GATEWAY NOTEBOOK

SERVICEGUIDE



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Replacing Convertible Notebook Components

- Identifying the convertible notebook model
- Identifying components
- · Preparing your work space
- · Preventing static electricity discharge
- · Preparing the convertible notebook
- · Adding or replacing memory modules
- · Replacing the CMOS battery
- Replacing the IEEE 802.11 wireless card
- Replacing the DVD drive
- · Replacing the hard drive
- · Replacing the keyboard
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- · Replacing the LCD assembly lid



This service guide is not intended to be provided to individual users or consumers. It cannot be provided to anyone other than an authorized service provider.

Important

For information on the convertible notebook's general maintenance, technical support, safety notices, and regulatory notices, see the convertible notebook's user guide.

Important

If you have suggestions regarding the content of this guide, send an e-mail with the subject "Service Guide Comments" to channel.services@gateway.com.

Use this service guide to help plan maintenance tasks for the following Gateway convertible notebooks:

E-155C

All tasks covered in this guide can be performed by an authorized field technician without jeopardizing the convertible notebook's warranty.

Identifying the convertible notebook model

↑ Caution

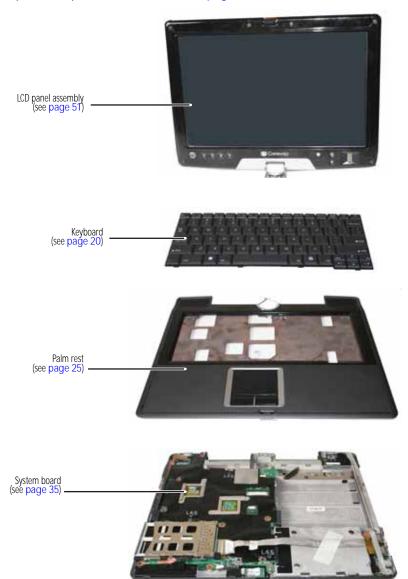
It is important that you use the correct service guide for the convertible notebook. Failure to follow the approved tasks for the convertible notebook model may result in damage to the convertible notebook.

The label on the bottom of the convertible notebook contains information that identifies the convertible notebook model and its features.



Identifying components

Use this chart to identify the main components of the convertible notebook. For a complete list of replaceable parts, see "Contents" on page i.



Preparing your work space

Before performing maintenance on the convertible notebook, make sure that your work space and the convertible notebook are correctly prepared.

- Wear a grounding (ESD) wrist strap, and use a grounded or dissipative work mat.
- Use a stable and strong table, and make sure that the table top is large enough to hold each component as you remove it.
- Use bright lighting to make part identification easier.
- Keep your work surface free from clutter and dust that may damage components.
- Use a magnetized screwdriver for removing screws.

- When removing components that are attached to the convertible notebook by a cable, unplug the cable before removing the screws, when possible, to avoid damaging the cable.
- As you remove components and screws, lay them toward the rear of your work surface (behind the convertible notebook) or far enough to the side that your arms do not accidentally brush them onto the floor.
- To help keep track of screws, try the following:
 - Place each component's screws in their own section of a parts sorter.
 - Place each component's screws next to the component on your work surface.
 - Print the first page of each task, then place the page toward the rear of your work surface. As you remove screws, place the screws in their respective boxes on the page.
 - After loosening screws that are deeply recessed in a hole (for example, on the bottom
 of the base assembly), you can leave the screws in the holes if you place small pieces
 of masking tape over the hole openings. When reassembling the component, just
 remove the tape and tighten the screws.
 - When you place flat-headed screws on your work surface, stand them on their heads to prevent the screws from rolling off the table.

Preventing static electricity discharge



Warning

To avoid exposure to dangerous electrical voltages and moving parts, turn off your convertible notebook, remove the battery, and unplug the power cord, modem cable, and network cable before opening the case.



Warning

To prevent risk of electric shock, do not insert any object into the vent holes of the convertible notebook.



Important

Before performing maintenance on the convertible notebook, you should read and understand the information in this section.

The components inside your convertible notebook are extremely sensitive to static electricity, also known as *electrostatic discharge* (ESD).

Before performing maintenance on the convertible notebook, follow these guidelines:

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Remove components from their antistatic bags only when you are ready to use them. Do
 not lay components on the outside of antistatic bags because only the inside of the bags
 provide electrostatic protection.
- Always hold components by their edges. Avoid touching the edge connectors. Never slide components over any surface.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of your workbench or other grounded connection.
- · Touch a bare metal surface on your workbench or other grounded object.

Tape

Some of the procedures in this guide involve removing tape that holds cables or components. Two types of tape are used in this Gateway convertible notebook:

- Mylar, non-conductive tape is typically transparent, with a red or brown tint.
- Conductive tape is typically grey or silver.

If the existing tape cannot be reused, replace it with the same type (conductivity) of tape. Both types of replacement tape should be non-ESD generating tape.

Do not use cellophane tape.

Preparing the convertible notebook

▶ To prepare the convertible notebook for maintenance:

- 1 Make sure that the disc drive is empty.
- 2 Turn off the convertible notebook.
- 3 Make sure the LCD panel is in notebook mode, then close the LCD panel.
- 4 Disconnect your convertible notebook from the optional port replicator.
- 5 Disconnect the AC adapter, modem cable, and network cable, if connected to the convertible notebook.
- 6 Disconnect all peripheral devices connected to the convertible notebook and remove any PC Cards.
- Remove the battery. For more information, see "Removing the battery" on page 5.

Removing the battery

▶ To remove the battery:

- 1 Turn your convertible notebook over so the bottom is facing up.
- 2 Slide the battery lock to the unlocked position o, then slide the battery release latch.



3 Slide the battery out of the bay.

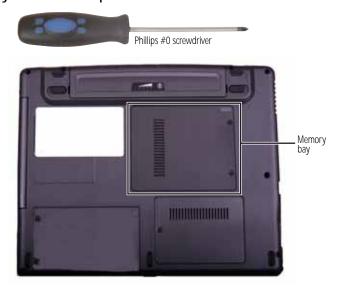


Adding or replacing memory modules



Important
Use only memory modules designed for this Gateway convertible notebook.

Tools you need to complete this task:



▶ To add or replace memory modules:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Loosen the two memory bay cover screws that secure the memory cover. (These screws cannot be removed.)



Remove the memory bay cover. Be careful not to break off the tabs located on the bottom of the cover. If the cover does not remove easily, wiggle the cover to loosen it.

4 If you are removing a module, gently press outward on the clip at each end of the memory module until the module tilts upward.



5 Pull the memory module out of the slot.



- 6 Hold the new or replacement module at a 30-degree angle and press it into the empty memory slot. This module is keyed so it can only be inserted in one direction. If the module does not fit, make sure that the notch in the module lines up with the tab in the memory bay.
- 7 Replace the memory bay cover, then tighten the cover screws.

Replacing the CMOS battery



Tools you need to complete this task:



▶ To replace the CMOS battery:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Loosen the two memory bay cover screws that secure the memory cover. (These screws cannot be removed.)



Remove the memory bay cover. Be careful not to break off the tabs located on the bottom of the cover. If the cover does not remove easily, wiggle the cover to loosen it.

