



PowerBook G3 Lombard Sound Card Replacement

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INTRODUCTION

Tripped over your power cord? At least you don't have to replace the entire logic board.



TOOLS:

- [Anti-Static Wrist Strap](#) (1)
- [Phillips #0 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T8 Torx Screwdriver](#) (1)



PARTS:

- [G3 Lombard DC & Sound Card](#) (1)

Step 1 — Keyboard



- Turn the computer so that the ports are facing you.
- If the keyboard is locked, open the port cover and turn the keyboard locking screw until the keyboard is unlocked.

Step 2



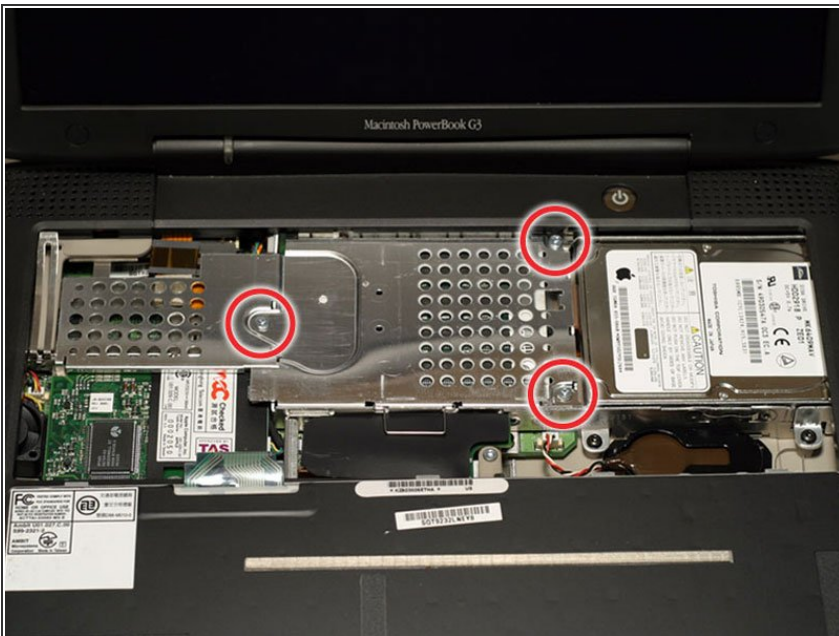
- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.
- ⓘ Make sure you have removed the laptop battery and CD/DVD module from the expansion bays before proceeding.

Step 3



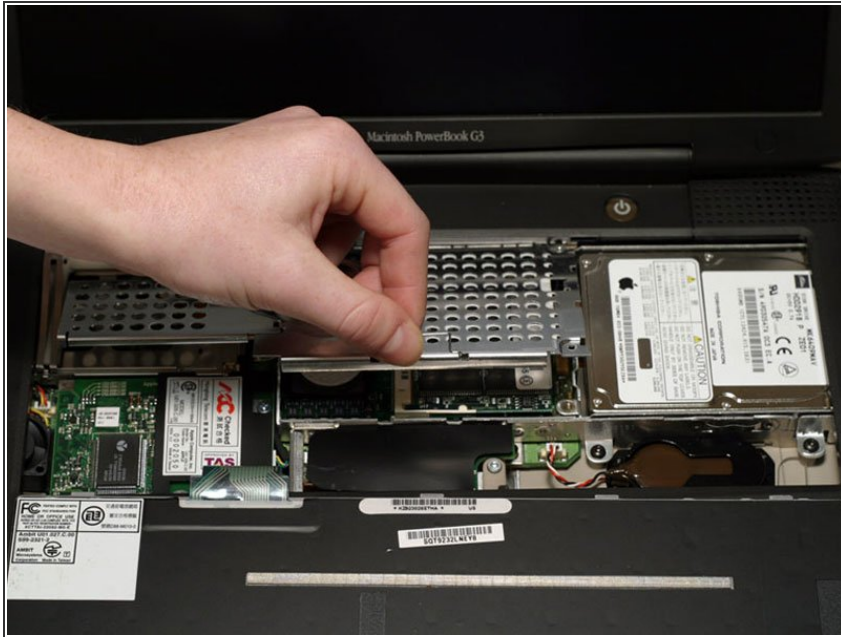
- Lift the keyboard out by pulling it up and away from you. Rest the keyboard, face down, on top of the trackpad.
- ⓘ In order to replace the keyboard, you must first remove the modem.

