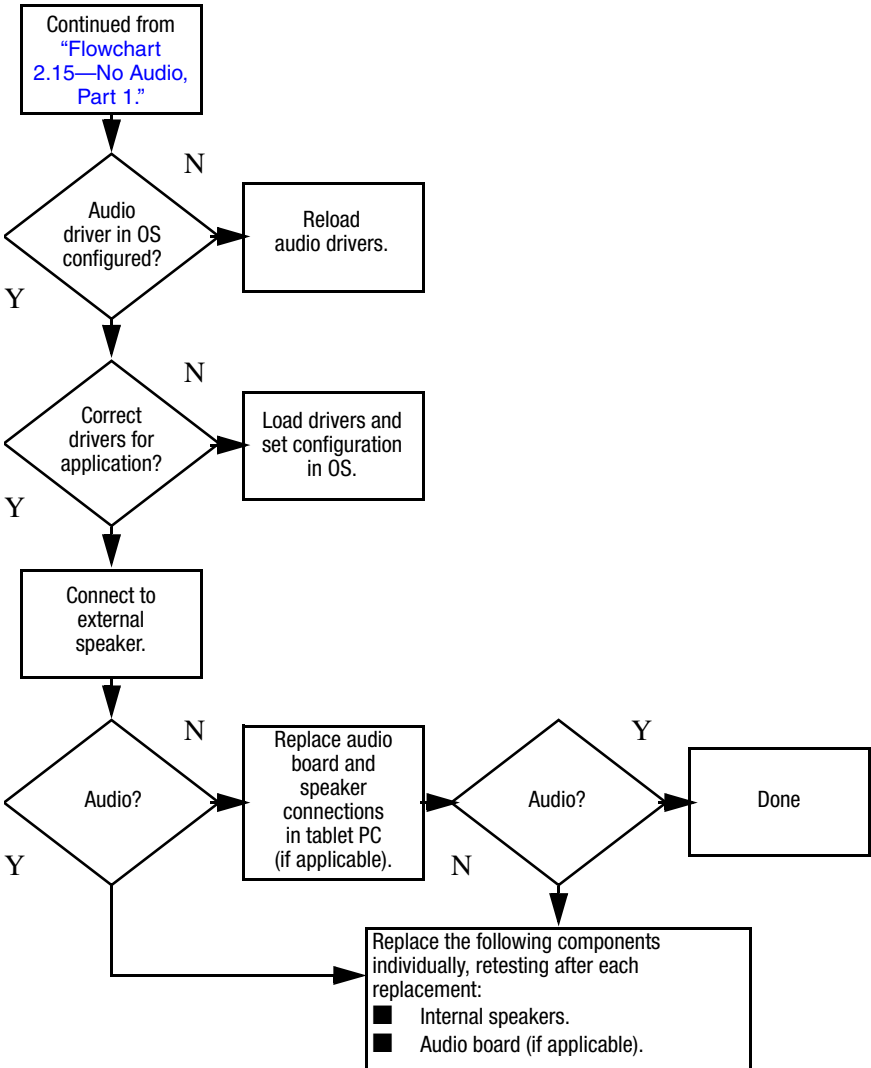




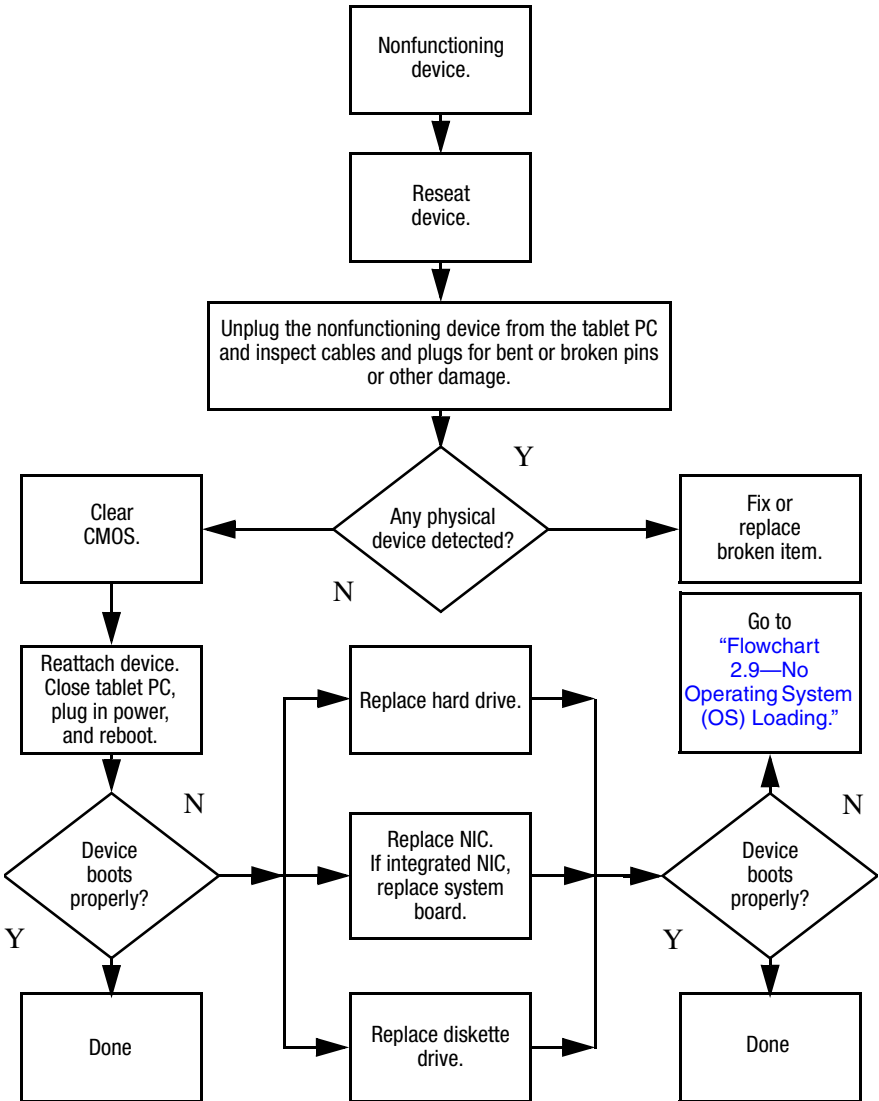
## Flowchart 2.15—No Audio, Part 1



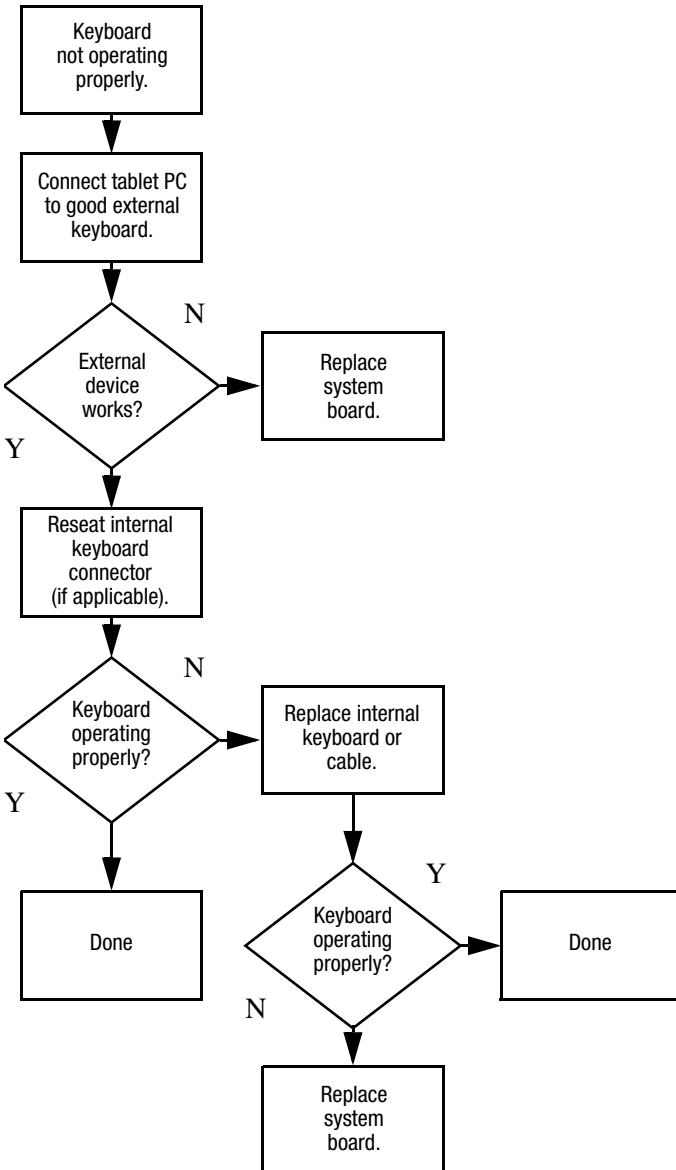
## Flowchart 2.16—No Audio, Part 2



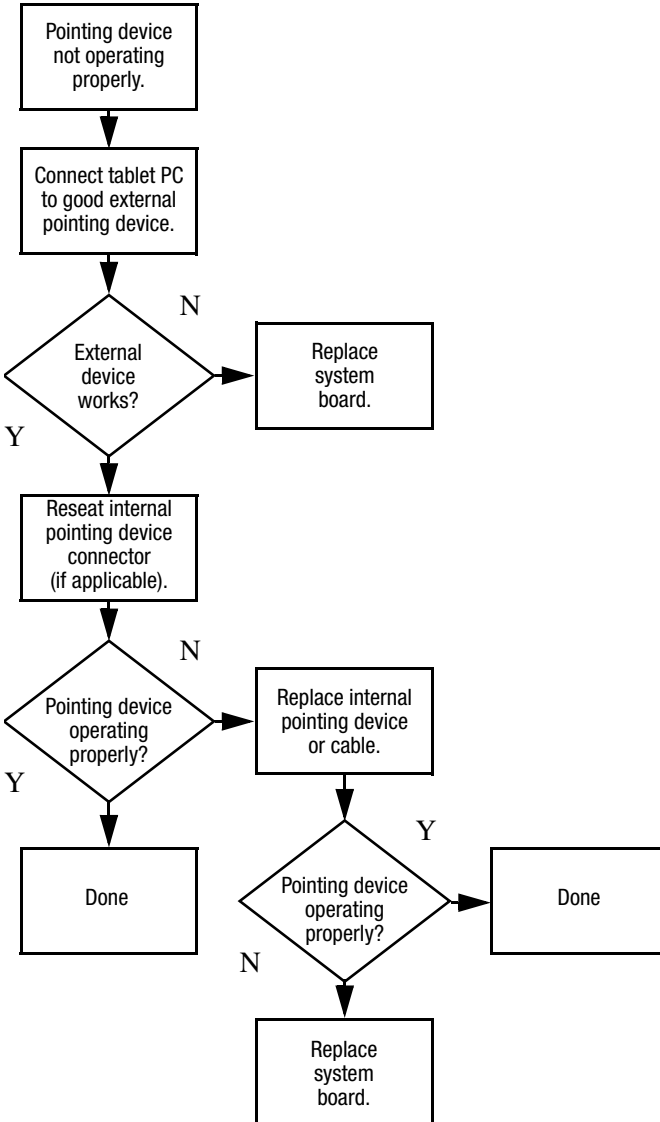
## Flowchart 2.17—Nonfunctioning Device



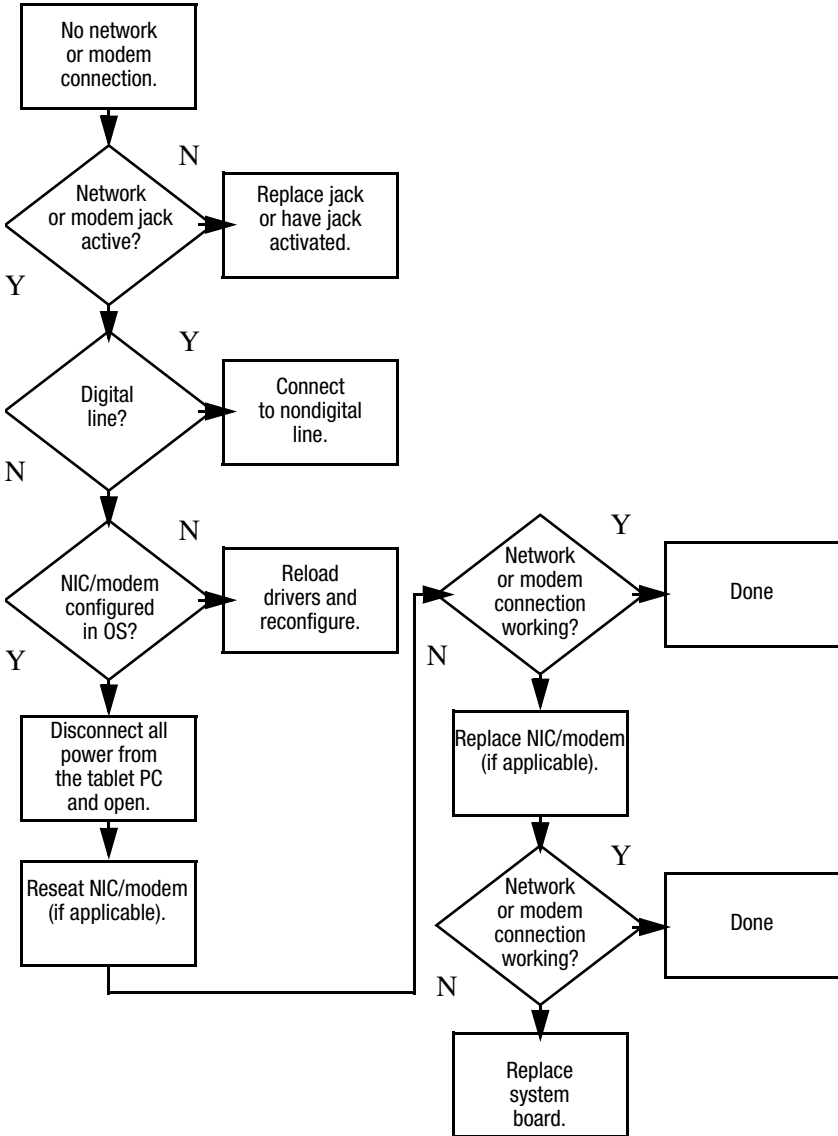
## Flowchart 2.18—Nonfunctioning Keyboard



## Flowchart 2.19—Nonfunctioning Pointing Device



## Flowchart 2.20—No Network/Modem Connection



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# Software Update and Recovery

## Software Updates

To stay current with the newest technology and maintain optimal performance, install the latest versions of HP software on your computer as they become available.

To update HP software:

1. Identify your computer model, product category, and series or family. Prepare for a system BIOS update by identifying the BIOS version currently installed on the computer.



**CAUTION:** If your computer is connected to a network, it is recommended that you consult with your network administrator before installing any software updates, especially system BIOS updates.

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The computer system BIOS is stored on the system ROM. The BIOS initializes the operating system, determines how the computer will interact with the hardware devices, and provides for data transfer among hardware devices, including the time and date.

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2. Access the updates through the HP Web site (<http://www.hp.com>) or the *Support Software* disc (purchased separately).
3. Install the updates.

## Accessing Computer Information

Before you access the updates for your computer, collect the following information:

- The product *category* is tablet PC.
- The product *family* name and *series* number are printed on the display bezel.
- *Model* information is provided on the serial number label on the bottom of the computer.

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

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

To use Computer Setup for displaying BIOS information:

1. Open Computer Setup by turning on or restarting the computer, and then pressing **f10** while the “F10 = ROM Based Setup” message is displayed in the lower-left corner of the screen.
2. Use the arrow keys to select **File > System Information**, and then press **enter**.

BIOS date information is displayed.

3. To exit Computer Setup, use the arrow keys to select **File > Ignore changes and exit**. Then follow the instructions on the screen.



## Obtaining the Support Software Disc

The *Support Software* disc provides HP software updates and installation instructions. The disc includes device drivers, BIOS updates, and utilities.

To purchase the current *Support Software* disc or a subscription that provides both the current version and future versions of the disc, visit the HP Web site at <http://www.hp.com>.

## Software Updates and the HP Web Site

Most software on the HP Web site is packaged in a compressed file called a *SoftPaq*. Some BIOS updates may be packaged in a compressed file called a *ROMPaq*.

Most download packages contain a file named *Readme.txt*. A *Readme.txt* file contains information regarding installing and troubleshooting the file. The *Readme.txt* files included with *ROMPaqs* are provided in English only.

## Downloading a BIOS Update



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

- Do not disconnect power from the computer by unplugging the power cord from the AC outlet.
  - Do not shut down the computer or initiate standby or hibernation.
  - Do not insert, remove, connect, or disconnect any device, cable, or cord.
-

To download a BIOS update:

1. Access the page on the HP Web site that provides software for your computer:
  - ❑ Select **Start > Help and Support**, and then click a software update link.
  - or –
  - ❑ Visit the HP Web site at <http://www.hp.com/support>.
2. Follow the instructions on the screen to identify your computer and access the BIOS update you want to download.
3. At the download area:
  - a. Identify the BIOS update that is later than the BIOS version currently installed on your computer. Make a note of the date, name, or other identifier. You may need this information to locate the update later, after it has been downloaded to your hard drive.
  - b. Follow the instructions on the screen to download your selection to the hard drive.



Make a note of the path to the location on your hard drive where the BIOS update will be downloaded. You will need to access this path when you are ready to install the update.

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## Installing a BIOS Update

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**CAUTION:** If your computer is connected to a network, it is recommended that you consult with your network administrator before installing any software updates, especially system BIOS updates.

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BIOS installation procedures vary. Follow any instructions that are displayed on the screen after the download is complete. If no instructions are displayed:

1. Open Windows Explorer by selecting **Start > All Programs > Accessories > Windows Explorer**.

2. In the left pane of the Windows Explorer window:
  - a. Click **My Computer** and then your hard drive designation. The hard drive designation is typically Local Disk (C:).
  - b. Using the hard drive path you recorded earlier, open the folder on your hard drive that contains the update.
3. Double-click the file with an .exe extension (for example, filename.exe).

The BIOS installation begins.
4. Complete the installation by following the instructions on the screen.



After a message on the screen reports a successful installation, you may delete the downloaded file from your hard drive.

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## Recovering the BIOS



The BIOS recovery procedure requires a USB diskette drive and a formatted diskette.

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The BIOS can be recovered if the flash memory is corrupted. Flash memory corruption can occur if the notebook powers down while the BIOS is being updated.

When the notebook is turned on, the boot block portion of the flash memory performs an integrity check on the rest of the BIOS image and enters recovery mode if the image is corrupt.

BIOS recovery can be forced on a non-functioning notebook by turning on the notebook while pressing and holding the Windows logo key + **B** on the nonfunctioning notebook keyboard until the caps lock light blinks.

To recover the BIOS:

1. If the nonfunctioning notebook is docked in an optional docking device, undock the notebook.
2. Attach the USB diskette drive directly to a USB port on the nonfunctioning notebook. (USB hubs are not supported for BIOS recovery).
3. Insert the correct ROMPaq diskette for the product being updated. The BIOS image file must be located in the root directory of the diskette and must be in contiguous sectors. The easiest way to ensure this is to visit <http://www.hp.com>, download the Softpaq, and let the Softpaq create the ROMPaq diskette.
4. Press and hold the Windows logo key + **B** on the notebook keyboard (do not use an external keyboard) and turn on the notebook and wait for the caps lock light to start blinking.
5. Release the Windows logo key + **B**.

The BIOS recovery procedure takes approximately one minute to read the image from the diskette, and then an additional 15 seconds to program the image into flash memory. The notebook restarts when the BIOS recovery procedure is complete. Do not attempt to turn off the notebook after starting a recovery.

If the BIOS recovery procedure stalls, the caps lock light will begin blinking. This situation can arise if the diskette is corrupt or the incorrect ROMPaq is used. If the notebook does not restart after approximately 3 minutes, press and hold the power button, or slide and hold the power switch, for at least 5 seconds to force the notebook to turn itself off. Then repeat the BIOS recovery procedure.

