

chapter 5

REMOVAL AND REPLACEMENT PROCEDURES

5.1 Serial Number

The computer serial number should be reported to Compaq when requesting information or ordering spare parts. The serial number is located on the bottom of the computer (Figure 5-1).

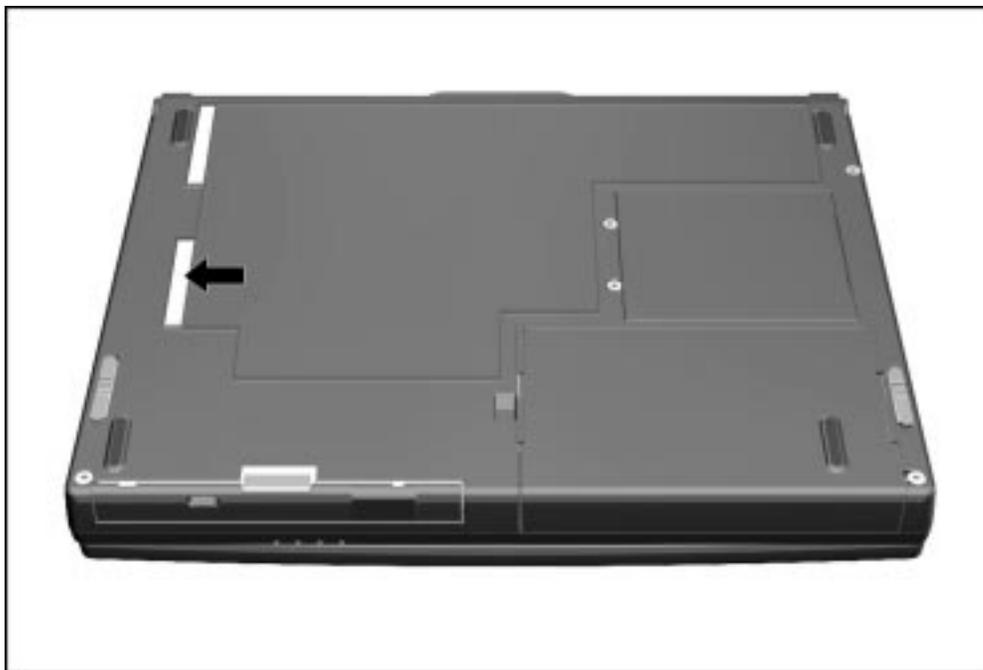


Figure 5-1. Serial Number Location

5.2 Disassembly Reference Chart

Use the chart below to determine the section number to be referenced when removing components from the computer.

5.3 Undocking the Computer	Undocking the Computer from the ArmadaStation
	Undocking the Computer from the Armada MiniStation
5.4 Disconnecting the Computer	
5.5 Computer Logo	
5.6 Computer Feet	
5.7 Preparing the Computer for Disassembly	
5.8 Battery Packs	
	Removing a Battery Pack
	Inserting a Battery Pack
5.9 Hard Drives	
	Removing a Hard Drive
	Inserting a Hard Drive
5.10 MultiBay Devices	
	Removing MultiBay Devices
	Inserting MultiBay Devices
5.11 PC Cards	
	Removing a PC Card When the Computer is Off
	Removing a PC Card When the Computer is On
	Inserting a PC Card
5.12 Memory Expansion	
	Removing the Memory Compartment Cover
	Removing a Memory Expansion Board
	Installing a Memory Expansion Board
5.13 Keyboard/CPU Cover Assembly	
	Removing the Keyboard/CPU Cover Assembly
	Installing the Keyboard/CPU Cover Assembly
5.14 Auxiliary Battery	
5.15 RTC Battery	
5.16 Audio/Modem or Audio Only Board	
5.17 Fan Assembly	
5.18 Processor Board	
5.19 Display Assembly	
	Removing the Display Assembly
	Display Assembly Internal Components
	Bezel
	Panel
	Display Cable
	Inverter
	Microphone
5.20 System Board	
	Installing the System Board

Figure 5-2. Computer Disassembly Sequence Chart

5.3 Undocking the Computer

If the computer is not docked in an ArmadaStation or Armada MiniStation, go to the "Disconnecting the Computer" section. If the computer is docked, go to the "Undocking the Computer from the ArmadaStation" or "Undocking the Computer from the Armada MiniStation" section.

Undocking the Computer from the ArmadaStation

1. Unlock the ArmadaStation keylock.
2. Shut down the computer
3. Close the computer.
4. Press the eject button **1**. The computer separates from the docking connector on the ArmadaStation **2** (Figure 5-3).

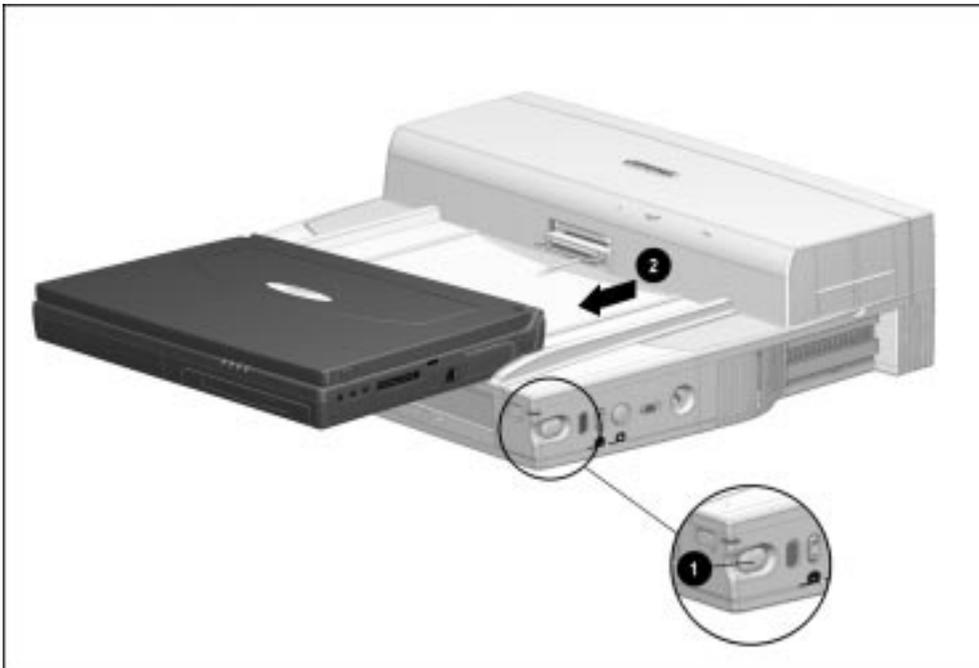


Figure 5-3. Undocking the Computer from the ArmadaStation

5. Slide the computer out of the ArmadaStation.

Undocking the Computer from the Armada MiniStation

1. Shut down the computer.
2. Close the computer.
3. Lift the docking lever and slide it forward ❶. The computer separates from the docking connector on the Armada MiniStation ❷ (Figure 5-4).



Figure 5-4. Undocking the Computer from the Armada MiniStation

4. Slide the computer away from the Armada MiniStation and remove it.

5.4 Disconnecting the Computer

If the computer is docked in an ArmadaStation or Armada MiniStation, refer to the "Undocking the Computer" section. If the computer is not docked in an ArmadaStation or Armada MiniStation, refer to Figure 5-5 and follow these steps to disconnect the computer:

1. Shut down the computer.
2. Close the computer.
3. Position the computer so the rear panel faces forward.
4. Disconnect the power cord from the AC Adapter ❶.
5. Disconnect the power cord from the wall outlet ❷.
6. Disconnect the AC Adapter cord from the computer ❸.

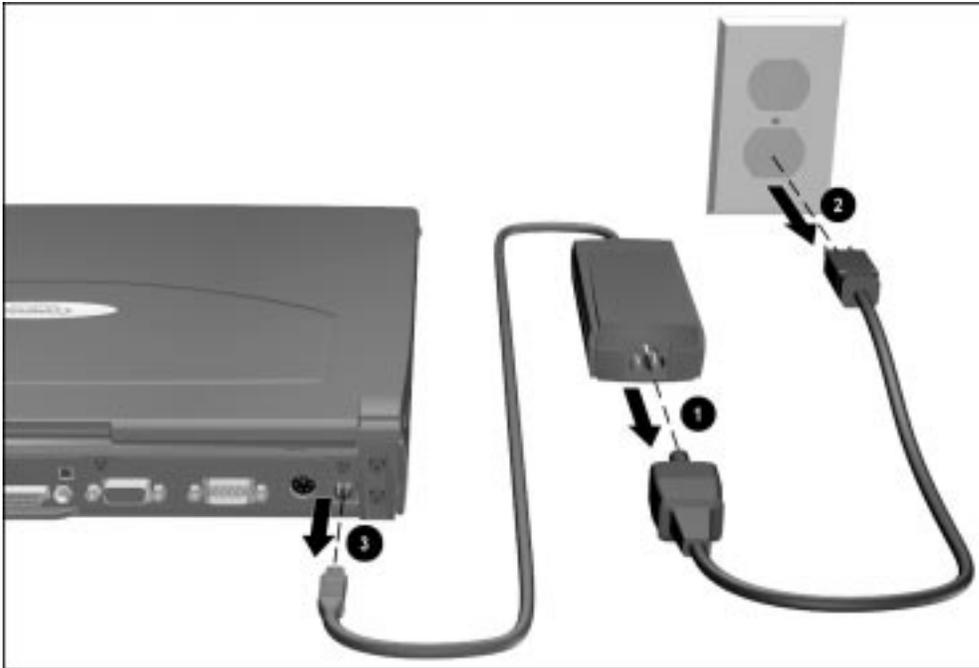


Figure 5-5. Disconnecting the Computer

7. Turn off and disconnect external devices.

5.5 Computer Logo

The computer logo has an adhesive backing for installation. Remove the protective covering from the adhesive back and install the logo (Figure 5-6). The logo is upside down when viewed from the back of the computer with the display open.

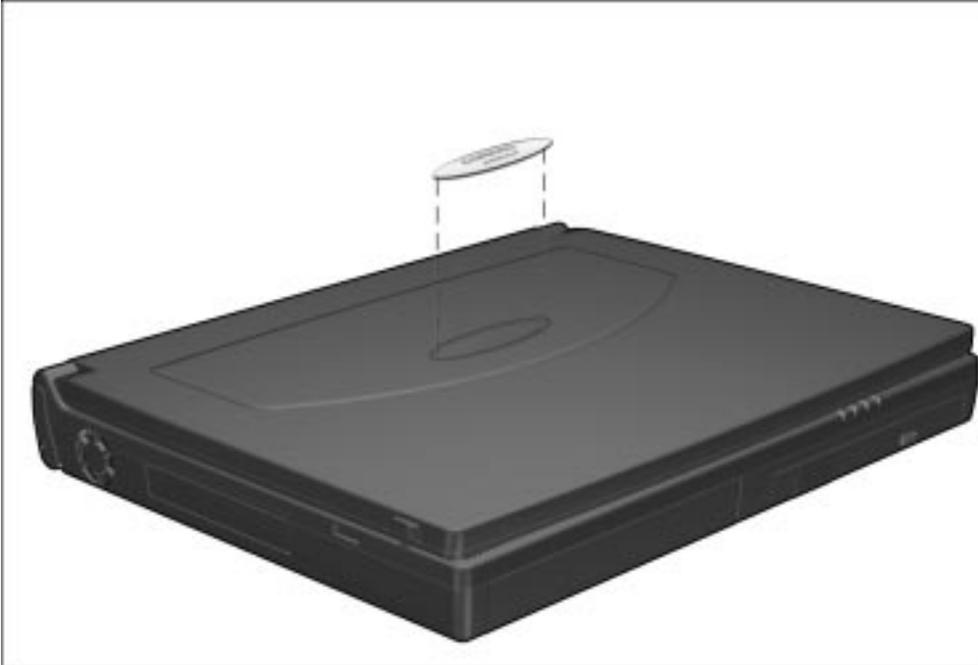


Figure 5-6. Installing the Computer Logo

5.6 Computer Feet

The computer feet are oblong, adhesive-backed rubber pads. The computer feet are included in the Miscellaneous Hardware Spare Kit.

Install the feet by removing the protective covering from the adhesive back and attaching the feet to the bottom of the computer (Figure 5-7).

NOTE: The front left computer foot adheres to the bottom of the battery pack.

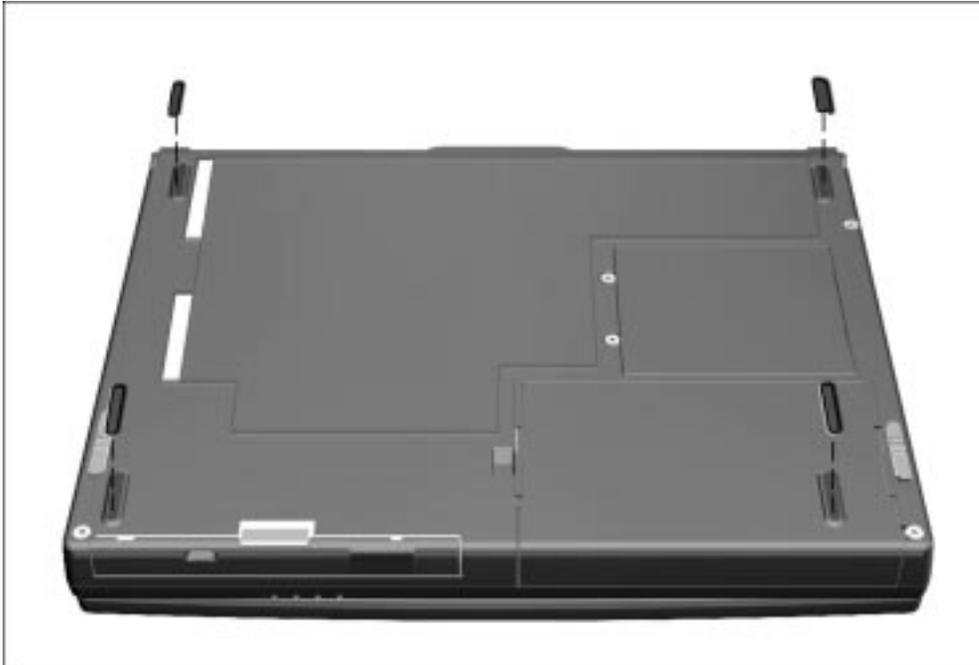


Figure 5-7. Installing the Computer Feet

5.7 Preparing the Computer for Disassembly

1. Undock the computer from the ArmadaStation or Armada MiniStation.
2. Shut down the computer.
3. Disconnect the AC Adapter and all external devices connected to the computer.
4. Remove the battery pack inserted into the battery bay (Section 5.8).