Step 4 — Heat Shield



- Remove the three silver Phillips screws that attach the heat shield to the internal metal framework.

Step 5



- Lift the heat shield up and pull it toward you.

Step 6



- Your laptop should look approximately like this.

Step 7 — PRAM Battery



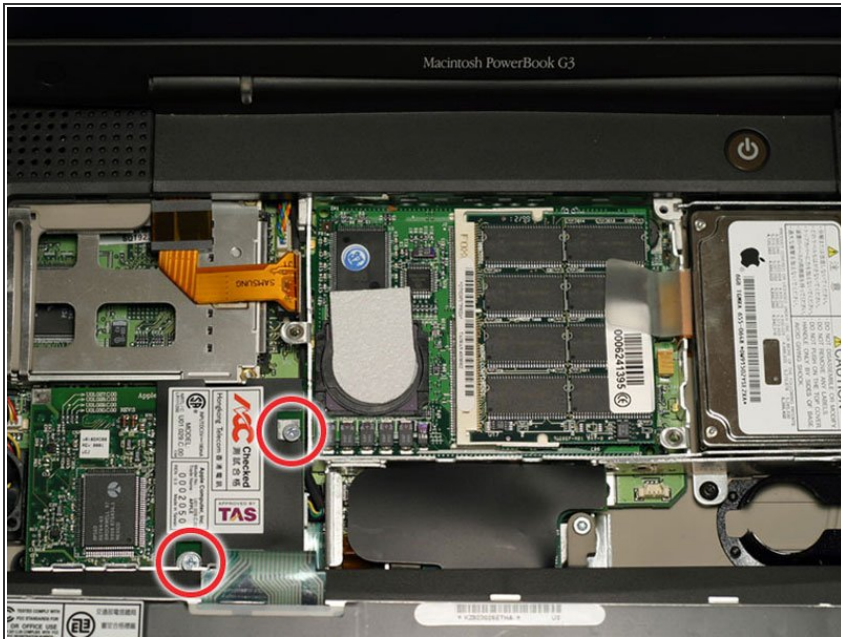
- Pull the battery cable directly up from the logic board.

Step 8



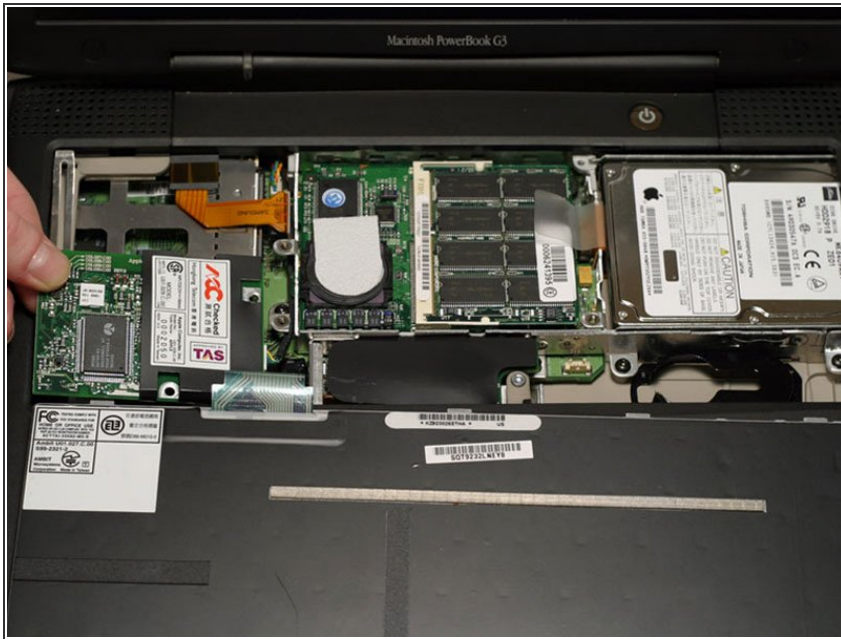
- Remove the battery from its holder by pulling up and to the left.

