

Gateway®



Service Guide

Gateway M350 Notebook

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Contents

Replacing Gateway M350 Components.....	1
Identifying the notebook model	2
Identifying components	3
Preparing your work space	4
Preventing static electricity discharge	5
Preparing the notebook	6
Removing the battery	7
Replacing the hard drive kit	9
Replacing the hard drive in the hard drive kit	13
Replacing the optical drive	16
Replacing the keyboard cover	19
Replacing the keyboard	23
Adding or replacing memory modules	28
Adding or replacing memory in the memory bay	28
Replacing memory under the keyboard	31
Replacing the IEEE 802.11 Mini PCI card	34
Replacing the cooling assembly	38
Replacing the hinge covers	41
Replacing the LCD panel assembly	45
Replacing the palm rest assembly	48
Replacing the diskette drive	54
Replacing the memory card reader	58
Replacing the modem	62
Replacing the CMOS battery	65
Replacing the system board	68



Replacing Gateway M350 Components

Important



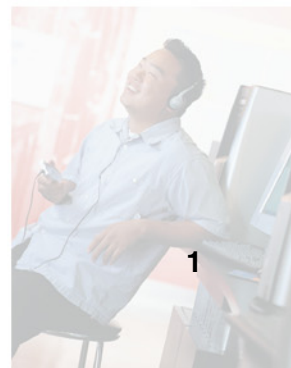
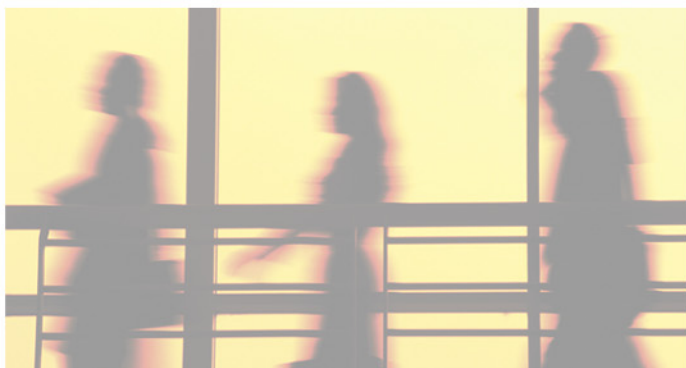
This service guide is not intended to be provided to individual users or consumers. It cannot be provided to anyone other than an authorized service provider.

Use this service guide to help plan your maintenance tasks for the Gateway M350 notebook. All tasks covered in this guide can be performed by an **authorized field technician** without jeopardizing the notebook's warranty.

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

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.

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Identifying the notebook model

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

Gateway model number



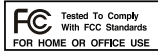
FOR USE WITH FSP150-1ADE11 or ADP-150CB B
POUR UTILISER AVEC MODEL FSP150-1ADE11 ou ADP-150CB B
INPUT: 19V ~ 7.9A

MODEL No.: M350WVN

This class B digital apparatus meets all requirements of the Canadian interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le Matériel brouilleur du Canada.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Apparatus Claims of U.S. Patent Nos. 4,631,603; 4,577,216; 4,819,098 and 4,907,093 licensed for limited viewing uses only.



CONFORMS TO
ANSI STD. 60950
CERTIFIED TO
CAN/CSA STD
C22.2 NO. 60950 300 961 5

Fitted with internal AMBIT Microsystems Corp.
modem model number T60M283.00
Complies with 47 CFR part 68
REN: 0.6B 6CT TAI-36146-M5-E
Complies with Industry Canada
CS03 IC: 2878 11538 A
MEX SCT TTDAMT603-128

Fitted with Gemtek
model xxxxxx
802.11g WLAN card
FCC ID: xxxxxxxxxx
IC: xxxxxxxxxx
SCT: xxxxxxxx

P/N.: [Redacted]

[Redacted]

TH10 CM

Warning

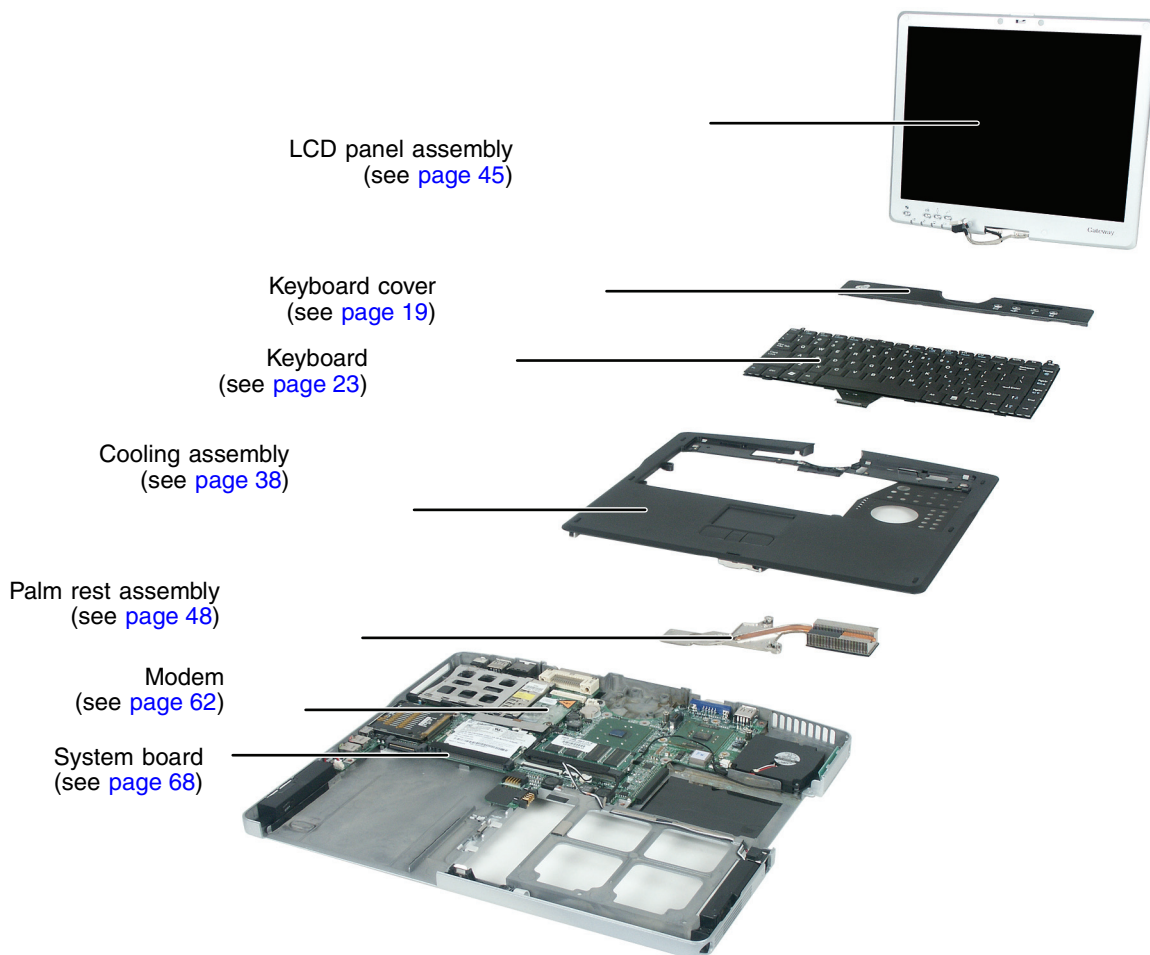


It is important that you use the correct service guide for the notebook. Failure to follow the approved tasks for the notebook model may result in damage to the notebook.

Identifying components

Where screw measurements are shown, the first number indicates screw head width, and the second number indicates screw length.

Use this chart to identify the main components of the notebook. For a complete list of replaceable parts, see the [“Contents” on page i](#).



Preparing your work space

Before performing maintenance on the notebook, make sure that your work space and the 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 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 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. Where screw measurements are shown, the first number indicates screw head width, and the second number indicates screw length.
 - 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

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

Warning



ESD can permanently damage electrostatic discharge-sensitive components in the notebook. Prevent ESD damage by following ESD guidelines every time you open the notebook case.

Warning



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

Before replacing components, follow these guidelines:

- Turn off the notebook.
- 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.

Warning



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

- Touch a bare metal surface on your workbench or other grounded object.
- Unplug the power cord and the modem and network cables.
- Remove the battery. For more information, see [“Removing the battery” on page 7](#).
- Disconnect all peripheral devices and remove any PC Cards.

Before working with notebook components, 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.

Preparing the notebook

Warning



To avoid exposure to dangerous electrical voltages and moving parts, turn off the notebook, remove the battery, and unplug the power cord and modem and network cables before opening the case. Replace the cover before you restore power or reconnect the modem and network cables.

To prepare the notebook for maintenance:

- Make sure that the CD or DVD drive is empty.
- Disconnect all peripheral devices.
- Remove any memory cards, PC Cards, and diskettes.
- Turn off the notebook and unplug the power cord and modem and network cables (if attached).
- Turn over the notebook and remove the battery. For more information see [“Removing the battery” on page 7](#).

Removing the battery



To remove the battery:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook”](#) on page 6.
- 2 Turn the notebook over so the bottom is facing up.
- 3 Slide the battery release latch.



- 4 Lift the battery out of the bay.



Replacing the hard drive kit

Tools you need to complete this task:



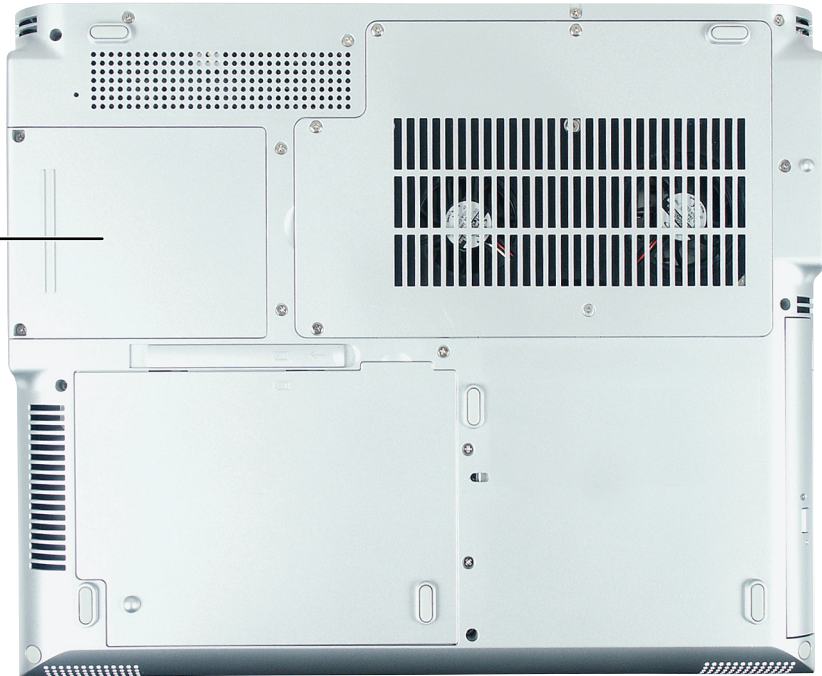
Phillips #0 screwdriver

Screws removed during this task:



2 chrome 2.5 × 6 mm
(hard drive kit)

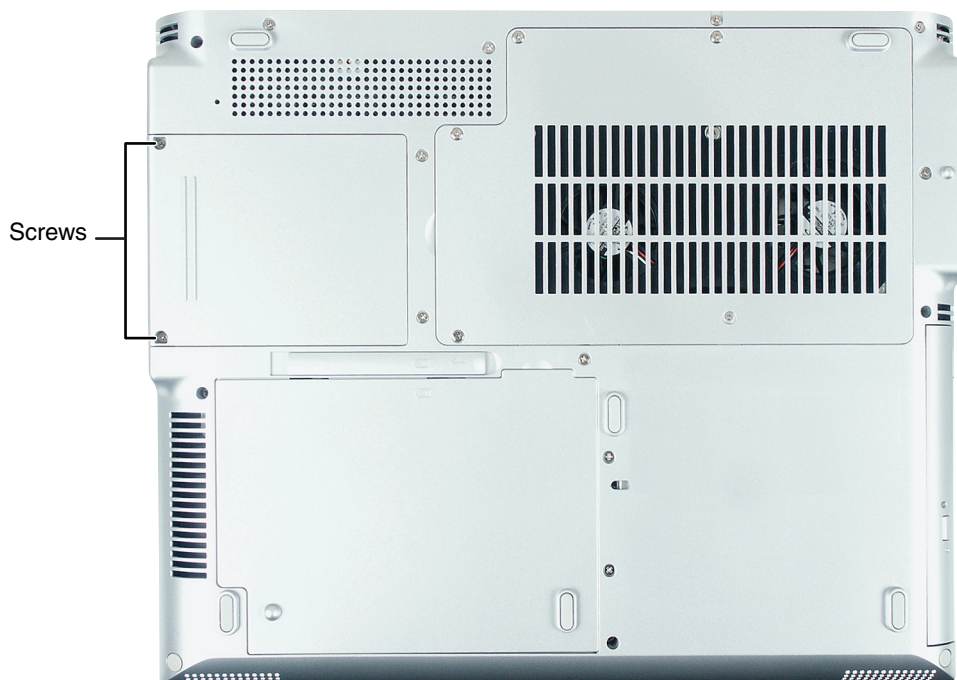
Hard
drive





To replace the hard drive kit:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Remove the two hard drive kit screws.