CAUTION: Failure to disconnect the AC Adapter from the computer and remove the battery pack before removing and installing internal components can damage the equipment.

5. Remove the hard drive (Section 5.9).
6. Remove MultiBay devices (Section 5.10).
NOTE: MultiBay devices may be left inside the MultiBay to provide balance when the computer is open.
7. Remove all PC Cards (Section 5.11).

5.8 Battery Packs



WARNING: To reduce the risk of injury or damage to the battery pack, do not crush, puncture, or incinerate the battery pack or short the metal contacts. Do not attempt to open or service the battery pack.

Removing a Battery Pack

1. If the computer is turned on, press the suspend button. If there is hard drive or diskette drive activity, Suspend may not occur immediately. The computer screen clears and the power/suspend light begins to flash when Suspend is initiated. If the computer is turned off or in Suspend or Hibernation, proceed to Step 2.
2. Tilt the computer at an angle ❶ so the bottom of the computer is accessible (Figure 5-8).
3. Slide the battery release latch forward ❷.
4. Pull the battery pack out of the battery bay ❸.

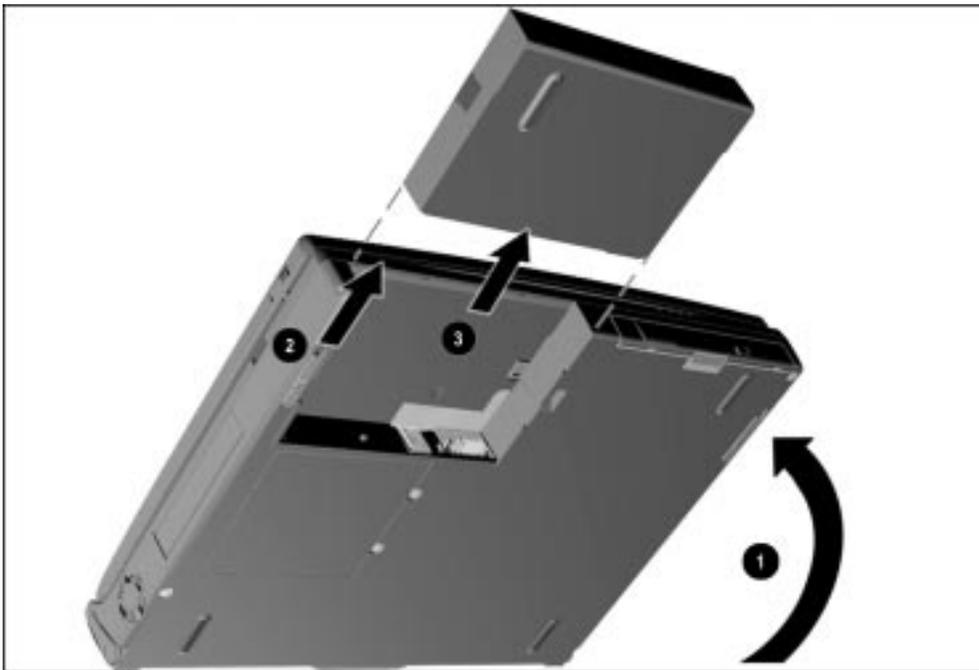


Figure 5-8. Removing a Battery Pack

Inserting a Battery Pack



WARNING: To prevent damage to the computer, do not insert a battery pack until the computer is fully reassembled.

1. With the battery pack label facing up and the battery pack contacts facing the computer, slide the battery pack into the battery bay until it clicks into place (Figure 5-9).

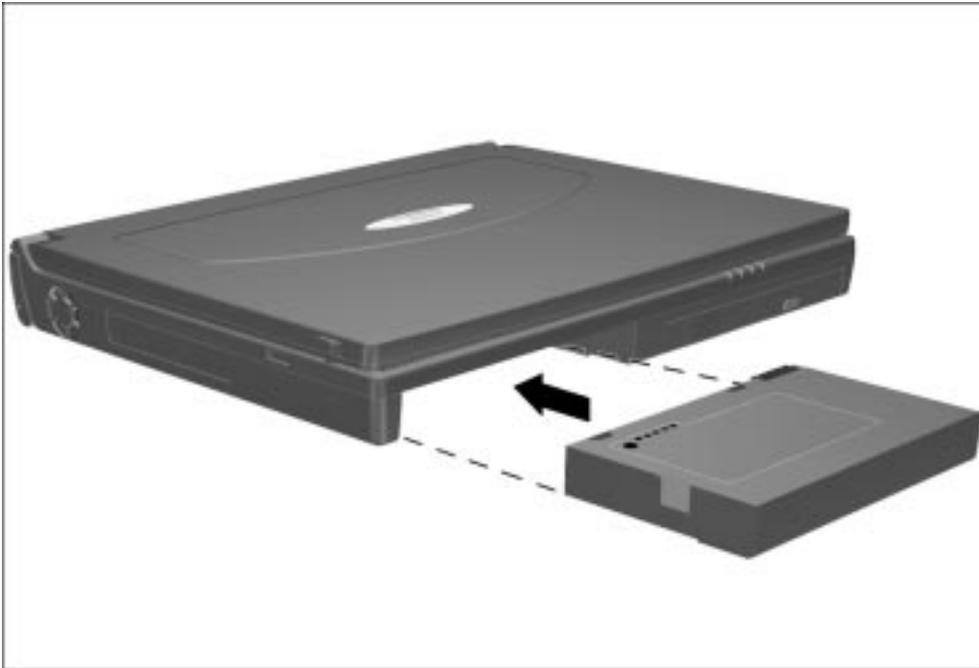


Figure 5-9. Inserting a Battery Pack

2. If the computer is in Suspend, press the suspend button to return to your work.

5.9 Hard Drives

Removing a Hard Drive

Before removing a hard drive, back up all information on the hard drive.

1. Save all work, exit all applications, and shut down the computer.
2. Remove the battery pack (Section 5.8).
3. Tilt the computer at an angle ❶ so the bottom of the computer is accessible (Figure 5-10).
4. If the hard drive has been secured in the hard drive bay with a security screw ❷, remove the screw using the security screwdriver provided with the computer.
5. Press the hard drive release button ❸.
6. Remove the hard drive from the hard drive bay ❹.

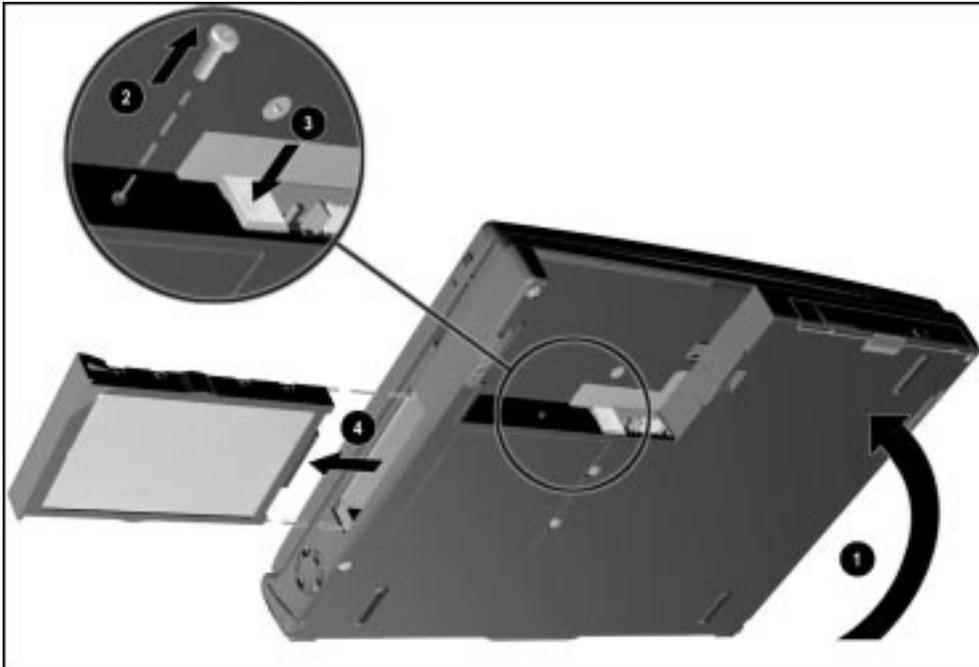


Figure 5-10. Removing a Hard Drive

Inserting a Hard Drive

1. Slide the hard drive into the hard drive bay (Figure 5-11).

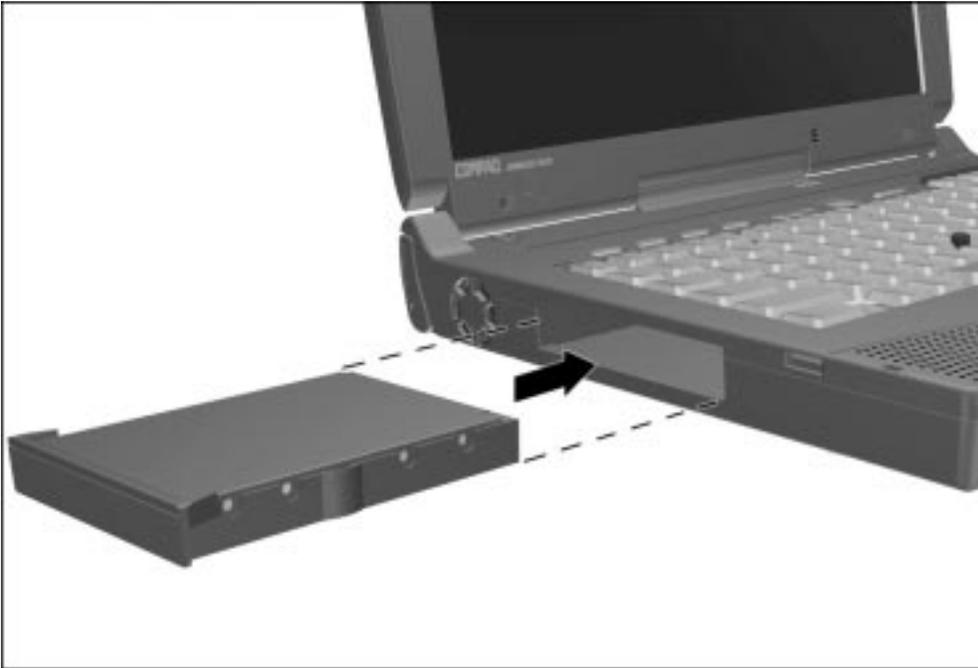


Figure 5-11. Inserting a Hard Drive

2. If the hard drive was secured in the hard drive bay using a security screw, replace the screw.

5.10 MultiBay Devices

Removing MultiBay Devices

1. Save all work, exit all applications, and shut down the computer.
2. Remove the media (diskette, CD-ROM, DVD-ROM) from the drive. Be sure the drive tray is closed.
3. Tilt the computer at an angle **1** so the bottom of the computer is accessible (Figure 5-12).
4. Slide the MultiBay release latch **2** forward.
5. Pull the device out of the MultiBay **3**.



Figure 5-12. Releasing a Device from the MultiBay

NOTE: If you are not inserting another device into the MultiBay, insert the MultiBay weight saver included with the computer.

Inserting MultiBay Devices

1. Remove the media (diskette, CD-ROM, etc.) from the drive to be inserted in the MultiBay. Ensure that the CD tray is closed.
2. With the bezel facing out, slide the device into the MultiBay until it clicks into place (Figure 5-13).