Step 9 — Modem



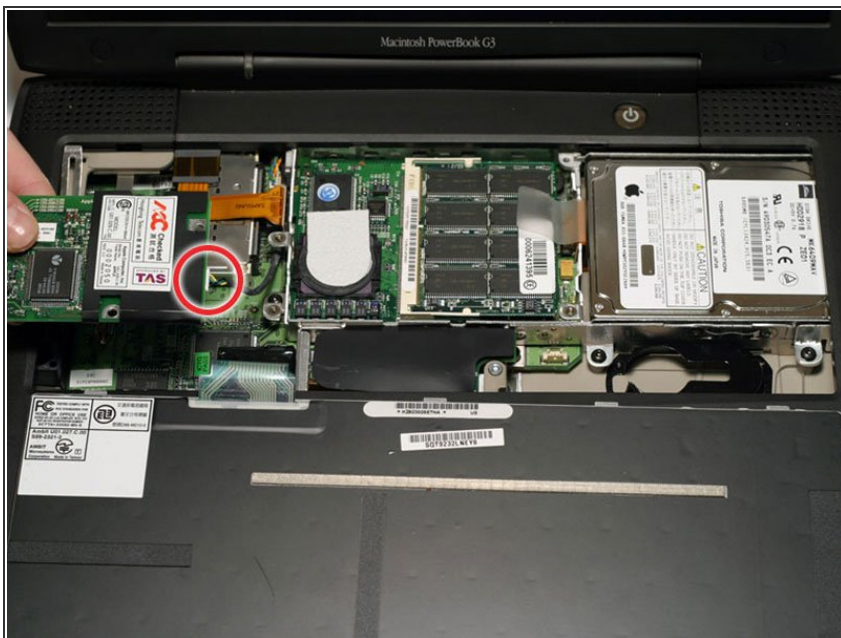
- Remove the two silver Phillips screws from the modem.

Step 10



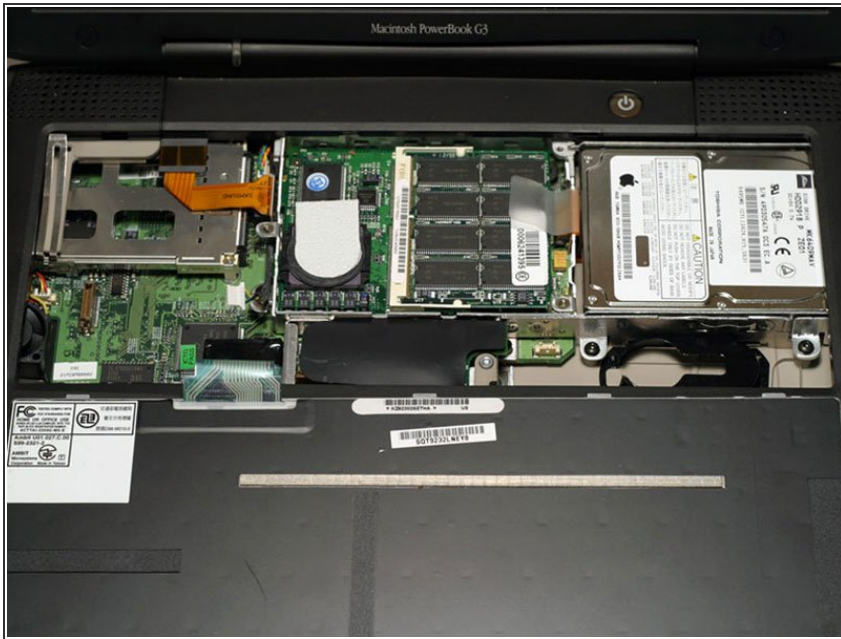
- Use a spudger, the tips of your fingers, or a flat non-metal tool to get under the modem's edge and pry it up from its socket as shown in the picture.