4 Insert the small flat-blade screwdriver or non-marring tool under the old battery and gently pry it up until it pops out of the socket.



- 5 Make sure the positive (+) side of the new battery is facing up, then press the battery into the socket until it snaps into place.
- 6 Replace the memory bay cover, then tighten the cover screws.

Replacing the IEEE 802.11 wireless card

Tools you need to complete this task:



Screws removed during this task:



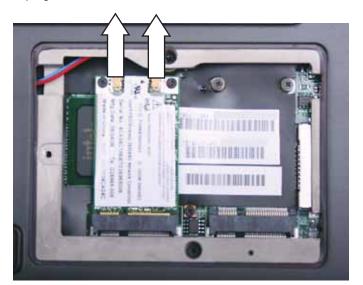


- ▶ To replace the IEEE 802.11 wireless card:
 - 1 Complete the steps in "Preparing the convertible notebook" on page 5.

2 Loosen the wireless bay cover screw (this screw cannot be removed), then remove the wireless bay cover.

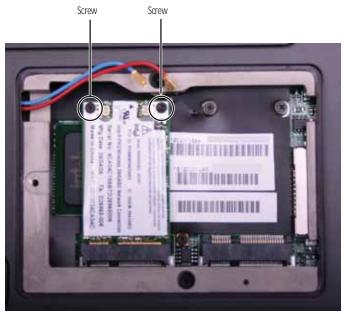


3 Unplug the two antenna cables.



4 Move the antenna cables out of the way.

5 Remove the two screws holding the wireless module.



6 Pull the module out of the slot.



- Insert the new module into the empty slot. This module is keyed so it can only be inserted in one direction. If the module does not fit, make sure that the notch in the module lines up with the tab in the module slot.
- 8 Move the antenna wires out of the way.
- 9 Press the module down, then replace the two screws remove in Step 5.

Reattach the blue antenna cable to the connector labelled \mathbf{MAIN} or \mathbf{M} , then reattach the red antenna cable to the connector labelled \mathbf{AUX} or \mathbf{A} . 10



Replace the wireless bay cover, then tighten the cover screw.

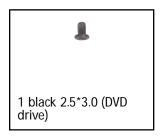
13

Replacing the DVD drive

Tools you need to complete this task:



Screws removed during this task:





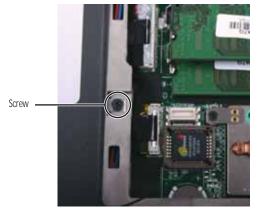
▶ To replace the DVD drive:

1 Complete the steps in "Preparing the convertible notebook" on page 5.

2 Loosen the two memory bay cover screws that secure the memory cover. (These screws cannot be removed.)



- Remove the memory bay cover. Be careful not to break off the tabs located on the bottom of the cover. If the cover does not remove easily, wiggle the cover to loosen it.
- 4 Remove the screw that secures the DVD drive to your convertible notebook.



5 Carefully slide the drive out of the drive bay.



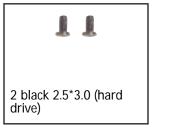
- Slide the new DVD drive into the drive bay. Make sure that the drive fits securely in the bay.
- 7 Secure the DVD drive with the screw removed in Step 4.
- 8 Replace the memory bay cover, then tighten the cover screws.

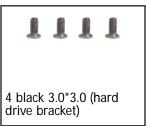
Replacing the hard drive

Tools you need to complete this task:



Screws removed during this task:

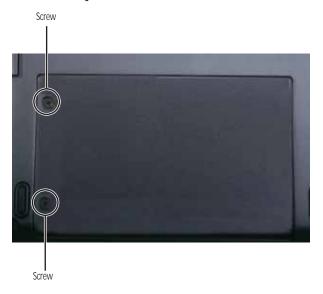




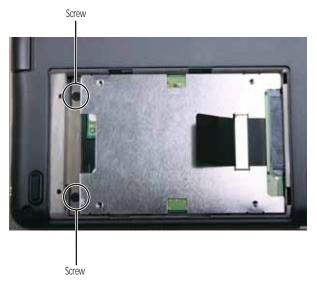


▶ To replace the hard drive:

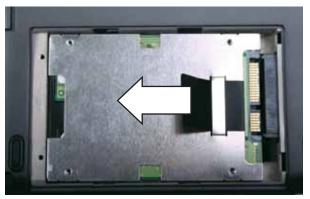
- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Loosen the two hard drive bay cover screws (these screws cannot be removed), then remove the hard drive bay cover.



3 Remove the two hard drive screws.



4 Pull on the plastic strip to slide the old hard drive out of the convertible notebook.



5 Remove the four screws that secure the hard drive to the hard drive bracket.



6 Remove the bracket from the old drive.



- 7 Insert the new drive into the bracket, label side up, so the screw holes line up.
- 8 Replace the four screws that were removed in Step 5.
- 9 Slide the new hard drive into your convertible notebook, then replace the screws that were removed in Step 3.
- 10 Replace the hard drive bay cover, then tighten the cover screws.

Replacing the keyboard

Tools you need to complete this task:



▶ To replace the keyboard:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Carefully open the LCD panel to the fully opened position.
- 3 Locate the three spring-clips securing the top of the keyboard. They are located above the Esc, F9, and DEL keys.



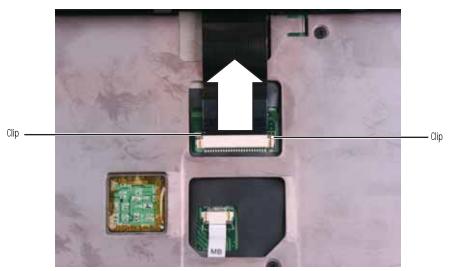
Insert the small flat-blade screwdriver or non-marring tool and gently slide each clip back. As you do so, lift up on the keyboard so the clip will slide behind the keyboard when you release the clip.



5 Lift the back edge of the keyboard and rotate the keyboard toward you so it lies keys-down on top of your convertible notebook.



6 Slide the brown connector clips to the back of your convertible notebook, then remove the cable. Be careful not to touch or damage any other components.



- 7 Lift the old keyboard away from your convertible notebook.
- 8 Place the new keyboard keys-down on your convertible notebook with the space bar away from you.
- 9 Make sure the brown keyboard connector clips are slid to the back of your convertible notebook, insert the cable into the connector, then slide the brown connector clips forward to lock the connector in place.



- 10 Rotate the keyboard toward the LCD panel until the keyboard is almost face-up.
- Insert the tabs on the front edge of the keyboard into the slots under the palm rest. You may need to press down on the keyboard keys along the front edge of the keyboard to seat the retaining tabs into their corresponding slots.
- Gently press the keyboard down until it is flat all the way across and the spring-clips are securing the top of the keyboard. Be careful not to damage the LCD panel.

Replacing the hinge cover

Tools you need to complete this task:



▶ To replace the hinge cover:

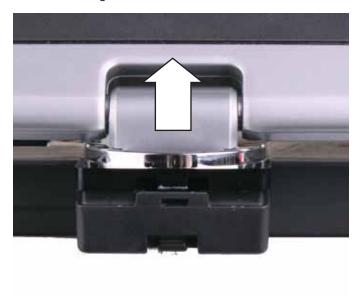
- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Close the LCD panel.
- 3 Insert a flat-blade screwdriver or non-marring tool into the slot on the hinge and press the tab. The hinge cover should pop up.