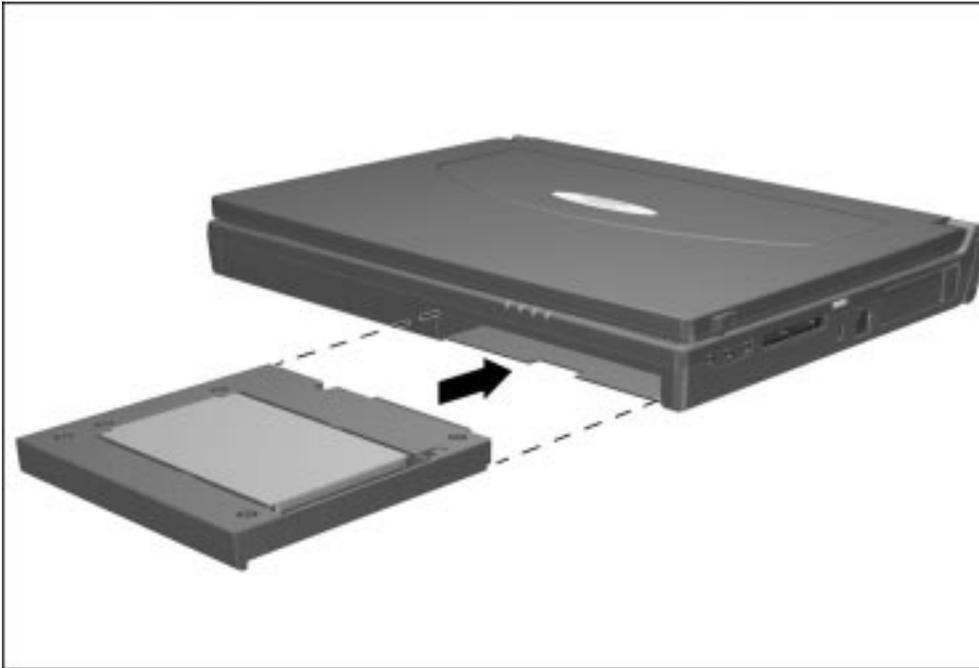


Figure 5-13. Inserting a Device into the MultiBay

5.11 PC Cards

The procedure for removing PC Cards varies with the operating system being used and with the kind of PC Card being removed.

If Windows 95 is running:

- A PC Card can be removed while the computer is on or off.
- The PC Card icon appears in the system tray on the Windows taskbar only while a PC Card is inserted.

If Windows NT is running:

- Some PC Cards, such as modem, ATA, flash, and SRAM cards, can be removed while the computer is on. However, the computer must be shut down before removing other PC Cards, such as LAN and SCSI cards. For removal information about a particular PC Card, refer to the documentation that came with the card and the Help program with CardWare.
- CardWare displays the PC Card icon on the system tray on the Windows taskbar whether or not a PC Card is inserted.

Removing a PC Card When the Computer is Off

1. Open the PC Card door by flipping it down ❶ (Figure 5-14).
2. Press the PC Card eject button ❷ for the card to be ejected. The eject button extends.
3. Press the eject button a second time ❸. The PC Card partially ejects from the PC Card slot.
4. Remove the PC Card from the PC Card slot ❹.

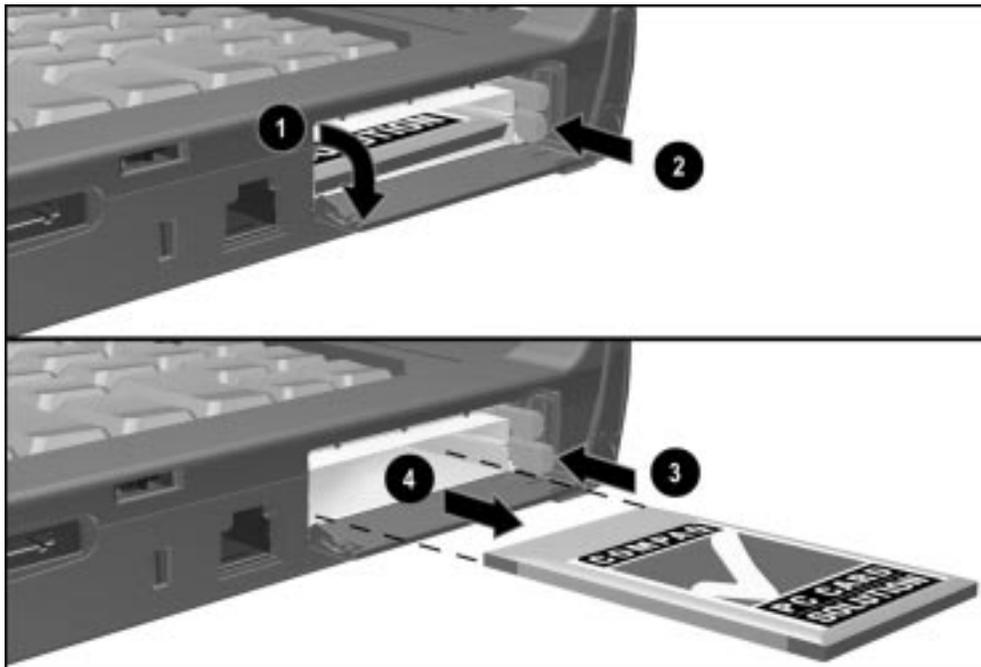


Figure 5-14. Removing a PC Card

Removing a PC Card When the Computer is On

1. Click the PC Card icon on the system tray on the Windows taskbar. A list of PC Cards running in the system appears.
2. Click the PC Card to be stopped.
IMPORTANT: Always stop a LAN, ATA, or SCSI card before removing it.
3. When a message appears that it is safe to remove the card, follow the procedures in the section, “Removing a PC Card When the Computer is Off.”

NOTE: A computer running Windows 95 beeps twice when the card is removed. A computer running Windows NT beeps three times in descending tones when the card is removed.

Inserting a PC Card

1. Save all work, exit all applications, and turn off the computer.
2. Open the PC Card door by flipping it down (Figure 5-15).
3. Align the edges of the PC Card with the rails on the sides of one of the PC Card slots.
4. Insert the PC Card into the PC Card slot.

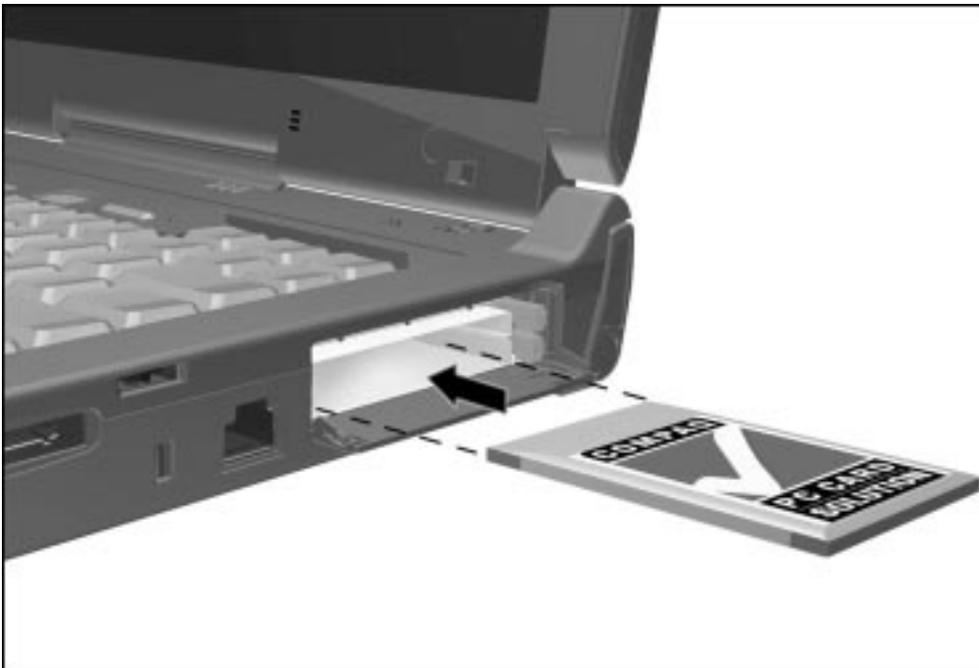


Figure 5-15. Inserting a PC Card

5.12 Memory Expansion

The memory compartment is located on the bottom of the computer and contains two memory slots. The computer standard memory is contained in one slot. Computer memory can be expanded by installing a memory board in the empty slot and/or replacing the standard memory board. SDRAM memory boards are available in 16-, 32-, 64-, and 128-MB increments.

The memory compartment cover and screws are spared with the computer base.

Removing the Memory Compartment Cover



CAUTION: Electrostatic discharge (ESD) can damage electronic components. Before beginning this procedure, ensure that you are properly grounded. For more information, refer to Appendix B, "Electrostatic Discharge."

1. Prepare the computer for disassembly (Section 5.7).



WARNING: Failure to unplug the power cord and remove the battery pack before installing a memory expansion board can damage the equipment and expose you to the risk of electrical shock.

2. Turn the computer upside down and position it so the rear panel faces forward.

3. Use a Torx T-10 screwdriver or the security screwdriver to remove the factory-installed screws that secure the memory compartment cover to the computer ❶ (Figure 5-16). If the security screws have been installed, use the security screwdriver to remove them.
4. Lift the right side of the cover and swing it away from the computer ❷.

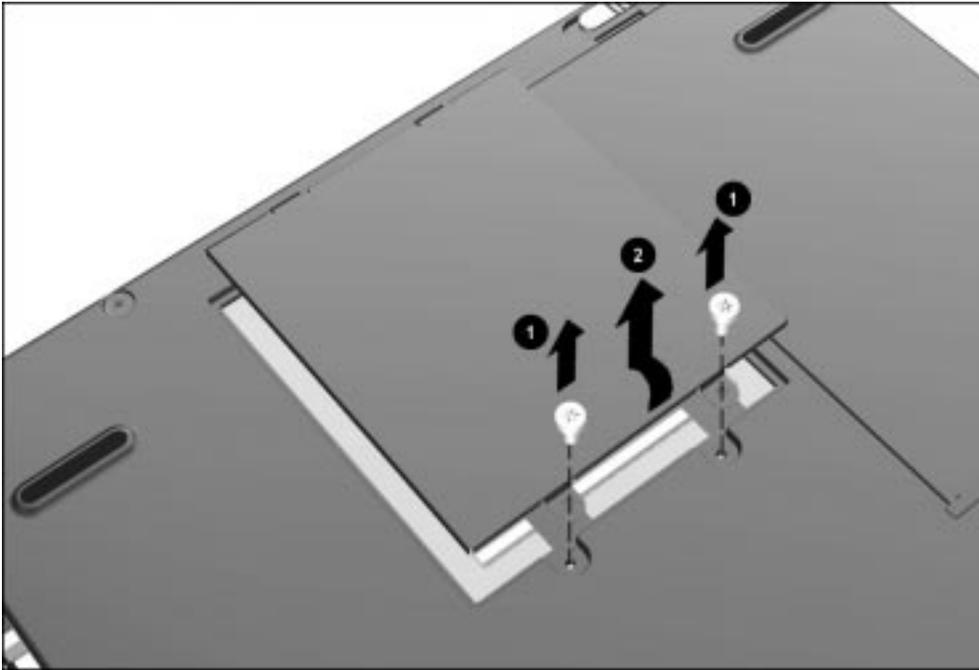


Figure 5-16. Removing the Memory Compartment Cover

Removing a Memory Expansion Board

1. Push the spring retention tabs away from both sides of the memory board to release the board ❶ (Figure 5-17).
2. Lift up the edge of the memory board and slide the board out of the slot at a 45-degree angle ❷.

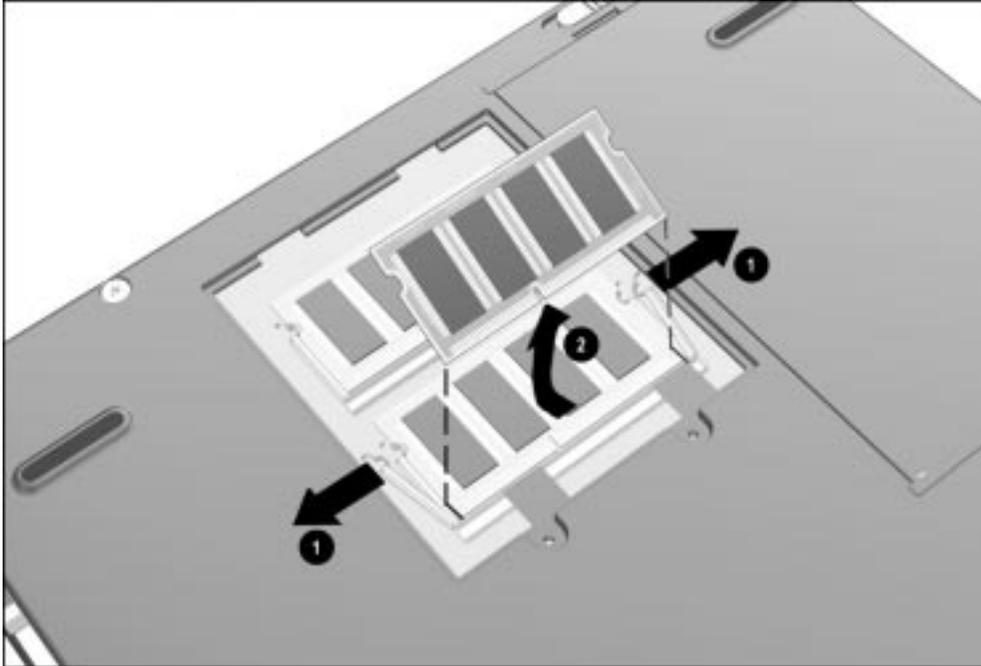


Figure 5-17. Removing a Memory Expansion Board

3. Place the memory board in an electrostatic-safe container.
4. If no memory expansion board is to be installed, replace the memory compartment cover and install the screws.

Installing a Memory Expansion Board

The memory expansion boards are asymmetrically keyed (notched) to ensure correct positioning.

1. Insert the memory expansion board into an empty memory expansion slot at a 45-degree angle ❶ (Figure 5-18).
2. Push the board into place until it is seated.
3. Push the memory expansion board down until the board is seated in the retention clips ❷.