Step 11



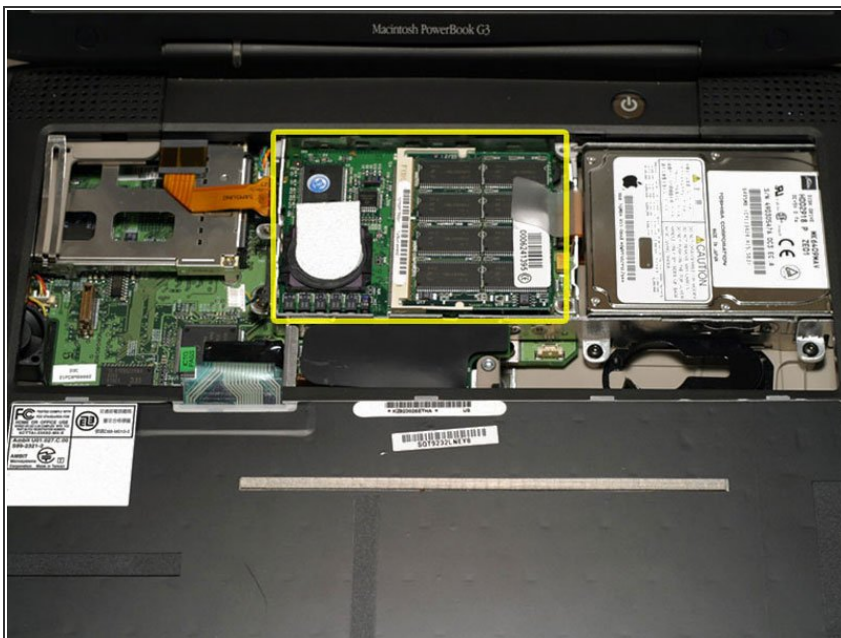
- Disconnect the cable from the right side of the modem.

Step 12



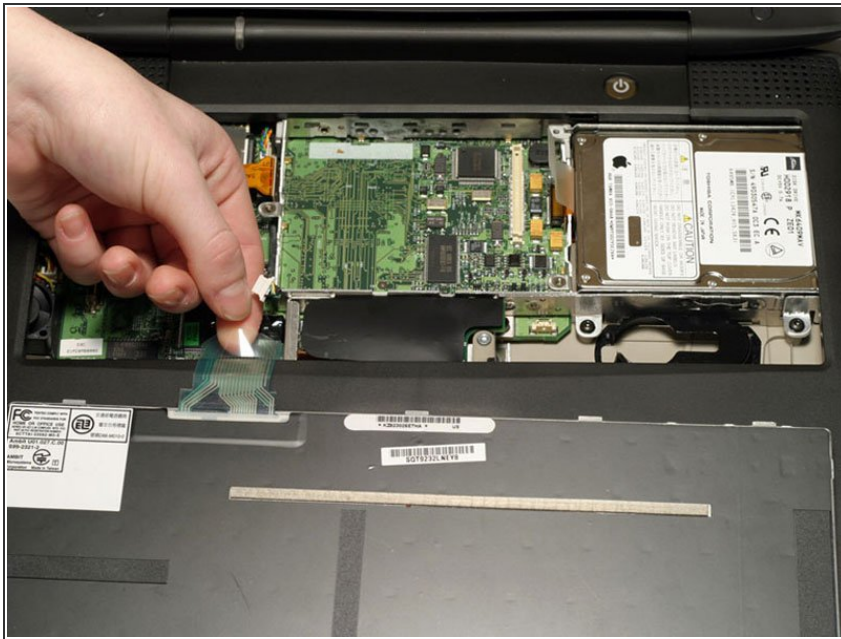
- Your laptop should look approximately like this.

Step 13 — Processor



- Use a spudger, the tips of your fingers, or a flat non-metal tool to pry up the processor's right side.