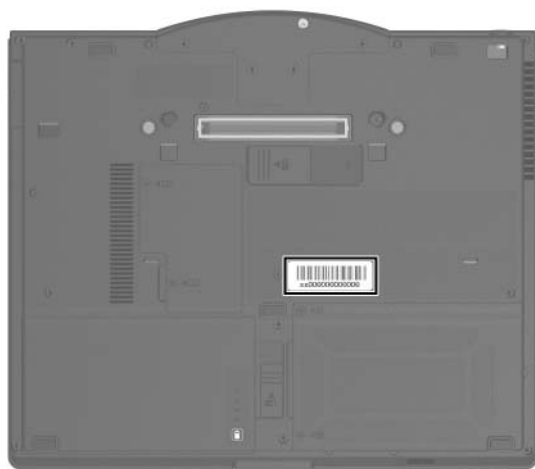
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## Illustrated Parts Catalog

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

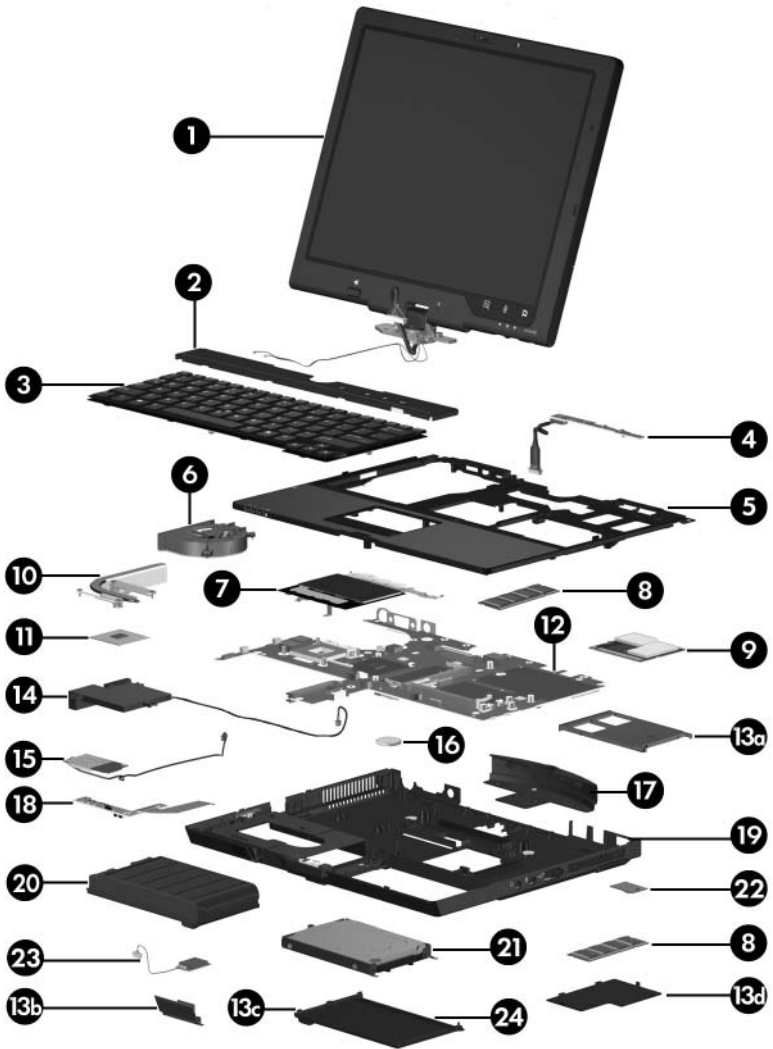
### 4.1 Serial Number Location

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



*Serial Number Location*

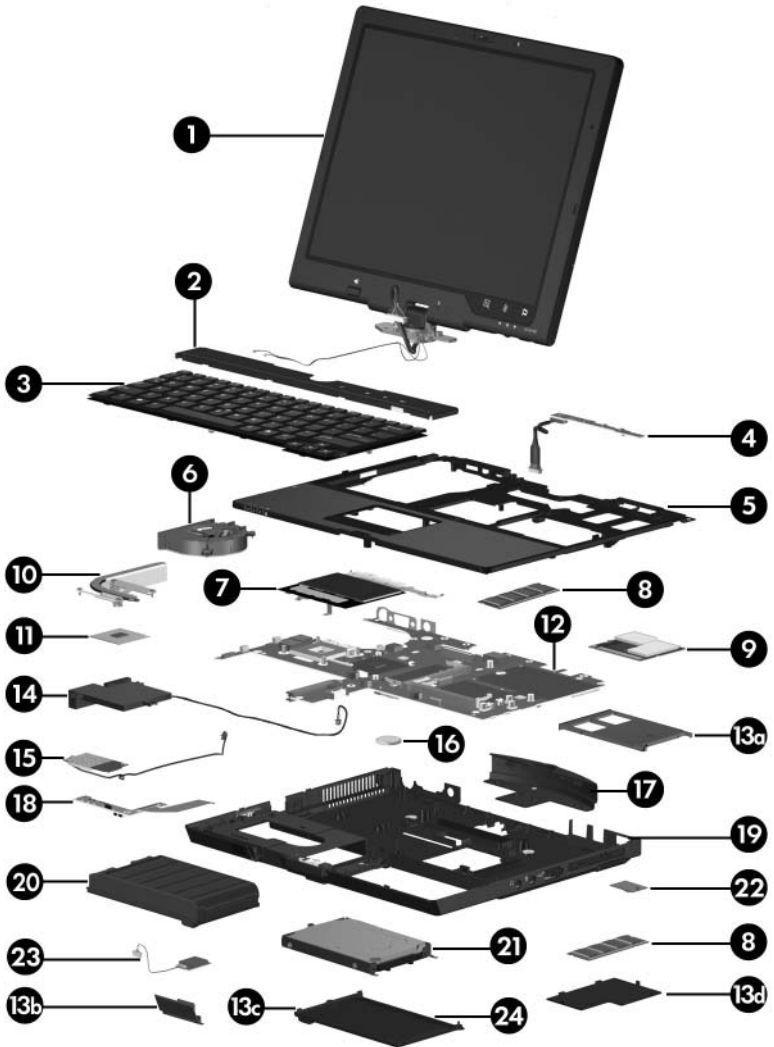
## 4.2 Tablet PC Major Components



Tablet PC Major Components

**Table 4-1**  
**Spare Parts: Tablet PC Major Components**

| <b>Item</b> | <b>Description</b>                                                                        | <b>Spare Part Number</b> |
|-------------|-------------------------------------------------------------------------------------------|--------------------------|
| 1           | <b>12.1-inch, XGA, TFT display assembly</b> (includes wireless antenna boards and cables) | 383548-001               |
|             | <b>Display Hinge Kit</b> (not illustrated)                                                | 383531-001               |
| 2           | <b>Keyboard cover</b>                                                                     | 383519-001               |
| 3           | <b>Keyboards</b> , with pointing stick                                                    |                          |
|             | Asia Pacific                                                                              | 383458-371               |
|             | Australia                                                                                 | 383458-011               |
|             | Belgium                                                                                   | 383458-181               |
|             | Czech Republic                                                                            | 383458-221               |
|             | Denmark                                                                                   | 383458-081               |
|             | Europe                                                                                    | 383458-021               |
|             | France                                                                                    | 383458-051               |
|             | French Canada                                                                             | 383458-121               |
|             | Germany                                                                                   | 383458-041               |
|             | Hong Kong                                                                                 | 383458-AC1               |
|             | Hungary                                                                                   | 383458-211               |
|             | Iceland                                                                                   | 383458-DD1               |
|             | Israel                                                                                    | 383458-BB1               |
|             | Italy                                                                                     | 383458-061               |
|             | Japan                                                                                     | 383458-291               |
|             | Korea                                                                                     | 383458-AD1               |
|             | Latin America                                                                             | 383458-161               |
|             | The Netherlands                                                                           | 383458-331               |
|             | Norway                                                                                    | 383458-091               |
|             | People's Republic of China                                                                | 383458-AA1               |
|             | Poland                                                                                    | 383458-241               |
|             | Portugal                                                                                  | 383458-131               |
|             | Russia                                                                                    | 383458-251               |
|             | Saudi Arabia                                                                              | 383458-171               |
|             | Spain                                                                                     | 383458-071               |
|             | Slovakia                                                                                  | 383458-231               |
|             | Sweden                                                                                    | 383458-101               |
|             | Switzerland                                                                               | 383458-111               |
|             | Taiwan                                                                                    | 383458-AB1               |
|             | Thailand                                                                                  | 383458-281               |
|             | Turkey                                                                                    | 383458-141               |
|             | United Kingdom                                                                            | 383458-031               |
|             | United States                                                                             | 383458-001               |



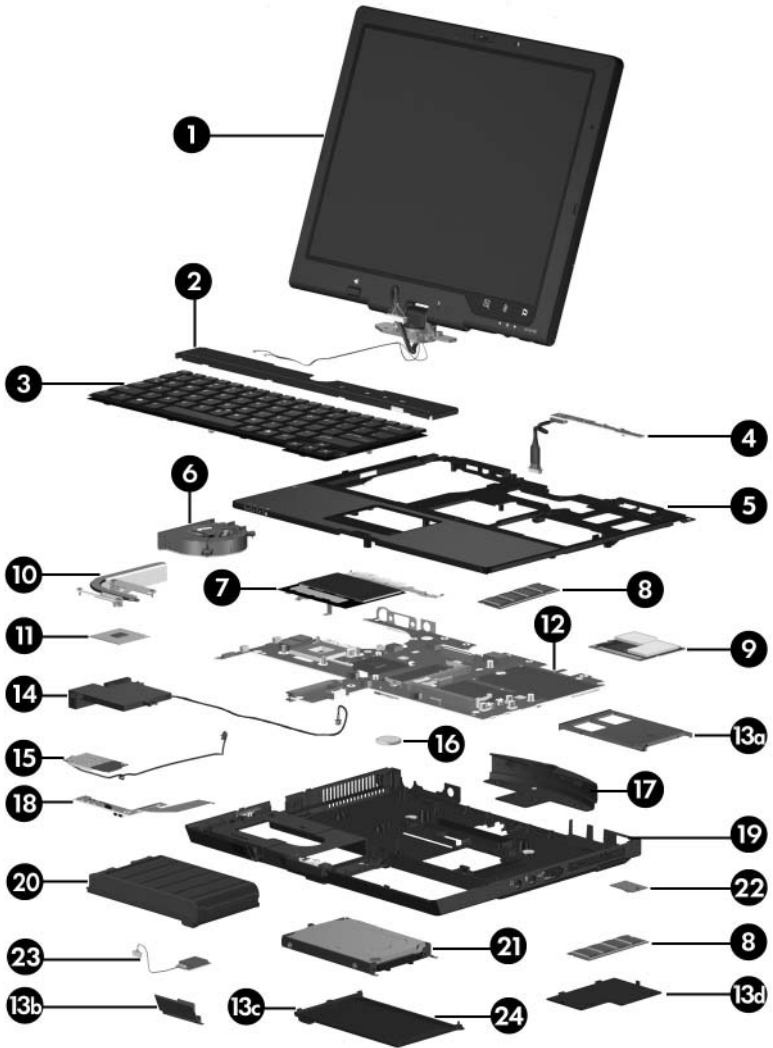
Tablet PC Major Components



Table 4-1

Spare Parts: Tablet PC Major Components (*Continued*)

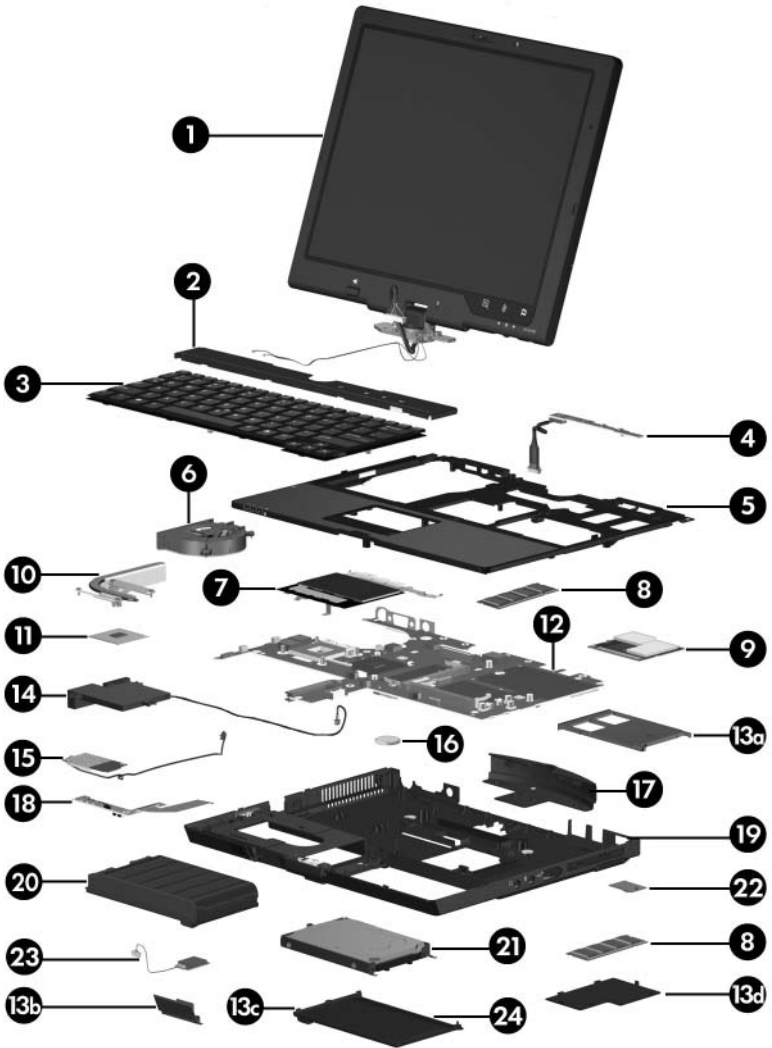
| Item | Description                                       | Spare Part Number |
|------|---------------------------------------------------|-------------------|
| 4    | <b>Button board</b> (includes button board cable) | 383511-001        |
| 5    | <b>Top cover</b>                                  | 383561-001        |
| 6    | <b>Fan</b>                                        | 383528-001        |
| 7    | <b>TouchPad</b> (includes cable and bracket)      | 383562-001        |
| 8    | <b>Memory modules</b>                             |                   |
|      | PC24200                                           |                   |
|      | 1024 MB                                           | 383536-001        |
|      | 512 MB                                            | 383542-001        |
|      | 256 MB                                            | 383538-001        |
|      | PC23200                                           |                   |
|      | 1024 MB                                           | 383535-001        |
|      | 512 MB                                            | 383541-001        |
|      | 256 MB                                            | 383537-001        |



Tablet PC Major Components

**Table 4-1****Spare Parts: Tablet PC Major Components (Continued)**

| <b>Item</b> | <b>Description</b>                                                                          | <b>Spare Part Number</b> |
|-------------|---------------------------------------------------------------------------------------------|--------------------------|
| 9           | <b>Mini PCI communications cards</b>                                                        |                          |
|             | 802.11b/g Silverton wireless local access network (WLAN) card, for use in most of the world | 359106-001               |
|             | 802.11b/g Silverton WLAN card, for use in the rest of the world                             | 359107-001               |
|             | 802.11a/b/g FRLN WLAN card, for use in Europe                                               | 377792-001               |
|             | 802.11a/b/g FRLN WLAN card, for use in Japan                                                | 373888-291               |
|             | 802.11a/b/g FRLN WLAN card, for use in most of the world                                    | 373888-001               |
|             | 802.11a/b/g FRLN WLAN card, for use in the rest of the world                                | 373889-001               |
|             | 802.11a/b/g DynaStar WLAN card, for use in Japan                                            | 337407-291               |
|             | 802.11a/b/g DynaStar WLAN card, for use in most of the world                                | 337407-001               |
|             | 802.11a/b/g DynaStar WLAN card, for use in the rest of the world                            | 337407-002               |
|             | 802.11a/b/g ATMC WLAN card, for use in Japan                                                | 377408-291               |
|             | 802.11a/b/g ATMC WLAN card, for use in most of the world                                    | 377408-001               |
|             | 802.11a/b/g ATMC WLAN card, for use in the rest of the world                                | 377408-002               |
| 10          | <b>Heat sink</b>                                                                            | 383559-001               |

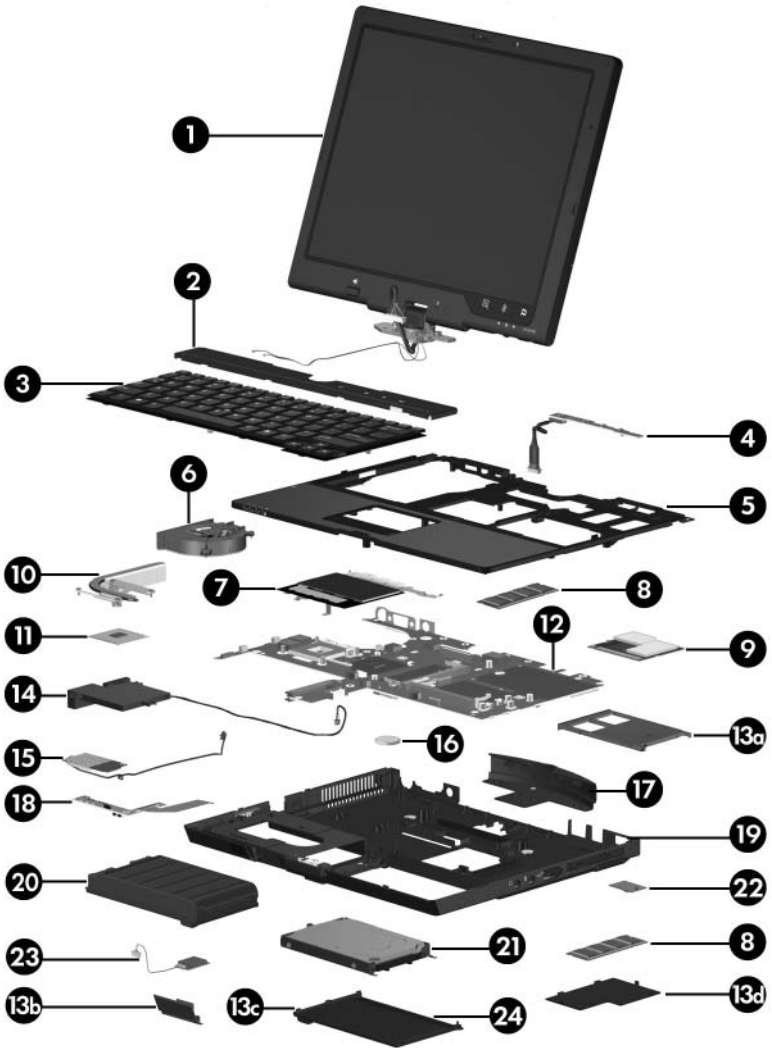


Tablet PC Major Components

Table 4-1

Spare Parts: Tablet PC Major Components (*Continued*)

| Item | Description                                               | Spare Part Number |
|------|-----------------------------------------------------------|-------------------|
| 11   | <b>Processors</b> (include thermal paste)                 |                   |
|      | Intel Pentium M 2.13-GHz                                  | 383555-001        |
|      | Intel Pentium M 2.00-GHz                                  | 383554-001        |
|      | Intel Pentium M 1.86-GHz                                  | 383553-001        |
|      | Intel Pentium M 1.73-GHz                                  | 383552-001        |
|      | Intel Pentium M 1.60-GHz                                  | 383551-001        |
|      | Intel Celeron M 1.50-GHz                                  | 384144-001        |
| 12   | <b>System board</b>                                       | 383515-001        |
|      | <b>Miscellaneous Plastics/Hardware Kit</b> , includes:    | 383549-001        |
| 13a  | PC Card slot spacer                                       |                   |
| 13b  | Bluetooth board cover                                     |                   |
| 13c  | Hard drive cover                                          |                   |
| 13d  | Memory module compartment cover                           |                   |
|      | Not illustrated:                                          |                   |
|      | Tablet PC feet                                            |                   |
| 14   | <b>Speaker</b> (includes cable)                           | 383557-001        |
| 15   | <b>Modem board</b> (high-speed 56K, includes modem cable) | 383534-001        |
| 16   | <b>RTC battery</b>                                        | 383625-001        |



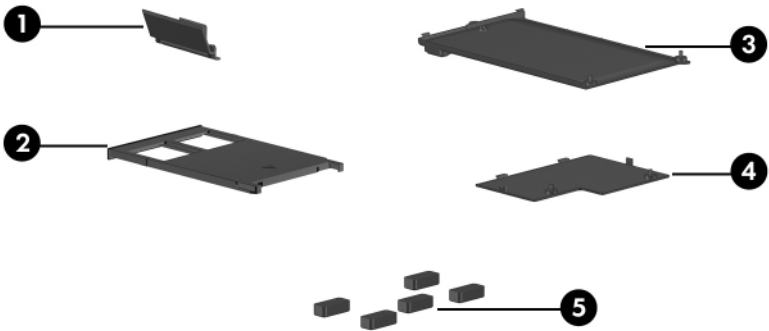
Tablet PC Major Components

Table 4-1

**Spare Parts: Tablet PC Major Components (Continued)**

| <b>Item</b> | <b>Description</b>                                                     | <b>Spare Part Number</b> |
|-------------|------------------------------------------------------------------------|--------------------------|
| 17          | <b>Base enclosure cover</b>                                            | 383521-001               |
| 18          | <b>Infrared board</b> (includes cable)                                 | 383513-001               |
| 19          | <b>Base enclosure</b>                                                  | 383509-001               |
| 20          | <b>6-cell battery pack</b>                                             | 383510-001               |
| 21          | <b>Hard drives</b> (all 5400 rpm; include cover, frame, and connector) |                          |
|             | 80-GB                                                                  | 383527-001               |
|             | 60-GB                                                                  | 383526-001               |
|             | 40-GB                                                                  | 383525-001               |
| 22          | <b>TPM security module</b>                                             | 383545-001               |
| 23          | <b>Bluetooth wireless module</b> (includes Bluetooth module cable)     | 370429-001               |
| 24          | <b>Hard drive cover</b>                                                | 383529-001               |