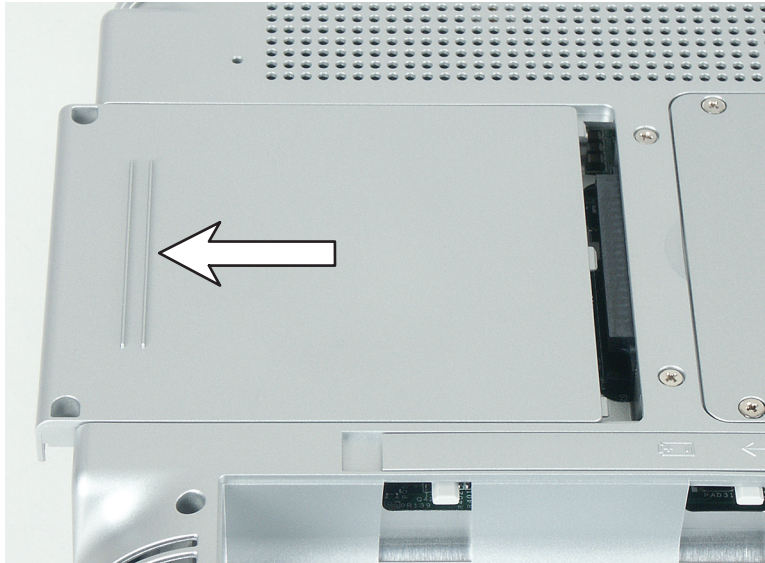


Tips & Tricks



Use a magnetic screwdriver or turn the notebook over to remove the screws.

- 5** Slide the old hard drive kit away from the connector.



- 6** Lift the end of the hard drive kit furthest from the connector, then remove the kit from the bay.



- 7** Place the new hard drive kit into the bay and slide it into the connector.
- 8** Replace the screws that secure the hard drive kit to the notebook.



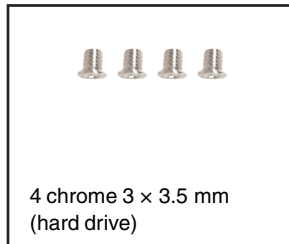
Replacing the hard drive in the hard drive kit

Tools you need to complete this task:



Phillips #0 screwdriver

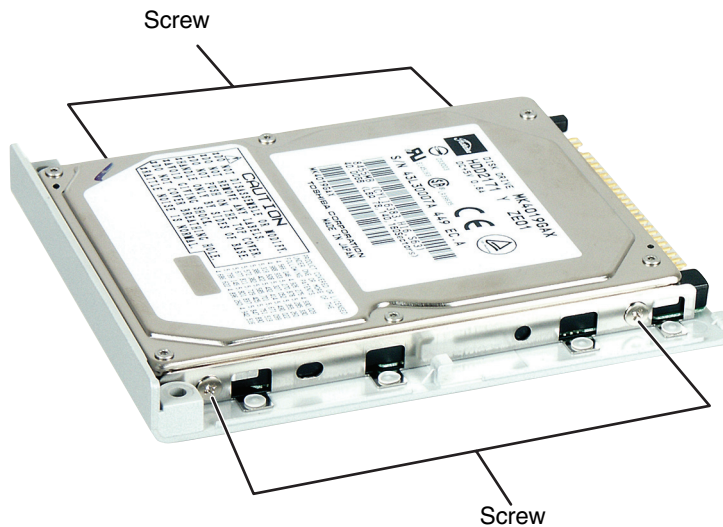
Screws removed during this task:



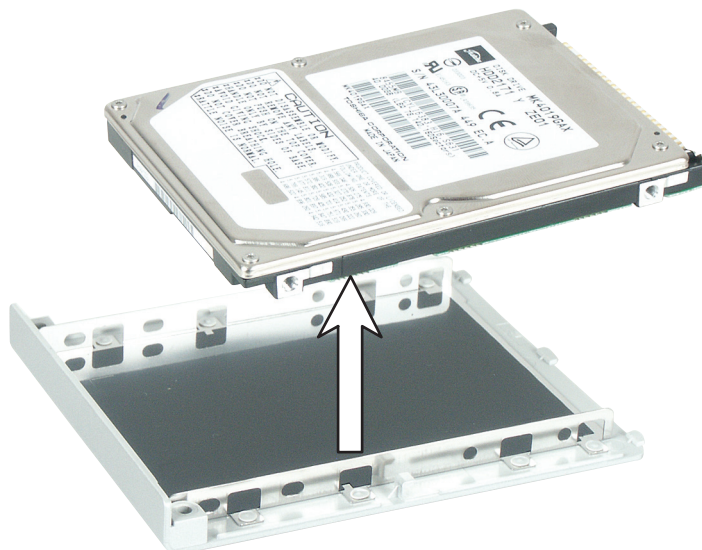
To replace the hard drive in the hard drive kit:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Remove the hard drive kit by following the instructions in [“Replacing the hard drive kit” on page 9](#).

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



- 6 Remove the bracket from the old drive.



- 7 Insert the new drive into the bracket so the screw holes line up.
- 8 Replace the four screws that secure the bracket to the drive.

- 9** Slide the new hard drive kit into the notebook.
- 10** Replace the screws that secure the hard drive kit to the notebook.



Replacing the optical drive

Tools you need to complete this task:



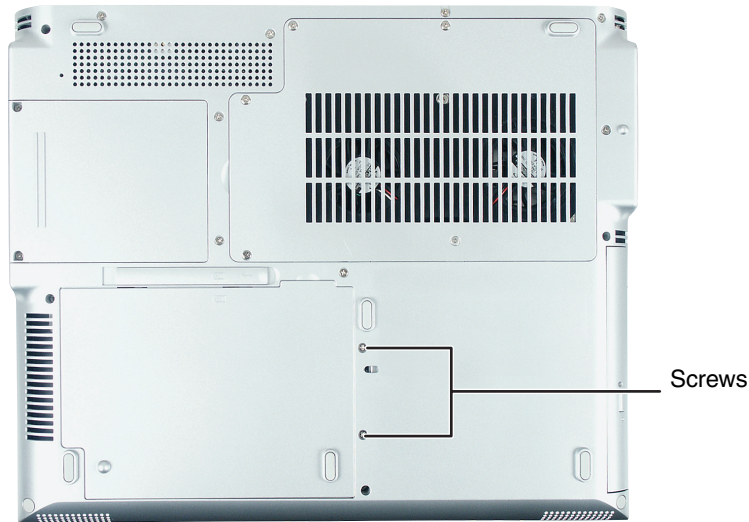
Screws removed during this task:



To replace the hard drive in the hard drive kit:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).

4 Remove the two optical drive screws.



5 Slide the old drive out of your notebook.

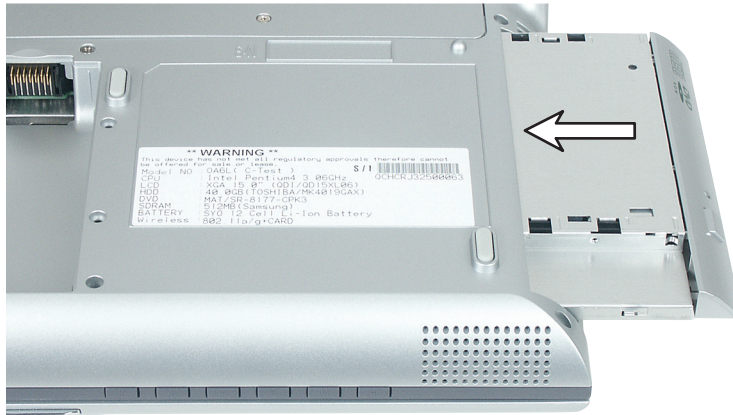


Tips & Tricks



To make removing the optical drive easier, insert a straightened paperclip into the manual eject hole on the optical drive. Grab the open optical drive tray and pull the drive straight out.

- 6 Slide the new drive into your notebook.



- 7 Replace the two optical drive screws.



Replacing the keyboard cover

Tools you need to complete this task:



To replace the keyboard cover:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Turn the notebook over so the top is facing up.
- 5** Open the LCD panel to the normal viewing position.

- 6 Insert the small flat-blade screwdriver or non-marring tool under the bottom right corner of the keyboard cover and gently pry it up.

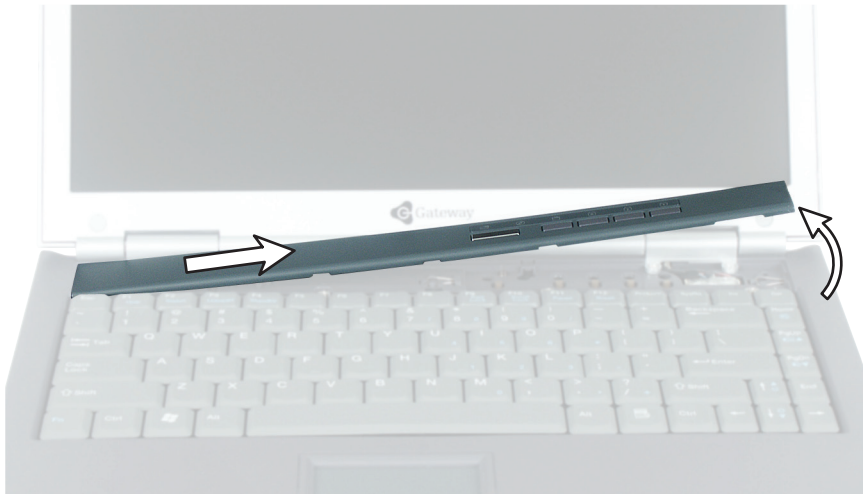
Important



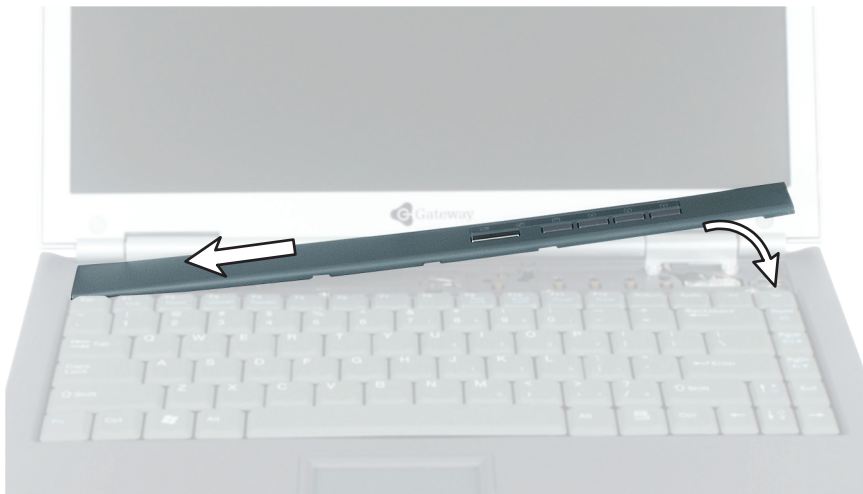
Inserting a piece of cloth between the screwdriver and keyboard and notebook case will help prevent damage to the notebook.



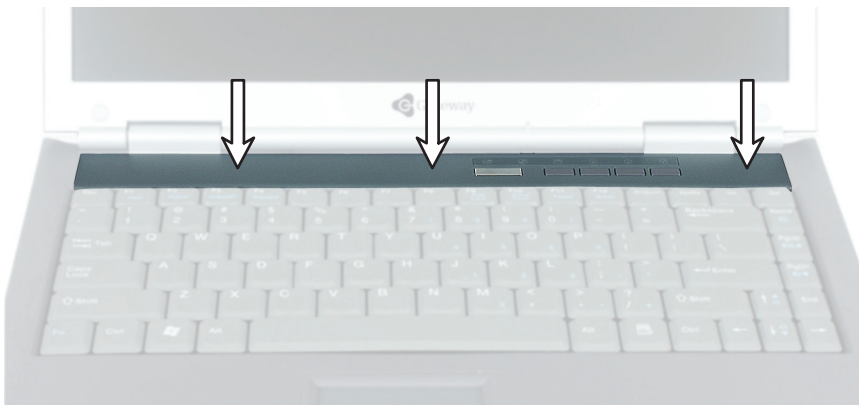
- 7** Pull the cover off the notebook. You will hear small snapping sounds as the cover comes away from the notebook. Be careful not to break off the tabs found on the left end of the cover.



- 8** Slide the two tabs on the left end of the new cover under the notebook frame.



- 9 Press down on the cover in several places until it clicks in place.



The cover is correctly mounted when you can run your finger along the cover and find no loose spots. The cover should be flat all the way across.

Warning

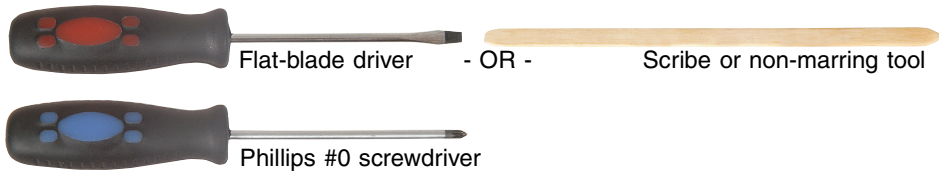


If the cover is not correctly replaced, the notebook could be damaged when you try to close the LCD panel.