Step 14



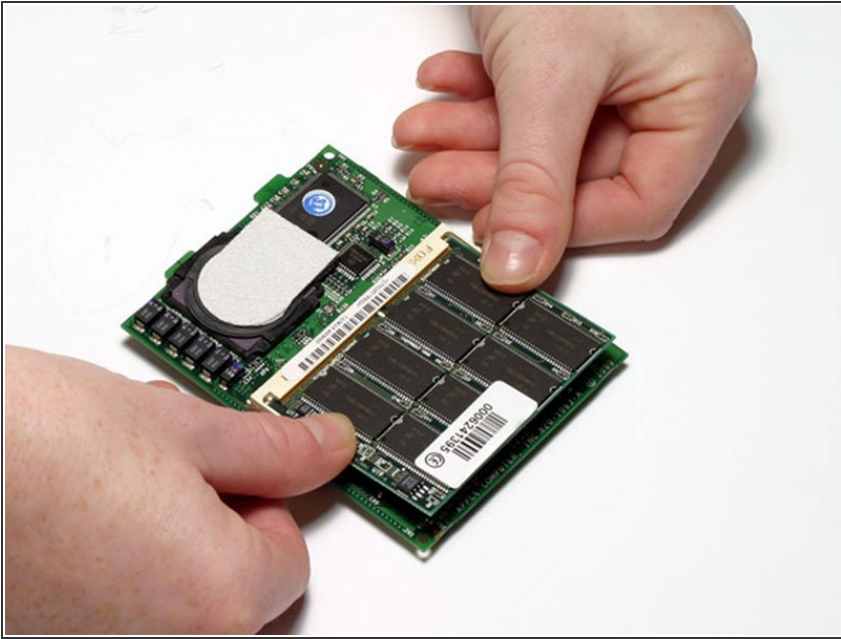
- Disconnect the keyboard cable from the logic board by pulling directly up on the clear plastic loop.
- ⓘ This step is out of sequence with the keyboard because in order to remove the keyboard you must first remove the modem.

Step 15



- Your laptop should look approximately like this.

Step 16 — RAM



- Release the tabs on each side of the RAM chip at the same time. These tabs lock the chip in place and releasing them will cause the chip to "pop" up.
- Pull the RAM chip out.
- ⓘ There are RAM slots on both sides of the processor. We recommend installing higher capacity chips on the bottom so that if you want to upgrade later, you won't have to remove the processor.

Step 17 — Hard Drive



- Grasp the orange cable at the left end of the hard drive and disconnect it from the logic board.
- ⓘ Try to grasp the cable on the plastic connector rather than on the flexible cable section.

Step 18



- Grasp the plastic tab and pull the hard drive up and to the left, making sure that the metal bracket doesn't catch on the black plastic casing.

Step 19 — Clutch Cover



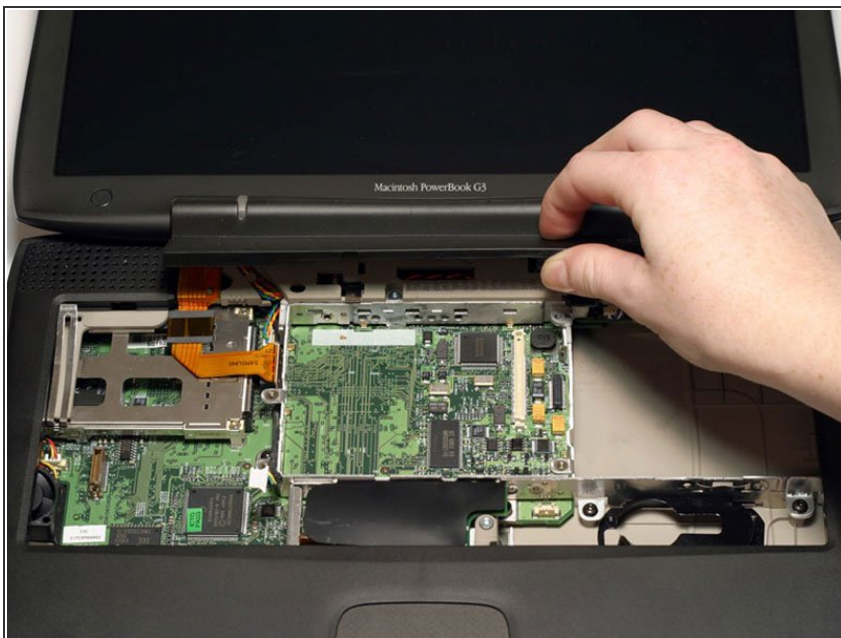
- Push the display back so that it lies flat.