Use the flat-blade screwdriver or non-marring tool to pry the hinge cover off the convertible notebook.



5 Slide the old hinge cover to the back and off of the convertible notebook.



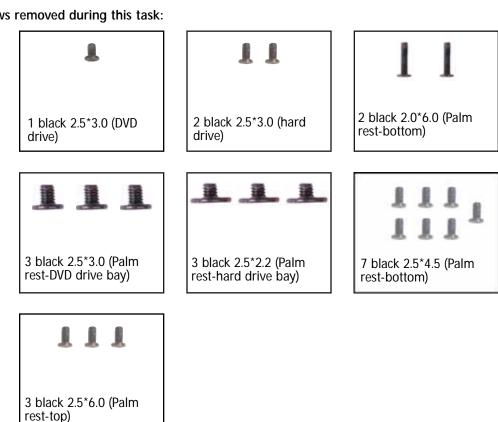
6 Slide the new hinge cover over the hinge and snap it into place.

Replacing the palm rest

Tools you need to complete this task:



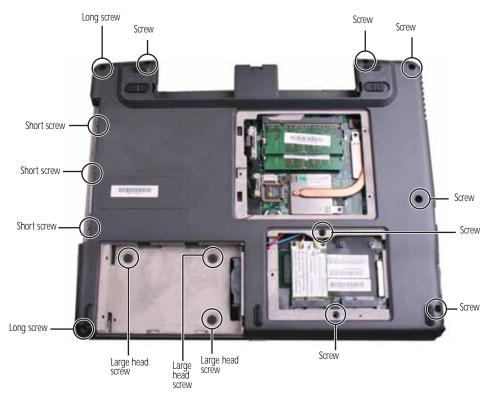
Screws removed during this task:



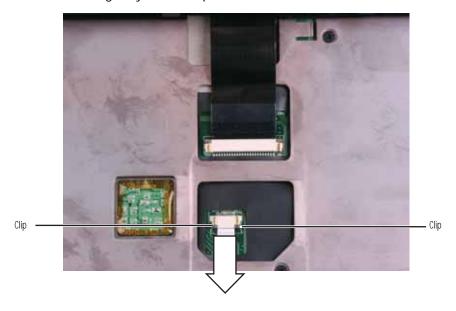
▶ To replace the palm rest:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Remove the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.

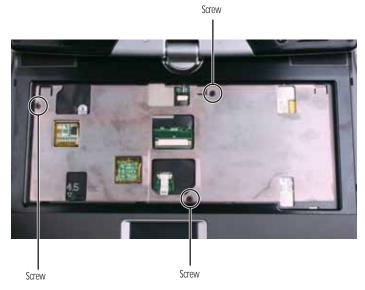
6 Remove the 15 screws shown in the following picture. Note the location of the screw types and sizes.



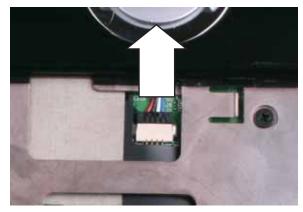
- 7 Turn the convertible notebook over so the top is facing up.
- 8 Remove the keyboard by following the steps in "Replacing the keyboard" on page 20.
- 9 Slide the brown touchpad connector clips to the front, then remove the cable. Be careful not to touch or damage any other components.



10 Remove the three screws shown in the following picture.



11 Disconnect the speaker cable.



12 Lift the palm rest assembly completely from the convertible notebook.

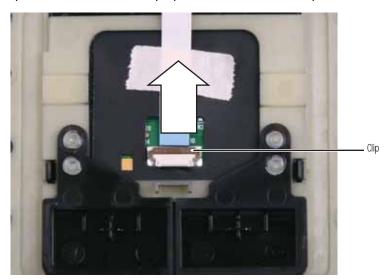


- 13 If the new palm rest does not include the touchpad cable, transfer the cable to the new palm rest. Go to Step 14.
 - -OR-

If the new palm rest includes the touchpad cable, go to Step 17.

14 Turn the palm rest over so the back side is facing up.

15 Flip the brown connector clip up, then remove the touchpad cable.



Make sure that the brown connector clip on the new palm rest is in the raised position, lay the cable into the connector, then flip the connector down onto the cable.



The cable is correctly oriented if the blue side is showing.

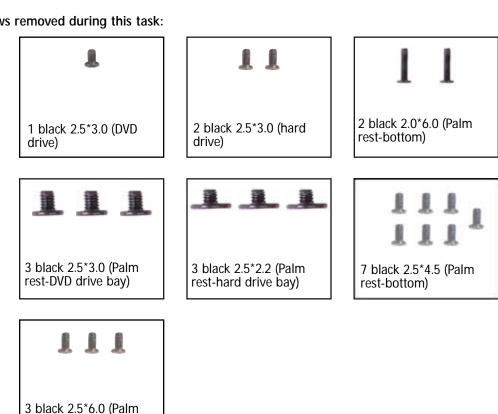
- 17 Place the new palm rest assembly onto the convertible notebook, then snap the assembly into place.
- 18 Reconnect the speaker cable.
- 19 Make sure the brown touchpad connector clips are slid to the front of the convertible notebook, insert the cable into the connector, then slide the brown connector clips back to lock the cable in place.
- 20 Replace the three top palm rest screws removed in Step 10.
- 21 Replace the keyboard by following the instructions in "Replacing the keyboard" on page 20.
- 22 Turn the convertible notebook over so the bottom is facing up.
- 23 Replace the 15 bottom palm rest screws removed in Step 6.
- 24 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 25 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 26 Replace the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 27 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the Bluetooth module

Tools you need to complete this task:



Screws removed during this task:

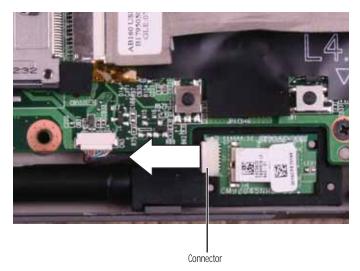


▶ To replace the Bluetooth module:

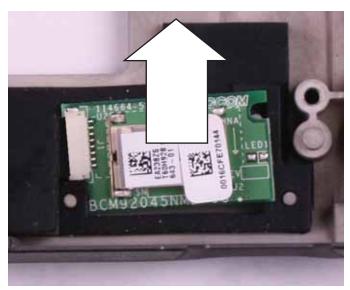
rest-top)

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Remove the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.

Disconnect the Bluetooth cable from the Bluetooth module.