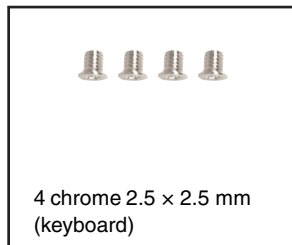


Replacing the keyboard

Tools you need to complete this task:



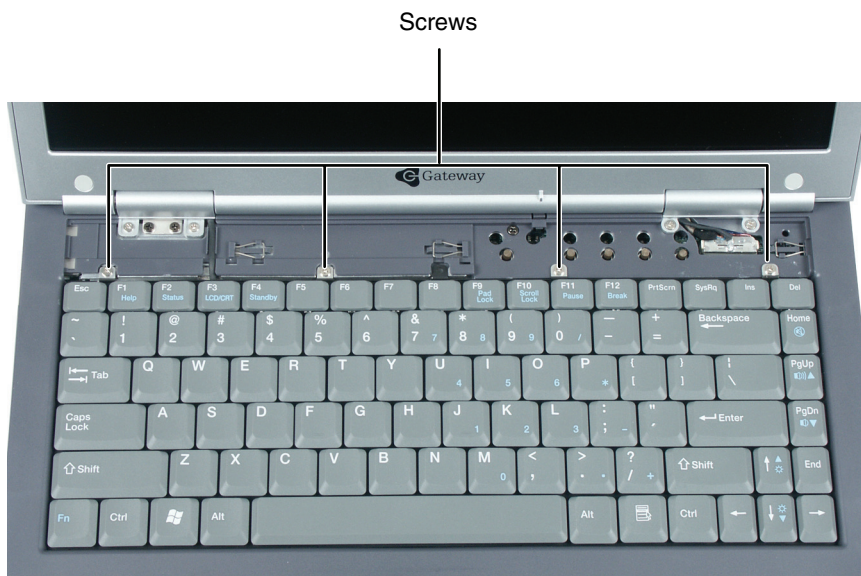
Screws removed during this task:



To replace the keyboard:

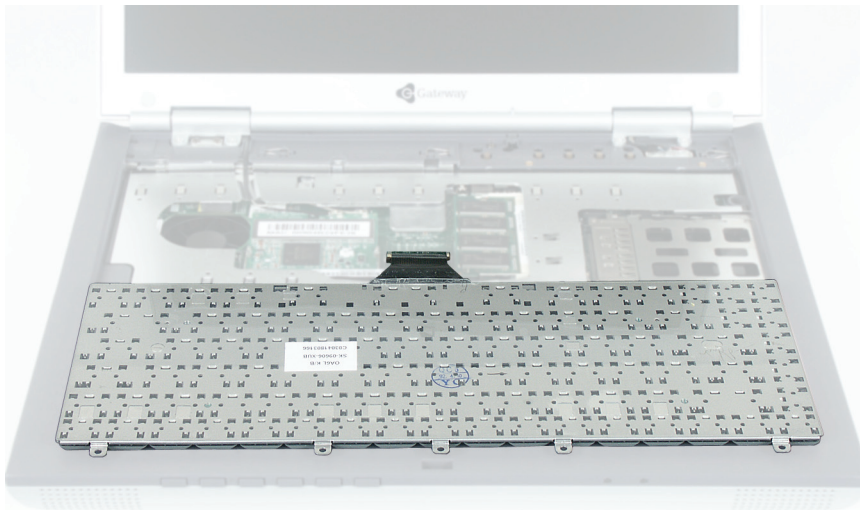
- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).

- 6 Remove the four keyboard screws that secure the keyboard to the notebook.



- 7 Lift the back edge of the keyboard slightly, then carefully slide the keyboard back until the four tabs on the front edge of the keyboard are free from their slots. Be careful not to damage the LCD panel.

- 8 Slowly rotate the keyboard toward you so it lies **keys-down** on top of the notebook. Be careful not to damage the LCD panel.



- 9 Carefully insert the small flat-blade screwdriver between the keyboard cable and the black plastic hinge where the cable connects to the system board. Gently lift the hinge off the cable. The cable is now free and you can remove the keyboard.
- 10 Place the new keyboard **keys-down** on the notebook with the space bar away from you.

- 11 Verify the black plastic hinge on the system board keyboard connector is in the raised position.
- 12 Insert the end of the keyboard cable between the black plastic hinge and the white connector.

Important



The cable is correctly oriented if it is not twisted.

- 13 Press the black plastic hinge onto the keyboard cable.
- 14 Rotate the keyboard toward the LCD panel until the keyboard is almost face-up.
- 15 Insert the four tabs located on the front edge of the keyboard into the corresponding slots under the palm rest.



- 16 Gently press the keyboard down until it is flat all the way across. The keyboard should easily fall into place. Be careful not to damage the LCD panel.

17 Replace the four keyboard screws.

Screws



18 Reassemble the notebook.



Adding or replacing memory modules

Adding or replacing memory in the memory bay

Tools you need to complete this task:

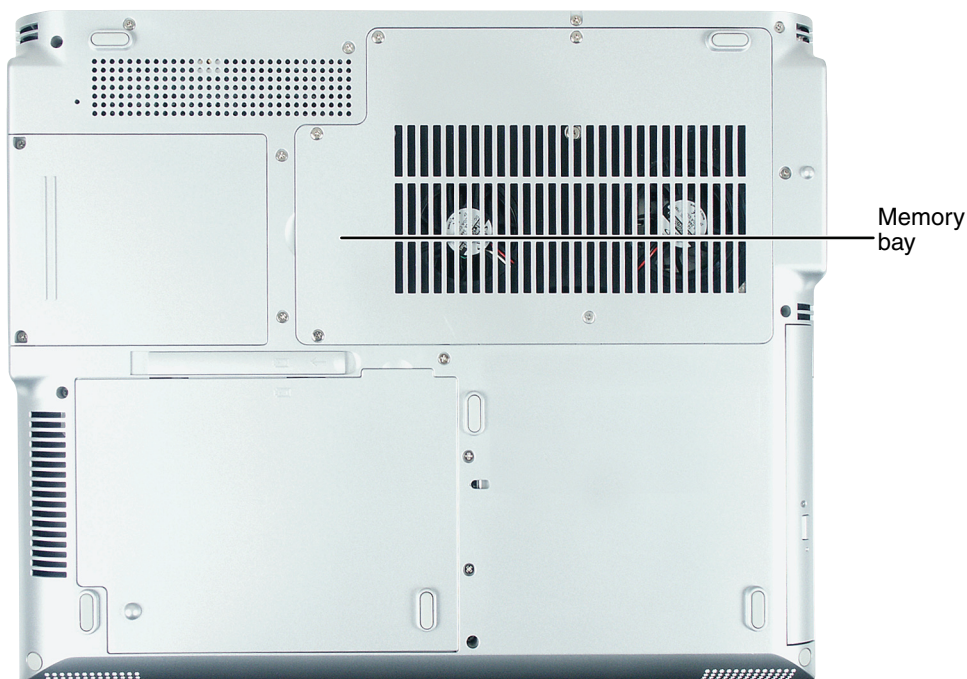


Phillips #0 screwdriver

Important

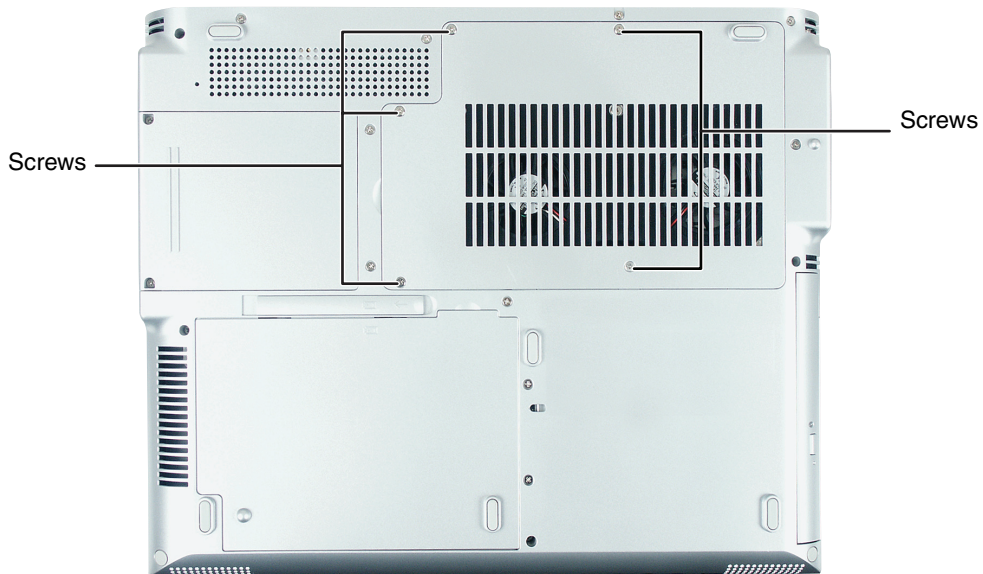


Use only memory modules designed for the Gateway M350.

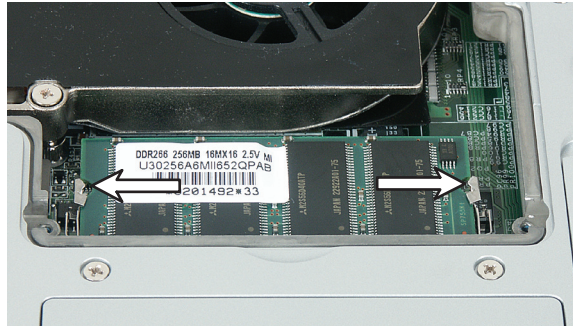


 To add or replace memory modules:

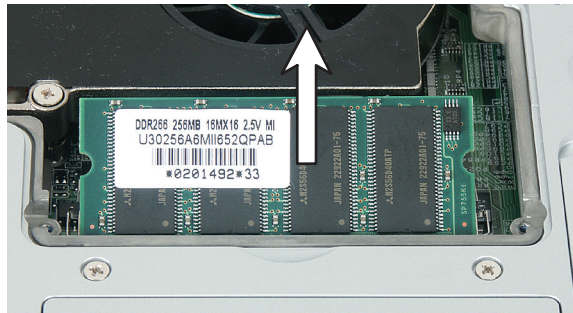
- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Loosen the five captive memory bay cover screws, then remove the memory bay cover. These screws cannot be removed.



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



- 6 Pull the memory module out of the slot.

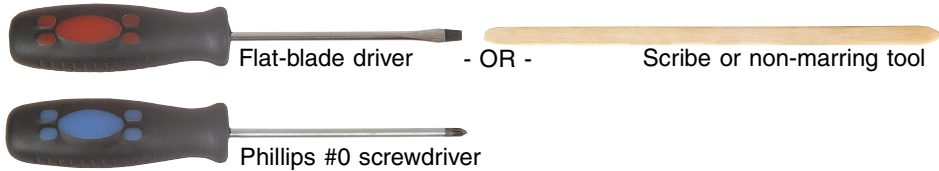


- 7 Hold the new or replacement module at a 30-degree angle and press it into the empty memory slot. This module is keyed so it can only be inserted in one direction. If the module does not fit, make sure that the notch in the module lines up with the tab in the memory bay.
- 8 Gently push the module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

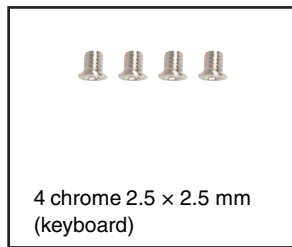


Replacing memory under the keyboard

Tools you need to complete this task:



Screws removed during this task:



Important



Use only memory modules designed for the Gateway M350 for upgrading your memory.



To replace memory modules:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Open the LCD panel to the normal viewing position.

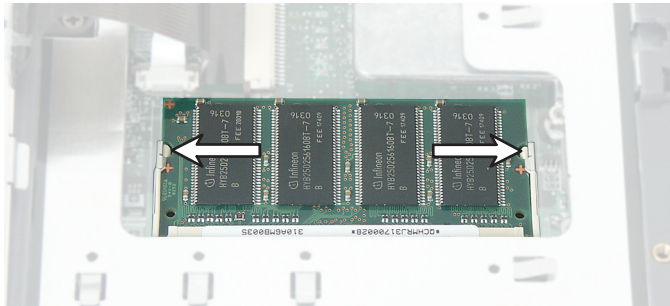
- 6 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover”](#) on page 19.
- 7 Open the keyboard compartment by following the instructions in [“Replacing the keyboard”](#) on page 23.

Important

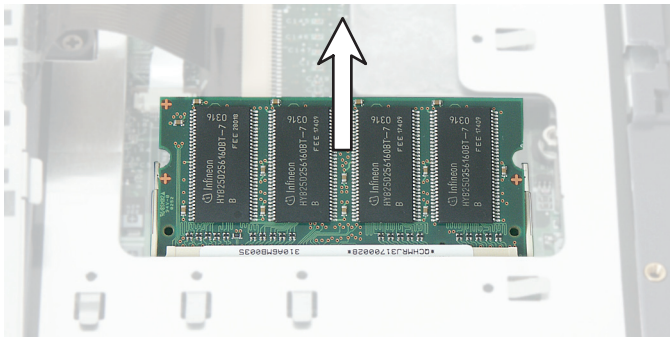


You do not need to disconnect the keyboard from the system board.