## 4.3 Miscellaneous Plastics/ Hardware Kit



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**Table 4-2**

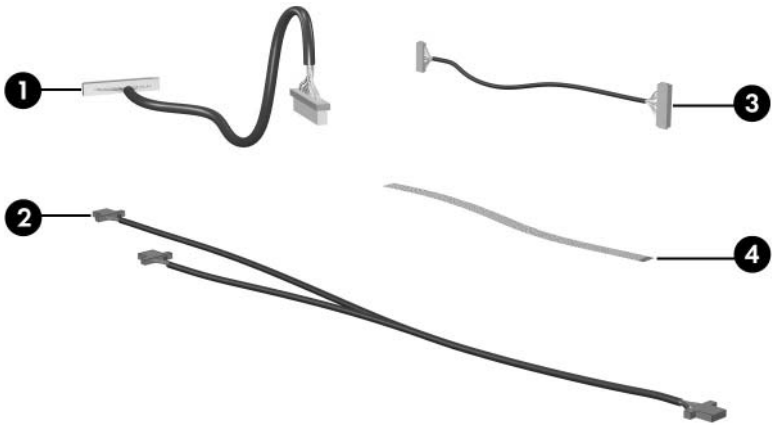
**Spare Part Number 383549-001**

| <b>Item</b> | <b>Description</b>                                          |
|-------------|-------------------------------------------------------------|
| 1           | Bluetooth cover                                             |
| 2           | PC Card slot space saver                                    |
| 3           | Hard drive cover                                            |
| 4           | Memory module compartment cover (includes 2 captive screws) |
| 5           | Tablet PC feet (5)                                          |

---



## 4.4 Miscellaneous Cable Kit



**Table 4-3**

**Spare Part Number 383516-001**

| Item | Description     |
|------|-----------------|
| 1    | LED board cable |
| 2    | RJ-11 cable     |
| 3    | TouchPad cable  |
| 4    | Bluetooth cable |

## 4.5 Miscellaneous (Not Illustrated)

---

**Table 4-4**  
**Miscellaneous Spare Part Information**

| <b>Description</b>                                                            | <b>Spare Part Number</b> |
|-------------------------------------------------------------------------------|--------------------------|
| <b>Label Kit</b>                                                              | 383533-001               |
| <b>Adjustable notebook stand</b>                                              | 372420-001               |
| <b>Advanced Docking Station</b>                                               | 374804-001               |
| <b>Docking Station</b>                                                        | 374803-001               |
| <b>Docking Station Miscellaneous Plastics Kit</b>                             | 380045-001               |
| <b>Power supply, 65 watt</b>                                                  | 338136-001               |
| <b>Power cords</b>                                                            |                          |
| For use in:                                                                   |                          |
| Australia and New Zealand                                                     | 350188-011               |
| Belgium, Europe, Greece, Norway, and Portugal                                 | 350188-021               |
| Canada, French Canada, Latin America, Taiwan, Thailand, and the United States | 350188-001               |
| Denmark                                                                       | 350188-081               |
| France                                                                        | 350188-051               |
| Germany                                                                       | 350188-041               |
| Hong Kong and the United Kingdom                                              | 350188-031               |
| Israel                                                                        | 350188-BB1               |

---

Table 4-4

Miscellaneous Spare Part Information (*Continued*)

| Description                                                                                                                                              | Spare Part Number          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Power cords</b> ( <i>Continued</i> )                                                                                                                  |                            |
| For use in:                                                                                                                                              |                            |
| Italy                                                                                                                                                    | 350188-061                 |
| Japan                                                                                                                                                    | 350188-291                 |
| The Netherlands                                                                                                                                          | 350188-331                 |
| People's Republic of China                                                                                                                               | 350188-AA1                 |
| Saudi Arabia                                                                                                                                             | 350188-171                 |
| Spain                                                                                                                                                    | 3501880-071                |
| Sweden/Finland                                                                                                                                           | 350188-B71                 |
| <b>Screw Kit</b> (includes the following screws; refer to <a href="#">Appendix C, "Screw Listing,"</a> for more information on specifications and usage) | 383556-001                 |
| ■ Phillips PM2.5×13.0 spring-loaded screw                                                                                                                | ■ Phillips PM1.5×3.5 screw |
| ■ Phillips PM3.0×4.0 screw                                                                                                                               | ■ Torx 8 M2.0×18.0 screw   |
| ■ Phillips PM2.5×7.0 screw                                                                                                                               | ■ Torx 8 M2.0×9.0 screw    |
| ■ Phillips PM2.0×5.0 screw                                                                                                                               | ■ Torx 8 M2.0×7.5 screw    |
| ■ Phillips PM2.0×4.0 screw                                                                                                                               | ■ Torx 8 M2.0×5.0 screw    |

## 4.6 Sequential Part Number Listing

---

**Table 4-5**  
**Sequential Part Number Listing**

| <b>Spare Part Number</b> | <b>Description</b>                                                                                  |
|--------------------------|-----------------------------------------------------------------------------------------------------|
| 337407-001               | 802.11a/b/g DynaStar WLAN Mini PCI communications card, for use in most of the world                |
| 337407-002               | 802.11a/b/g DynaStar WLAN Mini PCI communications card, for use in the rest of the world            |
| 337407-291               | 802.11a/b/g DynaStar WLAN Mini PCI communications card, for use in Japan                            |
| 338136-001               | 65-watt power supply                                                                                |
| 350188-001               | Power cord for use in Canada, French Canada, Latin America, Taiwan, Thailand, and the United States |
| 350188-011               | Power cord for use in Australia and New Zealand                                                     |
| 350188-021               | Power cord for use in Belgium, Europe, Greece, Norway, and Portugal                                 |
| 350188-031               | Power cord for use in Hong Kong and the United Kingdom                                              |
| 350188-041               | Power cord for use in Germany                                                                       |
| 350188-051               | Power cord for use in France                                                                        |
| 350188-061               | Power cord for use in Italy                                                                         |
| 350188-071               | Power cord for use in Spain                                                                         |
| 350188-081               | Power cord for use in Denmark                                                                       |
| 350188-171               | Power cord for use in Saudi Arabia                                                                  |
| 350188-291               | Power cord for use in Japan                                                                         |
| 350188-331               | Power cord for use in the Netherlands                                                               |
| 350188-AA1               | Power cord for use in People's Republic of China                                                    |
| 350188-B71               | Power cord for use in Sweden/Finland                                                                |

---

**Table 4-5**  
**Sequential Part Number Listing (*Continued*)**

| <b>Spare Part Number</b> | <b>Description</b>                                                                           |
|--------------------------|----------------------------------------------------------------------------------------------|
| 350188-BB1               | Power cord for use in Israel                                                                 |
| 359106-001               | 802.11b/g Silverton WLAN Mini PCI communications card, for use in most of the world          |
| 359107-001               | 802.11b/g Silverton WLAN card Mini PCI communications card, for use in the rest of the world |
| 370429-001               | Bluetooth wireless module (includes Bluetooth module cable)                                  |
| 372420-001               | Adjustable notebook stand                                                                    |
| 374804-001               | Advanced Docking Station                                                                     |
| 374803-001               | Docking Station                                                                              |
| 380045-001               | Docking Station Miscellaneous Plastics Kit                                                   |
| 377408-002               | 802.11a/b/g ATMC WLAN Mini PCI communications card, for use in the rest of the world         |
| 377408-291               | 802.11a/b/g ATMC WLAN Mini PCI communications card, for use in Japan                         |
| 377792-001               | 802.11a/b/g FRLN WLAN Mini PCI communications card, for use in Europe                        |
| 383458-001               | Keyboard with pointing stick for use in the United States                                    |
| 383458-011               | Keyboard with pointing stick for use in Australia                                            |
| 383458-021               | Keyboard with pointing stick for use in Europe                                               |
| 383458-031               | Keyboard with pointing stick for use in the United Kingdom                                   |
| 383458-041               | Keyboard with pointing stick for use in Germany                                              |
| 383458-051               | Keyboard with pointing stick for use in France                                               |
| 383458-061               | Keyboard with pointing stick for use in Italy                                                |
| 383458-071               | Keyboard with pointing stick for use in Spain                                                |

**Table 4-5**  
**Sequential Part Number Listing (*Continued*)**

| <b>Spare Part Number</b> | <b>Description</b>                                                 |
|--------------------------|--------------------------------------------------------------------|
| 383458-081               | Keyboard with pointing stick for use in Denmark                    |
| 383458-091               | Keyboard with pointing stick for use in Norway                     |
| 383458-101               | Keyboard with pointing stick for use in Sweden                     |
| 383458-111               | Keyboard with pointing stick for use in Switzerland                |
| 383458-121               | Keyboard with pointing stick for use in French Canada              |
| 383458-131               | Keyboard with pointing stick for use in Portugal                   |
| 383458-141               | Keyboard with pointing stick for use in Turkey                     |
| 383458-171               | Keyboard with pointing stick for use in Saudi Arabia               |
| 383458-181               | Keyboard with pointing stick for use in Belgium                    |
| 383458-211               | Keyboard with pointing stick for use in Hungary                    |
| 383458-221               | Keyboard with pointing stick for use in Czech Republic             |
| 383458-231               | Keyboard with pointing stick for use in Slovakia                   |
| 383458-241               | Keyboard with pointing stick for use in Poland                     |
| 383458-251               | Keyboard with pointing stick for use in Russia                     |
| 383458-281               | Keyboard with pointing stick for use in Thailand                   |
| 383458-291               | Keyboard with pointing stick for use in Japan                      |
| 383458-371               | Keyboard with pointing stick for use in Asia Pacific               |
| 383458-AA1               | Keyboard with pointing stick for use in People's Republic of China |
| 383458-AB1               | Keyboard with pointing stick for use in Taiwan                     |
| 383458-AC1               | Keyboard with pointing stick for use in Hong Kong                  |
| 383458-AD1               | Keyboard with pointing stick for use in Korea                      |
| 383458-BB1               | Keyboard with pointing stick for use in Israel                     |

**Table 4-5**  
**Sequential Part Number Listing (*Continued*)**

| <b>Spare Part Number</b> | <b>Description</b>                                                |
|--------------------------|-------------------------------------------------------------------|
| 383458-DD1               | Keyboard with pointing stick for use in Iceland                   |
| 383509-001               | Base enclosure                                                    |
| 383510-001               | 6-cell battery pack                                               |
| 383511-001               | Button board (includes button board cable)                        |
| 383513-001               | Infrared board (includes cable)                                   |
| 383515-001               | System board                                                      |
| 383516-001               | Miscellaneous Cable Kit                                           |
| 383519-001               | Keyboard cover                                                    |
| 383521-001               | Base enclosure cover                                              |
| 383525-001               | 40-GB hard drive (5400 rpm; includes cover, frame, and connector) |
| 383526-001               | 60-GB hard drive (5400 rpm; includes cover, frame, and connector) |
| 383527-001               | 80-GB hard drive (5400 rpm; includes cover, frame, and connector) |
| 383528-001               | Fan                                                               |
| 383529-001               | Hard drive cover                                                  |
| 383531-001               | Display Hinge Kit                                                 |
| 383534-001               | Modem board (high-speed 56K, includes modem cable)                |
| 383535-001               | PC23200 1024-MB memory module                                     |
| 383536-001               | PC24200 1024-MB memory module                                     |
| 383537-001               | PC23200 256-MB memory module                                      |
| 383538-001               | PC24200 256-MB memory module                                      |
| 383541-001               | PC23200 512-MB memory module                                      |

**Table 4-5**  
**Sequential Part Number Listing (*Continued*)**

| <b>Spare Part Number</b> | <b>Description</b>                                                                 |
|--------------------------|------------------------------------------------------------------------------------|
| 383542-001               | PC24200 512-MB memory module                                                       |
| 383545-001               | TPM security module                                                                |
| 383548-001               | 12.1-inch, XGA, TFT display assembly (includes wireless antenna boards and cables) |
| 383549-001               | Miscellaneous Plastics/Hardware Kit                                                |
| 383551-001               | Intel Pentium M 1.60-GHz processor (includes thermal paste)                        |
| 383552-001               | Intel Pentium M 1.73-GHz processor (includes thermal paste)                        |
| 383553-001               | Intel Pentium M 1.86-GHz processor (includes thermal paste)                        |
| 383554-001               | Intel Pentium M 2.00-GHz processor (includes thermal paste)                        |
| 383555-001               | Intel Pentium M 2.13-GHz processor (includes thermal paste)                        |
| 383557-001               | Speaker                                                                            |
| 383559-001               | Heat sink                                                                          |
| 383561-001               | Top cover                                                                          |
| 383562-001               | TouchPad (includes cable and bracket)                                              |
| 383625-001               | RTC battery                                                                        |
| 383533-001               | Label Kit                                                                          |
| 383556-001               | Screw Kit                                                                          |
| 384144-001               | Intel Celeron M 1.50-GHz processor (includes thermal paste)                        |



---

## Removal and Replacement Preliminaries

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

### 5.1 Tools Required

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

- Magnetic screwdriver
- Phillips P0 screwdriver
- Torx T8 screwdriver
- Flat-bladed screwdriver
- Tool kit—includes connector removal tool, loopback plugs, and case utility tool

## 5.2 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 tablet PC, place the subassembly (and all accompanying screws) 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 tablet PC, ensure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the tablet PC.

---

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.

## 5.3 Preventing Damage to Removable Drives

Removable drives are fragile components that must be handled with care. To prevent damage to the tablet PC, damage to a removable drive, or loss of information, observe the following precautions:

- Before removing or inserting a hard drive, shut down the tablet PC. If you are unsure whether the tablet PC is off or in hibernation, turn the tablet PC 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.”

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

## 5.5 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.

## 5.6 Workstation Precautions

Use the following grounding precautions at workstations:

- Cover the workstation with approved static-shielding material (refer to [Table 5-2, “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, drivers, and vacuums.
- When fixtures must directly contact dissipative surfaces, use fixtures made only of static-safe materials.
- Keep the work area free of nonconductive materials such as ordinary plastic assembly aids and Styrofoam.
- Handle 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.

## 5.7 Grounding Equipment and Methods

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

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of one megohm  $\pm 10\%$  resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, use alligator clips to connect a wrist strap.
- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of one megohm resistance between the operator and ground. To be effective, the conductive strips must be worn in contact with the skin.

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

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

Table 5-1 shows how humidity affects the electrostatic voltage levels generated by different activities.

---

**Table 5-1**  
**Typical Electrostatic Voltage Levels**

---

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

---



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

---

Table 5-2 lists the shielding protection provided by antistatic bags and floor mats.

---

**Table 5-2**  
**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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# 6

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## Removal and Replacement Procedures

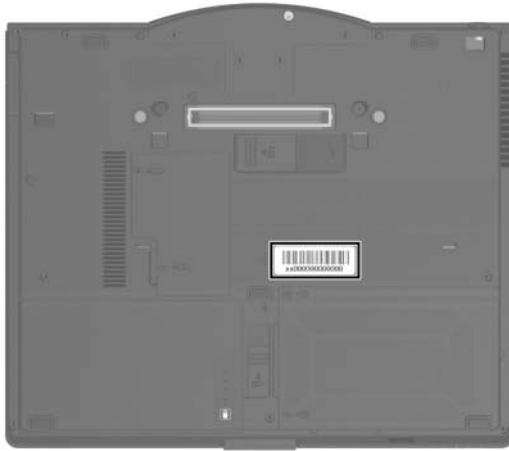
This chapter provides removal and replacement procedures.

There are 59 screws and screw locks, in 11 different sizes, that may have to be removed, replaced, or loosened when servicing the tablet PC. Make special note of each screw and screw lock size and location during removal and replacement.

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

## 6.1 Serial Number

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



*Serial Number Location*


## 6.2 Disassembly Sequence Chart

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

**Disassembly Sequence Chart**

| <b>Section</b> | <b>Description</b>                                      | <b># of Screws Removed</b>                                                                                 |
|----------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 6.3            | Preparing the tablet PC for disassembly<br>Battery pack | 0                                                                                                          |
| 6.4            | Hard drive                                              | 2 to remove the hard drive cover<br>1 loosened to remove the hard drive<br>4 to disassemble the hard drive |
| 6.5            | Tablet PC feet                                          | 0                                                                                                          |
| 6.6            | Bluetooth module                                        | 2 loosened to remove the Bluetooth cover                                                                   |
| 6.7            | External memory module                                  | 2 to remove the memory module compartment cover                                                            |
| 6.8            | TPM security card                                       | 1                                                                                                          |
| 6.9            | Keyboard cover                                          | 4                                                                                                          |
| 6.10           | Keyboard                                                | 4                                                                                                          |
| 6.11           | Fan                                                     | 3                                                                                                          |

**Disassembly Sequence Chart (Continued)**

| <b>Section</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b># of Screws Removed</b> |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 6.12           | Heat sink                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4                          |
| 6.13           | Processor                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1 loosened                 |
| 6.14           | Internal memory module                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0                          |
| 6.15           | Mini PCI communications card                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                          |
|                |  To prevent an unresponsive system and the display of a warning message, install only a Mini PCI device authorized for use in your tablet PC 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 tablet PC functionality. Then contact Customer Care. |                            |
| 6.16           | Button board                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                          |
| 6.17           | Display assembly                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6                          |
| 6.18           | Top cover                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10                         |
| 6.19           | TouchPad                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                          |
| 6.20           | Speaker                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2                          |
| 6.21           | Infrared board                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1                          |
| 6.22           | System board                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5                          |
| 6.23           | Modem board                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                          |
| 6.24           | RTC battery                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                          |

## 6.3 Preparing the Tablet PC for Disassembly

Before you begin any removal or installation procedures:

1. Shut down the tablet PC. If you are unsure whether the tablet PC 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 tablet PC.
3. Disconnect the power cord.

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### Battery Pack Spare Part Number Information

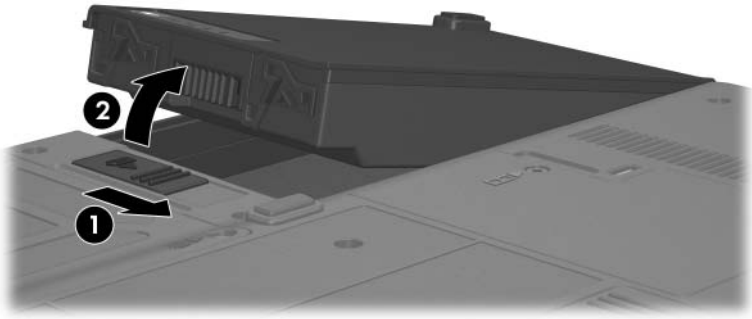
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6-cell battery pack

383510-001

---

4. Remove the battery pack by following these steps:
  - c. Turn the tablet PC upside down with the rear panel toward you.
  - d. Slide the battery release latch **1** toward you. (The left side of the battery pack disengages from the tablet PC.)
  - e. Lift the left side of the battery pack and swing it to the right **2** to remove it.



*Removing the Battery Pack*

Reverse the above procedure to install the battery pack.

## 6.4 Hard Drive

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### Hard Drive Spare Part Number Information

---

Hard drives (all 5400 rpm; include cover, frame, and connector)

|       |            |
|-------|------------|
| 80-GB | 383527-001 |
| 60-GB | 383526-001 |
| 40-GB | 383525-001 |

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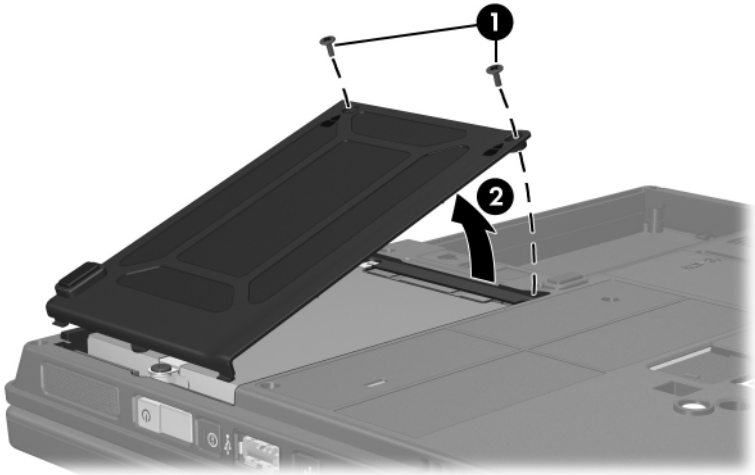
1. Prepare the tablet PC for disassembly ([Section 6.3](#)).

2. Remove the two PM2.0×5.0 screws ❶ that secure the hard drive cover to the tablet PC.
3. Lift the right side of the hard drive cover and swing it to the left ❷ to remove it.



The hard drive cover is included in the Miscellaneous Plastics/Hardware Kit, spare part number 383549-001.