8 Lift the right end of the old Bluetooth module, then slide the module out of the rubber holder.



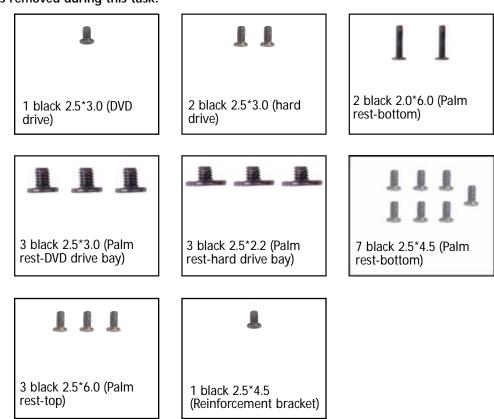
- Insert the left end of the new Bluetooth module under the flap in the rubber holder, then press the right end down. The notch in the right end of the module should fit around the pin located in the holder.
- 10 Connect the Bluetooth cable to the Bluetooth module.
- 11 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 12 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Replace the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the USB/Firewire board

Tools you need to complete this task:



Screws removed during this task:

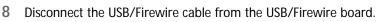


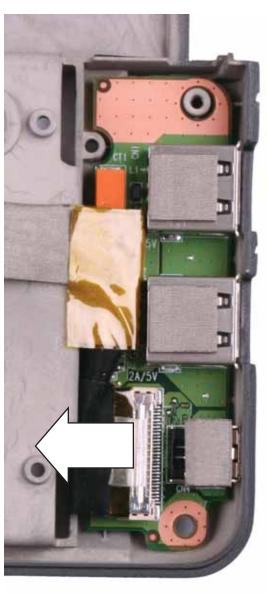
▶ To replace the USB/Firewire board:

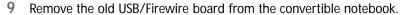
- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Remove the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.

7 Remove the screw holding the reinforcement bracket, then lift the bracket off of the convertible notebook.











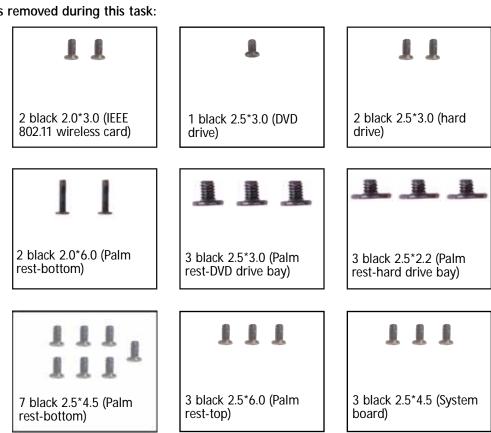
- 10 Place the new USB/Firewire board into the convertible notebook. The holes in the board should fit around the posts in the bay.
- 11 Connect the USB/Firewire cable to the USB/Firewire board.
- 12 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Replace the wireless bay cover by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the system board

Tools you need to complete this task:



Screws removed during this task:



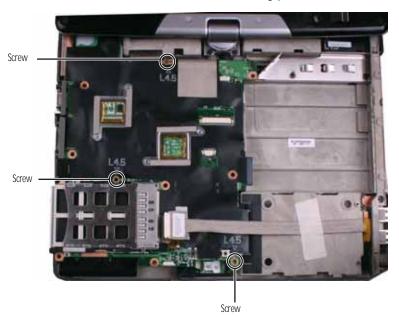
▶ To replace the system board:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory by following the steps in "Adding or replacing memory modules" on page 6.

3 Carefully unplug the LCD video cable and the modem/audio cable from the system board. Make sure you pull the plastic tabs, not the cables.



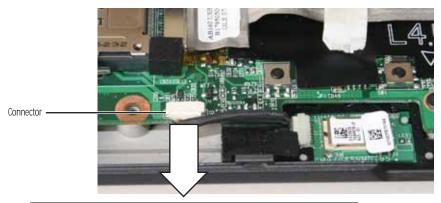
- 4 Remove the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 5 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 6 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the three screws shown in the following picture.



9 Disconnect the USB/Firewire cable from the system board.

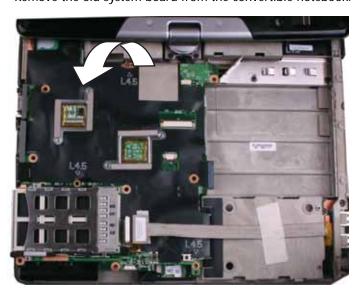


10 Disconnect the Bluetooth cable from the system board.



Tip
Remove the digital pen before disconnecting the Bluetooth cable from the system board.

11 Remove the old system board from the convertible notebook.



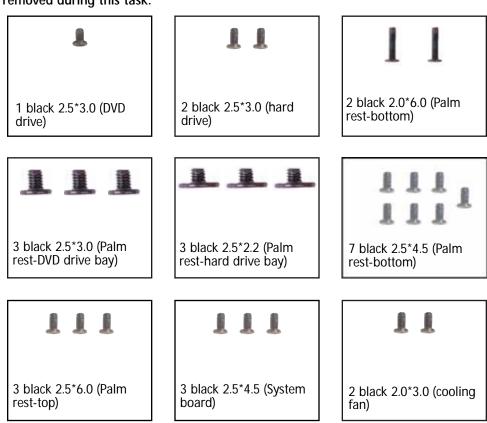
- 12 Place the new system board into the convertible notebook.
- 13 Connect the Bluetooth cable to the system board.
- 14 Connect the USB cable to the system board.
- 15 Replace the three screws removed in Step 8.
- 16 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 17 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 18 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 19 Reinstall the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 20 Plug the LCD video cable and the modem/audio cable into the system board.
- Reinstall the memory by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the cooling fan

Tools you need to complete this task:



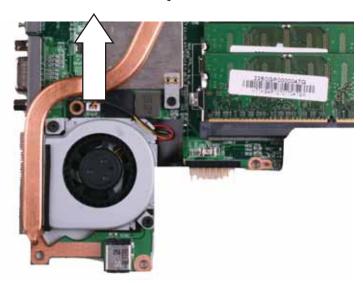
Screws removed during this task:



▶ To replace the cooling fan:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 7 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 8 Turn the system board over so the bottom is facing up.

9 Disconnect the fan from the system board.



10 Remove the two screws that secure the cooling fan to the system board.



11 Remove the old fan from the system board.



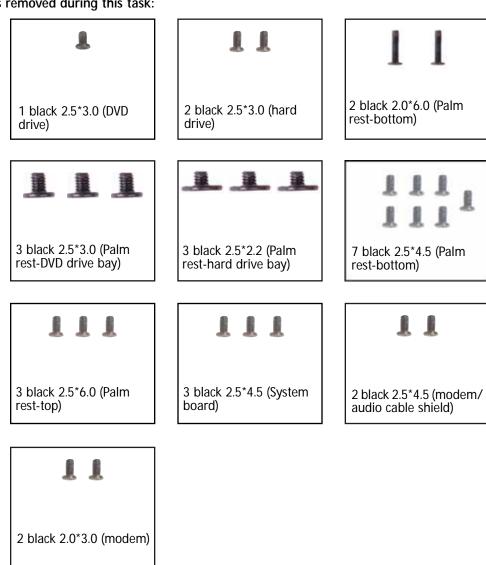
- 12 Install the new fan on the system board, then replace the screws removed in Step 10.
- 13 Connect the fan to the system board.
- Replace the system board by following the steps in "Replacing the system board" on page 35.
- 15 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 16 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 17 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 19 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the modem

Tools you need to complete this task:



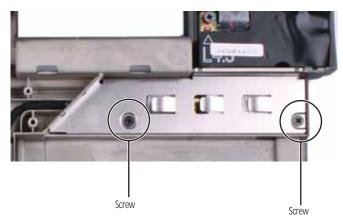
Screws removed during this task:



▶ To replace the modem:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.

