

COMPAQ TC1000 LAPTOP MAINTENANCE AND SERVICE MANUAL



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Maintenance and Service Guide

Tablet PC TC1000

Document Part Number: 268627-001

April 2003

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

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Product Description

The Compaq Tablet PC TC1000 offers a Transmeta 1.0-GHz processor with 512-KB cache, a 10.4-inch color TFT XGA display, 256 MB (133 MHz) SDRAM, and nVidia GeForce2Go graphics with 16 MB of video SDRAM.

The primary pointing device on the tablet PC is the tablet PC pen. Handwriting recognition software is available in Microsoft Windows XP Tablet PC Edition, the operating system installed on the tablet PC.



Figure 1-1. Compaq Tablet PC TC1000

The optional keyboard is 95 percent the size of a full-size notebook keyboard and provides 101 data entry keys, cursor control keys, and a PointStick pointing device.

The optional docking station provides access to a MultiBay and a variety of connectors.



Figure 1-2. Compaq Tablet PC TC1000 with Optional Keyboard and Optional Docking Station

1.1 Models

Tablet PC models are shown in Tables 1-1 and 1-2

**Table 1-1
Compaq Tablet PC TC1000
Naming Conventions**

Key									
CTC1000	T	100	X0	30	0	8	25	T	XXXXXX-XXX
1	2	3	4	5	6	7	8	9	10
Key	Description			Options					
1	Brand/Series designator			C=Compaq				TC1000=Tablet PC	
2	Processor type			T=Transmeta					
3	Processor speed			100=1.0 GHz					
4	Display type/size/resolution			X=XGA (1024 × 768)				0=10.4-inch	
5	Hard drive size			30=30 GB					
6	Optical drive designator			W=DVD/CD-RW combination drive 0=no optical drive					
7	Integrated communication			8=combination modem/NIC/wireless LAN C=combination modem/NIC					
8	RAM			25=256 MB					
9	Operating system			T=Microsoft Windows XP Tablet Edition					
10	SKU								

Table 1-2
Compaq Tablet PC TC1000 Models

The following Compaq Tablet PC TC1000 models use config. code **LBSZ** and feature:

- Pen and PointStick keyboard
- 6-cell, 4.0 Ah lithium ion (Li ion) battery pack
- 16 MB of discrete video memory
- 3-year warranty on parts and labor

CTC1000	T	100	X0	30	0	8	25	T	
Asia Pacific									470045-252
Australia/New Zealand									470045-251
Belgium									470045-238
Denmark									470045-239
Europe International									470045-240
France									470045-241
French Canada									470045-237
French Canada (NAFTA)									470045-273
Germany									470045-242
Italy									470045-243
Japan									470045-248
Japan English									470045-249
Korea									470045-254
Norway									470045-244
Sweden									470045-245
Switzerland									470045-246
Taiwan									470045-253
United Kingdom									470045-247
United States									470045-236
United States (NAFTA)									470045-255

Table 1-2
Compaq Tablet PC TC1000 Models (Continued)

The following Compaq Tablet PC TC1000 models use config. code **LBRZ** and feature:

- Pen and PointStick keyboard
- 6-cell, 4.0 Ah Li ion battery pack
- 16 MB of discrete video memory
- 2-year warranty on parts and labor

CTC1000	T	100	X0	30	0	8	25	T	
Belgium				470045-204		Italy			470045-209
Denmark				470045-205		Norway			470045-210
Europe International				470045-206		Sweden			470045-211
France				470045-207		Switzerland			470045-212
Germany				470045-208		United Kingdom			470045-213

The following Compaq Tablet PC TC1000 models use config. code **LBQZ** and feature:

- Pen and PointStick keyboard
- 6-cell, 4.0 Ah Li ion battery pack
- 16 MB of discrete video memory
- 1-year warranty on parts and labor

CTC1000	T	100	X0	40	W	C	25	T	
Japan				470050-336		includes Tablet PC Docking Station			
CTC1000	T	100	X0	30	0	8	25	T	
Asia Pacific				470045-155		Japan English			470045-153
Australia/New Zealand				470045-154		Korea			470045-157
French Canada				470045-150		Taiwan			470045-156
Japan				470045-152		United States			470045-149
CTC1000	T	100	X0	30	0	C	25	T	
Asia Pacific				470044-786		People's			470044-787
Australia/New Zealand				470044-785		Republic of			
French Canada				470044-784		China			
Korea				470044-790		Taiwan			470044-788
						United States			470044-783

Table 1-2
Compaq Tablet PC TC1000 Models (Continued)

The following models represent configure-to-order Compaq Tablet PC TC1000 models and use config. code **LBQZ**. These tablet PC models feature:

- Pen and PointStick keyboard
- 6-cell, 4.0 Ah Li ion battery pack
- 16 MB of discrete video memory
- 1-year warranty on parts and labor

CTC1000	T	100	X0	60	0	8	76	T	
United States			470046-345						
CTC1000	T	100	X0	60	0	8	38	T	
United States			470046-344						
CTC1000	T	100	X0	60	0	8	25	T	
United States			470046-343						
CTC1000	T	100	X0	60	0	C	76	T	
United States			470046-352						
CTC1000	T	100	X0	60	0	C	38	T	
United States			470046-350						
CTC1000	T	100	X0	60	0	C	25	T	
United States			470046-349						

Table 1-2
Compaq Tablet PC TC1000 Models (Continued)

CTC1000	T	100	X0	30	0	8	76	T	
United States			470046-342						
CTC1000	T	100	X0	30	0	8	38	T	
United States			470046-341						
CTC1000	T	100	X0	30	0	8	25	T	
United States			470046-340						
CTC1000	T	100	X0	30	0	C	76	T	
United States			470046-348						
CTC1000	T	100	X0	30	0	C	38	T	
United States			470046-347						
CTC1000	T	100	X0	30	0	C	25	T	
United States			470046-346						

1.2 Features

- 1.0-GHz Transmeta Crusoe 5800 processor with 512-KB integrated cache
- nVidia GeForce2Go graphics controller with 16 MB SDRAM
- 256 MB high-performance Synchronous DRAM (SDRAM), expandable to 768 MB
- Microsoft Windows XP Tablet Edition
- 10.4-inch XGA (1024 × 768) TFT display with over 16.7 million colors
- Optional keyboard with PointStick pointing device
- Internal combination Type III mini PCI 56Kbps, v.90/v.92 modem and wireless LAN 802.11b 10/100 network interface card (NIC)
- Support for one Type II PC Card slot with support for both 32-bit CardBus and 16-bit PC Cards
- Support for one Type III CompactFlash card
- External 65 W AC adapter with power cord
- 40 Watt Hour Li ion battery pack
- 60-, 40-, or 30-GB high-capacity SMART hard drive, varying by tablet PC model
- Support for the following drives through the MultiBay (with optional external MultiBay or docking station):
 - ❑ 1.44-MB diskette drive
 - ❑ 24X Max CD-ROM drive
 - ❑ 8X Max CD-RW drive

- ☐ 8X Max DVD-ROM drive
- ☐ 8X Max DVD-CDRW combination drive
- ☐ 40- or 30-GB hard drive
- Support for the following connectors on the tablet PC:
 - ☐ PC Card slot
 - ☐ CompactFlash card slot
 - ☐ RJ-45 network
 - ☐ RJ-11 modem
 - ☐ Universal Serial Bus
 - ☐ External monitor
 - ☐ AC power
 - ☐ Stereo line out/headphone
 - ☐ Mono microphone
 - ☐ external MultiBay
 - ☐ optional keyboard
 - ☐ optional docking station
- Support for the following connectors on the optional docking station:
 - ☐ external MultiBay
 - ☐ RJ-45 network
 - ☐ Universal Serial Bus
 - ☐ External monitor
 - ☐ AC power
 - ☐ Stereo line out/headphone

1.3 Clearing a Password

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

1. Remove the battery pack and mini PCI communications/memory expansion slot cover. Refer to Section 5.3, “Preparing the Tablet PC for Disassembly,” for more information.
2. Remove the RTC battery (refer to Section 5.4, “Real Time Clock (RTC) Battery”).
3. Wait approximately five minutes.
4. Replace the RTC battery and reassemble the tablet PC. Do **not** reinsert the battery pack at this time.
5. Connect AC power to the tablet PC.
6. Turn on the tablet PC.

All passwords and all CMOS settings have been cleared.

1.4 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:

- Suspend
- Hibernation
- Setting customization by the user
- Hotkeys for setting level of performance
- Smart battery that provides an accurate battery power gauge
- Battery calibration
- Lid switch Suspend/resume
- Power/Suspend button
- Advanced Configuration and Power Management (ACP) compliance

1.5 Tablet PC External Components

The external components on the front panel of the tablet are shown in Figure 1-3 and described in Table 1-3.

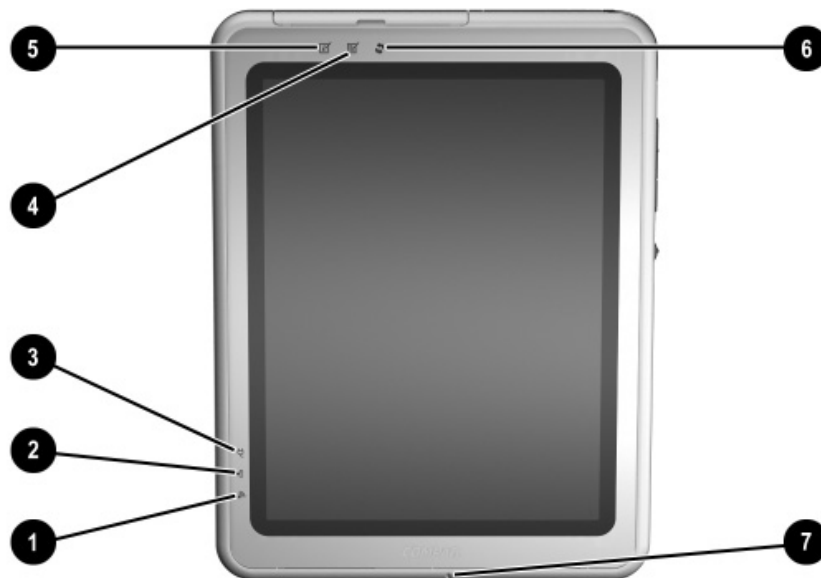


Figure 1-3. Front Panel Components

Table 1-3
Front Panel Components

Item	Component	Function
1	Wireless LAN activity light	Off: The internal wireless LAN is off or not installed. On: The internal wireless LAN is on and connected to a network. Flashing: The internal wireless LAN is on, but is not connected to a network or properly configured.
2	Battery light	On: A battery pack is charging. Flashing: A battery pack that is the only available power source has reached a low-battery condition.

Table 1-3
Front Panel Components (Continued)

Item	Component	Function
3	AC adapter light	On: AC power is being supplied through the AC adapter.
4	Journal launch button	When the tablet PC is in Windows, opens and closes the Microsoft Journal application, which supports handwriting.
5	Tablet PC Input Panel launch button	When the tablet PC is in Windows, opens the Microsoft Tablet PC Input Panel application, which includes a handwriting pad and an on-screen keyboard. While using the on-screen keyboard: ■ To enter the ctrl+alt+delete command, press the button on the tablet PC with the pen tip or a small object such as the end of a paper clip. ■ To switch the top row of keys between number keys and function keys, tap Func the on-screen keyboard.
6	Rotate button	Switches the image between landscape and portrait orientation.
7	Microphone	Inputs monaural sound.

The tablet top side components are shown in Figure 1-4 and described in Table 1-4.

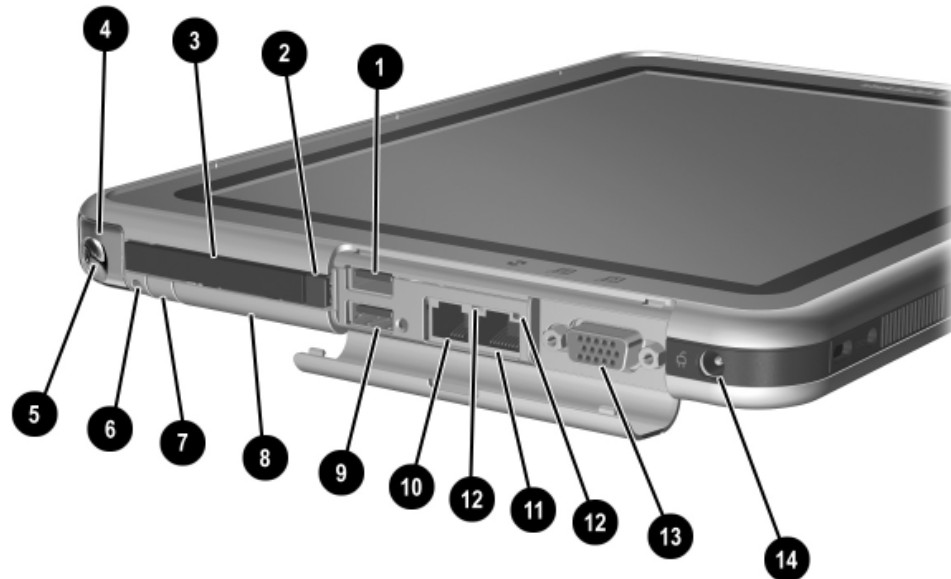


Figure 1-4. Top Side Components

**Table 1-4
Top Side Components**

Item	Component	Function
1	USB connector	Connects an optional USB 2.0- or 1.1-compliant device.
2	PC Card eject button	Ejects an optional PC Card from the PC Card slot.
3	PC Card slot	Supports an optional Type I or Type II 32-bit (CardBus) or 16-bit PC Card.
4	Pen holder (shown with pen 5 inserted)	Secures the pen to the tablet PC.
6	Tablet PC tether eyelet	Used with the tether eyelet on the pen, enables you to tether the pen to the tablet PC.

Table 1-4
Top Side Components (Continued)

Item	Component	Function
7	CompactFlash card eject button	Ejects an optional CompactFlash card from the CompactFlash card slot.
8	CompactFlash card slot	Supports an optional Type I or Type II CompactFlash card.
9	External MultiBay connector	Connects an optional USB 2.0- or 1.1-compliant device.
10	RJ-11 telephone jack	Connects a modem cable.
11	RJ-45 network jack	Connects an Ethernet network cable.
12	LAN connection lights (2)	Both lights off: The tablet PC is not connected to a LAN. Both lights on: The tablet PC is connected to a LAN with a 100 Mbps link. Green light on and yellow light off: The tablet PC is connected to a LAN with a 10 Mbps link. Green light flashing: Information is transmitting through the LAN.
13	External monitor connector	Connects an optional external monitor or projector.
14	AC power connector	Connects an AC adapter or an optional DC cable, Auto/Air Cable, or Automobile Power Adapter/Charger.

The tablet left side components are shown in Figure 1-5 and described in Table 1-5.

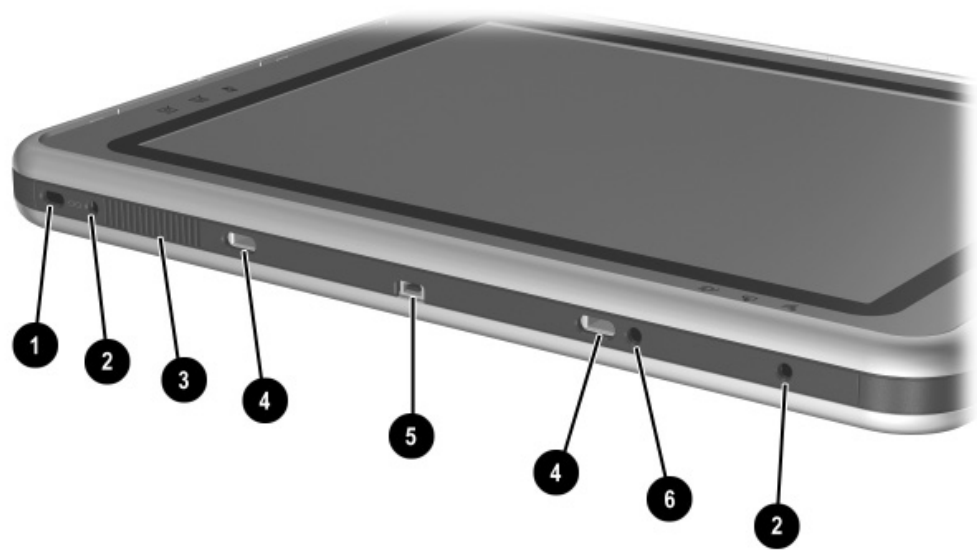


Figure 1-5. Left Side Components

Table 1-5 Left Side Components		
Item	Component	Function
1	Security cable slot	Attaches an optional security cable to the tablet PC.
2	Screen protector slots (2)	Secure the optional screen protector when it is attached to the tablet PC.

Table 1-5
Left Side Components (*Continued*)

Item	Component	Function
3	Air vent	Allows airflow to cool internal components.
 CAUTION: To prevent damage, the tablet PC shuts down if an overheating condition occurs. Do not block the cooling vent. Avoid placing the tablet PC on a blanket, rug, or other flexible surface that may cover the vent area.		
4	Universal alignment slots (2)	Secure the portfolio, the optional screen protector, or an optional attachment, such as a tablet PC keyboard, to the tablet PC.
5	Keyboard connector	Connects an optional tablet PC keyboard to the tablet PC.
6	Alignment key slot	Accepts an alignment key to safeguard attachment procedures. For example, matching the alignment key on an optional tablet PC keyboard to the alignment key slot helps you correctly orient the tablet PC to the keyboard as you attach the tablet PC to the keyboard.

The tablet right side components are shown in Figure 1-6 and described in Table 1-6.

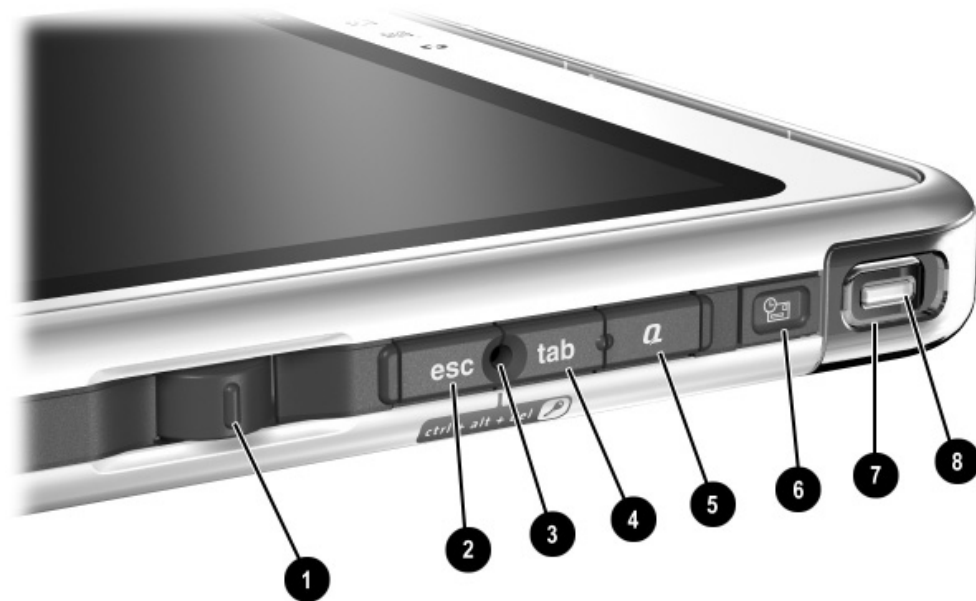


Figure 1-6. Right Side Components

**Table 1-6
Right Side Components**

Item	Component	Function
1	Jog dial	Functions like the enter and the up and down arrow keys on a standard keyboard. ■ Press inward to enter a command. ■ Rotate upward to scroll upward. ■ Rotate downward to scroll downward.
2	Esc button	While the tablet PC is: ■ Starting up and a flashing pointer is displayed on the screen, opens the Setup utility. ■ In Windows, functions like esc on a standard keyboard.

Table 1-6
Right Side Components (Continued)

Item	Component	Function
3	Windows security button	When pressed with the pen tip or a small object such as the end of a paper clip while: ■ Windows is open, enters the ctrl+alt+delete command. ■ The Setup utility is open, enters the reset command.
4	Tab button	When the tablet PC is in Windows, functions like tab on a standard keyboard.
5	Q menu button	When the tablet PC is in Windows, opens or closes the Q Menu.
6	Email launch button	When the tablet PC is in Windows: ■ Until your Internet or network service is set up, opens the operating system Internet connection wizard. ■ After your Internet or network service is setup, opens your default email application.
7	Power switch	When the tablet PC is: ■ Off, turns on the tablet PC. ■ On, initiates Standby. ■ In Standby, resumes tablet PC from Standby. ■ In Hibernation, resumes tablet PC from Hibernation. If the system has stopped responding and Windows shutdown procedures cannot be used, slide and hold for 4 seconds to turn off the tablet PC.
8	Power/Standby light	On: Tablet PC is on. Flashing: Tablet PC is in Standby. Off: Tablet PC is off or in Hibernation.

The tablet bottom side components are shown in Figure 1-7 and described in Table 1-7.

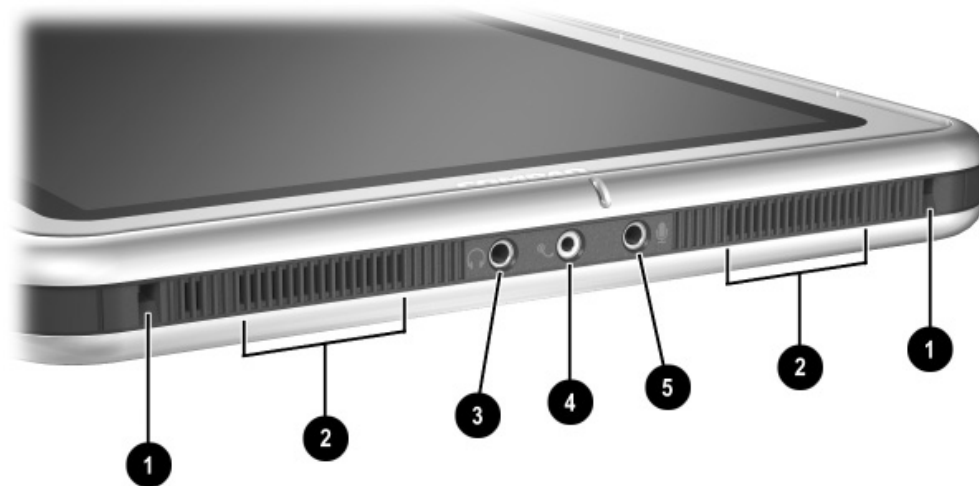


Figure 1-7. Bottom Side Components

**Table 1-7
Bottom Side Components**

Item	Component	Function
1	Docking alignment slots (2)	Secure the tablet PC to an optional Tablet PC Docking Station.
2	Speakers (2)	Produce stereo sound.
3	Audio line-out jack	Connects optional stereo headphones or powered stereo speakers.
4	Headset jack	Connects an optional headset, such as a mobile telephone headset with a microphone and a monaural ear piece.
5	Microphone jack	Connects an optional monaural microphone.

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

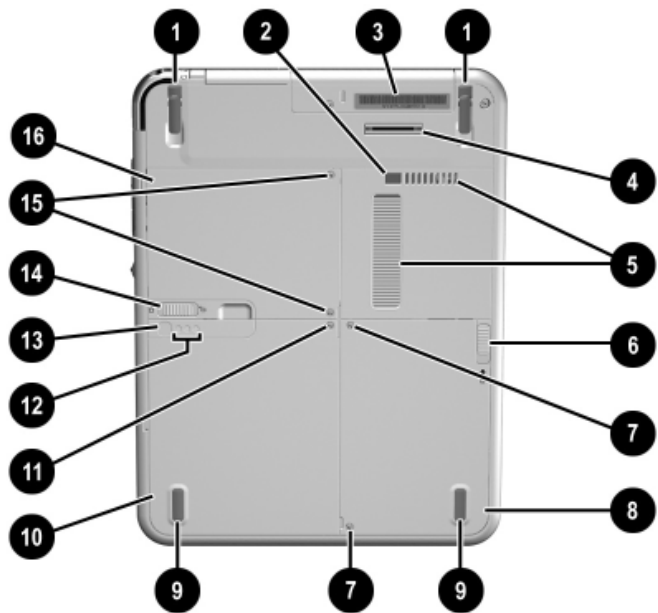


Figure 1-8. Bottom Components

Table 1-8
Bottom Components

Item	Component	Function
1	Tilt feet (2)	While the tablet PC is being used in portrait orientation as a free-standing tablet, can elevate the top of the tablet PC to provide a comfortable writing and viewing angle.
2	Docking restraint latch recess	Accepts the docking restraint latch on an optional docking station to secure the tablet PC to the docking station.

Table 1-8
Bottom Components (*Continued*)

Item	Component	Function
3	Product identification label	Contains the serial number of the tablet PC and a code describing the original configuration of the tablet PC. You will need the serial number if you call Compaq customer support.
4	Docking connector	Connects the tablet PC to an optional docking station.
5	Air vent	Allows airflow to cool internal components.
 CAUTION: To prevent damage, the tablet PC shuts down if an overheating condition occurs. Do not block the cooling vent. Avoid placing the tablet PC on a blanket, rug, or other flexible surface that may cover the vent area.		
6	Attachment release latch	Releases an attachment, such as the portfolio, an optional screen protector, or an optional tablet PC keyboard, from the universal attachment slots on the tablet PC.
7	Hard drive retention screws (2)	Secure the hard drive bay cover to the tablet PC.
8	Hard drive bay	Holds the system hard drive.
9	Pad feet (2)	Stabilize the tablet PC when the tablet PC is placed as a free-standing tablet on a flat surface.
10	Battery pack	Holds the battery pack.
11	Battery retention screw	Secures the battery pack to the tablet PC.

Table 1-8
Bottom Components (Continued)

Item	Component	Function
12	Battery quick check lights (3)	On: Each light represents a percent of a full charge. For example, when all three lights are on, the battery pack is fully charged. Flashing: When one light is flashing, less than 10 percent of a full charge remains in the battery pack.
13	Battery quick check button	Activates the battery quick check lights, which display how much charge remains in the battery pack.
14	Battery pack release latch	Releases the battery pack from the battery bay.
15	Memory expansion and mini PCI compartment cover retention screws (2)	Secure the memory and Mini PCI compartment cover to the tablet PC.
16	Memory expansion and mini PCI compartment	Contains one memory slot for a PC133-compliant memory module. Also holds an optional Mini PCI board, such as a modem board or a combination modem and wireless board.

1.6 Keyboard Components

The front panel components on the optional keyboard are shown in Figure 1-9 and described in Table 1-9.

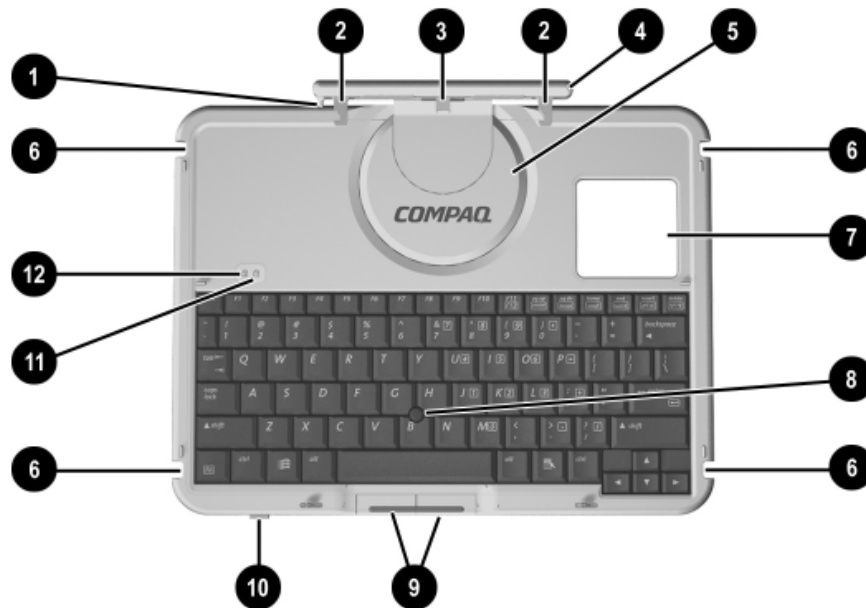


Figure 1-9. Keyboard Front Panel Components

**Table 1-9
Keyboard Front Panel Components**

Item	Component	Function
1	Alignment key	Ensures the tablet PC is attached to the keyboard in the correct orientation.
2	Keyboard hooks (2)	Secure the tablet PC to the keyboard.

Table 1-9
Keyboard Front Panel Components (*Continued*)

Item	Component	Function
3	Keyboard connector	Connects the keyboard to the keyboard connector on the tablet PC.
4	Tilt adjustment	Tilts the tablet PC forward or backward while it is connected to the keyboard.
5	Rotation disk	Rotates the tablet PC clockwise or counterclockwise while it is connected to the keyboard.
6	Docking alignment notches (4)	Help guide the tablet PC and keyboard into an optional Tablet PC Docking Station.
7	Docking connector pass-through	Enables the optional docking station to be connected to the tablet PC while the keyboard is attached to the tablet PC.
8	Pointing stick	Moves the cursor and selects and activates items on the screen.
9	Pointing stick buttons (2)	Locks the keyboard to and releases the keyboard from the tablet PC.
10	Keyboard latch	Locks the keyboard to and releases the keyboard from the tablet PC.
11	Caps lock light	When this light is on, the caps lock is on.
12	Num lock light	When this light is on, the numeric keypad is on.

The external components on the front panel of the keyboard are shown in Figure 1-10 and described in Table 1-10.



Figure 1-10. Keyboard Front Panel Components

Table 1-10
Keyboard Front Panel Components

Item	Component	Function
1	Function keys	Perform system and application tasks. For example, in the Microsoft Windows operating system and many applications, pressing F1 opens a Help file. To enter an F11 function, press the F11/F12 key. To enter an F12 function, press Fn+F11/F12 .
2	Fn key	Combines with other keys to perform system tasks. For example, pressing Fn+num lk turns on the keypad.
3	Keypad keys	Used like an external numeric keypad.
4	Microsoft logo key	Displays the Microsoft Windows Start Menu.
5	Applications key	Displays a shortcut menu for items beneath the pointer.

The components on the rear panel and bottom of the optional keyboard are shown in Figure 1-11 and described in Table 1-11.

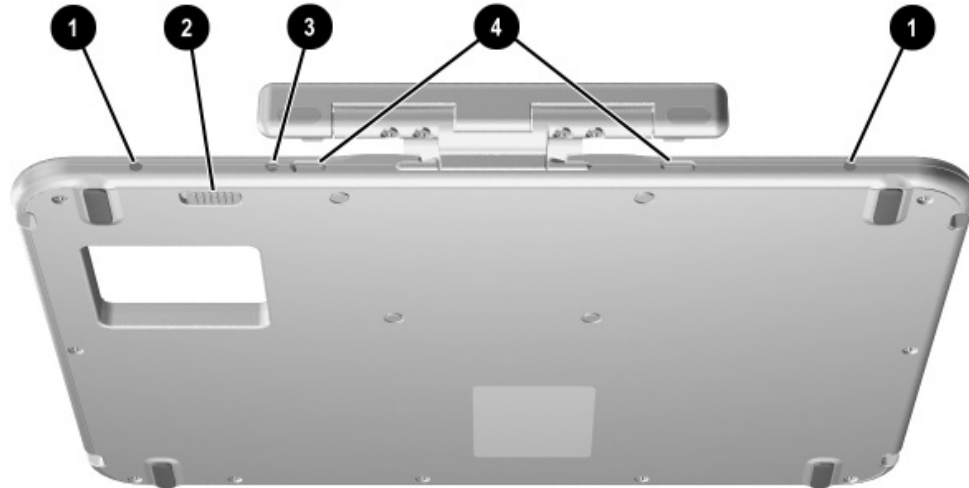


Figure 1-11. Keyboard Rear Panel and Bottom Components

Table 1-11
Keyboard Rear Panel and Bottom Components

Item	Component	Function
1	Screen protector slots	Attach the screen protector to the keyboard.
2	Attachment release switch	Releases an attachment, such as the portfolio or optional screen protector, from the keyboard.
3	Universal alignment slots	Secure the portfolio or optional screen protector to the keyboard.
4	Alignment key slot	Accepts an alignment key to ensure proper orientation.