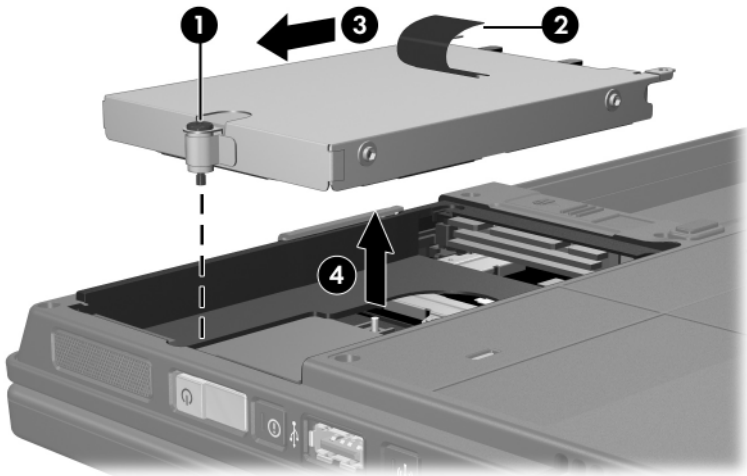
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*Removing the Hard Drive Cover*

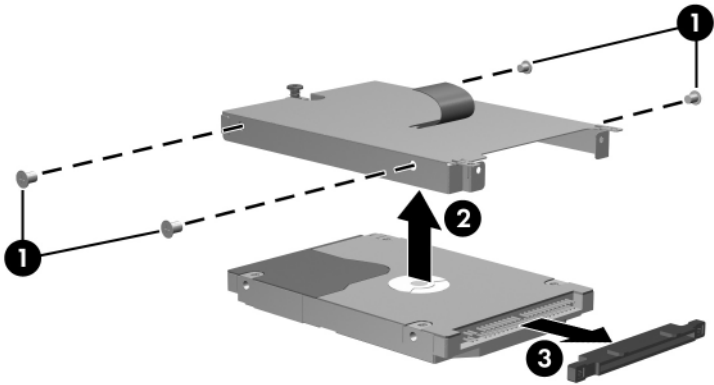


4. Loosen the PM2.5×13.0 hard drive retention screw ❶.
5. Grasp the mylar tab ❷ on the hard drive and slide the hard drive to the left ❸ to disconnect it from the system board.
6. Remove the hard drive.



*Removing the Hard Drive*

7. Remove the four PM3.0×4.0 screws **1** that secure the hard drive frame to the hard drive.
8. Lift the frame straight up **2** to remove it from the hard drive.
9. Remove the hard drive connector **3**.

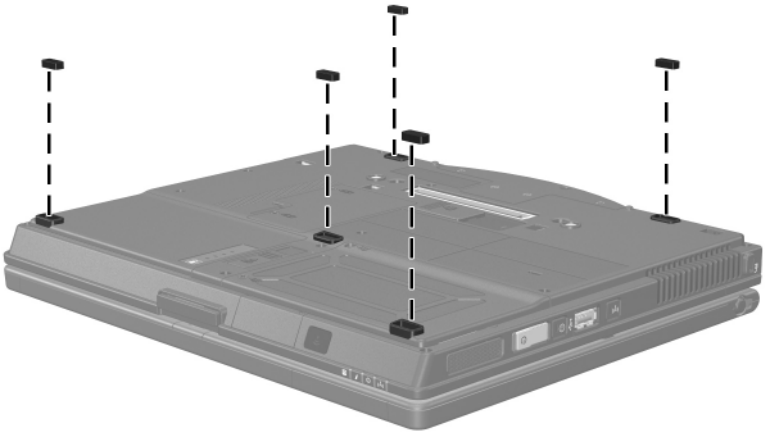


*Removing the Hard Drive Frame*

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

## 6.5 Tablet PC Feet

The tablet PC feet are adhesive-backed rubber pads. The feet are included in the Miscellaneous Plastics/Hardware Kit, spare part number 383549-001.



*Replacing the Tablet PC Feet*

## 6.6 Bluetooth Module

---

### Bluetooth Module Spare Part Number Information

|                                                             |            |
|-------------------------------------------------------------|------------|
| Bluetooth wireless module (includes Bluetooth module cable) | 370429-001 |
|-------------------------------------------------------------|------------|

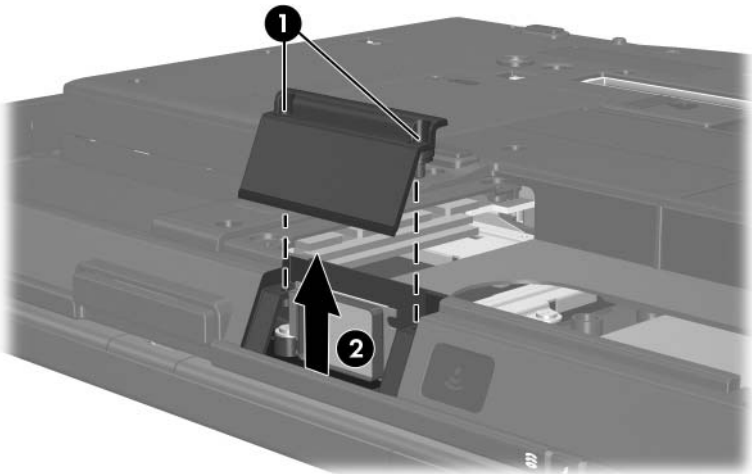
---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the hard drive cover ([Section 6.4](#)).
3. Position the tablet PC with the front toward you.
4. Loosen the two PM2.0×5.0 screws **1** that secure the Bluetooth cover to the tablet PC.
5. Remove the Bluetooth cover **2**.



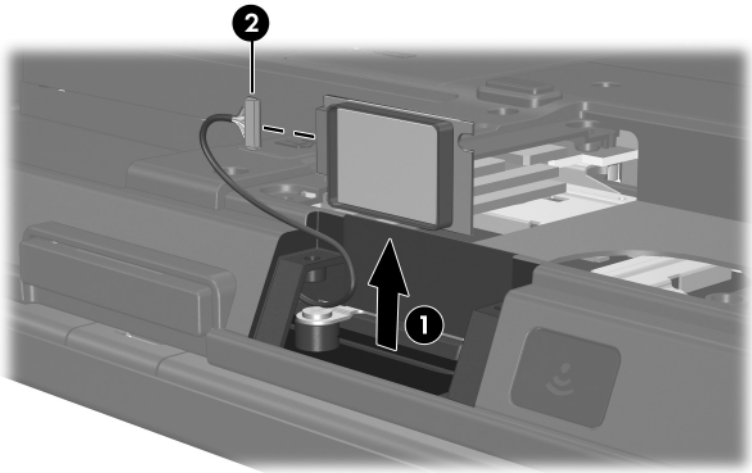
The Bluetooth cover is included in the Miscellaneous Plastics/Hardware Kit, spare part number 383549-001.

---



*Removing the Bluetooth Cover*

6. Slide the Bluetooth module out of the tablet PC ❶.
7. Disconnect the Bluetooth module cable ❷ from the board.



### *Removing the Bluetooth Module*

Reverse the above procedure to install the Bluetooth module.

## 6.7 External Memory Module

---

### Memory Module Spare Part Number Information

---

|         |  |            |
|---------|--|------------|
| PC24200 |  |            |
| 1024 MB |  | 383536-001 |
| 512 MB  |  | 383542-001 |
| 256 MB  |  | 383538-001 |
| PC23200 |  |            |
| 1024 MB |  | 383535-001 |
| 512 MB  |  | 383541-001 |
| 256 MB  |  | 383537-001 |

---

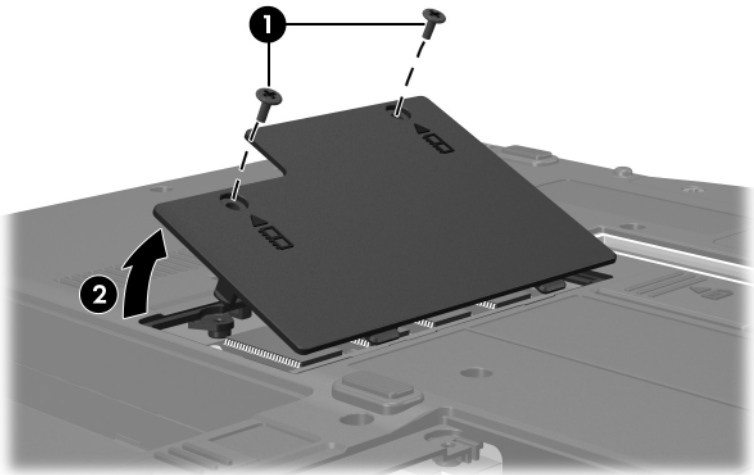
1. Prepare the tablet PC for disassembly (refer to [Section 6.3](#)).
2. Position the tablet PC with the front toward you.

3. Remove the two PM2.0×5.0 screws ❶ that secure the memory module compartment cover to the tablet PC.
4. Lift the left side of the cover and swing it to the right ❷ to remove the memory module compartment cover.



The memory module compartment cover is included in the Miscellaneous Plastics/Hardware Kit, spare part number 383549-001.

---



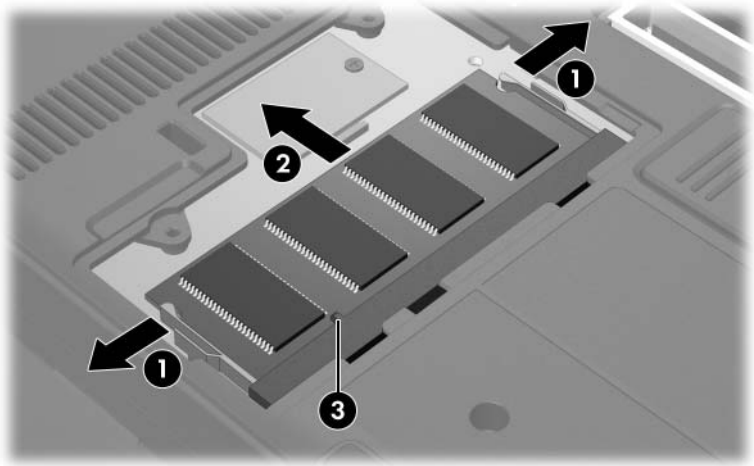
*Removing the Memory Module Compartment Cover*

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



Memory modules are slotted **3** to prevent incorrect installation into the memory module socket.

---



### *Removing the Memory Module*

Reverse the above procedure to install an external memory module.



## 6.8 TPM Security Card

---

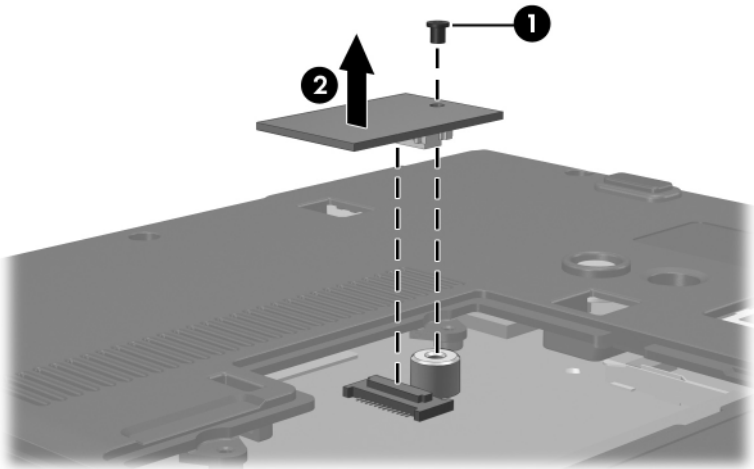
### TPM Security Card Spare Part Number Information

---

TPM security module

383545-001

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the memory module compartment cover ([Section 6.7](#)).
3. Remove the PM1.5×3.5 screw **1** that secures the TPM security card to the tablet PC.
4. Lift up on the rear edge of the TPM security card **2** to disconnect it from the system board.
5. Remove the TPM security card.



*Removing a TPM Security Card*

Reverse the above procedure to install the TPM security card.

## 6.9 Keyboard Cover

---

### Keyboard Cover Spare Part Number Information

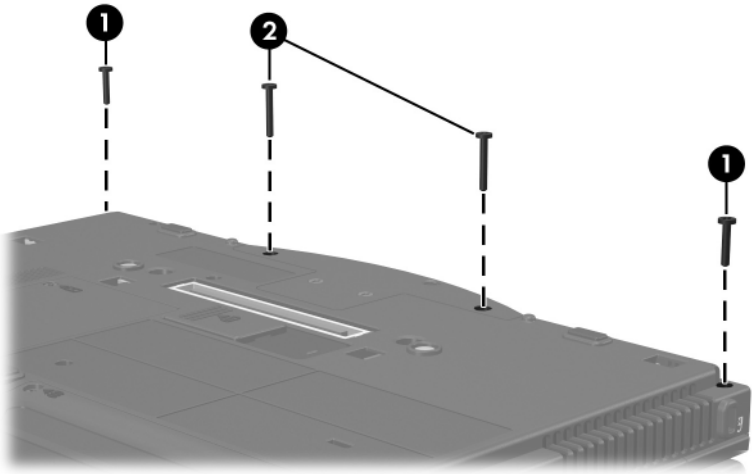
---

Keyboard cover

383519-001

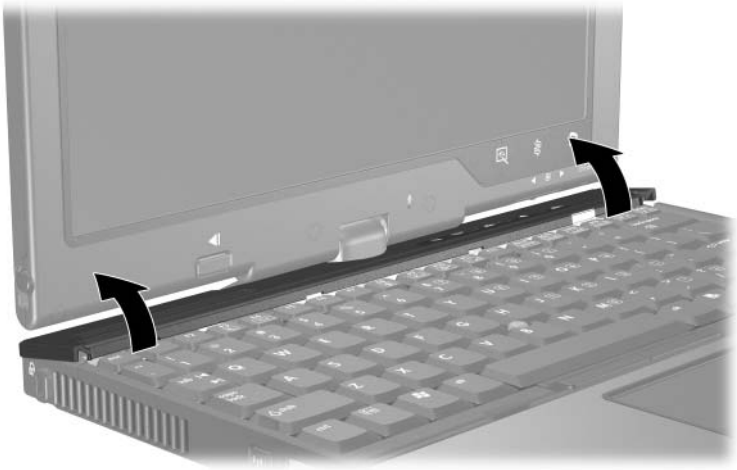
---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Position the tablet PC with the front toward you.
3. Remove the two T8M2.0×9.0 screws ❶ and the two T8M2.0×18.0 screws ❷ that secure the keyboard cover to the tablet PC.



*Removing the Keyboard Cover Screws*

4. Turn the tablet PC right-side up with the front toward you.
5. Open the tablet PC as far as possible.
6. Lift up the front edges of the keyboard cover until the cover disengages from the tablet PC.



*Releasing the Keyboard Cover*

7. Swing the right edge of the keyboard cover forward until the cover disengages from the tablet PC.



*Removing the Keyboard Cover*

Reverse the above procedure to install the keyboard cover.

## 6.10 Keyboard

### Keyboard Spare Part Number Information

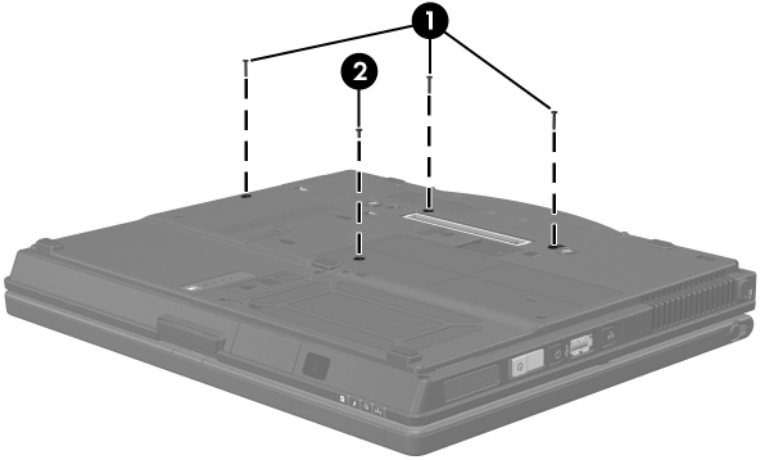
Keyboards, with pointing stick

|                |            |                               |            |
|----------------|------------|-------------------------------|------------|
| Asia Pacific   | 383458-371 | The Netherlands               | 383458-331 |
| Australia      | 383458-011 | Norway                        | 383458-091 |
| Belgium        | 383458-181 | People's Republic<br>of China | 383458-AA1 |
| Czech Republic | 383458-221 | Poland                        | 383458-241 |
| Denmark        | 383458-081 | Portugal                      | 383458-131 |
| Europe         | 383458-021 | Russia                        | 383458-251 |
| France         | 383458-051 | Saudi Arabia                  | 383458-171 |
| French Canada  | 383458-121 | Spain                         | 383458-071 |
| Germany        | 383458-041 | Slovakia                      | 383458-231 |
| Hong Kong      | 383458-AC1 | Sweden                        | 383458-101 |
| Hungary        | 383458-211 | Switzerland                   | 383458-111 |
| Iceland        | 383458-DD1 | Taiwan                        | 383458-AB1 |
| Israel         | 383458-BB1 | Thailand                      | 383458-281 |
| Italy          | 383458-061 | Turkey                        | 383458-141 |
| Japan          | 383458-291 | United Kingdom                | 383458-031 |
| Korea          | 383458-AD1 | United States                 | 383458-001 |
| Latin America  | 383458-161 |                               |            |

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Turn the tablet PC upside down with the front toward you.

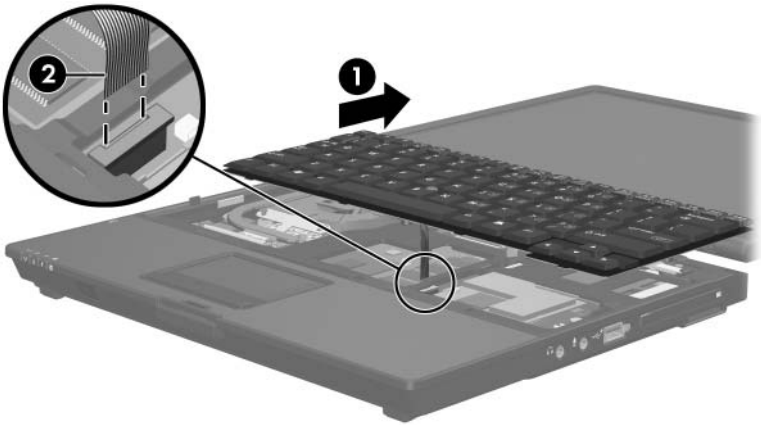
4. Remove the following:

- ❶ Three T8M2.0×9.0 screws
- ❷ One T8M2.0×5.0 screw



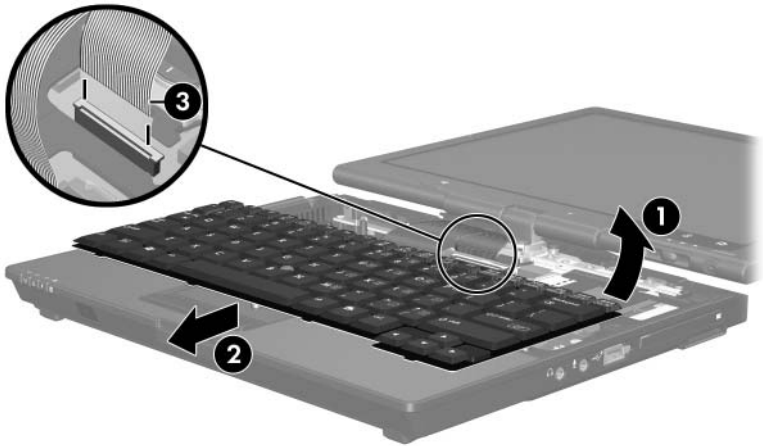
*Removing the Keyboard Screws*

5. Turn the tablet PC right-side up with the front toward you.
6. Open the tablet PC as far as possible.
7. Slide the keyboard back ❶ until the pointing stick cable is accessible.
8. Release the zero insertion force (ZIF) connector to which the pointing stick cable is connected and disconnect the pointing stick cable ❷ from the system board.



*Disconnecting the Pointing Stick Cable*

9. Lift the rear edge of the keyboard **1** until it disengages from the tablet PC.
10. Slide the keyboard forward **2** until it rests on the palm rest.
11. Release the ZIF connector to which the keyboard cable is connected and disconnect the keyboard cable **3** from the system board.
12. Remove the keyboard.



### *Removing the Keyboard*

Reverse the above procedure to install the keyboard.



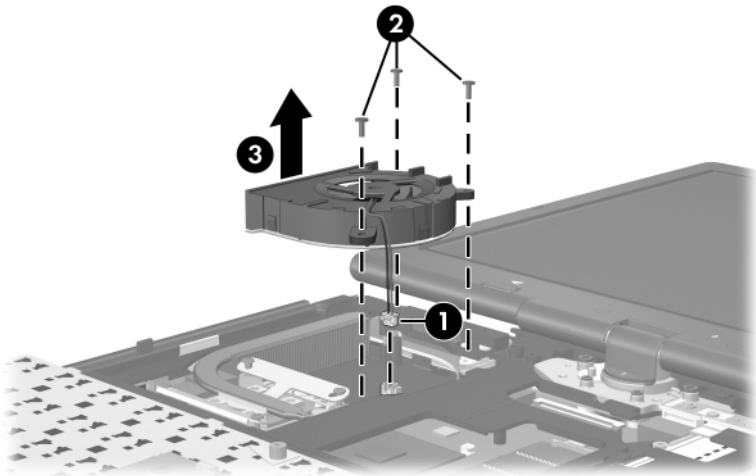
## 6.11 Fan

### Fan Spare Part Number Information

Fan

383528-001

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).
4. Disconnect the fan cable **1** from the system board.
5. Remove the three T8M2.0×7.5 screws **2** that secure the fan to the tablet PC.
6. Remove the fan **3**.