- 8 Gently press outward on the clip at each end of the memory module until the module tilts upward.



- 9 Pull the memory module out of the slot.



- 10 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.

- 11** Gently push the module down until it clicks in place.
- 12** Reassemble the notebook.



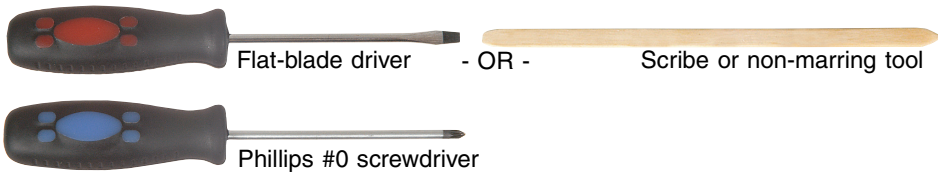
Replacing the IEEE 802.11 Mini PCI card

Caution

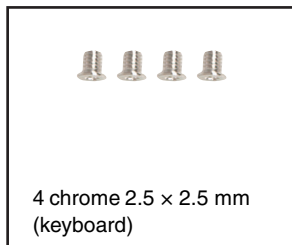


By law, only approved wireless modules provided by Gateway, or a Gateway authorized representative, explicitly for the Gateway M350 may be installed in this notebook.

Tools you need to complete this task:



Screws removed during this task:



To replace the IEEE 802.11 Mini PCI card:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Open the LCD panel to the normal viewing position.

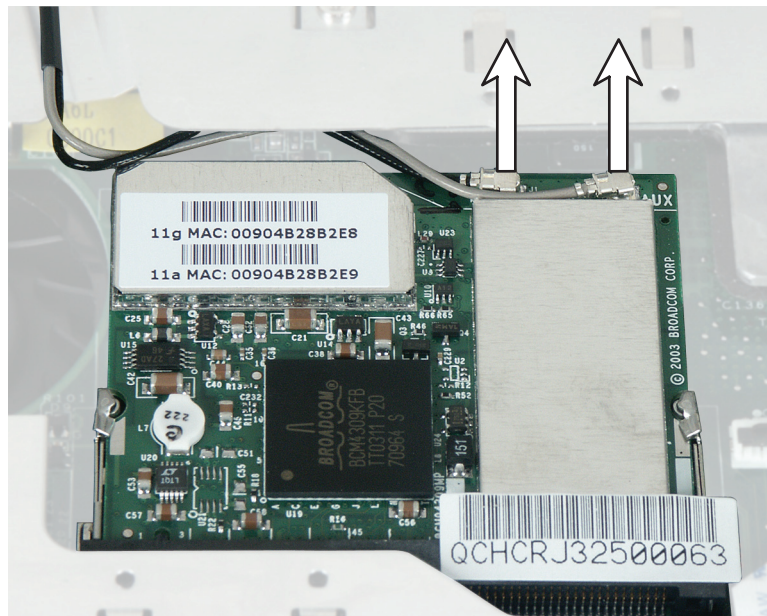
- 6 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19.](#)
- 7 Open the keyboard compartment by following the instructions in [“Replacing the keyboard” on page 23.](#)

Important

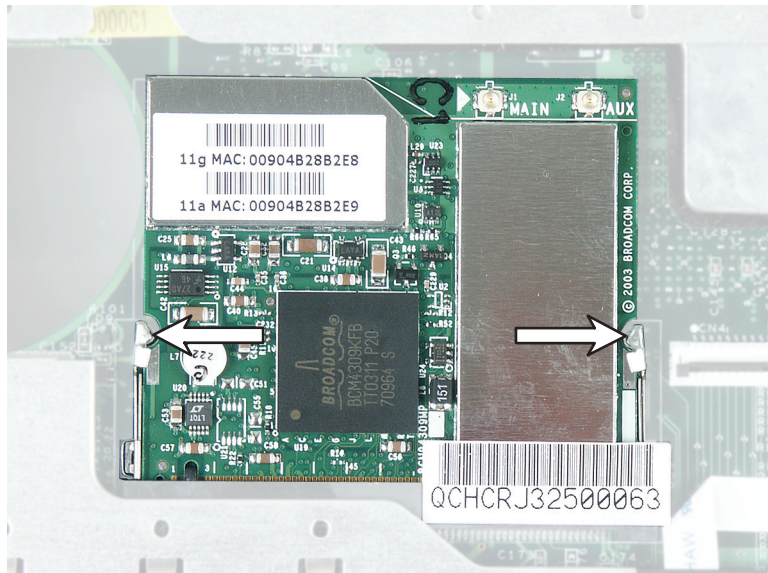


You do not need to disconnect the keyboard from the system board.

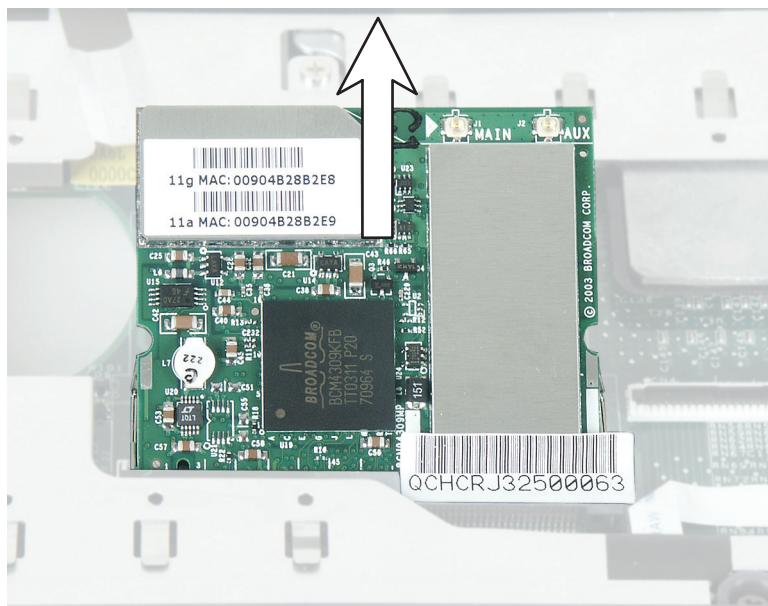
- 8 Unplug the two antenna cables.



- 9** Move the antenna wires out of the way, then press outward on the clip at each side of the module until the module tilts upward.



- 10** Pull the module out of the slot.



- 11** Hold the new module at a 30-degree angle and press it 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.
- 12** Move the antenna wires out of the way, then press the module down until it clicks into place.
- 13** Reattach the black antenna cable to the connector labelled MAIN or M, then reattach the light gray antenna cable to the connector labelled AUX or A.
- 14** Reassemble the notebook.



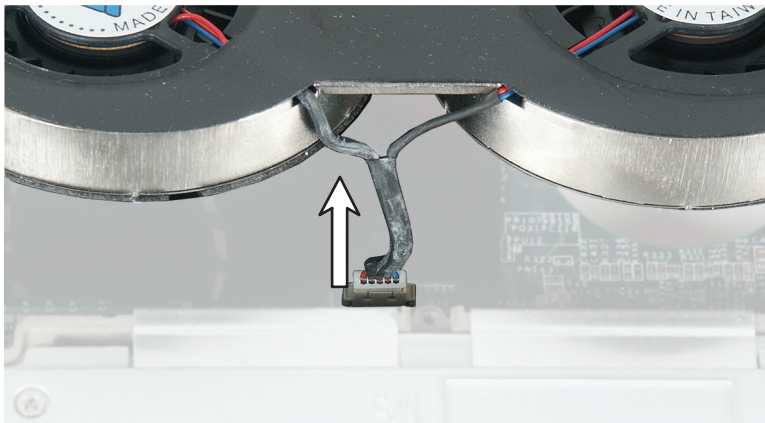
Replacing the cooling assembly

Tools you need to complete this task:

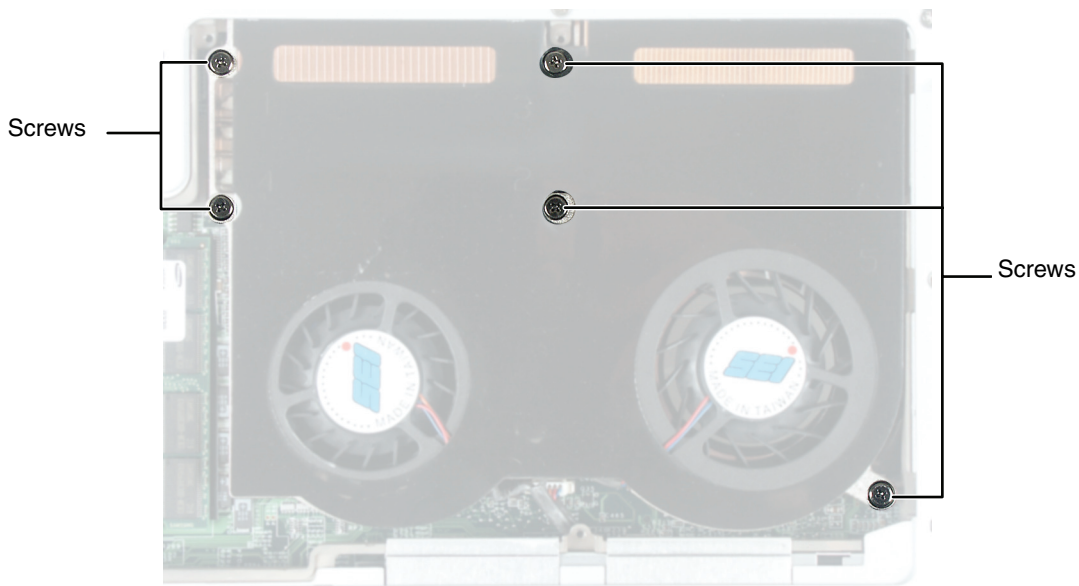


To replace the cooling assembly:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Loosen the five captive memory bay cover screws, then remove the memory bay cover. These screws cannot be removed.
- 5 Unplug the cooling fans.



- 6 Loosen the five captive screws that secure the cooling assembly to the notebook. These screws cannot be removed.



- 7 Remove the cooling assembly.
- 8 If the new cooling assembly came with a blue plastic cover that covers the thermal grease on the bottom side of the new cooling assembly, remove it. Go to [Step 10](#).

-OR-

If the new cooling assembly did not come with thermal grease already applied, go to [Step 9](#).

- 9 Use the provided applicator to apply a thin layer of thermal grease to the bottom of the cooling assembly where it will make contact with the processor.

Warning



Do not apply thermal grease to any other part of the cooling assembly or notebook.

- 10** Remove any thermal grease residue that may remain on the processor from the old cooling assembly. The residue can be removed using Isopropyl Alcohol, Acetone, or Toluene and a lint free cloth.
- 11** Insert the new cooling assembly into the notebook.
- 12** Tighten the five cooling assembly screws in the order. Make sure that you tighten the screws in numerical order. Each screw hole has a numeral next to it.

Warning



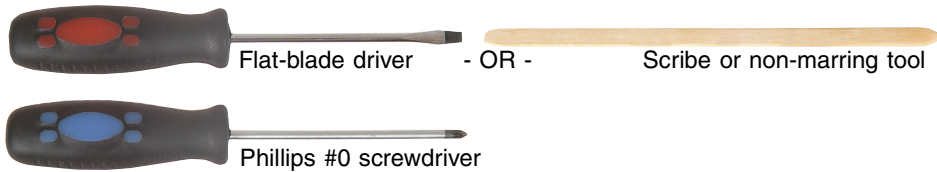
When tightening the cooling assembly's chrome screws into the numbered holes, tighten them in numerical order.

- 13** Plug in the cooling fans.
- 14** Reassemble the notebook.

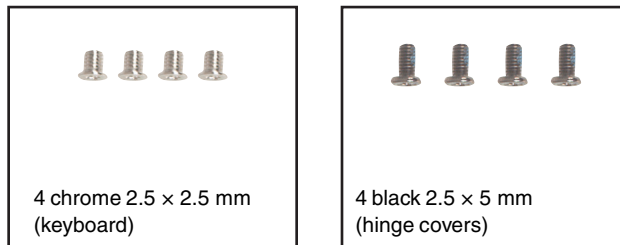


Replacing the hinge covers

Tools you need to complete this task:



Screws removed during this task:



To replace the hinge covers:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).

- 6 Open the keyboard compartment by following the instructions in [“Replacing the keyboard” on page 23](#).

Important



You do not need to disconnect the keyboard from the system board.

- 7 Open the LCD panel all the way.
- 8 Remove the hinge cover screws for the cover you are replacing.