1.7 Docking Station Components

The front and left side components on the optional docking station are shown in Figure 1-12 and described in Table 1-12.

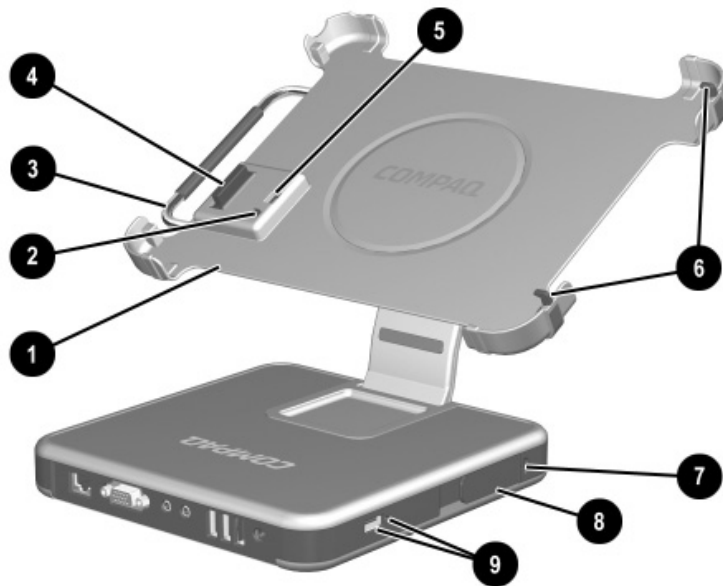


Figure 1-12. Docking Station Front and Left Side Components

Table 1-12
Docking Station Front and Left Side Components

Item	Component	Function
1	Docking stand	Holds the tablet PC when it is docked.
2	Docking eject pin	Disconnects the tablet PC and docking stand docking connectors when the release handle is pulled.
3	Release handle	Ejects the tablet PC from the docking stand.
4	Docking connector	Connects to the tablet PC.
5	Docking restraint latch	Secures the tablet PC to the docking stand.
6	Docking alignment brackets (2)	Fit into the tablet PC docking alignment slots to align the tablet PC in the docking stand.
7	Security cable slot	Attaches an optional security cable to the tablet PC.
8	MultiBay release lever	Ejects a MultiBay device from the bay.
9	External MultiBay connector	Connects optional USB devices.

The rear panel and right side components on the optional docking station are shown in Figure 1-13 and described in Table 1-13.

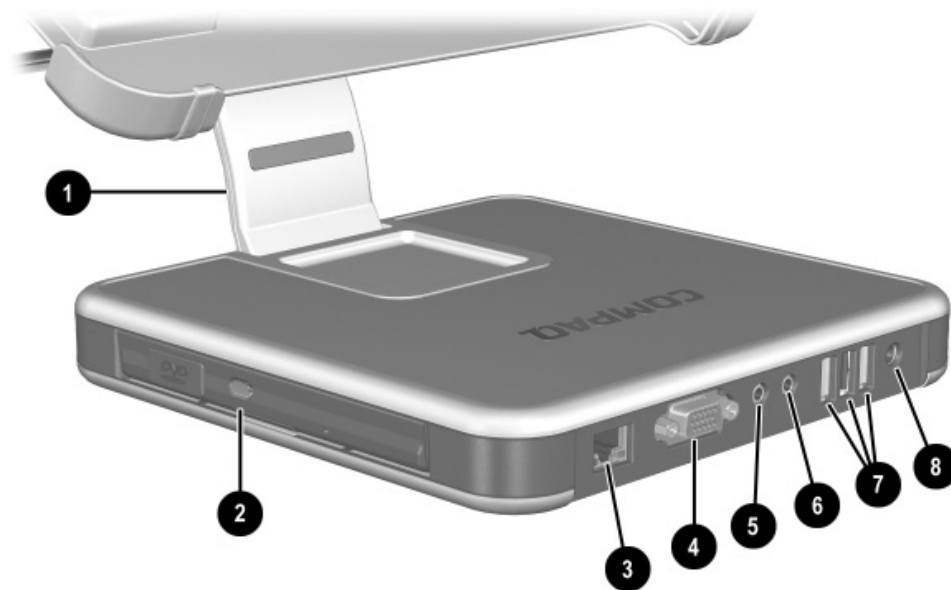


Figure 1-13. Docking Station Rear Panel and Right Side Components

Table 1-13
Docking Station Rear Panel and Right Side Components

Item	Component	Function
1	Pivot arm	Tilts the docking stand forward and backward to enable different viewing angles and different docking modes.
2	MultiBay	Supports a diskette drive, CD-ROM or CD-RW drive, DVD drive, CD-RW/DVD drive, or second hard drive.
3	RJ-45 network jack	Connects a network cable.
4	External monitor connector	Connects an optional external monitor or overhead projector.
5	Audio line-in jack	Connects the stereo audio function of optional audio devices such as CD players.
6	Audio line-out jack	Connects optional stereo headphones or powered stereo speakers and connects the audio function of an audio/video device such as a television or VCR.
7	USB connectors (3)	Connect optional USB devices.
8	AC power connector	Connects an AC adapter or an optional DC cable.

1.8 Design Overview

This section presents a design overview of key parts and features of the tablet PC. Refer to Chapter 3, “Illustrated Parts Catalog,” to identify replacement parts, and Chapter 5, “Removal and Replacement Procedures,” for disassembly steps. The system board provides the following device connections:

- Memory expansion board
- Hard drive
- Display
- Optional keyboard/pointing stick
- Audio
- Transmeta processor
- Fan
- PC Card
- CompactFlash
- External MultiBay
- Modem or modem/NIC

The tablet PC uses an electrical fan for ventilation. The fan is controlled by a temperature sensor and is designed to turn 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.



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

Troubleshooting



WARNING: Only authorized technicians trained by Compaq 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, no one should attempt to make repairs at the component level or to make 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 and Diagnostics Utilities

Selecting Computer Setup or Compaq Diagnostics

The tablet PC features two Compaq system management utilities:

- **Computer Setup**—A system information and customization utility that can be used even when your operating system is not working or will not load. This utility includes settings that are not available in Windows.

- **Compaq Diagnostics**—A system information and diagnostic utility that is used within your Windows operating system. Use this utility whenever possible to:

- ☐ Display system information.
- ☐ Test system components.
- ☐ Troubleshoot a device configuration problem in Windows 2000, Windows XP Professional, or Windows XP Home.



It is not necessary to configure a device connected to a USB connector on the tablet PC or an optional docking base.

Using Computer Setup

Information and settings in Computer Setup are accessed from the File, Security, or Advanced menus:

1. Turn on or restart the tablet PC. Press **F10** while the F10 = ROM 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**, or **Advanced** menu.
3. To close Computer Setup and restart the tablet PC:
 - ☐ Select **File > Save Changes and Exit** and press **enter**.
 - or
 - ☐ Select **File > Ignore Changes and Exit** and press **enter**.
4. When you are prompted to confirm your action, press **F10**.

Selecting from the File Menu

**Table 2-1
File Menu**

Select	To Do This
System Information	■ View identification information about the tablet PC, a docking base, and any battery packs in the system. ■ View specification information about the processor, memory and cache size, and system ROM.
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.

Selecting from the Security Menu

Table 2-2
Security Menu

Select	To Do This
Setup Password	Enter, change, or delete a setup password. (The setup password is called an administrator password in Compaq Computer Security, a program accessed from the Windows Control Panel.)
Power-on Password	Enter, change, or delete a power-on password.
DriveLock Passwords	Enable/disable DriveLock; change a DriveLock User or Master password.  DriveLock Settings are accessible only when you enter Computer Setup by turning on (not restarting) the tablet PC.
Password Options Password options can be selected only when a power-on password has been set.	Enable/disable: ■ QuickLock ■ QuickLock on Suspend ■ QuickBlank  To enable QuickLock on Suspend or QuickBlank, you must first enable QuickLock.
Device Security	Enable/disable: ■ Ports or diskette drives* ■ Diskette write* ■ CD-ROM or diskette startup  Settings for a DVD-ROM can be entered in the CD-ROM field.
System IDs	Enter identification numbers for the tablet PC, a docking base, and all battery packs in the system.

*Not applicable to SuperDisk LS-120 drives.

Selecting from the Advanced Menu

Table 2-3
Advanced Menu

Select	To Do This
Language (or press F2)	Change the Computer Setup language.
Boot Options	Enable/disable: ■ QuickBoot, which starts the tablet PC more quickly by eliminating some startup tests. (If you suspect a memory failure and want to test memory automatically during startup, disable QuickBoot.) ■ MultiBoot, which sets a startup sequence that can include most bootable devices and media in the system.
Device Options	■ Enable/disable the embedded numeric keypad at startup. ■ Enable/disable multiple standard pointing devices at startup. (To set the tablet PC to support only a single, usually nonstandard, pointing device at startup, select Disable.) ■ Enable/disable USB legacy support for a USB keyboard. (When USB legacy support is enabled, the keyboard works even when a Windows operating system is not loaded.) ■ Set an optional external monitor or overhead projector connected to a video card in a docking base as the primary device. (When the tablet PC display is set as secondary, the tablet PC must be shut down before undocking from a docking base.)

Table 2-3
Advanced Menu (*Continued*)

Select	To Do This
Device Options (<i>continued</i>)	■ Change the parallel port mode from EPP (Enhanced Parallel Port [default]) to standard, bidirectional, EPP or ECP (Enhanced Capabilities Port). ■ Set video-out mode to NTSC (default), PAL, NTSC-J, or PAL-M.* ■ Enable/disable all settings in the SpeedStep window. (When Disable is selected, the tablet PC runs in Battery Optimized mode.) ■ Specify how the tablet PC recognizes multiple identical docking bases that are identically equipped. (Select Disable to recognize the docking bases as a single docking base; select Enable to recognize the docking bases individually, by serial number.) ■ Enable/disable the reporting of the processor serial number by the processor to the software.
HDD Self-Test Options	Run a quick comprehensive self-test on hard drives in the system that support the test features.
*Video modes vary even within regions. However, NTSC is common in North America; PAL, in Europe, Africa, and the Middle East; NTSC-J, in Japan; and PAL-M, in Brazil. Other South and Central American regions may use NTSC, PAL, or PAL-M.	

2.2 Using Compaq Diagnostics

When you access Compaq Diagnostics, a scan of all system components is displayed on the screen before the Compaq Diagnostics window opens.

You can display more or less information from anywhere within Compaq Diagnostics by selecting **Level** on the menu bar.

Compaq Diagnostics is designed to test Compaq components. If non-Compaq components are tested, the results may be inconclusive.

Obtaining, Saving, or Printing Configuration Information

1. Access Compaq Diagnostics by selecting **Start > Settings > Control Panel > Compaq Diagnostics**.
2. Select **Categories**, then select a category from the drop-down list.
 - ☐ To save the information, select **File > Save As**.
 - ☐ To print the information, select **File > Print**.
3. To close Compaq Diagnostics, select **File > Exit**.

Obtaining, Saving, or Printing Diagnostic Test Information

1. Access Compaq Diagnostics by selecting **Start > Settings > Control Panel > Compaq Diagnostics**.
2. Select the **Test** tab.
3. In the scroll box, select the category or device you want to test.
4. Select a test type:
 - ☐ **Quick Test**—Runs a quick, general test on each device in a selected category.
 - ☐ **Complete Test**—Performs maximum testing on each device in a selected category.
 - ☐ **Custom Test**—Performs maximum testing on a selected device.
 - ◆ To run all tests for your selected device, select the **Check All** button.
 - ◆ To run only the tests you select, select the **Uncheck All** button, then select the checkbox for each test you want to run.

5. Select a test mode:

- ☐ **Interactive Mode**—Provides maximum control over the testing process. You determine whether the test was passed or failed and may be prompted to insert or remove devices.
- ☐ **Unattended Mode**—Does not display prompts. If errors are found, they are displayed when testing is complete.

6. Select the **Begin Testing** button.

7. Select a tab to view a test report:

- ☐ **Status tab**—Summarizes the tests run, passed, and failed during the current testing session.
- ☐ **Log tab**—Lists tests run on the system, the number of times each test has run, the number of errors found on each test, and the total run time of each test.
- ☐ **Error tab**—Lists all errors found in the tablet PC with their error codes.

8. Select a tab to save the report:

- ☐ **Log tab**—Select the **Log tab Save** button.
- ☐ **Error tab**—Select the **Error tab Save** button.

9. Select a tab to print the report:

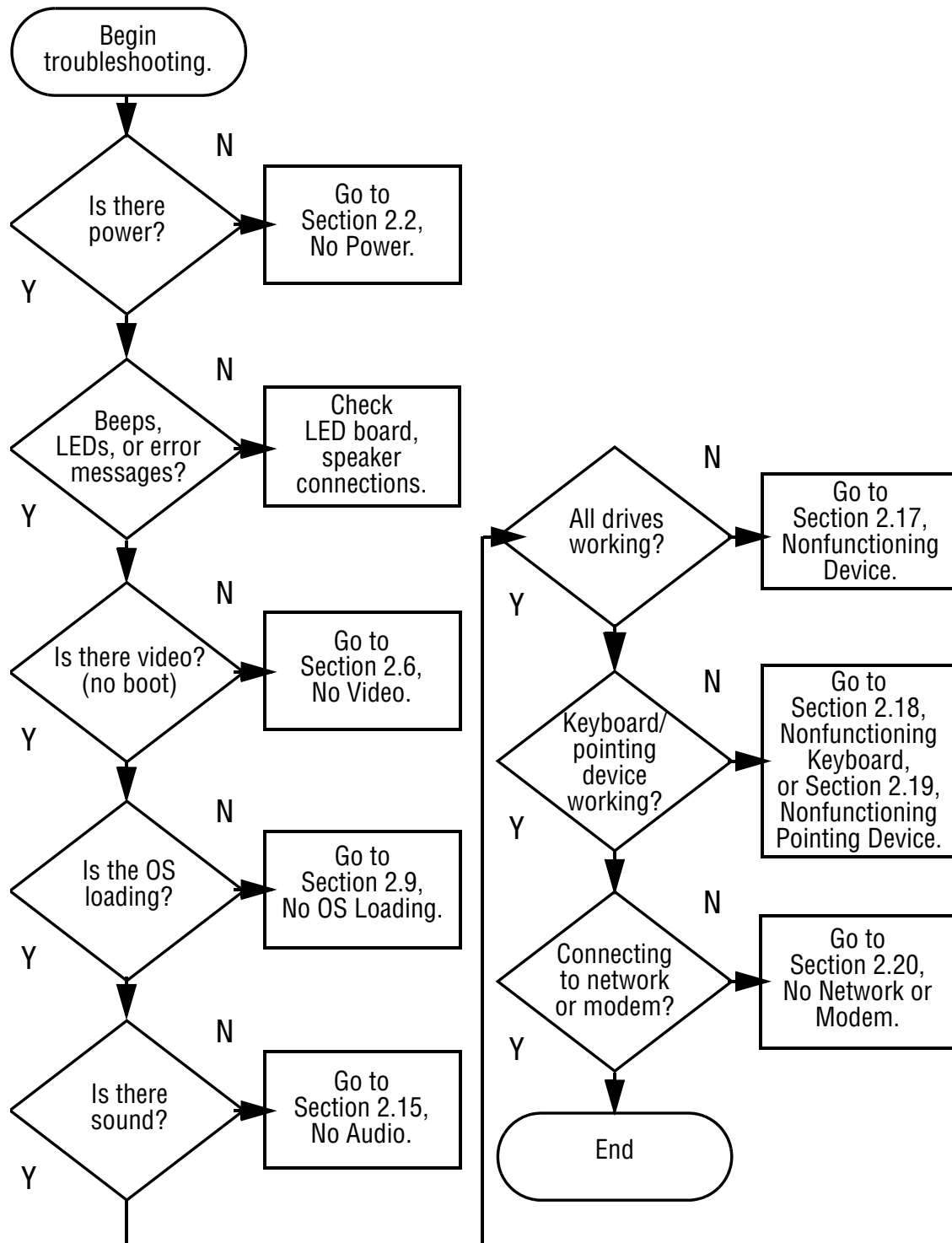
- ☐ **Log tab**—Select **File > Save As**, then print the file from your folder.

2.3 Troubleshooting Flowcharts

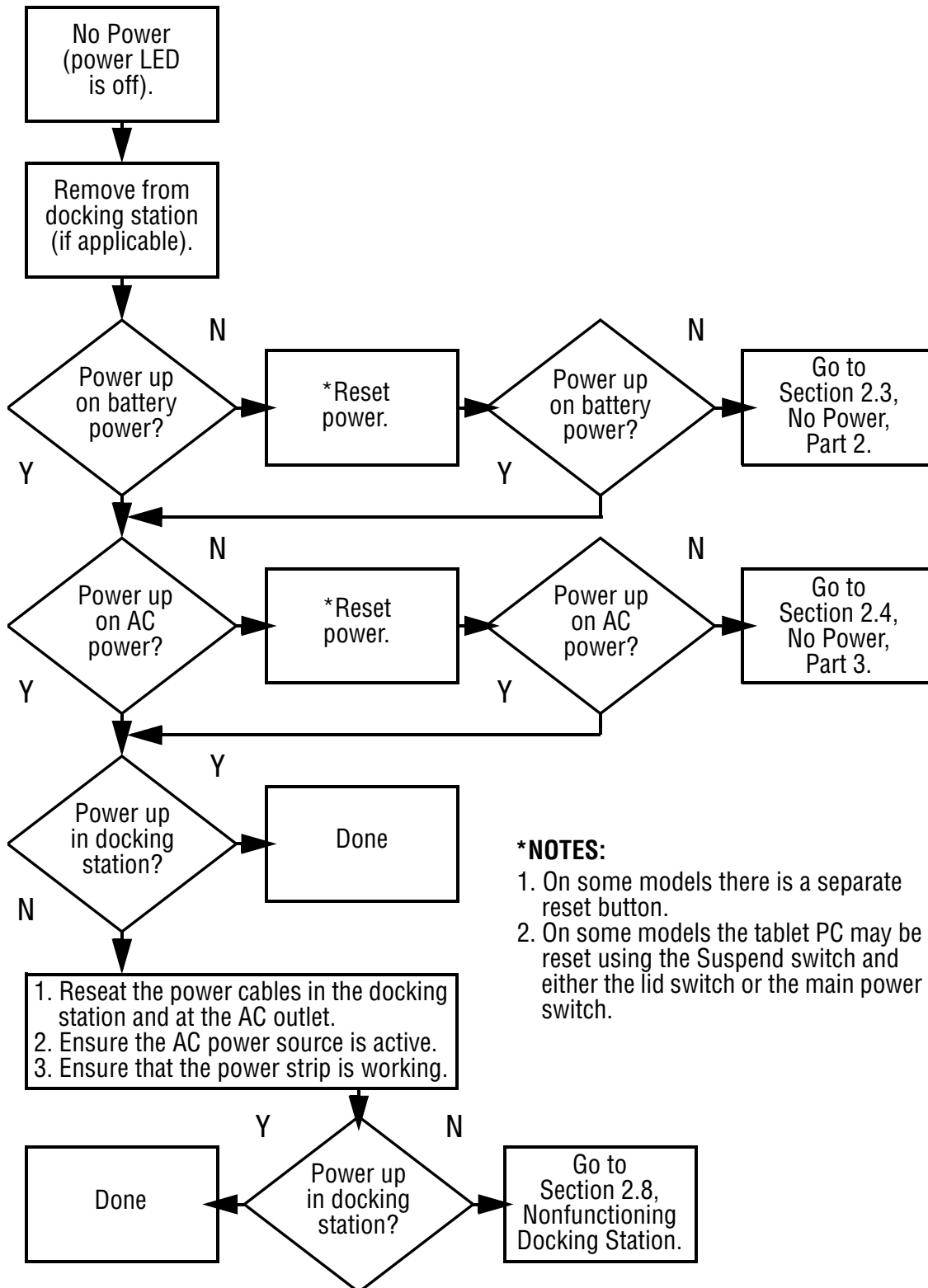
Table 2-4
Troubleshooting Flowcharts Overview

Flowchart	Description
2.1	Initial troubleshooting
2.2	No power, part 1
2.3	No power, part 2
2.4	No power, part 3
2.5	No power, part 4
2.6	No video, part 1
2.7	No video, part 2
2.8	Nonfunctioning docking station
2.9	No operating system (OS) loading
2.10	No OS loading from hard drive, part 1
2.11	No OS loading from hard drive, part 2
2.12	No OS loading from hard drive, part 3
2.13	No OS loading from diskette drive
2.14	No OS loading from CD- or DVD-ROM drive
2.15	No audio, part 1
2.16	No audio, part 2
2.17	Nonfunctioning device
2.18	Nonfunctioning keyboard
2.19	Nonfunctioning pointing device
2.20	No network or modem connection