*Removing the Fan*

Reverse the above procedure to install the fan.

## 6.12 Heat Sink

---

### Heat Sink Spare Part Number Information

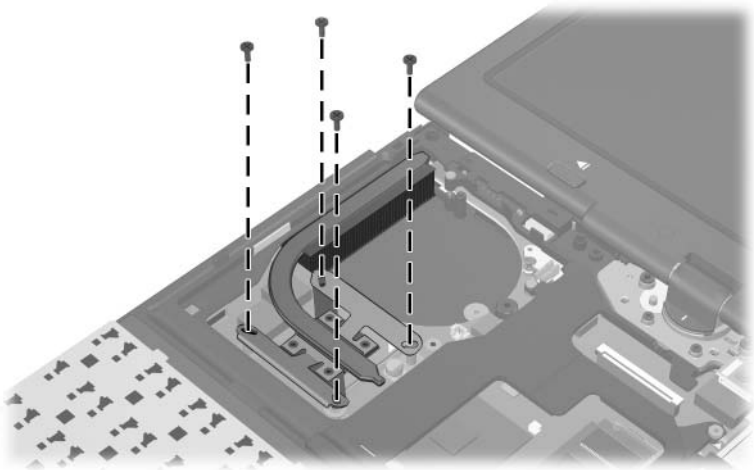
---

Heat sink (includes thermal paste)

383559-001

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).
4. Remove the fan ([Section 6.11](#)).
5. Remove the four PM2.5×7.0 screws that secure the heat sink to the tablet PC.



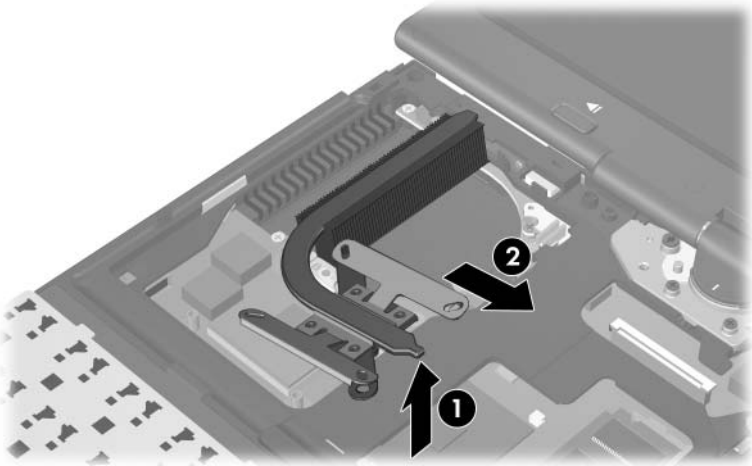
*Removing the Heat Sink Screws*

6. Lift the right side of the heat sink **1** to disengage it from the processor.
7. Slide the heat sink up and to the right **2** to remove it.



Due to the adhesive quality of the thermal paste located between the heat sink and processor, it may be necessary to move the heat sink from side to side to detach the heat sink from the processor.

---

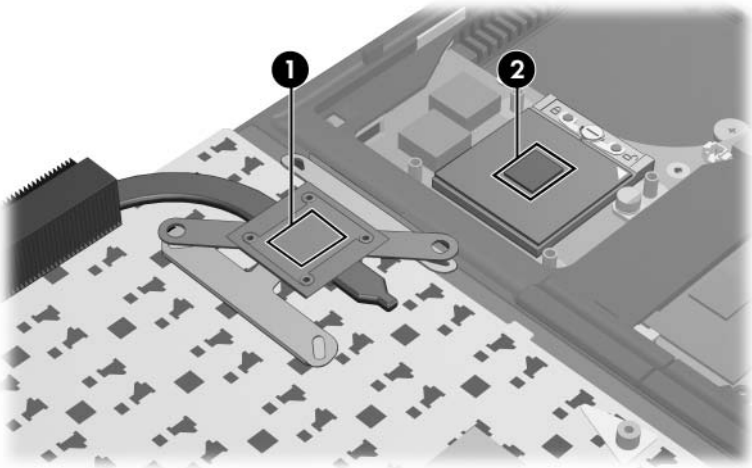


*Removing the Heat Sink*



The thermal paste should be thoroughly cleaned from the surfaces of the heat sink **1** and processor **2** each time the heat sink is removed. Thermal paste is included with all heat sink and processor spare part kits.

---



#### *Thermal Paste Locations*

Reverse the above procedure to install the heat sink.

## 6.13 Processor



All processor spare part kits include thermal paste.

### Processor Spare Part Number Information

|                          |            |
|--------------------------|------------|
| Intel Pentium M 2.13-GHz | 383555-001 |
| Intel Pentium M 2.00-GHz | 383554-001 |
| Intel Pentium M 1.86-GHz | 383553-001 |
| Intel Pentium M 1.73-GHz | 383552-001 |
| Intel Pentium M 1.60-GHz | 383551-001 |
| Intel Celeron M 1.50-GHz | 384144-001 |

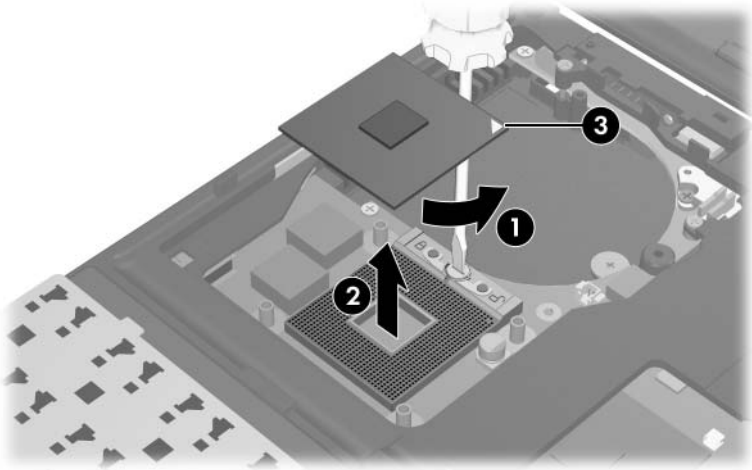
1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).
4. Remove the fan ([Section 6.11](#)).
5. Remove the heat sink ([Section 6.12](#)).

6. Use a flat-blade screwdriver to turn the processor locking screw one-quarter turn counterclockwise ❶ until you hear a click.
7. Lift the processor straight up and remove it ❷.



The gold triangle ❸ on the processor should be aligned in the rear right corner when you install the processor.

---



### *Removing the Processor*

Reverse the above procedure to install the processor.

## 6.14 Internal Memory Module

---

### Memory Module Spare Part Number Information

---

|         |  |            |
|---------|--|------------|
| PC24200 |  |            |
| 1024 MB |  | 383536-001 |
| 512 MB  |  | 383542-001 |
| 256 MB  |  | 383538-001 |
| PC23200 |  |            |
| 1024 MB |  | 383535-001 |
| 512 MB  |  | 383541-001 |
| 256 MB  |  | 383537-001 |

---

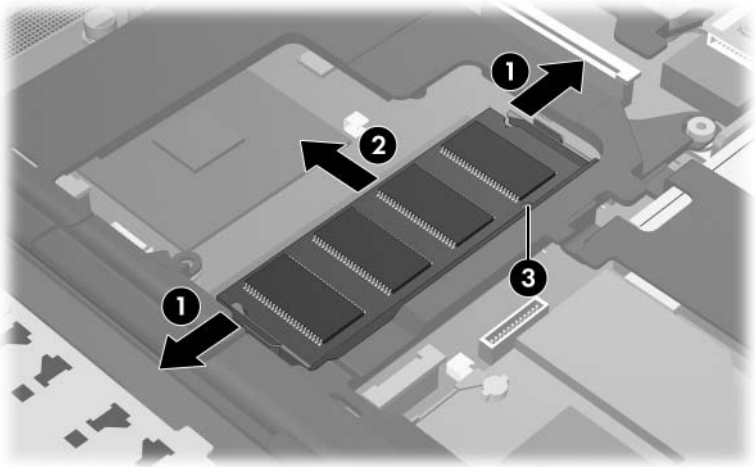
1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).

4. Spread the retaining tabs **1** on each side of the memory module socket to release the memory module. (The side of the memory module opposite the socket rises away from the tablet PC.)
5. Slide the memory module away from the socket at an angle **2**.
6. Remove the memory module.



Memory modules are slotted **3** to prevent incorrect installation into the memory module socket.

---



#### *Removing the Internal Memory Module*

Reverse the above procedure to install a memory module.



## 6.15 Mini PCI Communications Card

### Mini PCI Communications Card Spare Part Number Information

|                                                                                             |            |
|---------------------------------------------------------------------------------------------|------------|
| 802.11b/g Silverton wireless local access network (WLAN) card, for use in most of the world | 359106-001 |
| 802.11b/g Silverton WLAN card, for use in the rest of the world                             | 359107-001 |
| 802.11a/b/g FRLN WLAN card, for use in Europe                                               | 377792-001 |
| 802.11a/b/g FRLN WLAN card, for use in Japan                                                | 373888-291 |
| 802.11a/b/g FRLN WLAN card, for use in most of the world                                    | 373888-001 |
| 802.11a/b/g FRLN WLAN card, for use in the rest of the world                                | 373889-001 |
| 802.11a/b/g DynaStar WLAN card, for use in Japan                                            | 337407-291 |
| 802.11a/b/g DynaStar WLAN card, for use in most of the world                                | 337407-001 |
| 802.11a/b/g DynaStar WLAN card, for use in the rest of the world                            | 337407-002 |
| 802.11a/b/g ATMC WLAN card, for use in Japan                                                | 377408-291 |
| 802.11a/b/g ATMC WLAN card, for use in most of the world                                    | 377408-001 |
| 802.11a/b/g ATMC WLAN card, for use in the rest of the world                                | 377408-002 |

1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).



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

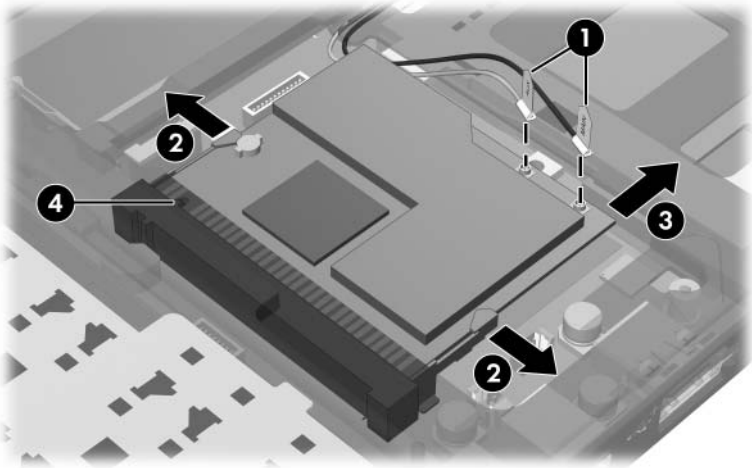
---

4. Disconnect the auxiliary and main antenna cables ❶ from the Mini PCI communications card.
  5. Spread the two retaining tabs ❷ on each side of the Mini PCI socket to release the Mini PCI communications card. (The edge of the card opposite the socket rises away from the tablet PC.)
  6. Remove the Mini PCI communications card by pulling the card away from the socket at a 45-degree angle ❸.
- 



The Mini PCI communications card is slotted ❹ to prevent incorrect installation.

---



*Removing a Mini PCI Communications Card*

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

## 6.16 Button Board

---

### Button Board Spare Part Number Information

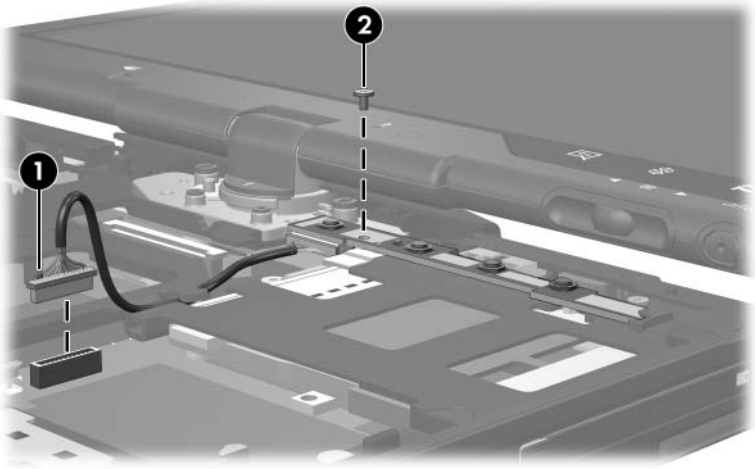
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|                                            |            |
|--------------------------------------------|------------|
| Button board (includes button board cable) | 383511-001 |
|--------------------------------------------|------------|

---

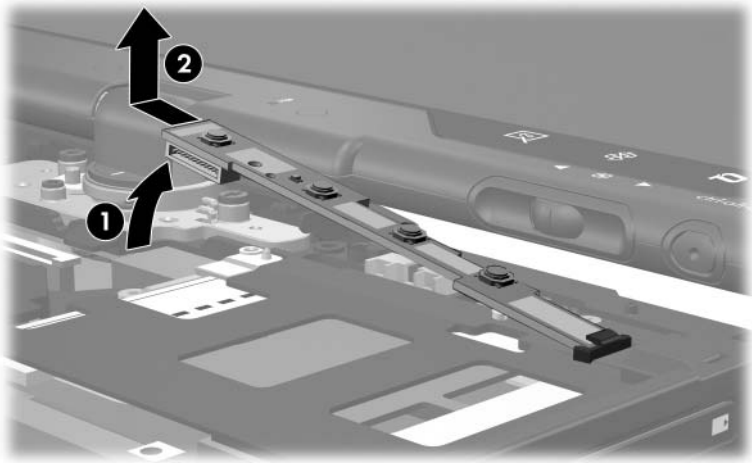
1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Release the keyboard ([Section 6.10](#)).

4. Disconnect the button board cable ❶ from the system board.
5. Remove the silver PM2.0×4.0 screw ❷ that secures the button board to the switch cover.



*Removing the Button Board Screw*

6. Lift the left side of the button board ❶ until it rests at angle.
7. Remove the button board ❷.



*Removing the Button Board*

Reverse the above procedure to install the button board.

## 6.17 Display Assembly

---

### Display Assembly Spare Part Number Information

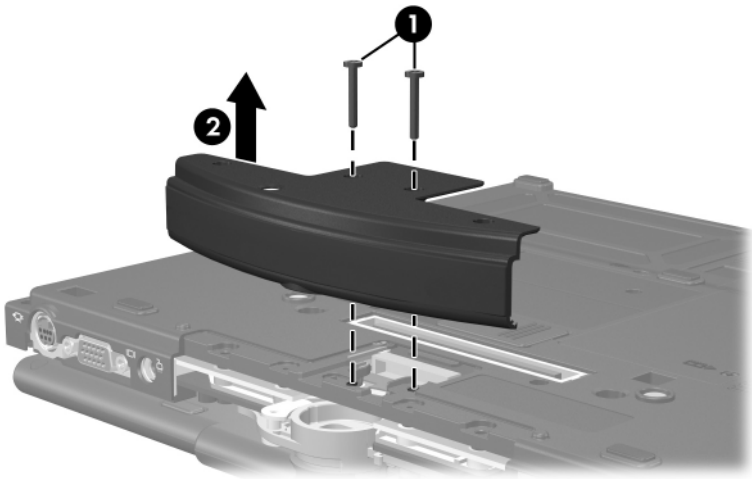
---

|                                                                                    |            |
|------------------------------------------------------------------------------------|------------|
| 12.1-inch, XGA, TFT display assembly (includes wireless antenna boards and cables) | 383548-001 |
| Display Hinge Kit (not illustrated)                                                | 383531-001 |

---

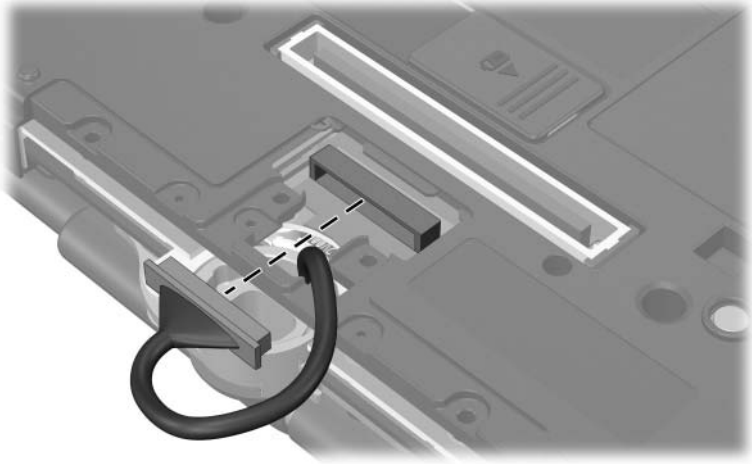
1. Prepare the tablet PC for disassembly ([Section 6.3](#)).
2. Remove the keyboard cover ([Section 6.9](#)).
3. Remove the keyboard ([Section 6.10](#)).
4. Close the tablet PC.
5. Turn the tablet PC upside down with the rear panel toward you.

6. Remove the two T8M2.0×18.0 screws ❶ that secure the base enclosure cover to the tablet PC.
7. Remove the base enclosure cover ❷.



*Removing the Base Enclosure Cover*

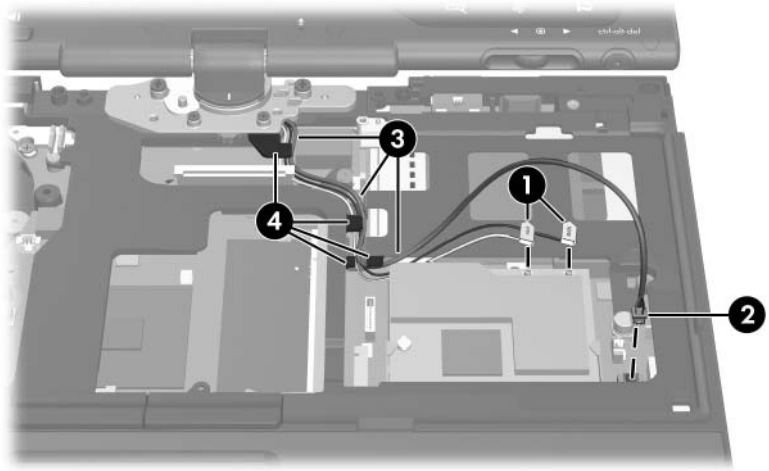
8. Disconnect the display cable from the system board.



*Disconnecting the Display Cable*

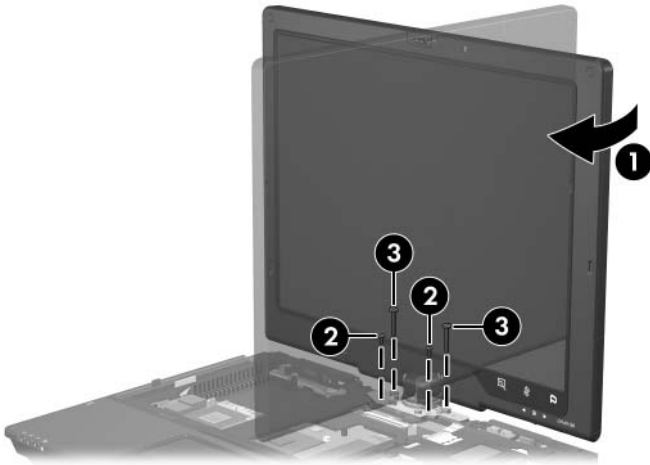


9. Turn the tablet PC right-side up with the front toward you.
10. Open the tablet PC as far as possible.
11. Disconnect the wireless antenna cables from the Mini PCI communications board **1**.
12. Disconnect the microphone cable **2** from the system board.
13. Remove the wireless antenna cables and the microphone cable from the routing channel **3** and clips **4** through which the cables are routed.