Left hinge cover screws

Right hinge cover screws

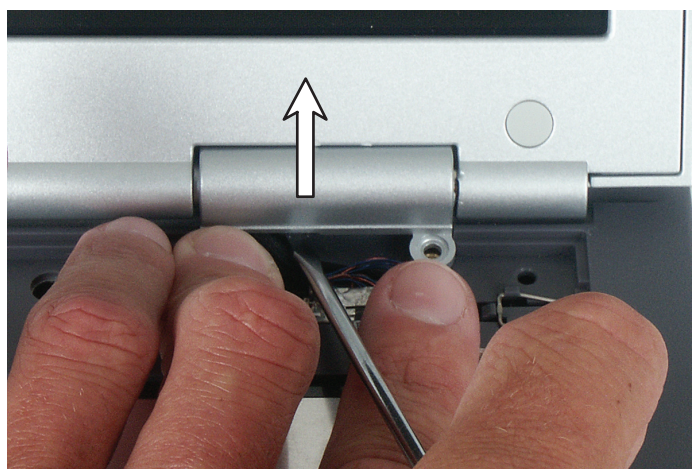
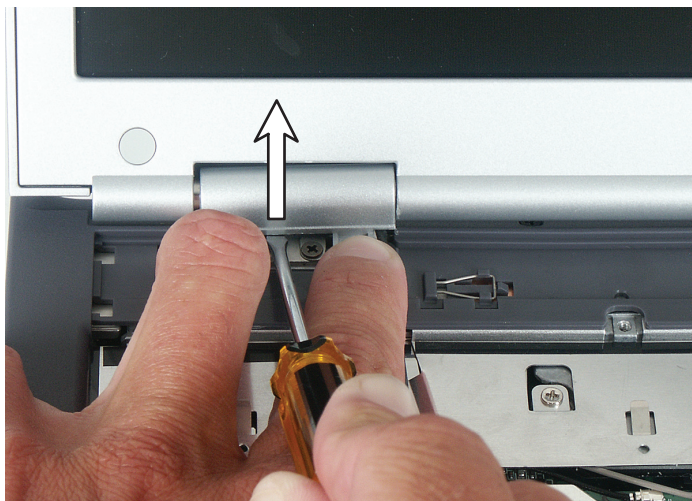


- 9 Insert the small flat-blade screwdriver or non-marring tool under the bottom of the hinge cover, then carefully pry it up. Press down on the two plastic screw tabs while you pry.

Warning



To avoid breaking the hinge cover or putting stress on the LCD panel, hold down on the two plastic screw tabs while you pry.



- 10 Snap the new cover into place over the hinge.

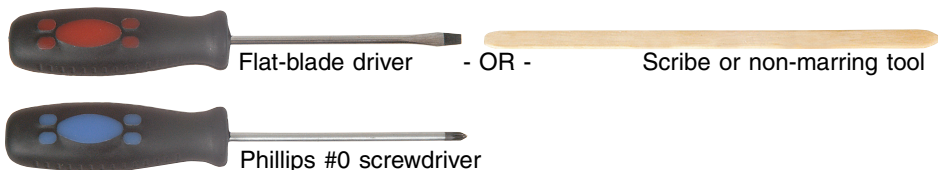
11 Replace the hinge cover screws.

12 Reassemble the notebook.

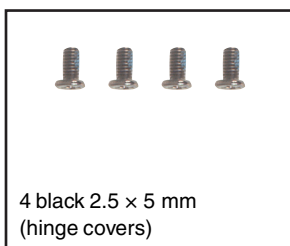
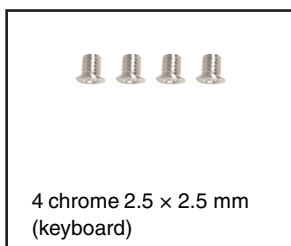


Replacing the LCD panel assembly

Tools you need to complete this task:



Screws removed during this task:



To replace the LCD panel assembly:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).

- 6 Open the keyboard compartment by following the instructions in [“Replacing the keyboard” on page 23](#).

Important



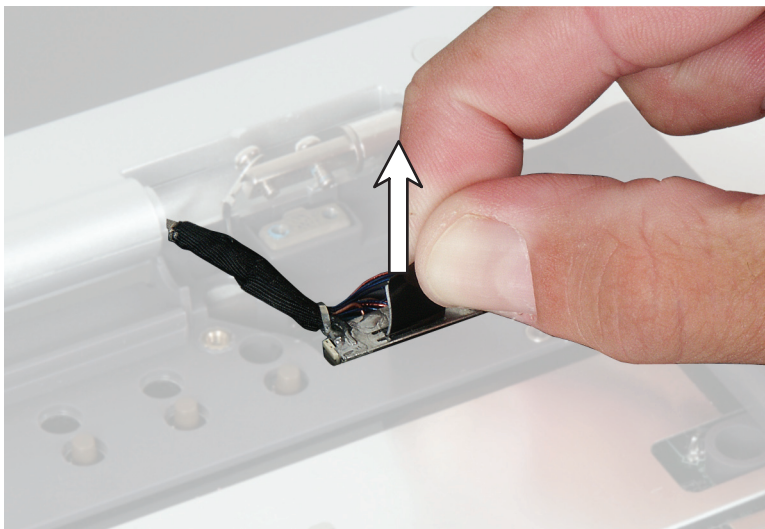
You do not need to disconnect the keyboard from the system board.

- 7 If the notebook has IEEE 802.11 wireless networking built in, detach the two antenna cables.
- 8 Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 9 Use the plastic tab to carefully unplug the LCD video cable from the notebook. Make sure you grasp the tab, not the cable.

Warning



The connector is fragile.



- 10** Remove the four hinge screws that secure the LCD panel to the notebook. Note the location of the LCD panel grounding wires attached to one of the left and right hinge screws.



- 11** Lift the LCD panel assembly away from the notebook. The LCD panel assembly is now completely detached from the notebook.

Warning



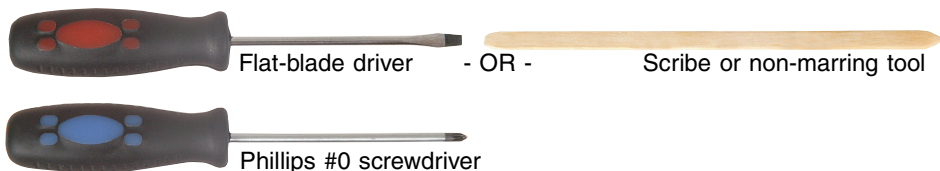
The IEEE 802.11 connectors may catch on the EMI shielding. Be careful not to break off the connectors on the antenna cable.

- 12** Place the new LCD panel assembly onto the notebook, then replace the four hinge screws. Make sure to reattach the grounding cables to the appropriate screws.
- 13** Reattach the black antenna cable to the connector labelled MAIN or M, then reattach the light gray antenna cable to the connector labelled AUX or A.
- 14** Plug the LCD video cable into the notebook.
- 15** Reassemble the notebook.

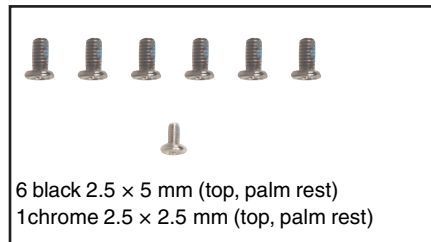
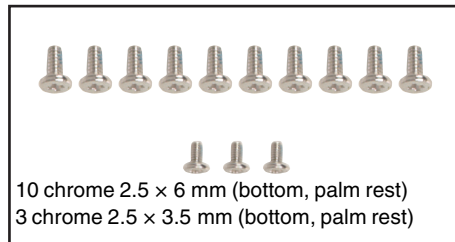
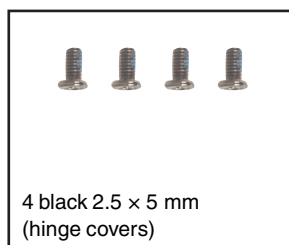
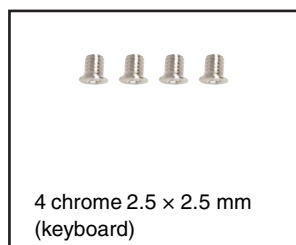


Replacing the palm rest assembly

Tools you need to complete this task:



Screws removed during this task:

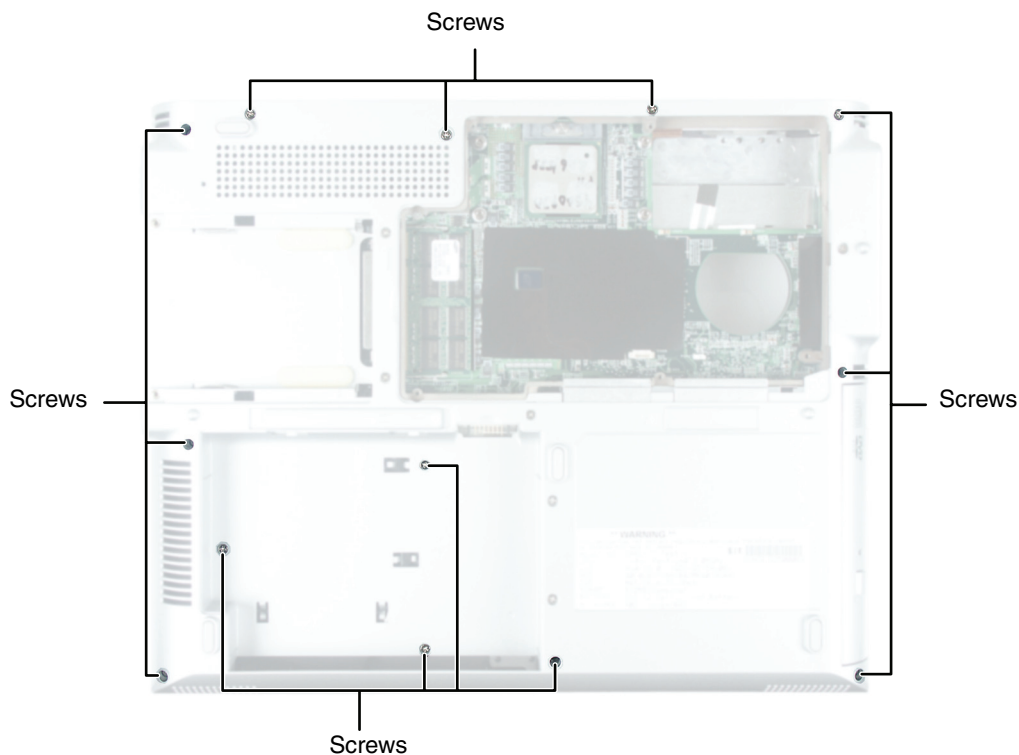




To replace the palm rest assembly:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Remove the hard drive kit by following the instructions in [“Replacing the hard drive kit” on page 9](#).
- 5** Turn the notebook over so the top is facing up.
- 6** Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).
- 7** Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23](#).
- 8** Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 9** Remove the LCD panel from the notebook by following the instructions in [“Replacing the LCD panel assembly” on page 45](#).

- 10 Turn the notebook over, then remove the thirteen screws on the bottom of the notebook.

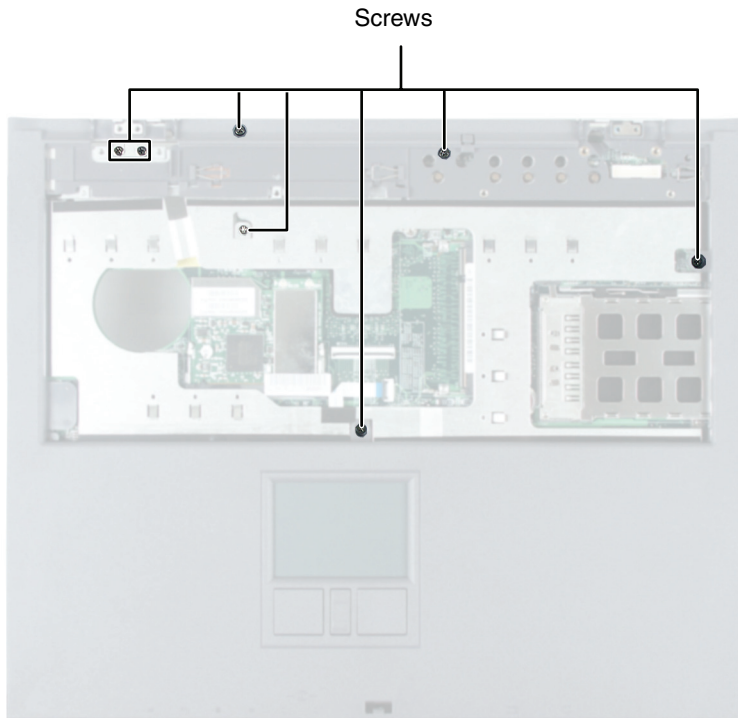


Important



The three shorter screws fit into the battery bay.

- 11** Turn the notebook over, then remove the seven screws on the top of the notebook.