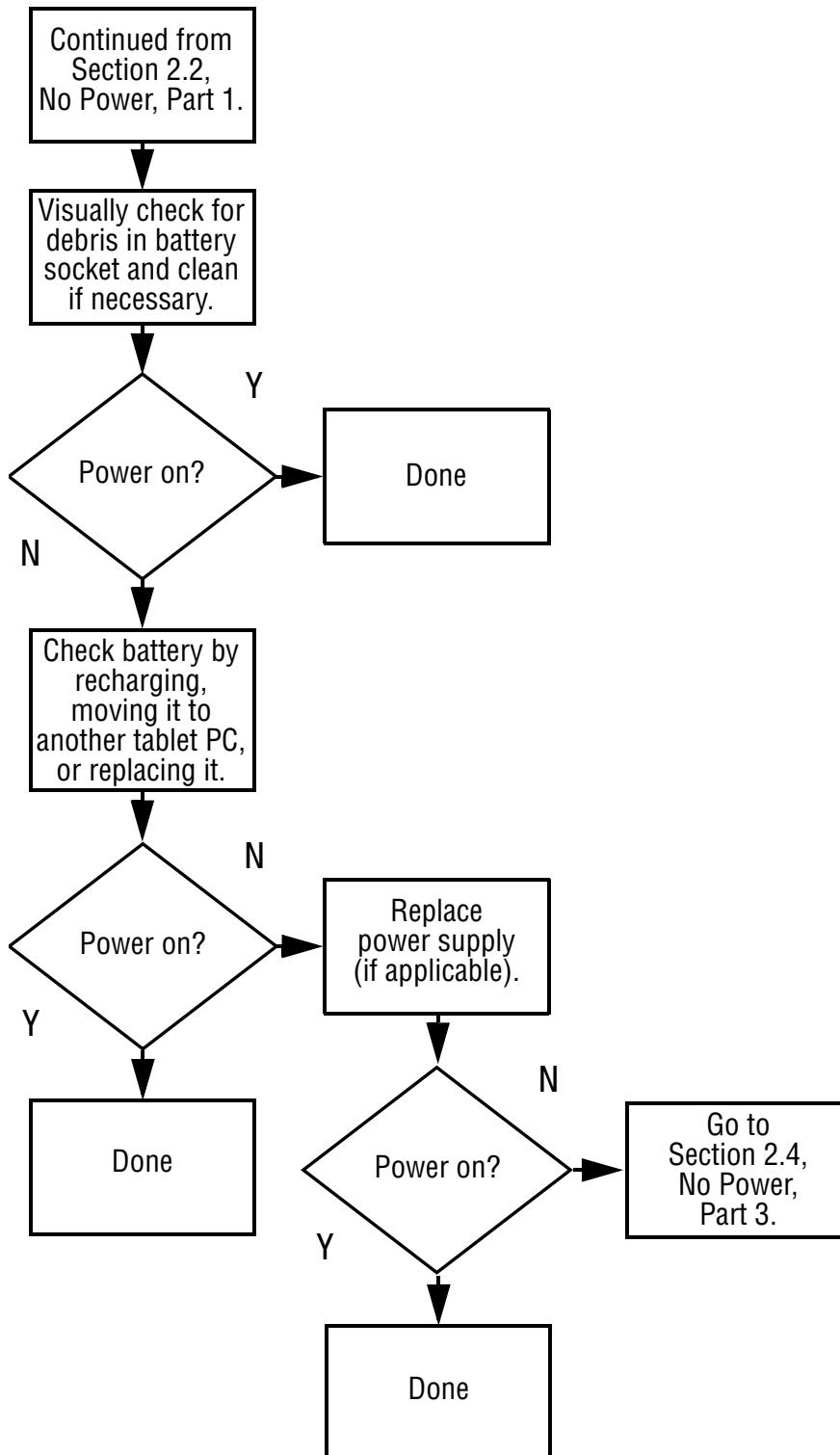
Flowchart 2.1—Initial Troubleshooting



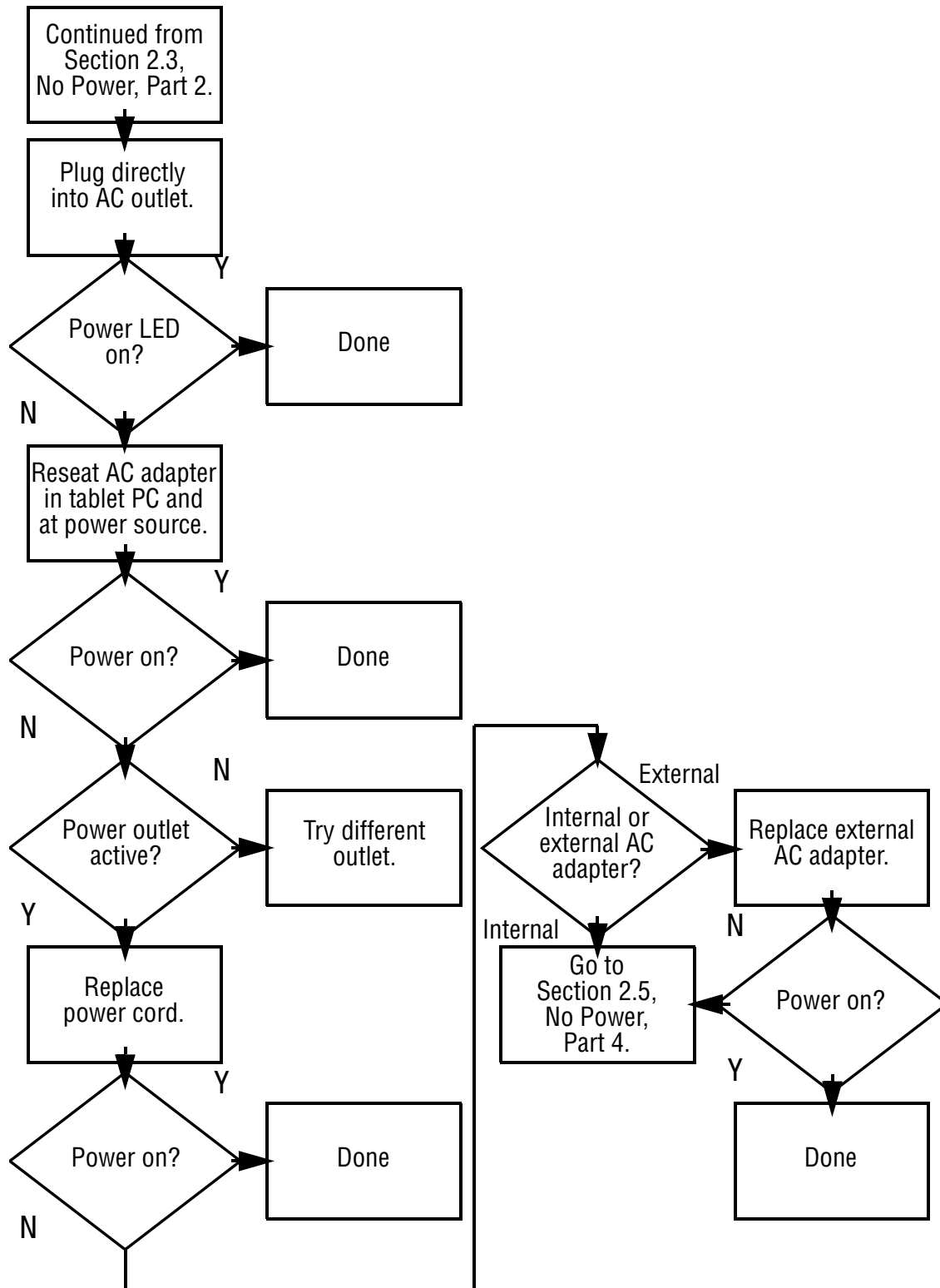
Flowchart 2.2—No Power, Part 1



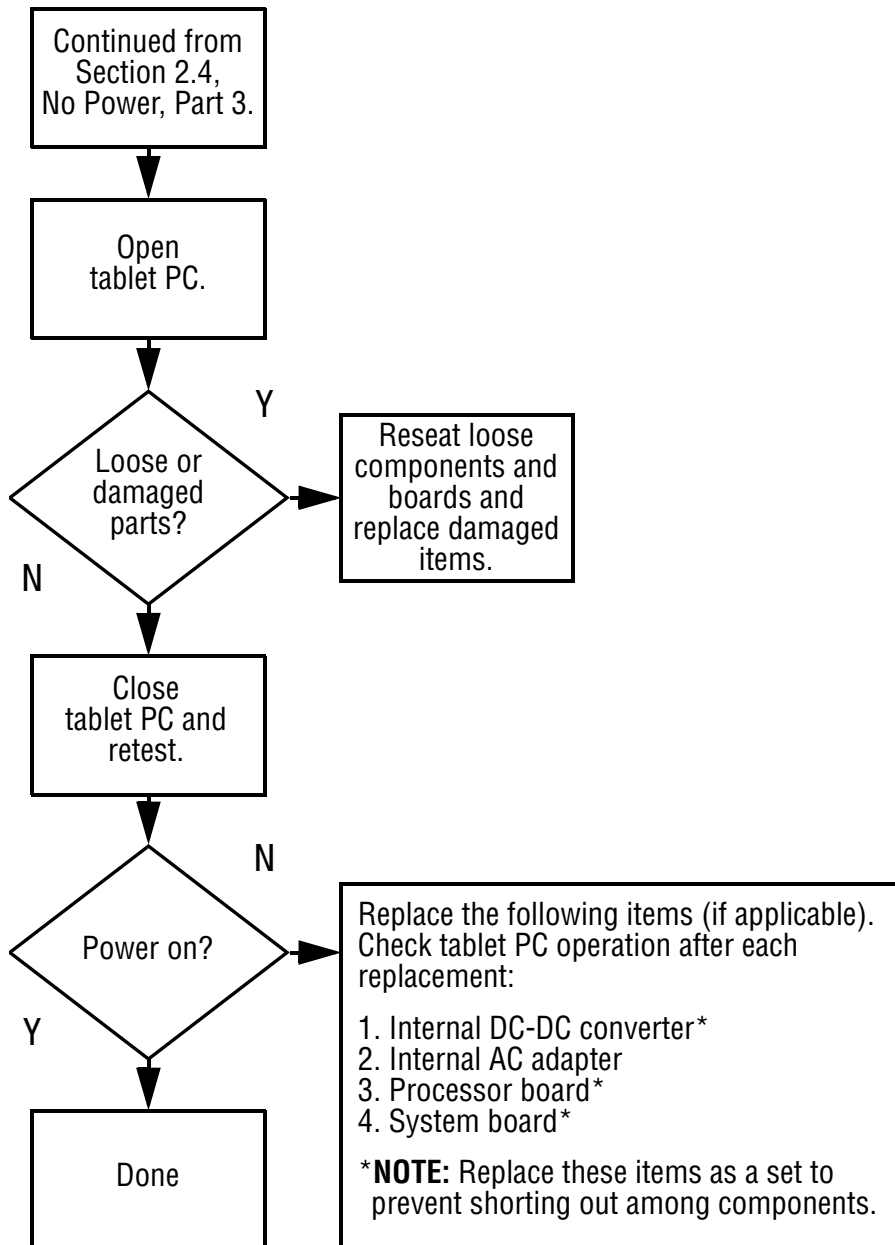
Flowchart 2.3—No Power, Part 2



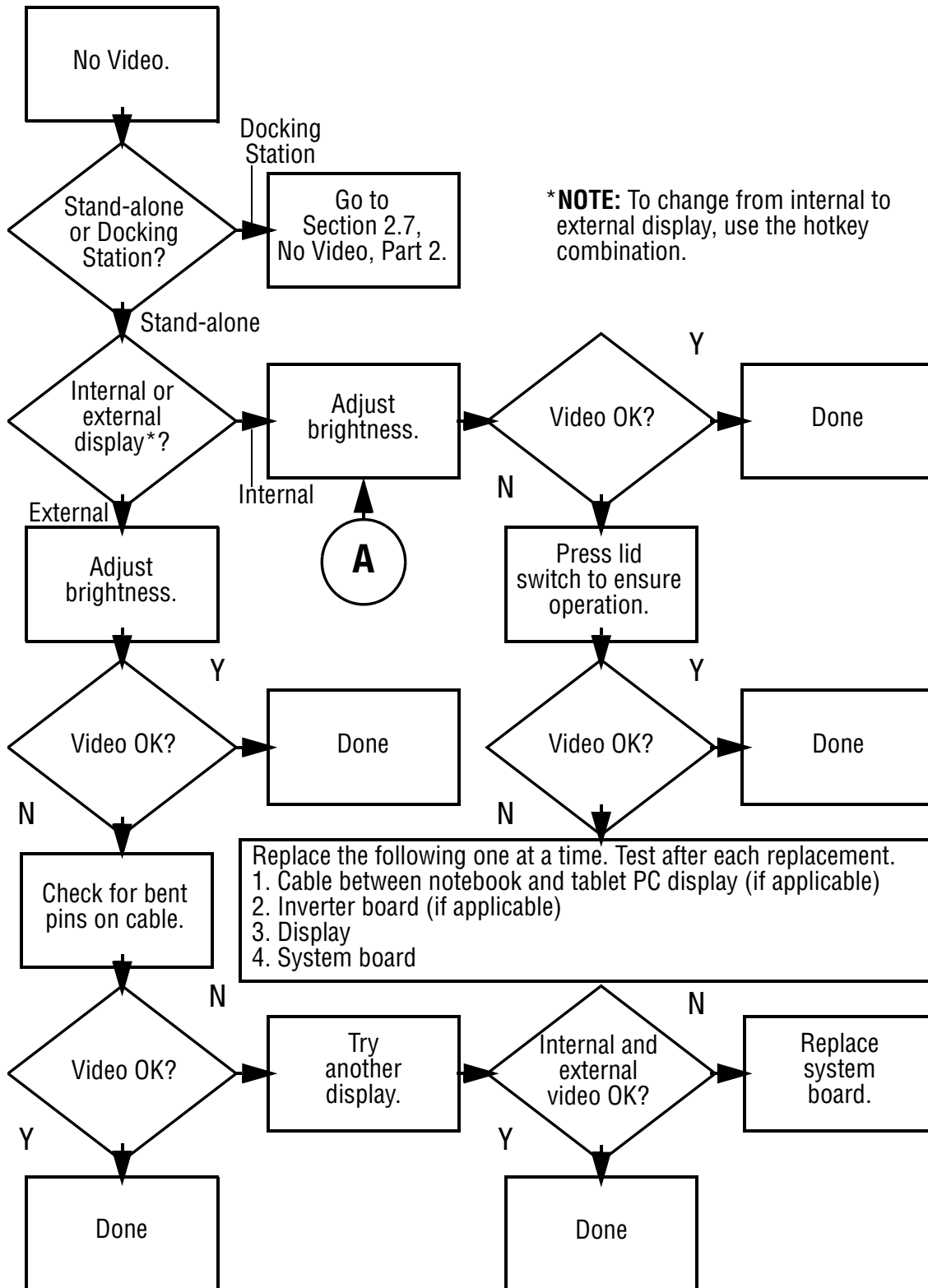
Flowchart 2.4—No Power, Part 3



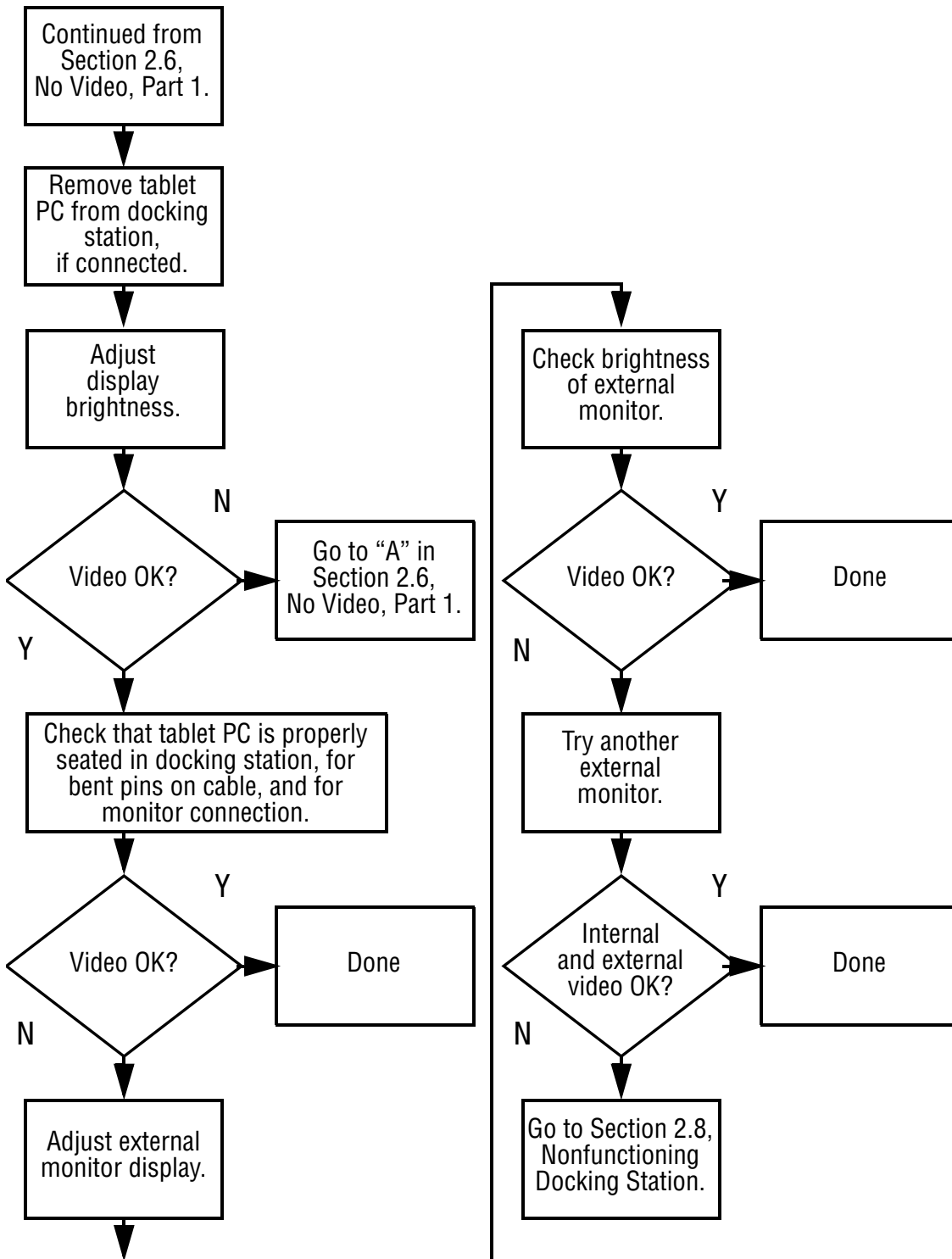
Flowchart 2.5—No Power, Part 4



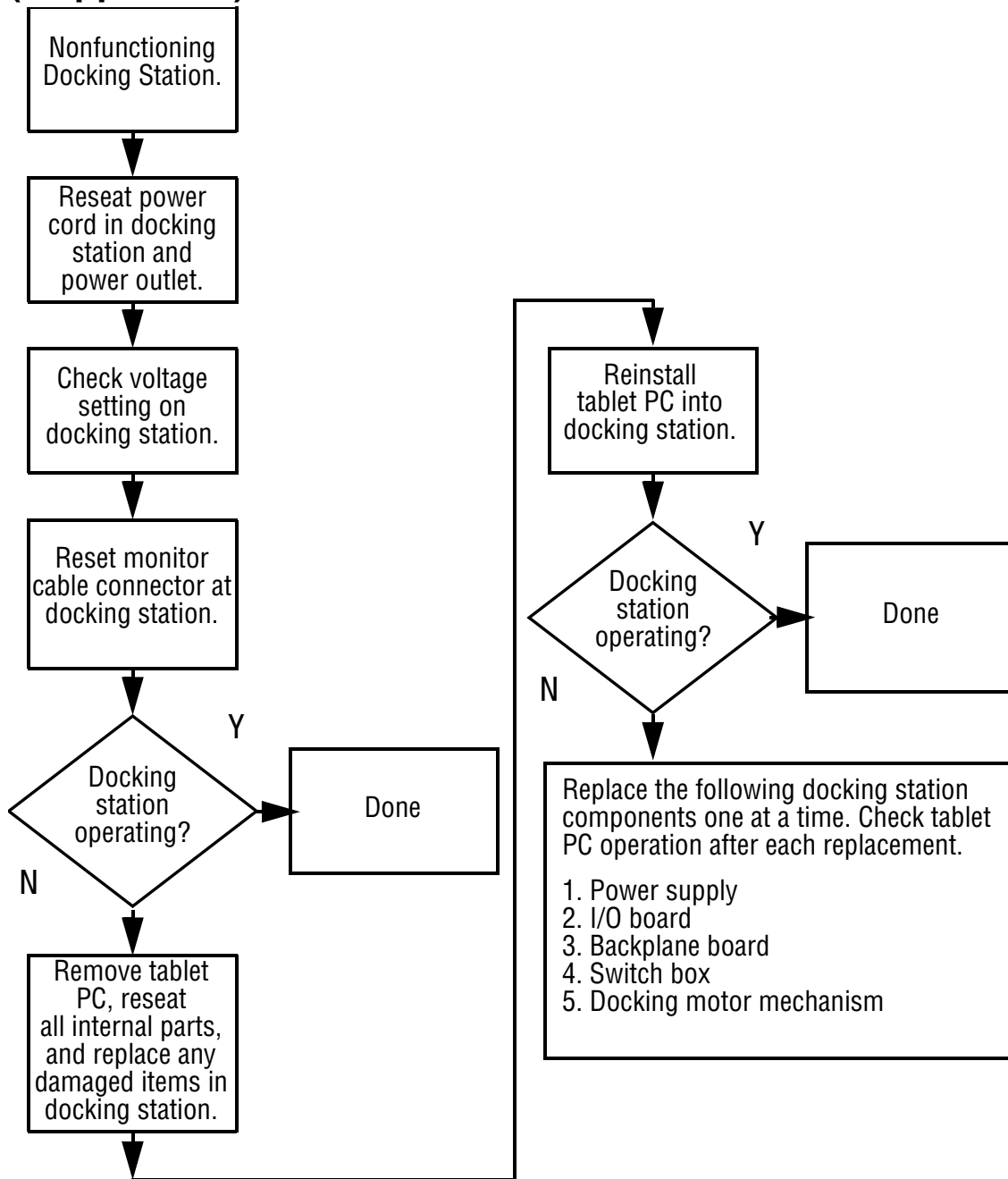
Flowchart 2.6—No Video, Part 1



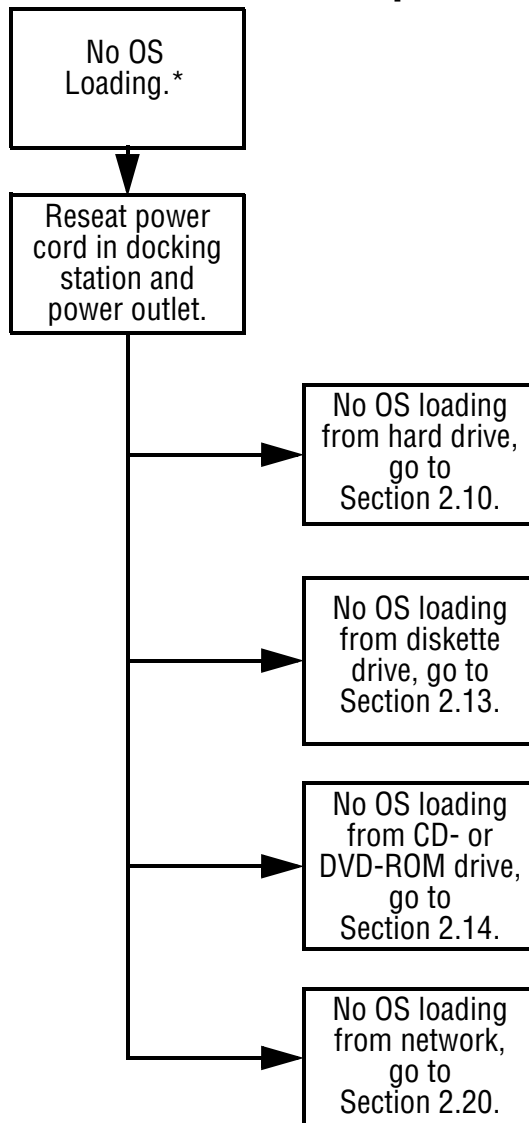
Flowchart 2.7—No Video, Part 2



**Flowchart 2.8—Nonfunctioning Docking Station
(if applicable)**

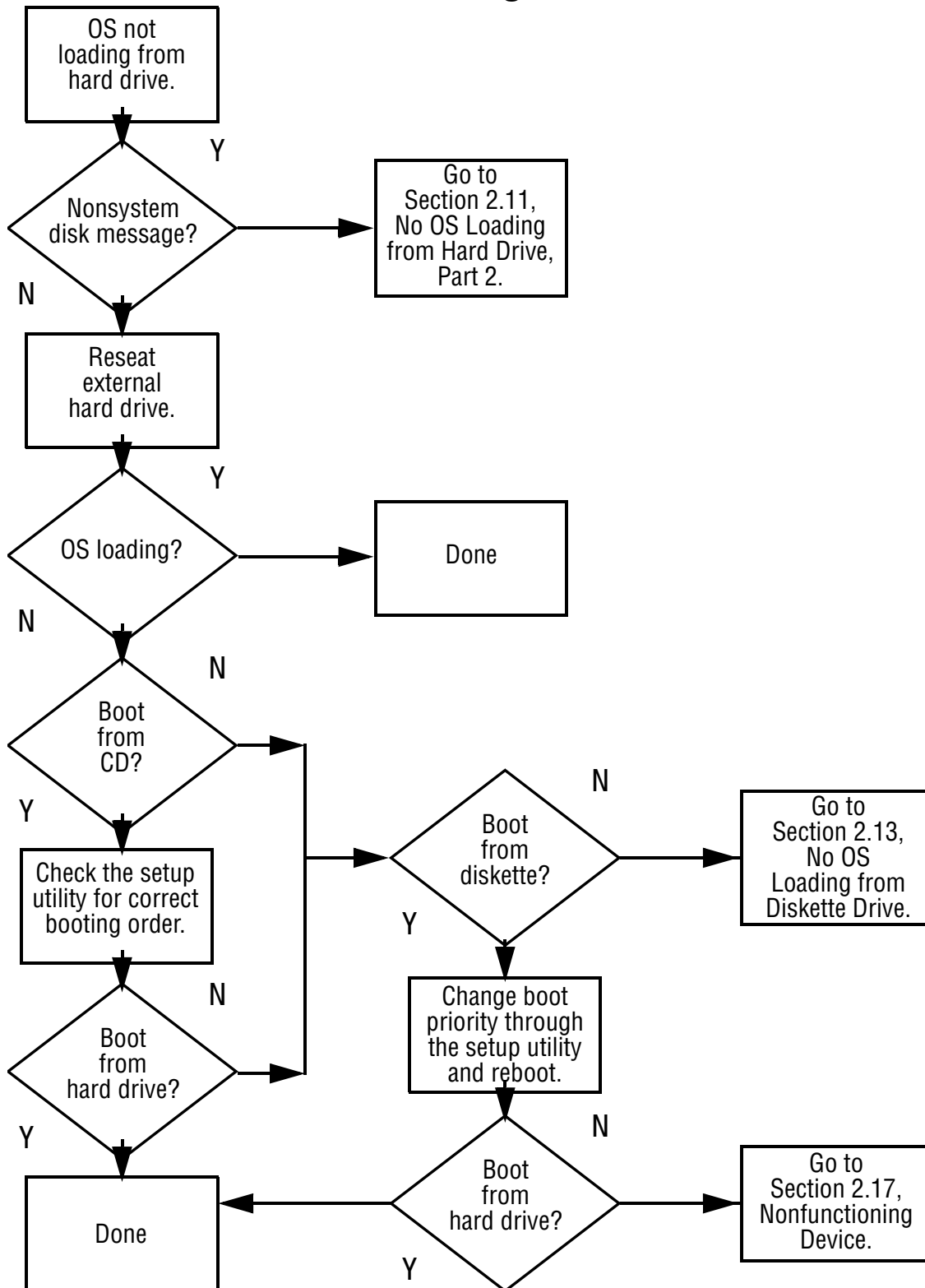


Flowchart 2.9—No Operating System (OS) Loading

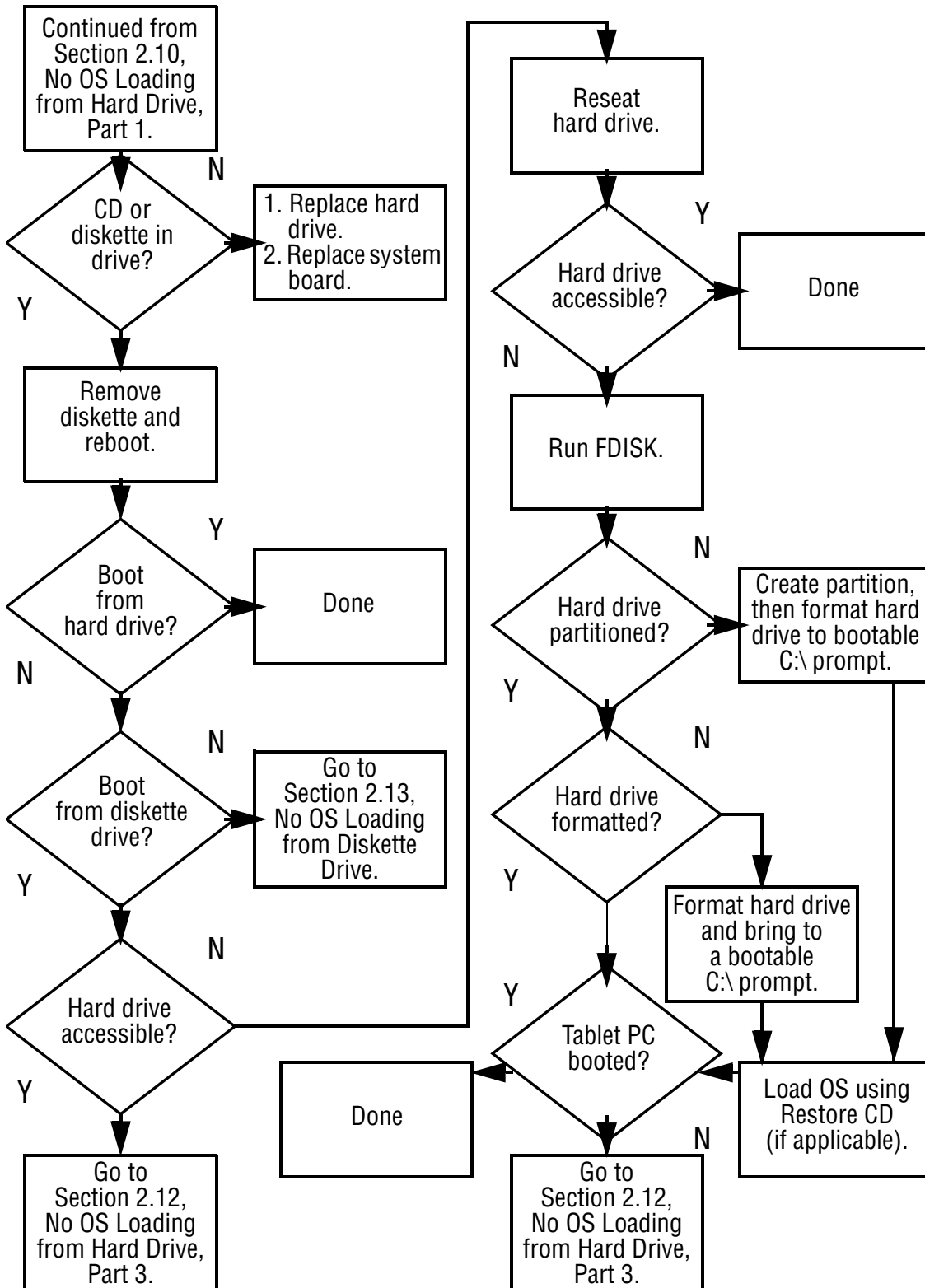


***NOTE:** Before beginning troubleshooting, always check cable connections, cable ends, and drives for bent or damaged pins.

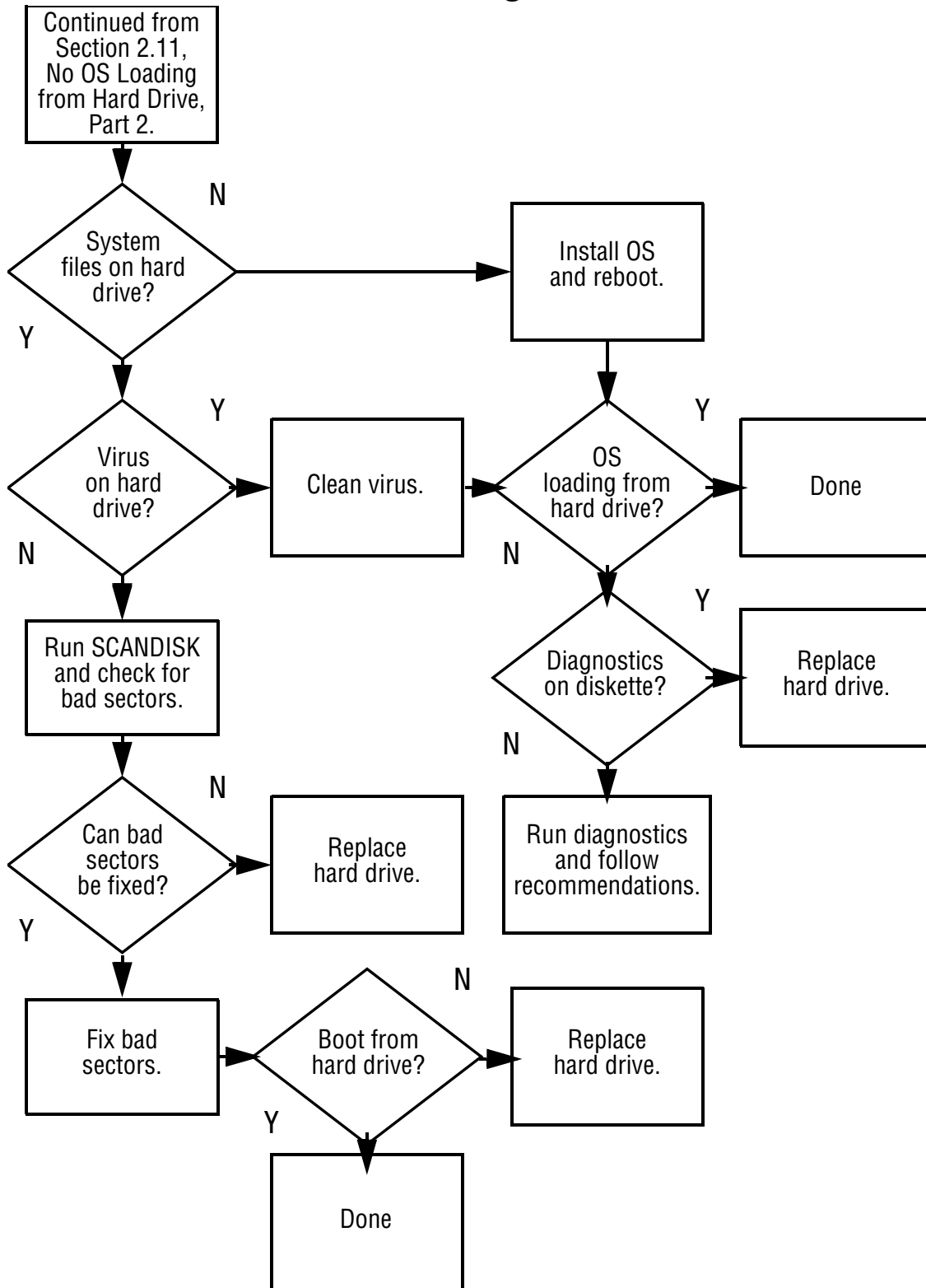
Flowchart 2.10—No OS Loading from Hard Drive, Part 1



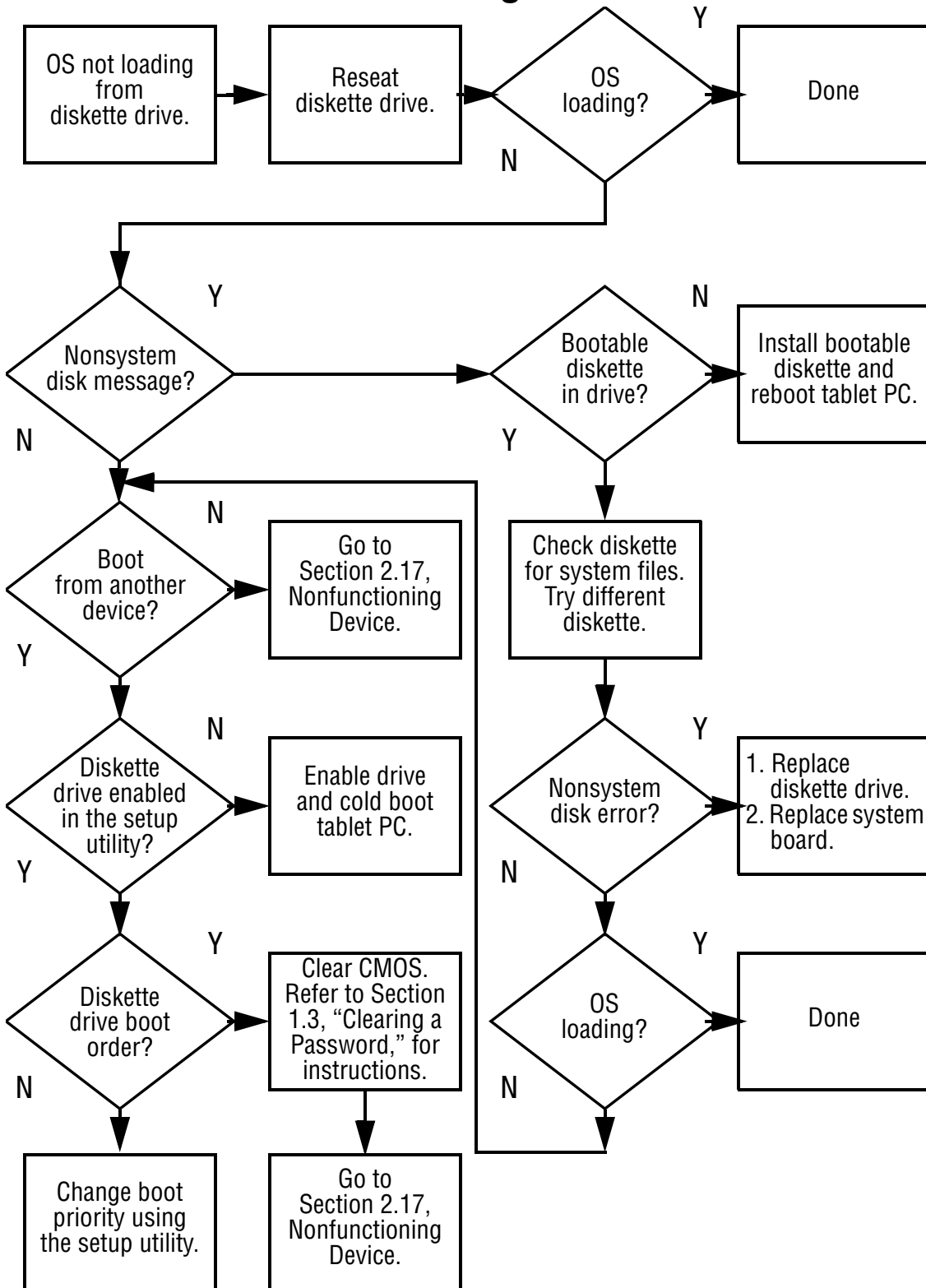
Flowchart 2.11—No OS Loading from Hard Drive, Part 2



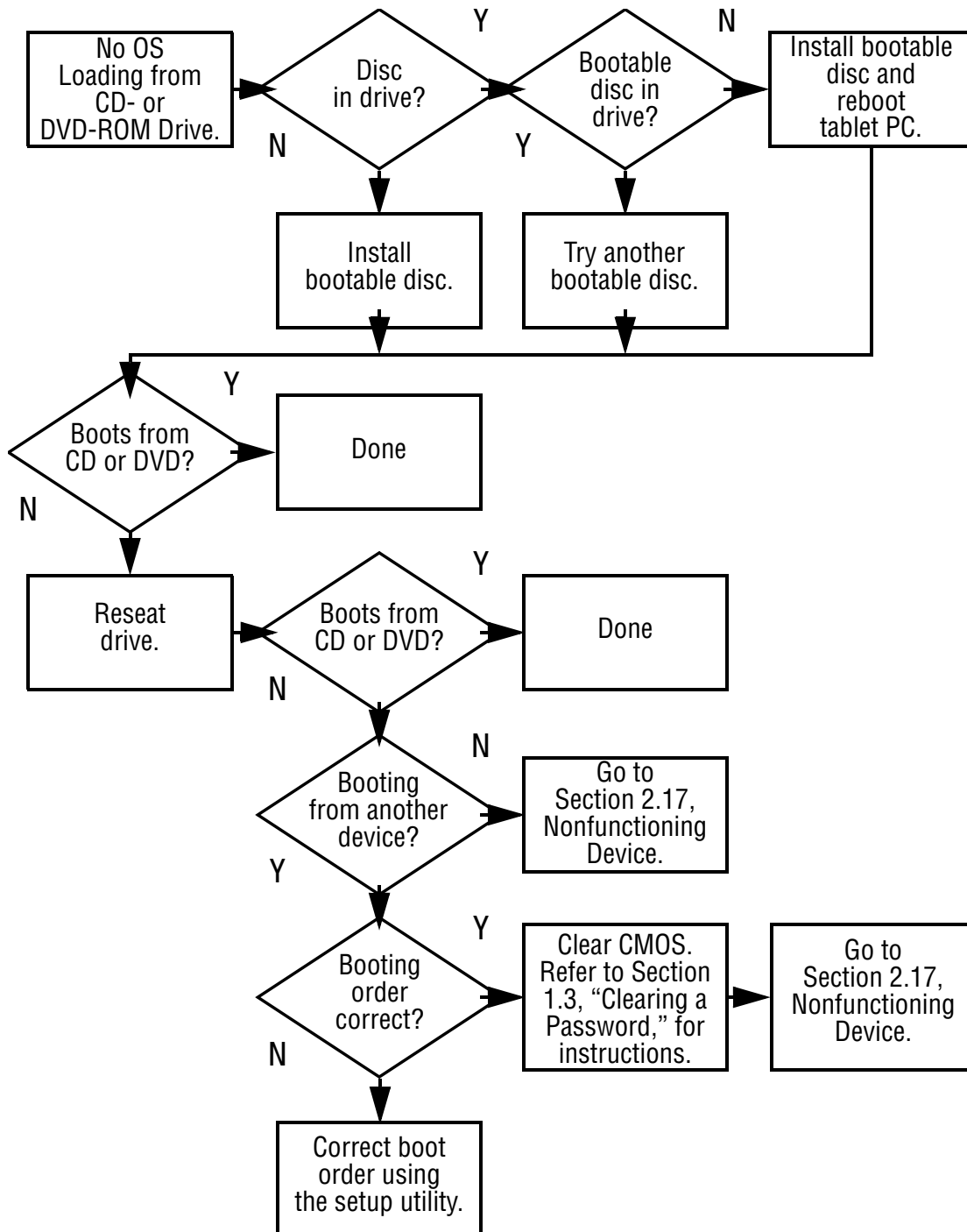
Flowchart 2.12—No OS Loading from Hard Drive, Part 3