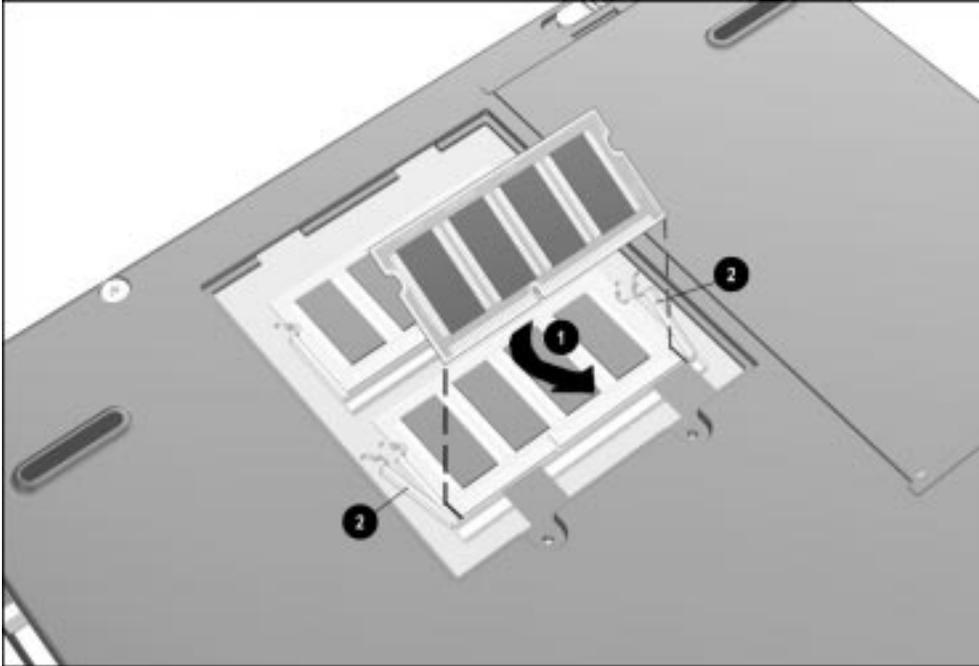


Figure 5-18. Installing a Memory Expansion Board

4. Slide the memory compartment cover into position and insert the two screws.
5. Run Computer Setup (Section 2.5).

NOTE: If, after installation, a memory expansion board fails to be recognized, remove the board and make sure the memory expansion slot is clean and free of debris. Reinsert the card.

5.13 Keyboard/CPU Cover Assembly

The keyboard/CPU cover assembly is spared as a unit. Two spare pointing device caps are included with the assembly. Remove the keyboard/CPU cover assembly to gain access to the internal components of the computer.

Removing the Keyboard/CPU Cover Assembly

1. Prepare the computer for disassembly (Section 5.7).
2. Turn the computer upside down with the front of the computer facing forward.
3. Remove the nine screws from the bottom of the computer (Figure 5-19).



CAUTION: The screw removed from the MultiBay area of the computer (circled in Figure 5-19) is shorter than the other screws removed in Step 3. When installing the keyboard/CPU cover assembly, be sure this shorter screw is installed in the proper location. Failure to follow this caution can result in damage to the computer.

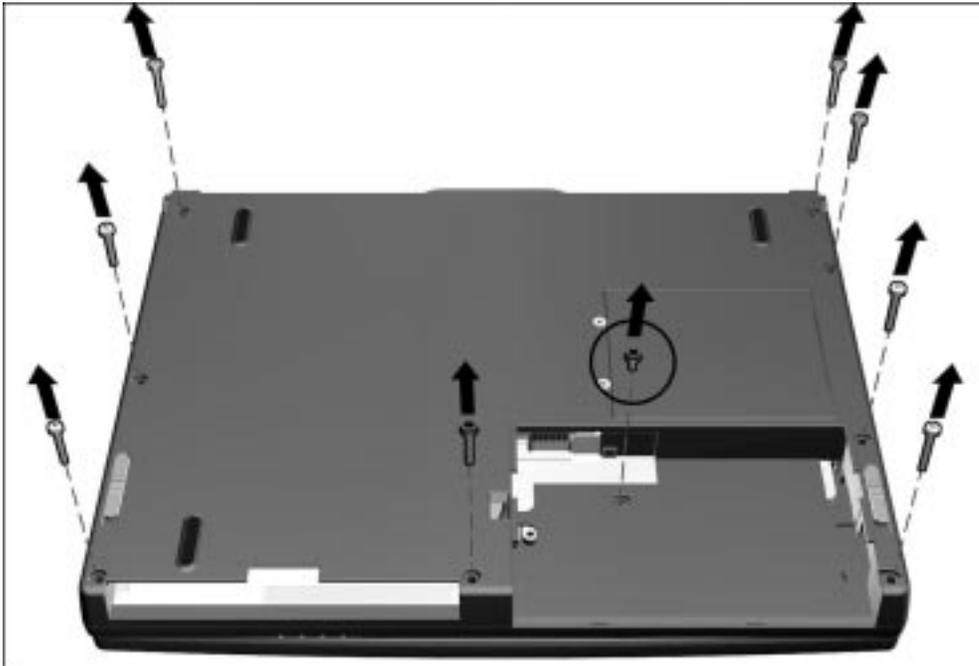


Figure 5-19. Removing the Keyboard/CPU Cover Assembly Screws

4. Turn the computer right side up with the front of the computer facing forward.
5. Open the computer as far as it will open.

NOTE: With the display open and the battery pack and hard drive removed, the weight of the display makes the computer susceptible to being easily tipped over.

6. Unsnap the back of the keyboard/CPU cover assembly.
7. Lift the keyboard/CPU cover assembly straight up and away from the computer (Figure 5-20).

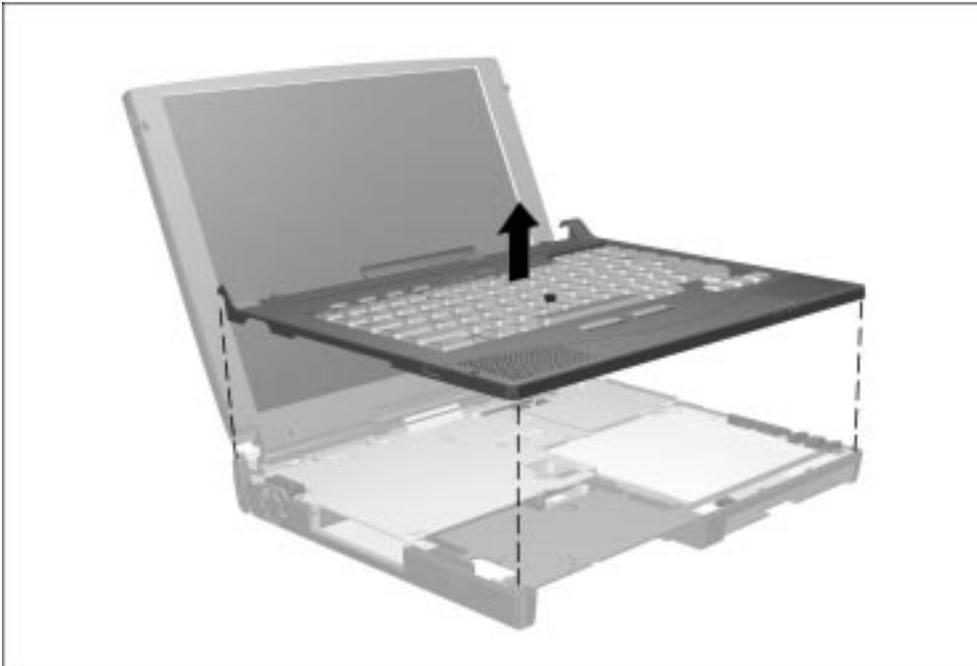


Figure 5-20. Removing the Keyboard/CPU Cover Assembly

8. Remove the six screws securing the EMI shield to the base assembly ❶ (Figure 5-21).
9. Remove the screw ❷ that secures the heatpipe mount leaf spring ❸ to the processor assembly.

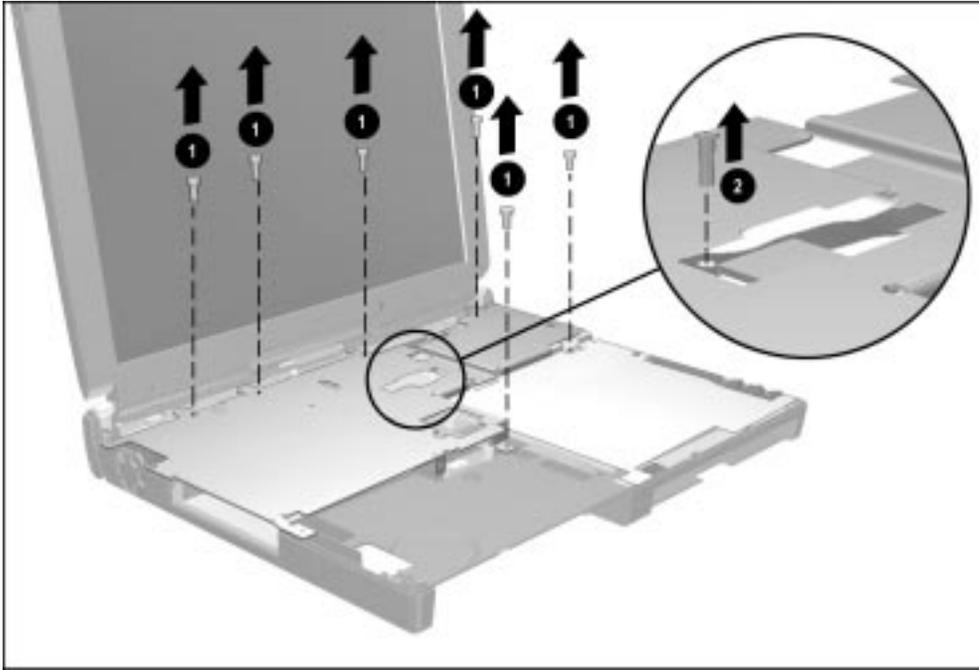


Figure 5-21. Removing the Heatpipe Mount Leaf Spring and EMI Shield Screws

10. Swing the left side of the heatpipe mount leaf spring up and away from the base assembly ❶ (Figure 5-22).
11. Lift the front edge of the EMI shield up and remove the shield from the computer ❷.

NOTE: A thermal pad is located between the heatpipe slug and the processor assembly. Before removing the EMI shield, pry the slug from the processor. Remove all thermal pad residue from the slug and processor, being careful not to scratch the black material on the top of the processor. Attach a new thermal pad when installing the EMI shield. Thermal pads are spared in various kits for the computer, including the Miscellaneous Hardware Kit (spare part number 204260-001) and with the processor assemblies (spare part numbers 204266-001 and 204267-001).



CAUTION: Make sure the auxiliary battery cable ❸ does not interfere with the removal of the EMI shield. Also make sure the screw tab on the right front side of the EMI shield ❹ does not interfere with the audio/modem board. Failure to follow these cautions can result in damage to the auxiliary battery cable.

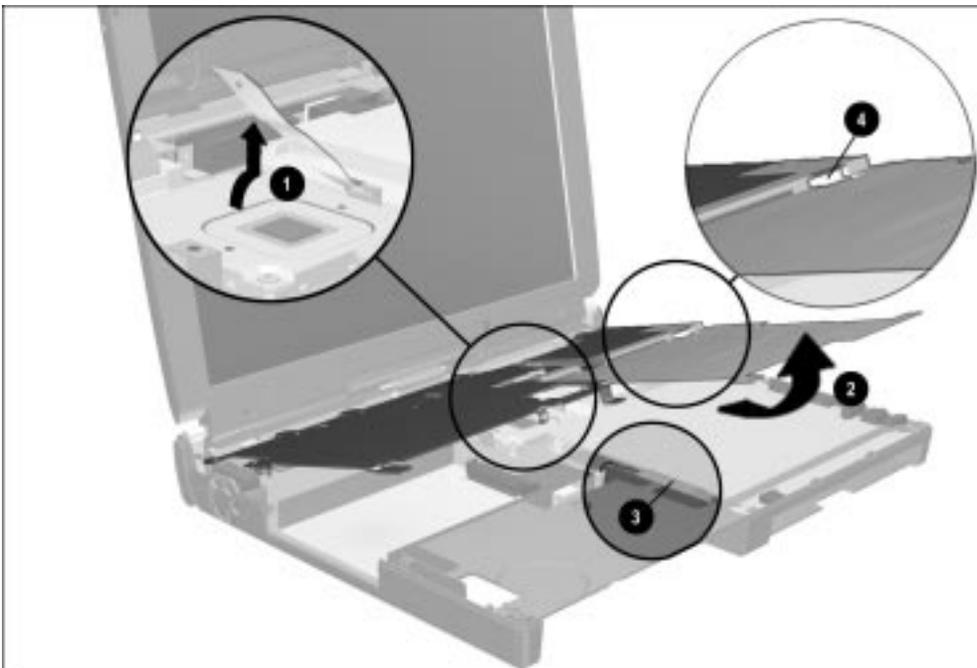


Figure 5-22. Removing the EMI shield

Installing the Keyboard/CPU Cover Assembly

NOTE: Make sure the PC Card door is open when installing the keyboard/CPU cover assembly.

1. Replace the EMI shield, making sure the four tabs on the back of the shield ❶ fit into the appropriate slots ❷ on the U-channel (Figure 5-23). Install the six screws that secure the shield to the base assembly.