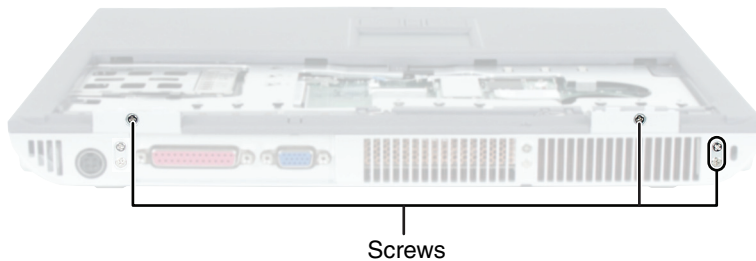


Important

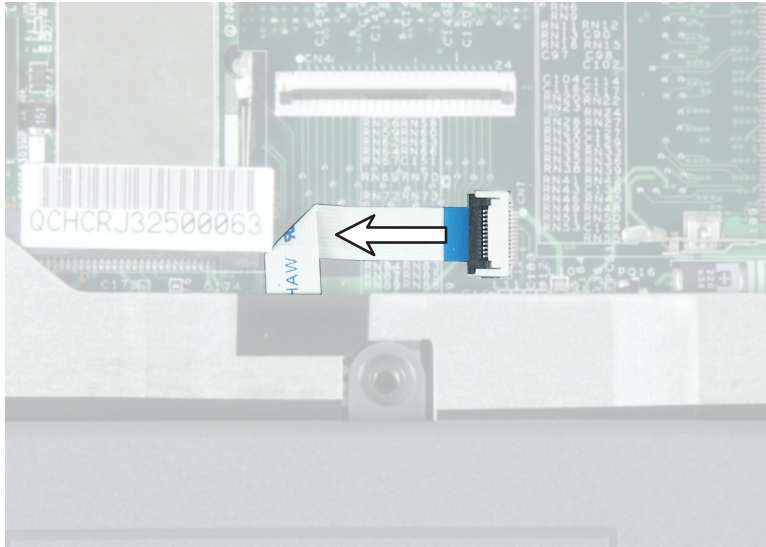


The chrome screw fits in the silver EMI shield.

- 12** Remove the four screws on the back of the notebook.



- 13** Carefully insert the small flat-blade screwdriver between the touchpad cable and the black plastic hinge where the cable connects to the system board. Gently lift the hinge off the cable. The cable is now free.



- 14** Lift the palm rest assembly completely from the notebook.
- 15** Place the new palm rest assembly onto the notebook, then snap the assembly into place.
- 16** Replace all of the palm rest screws.

Important



The three shorter screws fit into the battery bay.

- 17** Make sure that the black plastic hinge on the system board touchpad connector is in the raised position.

- 18** Insert the end of the touchpad cable between the black plastic hinge and the white connector.

Important



The cable is oriented correctly if it is twisted as shown in the previous picture and the blue side is visible.

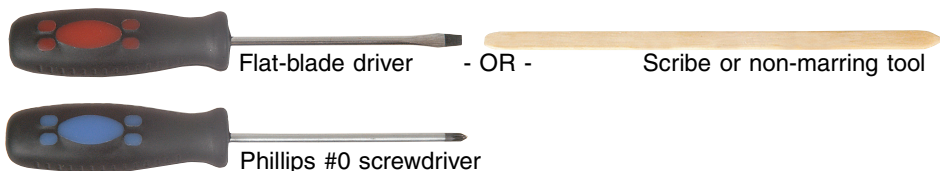
- 19** Press the black plastic hinge onto the touchpad cable.

- 20** Reassemble the notebook.

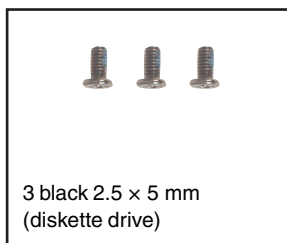
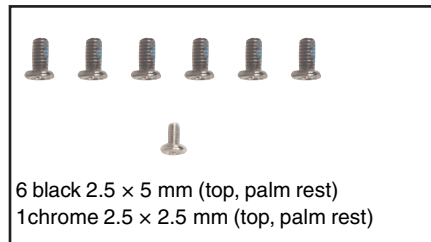
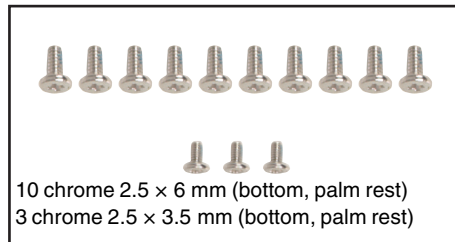
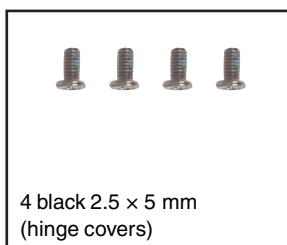
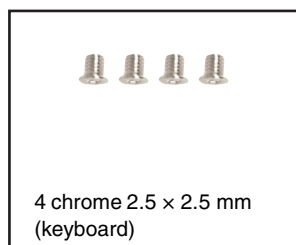


Replacing the diskette drive

Tools you need to complete this task:



Screws removed during this task:

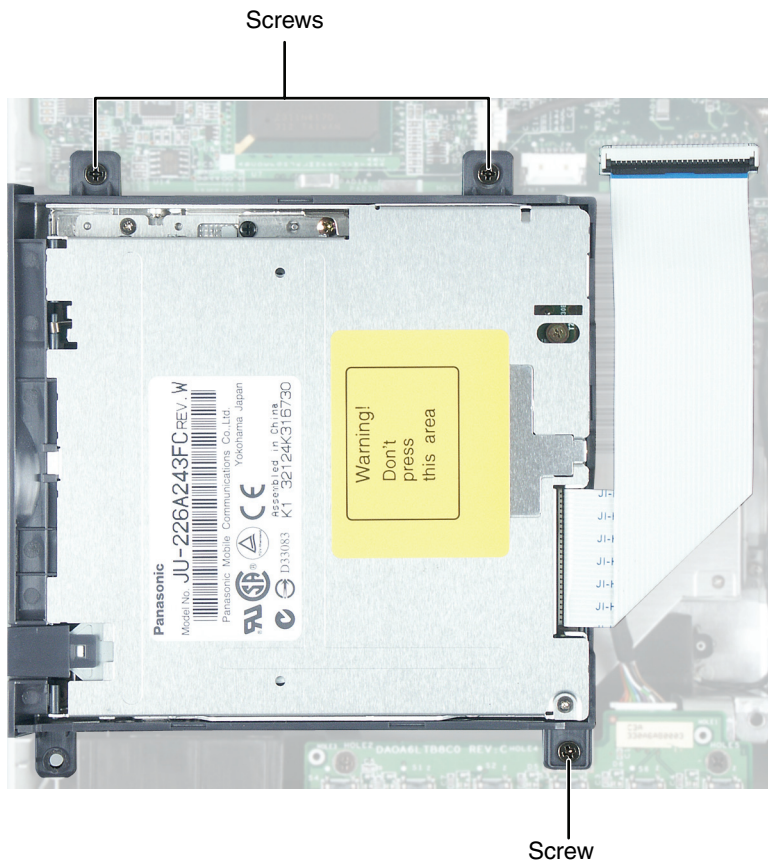




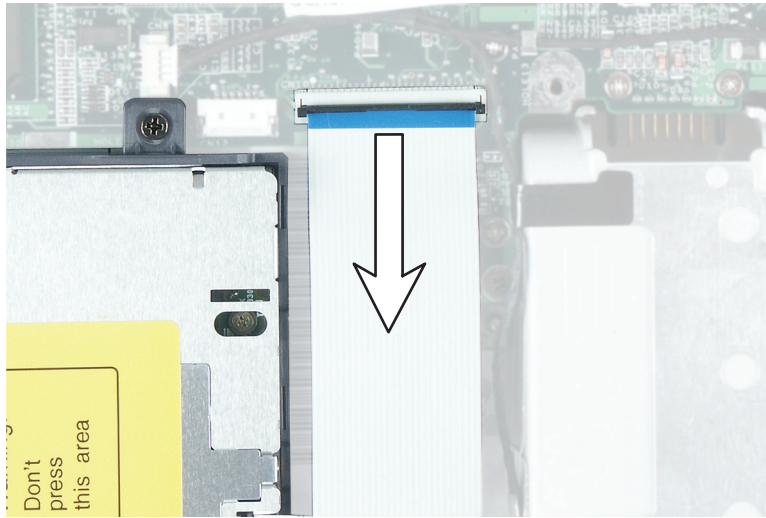
To replace the diskette drive:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Turn the notebook over so the top is facing up.
- 5** Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).
- 6** Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23](#).
- 7** Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 8** Remove the LCD panel from the notebook by following the instructions in [“Replacing the LCD panel assembly” on page 45](#).
- 9** Remove the palm rest assembly by following the instructions in [“Replacing the palm rest assembly” on page 48](#).

- 10 Remove the three screws that secure the diskette drive to the notebook.



- 11** Carefully insert the small flat-blade screwdriver between the diskette drive cable and the black plastic hinge where the cable connects to the system board. Gently lift the hinge off the cable. The cable is now free.



- 12** Make sure that the black plastic hinge on the system board diskette drive connector is in the raised position.
- 13** Insert the end of the diskette drive cable between the black plastic hinge and the white connector.

Important



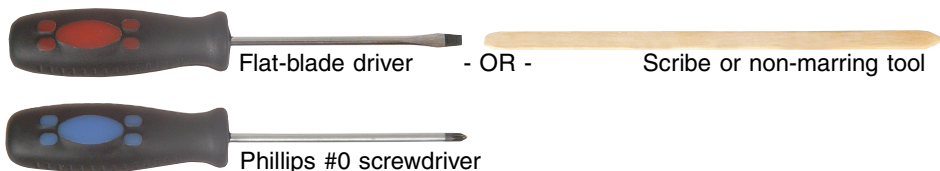
The cable is oriented correctly if it is twisted with the blue side visible.

- 14** Press the black plastic hinge onto the diskette drive cable.
- 15** Replace the three screws that secure the diskette drive to the notebook.
- 16** Reassemble the notebook.

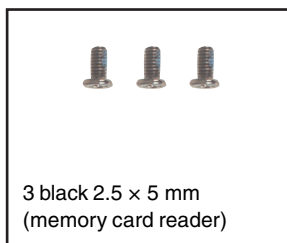
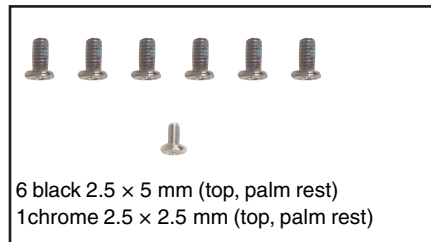
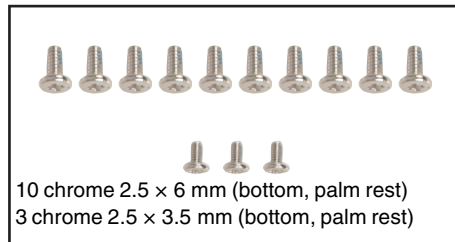
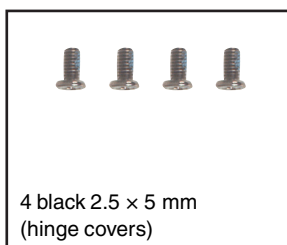
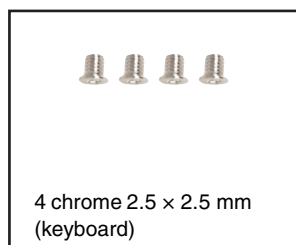


Replacing the memory card reader

Tools you need to complete this task:



Screws removed during this task:

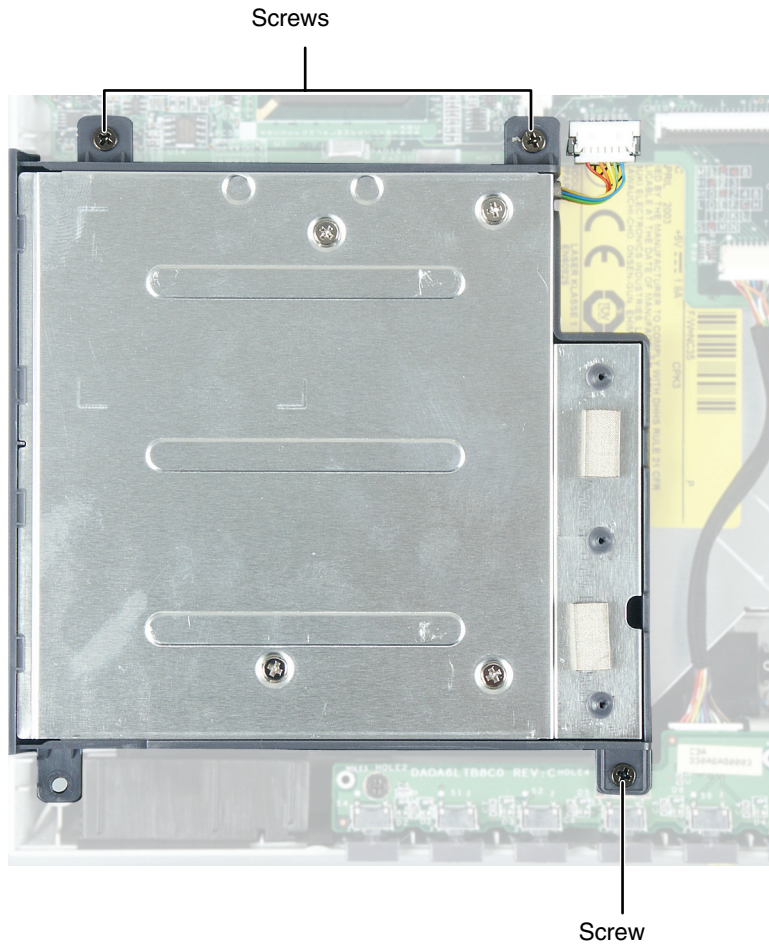




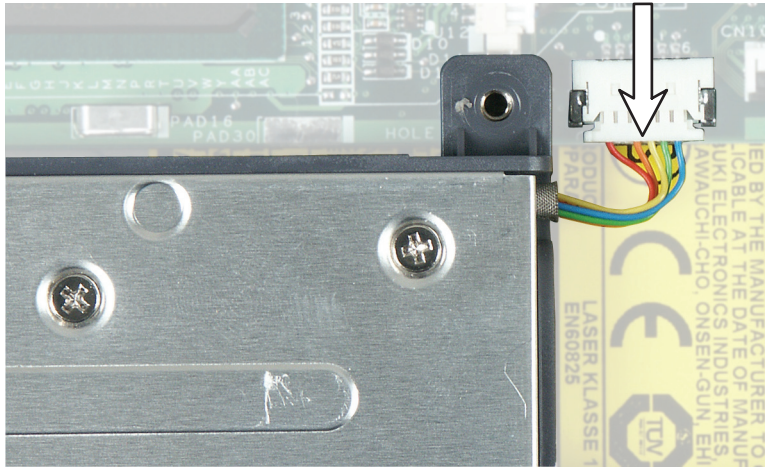
To replace the memory card reader:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Turn the notebook over so the top is facing up.
- 5** Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).
- 6** Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23](#).
- 7** Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 8** Remove the LCD panel from the notebook by following the instructions in [“Replacing the LCD panel assembly” on page 45](#).
- 9** Remove the palm rest assembly by following the instructions in [“Replacing the palm rest assembly” on page 48](#).