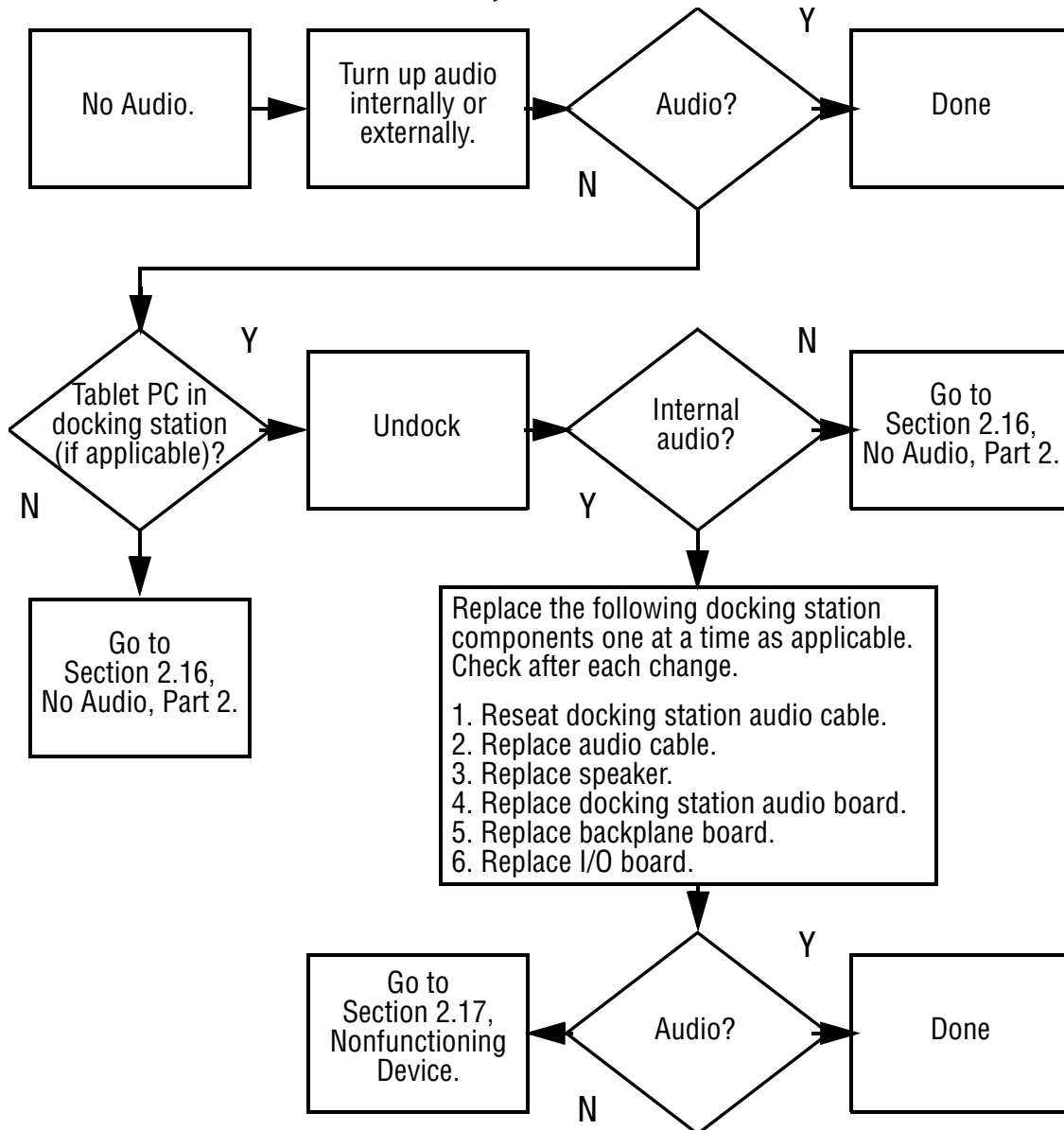
Flowchart 2.13—No OS Loading from Diskette Drive



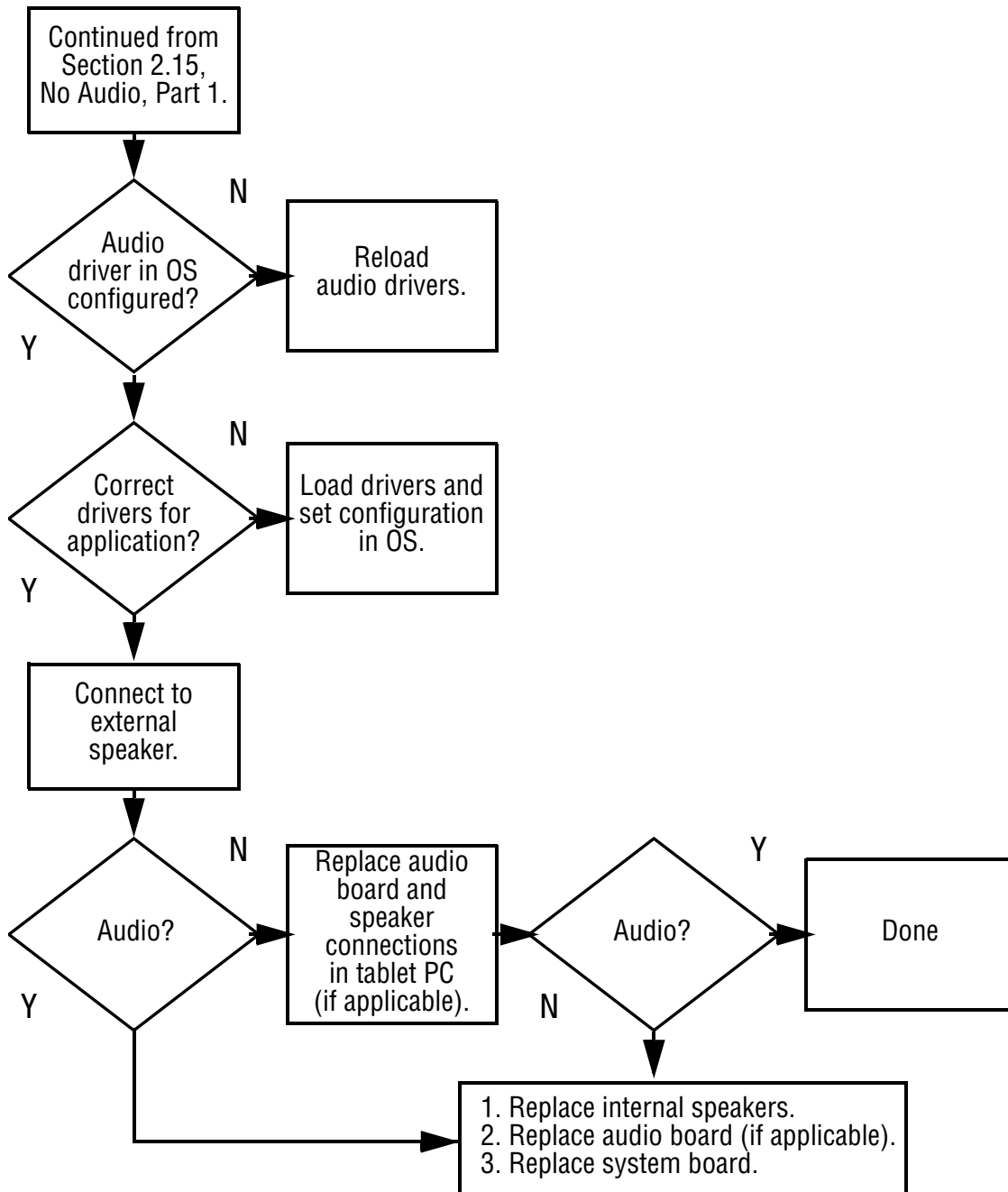
Flowchart 2.14—No OS Loading from CD- or DVD-ROM Drive



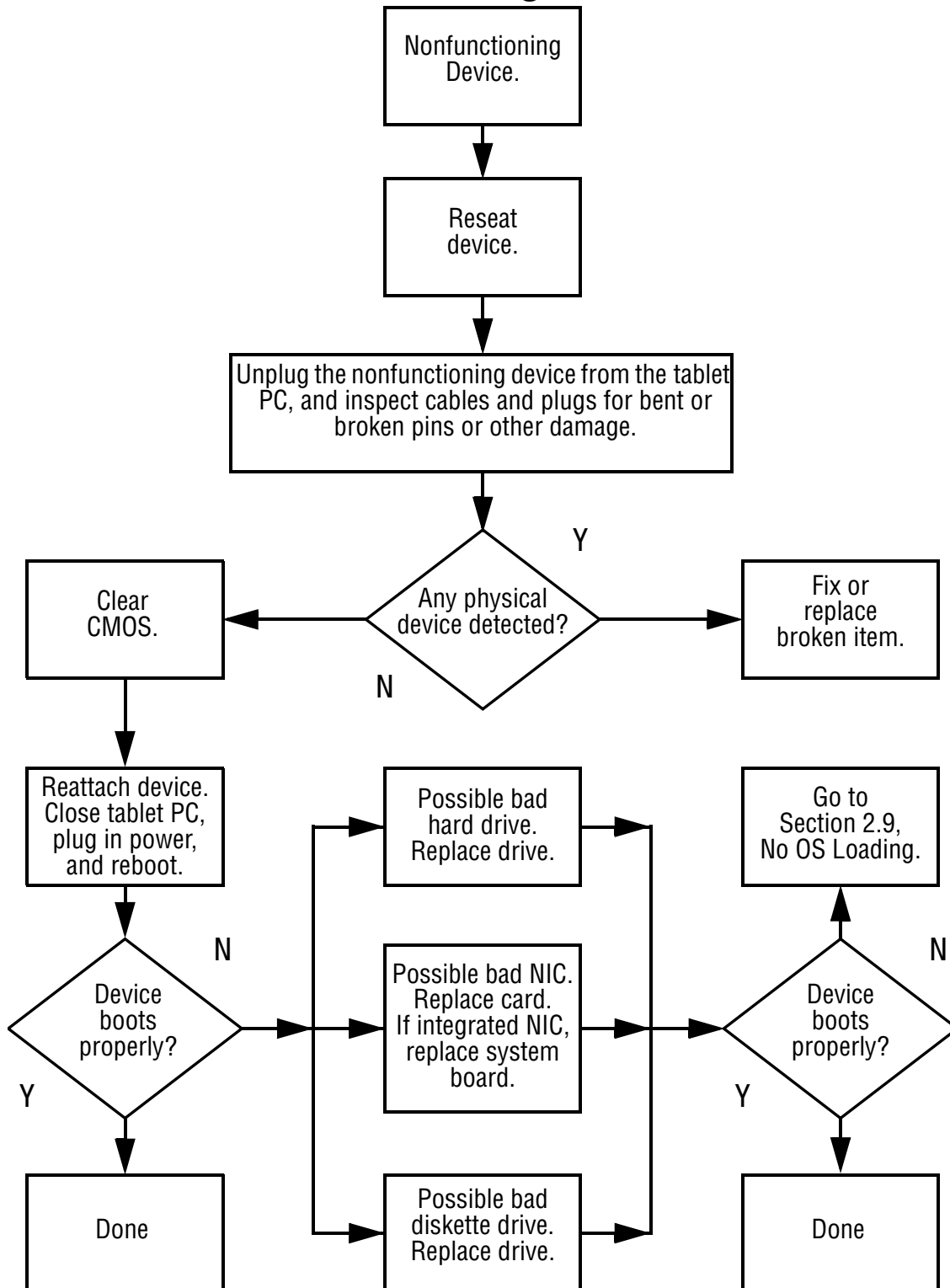
Flowchart 2.15—No Audio, Part 1



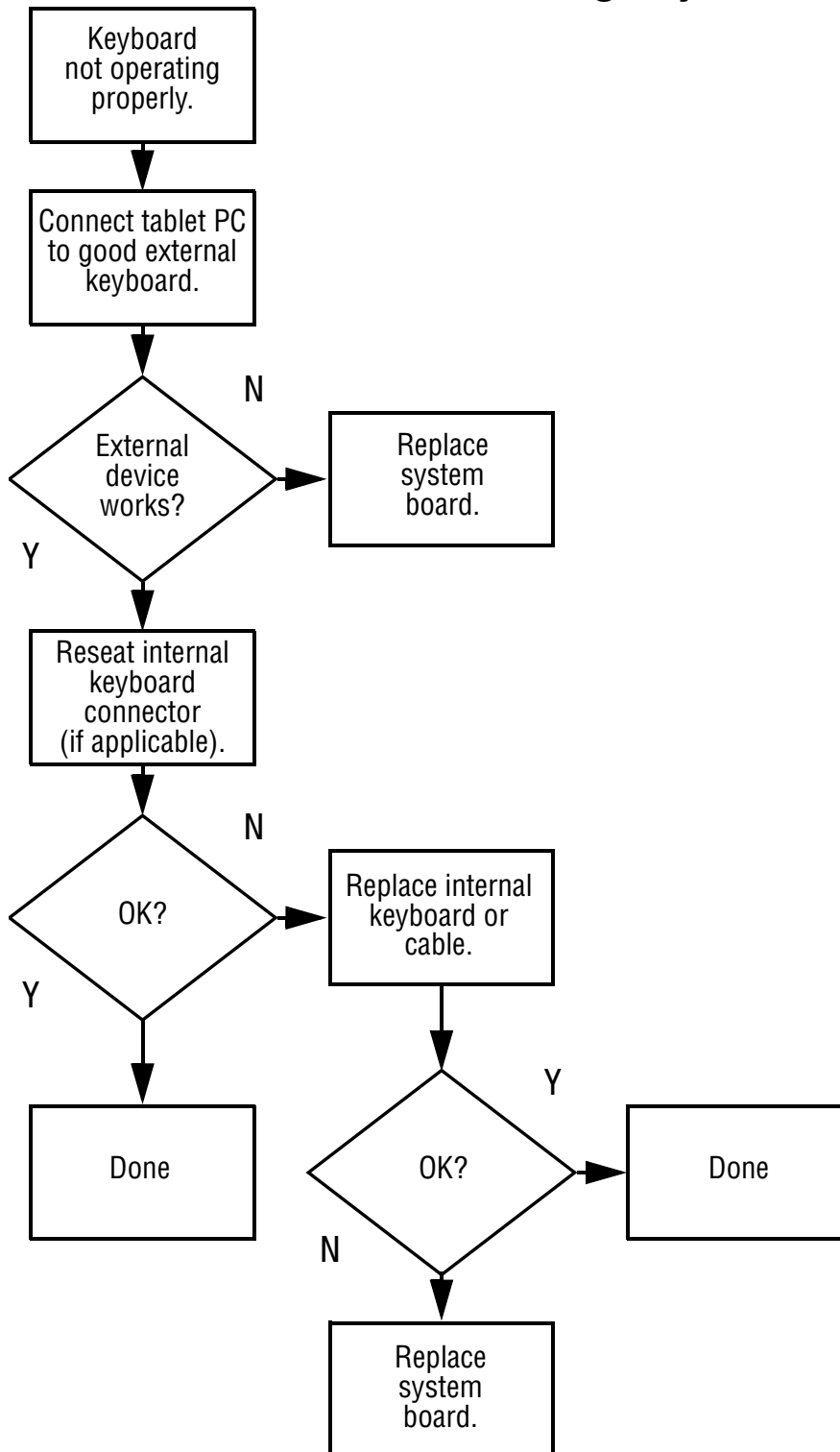
Flowchart 2.16—No Audio, Part 2



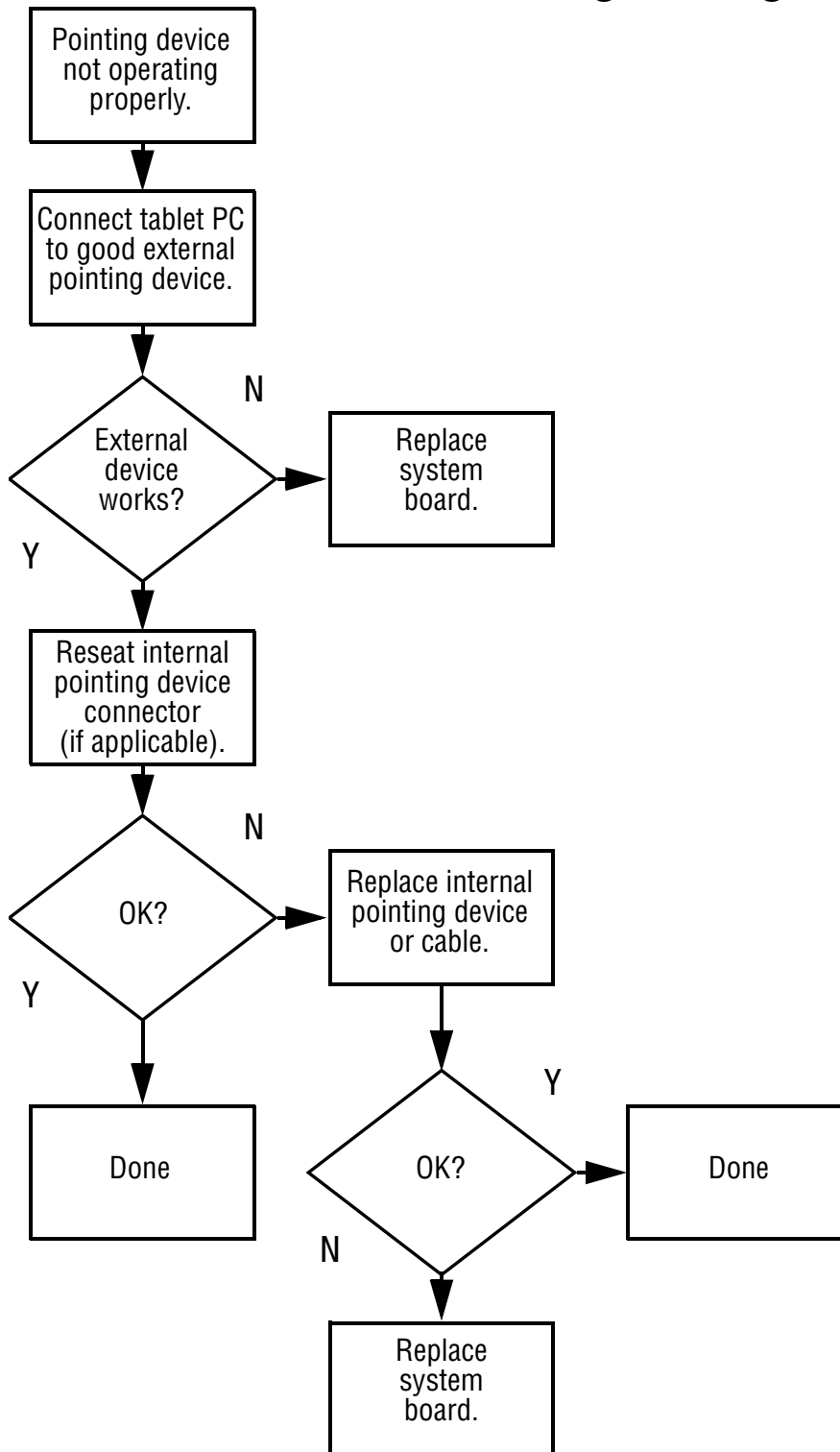
Flowchart 2.17—Nonfunctioning Device



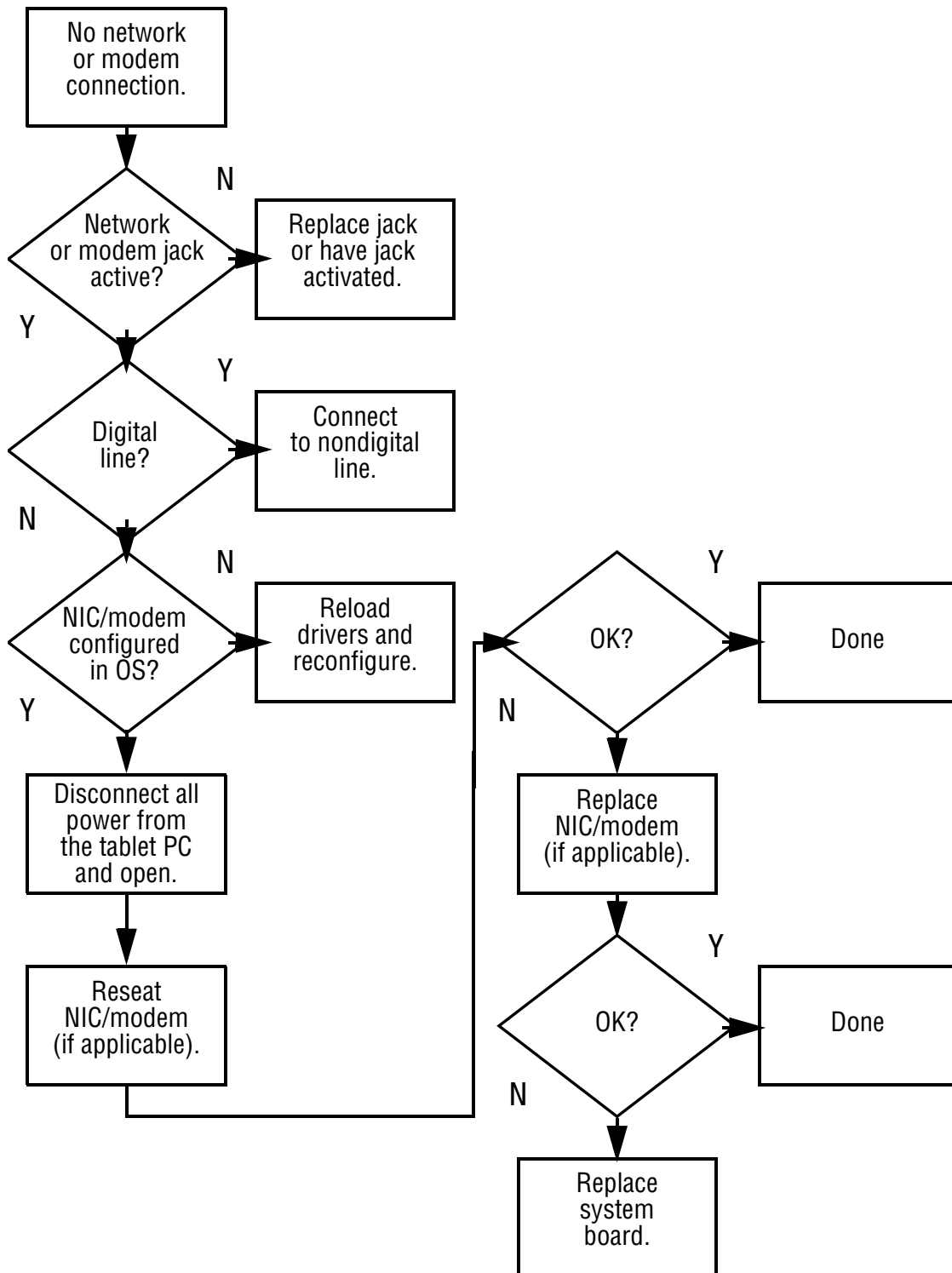
Flowchart 2.18—Nonfunctioning Keyboard



Flowchart 2.19—Nonfunctioning Pointing Device



Flowchart 2.20—No Network or Modem Connection



Illustrated Parts Catalog

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

3.1 Serial Number Location

When ordering parts or requesting information, provide the tablet PC serial number and model number located on the bottom of the tablet PC (Figure 3-1).



Figure 3-1. Serial Number Location

3.2 Tablet PC System Major Components

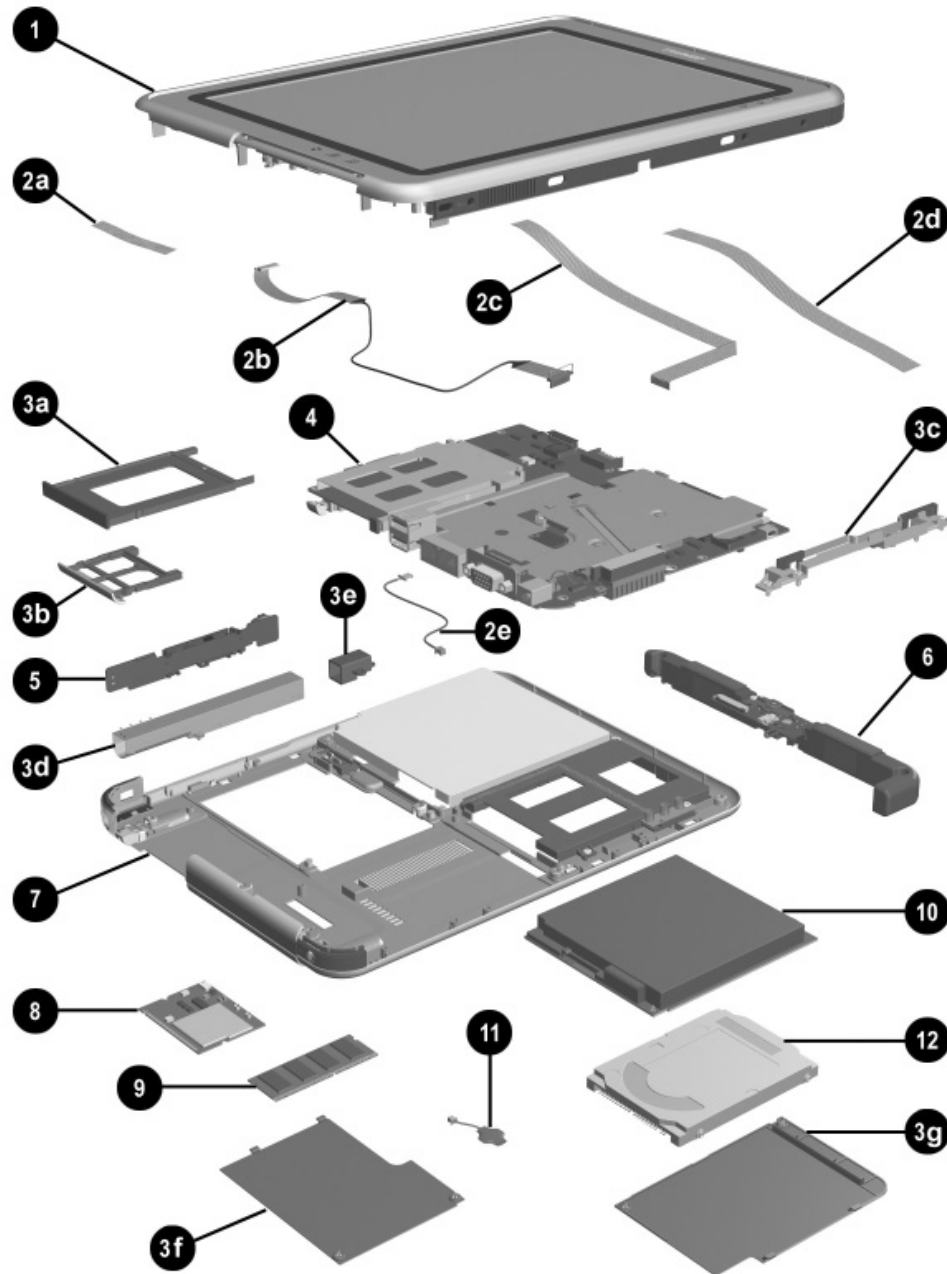


Figure 3-2. Tablet PC Major Components

Table 3-1
Spare Parts: Tablet PC System Major Components

Item	Description	Spare Part Number
1	Display components	
	Display panel assembly	311062-001
	Display bezel with inverter	310667-001
	Bridge battery	310676-001
	Digitizer	310666-001
	Miscellaneous Cable Kit, includes:	310673-001
2a	Switch board cable	
2b	Digitizer cable	
2c	Speaker cable	
2d	Display panel cable	
2e	Modem cable	
	not illustrated: display inverter cable	
	Miscellaneous Plastic/Hardware Kit, includes:	310678-001
3a	PC Card slot space saver	
3b	CompactFlash card slot space saver	
3c	Keyboard release assembly	
3d	Pen holder	
3e	Pen holder push block assembly	
3f	Mini PCI communications/memory expansion compartment cover	
3g	Hard drive cover	
	not illustrated: tablet PC feet	

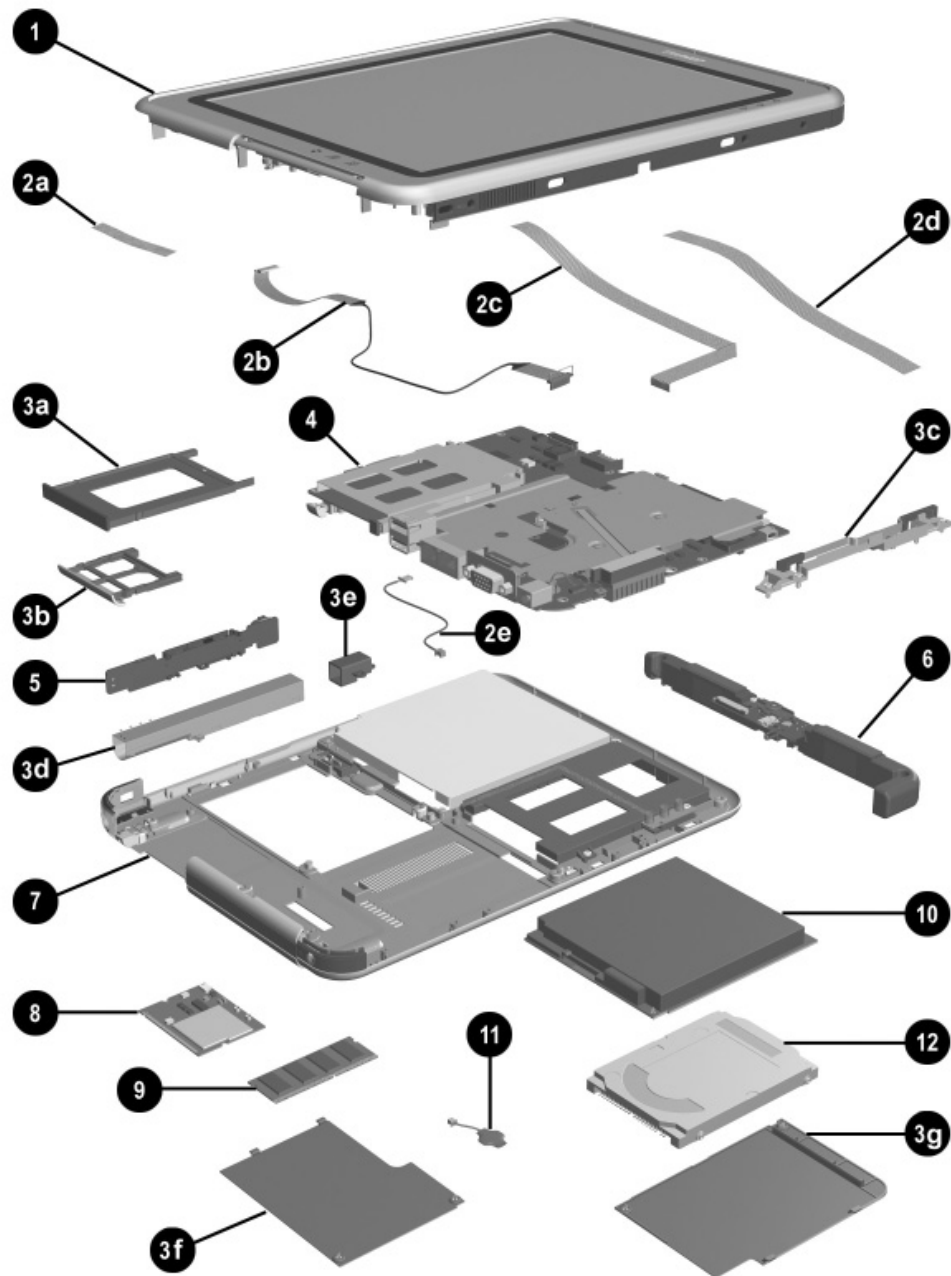


Figure 3-2. Tablet PC Major Components

Table 3-1
Spare Parts: Tablet PC System Major Components (Continued)