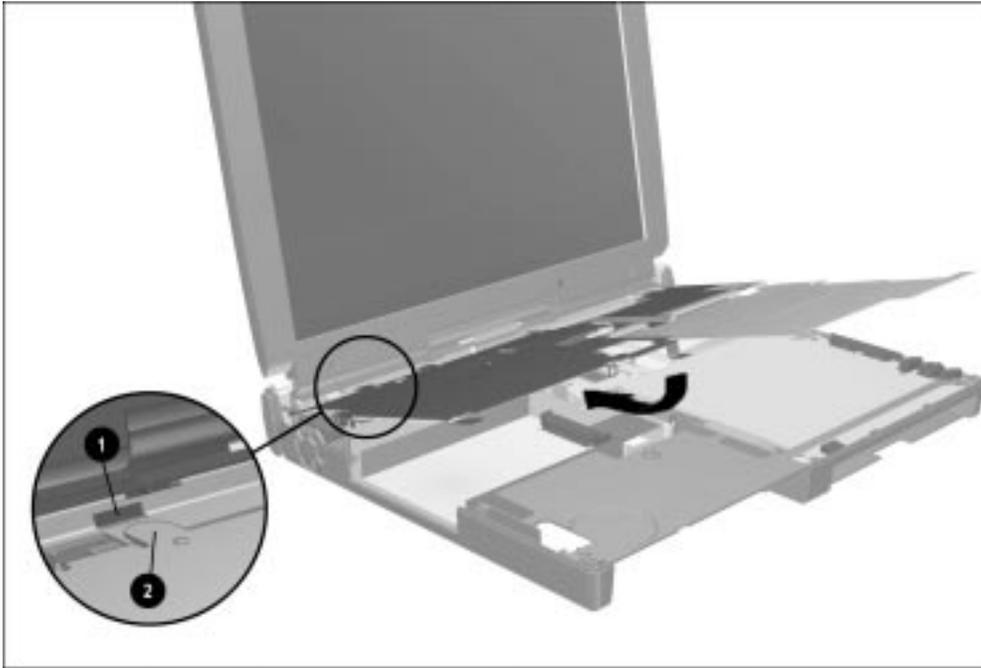


Figure 5-23. Installing the EMI shield

2. Insert the notched end of the heatpipe mount leaf spring ❶ into the slot on the thermal catch bracket on the processor (Figure 5-24).
3. Swing down the left side of the heatpipe mount leaf spring ❷.
4. Install the screw that secures the heatpipe mount leaf spring ❸.

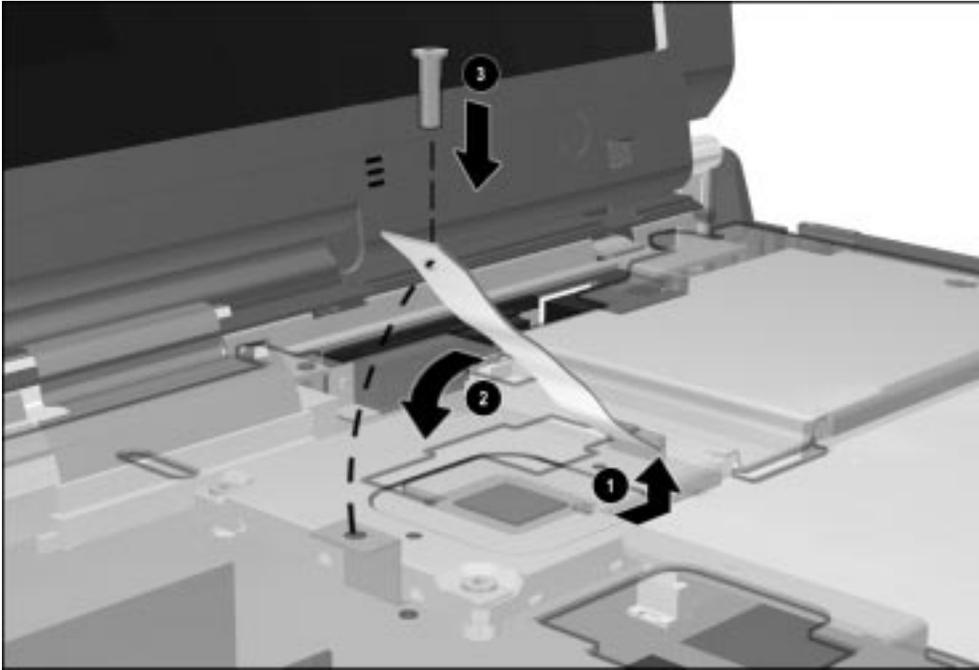


Figure 5-24. Installing the Heatpipe Mount Leaf Spring

5. Hold the keyboard/CPU cover assembly at a downward angle and push the right rear corner of the cover onto the right display clutch.
6. Press down on the cover in the area above the keyboard connector to seat the connector.
7. Push the left rear corner of the cover onto the left display clutch.
8. Lower the front of the cover.
9. Close the display.
10. Turn the computer upside down and install the eight screws that secure the keyboard/CPU cover assembly to the CPU base assembly.



CAUTION: To avoid damaging the computer, do not pinch or deform cables when installing the keyboard/CPU cover assembly.

5.14 Auxiliary Battery

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly (Section 5.13).
3. Use the connector removal tool to disconnect the auxiliary battery cable from the system board ❶ (Figure 5-25).
4. Lift and remove the auxiliary battery ❷.

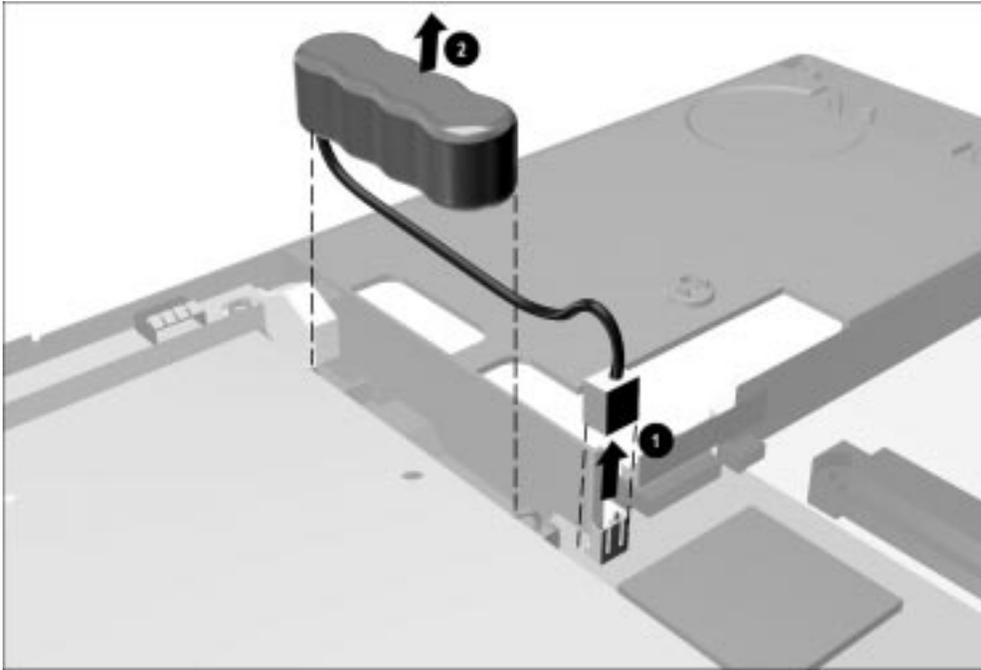


Figure 5-25. Removing the Auxiliary Battery

NOTE: The RTC battery should be installed before installing the auxiliary battery. Refer to Section 5.15.

When installing the auxiliary battery, connect the battery to the system board **1**, route the cable as illustrated in Figure 5-26, and then place the battery into the channel **2** in the front of the base assembly, with the cable underneath the battery.

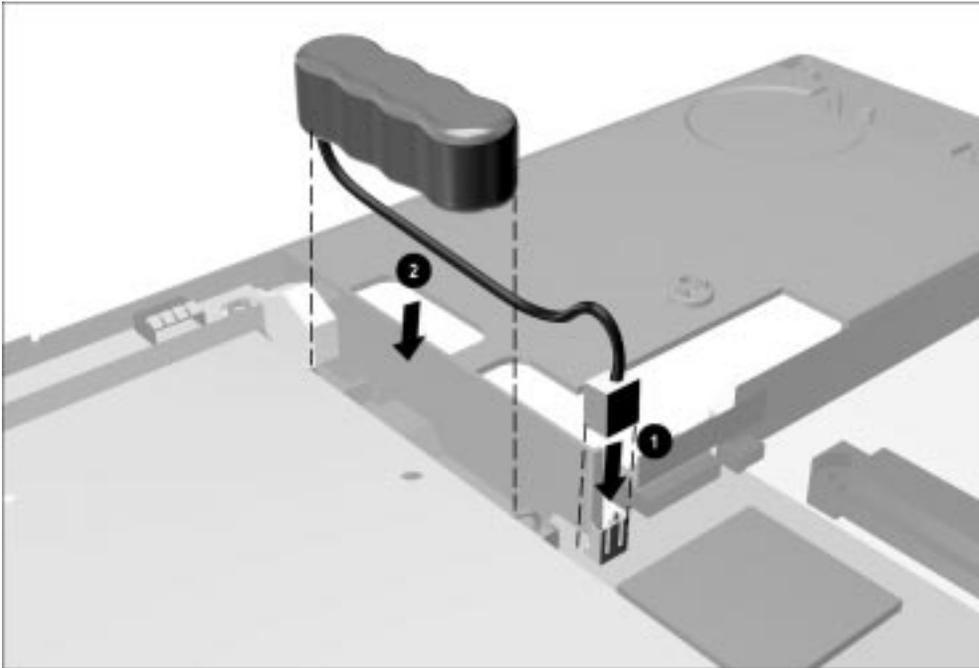


Figure 5-26. Installing the Auxiliary Battery

5.15 RTC Battery

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly (Section 5.13).
3. Use the connector removal tool to disconnect the RTC battery cable from the system board ❶ (Figure 5-27).
4. Lift and remove the RTC battery ❷.

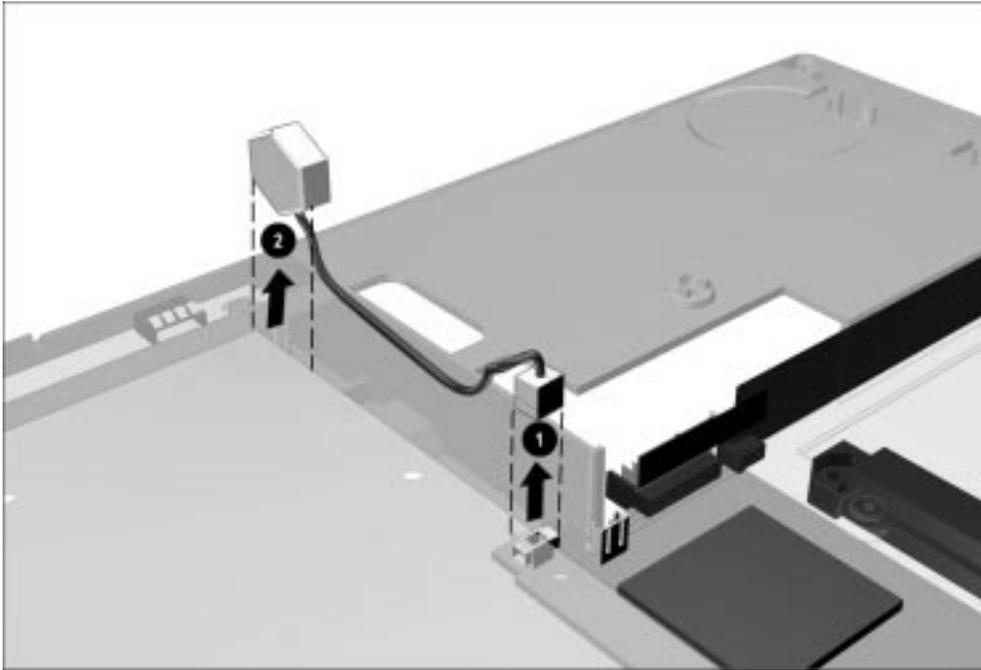


Figure 5-27. Removing the RTC Battery

When installing the RTC battery, connect the battery to the system board ❶, route the cable as illustrated in Figure 5-28, and then place the battery into the slot in the front of the base assembly ❷.

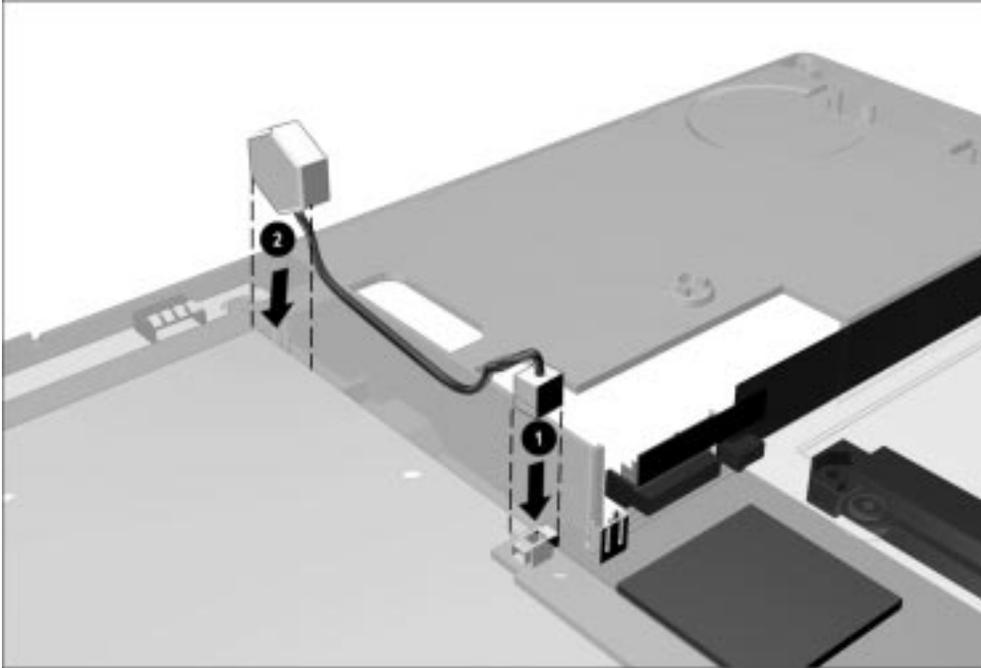


Figure 5-28. Installing the RTC Battery

5.16 Audio/Modem or Audio Only Board

Depending on the model, the computer contains either an audio/modem or an audio only board. The audio board is located in the right front area of the computer and connects to the system board. The audio/modem or audio only board is spared as a unit.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Lift up on the rear left corner of the audio/modem board ❶ to disconnect the board from the system board (Figure 5-29).
4. Remove the audio/modem board from the computer ❷.
5. Remove the MultiBay shield from the computer ❸.