- 10** Remove the three screws that secure the memory card reader to the notebook.



- 11** Unplug the card reader cable from the system board.

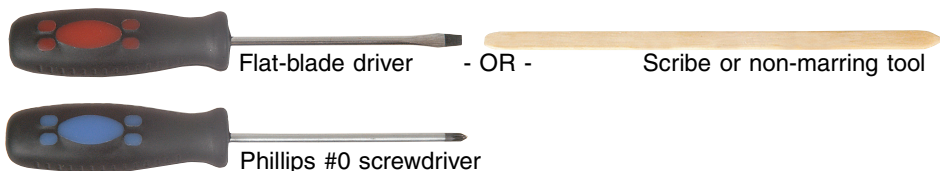


- 12** Connect the new card reader cable into the system board.
- 13** Replace the three screws that secure the card reader to the notebook.
- 14** Reassemble the notebook.

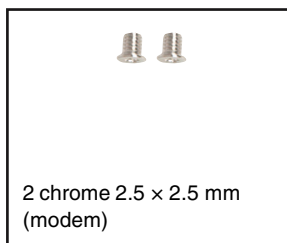
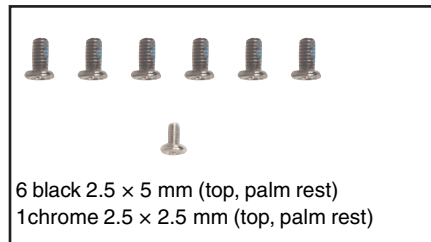
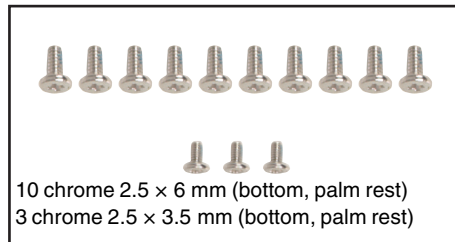
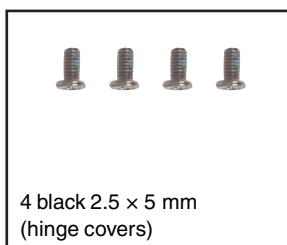
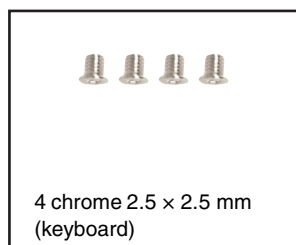


Replacing the modem

Tools you need to complete this task:



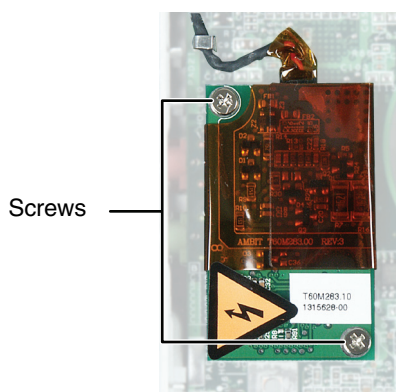
Screws removed during this task:





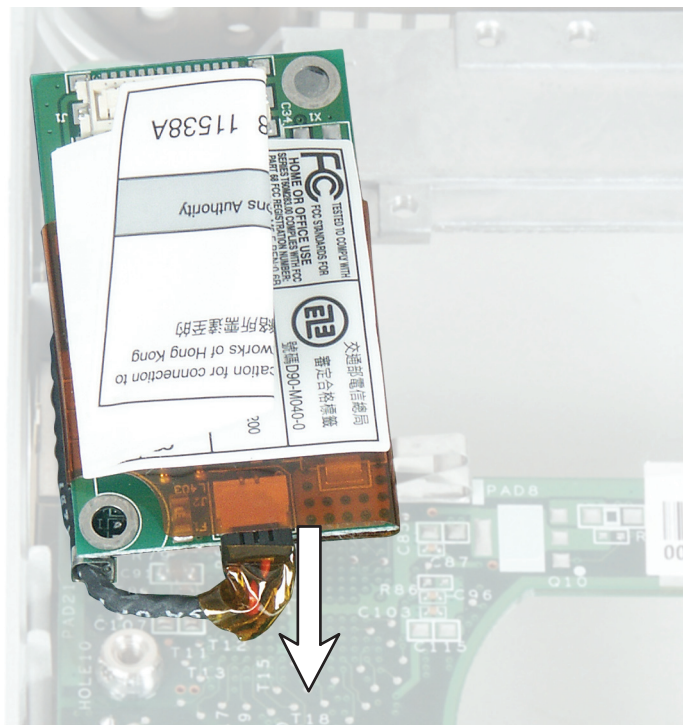
To replace the modem:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Turn the notebook over so the bottom is facing up.
- 3 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4 Turn the notebook over so the top is facing up.
- 5 Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).
- 6 Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23](#).
- 7 Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 8 Remove the LCD panel from the notebook by following the instructions in [“Replacing the LCD panel assembly” on page 45](#).
- 9 Remove the palm rest assembly by following the instructions in [“Replacing the palm rest assembly” on page 48](#).
- 10 Remove the two screws that secure the modem to the notebook.



- 11 Insert the small flat-blade screwdriver or non-marring tool under the modem and gently pry it up about ¼ inch.

- 12** Turn the modem over, then unplug the modem cable from the modem.



- 13** Connect the modem cable into the new modem.
- 14** Align the modem's screw holes with the holes on the notebook, then press the modem into place.
- 15** Replace the two screws that secure the modem to the notebook.
- 16** Reassemble the notebook.



Replacing the CMOS battery

Tools you need to complete this task:



Flat-blade driver

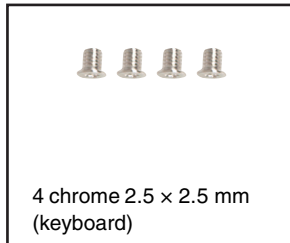
- OR -

Scribe or non-marring tool

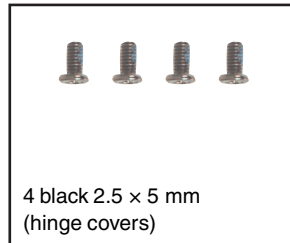


Phillips #0 screwdriver

Screws removed during this task:



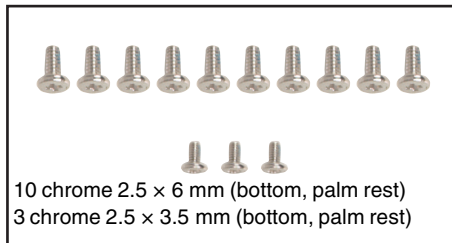
4 chrome 2.5 × 2.5 mm
(keyboard)



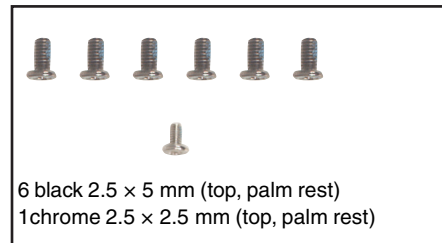
4 black 2.5 × 5 mm
(hinge covers)



4 chrome 2.5 × 6 mm
(LCD panel hinges)



10 chrome 2.5 × 6 mm (bottom, palm rest)
3 chrome 2.5 × 3.5 mm (bottom, palm rest)



6 black 2.5 × 5 mm (top, palm rest)
1 chrome 2.5 × 2.5 mm (top, palm rest)



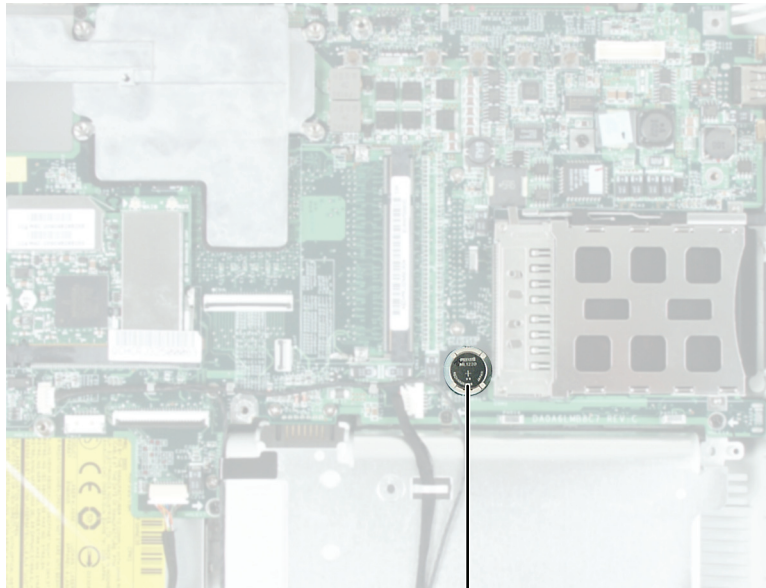
4 chrome 2.5 × 6 mm
(back, palm rest)



To replace the CMOS battery:

- 1** Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2** Turn the notebook over so the bottom is facing up.
- 3** Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 4** Turn the notebook over so the top is facing up.
- 5** Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19](#).
- 6** Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23](#).
- 7** Remove both hinge covers by following the instructions in [“Replacing the hinge covers” on page 41](#).
- 8** Remove the LCD panel from the notebook by following the instructions in [“Replacing the LCD panel assembly” on page 45](#).
- 9** Remove the palm rest assembly by following the instructions in [“Replacing the palm rest assembly” on page 48](#).

- 10** Locate the old battery on the system board.



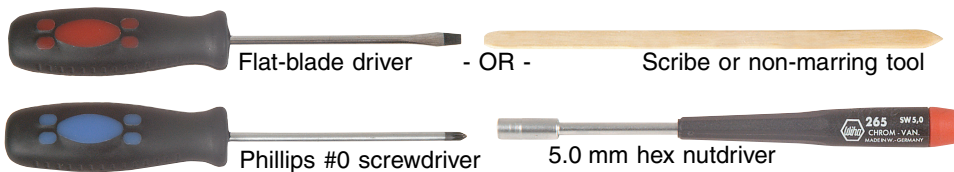
CMOS battery

- 11** 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.
- 12** Make sure the positive (+) side of the new battery is facing up, then press the battery into the socket until it snaps into place.
- 13** Reassemble the notebook.

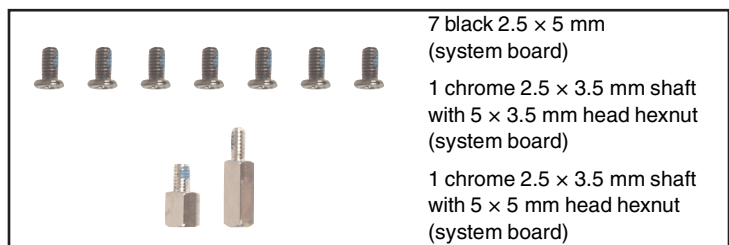
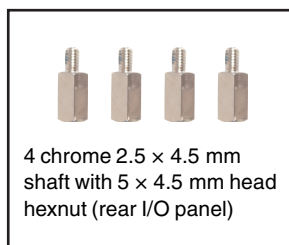
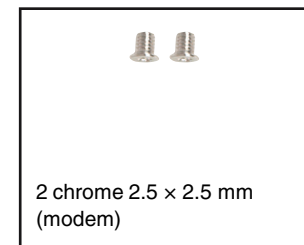
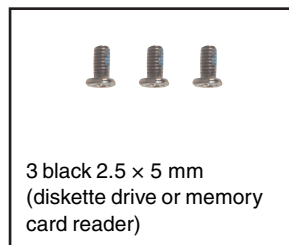
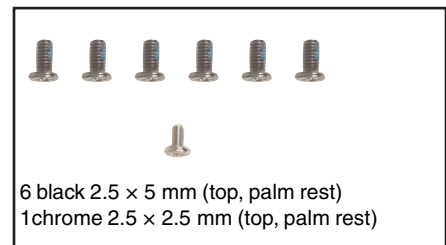
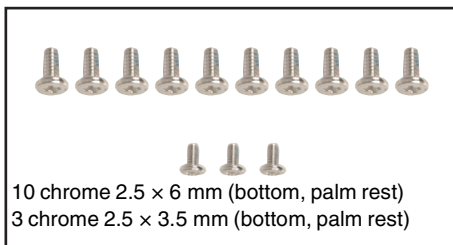
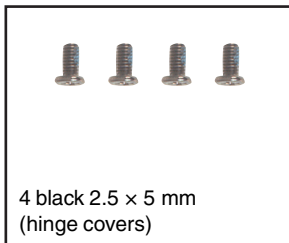


Replacing the system board

Tools you need to complete this task:



Screws removed during this task:





To replace the system board:

- 1 Disconnect the AC adapter and modem and network cables and prepare the notebook by following the instructions in [“Preparing the notebook” on page 6](#).
- 2 Identify the correct system board installed in the notebook.