Item	Description	Spare Part Number
4	System board (includes fan, heat sink, and 256 MB memory)	310664-001
	Fan and heat sink (not illustrated separately)	310665-001
5	Switch board	310672-001
6	Speaker assembly (includes audio board)	310679-001
7	Base enclosure (includes battery shield, hard drive bracket, LED board assembly, connector cover, and shields)	310671-001
8	Wireless local area network (LAN) board (mini PCI, Type III)	310670-001
9	Memory expansion board (DDR, 256 MB)	310677-001
10	Battery pack, Li ion	302119-001
11	Real time clock (RTC) battery	310675-001
12	Hard drives	
	40 GB	311240-001
	30 GB	310668-001

3.3 Miscellaneous Cable Kit Components

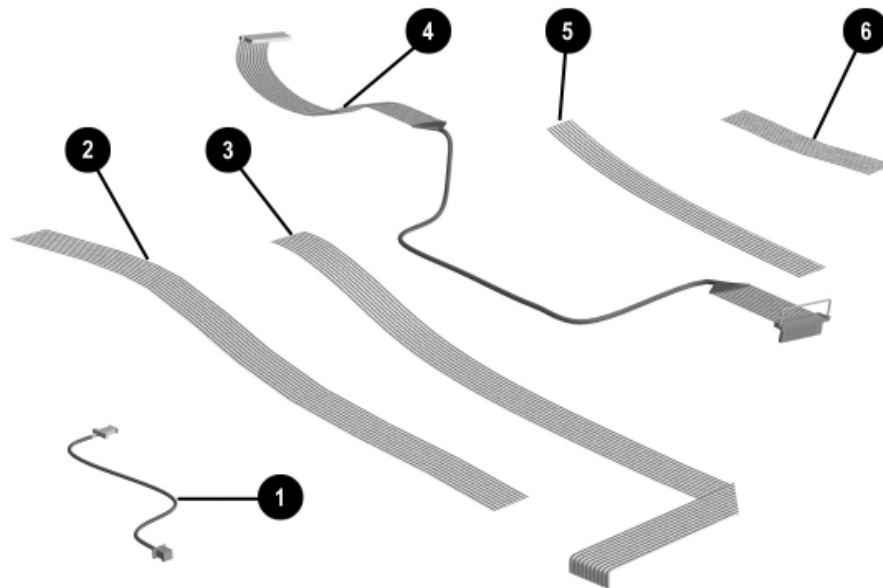


Figure 3-3. Miscellaneous Cable Kit Components

Table 3-2
Miscellaneous Cable Kit Components
Spare Part Number 310673-001

Item	Description
1	Modem cable
2	Display panel cable
3	Speaker cable
4	Digitizer cable
5	Display inverter cable
6	Switch board cable

3.4 Miscellaneous Plastics/Hardware Kit Components

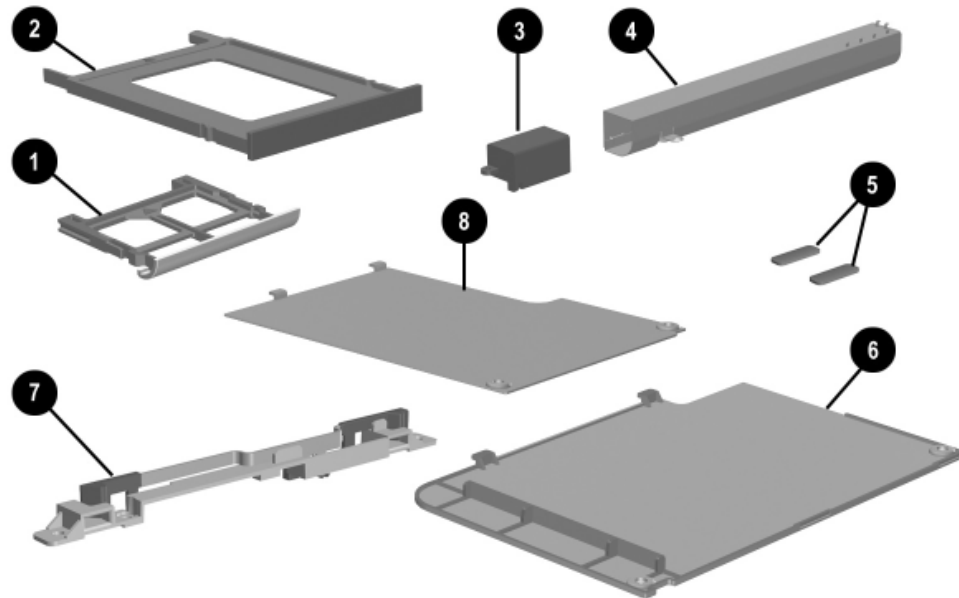


Figure 3-4. Miscellaneous Plastic/Hardware Kit Contents

Table 3-3
Miscellaneous Plastic/Hardware Kit Components
Spare Part Number 310678-001

Item	Description
1	CompactFlash card slot space saver
2	PC Card slot space saver
3	Pen holder push block assembly
4	Pen holder
5	Tablet PC feet (2)
6	Hard drive cover
7	Keyboard release assembly
8	Memory expansion/mini PCI communications compartment cover

3.5 Keyboard



Figure 3-5. Tablet PC TC1000 Keyboard

Table 3-4
Tablet PC TC1000 Keyboard

Description			Spare Part Number
Tablet PC TC1000 Keyboards			
Australia	310681-011	Korea	310681-AD1
Denmark	310681-081	Norway	310681-091
European	310681-021	People's Republic of China	310681-AA1
France	310681-051	Sweden/Finland	310681-101
French Canada	310681-121	Switzerland	310681-111
German	310681-041	Taiwan	310681-AB1
International	310681-002	United Kingdom	310681-031
Italy	310681-061	United States	310681-001
Japan	310681-291		

3.6 Docking Station



Figure 3-6. Compaq Tablet PC TC1000 Docking Station

**Table 3-5
Optional Docking Station**

Description	Spare Part Number
Tablet PC TC1000 Docking Station	311063-001

3.7 Docking Station Components

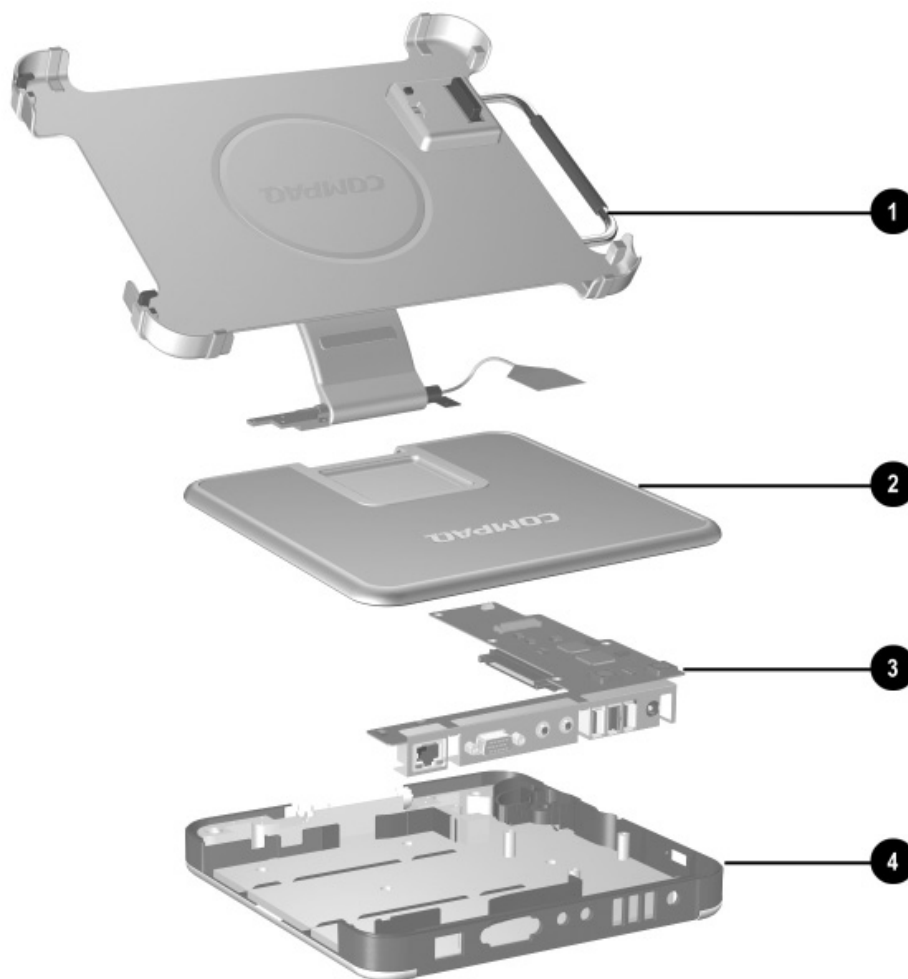


Figure 3-7. Compaq Tablet PC TC1000 Docking Station Components

Table 3-6
Docking Station Components

Item	Description	Spare Part Number
1	Docking stand and pivot arm	311189-001
2	Top case	311190-001
3	Board assembly	311192-001
4	Bottom case	311191-001

3.8 Miscellaneous

Table 3-7
Spare Parts: Miscellaneous (not illustrated)

Description				Spare Part Number
AC power cord, 3 wire				
Australia	198723-011	Sweden		198723-101
Europe International	198723-B31	Switzerland		198723-BG1
Italy	198723-061	Taiwan		198723-AB1
Japan	198723-291	United Kingdom		198723-031
Korea	198723-AD1	United States		198723-001
People's Republic of China	198723-AA1			
AC adapter, 65 W				285288-001
Pen (uses a 1.5 VDC, AAAA battery)				310680-001
Tablet PC Miscellaneous Screw Kit (includes the following screws; refer to Appendix C, "Screw Listing," for more information on screw specifications and usage.)				310674-001
■ Phillips M2.0 × 4.0 ■ Phillips M2.0 × 5.0 ■ Phillips M2.0 × 3.5 ■ Torx M2.5 × 7.0				
Docking Station Miscellaneous Screw Kit (includes the following screws; refer to Appendix C, "Screw Listing," for more information on screw specifications and usage.)				311241-001
■ Phillips M2.5 × 5.0 ■ Phillips M2.5 × 12.0 ■ Phillips M2.5 × 6.0 ■ Torx M2.5 × 7.0				

Removal and Replacement Preliminaries

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

4.1 Tools Required

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

- Magnetic screwdriver
- Torx T8 screwdriver
- Phillips P0 screwdriver
- Tool kit (includes connector removal tool, loopback plugs, and case utility tool)

4.2 Service Considerations

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



As you remove each subassembly from the 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

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.



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.

4.3 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 on the tablet PC, then shut it down.
- Before removing a diskette drive or optical drive, ensure that a diskette or disc is not in the drive. 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 that have at least one inch of shock-proof foam.
- Avoid dropping drives from any height onto any surface.
- After removing a hard drive, CD-ROM 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 to liquids.
- If a drive must be mailed, place the drive in a bubble pack mailer or other suitable form of protective packaging and label the package "Fragile: Handle With Care."

4.4 Preventing Electrostatic Damage

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

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

An electronic device exposed to electrostatic discharge 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.

4.5 Packaging and Transporting Precautions

Use the following grounding precautions when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe containers, such as tubes, bags, or boxes.
- Protect all electrostatic-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic-sensitive parts in their containers until the parts arrive at static-free workstations.
- Place items on a grounded surface before removing items from their containers.
- Always be properly grounded when touching a sensitive component or assembly.

- Store reusable electrostatic-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyors made of antistatic belts and roller bushings. Ensure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

4.6 Workstation Precautions

Use the following grounding precautions at workstations:

- Cover the workstation with approved static-dissipative material (refer to Table 4-2).
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screwdrivers, and vacuums.
- When using fixtures that must directly contact dissipative surfaces, only use fixtures made of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Handle electrostatic-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting or removing connectors or test equipment.

4.7 Grounding Equipment and Methods

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

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

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

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

- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

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

Table 4-1
Typical Electrostatic Voltage Levels

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

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

Table 4-2
Static-Shielding Materials

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

Removal and Replacement Procedures

This chapter provides removal and replacement procedures.

Torx T8 and Phillips P0 screws are removed during the disassembly of the tablet PC and the docking station. There are 36 screws, in 4 different sizes, that must be removed, replaced, and loosened when servicing the tablet PC. There are 17 screws, in 4 different sizes, that must be removed and replaced when servicing the docking station. Make special note of each screw size and location during removal and replacement.

Refer to Appendix C, “Screw Listing,” for detailed information on screw sizes, locations, and usage.

5.1 Serial Number

Report the tablet PC serial number to Compaq when requesting information or ordering spare parts. The serial number is located on the bottom of the tablet PC (Figure 5-1).



Figure 5-1. Serial Number Location

5.2 Disassembly Sequence Chart

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

Table 5-1
Disassembly Sequence Chart

Section	Description	Number of screws removed
5.3	Preparing the tablet PC for disassembly	
	Battery pack	1
	Mini PCI communications board	2
	Memory expansion board	0
	Hard drive	2
5.4	Real time clock (RTC) battery	0
5.5	Display panel assembly	16
5.6	Speaker assembly	0
5.7	Digitizer cable	0
5.8	System board	8
5.9	Fan and heat sink	6
5.10	Modem cable	0
5.11	Switch board	1
5.12	Docking station	17

5.3 Preparing the Tablet PC for Disassembly

Perform the following steps before disassembling the tablet PC:

1. Turn off the tablet PC.
2. Disconnect the AC adapter and all external devices.
3. Remove the battery pack by following these steps:

Battery Pack Spare Part Number Information	
Battery pack, Li ion	302119-001

- a. Turn the tablet panel side down with the power switch and jog dial facing you.

- b. Remove the PM2.0 × 4.0 screw ❶ that secures the battery pack to the tablet PC (Figure 5-2).
- c. Slide the battery release latch ❷ toward the back of the tablet to release the battery pack.
- d. Use the notch in the battery pack to lift the left side of the battery pack up and swing it to the right ❸.
- e. Remove the battery pack.

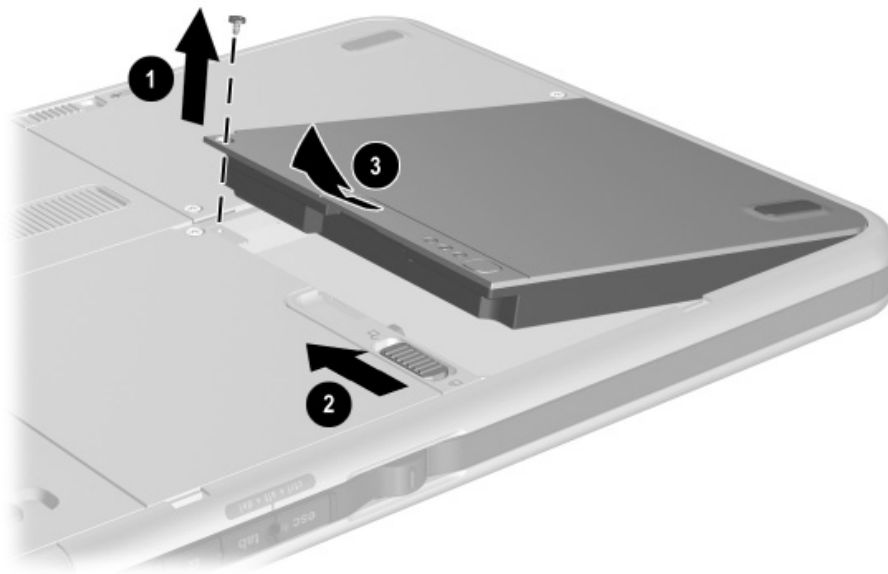


Figure 5-2. Removing the Battery Pack

Reverse the preceding procedures to install the battery pack.

4. Remove the mini PCI communications board by following these steps:
 - a. Turn the tablet panel side down with the power switch and jog dial facing you.
 - b. Remove the two PM2.0 × 4.0 screws ❶ that secure the mini PCI communications/memory expansion slot cover to the tablet PC (Figure 5-3).
 - c. Lift the back edge of the mini PCI communications/memory expansion slot cover up and swing it forward ❷.
 - d. Remove the mini PCI communications/memory expansion slot cover.



The mini PCI communications/memory expansion slot cover is included in the Miscellaneous Plastics/Hardware kit, 310678-001.

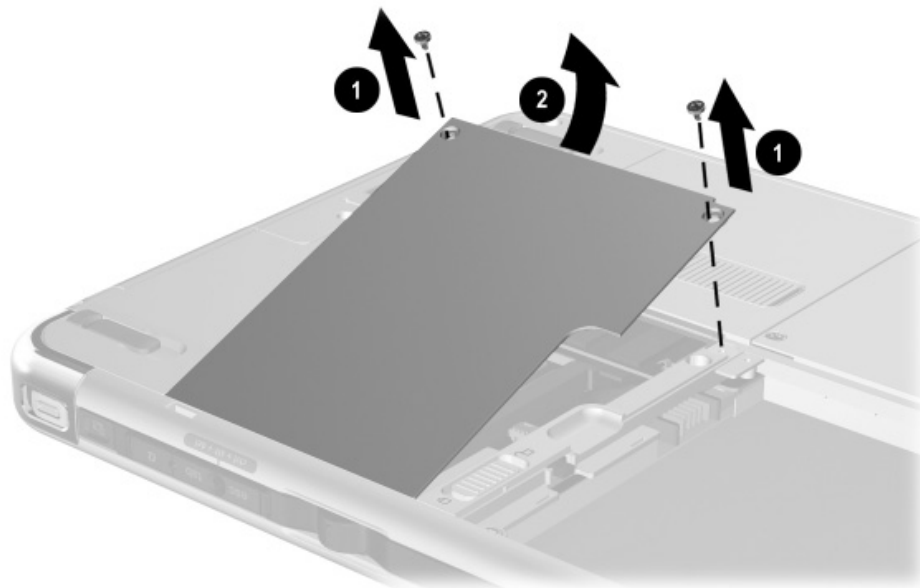


Figure 5-3. Removing the Memory Expansion/Mini PCI Communications Compartment Cover

- e. Disconnect the modem cable ❶ and the two antenna cables ❷ from the mini PCI communications board (Figure 5-4).
- f. Spread the retaining tabs ❸ securing the mini PCI communications board to the system board.
- g. The mini PCI communications board will rise up at a 45-degree angle.
- h. Pull the mini PCI communications board away from the connector at a 45-degree angle ❹.

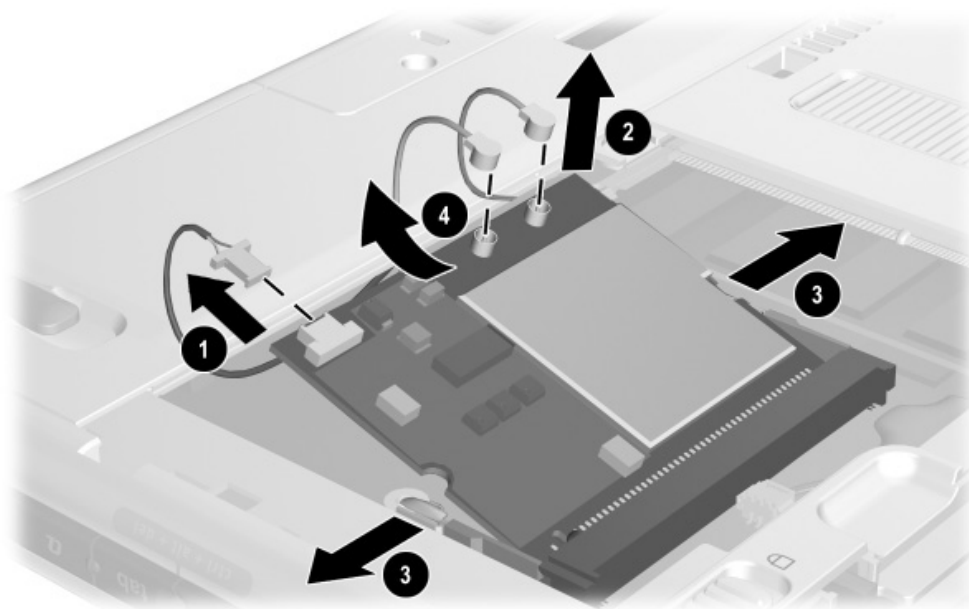


Figure 5-4. Removing the Mini PCI Communications Board

**Mini PCI Communications Board
Spare Part Number Information**

Mini PCI Type III wireless local area network (LAN) card	310670-001
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Reverse the preceding procedures to install the mini PCI communications board.

5. Remove the memory expansion board by following these steps:
 - a. Remove the mini PCI communications/memory expansion slot cover.
 - b. Spread the retaining tabs ❶ securing the memory expansion board to the system board (Figure 5-5).
 - c. The memory expansion board will rise up at a 45-degree angle.
 - d. Pull the memory expansion board away from the connector at a 45-degree angle ❷.

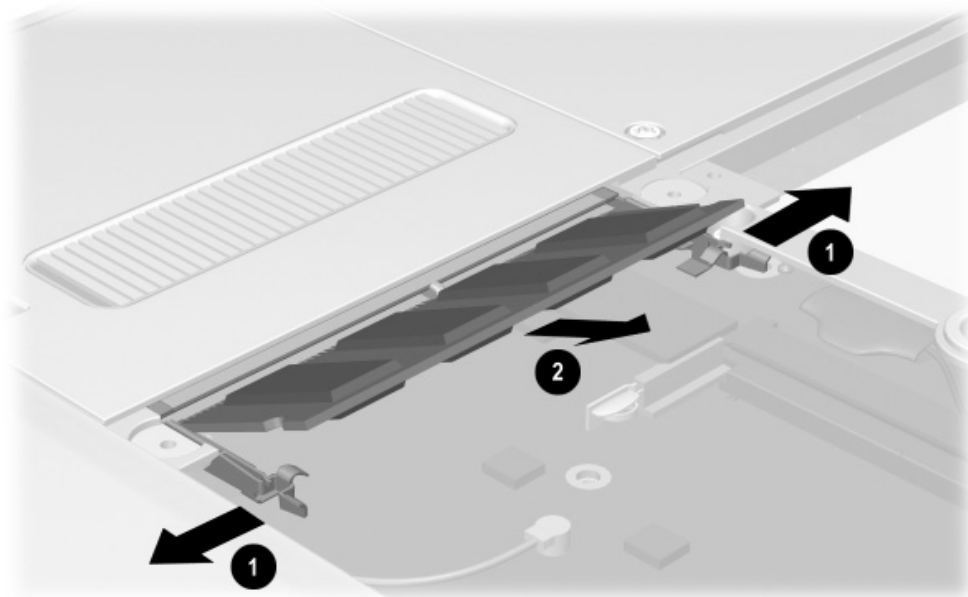


Figure 5-5. Removing the Memory Expansion Board

Memory Expansion Board Spare Part Number Information

256 MB DDR memory expansion board

	310677-001
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Reverse the preceding procedures to install the memory expansion board.

6. Remove the hard drive by following these steps:
 - a. Turn the tablet PC panel side down with the power switch and jog dial facing you.
 - b. Remove the two PM2.0 × 4.0 screws ❶ that secure the hard drive cover to the tablet PC (Figure 5-6).
 - c. Lift the front edge of the cover up and swing the cover back ❷.
 - d. Remove the hard drive cover.



The hard drive cover is included in the Miscellaneous Plastics/Hardware kit, spare part number 310678-001.

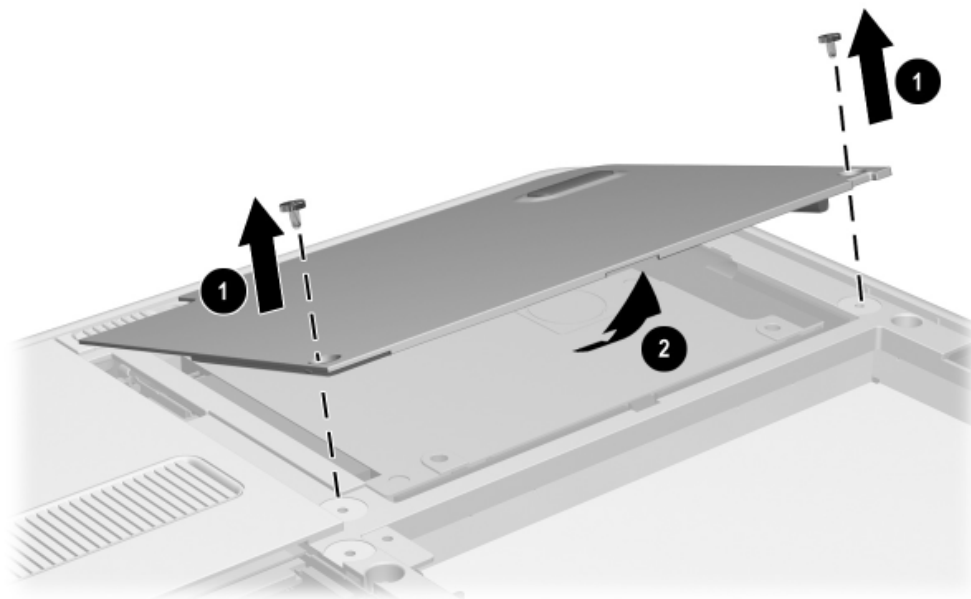


Figure 5-6. Removing the Hard Drive Cover

- e. Use the tab ❶ on the right side of the hard drive to slide the drive to the right ❷ and disconnect it from the system board (Figure 5-7).
- f. Remove the hard drive from the tablet ❸.

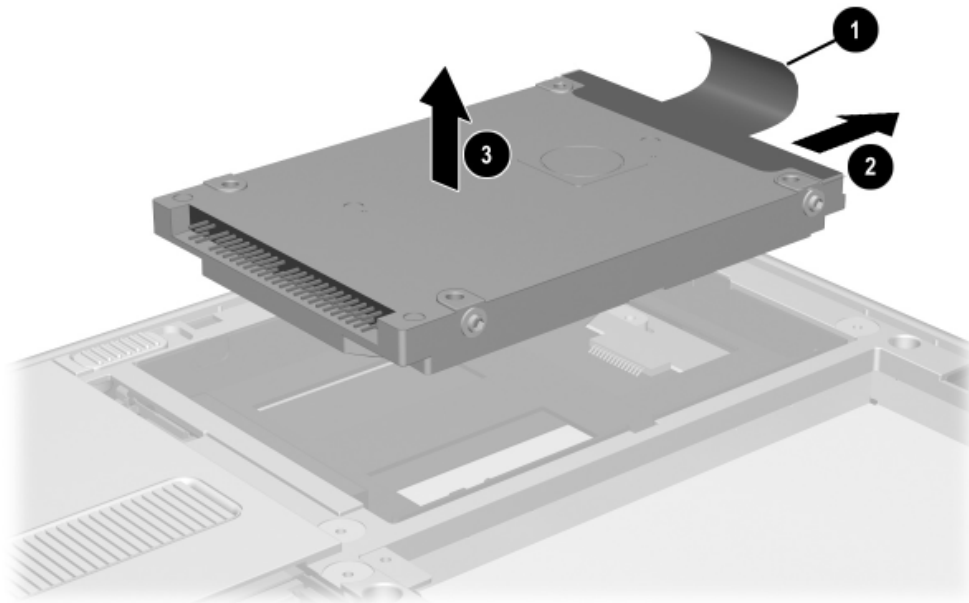


Figure 5-7. Removing the Hard Drive

Reverse the preceding procedures to install the hard drive.

Hard Drive Spare Part Number Information	
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40 GB	311240-001
30 GB	310668-001

5.4 Real Time Clock (RTC) Battery

RTC Battery Spare Part Number Information

Disk cell RTC battery

310675-001

Perform the following steps to remove the RTC battery:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the mini PCI communications/memory expansion slot cover.
3. Turn the tablet PC panel side down with the power switch and jog dial facing you.
4. Disconnect the RTC battery cable from the system board ❶ (Figure 5-8).
5. Remove the RTC battery from the tablet ❷.

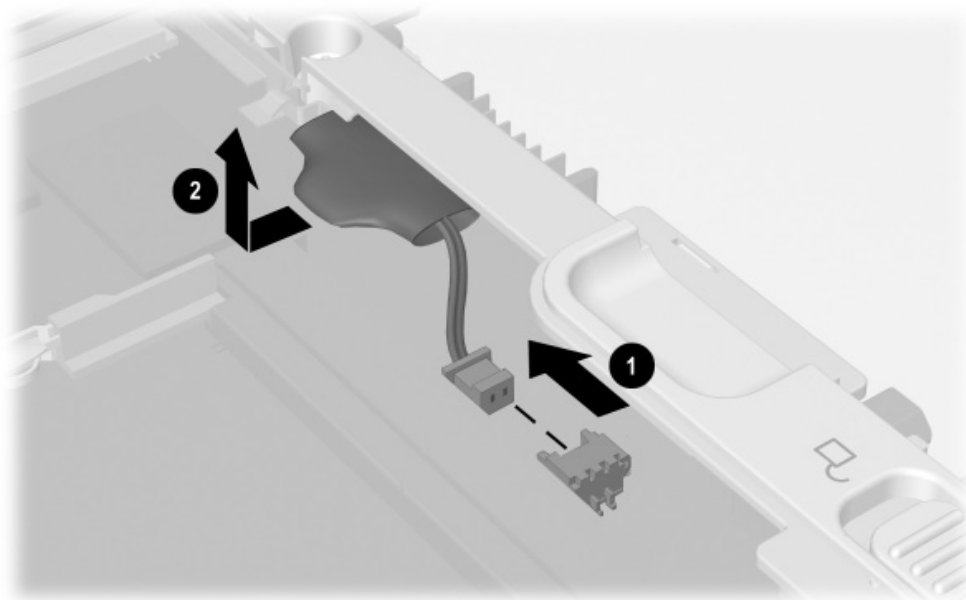


Figure 5-8. Removing the RTC Battery

Reverse the preceding procedures to install the RTC battery.

5.5 Display Panel Assembly

Display Panel Assembly Components Spare Part Number Information

Display panel assembly	311062-001
Display bezel with inverter	310667-001
Bridge battery	310676-001
Digitizer	310666-001

Perform the following steps to remove and disassemble the display panel assembly:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Turn the tablet PC panel side down with the power switch and jog dial facing you.

3. Remove the seven TM2.5 × 7.0 screws ❶ that secure the display panel assembly to the tablet PC (Figure 5-9).
4. Open the bottom tilt foot ❷ and remove the TM2.5 × 7.0 screw ❸ that secures the display panel assembly to the tablet PC.