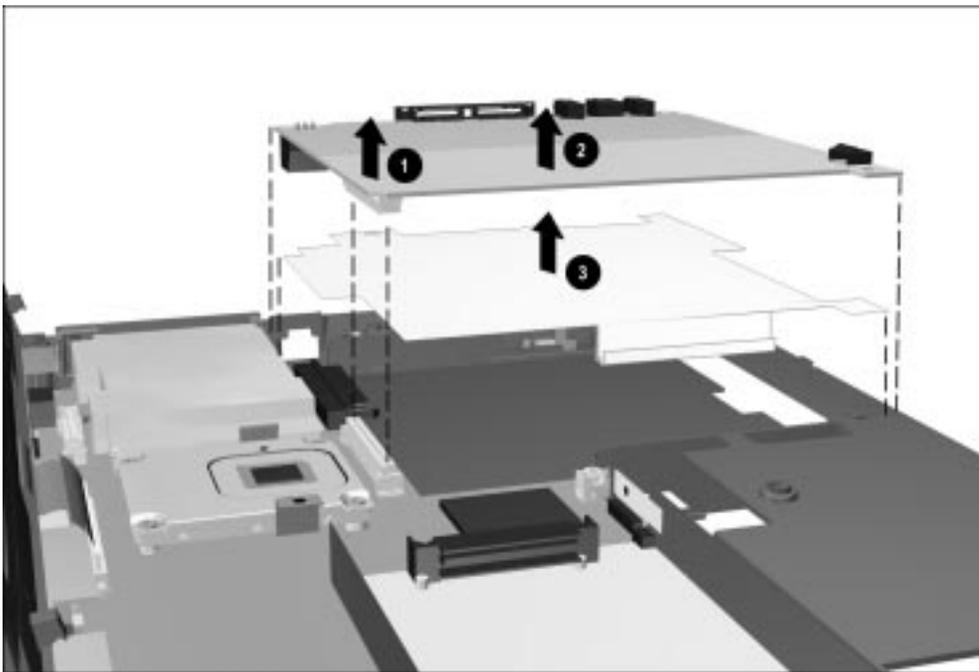


Figure 5-29. Removing the Audio/Modem Board and MultiBay Shield

Reverse the above procedure to install the audio/modem or audio only board and MultiBay shield.



CAUTION: When installing the MultiBay shield, make sure the tabs on the left and right sides of the shield are placed on the outside of the wall in the base assembly. Failure to follow this caution can result in damage to the MultiBay shield and any devices inserted into the MultiBay.

5.17 Fan Assembly

The fan assembly is mounted at the air vent on the left side of the computer and is connected to the system board.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Disconnect the fan cable from the system board ❶ (Figure 5-30).
4. Lift the fan from the housing molded into the base assembly ❷.

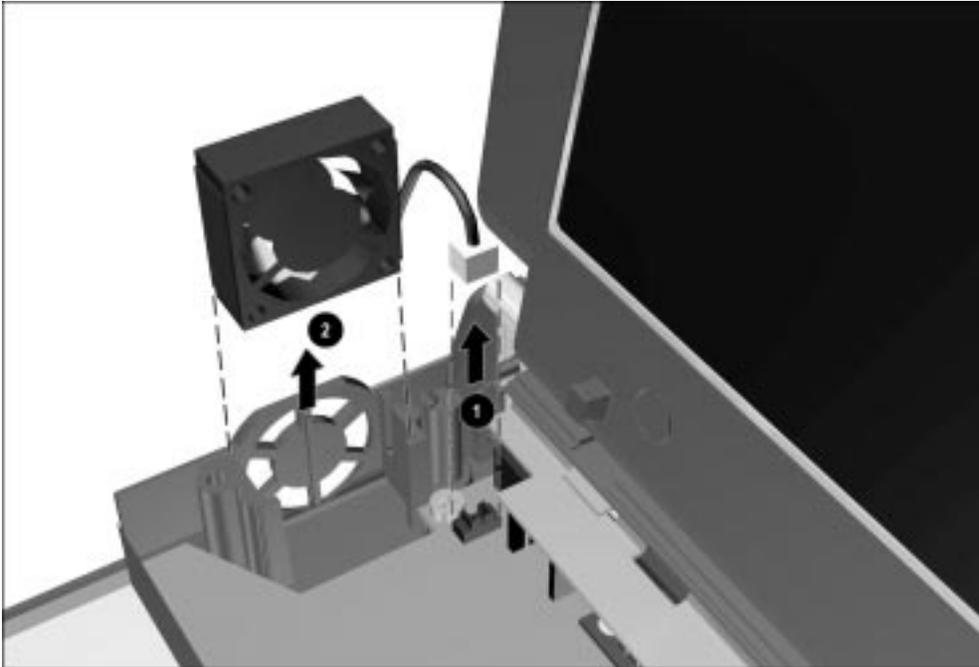


Figure 5-30. Removing the Fan Assembly

Reverse the above procedure to install the fan. Make sure the fan cable is routed through the slot in the back of the fan housing in the base assembly.



CAUTION: To maintain proper air flow, be sure the fan label faces outward and the fan cable faces the rear panel of the computer.

5.18 Processor Board

The processor board is spared as a unit.



CAUTION: When the processor assembly is removed, make sure the processor spacers either remain in place on the processor mounting bracket protruding through the system board or are removed.

When installing the processor assembly, make sure the processor spacers, processor assembly, and screws are installed in the proper sequence. Refer to Figures 5-31 and 5-32 for the proper installation sequence.

Failure to follow this caution can result in damage to the processor and system board.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the four screws **1** that secure the processor board to the system board. Lift up on the back edge of the processor board **2** and swing it forward to disconnect it from the system board and remove the processor board (Figure 5-31).

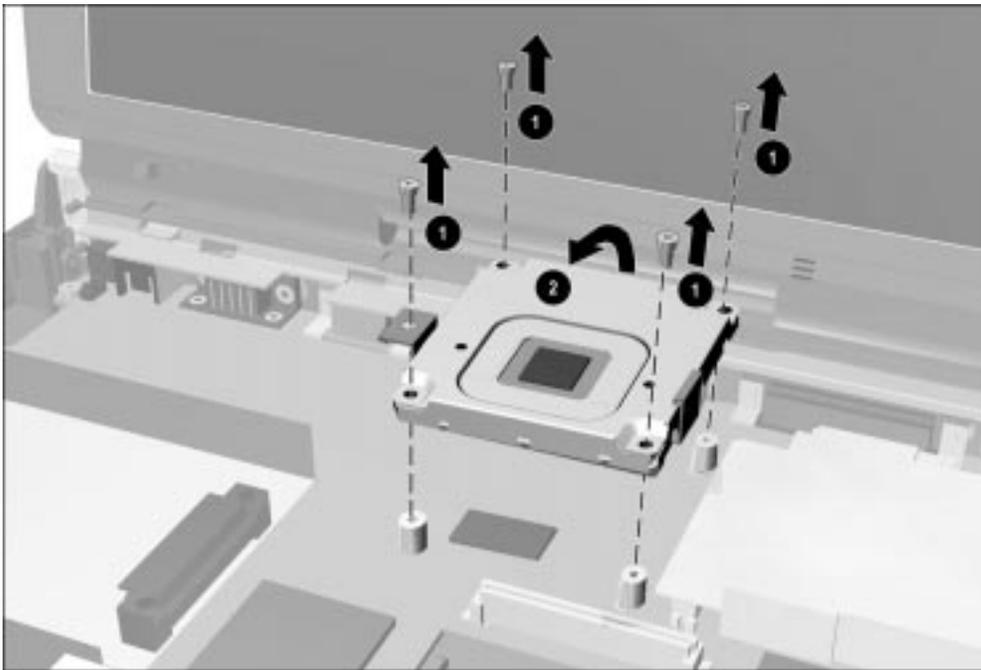


Figure 5-31. Removing the Processor Board

4. Remove the four spacers from the mounting posts on the processor mounting bracket (Figure 5-32).

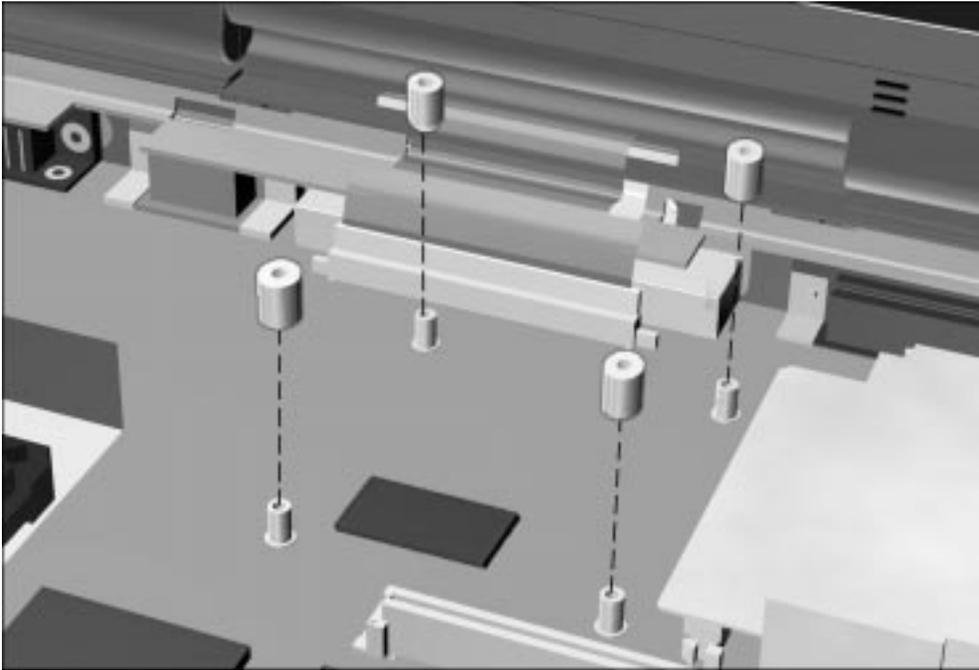


Figure 5-32. Removing the Processor Board Spacers

Reverse the above procedure to install the processor board. Make sure the four spacers are replaced before the processor board is secured to the system board.

NOTE: Make sure the processor assembly is fully seated on its connector on the system board before installing the screws.

5.19 Display Assembly

The display assembly is spared as a unit. The Compaq logo is included with the assembly.

Removing the Display Assembly

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Position the computer so the rear panel faces forward.
4. Remove the four screws that secure the display assembly to the base assembly (Figure 5-33).