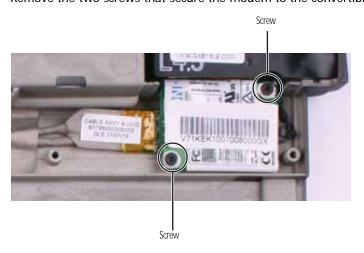
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 7 Remove the system board by following the steps in "Replacing the system board" on page 35.
- Remove the two screws that secure the modem/audio cable shield to the convertible notebook.



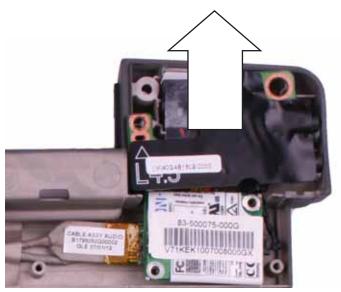
9 Remove the modem/audio cable shield.



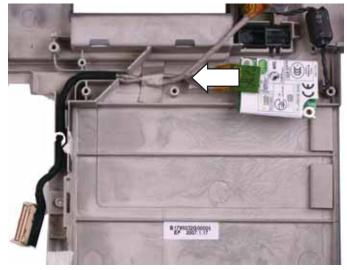
10 Remove the two screws that secure the modem to the convertible notebook.



11 Lift the modem out of the convertible notebook.



12 Turn the modem over, then disconnect the modem cable from the old modem.



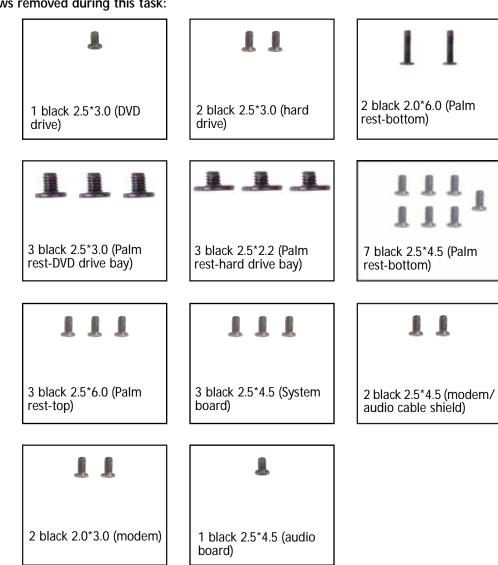
- 13 Connect the modem cable to the new modem.
- Replace the modem so that the cables from both the modem and the audio board go under the modem, then replace the screws removed in Step 10.
- 15 Replace the modem/audio cable shield, then replace the screws removed in Step 8.
- Replace the system board by following the steps in "Replacing the system board" on page 35.
- 17 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 18 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 19 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 20 Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 21 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the audio board

Tools you need to complete this task:



Screws removed during this task:



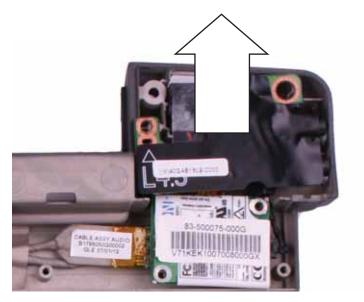
▶ To replace the audio board:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 7 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 8 Remove the modem by following the steps in "Replacing the modem" on page 42.
- 9 Remove the screw that secures the audio board to the convertible notebook.



10 Lift both the audio board and the modem out of the convertible notebook.



Turn the audio board over, then disconnect the audio cable from the old audio board. Make sure you pull the plastic tab, not the cable.



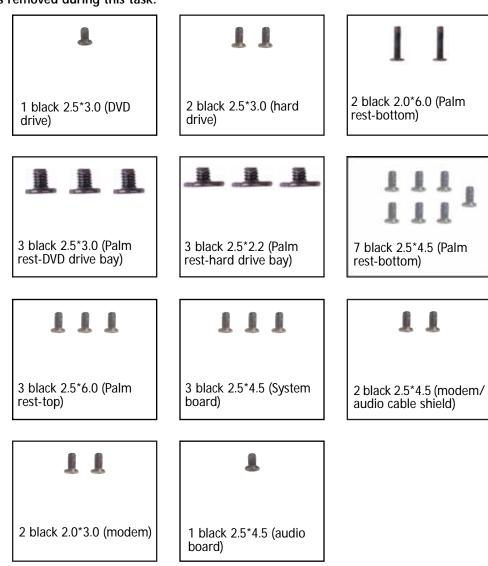
- 12 Connect the audio cable to the new audio board.
- Place the new audio board so that the large post in the bay fits within the large hole in the board, then replace the screw removed in Step 9.
- 14 Replace the modem by following the steps in "Replacing the modem" on page 42.
- 15 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 16 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 17 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 18 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 19 Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 20 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the modem jack

Tools you need to complete this task:



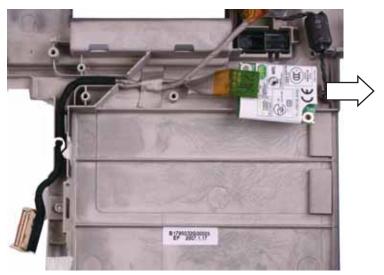
Screws removed during this task:



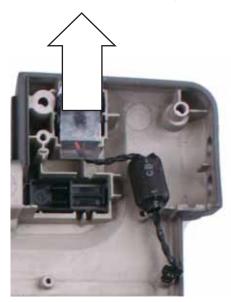
▶ To replace the modem jack:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 7 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 8 Remove the modem by following the steps in "Replacing the modem" on page 42.
- 9 Remove the audio board by following the steps in "Replacing the audio board" on page 45.
- 10 Disconnect the modem jack from the modem.



11 Use the plastic tab to lift the old modem jack out of the convertible notebook.



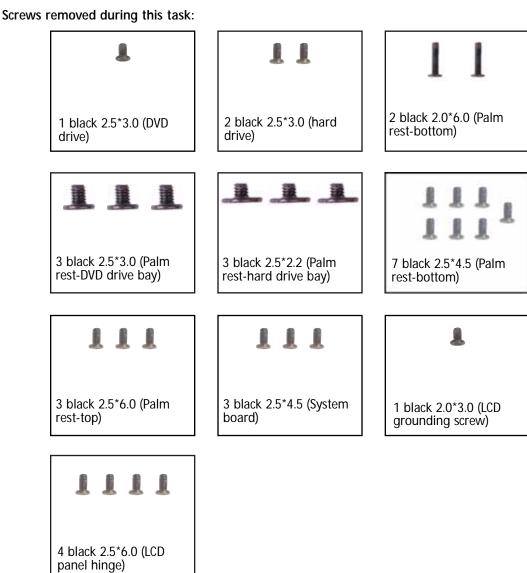
- 12 Slide the new modem jack into the convertible notebook.
- 13 Reconnect the modem jack to the modem.
- 14 Replace the audio board by following the steps in "Replacing the audio board" on page 45.
- 15 Replace the modem by following the steps in "Replacing the modem" on page 42.
- Replace the system board by following the steps in "Replacing the system board" on page 35.
- 17 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 19 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10. 20
- Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6. 21