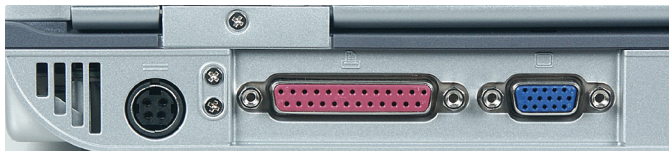
Warning



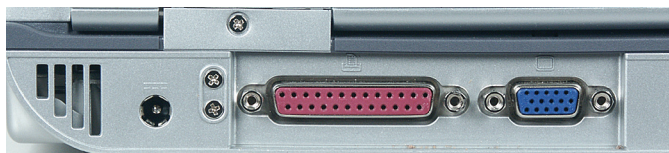
Two different system boards are used in the Gateway M350 notebook, depending on date of manufacture. When replacing the system board, be sure that the new system board is the same model as the old system board. Failure to do so will result in damage to the notebook.

Turn the notebook to the back so you can see the the power connection.

- On older notebooks, the system board has a larger power connection.



- On newer notebooks, the system board has a smaller power connection with a prong extending from the system board.



- 3 Turn the notebook over so the bottom is facing up.
- 4 Remove the battery by following the instructions in [“Removing the battery” on page 7](#).
- 5 Remove the hard drive kit by following the instructions in [“Replacing the hard drive kit” on page 9](#).

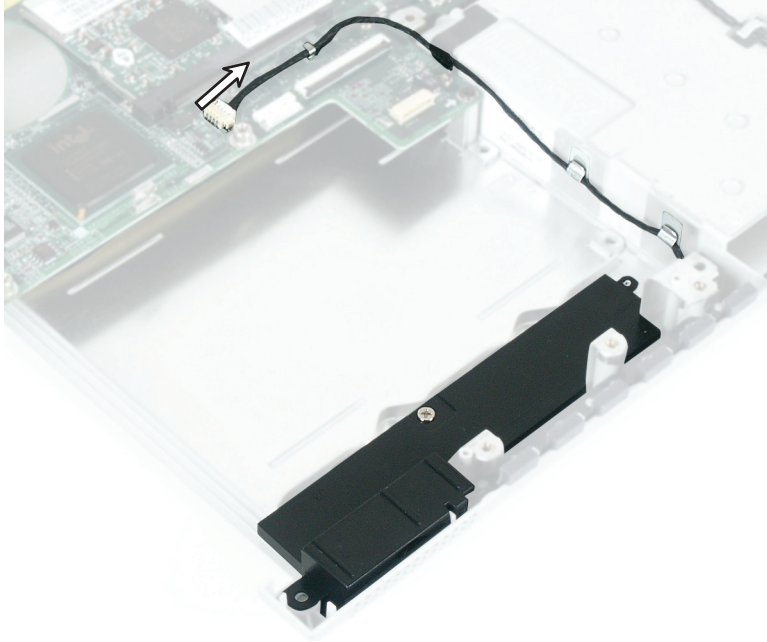
- 6** Remove the optical drive by following the instructions in [“Replacing the optical drive” on page 16.](#)
- 7** Remove the bottom memory module by following the instructions in [“Adding or replacing memory in the memory bay” on page 28.](#)
- 8** Remove the cooling assembly by following the instructions in [“Replacing the cooling assembly” on page 38.](#)
- 9** Turn the notebook over so the top is facing up.
- 10** Remove the keyboard cover by following the instructions in [“Replacing the keyboard cover” on page 19.](#)
- 11** Remove the keyboard by following the instructions in [“Replacing the keyboard” on page 23.](#)
- 12** Remove the top memory module by following the instructions in [“Replacing memory under the keyboard” on page 31.](#)
- 13** If the notebook has IEEE 802.11 wireless networking built in, remove the IEEE 802.11 Mini PCI module by following the instructions in [“Replacing the IEEE 802.11 Mini PCI card” on page 34.](#)
- 14** Remove the hinge covers by following the instructions in [“Replacing the hinge covers” on page 41.](#)
- 15** Remove the LCD panel by following the instructions in [“Replacing the LCD panel assembly” on page 45.](#)
- 16** Remove the palm rest assembly by following the instructions in [“Replacing the palm rest assembly” on page 48.](#)
- 17** Remove the diskette drive by following the instructions in [“Replacing the diskette drive” on page 54.](#)

-OR

Remove the memory card reader by following the instructions in [“Replacing the memory card reader” on page 58.](#)

- 18** Remove the modem by following the instructions in [“Replacing the modem” on page 62.](#)

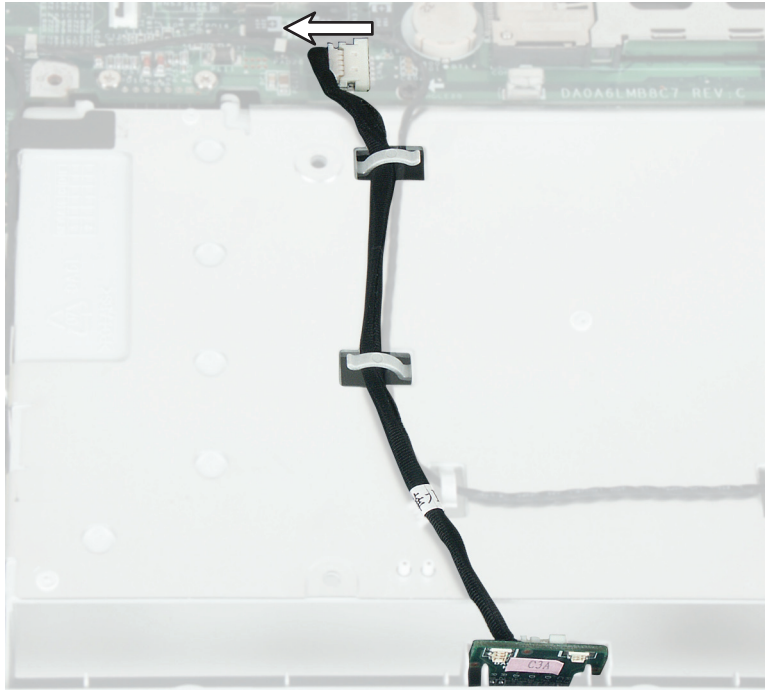
- 19** Unplug the speakers from the system board (one connector).



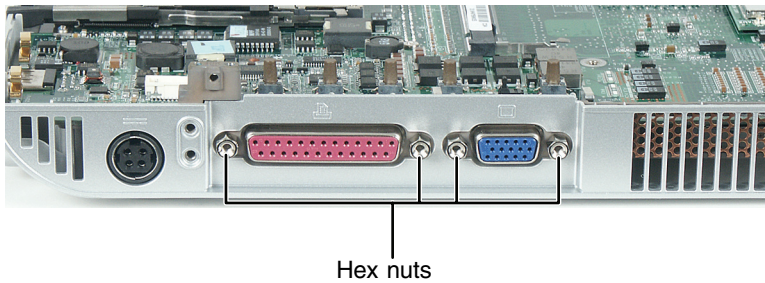
- 20** Unplug the audio board from the system board.



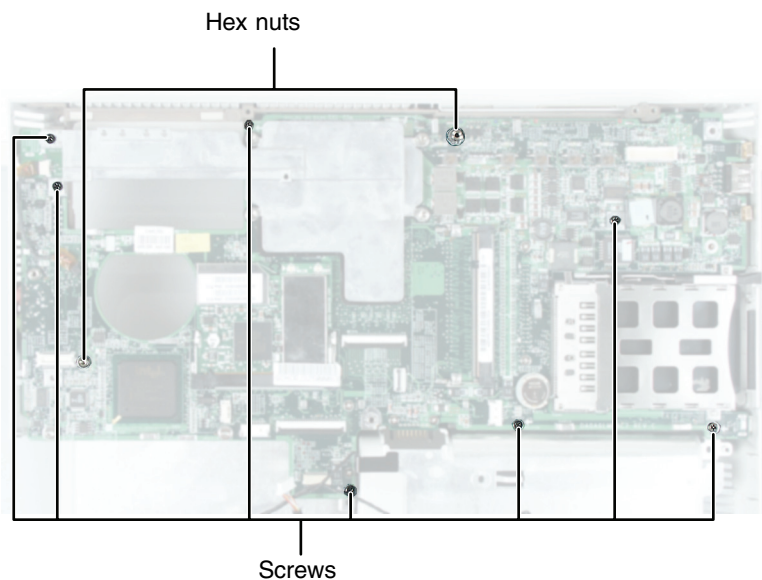
- 21** Unplug the front LED panel from the system board.



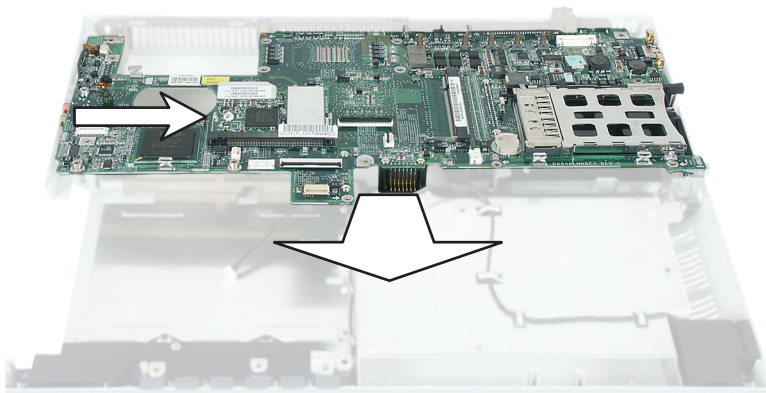
- 22** Remove the four hex nuts on the rear I/O panel.



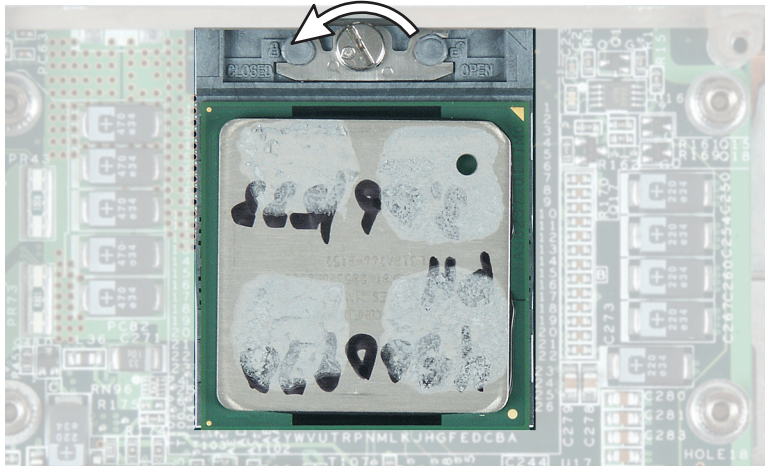
- 23** Remove the seven system board screws and the two system board hex nuts.



- 24** Remove the system board. Make sure that the rear I/O panel clears the bottom of the chassis and the side audio jacks clear the bottom of the chassis.



- 25** Use a flat-blade screwdriver to turn the processor lock screw $\frac{1}{4}$ -turn counter-clockwise, then remove the processor from the old system board.



- 26** Install the processor onto the new system board making sure that Pin 1 on the processor (indicated by the silk-screened arrow on the corner of the processor) aligns with Pin 1 on the processor socket (indicated by the absence of a pin hole in the processor socket), then lock the processor in place by using a flat-blade screwdriver to turn the processor lock screw $\frac{1}{4}$ -turn clockwise.



Important



If the thermal grease on the processor or cooling assembly is dried, clean the grease off the processor and cooling assembly. The residue can be removed using Isopropyl Alcohol, Acetone, or Toluene and a lint free cloth. Apply new thermal grease using the provided applicator. Apply a thin layer of thermal grease to the bottom of the cooling assembly where it will make contact with the processor. Do not apply thermal grease to any other part of the cooling assembly or notebook.

- 27** Place the new system board into the notebook.
- 28** Replace the seven system board screws from the holes marked 5, 6, 14, 17, 18, 19, and 20; the long hex nut from the hole marked 2; and the short hex nut from the hole marked 11.
- 29** Replace the four rear I/O panel hex nuts.
- 30** Connect the speakers, audio board, and front LED panel.
- 31** Reassemble the notebook.



MAN SYS M350 SERVICE GDE R1 2/04



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