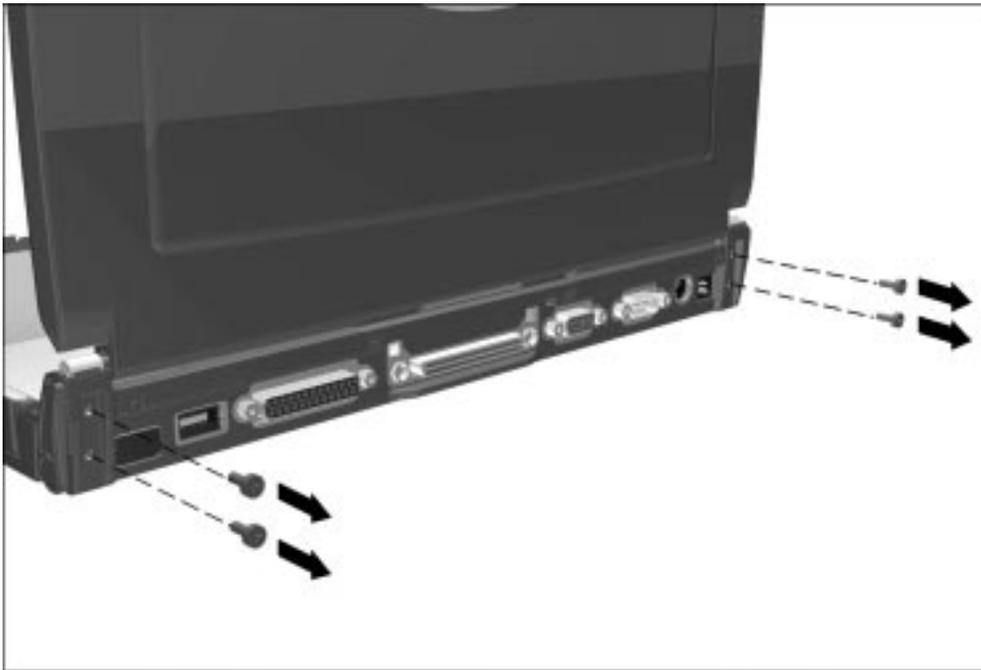


Figure 5-33. Removing the Display Assembly Screws

5. Position the computer so the front faces forward.
6. Open the computer.

7. Disconnect the display cable from the system board (Figure 5-34).

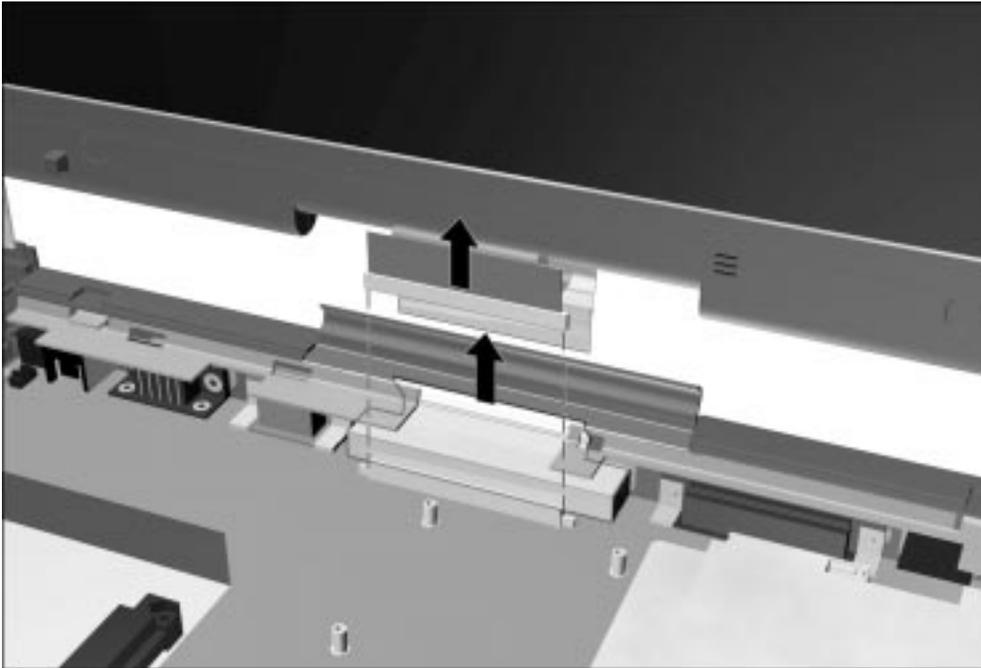


Figure 5-34. Disconnecting the Display Cable

8. Lift up and remove the display assembly from the base assembly.

As the display assembly is removed, the display ground cable disconnects from the base assembly.

Reverse the above procedure to install the display assembly. Insert the display ground cable into the clip in the base assembly as you lower the display clutches into their slots on the base assembly (Figure 5-35).

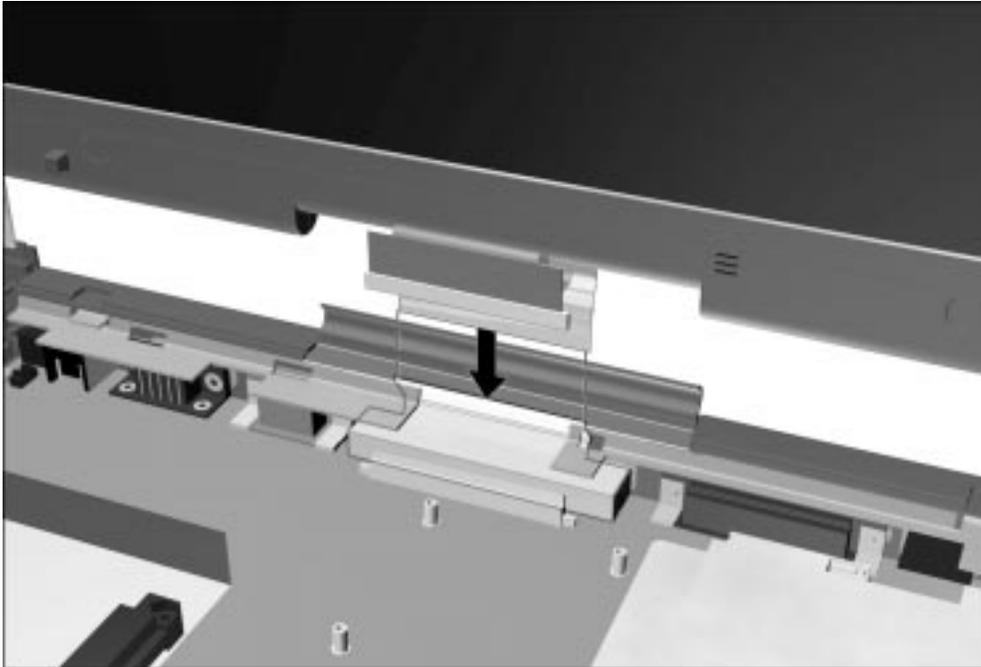


Figure 5-35. Connecting the Display Ground Cable

Display Assembly Internal Components

The display assembly is spared as a hinge-up subassembly in certain geographical regions. In other regions, individual components inside the assembly are spared separately. Refer to the following sections for display assembly disassembly instructions.

Bezel

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the display assembly (Section 5.19).
4. Peel off the adhesive-backed overlay **1** (Figure 5-36).
5. Remove the two screw covers **2** and six screws **3** that secure the bezel to the enclosure. The screw removed from the upper left corner of the bezel should include a metal washer. It is important that this washer be included with the screw at reassembly.
6. Remove the bezel **4**. The bezel is used to hold the display release latches in place. When the bezel is removed, the display release latches are loose. Make sure the latches and their springs are not misplaced when removing the bezel.

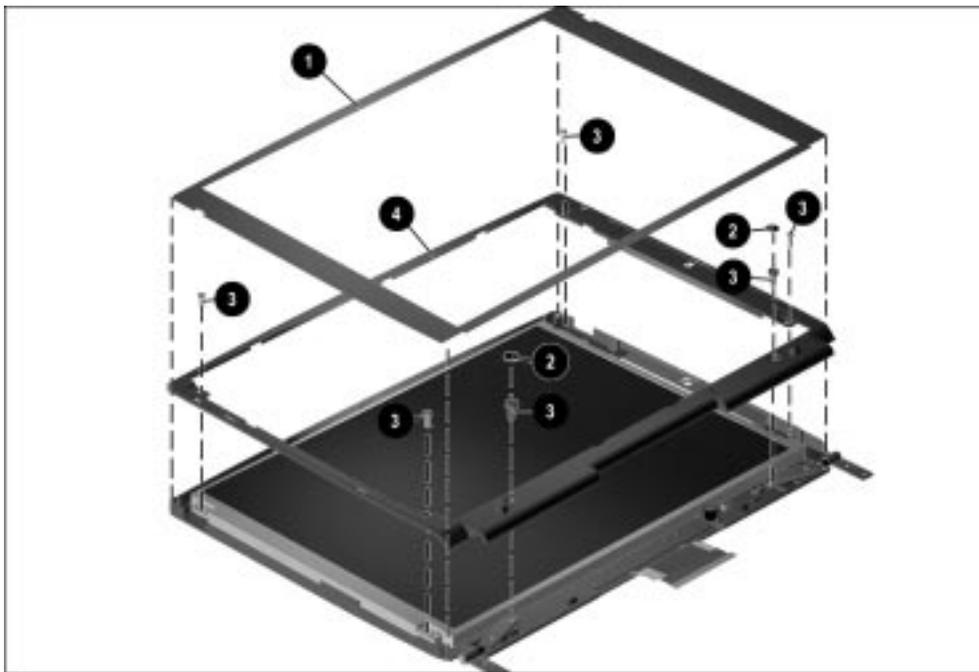


Figure 5-36. Removing the Display Overlay And Bezel

Panel

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the display assembly (Section 5.19).
4. Remove the overlay and bezel.
5. Disconnect the backlight cable from the inverter ❶ (Figure 5-37).
6. Lift the right side of the panel out of the enclosure.
7. Remove the tape that secures the display cable to the back of the panel ❷.



CAUTION: Do not remove the tape from the display cable. Failure to follow this caution can result in damage to the display cable.

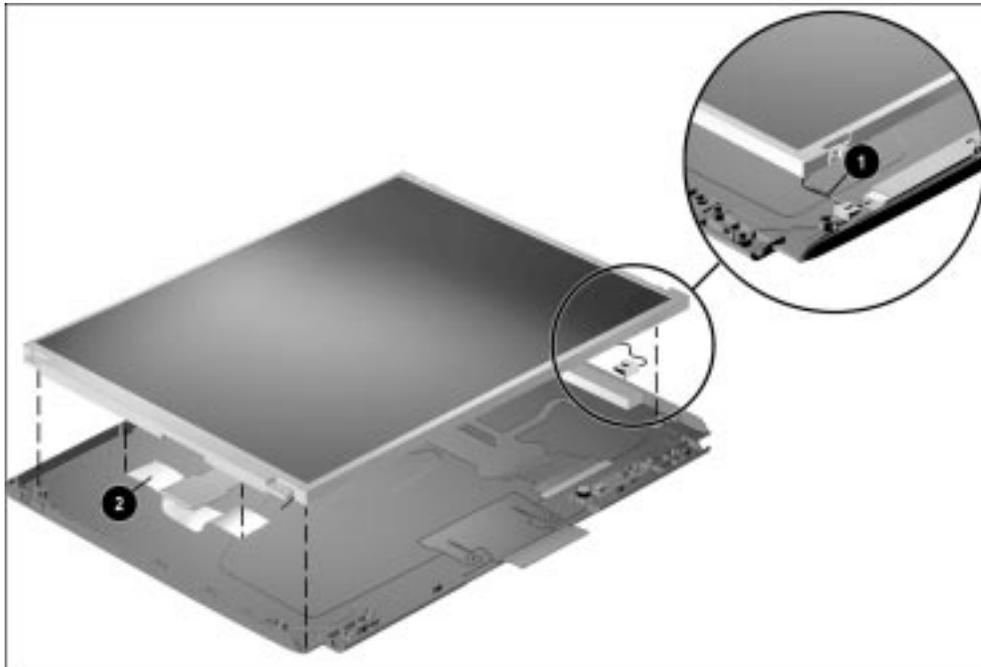


Figure 5-37. Disconnecting the Backlight Cable and Removing the Display Cable Tape

8. Disconnect the display cable from the panel.



CAUTION: Exercise caution when disconnecting the cable from the panel. Pull the cable away from the panel on a horizontal plane ❶ (Figure 5-38). Failure to follow this caution can result in damage to the cable and panel.

9. Remove the panel from the enclosure ❷.

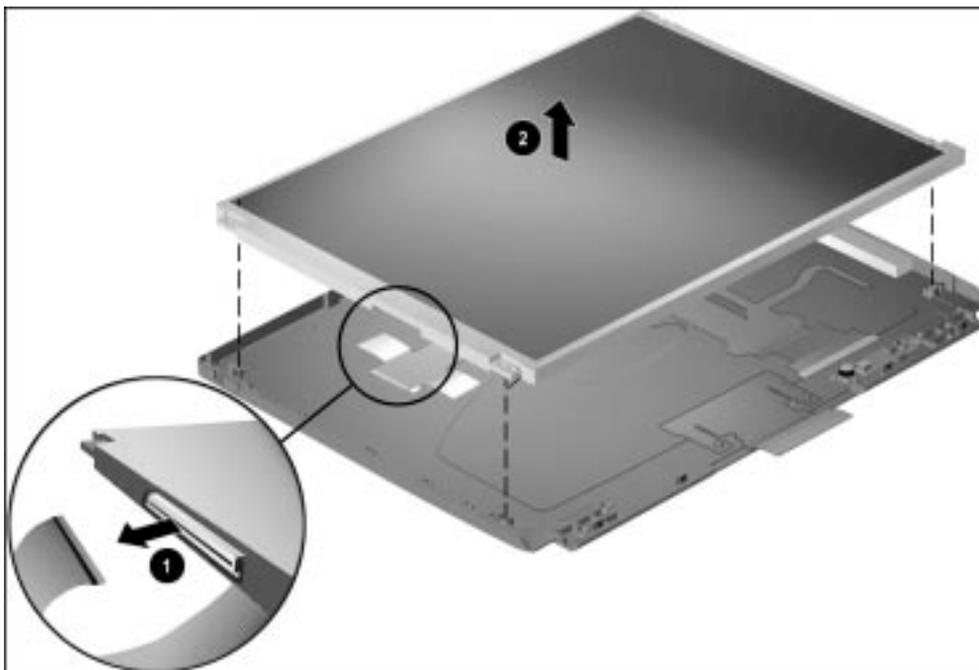


Figure 5-38. Disconnecting the Display Cable and Removing the Display Panel

Reverse the above procedure to install the panel.

Display Cable

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the display assembly (Section 5.19).
4. Remove the overlay and bezel.
5. Remove the panel.
6. Disconnect the display cable from the inverter ❶ and microphone board ❷ (Figure 5-39).
7. Remove the display cable from the enclosure ❸.