Replacing the LCD assembly

Tools you need to complete this task:

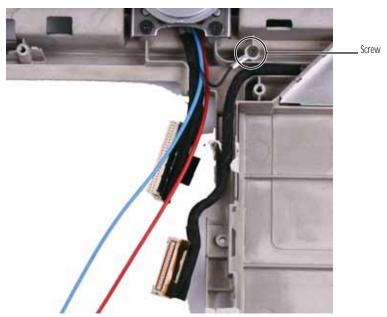




▶ To replace the LCD assembly:

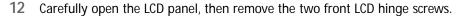
- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

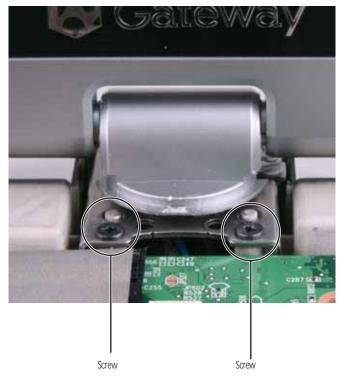
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove any tape holding the antenna wires and LCD cable, then gently pull the antenna wires out of the wireless bay.
- 10 Remove the LCD grounding screw.



11 Close the LCD panel, then remove the two rear LCD hinge screws.







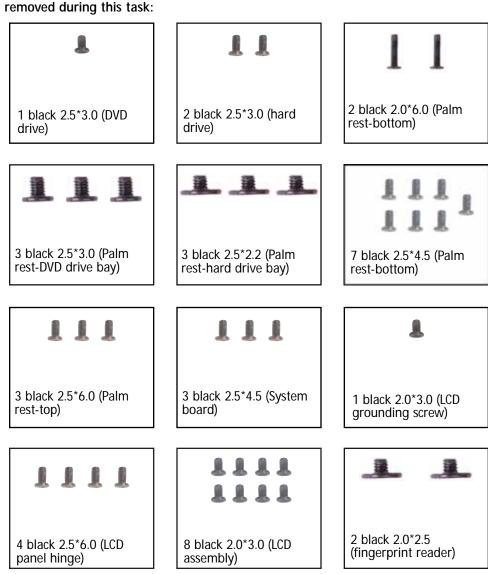
- 13 Lift the old LCD assembly off of the convertible notebook.
- 14 Place the new LCD assembly on the convertible notebook. Make sure that the antenna wires and LCD cable are routed between the front hinge screw posts.
- 15 Replace the screws removed in Step 12.
- 16 Carefully close the LCD panel, then replace the screws removed in Step 11.
- 17 Open the LCD panel, then replace the grounding screw removed in Step 10.
- 18 Feed the antenna wires into the wireless bay.
- 19 Replace any tape that held the antenna wires and LCD cable.
- 20 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 21 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 22 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 23 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 24 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the fingerprint reader

Tools you need to complete this task:



Screws removed during this task:



▶ To replace the fingerprint reader:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Remove the six black and two silver rubber inserts from the front of the LCD panel assembly.



11 Remove the eight screws from the front of the LCD panel assembly.



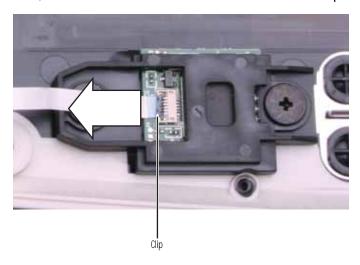
12 Carefully separate the front and back of the LCD panel assembly.



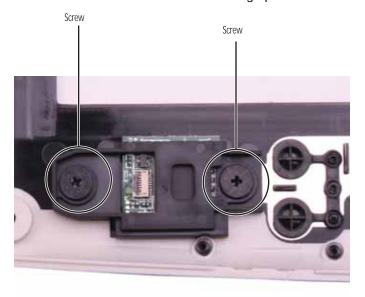
The fingerprint reader cable connects the two halves. Lay the front of the LCD panel assembly so you can access the fingerprint cable connector.



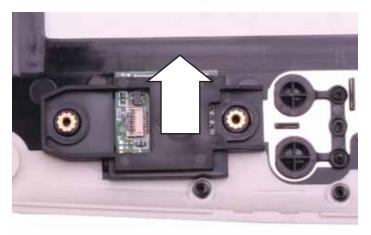
With a flat-blade screwdriver, scribe, or a fingernail, lift the brown clip off of the fingerprint cable, then remove the cable. The two halves are now completely separate.



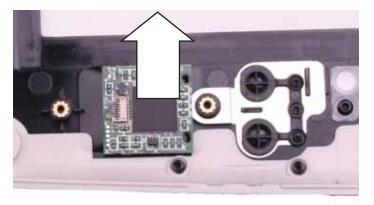
14 Remove the two screws that connect the fingerprint reader to the LCD panel assembly front.



15 Lift the black bracket off of the fingerprint reader.



Note the orientation of the old fingerprint reader, then lift it off of the LCD panel assembly front.



17 Place the new fingerprint reader onto the LCD panel assembly front in the same orientation as the old reader.

- 18 Lay the black bracket on the fingerprint reader, then replace the two screws removed in Step 14.
- 19 Make sure the brown fingerprint reader cable connector clip is in the raised position, then insert the cable into the connector and lower the clip onto the cable.

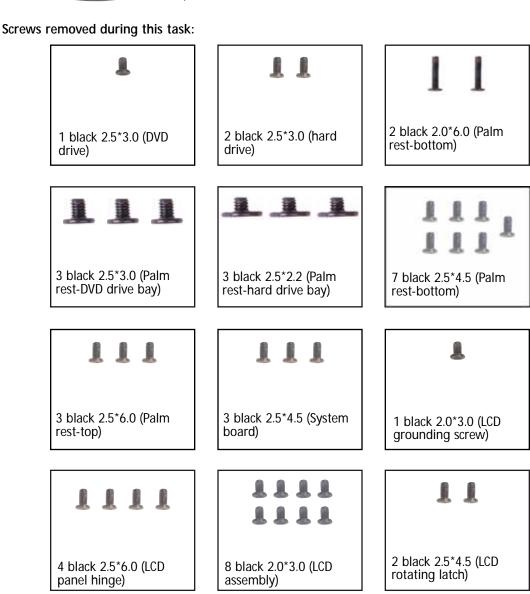


- Press the two halves of the LCD panel front and back together in several places until they click in place. You should find no loose spots or spots where the two halves do not meet.
- 21 Replace the eight LCD panel assembly screws removed in Step 11.
- 22 Replace the eight rubber inserts removed in Step 10.
- Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- Replace the system board by following the steps in "Replacing the system board" on page 35.
- 25 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 26 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 27 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 28 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 30 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the LCD rotating latch

Tools you need to complete this task:





▶ To replace the LCD rotating latch:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Remove the six black and two silver rubber inserts from the front of the LCD panel assembly.