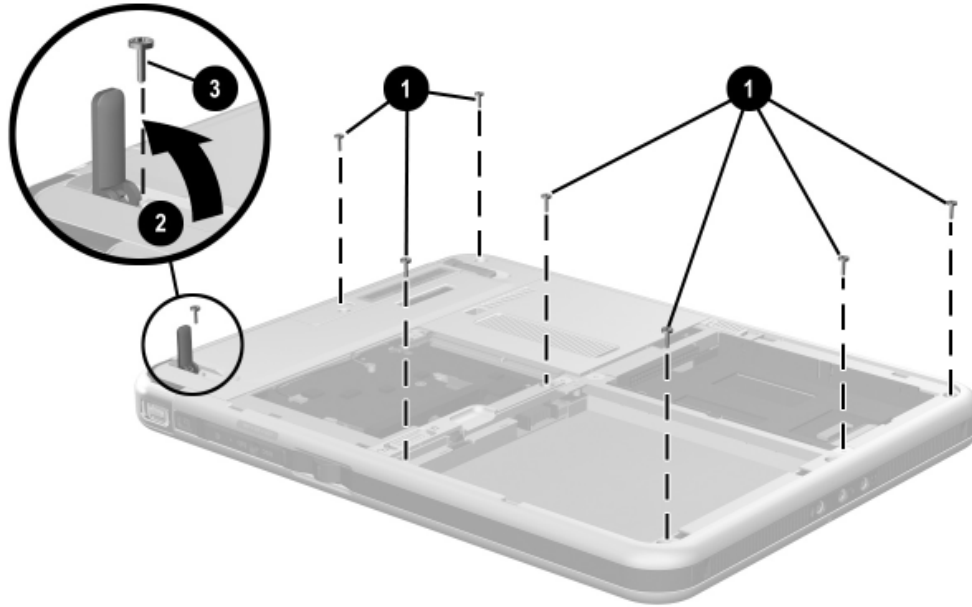


Figure 5-9. Removing the Display Panel Assembly Screws

5. Slide and hold the keyboard release latch ❶ to the right (Figure 5-10).
6. Remove the TM2.5 × 7.0 screw ❷ that secures the display panel assembly to the tablet PC.
7. Disconnect the digitizer cable ❸ in the hard drive bay.

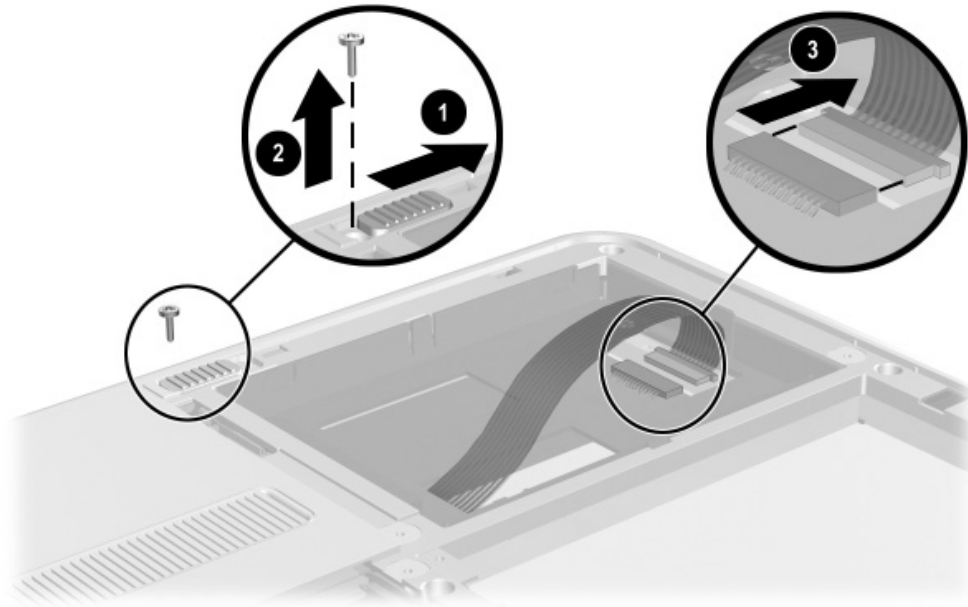


Figure 5-10. Removing the Display Panel Assembly Screw and Disconnecting the Digitizer Cable

8. Turn the tablet PC panel side up with the power switch and jog dial facing you.
9. Lift and hold the front edge of the base enclosure ❶ until it rests at a 45-degree angle (Figure 5-11).
10. Release the ZIF connector ❷ to which the inverter cable is attached and disconnect the cable ❸.
11. Lift the base enclosure straight up ❹ to remove it from the display panel assembly.

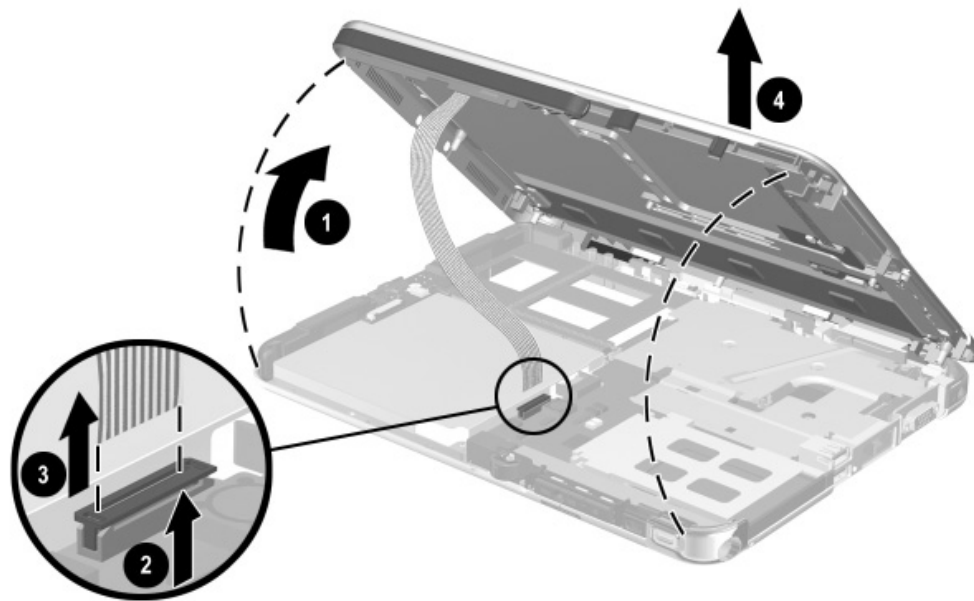


Figure 5-11. Removing the Display Panel Assembly

12. Position the display panel assembly so the display panel is facing down and the inverter and bridge battery are facing you.
13. Remove the two PM2.0 × 5.0 screws ❶ that secure the display panel bracket to the display panel assembly (Figure 5-12).
14. Remove the display panel bracket ❷.

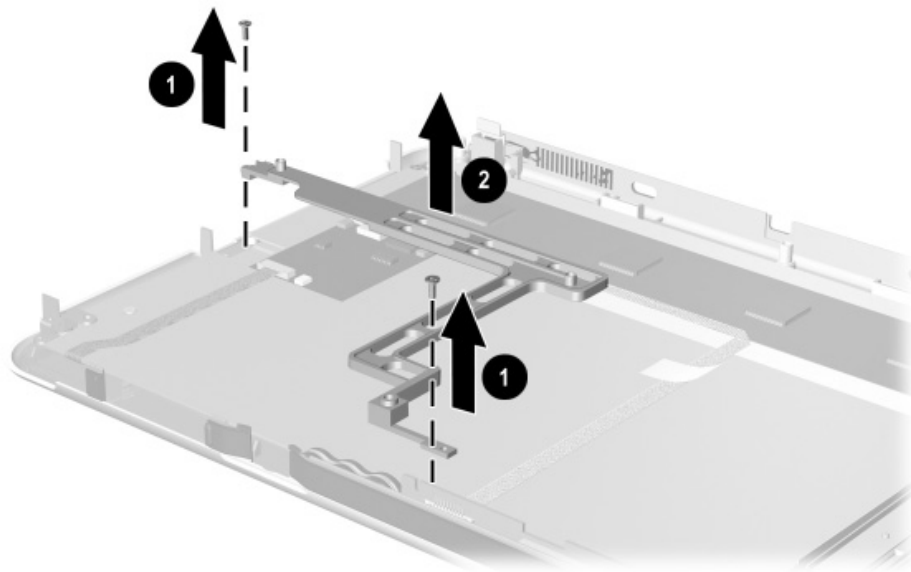


Figure 5-12. Removing the Display Panel Bracket

15. Disconnect the inverter board cable ❶ from the inverter board (Figure 5-13).
16. Release the ZIF connector ❷ to which the inverter board cable is attached and disconnect the cable ❸.
17. Remove the tape ❹ that secures the inverter board cable to the back of the display panel.

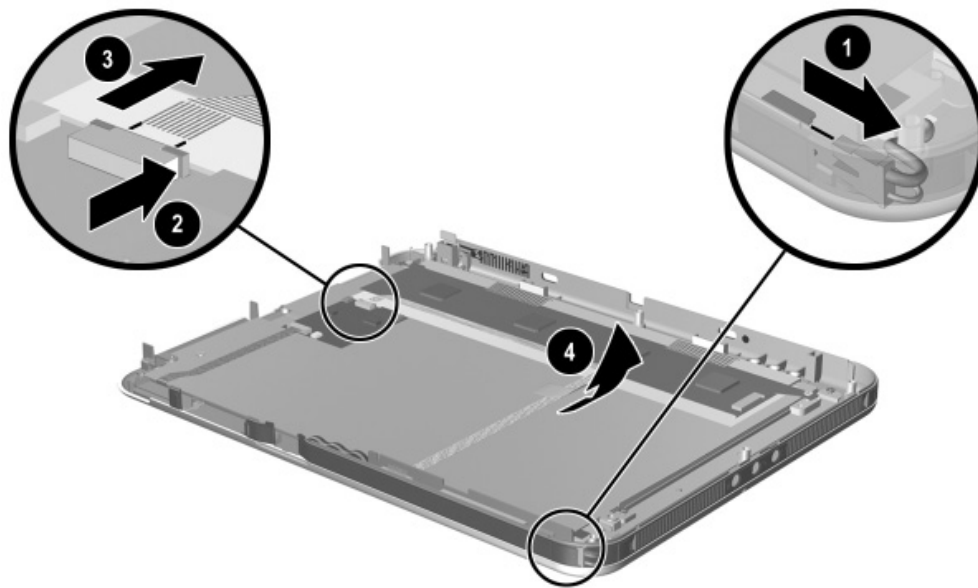


Figure 5-13. Disconnecting the Display Panel Cables

18. Remove the four PM2.0 × 4.0 screws ❶ that secure the display panel to the display bezel (Figure 5-14).
19. Swing the two flex cables to the left ❷.
20. Lift the front edge of the display panel ❸ and slide it forward ❹ to remove it from the display bezel.

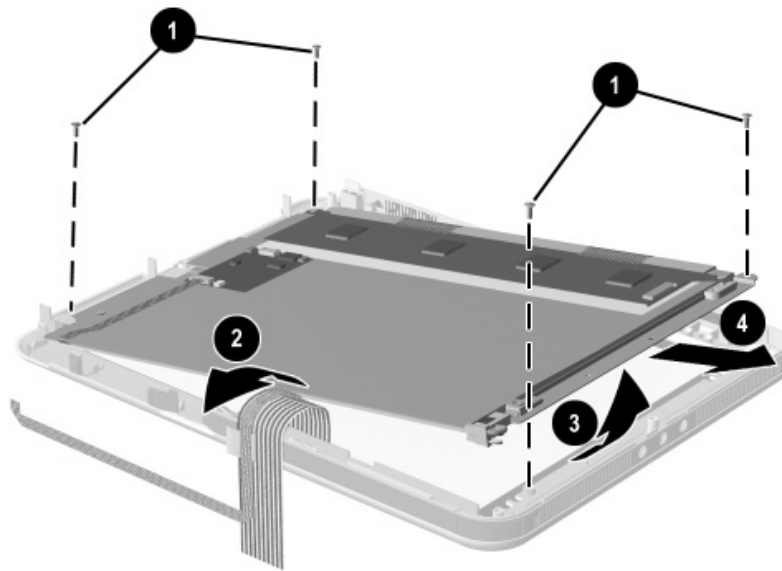


Figure 5-14. Removing the Display Panel

21. Remove the PM2.0 × 5.0 screw ❶ that secures the digitizer to the display panel assembly (Figure 5-15).
22. Lift the front edge of the digitizer ❷ and slide it out ❸ of the display panel.

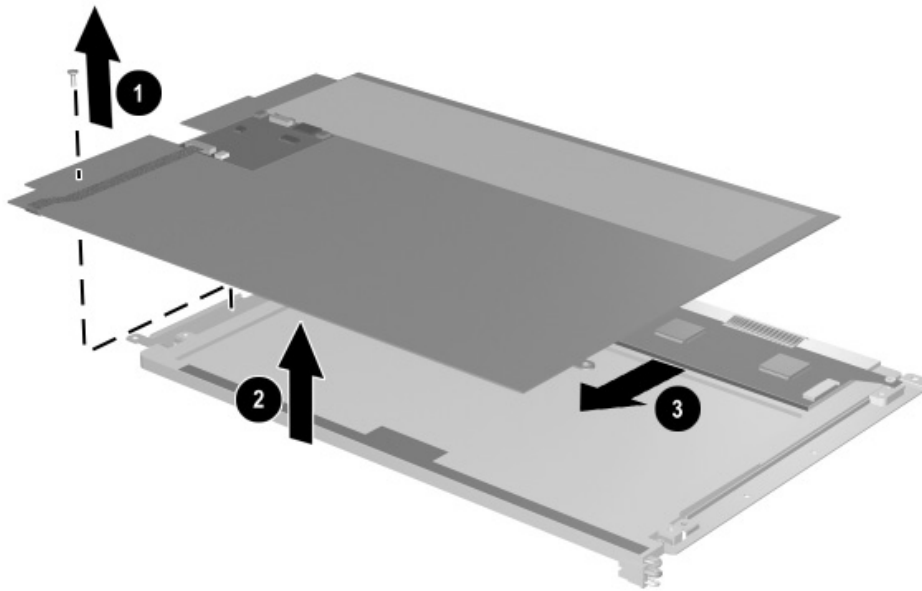


Figure 5-15. Removing the Digitizer

23. Disconnect the bridge battery cable ❶ from the panel inverter board (Figure 5-16).
24. Remove the bridge battery ❷ from the panel bezel.

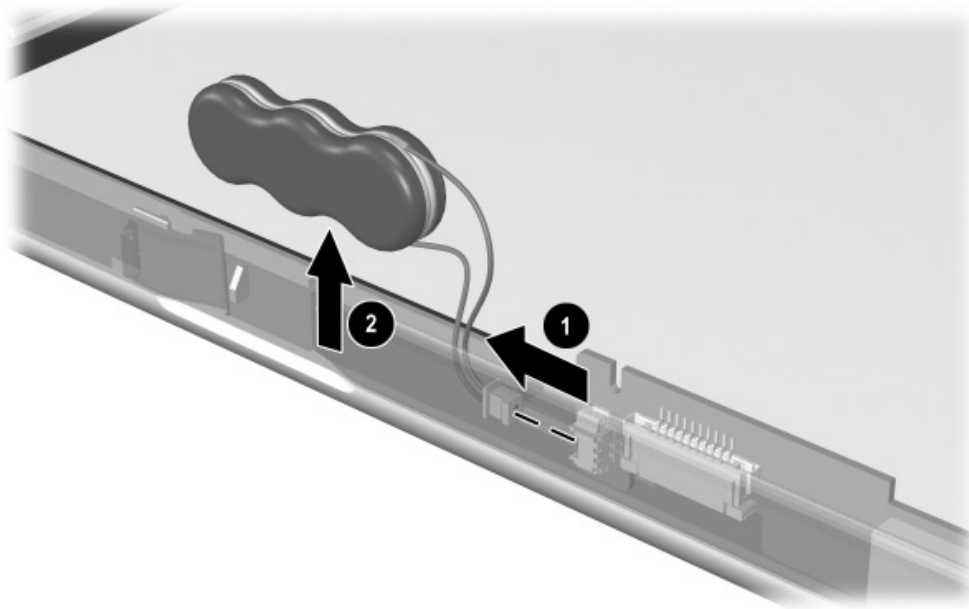


Figure 5-16. Removing the Bridge Battery

Reverse the preceding procedures to reassemble and install the display panel assembly.

5.6 Speaker Assembly

Speaker Assembly Spare Part Number Information

Speaker assembly and audio board

310679-001

Perform the following steps to remove the speaker assembly:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).
3. Turn the tablet PC base enclosure top side up with the power switch and jog dial facing you.
4. Release the ZIF connector ❶ to which the speaker cable is attached and disconnect the cable ❷ from the speaker assembly (Figure 5-17).
5. Remove the speaker assembly ❸ from the base enclosure.

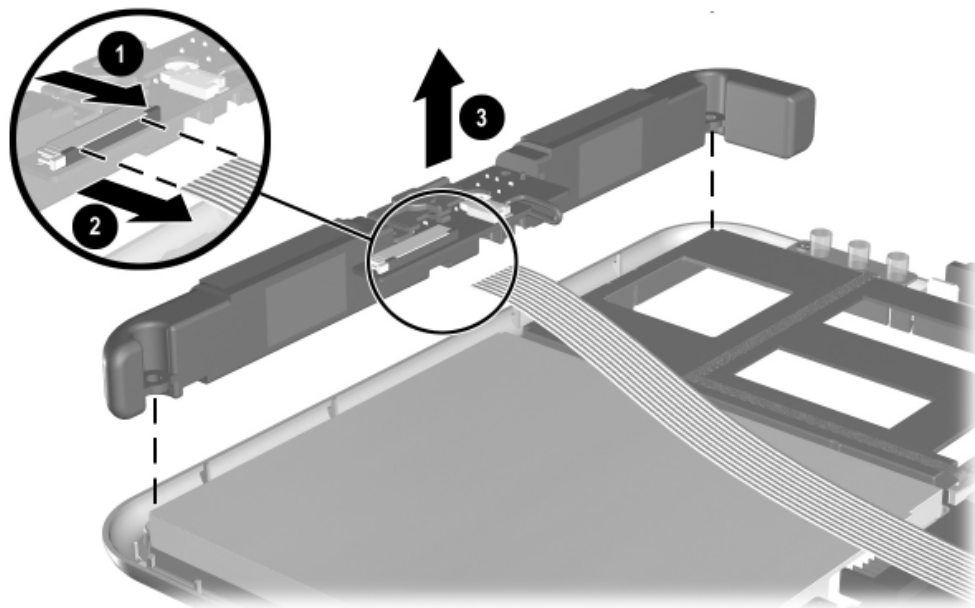


Figure 5-17. Removing the Speaker Assembly

6. Release the system board ZIF connector ❶ to which the speaker cable is attached and disconnect the cable ❷ from the system board (Figure 5-18).
7. Remove the tape ❸ that secures the speaker cable to the PC Card assembly.
8. Remove the speaker cable ❹.



The speaker cable is included in the Miscellaneous Cable Kit, spare part number 310673-001.

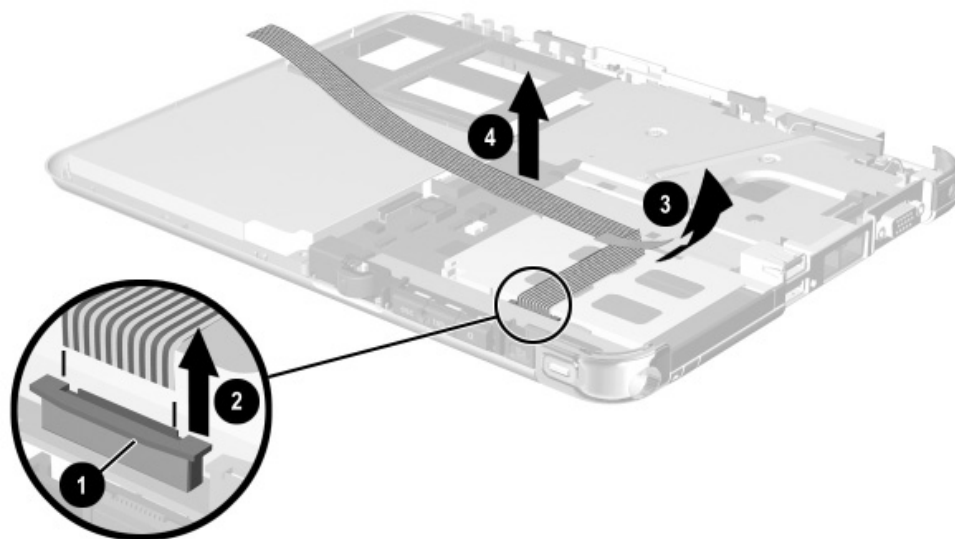


Figure 5-18. Removing the Speaker Cable

Reverse the preceding procedures to install the speaker assembly.

5.7 Digitizer Cable



The digitizer cable is included in the Miscellaneous Cable Kit, spare part number 310673-001.

Perform the following steps to remove the digitizer cable:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).
3. Disconnect the digitizer cable ❶ from the system board (Figure 5-19).
4. Remove the digitizer cable from the clips in the heat sink ❷.
5. Remove the digitizer cable from the base enclosure ❸.

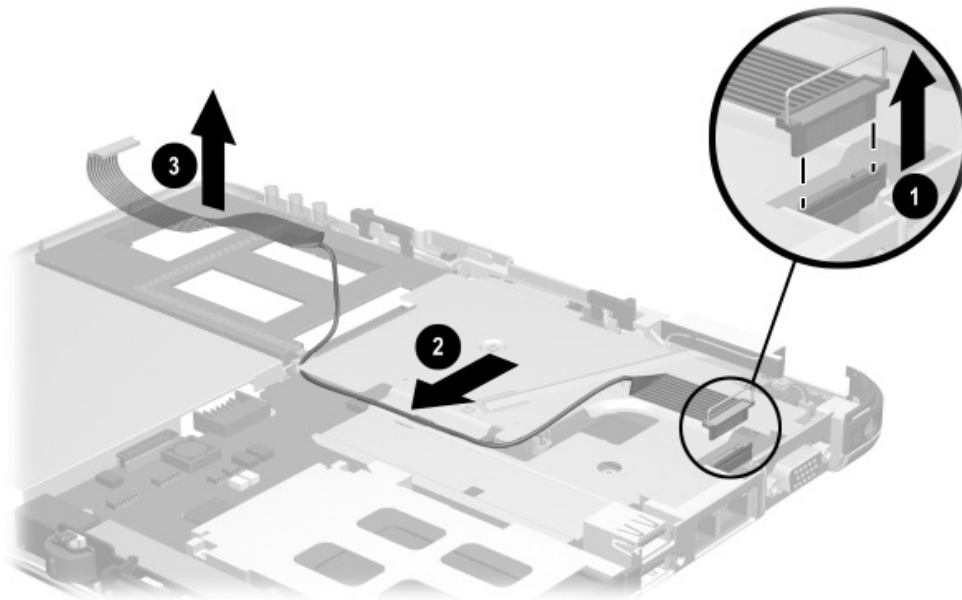


Figure 5-19. Removing the Digitizer Cable

Reverse the preceding procedures to install the digitizer cable.

5.8 System Board

System Board Spare Part Number Information	
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System board with fan and heat sink (includes 256 MB memory)	310664-001
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Perform the following steps to remove the system board:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).

3. Position the tablet PC base enclosure so the heat sink grille faces you.
4. Remove the four TM2.5 × 7.0 screws ❶ that secure the keyboard release assembly to the base enclosure (Figure 5-20).
5. Lift the keyboard release assembly straight up ❷ and remove it from the base enclosure.



The keyboard release assembly is included in the Miscellaneous Plastics/Hardware kit, 310678-001.

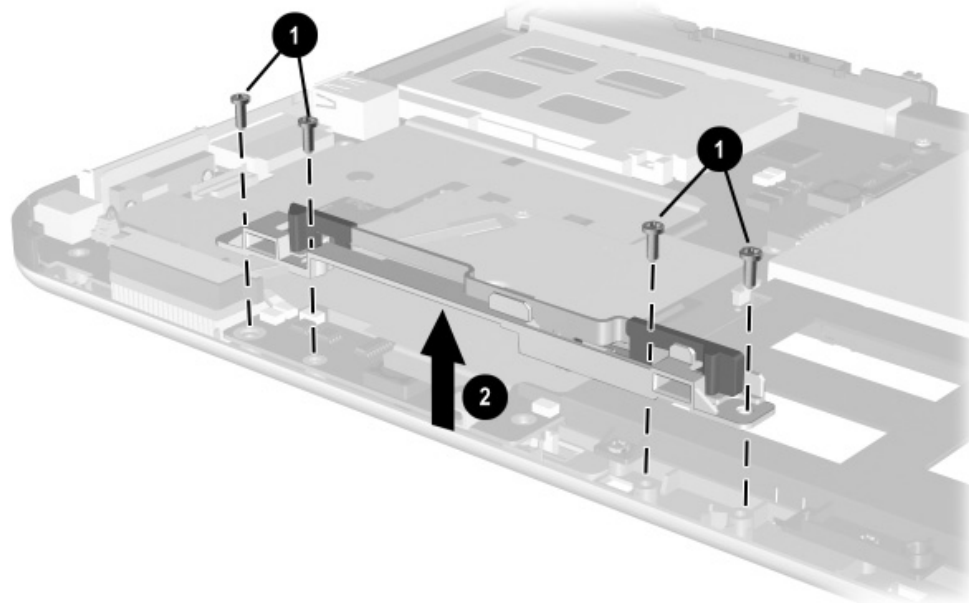


Figure 5-20. Removing the Keyboard Release Assembly



When installing the keyboard release assembly, make sure the actuator tab **1** in the base enclosure is in the leftmost position. After this tab is positioned properly, install the keyboard release assembly **2** and screws **3** (Figure 5-21).

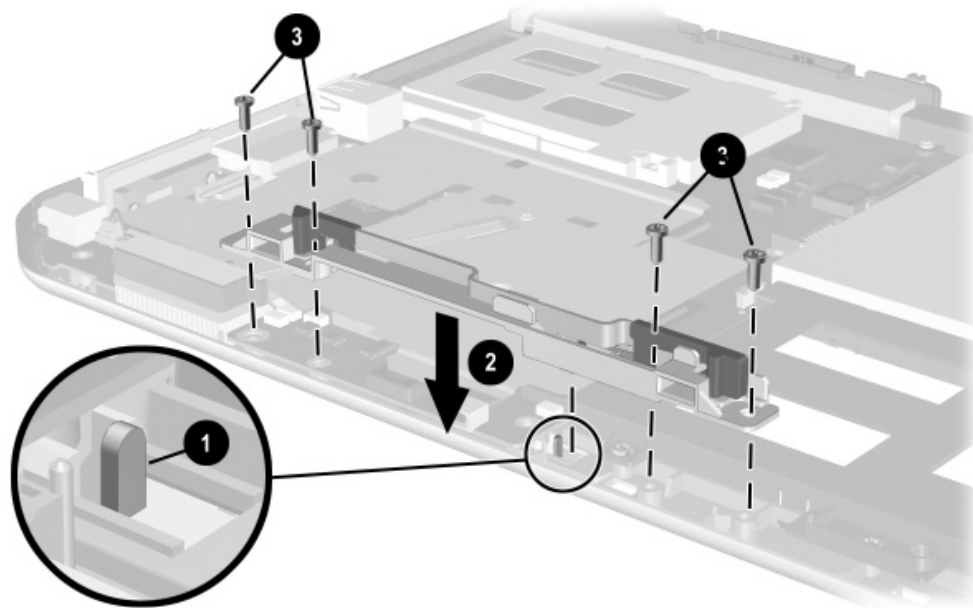


Figure 5-21. Installing the Keyboard Release Assembly

6. Position the base enclosure so the PC Card slot is facing you.
7. Press the PC Card release button ❶ to release it from the base enclosure. Press the button a second time to eject the contents of the PC Card slot (Figure 5-22).
8. Remove the PC Card slot device ❷ from the PC Card slot.
9. Press the CompactFlash card release button ❸ to release it from the base enclosure. Press the button a second time to eject the contents of the CompactFlash card slot.
10. Remove the CompactFlash card slot device ❹ from the card slot.



The PC Card slot space saver ❷ and CompactFlash slot space saver ❹ are included in the Miscellaneous Plastics/Hardware kit, spare part number 310678-001.

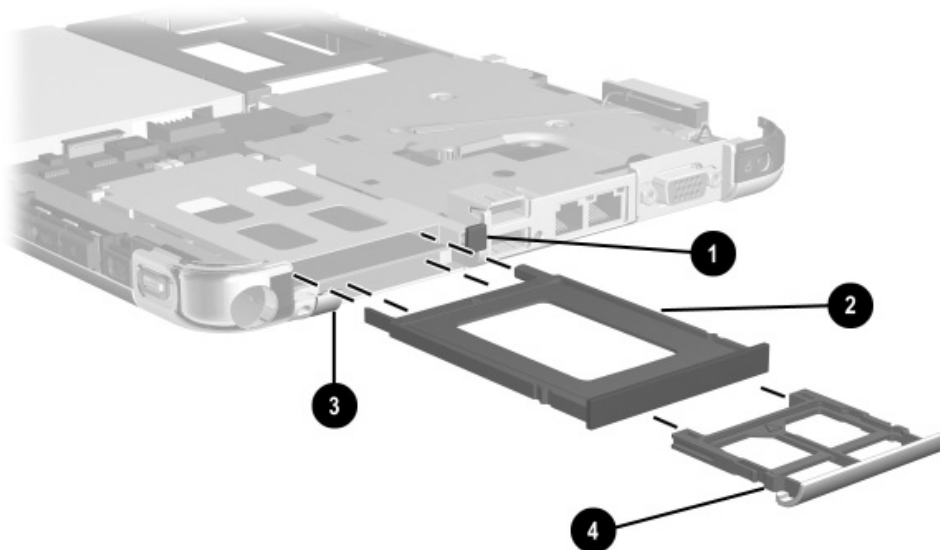


Figure 5-22. Removing the PC Card and CompactFlash Card Slot Devices

11. Release the ZIF connector ❶ to which the switch board cable is attached and disconnect the cable ❷ from the system board (Figure 5-23).
12. Release the ZIF connector ❸ to which the switch board cable is attached and disconnect the cable ❹ from the switch board.



The switch board cable is included in the Miscellaneous Cable Kit, spare part number 310673-001.