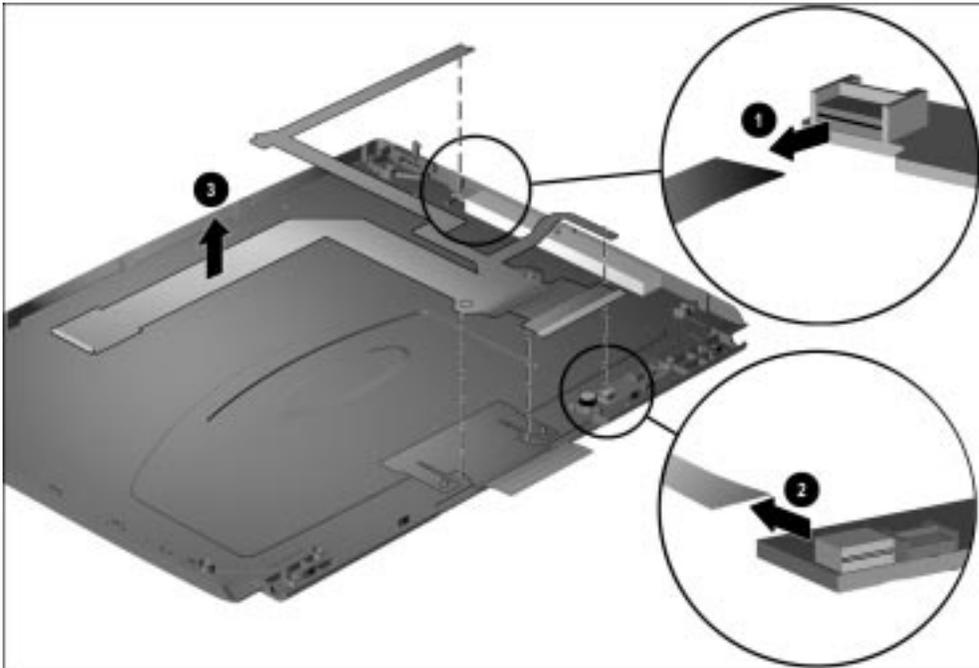


Figure 5-39. Removing the Display Cable

Reverse the above procedure to install the display cable. Be sure the alignment holes on the cable are placed over the alignment pegs on the enclosure.

Inverter

The display inverter is spared with the inverter insulator.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the display assembly (Section 5.19).
4. Remove the overlay and bezel.
5. Remove the panel.
6. Remove the display cable.
7. Remove the screw that secures the inverter to the enclosure ❶ (Figure 5-40).
8. Remove the inverter from the enclosure ❷.

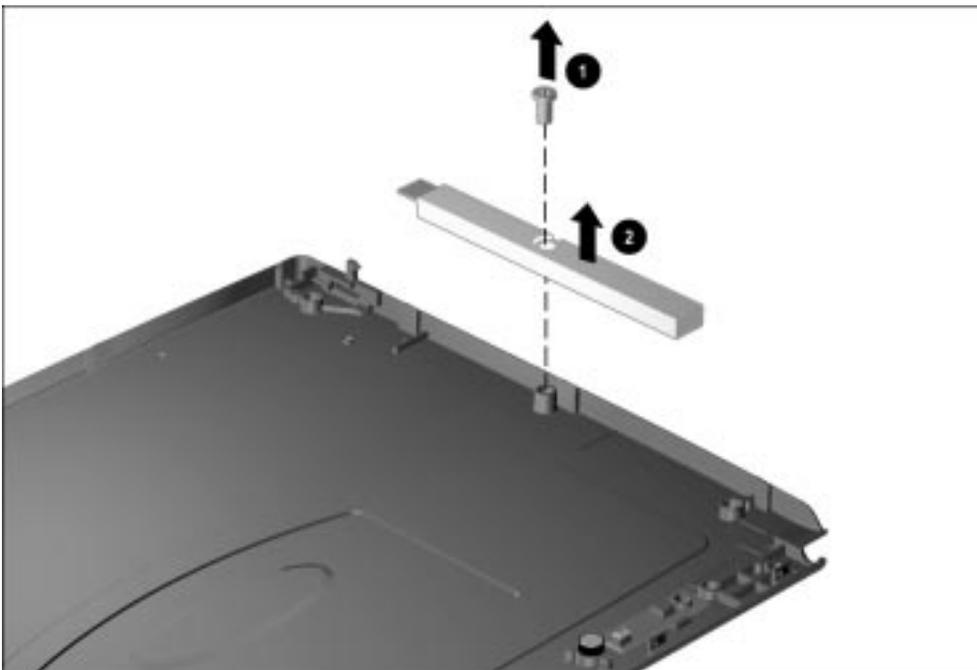


Figure 5-40. Removing the Display Inverter

Reverse the above procedure to install the inverter.

Microphone

The microphone assembly consists of the microphone, the microphone board, and the isolator.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the display assembly (Section 5.19).
4. Remove the overlay and bezel.
5. Remove the panel.
6. Remove the display cable.
7. Disconnect the microphone cable from the microphone board ❶ and remove the microphone ❷ (Figure 5-41).
8. Remove the microphone board from the enclosure ❸.

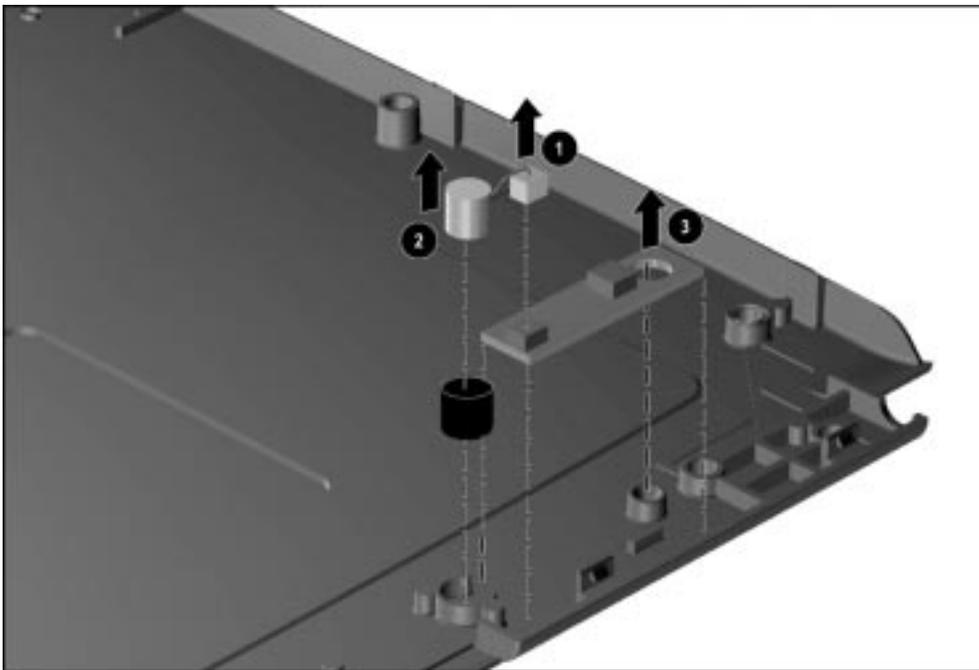


Figure 5-41. Removing the Microphone

Reverse the above procedure to install the microphone. The microphone board is secured to the display enclosure by an adhesive pad. If this pad needs to be replaced, install it on the microphone board first, then install the board on the display enclosure.

5.20 System Board

The system board is located beneath the major components in the computer. Those components must be removed to remove the system board. The system board is spared with the U-channel and expansion connector shield.

1. Prepare the computer for disassembly (Section 5.7).
2. Remove the keyboard/CPU cover assembly and EMI shield (Section 5.13).
3. Remove the auxiliary battery (Section 5.14).
4. Remove the RTC battery (Section 5.15).
5. Remove the audio/modem or audio only board and shield (Section 5.16).
6. Remove the fan assembly (Section 5.17).
7. Remove the processor board (Section 5.18).
8. Remove the display assembly (Section 5.19).

NOTE: Once the display assembly has been removed, MultiBay devices left inside the MultiBay for balance purposes can be removed (Section 5.8).

9. Position the computer so the rear panel faces forward.
10. Remove the two screws that secure the U-channel to the base assembly (Figure 5-42).



Figure 5-42. Removing the U-channel Screws

11. Position the computer so the front faces forward.
12. Remove the four screws ❶ that secure the system board to the base assembly (Figure 5-43).
13. Lift up on the front edge of the system board ❷. Once the front edge of the system board clears the battery bay housing, pull the system board forward and remove it from the computer ❸.

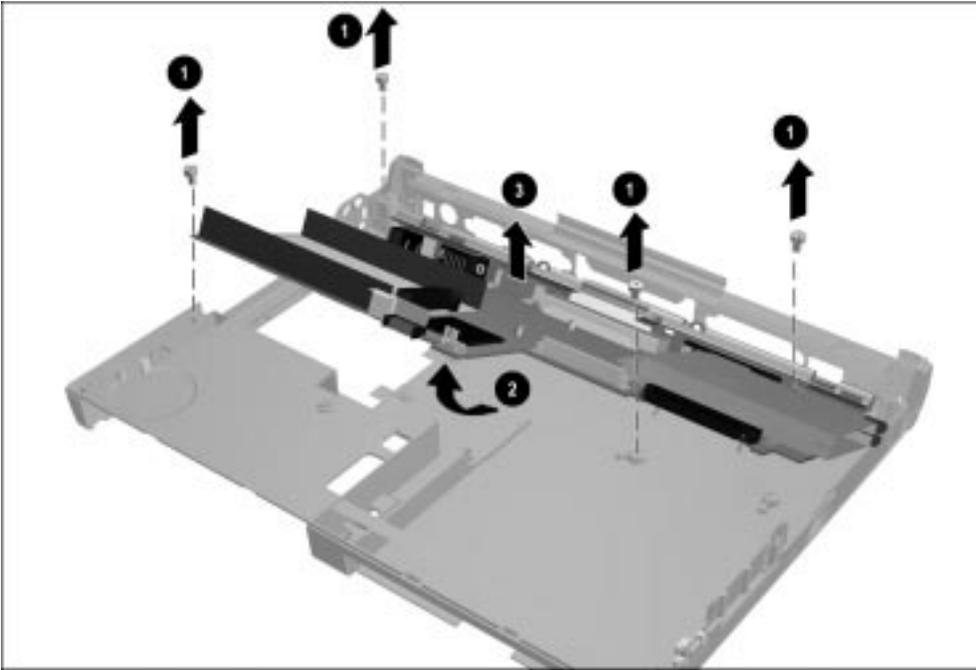


Figure 5-43. Removing the System Board

NOTE: When the system board is removed, the processor attach bracket loosely fits between the system board and the system board insulator. If the processor attach bracket is removed, the processor board spacers may be lost. Ensure that the spacers are not lost and are replaced before the processor is installed.

Installing the System Board

1. Insert and hold the processor attach bracket in place on the bottom of the system board (Figure 5-44).

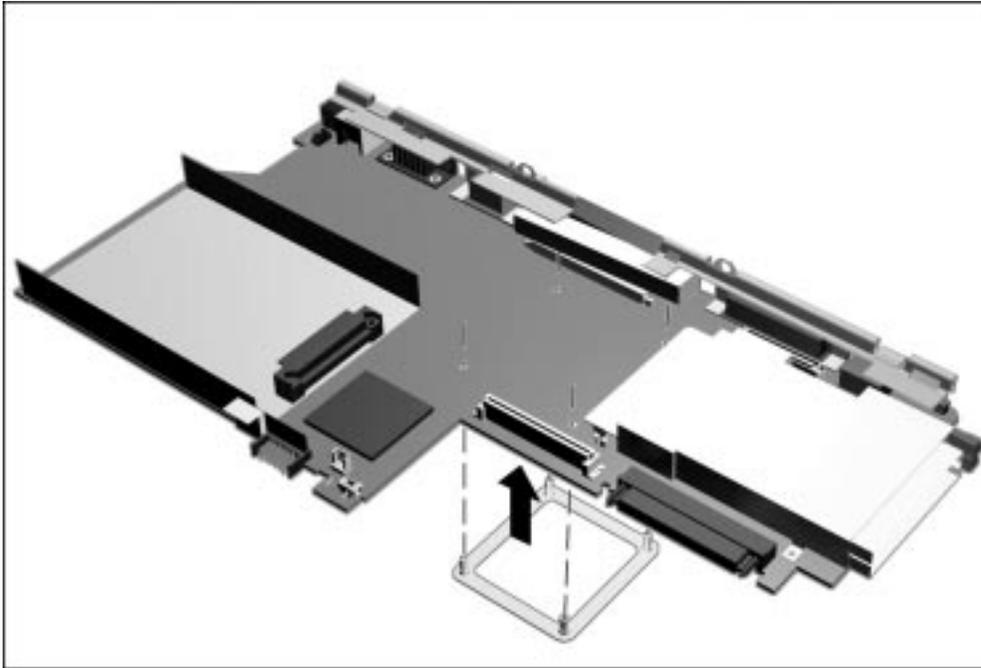


Figure 5-44. Installing the Processor Attach Bracket

2. Position the base assembly so the front of the computer faces forward.

3. With the back edge of the system board leaning downward, insert the system board into the base assembly ❶ (Figure 5-45).

NOTE: Make sure the PC Card door is open when inserting the system board into the base assembly.

4. When the back edge is in place, push the front edge down ❷ into the base assembly.
5. Install the six screws that secure the system board.



Figure 5-45. Installing the System Board



CAUTION: When the processor assembly is removed, make sure the processor spacers either remain in place on the processor mounting bracket protruding through the system board or are removed.

When installing the processor assembly, make sure the processor spacers, processor assembly, and screws are installed in the proper sequence. Refer to Figures 5-31 and 5-32 for the proper installation sequence.

Failure to follow this caution can result in damage to the processor and system board.