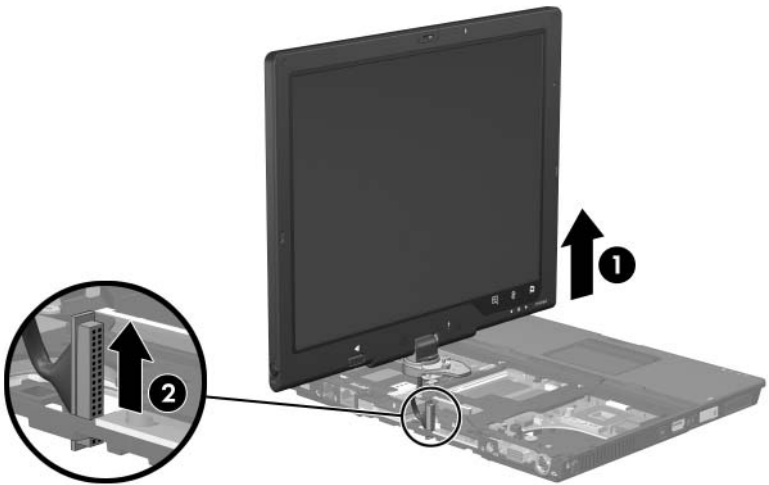
*Disconnecting the Display Cables*

14. Rotate the display clockwise 90 degrees ❶.
15. Remove the two T8M2.0×18.0 screws ❷ and the two PM2.0×7.5 screws ❸ that secure the display assembly to the tablet PC.



*Removing the Display Screws*

16. Position the tablet PC with the rear panel toward you.
17. Lift the display assembly slightly until it disengages from the tablet PC **1**.
18. Route the display connector and cable through the opening **2** in the base enclosure.
19. Remove the display assembly.



### *Removing the Display Assembly*

Reverse the above procedure to install the display assembly.

## 6.18 Top Cover

---

### Top Cover Spare Part Number Information

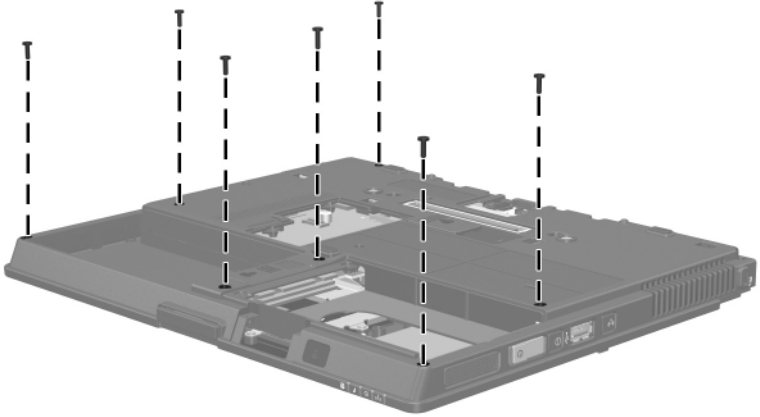
---

|           |            |
|-----------|------------|
| Top cover | 383561-001 |
|-----------|------------|

---

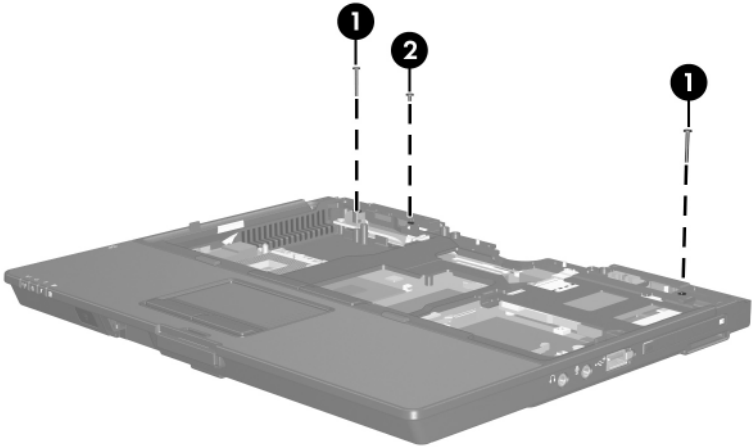
1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Keyboard cover ([Section 6.9](#))
  - c. Keyboard ([Section 6.10](#))
  - d. Button board ([Section 6.16](#))
  - e. Display assembly ([Section 6.17](#))
2. Turn the tablet PC upside down with the front toward you.

3. Remove the seven T8M2.0×9.0 screws that secure the top cover to the base enclosure.



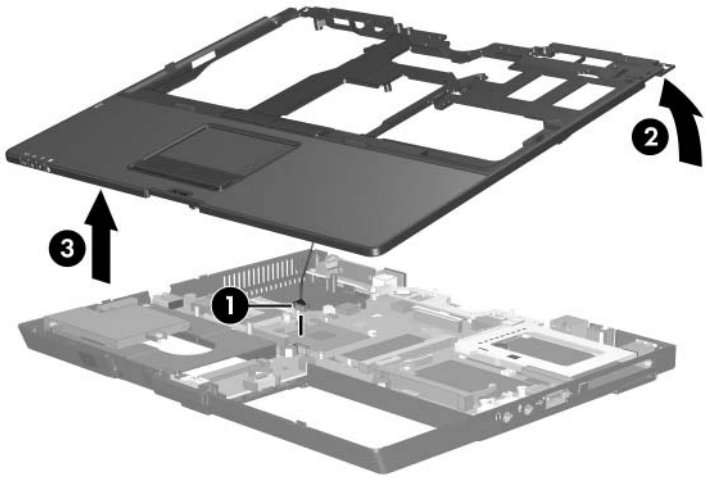
*Removing the Top Cover Screws, Part 1*

4. Turn the tablet PC right-side up with the front toward you.
5. Remove the two T8M2.0×18.0 screws ❶ that secure the rear bezel to the tablet PC.
6. Remove the silver PM2.0×4.0 screw ❷ secures the top cover to the tablet PC.



*Removing the Top Cover Screws, Part 2*

7. Disconnect the TouchPad cable from the system board ❶.
8. Lift the rear edge of the top cover ❷ until it disengages from the base enclosure.
9. Lift the top cover straight up ❸ and remove it.



### *Removing the Top Cover*

Reverse the above procedure to install the top cover.

## 6.19 TouchPad

---

### TouchPad Spare Part Number Information

---

TouchPad (includes cable and bracket)

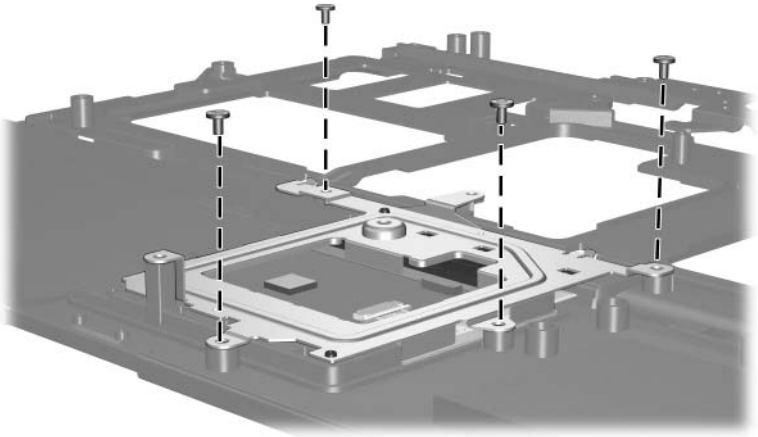
383562-001

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Keyboard cover ([Section 6.9](#))
  - c. Keyboard ([Section 6.10](#))
  - d. Button board ([Section 6.16](#))
  - e. Display assembly ([Section 6.17](#))
  - f. Top cover ([Section 6.18](#))
2. Turn the top cover upside down with the front toward you.

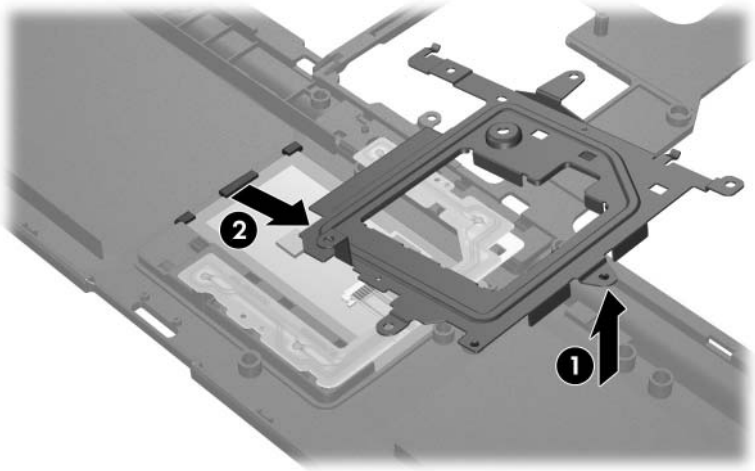


3. Remove the four silver PM2.0×4.0 screws that secure the TouchPad bracket to the top cover.



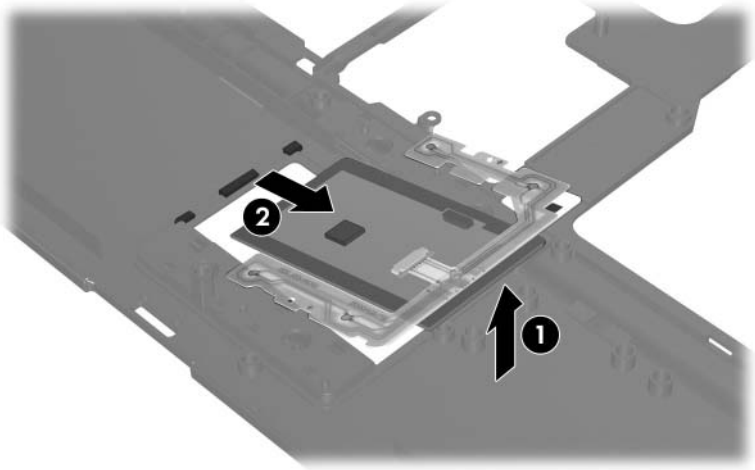
*Removing the TouchPad Bracket Screw*

4. Lift the right side of the TouchPad bracket **1** until it rests at an angle.
5. Slide the TouchPad bracket to the right **2** and remove it.



*Removing the TouchPad Bracket*

6. Lift the right side of the TouchPad ❶ until it rests at an angle.
7. Slide the TouchPad to the right and remove it ❷.



*Removing the TouchPad*

Reverse the above procedure to install the TouchPad.

## 6.20 Speaker

---

### Speaker Spare Part Number Information

---

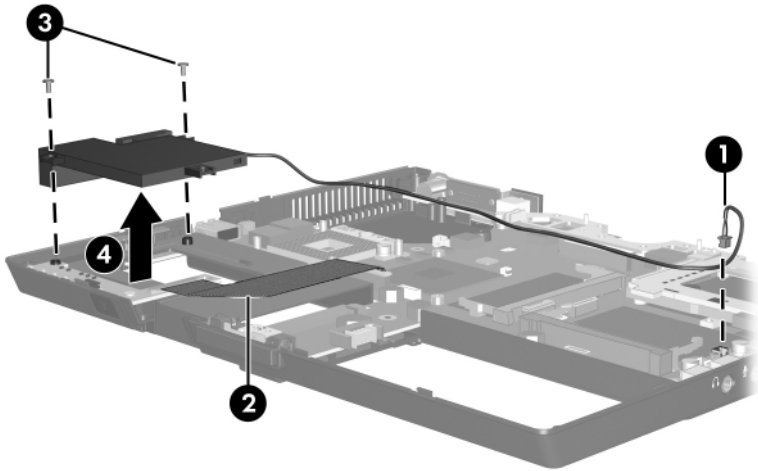
Speaker

383557-001

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Keyboard cover ([Section 6.9](#))
  - c. Keyboard ([Section 6.10](#))
  - d. Button board ([Section 6.16](#))
  - e. Display assembly ([Section 6.17](#))
  - f. Top cover ([Section 6.18](#))

2. Disconnect the speaker cable ❶ from the system board and route the cable under the infrared board cable ❷.
3. Remove the two T8M2.0×5.0 screws ❸ that secure the speaker to the tablet PC.
4. Remove the speaker ❹.



### *Removing the Speaker*

Reverse the above procedure to install the speaker.

## 6.21 Infrared Board

---

### Infrared Board Spare Part Number Information

---

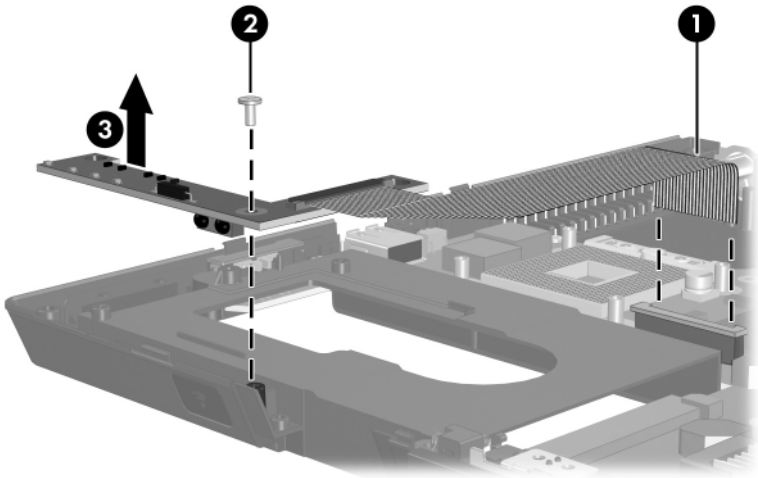
Infrared board (includes cable)

383513-001

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Keyboard cover ([Section 6.9](#))
  - c. Keyboard ([Section 6.10](#))
  - d. Button board ([Section 6.16](#))
  - e. Display assembly ([Section 6.17](#))
  - f. Top cover ([Section 6.18](#))
  - g. Speaker ([Section 6.20](#))

2. Release the ZIF connector to which the infrared board cable is connected and disconnect the cable ❶ from the system board.
3. Remove the T8M2.0×5.0 screw ❷ that secures the infrared board to the system board.
4. Remove the infrared board ❸.



### *Removing the Infrared Board*

Reverse the above procedure to install the infrared board.

## 6.22 System Board

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### System Board Spare Part Number Information

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System board

383515-001

---



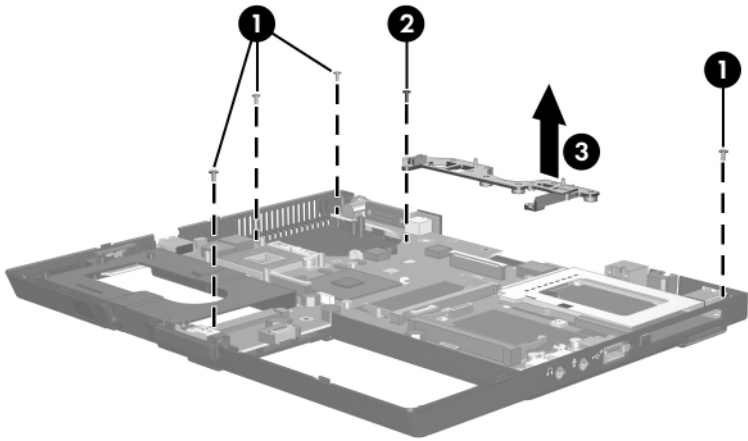
When replacing the system board, ensure that the following components are removed from the defective system board and installed on the replacement system board:

- Memory modules ([Section 6.7](#) and [Section 6.14](#))
  - TPM security card ([Section 6.8](#))
  - Processor ([Section 6.13](#))
  - Mini PCI communications card ([Section 6.15](#))
  - Modem board ([Section 6.23](#))
  - RTC battery ([Section 6.24](#))
- 

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Bluetooth module ([Section 6.6](#))
  - c. Keyboard cover ([Section 6.9](#))
  - d. Keyboard ([Section 6.10](#))
  - e. Fan ([Section 6.11](#))
  - f. Heat sink ([Section 6.12](#))
  - g. Button board ([Section 6.16](#))
  - h. Display assembly ([Section 6.17](#))
  - i. Top cover ([Section 6.18](#))
  - j. Speaker ([Section 6.20](#))
  - k. Infrared board ([Section 6.21](#))

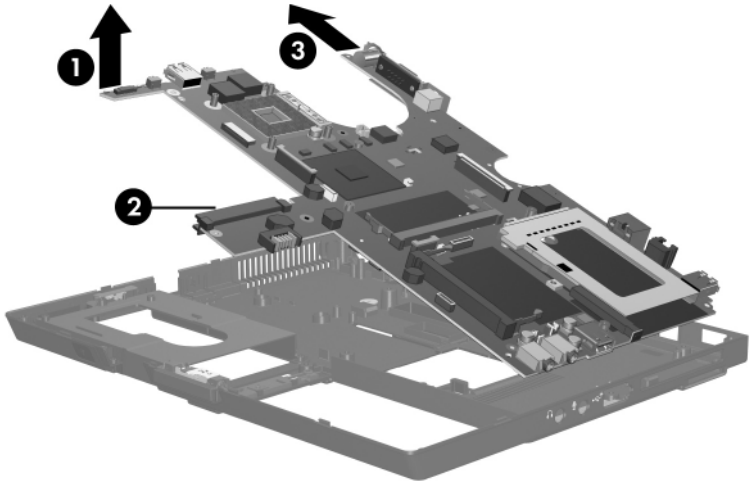


2. Position the tablet PC with the front toward you.
3. Remove the four T8M2.0×5.0 screws ❶ that secure the system board to the tablet PC.
4. Remove the T8M2.0×7.5 screw ❷ that secures the system board spacer to the tablet PC.
5. Remove the system board spacer ❸.



*Removing the System Board Screws*

6. Lift the left side of the system board **1** until the hard drive connector **2** is clear of the base enclosure.
7. Slide the system board to the left **3** to remove it.



### *Removing the System Board*

Reverse the above procedure to install the system board.

## 6.23 Modem Board

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### Modem Board Spare Part Number Information

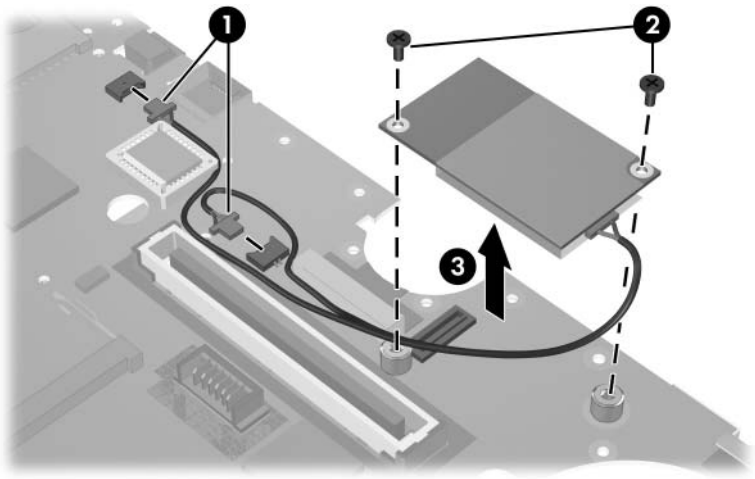
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|                                                    |            |
|----------------------------------------------------|------------|
| Modem board (high-speed 56K, includes modem cable) | 383534-001 |
|----------------------------------------------------|------------|

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Bluetooth module ([Section 6.6](#))
  - c. Keyboard cover ([Section 6.9](#))
  - d. Keyboard ([Section 6.10](#))
  - e. Fan ([Section 6.11](#))
  - f. Heat sink ([Section 6.12](#))
  - g. Button board ([Section 6.16](#))
  - h. Display assembly ([Section 6.17](#))
  - i. Top cover ([Section 6.18](#))
  - j. Speaker ([Section 6.20](#))
  - k. Infrared board ([Section 6.21](#))
  - l. System board ([Section 6.22](#))

2. Turn the system board upside down with the front toward you.
3. Disconnect the modem cable from the two connectors **1** on the system board.
4. Remove the two black PM2.0×4.0 screws **2** that secure the modem board to the system board.
5. Lift the right side of the modem board **3** to disconnect it from the system board.
6. Remove the modem board.



*Removing the Modem Board*

Reverse the above procedure to install the modem board.

## 6.24 RTC Battery

---

### RTC Battery Spare Part Number Information

---

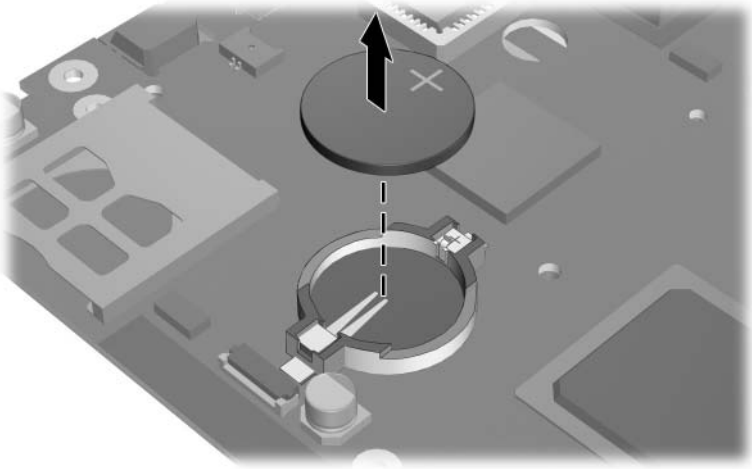
RTC battery

383265-001

---

1. Prepare the tablet PC for disassembly ([Section 6.3](#)) and remove the following components:
  - a. Hard drive ([Section 6.4](#))
  - b. Bluetooth module ([Section 6.6](#))
  - c. Switch cover ([Section 6.9](#))
  - d. Keyboard ([Section 6.10](#))
  - e. Fan ([Section 6.11](#))
  - f. Heat sink ([Section 6.12](#))
  - g. Button board ([Section 6.16](#))
  - h. Display assembly ([Section 6.17](#))
  - i. Top cover ([Section 6.18](#))
  - j. Speaker ([Section 6.20](#))
  - k. Infrared board ([Section 6.21](#))
  - l. System board ([Section 6.22](#))

2. Turn the system board upside down with the left side toward you.
3. Remove the RTC battery from the system board socket.