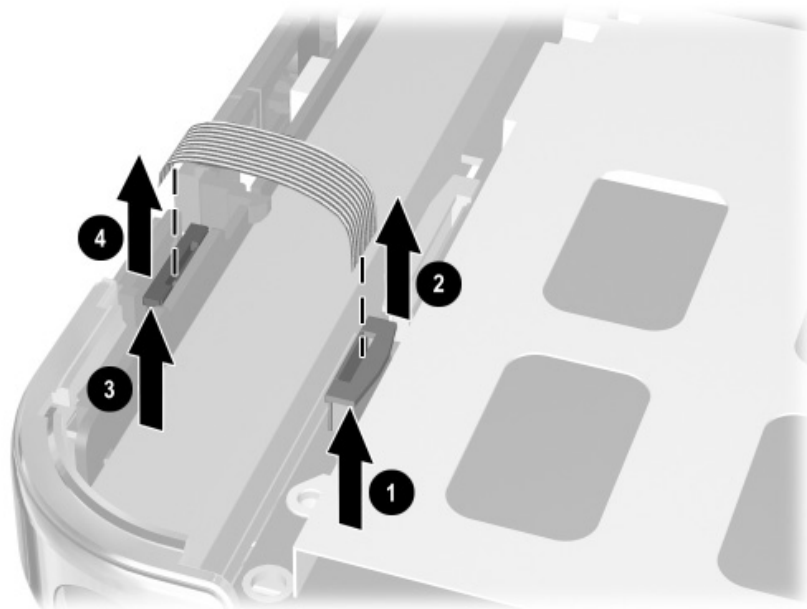


Figure 5-23. Removing the Switch Board Cable

13. Release the ZIF connector ❶ to which the LED board cable is attached and disconnect the LED board cable ❷ from the system board (Figure 5-24).
14. Remove the four PM2.0 × 5.0 screws that secure the system board to the base enclosure. The screws are located in the following locations:
 - ☐ Next to the pen holder spring clip ❸
 - ☐ Directly behind the USB connectors ❹
 - ☐ Directly behind the external monitor connector ❺
 - ☐ Left side of the heat sink grille ❻

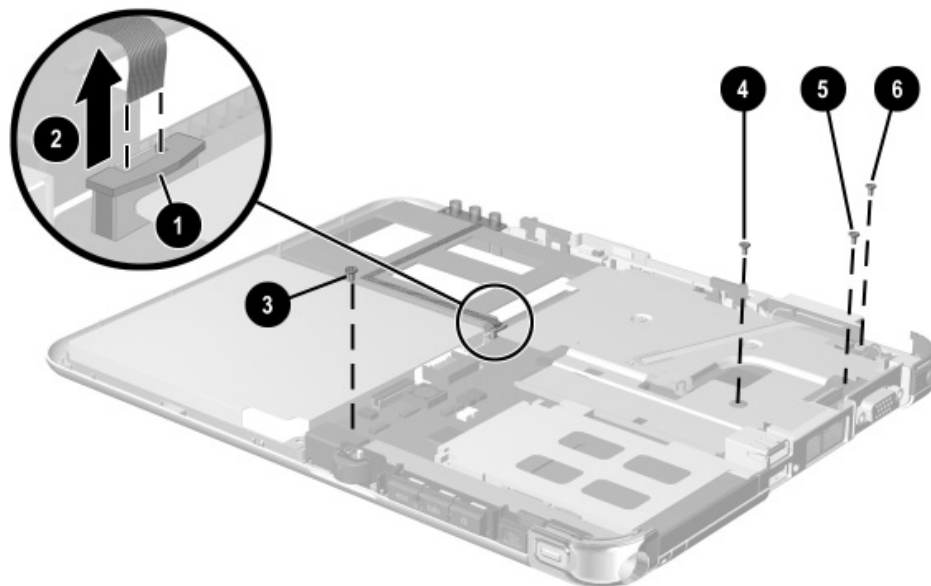


Figure 5-24. Removing the System Board Screws

15. Position the base enclosure so the heat sink grille faces you.
16. Use the heat sink grille ❶ to lift the right side of the system board ❷ until it rests at a 45-degree angle (Figure 5-25).
17. Slide the system board away from the base enclosure at an angle ❸ to remove it.

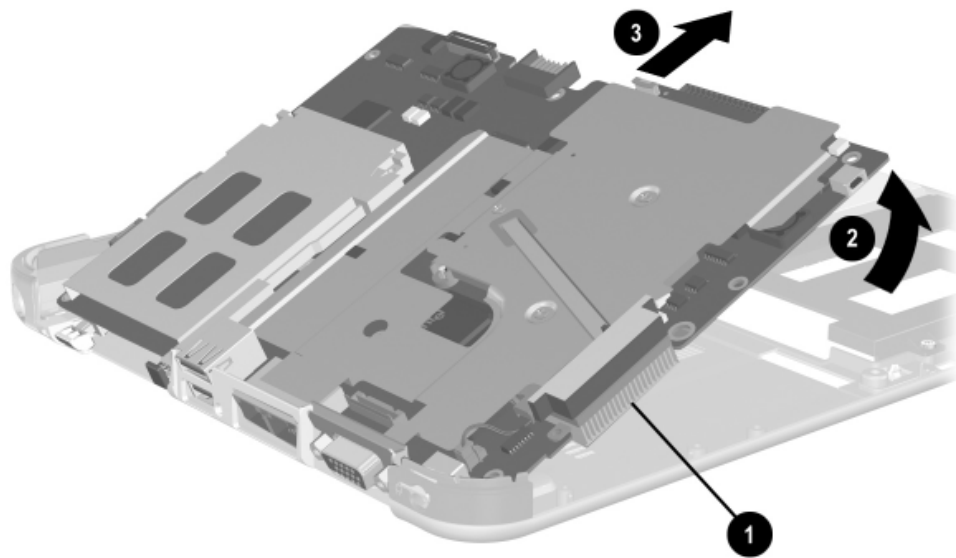


Figure 5-25. Removing the System Board

Reverse the preceding procedures to install the system board.

5.9 Fan and Heat Sink

Fan and Heat Sink Spare Part Number Information

Fan and Heat Sink

310665-001



The fan and heat sink are included with the system board. A fan and heat sink can also be ordered using spare part number 310665-001.

Perform the following steps to remove the fan and heat sink:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).
3. Remove the system board (Section 5.8).

4. Remove the three PM2.0 × 3.5 screws ❶ that secure the EMI shield to the base enclosure (Figure 5-26).
5. Remove the shield ❷.
6. Disconnect the fan cable ❸ from the system board.

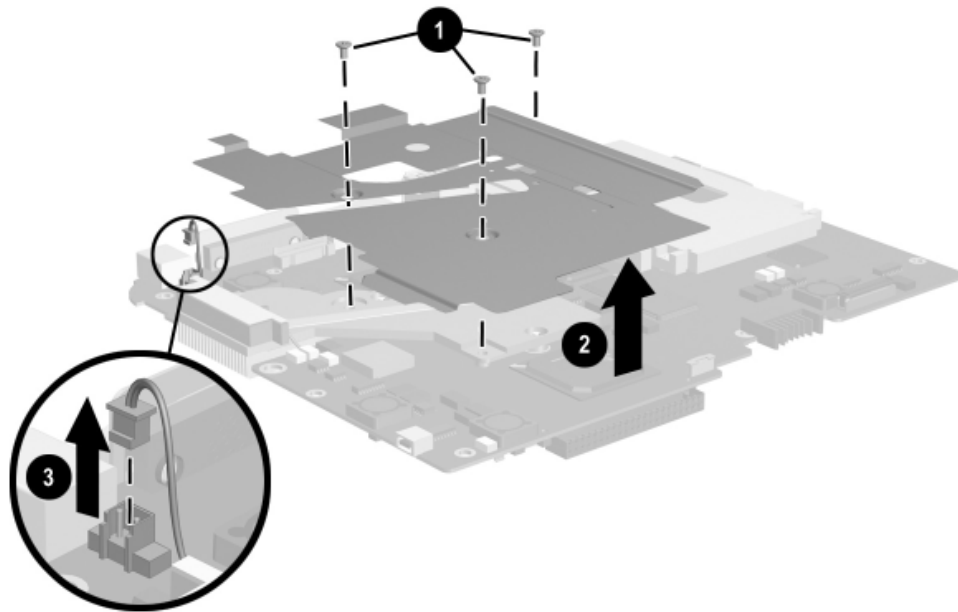


Figure 5-26. Removing the EMI Shield

7. Turn the system board bottom side up with the heat sink grille facing you.
8. Remove the mylar system board shield ❶ (Figure 5-27).
9. Remove the three PM2.0 × 5.0 screws ❷ that secure the fan and heat sink to the system board.
10. Lift the system board straight up ❸. The fan and heat sink ❹ will remain resting on the work surface.

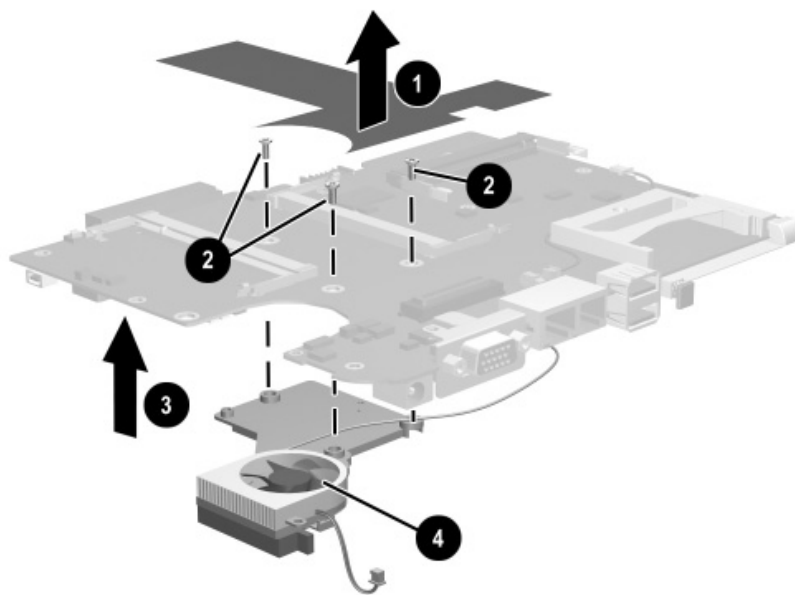


Figure 5-27. Removing the Fan and Heat Sink

Reverse the preceding procedures to install the EMI shield, fan, and heat sink.

5.10 Modem Cable



The modem cable is included in the Miscellaneous Cable Kit, spare part number 310673-001.

Perform the following steps to remove the modem cable:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).
3. Remove the system board (Section 5.8).
4. Position the system board with the fan side facing up and the heat sink grille facing you.
5. Disconnect the modem cable ❶ from the system board (Figure 5-28).
6. Remove the modem cable ❷.

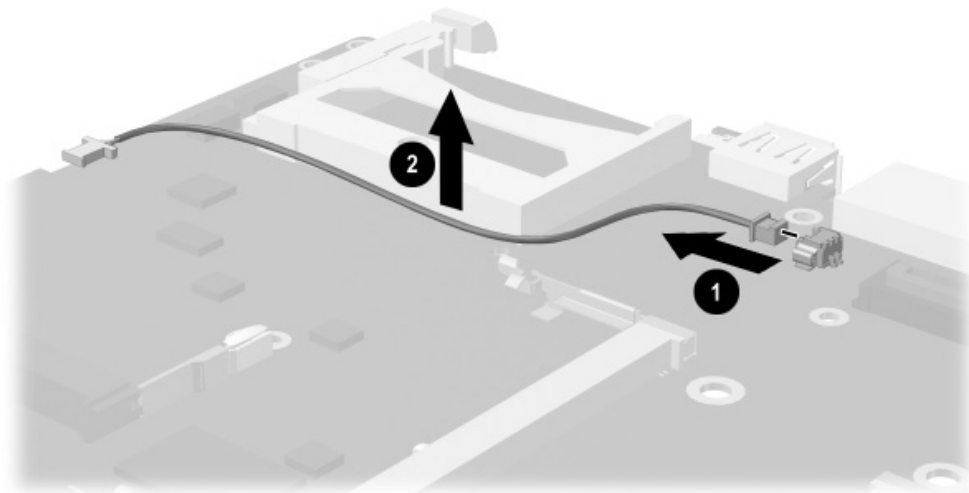


Figure 5-28. Removing the Modem Cable

Reverse the preceding procedures to install the modem cable.

5.11 Switch Board

Switch Board Spare Part Number Information	
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Switch board	310672-001
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Perform the following steps to remove the switch board:

1. Prepare the tablet PC for disassembly (Section 5.3).
2. Remove the display panel assembly (Section 5.5).
3. Remove the system board (Section 5.8).
4. Position the tablet PC base enclosure so the PC Card slot faces you.

5. Route the wireless LAN antenna cable ❶ out of the clips in the pen holder (Figure 5-29).
6. Remove the PM2.0 × 3.5 screw ❷ that secures the switch board to the base enclosure.
7. Remove the switch board ❸.

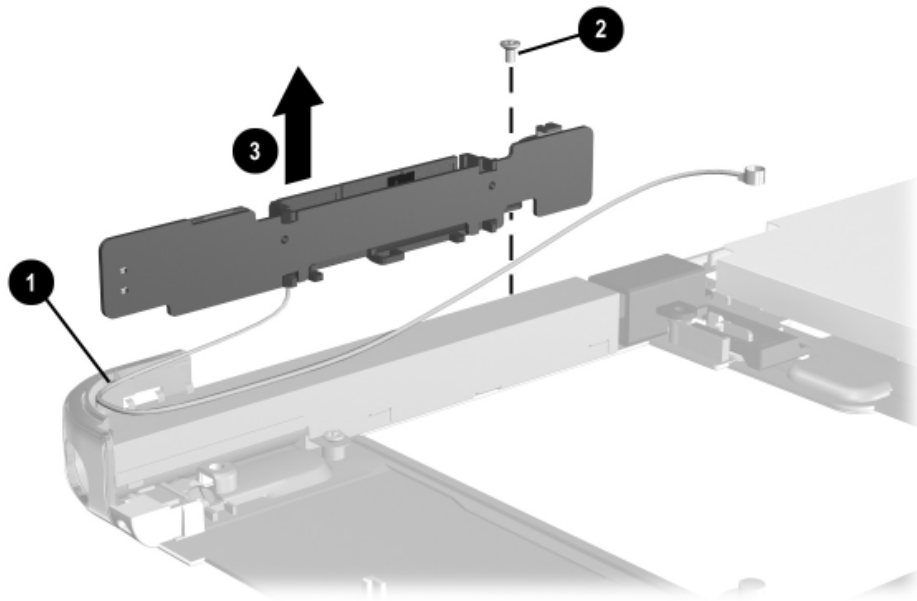


Figure 5-29. Removing the Switch Board

Reverse the preceding procedures to install the switch board.

5.12 Docking Station

Docking Station Components Spare Part Number Information

Docking station	311063-001
Docking stand and pivot arm	311189-001
Top case	311190-001
Board assembly	311192-001
Bottom case	311191-001

Perform the following steps to disassemble the docking station:

1. Position the docking station bottom side up, resting on the docking stand, with the bottom case facing you.
2. Remove the four TM2.5 × 7.0 screws that secure the top case to the bottom case (Figure 5-30).



Figure 5-30. Removing the Top Case Screws

3. Position the docking station top side up with the rear panel facing you and the docking stand swung all the way back.
4. Lift the left rear edge of the top case ❶ until the rear edge of the case ❷ disengages from the bottom case (Figure 5-31).
5. Remove the top case ❸.

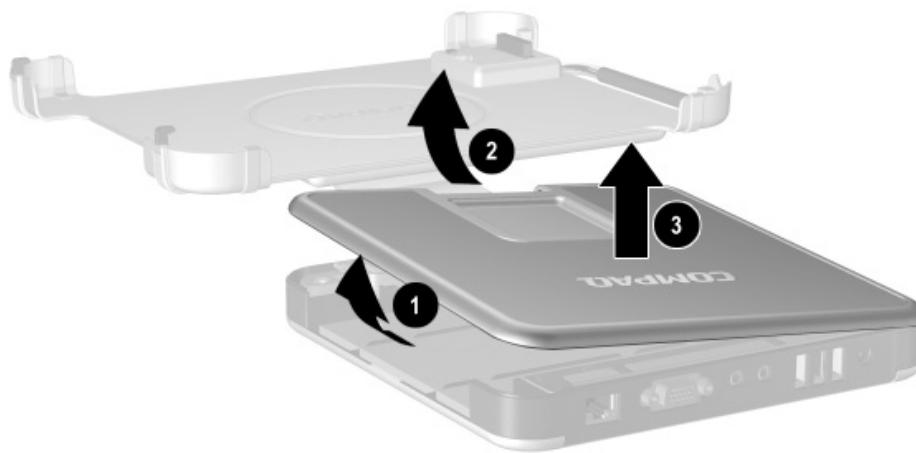


Figure 5-31. Removing the Top Case

6. Disconnect the docking stand cable ❶ from the board assembly ❷ (Figure 5-32).

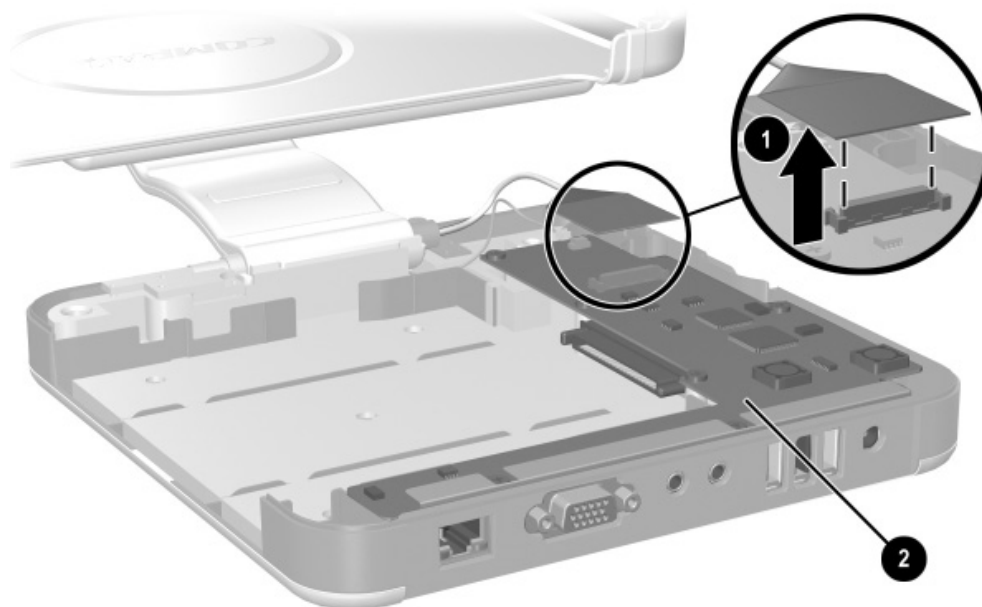


Figure 5-32. Disconnecting the Docking Stand Cable



Make sure the docking stand and pivot arm are supported before removing the following screws. The docking stand and pivot arm can fall if not supported.

7. Remove the following screws:

- ❑ Two PM2.5 × 5.0 screws ❶ that secure the cable bracket to the bottom case (Figure 5-33)
- ❑ One PM2.5 × 12.0 screw ❷ that secures the pivot arm hinge to the bottom case
- ❑ Three PM2.5 × 6.0 screws ❸ that secure the pivot arm hinge to the bottom case

8. Remove the docking stand and pivot arm ❹.

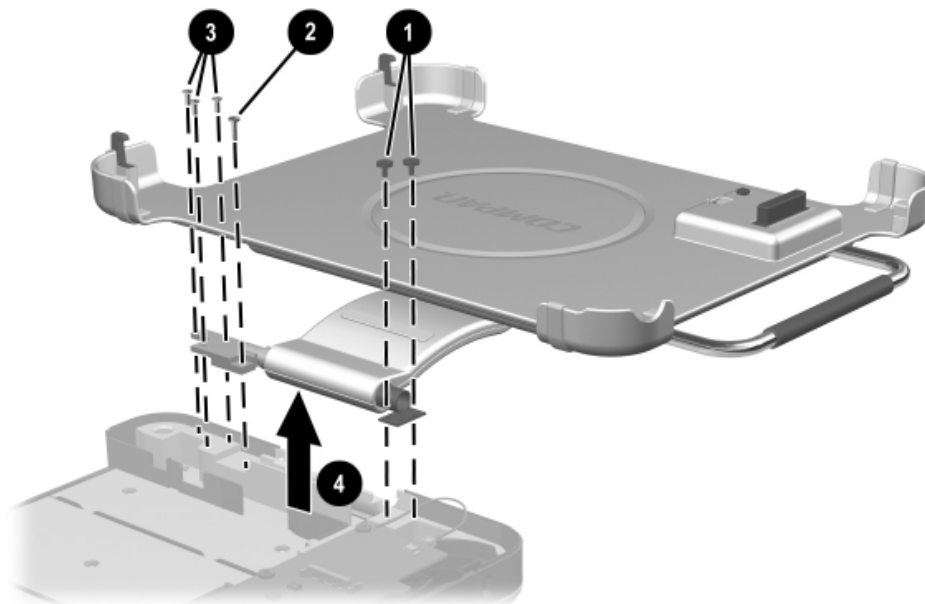


Figure 5-33. Removing the Docking Stand and Pivot Arm

9. Disconnect the switch cable ❶ from the board assembly (Figure 5-34).
10. Remove the seven PM2.5 × 5.0 screws ❷ that secure the board assembly to the bottom case.

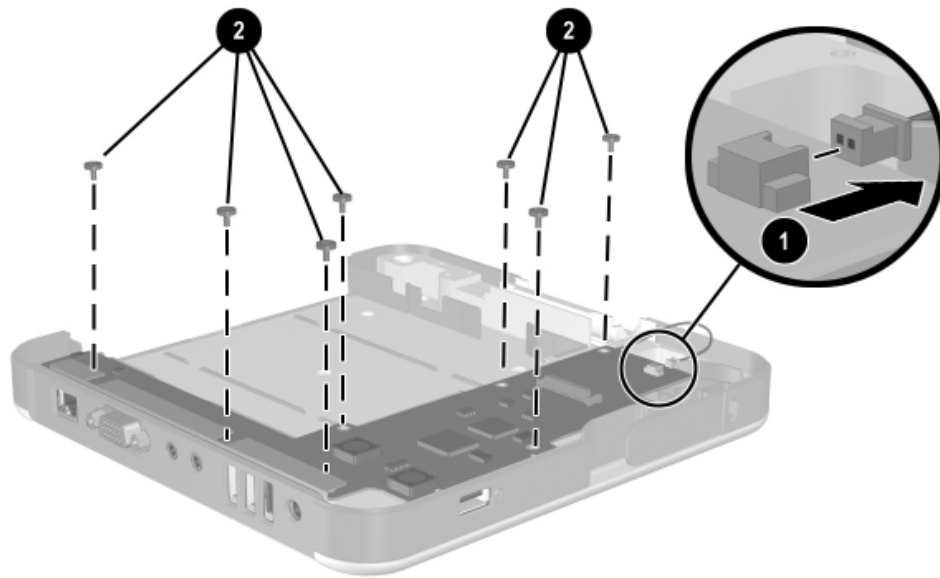


Figure 5-34. Removing the Board Assembly Screws

11. Lift the front edge of the board assembly ❶ until it rests at an angle (Figure 5-35).
12. Slide the board assembly forward ❷ until the rear panel connectors clear the bottom case.
13. Lift the board assembly straight up ❸ to remove it from the bottom case.

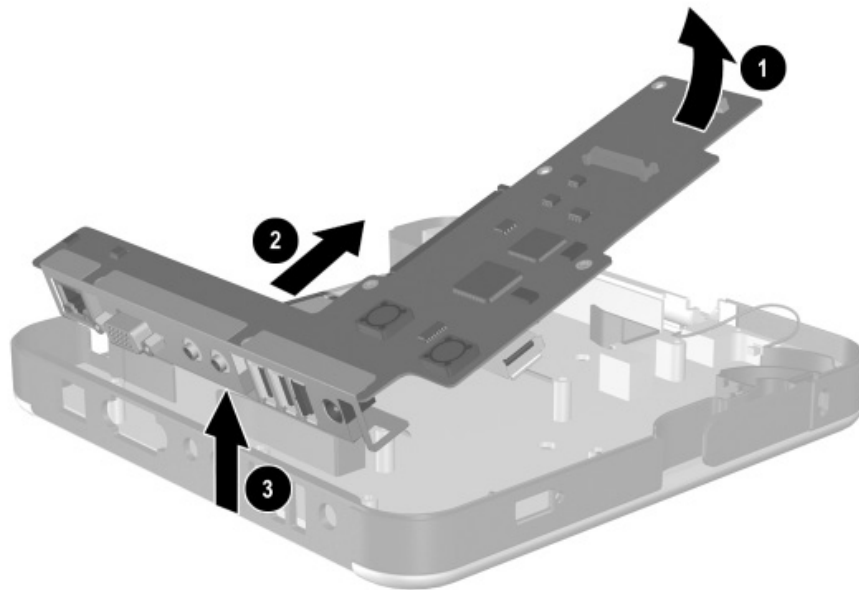


Figure 5-35. Removing the Board Assembly

Reverse the preceding procedures to assemble the docking station.

Specifications

This chapter provides physical and performance specifications.

Table 6-1
Tablet PC

Dimensions		
Height	27.4 cm	10.8 in
Width	21.6 cm	8.5 in
Depth	2.0 cm	.8 in
Weight (varies by configuration)		
Tablet PC only	1.4 kg	3.1 lb
Tablet PC with keyboard	1.8 kg	4.0 lb
Stand-alone power requirements		
Nominal operating voltage	14.8 VDC	
Maximum operating power	40.0 W	
Peak operating power	38.0 W	
Temperature		
Operating	10° to 35° C	50° to 95° F
Nonoperating	-20° to 60° C	-4° to 140° F
Relative humidity (noncondensing)		
Operating	10% to 90%	
Nonoperating	5% to 90%, 38.7° C (101.6° F) maximum wet bulb temperature	

Table 6-1
Tablet PC (Continued)

Altitude (unpressurized)

Operating (14.7 to 10.1 psia)	0 to 3,048 m	0 to 10,000 ft
Nonoperating (14.7 to 4.4 psia)	0 to 9,144 m	0 to 30,000 ft

Shock

Operating	10 G, 11 ms, half-sine
Nonoperating	60 G, 11 ms, half-sine

Vibration

Operating	0.5 G zero-to-peak, 10 to 500 Hz, 0.5 oct/min sweep rate
Nonoperating	1.0 G zero-to-peak, 10 to 500 Hz, 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 6-2
10.4-inch XGA, TFT Display

Dimensions		
Height	23.6 cm	9.29 in
Width	17.3 cm	6.81 in
Diagonal	26.4 cm	10.4 in
Number of colors	up to 16.8 million	
Contrast ratio	150:1	
Brightness	140 nit typical	
Pixel resolution		
Pitch	0.264 × 0.264 mm	
Format	1024 × 768	
Configuration	RGB vertical stripe	
Backlight	Edge lit	
Character display	80 × 25	
Total power consumption	3.75 W	

**Table 6-3
Hard Drives**

	60 GB	30 GB
User capacity per drive¹	60.0 GB	30.0 GB
Drive height	9.5 mm	9.5 mm
Drive width	70 mm	70 mm
Interface type	ATA-5	ATA-5
Seek times (typical read, including setting)		
Single track	3 ms	3 ms
Average	13 ms	13 ms
Full stroke	24 ms	24 ms
Logical blocks³	117,210,240	58,605,120
Logical configuration		
Cylinders	16,383	16,383
Heads	16	16
Sectors per track	63	63

¹1 GB=1,073,741,824 bytes.

²System capability may differ.

³Actual drive specifications may differ slightly.

Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.

Table 6-3
Hard Drives (Continued)

	60 GB	30 GB
Physical configuration		
Cylinders ³	22,784	25,800
Heads	6	2
Sectors per track ³	293 to 560	398 to 731
Bytes per sector	512	512
Buffer size³	2 MB	512 KB
Disk rotational speed	4200 rpm	4200 rpm
Transfer rate		
Interface max (MB/s) ²	66.6	100
Media (MB/s) ³	109 to 203	155 to 256

¹1 GB=1,073,741,824 bytes.

²System capability may differ.

³Actual drive specifications may differ slightly.

Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.

Table 6-4
Diskette Drive
(For Use Only in the Docking Station or External MultiBay)

Diskette size	3.5 inch
Light	On system
Height	0.5 in (12.7 mm)
Bytes per sector	512
Sectors per track	
High density	18 (1.44 MB)
Low density	9
Tracks per side	
High density	80
Low density	80
Read/write heads	2
Average seek times	
Track-to-track (high/low)	3 to 6 ms
Average (high/low)	95 to 174 ms
Settling time	15 ms
Latency average	100 ms

Table 6-5
CD-ROM Drive
(For Use Only in the Docking Station or External MultiBay)

Applicable disk	CD-ROM (Mode 1, 2, and 3) CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R (read only) CD Plus Photo CD (single/multisession) CD-Extra Video CD CD-WO (fixed packets only) CD-Bridge	
Center hole diameter	0.59 in	1.5 cm
Disk diameter	12 cm, 8 cm	
Disk thickness	0.047 in	1.2 mm
Track pitch	1.6 μ m	
Access time		
Random	< 150 ms	
Full stroke	< 300 ms	
Cache buffer	128 KB	
Data transfer rate		
Sustained, 16X	150 KB/s at 1X	
Variable	1500 to 3600 KB/s (10X to 24X)	
Normal PIO Mode 4 (single burst)	16.66 KB/s	
Startup time	< 8 seconds	
Stop time	< 4 seconds	

Table 6-6
DVD-ROM Drive
(For Use Only in the Docking Station or External MultiBay)

Applicable disk	DVD-5, DVD-9, DVD-10 CD-ROM (Mode 1 and 2) CD Digital Audio CD-XA ready (Mode 2, Form 1 and 2) CD-I ready (Mode 2, Form 1 and 2) CD-R (read only) CD Plus Photo CD (single/multisession) CD-Bridge	
Center hole diameter	0.59 in	1.5 cm
Disk diameter		12 cm, 8 cm
Disk thickness	0.047 in	1.2 mm
Track pitch	0.74 μ m	
Access time		
Random	< 150 ms	
Full stroke	< 225 ms	
Audio output level	Line-out, 0.7 Vrms	
Cache buffer	512 KB	
Data transfer rate		
Max 24X CD	3600 KB/s (150 KB/s at 1X CD rate)	
Max 8X DVD	10,800 KB/s (1352 KB/s at 1X DVD rate)	
Normal IO Mode 4 (single burst)	16.6 MB/s	
Startup time	< 12 seconds	
Stop time	< 3 seconds	

Table 6-7
CD-RW Drive
(For Use Only in the Docking Station or External MultiBay)

Center hole diameter	0.59 in	0.39 cm
Disk diameter		12 cm, 8 cm
Disk thickness	0.47 in	1.19 cm
Track pitch	0.74 μ m	
Access time		
Random	< 150 ms	
Full stroke	< 225 ms	
Audio output level	Line-out, 0.7 Vrms	
Cache buffer	128 KB	
Data transfer rate		
Sustained, 16X	150 KB/s	
Sustained, 4X CD-RW	5,520 KB/s	
Normal PIO Mode 4 (single burst)	16.6 MB/s	
Startup time	< 15 seconds	
Stop time	< 6 seconds	

Table 6-8
External AC Adapter

Weight	0.28 kg	0.62 lb
Power supply (input)		
Operating voltage	90 to 260 VAC RMS	
Operating current	1.7 A RMS	
Operating frequency range	47 to 63 Hz AC	
Maximum transient	4/50 kV	

Table 6-9
6-cell, Li Ion Battery Pack

Weight	0.30 kg	0.65 lb
Energy		
Voltage	11.1 V	
Amp-hour capacity	3.6 Ah	
Watt-hour capacity	40.0 Wh	
Temperature		
Operating: charging	0 to 40° C	32 to 104° F
Operating: discharging	-10 to 50° C	14 to 122° F
Nonoperating	-20 to 60° C	-4 to 140° F
Battery recharge time		
System off or in Standby	2.5 hours	
System on (varies depending on system power consumption)	3 to 6 hours	

Table 6-10
System DMA

Hardware DMA	System Function
DMA0	Available for audio
DMA1	Entertainment audio (default; alternate=DMA0, DMA3, none)
DMA2	Diskette drive
DMA3	ECP parallel port LPT1 (default; alternate=DMA0, none)
DMA4	DMA controller cascading (not available)
DMA5	Available for PC Card
DMA6	Not assigned
DMA7	Not assigned
 PC Card controller can use DMA 1, 2, or 5.	

Table 6-11
System Interrupts

Hardware IRQ	System Function
IRQ0	System timer
IRQ1	Keyboard controller
IRQ2	Cascaded
IRQ3	COM2
IRQ4	COM1
IRQ5	Audio (default)*
IRQ6	Diskette drive
IRQ7	Parallel port
IRQ8	Real time clock (RTC)
IRQ9	Infrared
IRQ10	System use
IRQ11	System use
IRQ12	Internal point stick or external mouse
IRQ13	Coprocessor (not available to any peripheral)
IRQ14	IDE interface (hard drive and optical drive)
IRQ15	System use
 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.	
*Default configuration; audio possible configurations are IRQ5, IRQ7, IRQ9, IRQ10, or none.	