11 Remove the eight screws from the front of the LCD panel assembly.



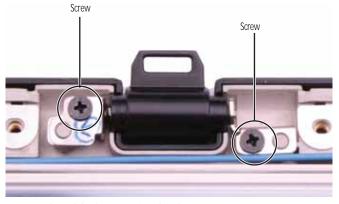
Carefully separate the front and back of the LCD panel assembly.



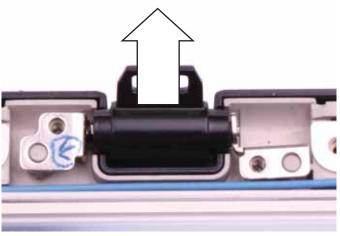
Caution
The fingerprint reader cable connects the two halves. Lay the front of the LCD panel assembly beside the back half.



Remove the two screws connecting the LCD rotating latch to the LCD lid.



Remove the old LCD rotating latch.



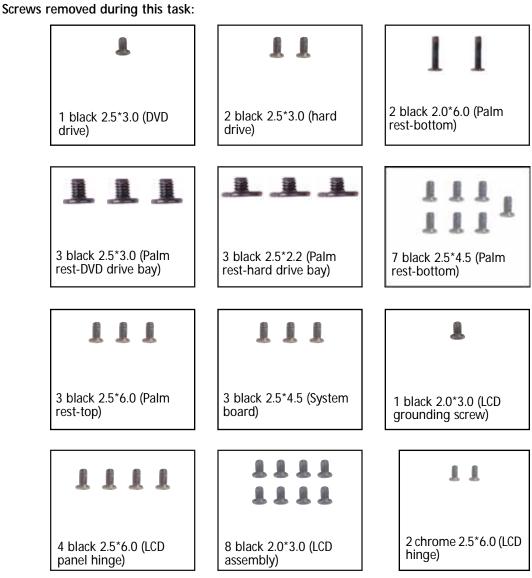
Place the new LCD rotating latch into the LCD lid.

- 16 Replace the screws removed in Step 13.
- 17 Press the two halves of the LCD panel front and back together in several places until they click in place. You should find no loose spots or spots where the two halves do not meet.
- 18 Replace the eight LCD panel assembly screws removed in Step 11.
- 19 Replace the eight rubber inserts removed in Step 10.
- 20 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 21 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 22 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 23 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 24 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 25 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 27 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the LCD hinge

Tools you need to complete this task:





▶ To replace the LCD hinge:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Remove the six black and two silver rubber inserts from the front of the LCD panel assembly.



11 Remove the eight screws from the front of the LCD panel assembly.



12 Carefully separate the front and back of the LCD panel assembly.

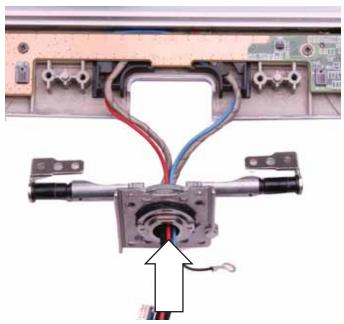
Caution
The fingerprint reader cable connects the two halves. Lay the front of the LCD panel assembly beside the back half.



Remove the two screws connecting the LCD hinge to the LCD lid.



14 Remove the old LCD hinge. Be careful to feed each cable individually through the hinge, with the grey LCD cable last.

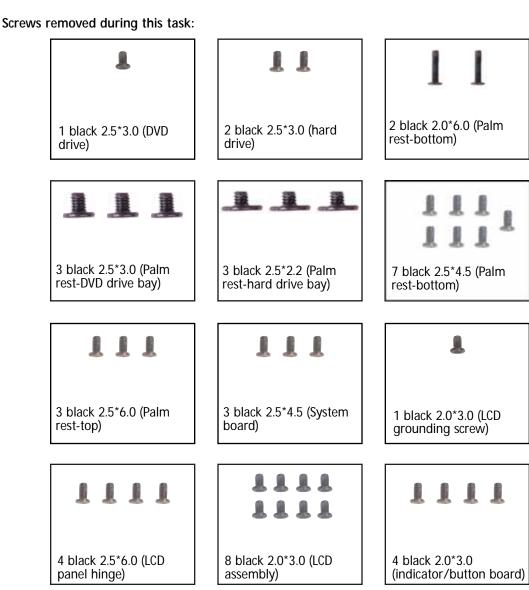


- 15 Feed the cables through the new LCD hinge, with the grey LCD cable first.
- 16 Place the new LCD hinge into the LCD lid.
- 17 Replace the screws removed in Step 13.
- 18 Press the two halves of the LCD panel front and back together in several places until they click in place. You should find no loose spots or spots where the two halves do not meet.
- 19 Replace the eight LCD panel assembly screws removed in Step 11.
- 20 Replace the eight rubber inserts removed in Step 10.
- 21 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 22 Replace the system board by following the steps in "Replacing the system board" on page 35.
- Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 24 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 25 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 26 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 27 Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 28 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the indicator/button board

Tools you need to complete this task:





▶ To replace the indicator/button board:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Remove the six black and two silver rubber inserts from the front of the LCD panel assembly.



11 Remove the eight screws from the front of the LCD panel assembly.



12 Carefully separate the front and back of the LCD panel assembly.

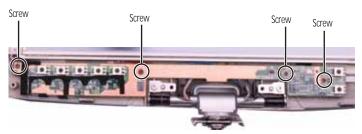


Caution

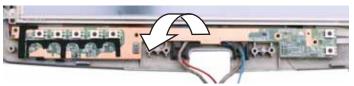
The fingerprint reader cable connects the two halves. Lay the front of the LCD panel assembly beside the back half.



13 Remove the four screws that connect the indicator/button board to the LCD panel assembly back.



14 Lift the indicator/button board off of the LCD panel assembly back, then turn it over.



15 Disconnect the two cables from the old indicator/button board.



- 16 Connect the two cables to the new indicator/button board.
- 17 Replace the indicator/button board, then replace the four screws removed in Step 13.
- Press the two halves of the LCD panel front and back together in several places until they click in place. You should find no loose spots or spots where the two halves do not meet.
- 19 Replace the eight LCD panel assembly screws removed in Step 11.
- 20 Replace the eight rubber inserts removed in Step 10.

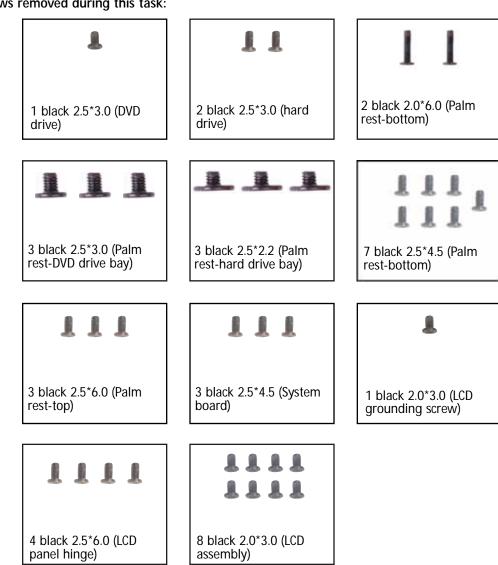
- 21 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 22 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 23 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 24 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 25 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 26 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 27 Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the inverter

Tools you need to complete this task:



Screws removed during this task:



▶ To replace the inverter:

- Complete the steps in "Preparing the convertible notebook" on page 5.
- Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.

- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 7 Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Remove the six black and two silver rubber inserts from the front of the LCD panel assembly.



11 Remove the eight screws from the front of the LCD panel assembly.



12 Carefully separate the front and back of the LCD panel assembly.



Caution

The fingerprint reader cable connects the two halves. Lay the front of the LCD panel assembly beside the back half.



13 Disconnect the two cables from the old inverter.

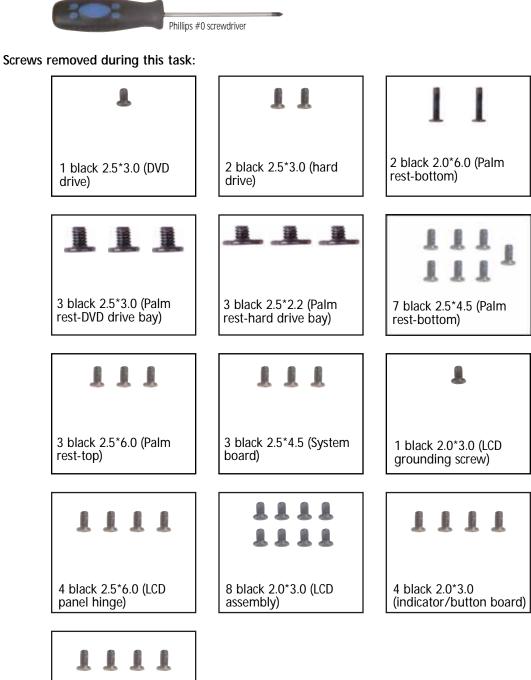


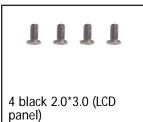
- 14 Remove the old inverter from the LCD assembly back.
- 15 Connect the two cables to the new inverter.
- 16 Replace the inverter.
- 17 Press the two halves of the LCD panel front and back together in several places until they click in place. You should find no loose spots or spots where the two halves do not meet.
- 18 Replace the eight LCD panel assembly screws removed in Step 11.
- 19 Replace the eight rubber inserts removed in Step 10.
- 20 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 21 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 22 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 23 Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 24 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 25 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 27 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the LCD panel

Tools you need to complete this task:





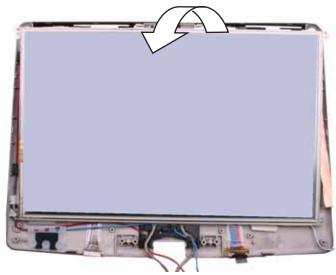


▶ To replace the LCD panel:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- Disconnect the fingerprint cable by following the instructions in "Replacing the fingerprint reader" on page 54.
- 11 Remove the indicator/button board by following the instructions in "Replacing the indicator/button board" on page 67.
- 12 Remove the inverter by following the instructions in "Replacing the inverter" on page 71.
- Remove the four screws connecting the LCD panel to the LCD lid.



14 Remove the old LCD panel from the LCD lid.



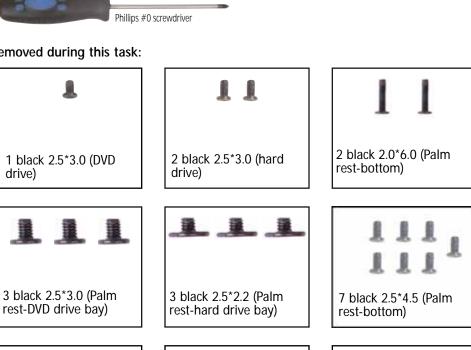
- 15 Place the new LCD panel into the LCD lid.
- 16 Replace the screws removed in Step 13.
- 17 Replace the inverter by following the instructions in "Replacing the inverter" on page 71.
- Replace the indicator/button board by following the instructions in "Replacing the indicator/button board" on page 67.
- 19 Connect the fingerprint cable by following the instructions in "Replacing the fingerprint reader" on page 54.
- 20 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 21 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 22 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 24 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 25 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 27 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

Replacing the LCD assembly lid

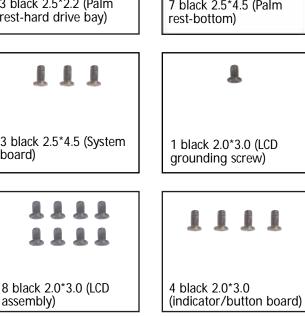
Tools you need to complete this task:

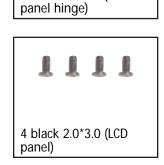


Screws removed during this task:









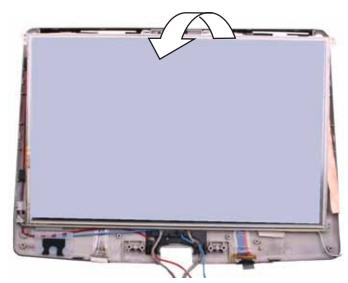
4 black 2.5*6.0 (LCD

▶ To replace the LCD assembly lid:

- 1 Complete the steps in "Preparing the convertible notebook" on page 5.
- 2 Remove the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.
- 3 Disconnect the wireless antenna wires by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 4 Remove the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- 5 Remove the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 6 Remove the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- Remove the palm rest by following the steps in "Replacing the palm rest" on page 25.
- 8 Remove the system board by following the steps in "Replacing the system board" on page 35.
- 9 Remove the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 10 Disconnect the fingerprint cable by following the instructions in "Replacing the fingerprint reader" on page 54.
- 11 Remove the indicator/button board by following the instructions in "Replacing the indicator/button board" on page 67.
- 12 Remove the inverter by following the instructions in "Replacing the inverter" on page 71.
- Remove the four screws connecting the LCD panel to the LCD lid.



14 Remove the LCD panel from the old LCD lid.



- 15 Place the LCD panel into the new LCD lid.
- 16 Replace the screws removed in Step 13.
- 17 Replace the inverter by following the instructions in "Replacing the inverter" on page 71.
- Replace the indicator/button board by following the instructions in "Replacing the indicator/button board" on page 67.
- 19 Connect the fingerprint cable by following the instructions in "Replacing the fingerprint reader" on page 54.
- 20 Replace the LCD assembly by following the steps in "Replacing the LCD assembly" on page 51.
- 21 Replace the system board by following the steps in "Replacing the system board" on page 35.
- 22 Replace the palm rest by following the steps in "Replacing the palm rest" on page 25.
- Replace the hinge cover by following the steps in "Replacing the hinge cover" on page 23.
- 24 Replace the hard drive by following the steps in "Replacing the hard drive" on page 17.
- 25 Replace the DVD drive by following the steps in "Replacing the DVD drive" on page 14.
- Reconnect the antenna wires to the wireless card by following the steps in "Replacing the IEEE 802.11 wireless card" on page 10.
- 27 Replace the memory bay cover by following the steps in "Adding or replacing memory modules" on page 6.

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