*Removing the RTC Battery*

Reverse the above procedure to install the RTC battery.

# 7

---

## Specifications

This chapter provides physical and performance specifications.

---

**Table 7-1**  
**Tablet PC**

| <b>Dimensions</b>                       | <b>Metric</b>            | <b>U.S.</b>     |
|-----------------------------------------|--------------------------|-----------------|
| Height (front to back)                  | 30.2 to 31.5 mm          | 1.19 to 1.24 in |
| Width                                   | 285 mm                   | 11.22 in        |
| Depth                                   | 235 mm                   | 9 in            |
| <b>Weight</b>                           | 2.04 kg                  | 4.5 lbs         |
| <b>Input Power</b>                      |                          |                 |
| Operating voltage                       | 18.5 V dc @ 3.5 A - 65 W |                 |
| Operating current                       | 3.5 A                    |                 |
| <b>Temperature</b>                      |                          |                 |
| 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   |

---

---

**Table 7-1**  
**Tablet PC**

---

**Relative humidity** (noncondensing)

|              |            |            |
|--------------|------------|------------|
| Operating    | 10% to 90% | 10% to 90% |
| Nonoperating | 5% to 95%  | 5% to 95%  |

---

**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,<br>0.25 oct/min sweep rate |
| Nonoperating | 1.50 g zero-to-peak, 10 Hz to 500 Hz,<br>0.5 oct/min sweep rate  |

---



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

---



**Table 7-2**  
**12.1-inch, XGA, TFT Display**

|                                |                                            |         |
|--------------------------------|--------------------------------------------|---------|
| <b>Dimensions</b>              |                                            |         |
| Height                         | 20.7 cm                                    | 8.1 in  |
| Width                          | 33.1 cm                                    | 13.0 in |
| Diagonal                       | 39.1 cm                                    | 15.4 in |
| <b>Number of colors</b>        | Up to 16.8 million                         |         |
| <b>Contrast ratio</b>          | 150:1                                      |         |
| <b>Brightness</b>              | 150 nits typical                           |         |
| <b>Pixel resolution</b>        |                                            |         |
| Pitch                          | 0.300 × 0.300 mm                           |         |
| Format                         | 1024 × 768                                 |         |
| Configuration                  | RGB vertical stripe                        |         |
| <b>Backlight</b>               | Edge lit                                   |         |
| <b>Character display</b>       | 80 × 25                                    |         |
| <b>Total power consumption</b> | 3.5 W                                      |         |
| <b>Viewing angle</b>           | +/-65° horizontal, +/-50° vertical typical |         |

**Table 7-3**  
**Hard Drives**

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



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

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

<sup>†</sup>Actual drive specifications may differ slightly.

---

**Table 7-4**  
**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            | 10.8 V |
| Amp-hour capacity  | 4.8 Ah |
| Watt-hour capacity | 52 Wh  |

---

**Temperature**

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

---

---

**Table 7-5**  
**System DMA**

| <b>Hardware DMA</b> | <b>System Function</b>          |
|---------------------|---------------------------------|
| 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                    |

---

\*PC Card controller can use DMA 1, 2, or 5.

---

**Table 7-6**  
**System Interrupts**

| <b>Hardware IRQ</b> | <b>System Function</b>                                                                                                               |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| IRQ0                | System timer                                                                                                                         |
| IRQ1                | Standard 101-/102-Key or Microsoft Natural Keyboard                                                                                  |
| IRQ2                | Cascaded                                                                                                                             |
| IRQ3                | Intel 82801DB/DBM USB2 Enhanced Host Controller—24CD                                                                                 |
| IRQ4                | COM1                                                                                                                                 |
| IRQ5*               | Conexant AC—Link Audio<br>Intel 82801DB/DBM SMBus Controller—24C3<br>Data Fax Modem with SmartCP                                     |
| IRQ6                | Diskette drive                                                                                                                       |
| IRQ7*               | Parallel port                                                                                                                        |
| IRQ8                | System CMOS/real-time clock                                                                                                          |
| IRQ9*               | Microsoft ACPI-compliant system                                                                                                      |
| IRQ10*              | Intel USB UHCI controller—24C2<br>Intel 82852/82855 GM/GME Graphic Controller<br>Realtek RTL8139 Family PCI fast Ethernet Controller |

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**Table 7-6**  
**System Interrupts (*Continued*)**

---

|       |                                                                                                                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IRQ11 | Intel USB EHCI controller—24CD<br>Intel USB UHCI controller—24C4<br>Intel USB UHCI controller—24C7<br>Intel Pro/Wireless 2200BG<br>TI OHCI 1394 host controller<br>TI PCI1410 CardBus controller |
| IRQ12 | Synaptics PS/2 TouchPad                                                                                                                                                                          |
| IRQ13 | Numeric data processor                                                                                                                                                                           |
| IRQ14 | Primary IDE channel                                                                                                                                                                              |
| IRQ15 | Secondary IDE channel                                                                                                                                                                            |

---

\*Default configuration; audio possible configurations are IRQ5, IRQ7, IRQ9, IRQ10, or none.

---



PC Cards may assert IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, or IRQ15. Either the infrared or the serial port may assert IRQ3 or IRQ4.

---

**Table 7-7**  
**System I/O Addresses**

| <b>I/O Address (hex)</b> | <b>System Function (shipping configuration)</b> |
|--------------------------|-------------------------------------------------|
| 000 - 00F                | DMA controller no. 1                            |
| 010 - 01F                | Unused                                          |
| 020 - 021                | Interrupt controller no. 1                      |
| 022 - 024                | Opti chipset configuration registers            |
| 025 - 03F                | Unused                                          |
| 02E - 02F                | 87334 "Super I/O" configuration for CPU         |
| 040 - 05F                | Counter/timer registers                         |
| 044 - 05F                | Unused                                          |
| 060                      | Keyboard controller                             |
| 061                      | Port B                                          |
| 062 - 063                | Unused                                          |
| 064                      | Keyboard controller                             |
| 065 - 06F                | Unused                                          |
| 070 - 071                | NMI enable/RTC                                  |
| 072 - 07F                | Unused                                          |
| 080 - 08F                | DMA page registers                              |
| 090 - 091                | Unused                                          |
| 092                      | Port A                                          |
| 093 - 09F                | Unused                                          |
| 0A0 - 0A1                | Interrupt controller no. 2                      |

**Table 7-7**  
**System I/O Addresses (Continued)**

| <b>I/O Address (hex)</b> | <b>System Function (shipping configuration)</b> |
|--------------------------|-------------------------------------------------|
| 0A2 - 0BF                | Unused                                          |
| 0C0 - 0DF                | DMA controller no. 2                            |
| 0E0 - 0EF                | Unused                                          |
| 0F0 - 0F1                | Coprocessor busy clear/reset                    |
| 0F2 - 0FF                | Unused                                          |
| 100 - 16F                | Unused                                          |
| 170 - 177                | Secondary fixed disk controller                 |
| 178 - 1EF                | Unused                                          |
| 1F0 - 1F7                | Primary fixed disk controller                   |
| 1F8 - 200                | Unused                                          |
| 201                      | Joystick (decoded in ESS1688)                   |
| 202 - 21F                | Unused                                          |
| 220 - 22F                | Entertainment audio                             |
| 230 - 26D                | Unused                                          |
| 26E - 26                 | Unused                                          |
| 278 - 27F                | Unused                                          |
| 280 - 2AB                | Unused                                          |
| 2A0 - 2A7                | Unused                                          |
| 2A8 - 2E7                | Unused                                          |
| 2E8 - 2EF                | Reserved serial port                            |



**Table 7-7**  
**System I/O Addresses (Continued)**

| <b>I/O Address (hex)</b> | <b>System Function (shipping configuration)</b> |
|--------------------------|-------------------------------------------------|
| 2F0 - 2F7                | Unused                                          |
| 2F8 - 2FF                | Infrared port                                   |
| 300 - 31F                | Unused                                          |
| 320 - 36F                | Unused                                          |
| 370 - 377                | Secondary diskette drive controller             |
| 378 - 37F                | Parallel port (LPT1/default)                    |
| 380 - 387                | Unused                                          |
| 388 - 38B                | FM synthesizer—OPL3                             |
| 38C - 3AF                | Unused                                          |
| 3B0 - 3BB                | VGA                                             |
| 3BC - 3BF                | Reserved (parallel port/no EPP support)         |
| 3C0 - 3DF                | VGA                                             |
| 3E0 - 3E1                | PC Card controller in CPU                       |
| 3E2 - 3E3                | Unused                                          |
| 3E8 - 3EF                | Internal modem                                  |
| 3F0 - 3F7                | “A” diskette controller                         |
| 3F8 - 3FF                | Serial port (COM1/default)                      |
| CF8 - CFB                | PCI configuration index register (PCIDIVO-1)    |
| CFC - CFF                | PCI configuration data register (PCIDIVO-1)     |

---

**Table 7-8**  
**System Memory Map**

| <b>Size</b> | <b>Memory Address</b> | <b>System Function</b>       |
|-------------|-----------------------|------------------------------|
| 640 KB      | 00000000-0009FFFF     | Base memory                  |
| 128 KB      | 000A0000-000BFFFF     | Video memory                 |
| 48 KB       | 000C0000-000CBFFF     | Video BIOS                   |
| 160 KB      | 000C8000-000E7FFF     | Unused                       |
| 64 KB       | 000E8000-000FFFFF     | System BIOS                  |
| 15 MB       | 00100000-00FFFFFF     | Extended memory              |
| 58 MB       | 01000000-047FFFFF     | Super extended memory        |
| 58 MB       | 04800000-07FFFFFF     | Unused                       |
| 2 MB        | 08000000-080FFFFF     | Video memory (direct access) |
| 4 GB        | 08200000-FFFEFFFF     | Unused                       |
| 64 KB       | FFFF0000-FFFFFFFF     | System BIOS                  |

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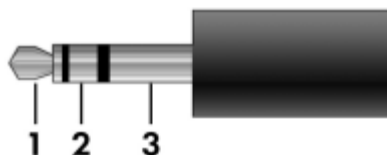
# A

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## Connector Pin Assignments

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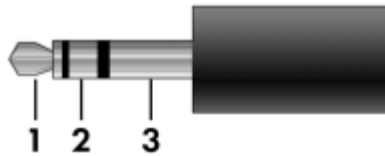
**Table A-1**  
**Audio-Out (Headphone)**



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

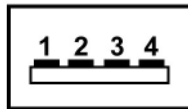
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**Table A-2**  
**Audio-In (Microphone)**



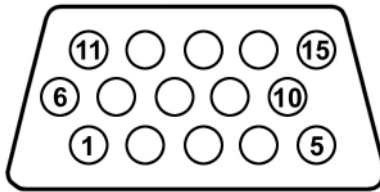
| Pin | Signal          | Pin | Signal |
|-----|-----------------|-----|--------|
| 1   | Audio signal in | 3   | Ground |
| 2   | Audio signal in |     |        |

**Table A-3**  
**Universal Serial Bus**



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

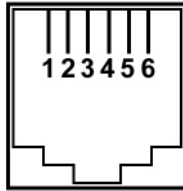
**Table A-4**  
**External Monitor**



| <b>Pin</b> | <b>Signal</b> | <b>Pin</b> | <b>Signal</b>   |
|------------|---------------|------------|-----------------|
| 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 |            |                 |

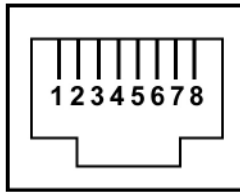
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**Table A-5**  
**RJ-11 (Modem)**



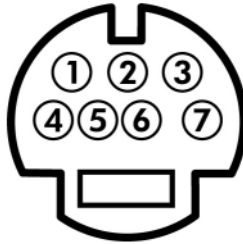
| <b>Pin</b> | <b>Signal</b> | <b>Pin</b> | <b>Signal</b> |
|------------|---------------|------------|---------------|
| 1          | Unused        | 4          | Unused        |
| 2          | Tip           | 5          | Unused        |
| 3          | Ring          | 6          | Unused        |

**Table A-6**  
**RJ-45 (Network)**



| <b>Pin</b> | <b>Signal</b> | <b>Pin</b> | <b>Signal</b> |
|------------|---------------|------------|---------------|
| 1          | Transmit +    | 5          | Unused        |
| 2          | Transmit -    | 6          | Receive -     |
| 3          | Receive +     | 7          | Unused        |
| 4          | Unused        | 8          | Unused        |

**Table A-7**  
**S-Video-Out**



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



---

## Power Cord Set Requirements

### 3-Conductor Power Cord Set

The wide range input feature of the tablet PC 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 tablet PC 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 tablet PC is used.

## General Requirements

The requirements listed below are applicable to all countries.

- The length of the power cord set must be at least 1.5 m (5.0 ft) and a maximum of 2.0 m (6.5 ft).
- All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
- The power cord sets must have a minimum current capacity of 10 amps and a nominal voltage rating of 125 or 250 V AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector for mating with the appliance inlet on the back of the tablet PC.

## Country-Specific Requirements

### 3-Conductor Power Cord Set Requirements

| Country   | 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 mm<sup>2</sup> 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 mm<sup>2</sup> 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*)

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| Country         | Accredited Agency | Applicable Note Number |
|-----------------|-------------------|------------------------|
| The Netherlands | KEMA              | 1                      |
| Norway          | NEMKO             | 1                      |
| Sweden          | SEMKO             | 1                      |
| Switzerland     | SEV               | 1                      |
| United Kingdom  | BSI               | 1                      |
| United States   | UL                | 2                      |

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NOTES:

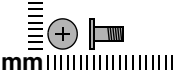
1. The flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 mm<sup>2</sup> conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.
  2. The flexible cord must be Type 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 mm<sup>2</sup> 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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## Screw Listing

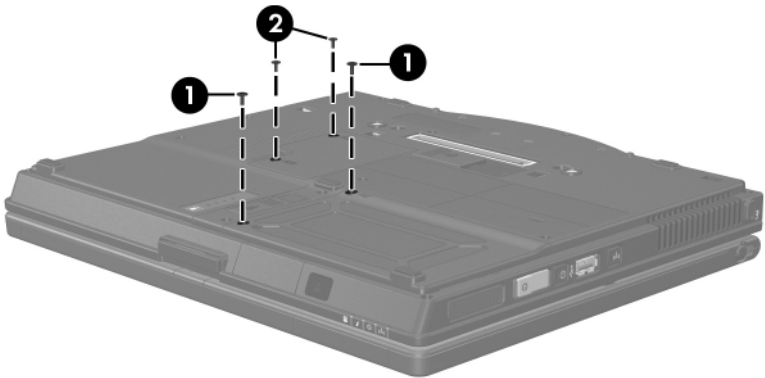
This appendix provides specification and reference information for the screws and screw locks used in the tablet PC. All screws and screw locks listed in this appendix are available in the Screw Kit, spare part number 383556-001.

**Table C-1**  
**Phillips PM2.0x5.0 Screw**

|  mm | Color | Qty. | Length | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                      | Black | 6    | 5.0 mm | 2.0 mm | 4.5 mm     |

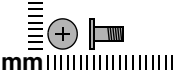
**Where used:**

- ❶ Two screws that secure the hard drive cover to the tablet PC (documented in [Section 6.4](#))
- ❷ Two screws that secure the memory module compartment drive cover to the tablet PC (documented in [Section 6.7](#))



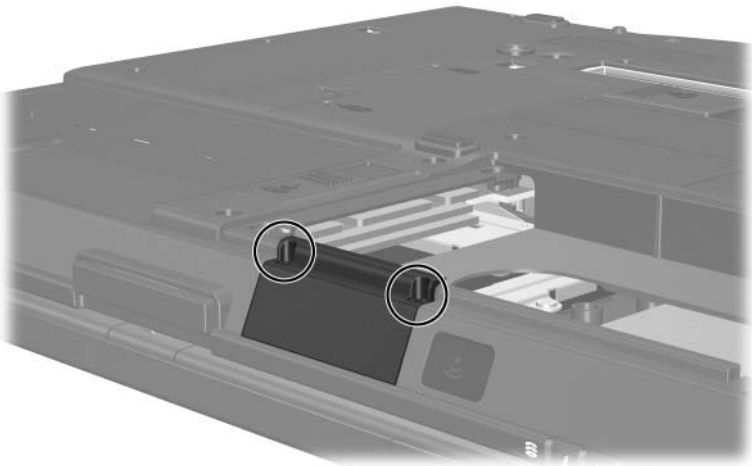
*Phillips M2.0x5.0 Screw Locations*

**Table C-1**  
**Phillips PM2.0x5.0 Screw (Continued)**

|  mm | Color | Qty. | Length | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                      | Black | 6    | 5.0 mm | 2.0 mm | 4.5 mm     |

**Where used:**

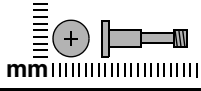
2 screws that secure the Bluetooth cover to the tablet PC (screws are captured on the cover by C clips; documented in [Section 6.6](#))



*Phillips M2.0x5.0 Screw Locations*

**Table C-2**

**Phillips PM2.5×13.0 Spring-Loaded Hard Drive Retention Screw**



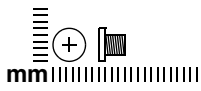
| Color  | Qty. | Length  | Thread | Head Width |
|--------|------|---------|--------|------------|
| Silver | 1    | 13.0 mm | 2.5 mm | 5.5 mm     |

**Where used:**

- ① One screw that secures the hard drive to the tablet PC (screw is captured on the hard drive frame by a C clip; documented in [Section 6.5](#))

**Table C-3**

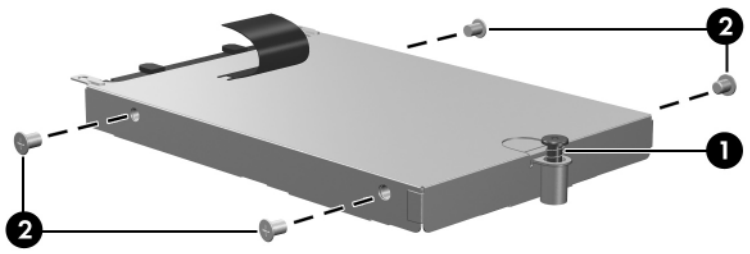
**Phillips PM3.0×4.0 Screw**



| Color  | Qty. | Length | Thread | Head Width |
|--------|------|--------|--------|------------|
| Silver | 4    | 4.0 mm | 3.0 mm | 5.5 mm     |

**Where used:**

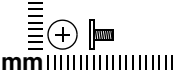
- ② Four screws that secure the hard drive frame to the hard drive (documented in [Section 6.5](#))



*Phillips M2.5×13.0 and Phillips M3.0×4.0 Screw Locations*

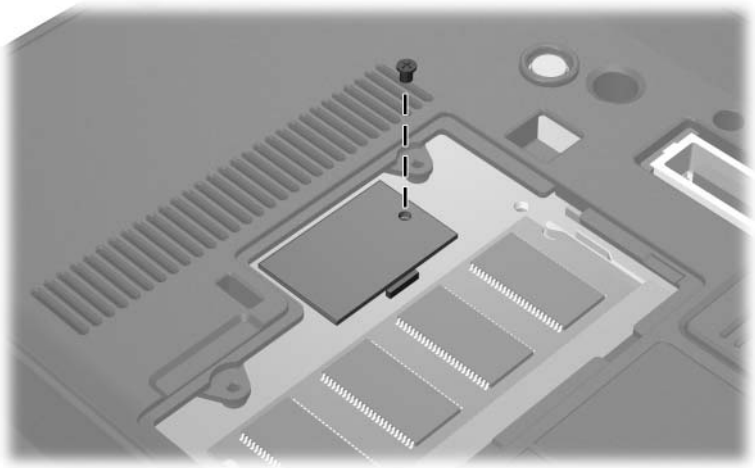


**Table C-4**  
**Phillips PM1.5×3.5 Screw**

|  | Color  | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                   | Silver | 1    | 3.5 mm | 1.5 mm | 4.5 mm     |

**Where used:**

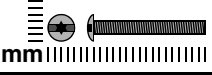
One screw that secures the TPM security card to the tablet PC documented in [Section 6.8](#))