Table 6-12
System I/O Addresses

I/O Address (hex)	System Function (shipping configuration)
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/real time clock
072 - 07F	Unused
080 - 08F	DMA page registers
090 - 091	Unused
092	Port A
093 - 09F	Unused
0A0 - 0A1	Interrupt controller no. 2

Table 6-12
System I/O Addresses (*Continued*)

I/O Address (hex)	System Function (shipping configuration)
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 6-12
System I/O Addresses (Continued)

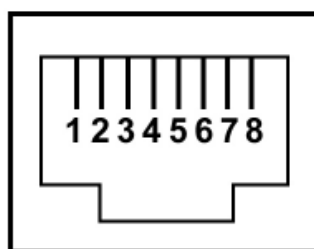
I/O Address (hex)	System Function (shipping configuration)
2F0 - 2F7	Unused
2F8 - 2FF	Infrared port
300 - 31F	Unused
320 - 36F	Unused
370 - 377	Secondary diskette drive controller
378 - 37F	Parallel port (LPT1/default)
380 - 387	Unused
388 - 38B	FM synthesizer—OPL3
38C - 3AF	Unused
3B0 - 3BB	VGA
3BC - 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 6-13
System Memory Map

Size	Memory Address	System Function
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	000E8000-000FFFFFFF	System BIOS
15 MB	00100000-00FFFFFFF	Extended memory
58 MB	01000000-047FFFFFFF	Super extended memory
58 MB	04800000-07FFFFFFF	Unused
2 MB	08000000-080FFFFFFF	Video memory (direct access)
4 GB	08200000-FFFEFFFF	Unused
64 KB	FFFF0000-FFFFFFFFF	System BIOS

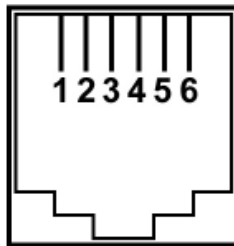
Connector Pin Assignments

Table A-1
RJ-45 Network Interface



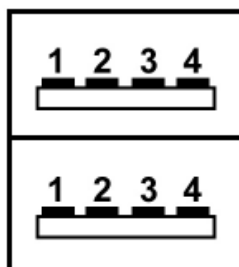
Pin	Signal	Pin	Signal
1	Transmit +	5	Unused
2	Transmit –	6	Receive –
3	Receive +	7	Unused
4	Unused	8	Unused

Table A-2
RJ-11 Modem



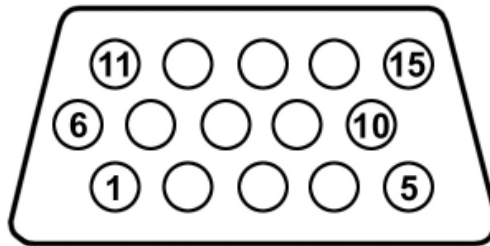
Pin	Signal	Pin	Signal
1	Unused	4	Unused
2	Tip	5	Unused
3	Ring	6	Unused

Table A-3
Universal Serial Bus



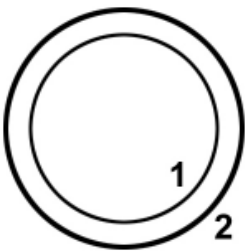
Pin	Signal	Pin	Signal
1	+5 VDC	3	Data +
2	Data –	4	Ground

Table A-4
External Monitor



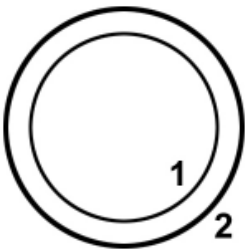
Pin	Signal	Pin	Signal
1	Red analog	9	+5 VDC
2	Green analog	10	Ground
3	Blue analog	11	Monitor detect
4	Not connected	12	DDC 2B data
5	Ground	13	Horizontal sync
6	Ground analog	14	Vertical sync
7	Ground analog	15	DDC 2B clock
8	Ground analog		

Table A-5
Stereo Speaker/Headphone



Pin	Signal	Pin	Signal
1	Audio out	2	Ground

Table A-6
Microphone



Pin	Signal	Pin	Signal
1	Audio in	2	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 received 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. For more information on power cord set requirements, contact a Compaq authorized reseller or service provider.

General Requirements

The following requirements apply to all countries:

- The length of the power cord set must be at least 1.5 meters (5.00 feet) a maximum of 2.0 meters (6.50 feet).
- 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 set must have a minimum current capacity of 10 amps and a nominal voltage rating of 125 or 250 volts 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
The Netherlands	KEMA	1
Norway	NEMKO	1
Sweden	SEMKO	1
Switzerland	SEV	1
United Kingdom	BSI	1
United States	UL	2

Notes

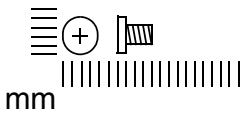
1. The flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 mm² conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.
2. The flexible cord must be Type SPT-3 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15 A, 125 V) or NEMA 6-15P (15 A, 250 V) configuration.
3. The appliance coupler, flexible cord, and wall plug must bear a “T” mark and registration number in accordance with the Japanese Dentori Law. The flexible cord must be Type VCT or VCTF, 3-conductor, 1.00 mm² conductor size. The wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7 A, 125 V) configuration.

C

Screw Listing

This appendix provides specification and reference information for the screws used in the tablet PC and the docking station. All screws listed in this appendix are available for the tablet PC in the Miscellaneous Screw Kit, spare part number 310674-001, and for the docking station in the Miscellaneous Docking Station Screw Kit, spare part number 311241-001.

Table C-1
Phillips M2.0 × 4.0 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	10	4.0 mm	2.0 mm	4.0 mm

Where used:

- ❶ One screw that secures the battery pack to the tablet PC (documented in Section 5.3)
- ❷ Two screws that secure the mini PCI communications/memory expansion slot cover to the tablet PC (documented in Section 5.3)
- ❸ Two screws that secure the hard drive bracket to the tablet PC (documented in Section 5.3)
- ❹ One screw that secures the connector cover to the tablet PC.

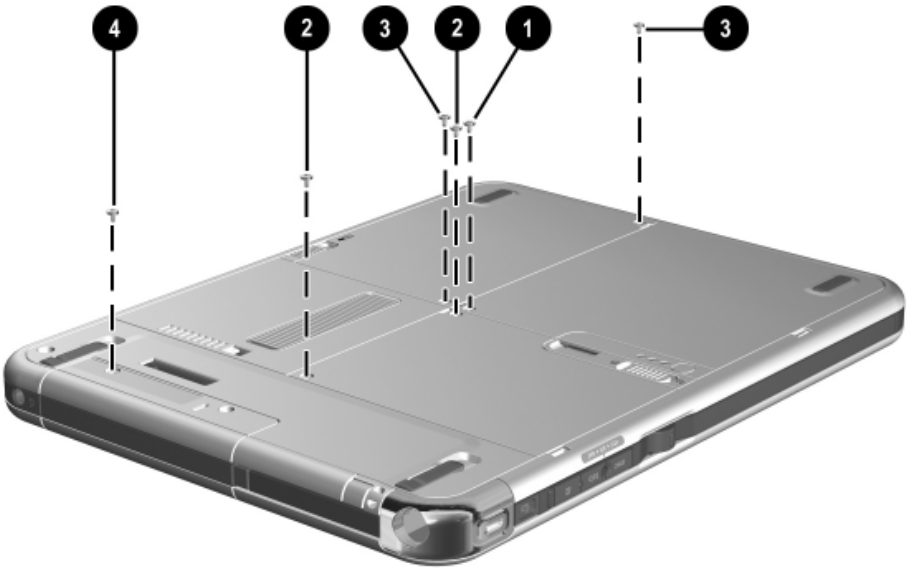
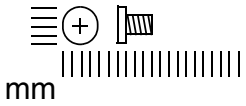


Figure C-1. Phillips M2.0 × 4.0 Screw Location

Table C-1
Phillips M2.0 × 4.0 Screw (Continued)

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	10	4.0 mm	2.0 mm	4.0 mm

Where used:

Four screws that secure the display panel to the display bezel
(documented in Section 5.5)

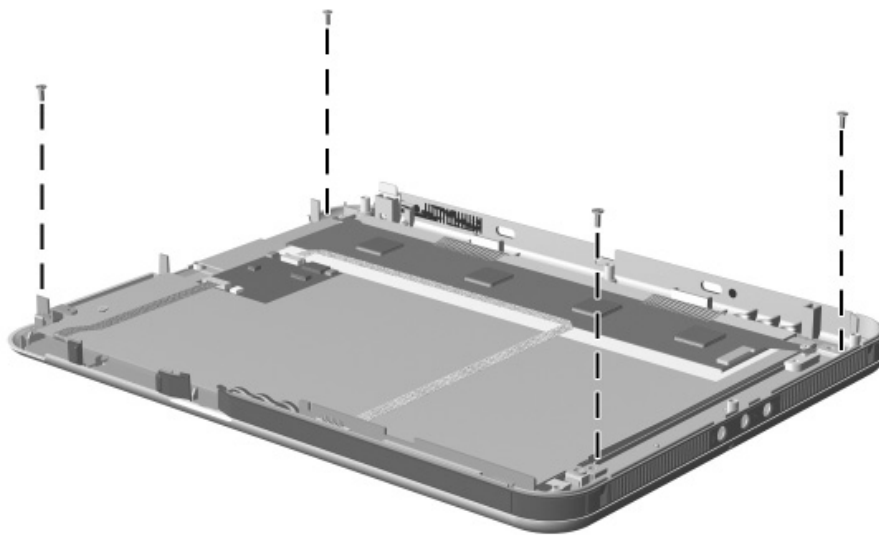
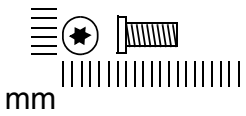


Figure C-2. Phillips M2.0 × 4.0 Screw Locations

Table C-2
Torx M2.5 × 7.0 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	17	7.0 mm	2.5 mm	4.0 mm
Where used:					
❶ One screw that secures the connector cover and display panel assembly to the tablet PC (documented in Section 5.5)					
❷ Eight screws that secure the display panel assembly to the tablet PC (documented in Section 5.5)					

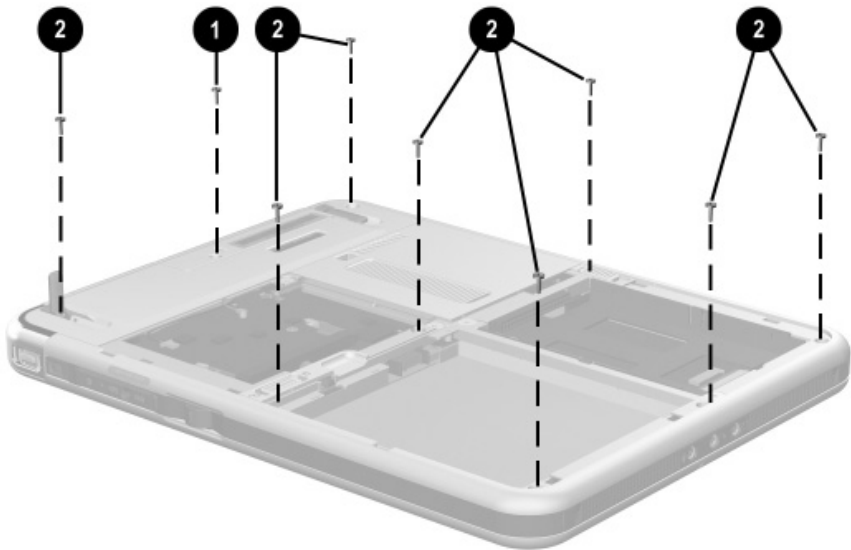
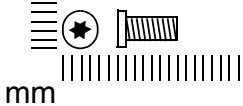


Figure C-3. Torx M2.5 × 7.0 Screw Locations

Table C-2
Torx M2.5 × 7.0 Screw (Continued)

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	17	7.0 mm	2.5 mm	4.0 mm

Where used:

Four screws that secure the keyboard release assembly to the base enclosure (documented in Section 5.8)

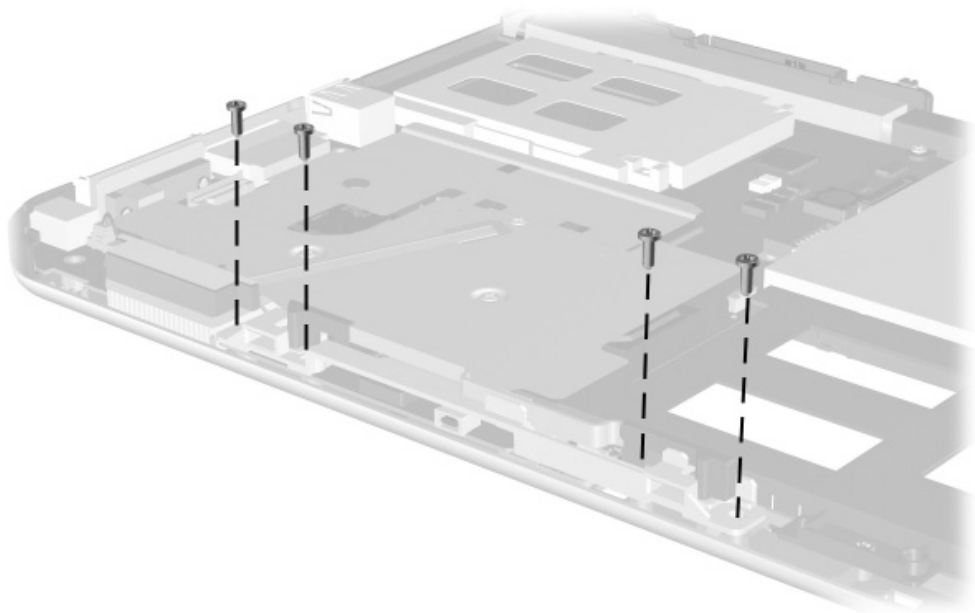


Figure C-4. Torx M2.5 × 7.0 Screw Locations

Table C-2
Torx M2.5 × 7.0 Screw (Continued)

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	17	7.0 mm	2.5 mm	4.0 mm

Where used:

Four screws that secure the docking station top case to the bottom case (documented in Section 5.12)

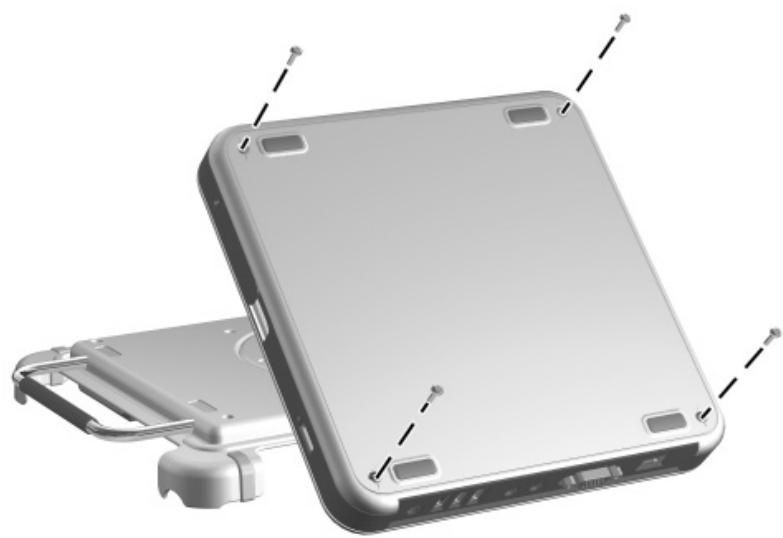


Figure C-5. Torx M2.5 × 7.0 Screw Locations

Table C-3
Phillips M2.0 × 5.0 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	10	5.0 mm	2.0 mm	4.0 mm

Where used:

- ❶ Two screws that secure the display panel bracket to the display panel assembly (documented in Section 5.5)
- ❷ One screw that secures the digitizer to the display panel assembly (documented in Section 5.5)

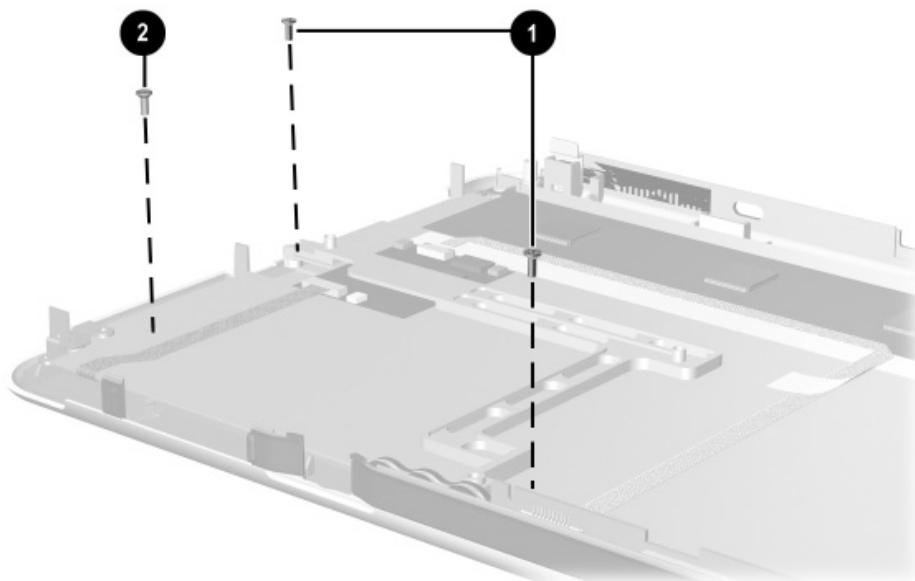


Figure C-6. Phillips M2.0 × 5.0 Screw Locations

Table C-3
Phillips M2.0 × 5.0 Screw (Continued)

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	10	5.0 mm	2.0 mm	4.0 mm

Where used:

Four screws that secure the system board to the base enclosure
(documented in Section 5.8)

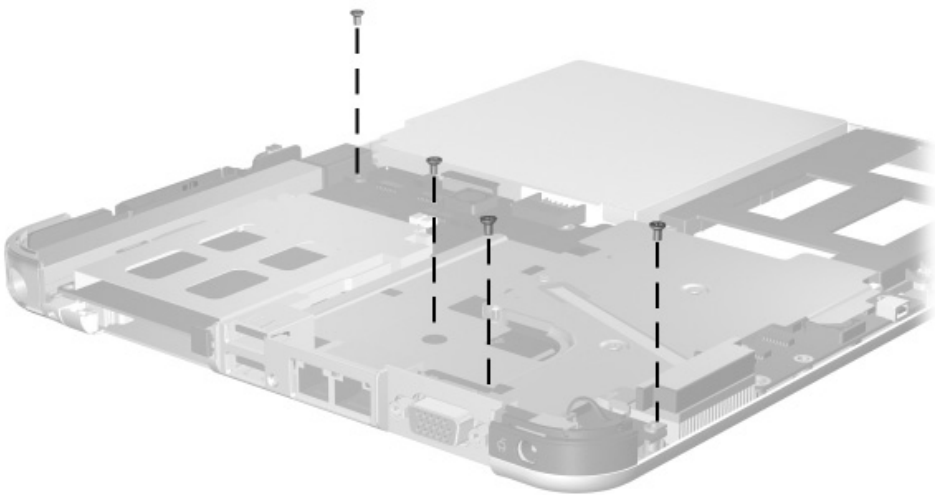
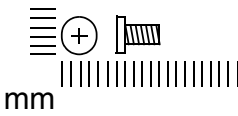


Figure C-7. Phillips M2.0 × 5.0 Screw Locations

Table C-3
Phillips M2.0 × 5.0 Screw (Continued)

	Color	Qty.	Length	Thread	Head Width
	Silver	10	5.0 mm	2.0 mm	4.0 mm

Where used:

Three screws that secure the fan and heat sink to the system board (documented in Section 5.9)

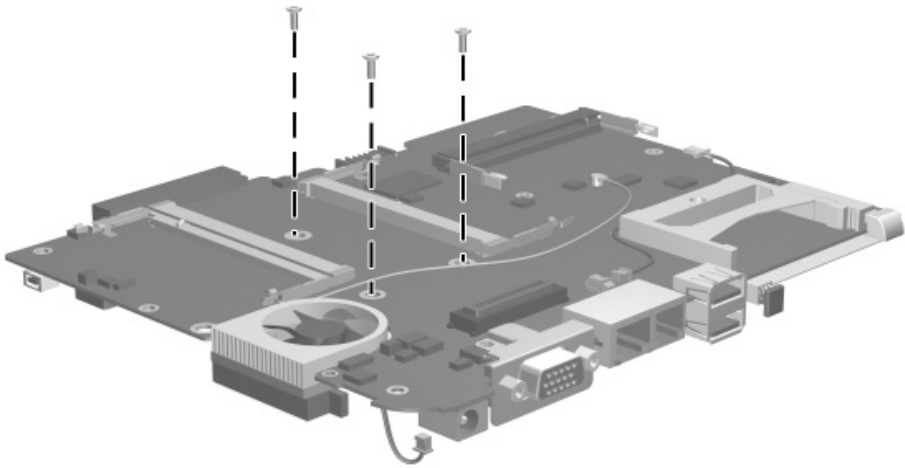


Figure C-8. Phillips M2.0 × 5.0 Screw Locations

Table C-4
Phillips M2.0 × 3.5 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	4	3.5 mm	2.0 mm	4.0 mm
Where used: Three screws that secure the EMI shield to the base enclosure (documented in Section 5.9)					

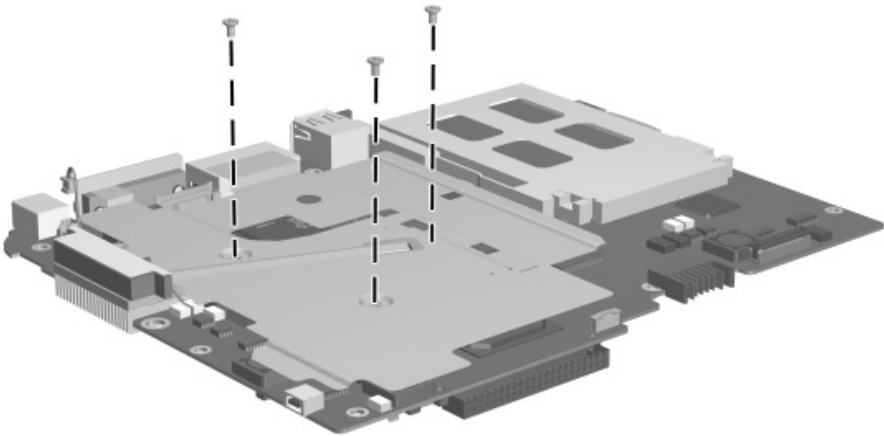
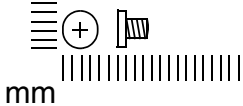


Figure C-9. Phillips M2.0 × 3.5 Screw Locations

Table C-4
Phillips M2.0 × 3.5 Screw (Continued)

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	4	3.5 mm	2.0 mm	4.0 mm

Where used:

One screw that secures the switch board to the base enclosure
(documented in Section 5.11)

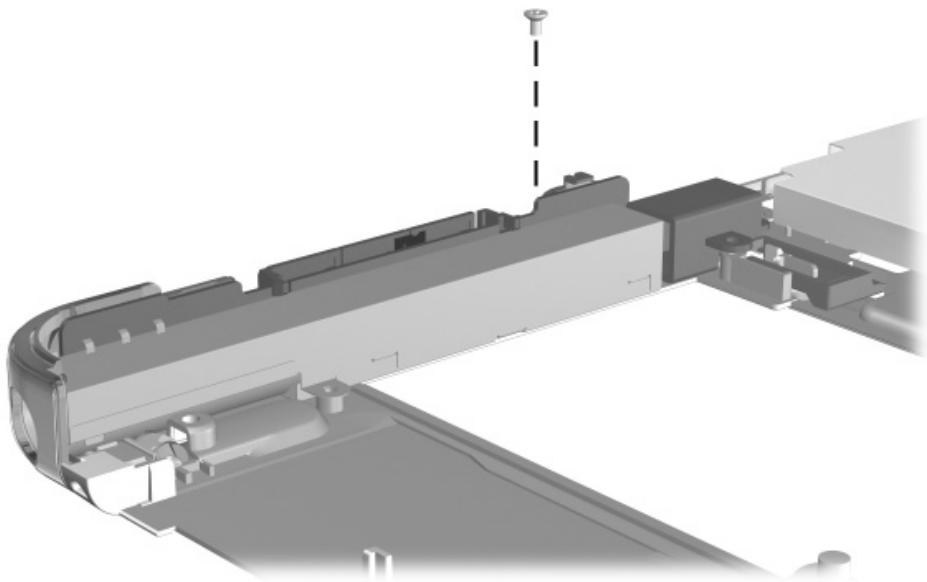
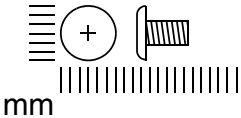


Figure C-10. Phillips M2.0 × 3.5 Screw Locations

Table C-5
Phillips M2.5 × 5.0 Screw

					
mm	Color	Qty.	Length	Thread	Head Width
	Black	9	5.0 mm	2.5 mm	6.0 mm
Where used:					
❶ Two screws that secure the docking station pivot arm and cable bracket to the bottom case (documented in Section 5.12)					
❷ Seven screws that secure the docking station board assembly to the bottom case (documented in Section 5.12)					

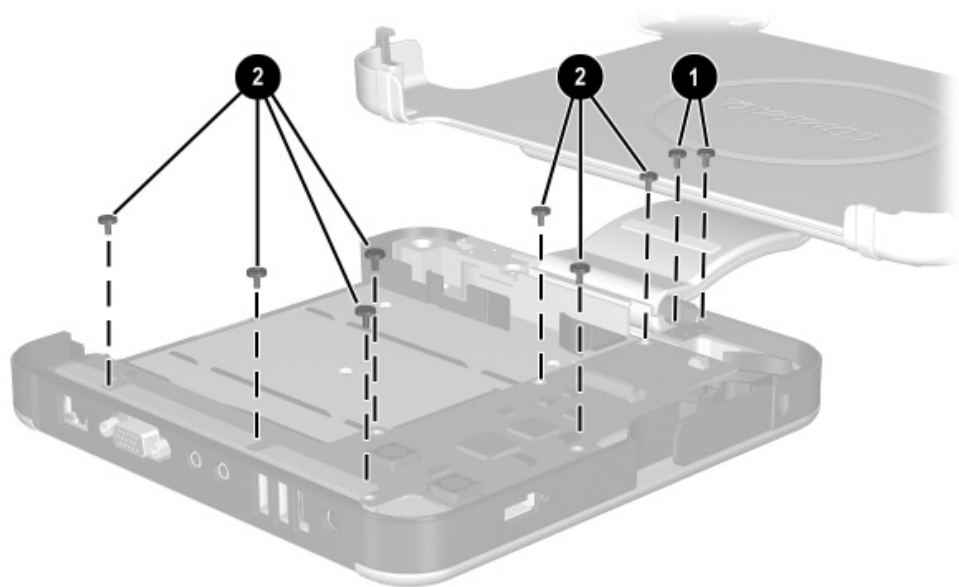
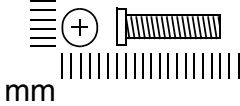


Figure C-11. Phillips M2.5 × 5.0 Screw Locations

Table C-6
Phillips M2.5 × 12.0 Screw

 mm	Color	Qty.	Length	Thread	Head Width
	Silver	1	12.0 mm	2.5 mm	4.0 mm

Where used:

One screw that secures the docking station pivot arm hinge to the bottom case (documented in Section 5.12)

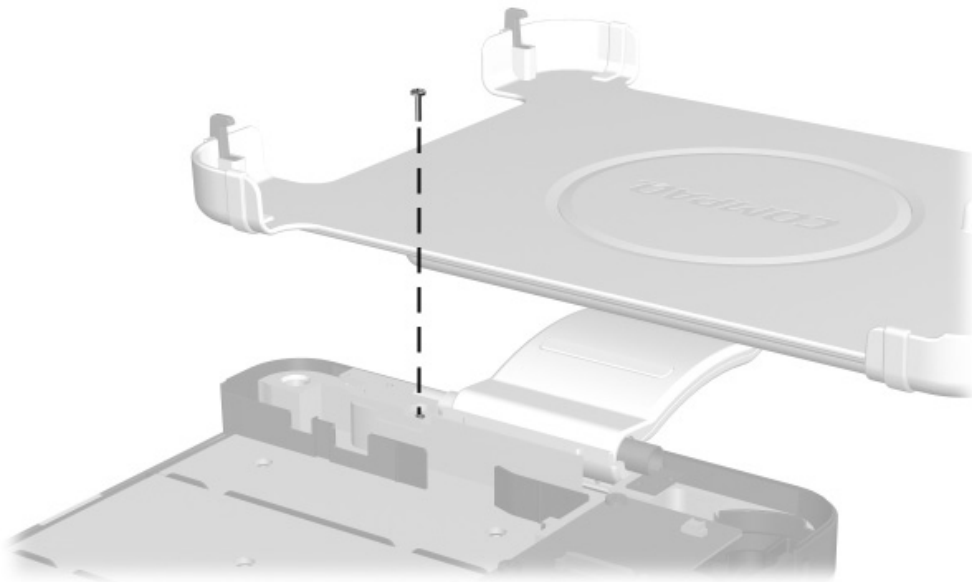
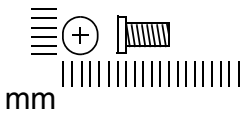


Figure C-12. Phillips M2.5 × 12.0 Screw Location

Table C-7
Phillips M2.5 × 6.0 Screw

	Color	Qty.	Length	Thread	Head Width
	Silver	3	6.0 mm	2.5 mm	4.0 mm

Where used:

Three screws that secure the docking station pivot arm hinge to the bottom case (documented in Section 5.12)

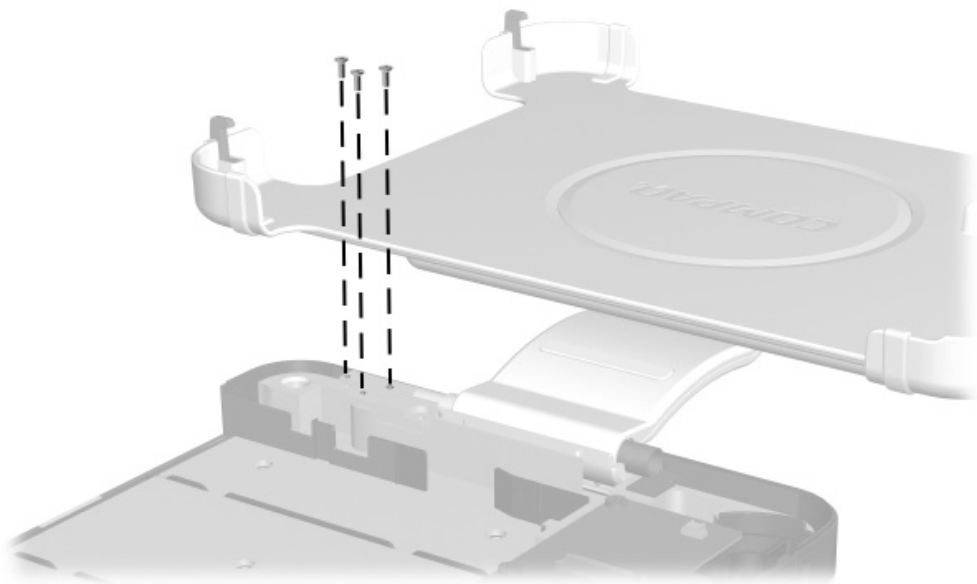


Figure C-13. Phillips M2.5 × 6.0 Screw Locations

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