*Phillips M1.5×3.5 Screw Location*

**Table C-5**  
**Torx T8M2.0×18.0 Screw**

---

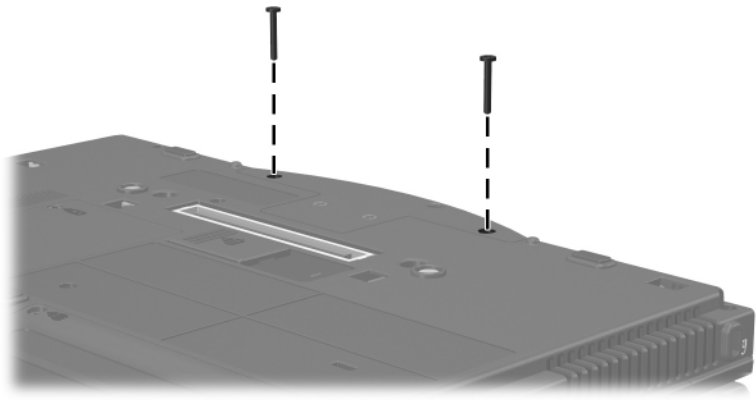
|  mm | Color | Qty. | Length  | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|---------|--------|------------|
|                                                                                      | Black | 8    | 18.0 mm | 2.0 mm | 4.5 mm     |

---

**Where used:**

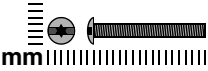
2 screws that secure the keyboard cover to the tablet PC (documented in [Section 6.9](#))

---



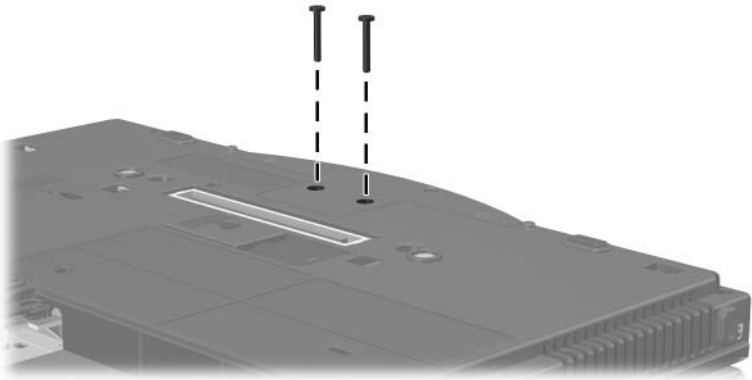
*Torx T8M2.0×18.0 Screw Locations*

**Table C-5**  
**Torx T8M2.0×18.0 Screw (Continued)**

|  mm | Color | Qty. | Length  | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|---------|--------|------------|
|                                                                                      | Black | 8    | 18.0 mm | 2.0 mm | 4.5 mm     |

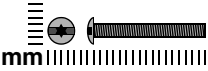
**Where used:**

2 screws that secure the base enclosure cover to the tablet PC (documented in [Section 6.17](#))



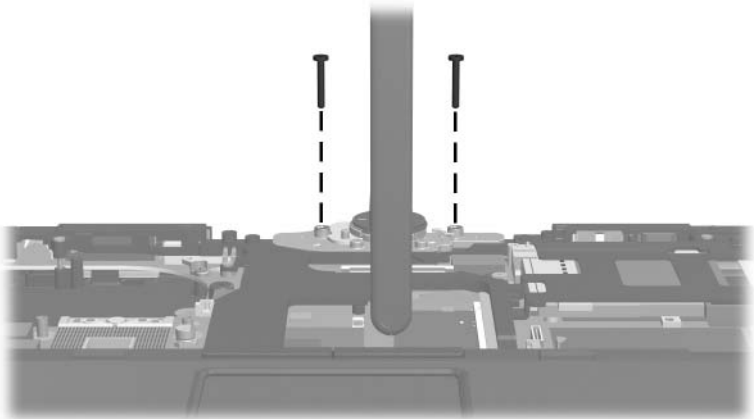
*Torx T8M2.0×18.0 Screw Locations*

**Table C-5**  
**Torx T8M2.0×18.0 Screw (Continued)**

|  | Color | Qty. | Length  | Thread | Head Width |
|-----------------------------------------------------------------------------------|-------|------|---------|--------|------------|
|                                                                                   | Black | 8    | 18.0 mm | 2.0 mm | 4.5 mm     |

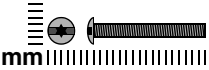
**Where used:**

2 screws that secure the display assembly to the tablet PC (documented in [Section 6.17](#))



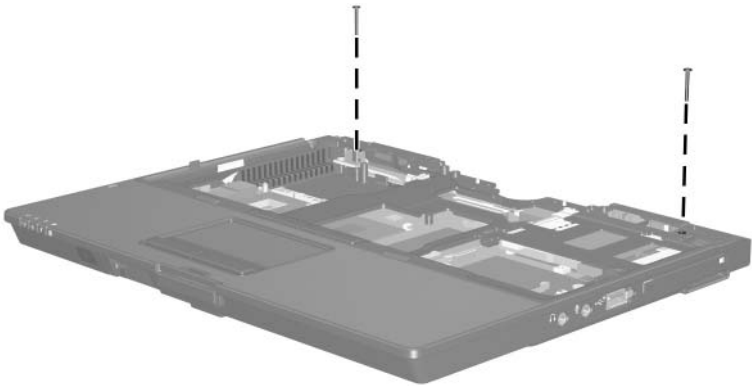
*Torx T8M2.0×18.0 Screw Locations*

**Table C-5**  
**Torx T8M2.0×18.0 Screw (Continued)**

|  mm | Color | Qty. | Length  | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|---------|--------|------------|
|                                                                                      | Black | 8    | 18.0 mm | 2.0 mm | 4.5 mm     |

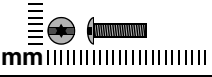
**Where used:**

2 screws that secure the top cover to the tablet PC (documented in [Section 6.18](#))



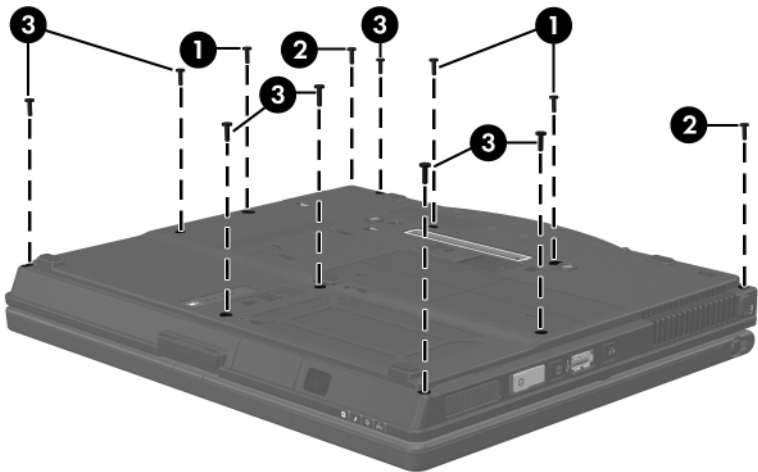
*Torx T8M2.0×18.0 Screw Locations*

**Table C-6**  
**Torx T8M2.0×9.0 Screw**

|  mm | Color | Qty. | Length | Thread | Head Width |
|--------------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                      | Black | 12   | 9.0 mm | 2.0 mm | 4.5 mm     |

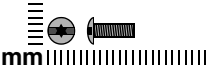
**Where used:**

- ❶ Three screws that secure the keyboard to the tablet PC (documented in [Section 6.9](#))
- ❷ Two screws that secure the keyboard cover to the tablet PC (documented in [Section 6.9](#))
- ❸ Seven screws that secure the top cover to the tablet PC (documented in [Section 6.18](#))



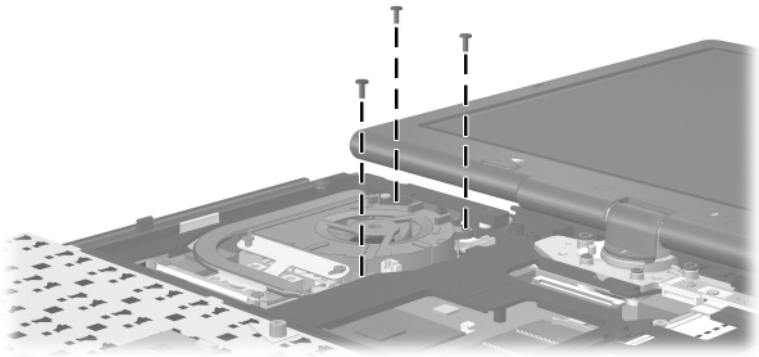
*Torx T8M2.0×9.0 Screw Locations*

**Table C-7**  
**Torx T8M2.0×7.5 Screw**

|  mm | Color  | Qty. | Length | Thread | Head Width |
|--------------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                      | Silver | 6    | 7.5 mm | 2.0 mm | 4.5 mm     |



**Where used:**

3 screws that secure the fan to the tablet PC (documented in [Section 6.11](#))



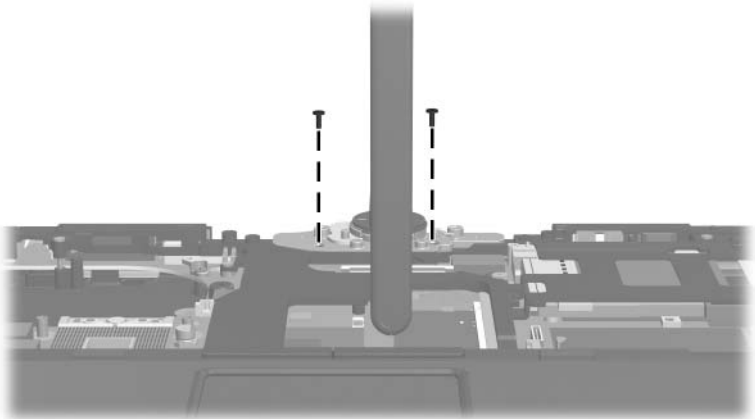
*Torx T8M2.0×7.5 Screw Locations*

**Table C-7**  
**Torx T8M2.0x7.5 Screw (Continued)**

| <br>mm  | Color  | Qty. | Length | Thread | Head Width |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                                                                                                           | Silver | 6    | 7.5 mm | 2.0 mm | 4.5 mm     |

**Where used:**

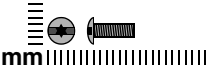
2 screws that secure the display assembly to the tablet PC (documented in [Section 6.17](#))



*Torx T8M2.0x7.5 Screw Locations*

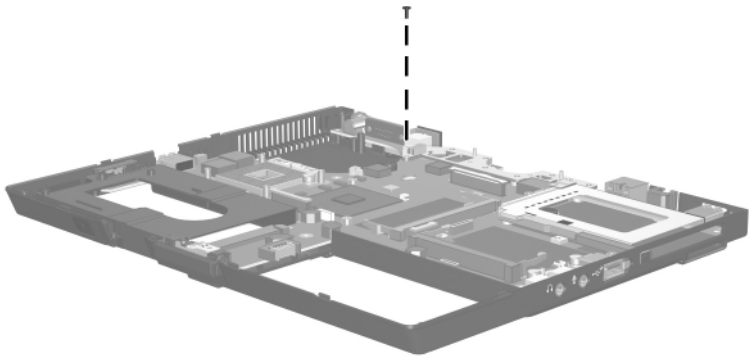


**Table C-7**  
**Torx T8M2.0×7.5 Screw (Continued)**

|  | Color  | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                   | Silver | 6    | 7.5 mm | 2.0 mm | 4.5 mm     |

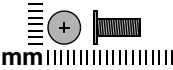
**Where used:**

One screw that secures the system board and system board spacer to the tablet PC (documented in [Section 6.22](#))



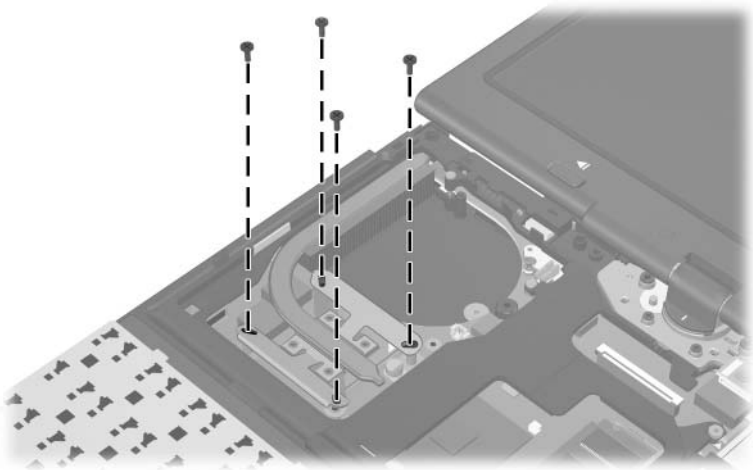
*Torx T8M2.0×7.5 Screw Location*

**Table C-8**  
**Phillips PM2.5×7.0 Screw**

|  | Color | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                   | Black | 4    | 7.0 mm | 2.5 mm | 4.0 mm     |

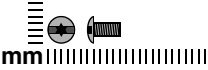
**Where used:**

4 screws that secure the heat sink to the tablet PC (documented in [Section 6.12](#))



*Phillips M2.5×7.0 Screw Locations*

**Table C-9**  
**Torx T8M2.0×5.0 Screw**

|  | Color | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                   | Black | 8    | 5.0 mm | 2.0 mm | 4.5 mm     |



**Where used:**

One screw that secures the keyboard to the tablet PC (documented in [Section 6.10](#))



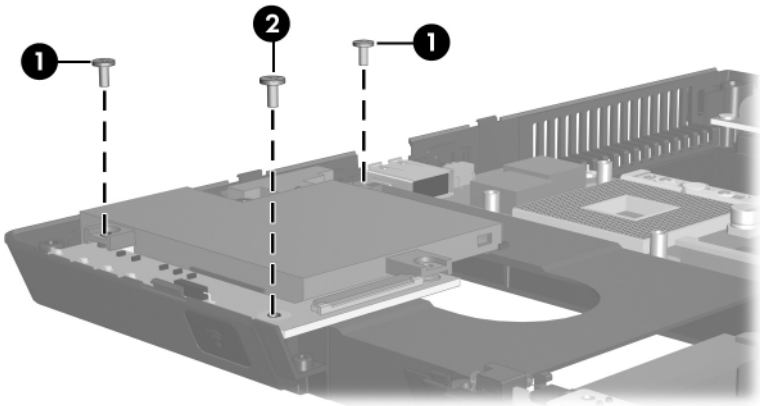
*Torx T8M2.0×5.0 Screw Location*

**Table C-9**  
**Torx T8M2.0x5.0 Screw (Continued)**

| <br>mm  | Color | Qty. | Length | Thread | Head Width |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                                                                                                           | Black | 8    | 5.0 mm | 2.0 mm | 4.5 mm     |



**Where used:**

- ❶ Two screws that secure the speaker to the tablet PC (documented in [Section 6.20](#))
- ❷ One screw that secures the infrared board to the tablet PC (documented in [Section 6.21](#))



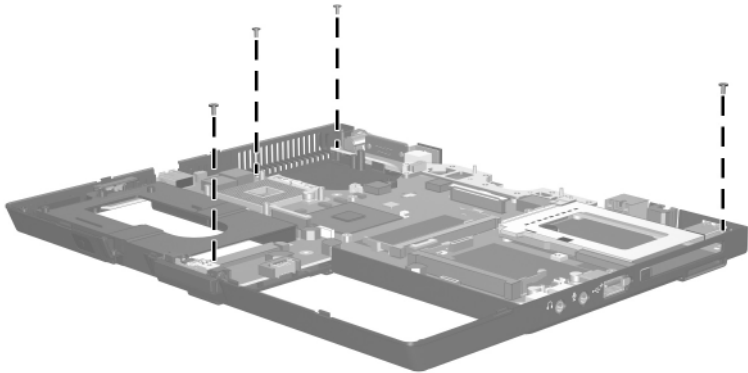
*Torx T8M2.0x5.0 Screw Locations*

**Table C-9**  
**Torx T8M2.0x5.0 Screw (Continued)**

| <br>mm | Color | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|        | Black | 8    | 5.0 mm | 2.0 mm | 4.5 mm     |

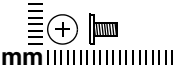
**Where used:**

4 screws that secure the system board to the tablet PC (documented in [Section 6.22](#))



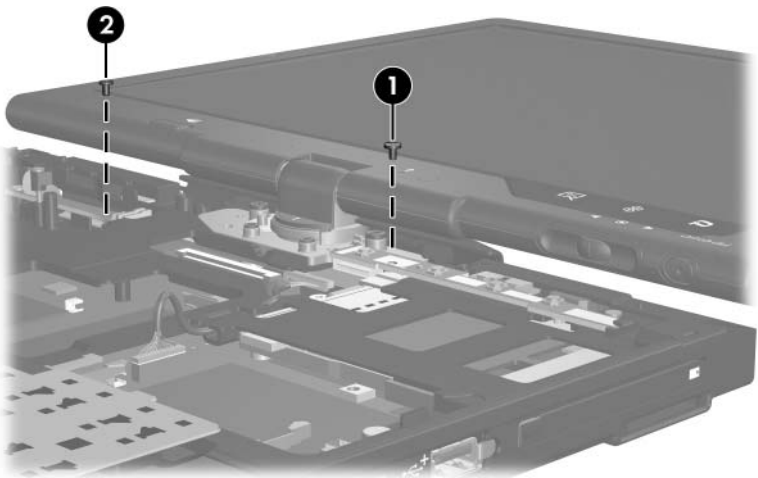
*Torx T8M2.0x5.0 Screw Locations*

**Table C-10**  
**Silver Phillips PM2.0×4.0 Screw**

|  mm | Color  | Qty. | Length | Thread | Head Width |
|--------------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                      | Silver | 6    | 4.0 mm | 2.0 mm | 4.0 mm     |

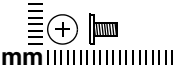
**Where used:**

- ❶ One screw that secures the button board to the tablet PC (documented in [Section 6.16](#))
- ❷ One screw that secures the top cover to the tablet PC (documented in [Section 6.18](#))



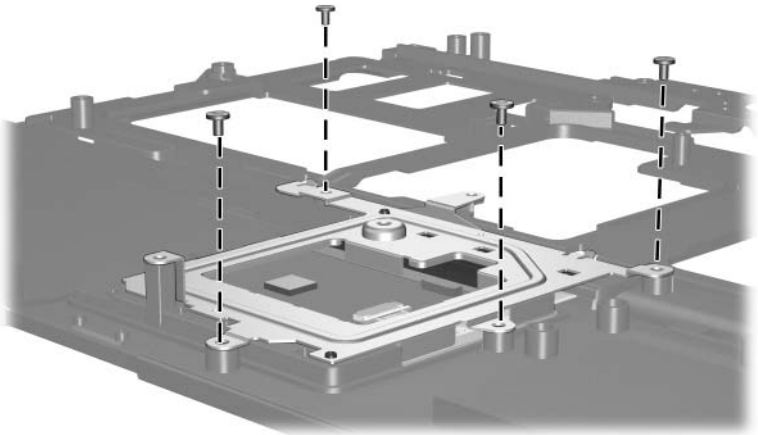
*Silver Phillips M2.0×4.0 Screw Locations*

**Table C-10**  
**Silver Phillips PM2.0×4.0 Screw (Continued)**

|  | Color  | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|--------|------|--------|--------|------------|
|                                                                                   | Silver | 6    | 2.0 mm | 4.0 mm | 4.0 mm     |

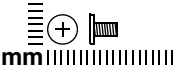
**Where used:**

4 screws that secure the TouchPad bracket to the top cover (documented in [Section 6.19](#))



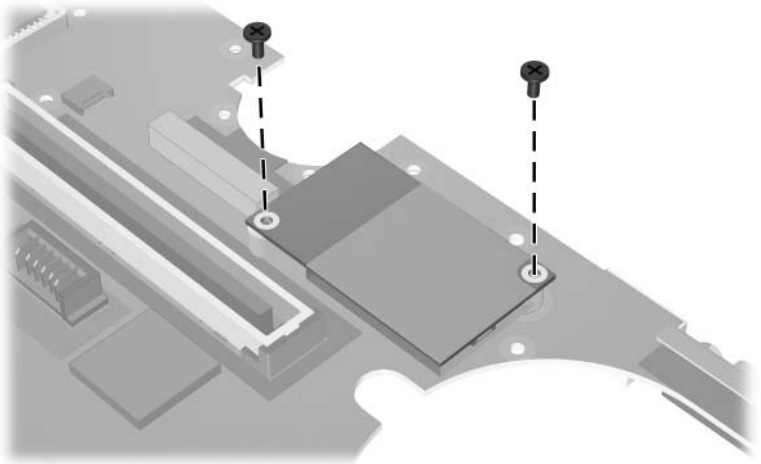
*Silver Phillips M2.0×4.0 Screw Locations*

**Table C-11**  
**Black Phillips PM2.0x4.0 Screw**

|  | Color | Qty. | Length | Thread | Head Width |
|-----------------------------------------------------------------------------------|-------|------|--------|--------|------------|
|                                                                                   | Black | 2    | 2.0 mm | 4.0 mm | 4.0 mm     |

**Where used:**

2 screws that secure the modem board to the system board (documented in [Section 6.23](#))



*Black Phillips M2.0x4.0 Screw Locations*



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