Step 20



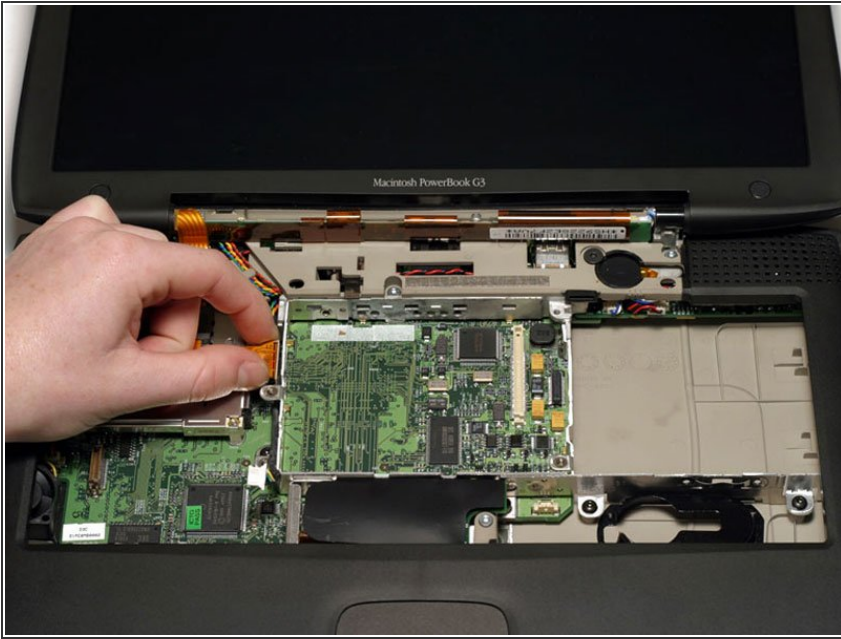
- Slip a spudger or your index finger under the clutch cover near the power button and pull gently upward until you feel it come free.
- Repeat the previous step on the left side.

Step 21



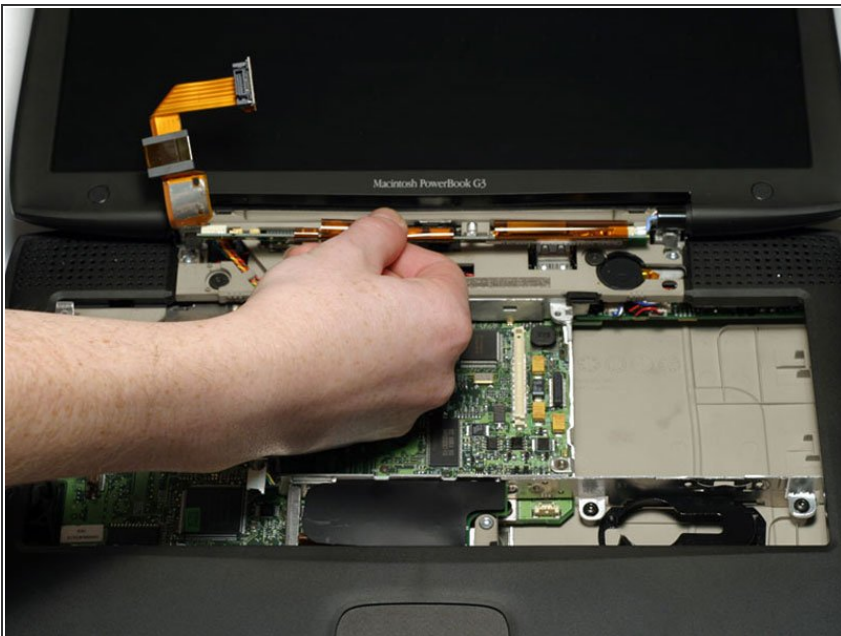
- Lift the clutch cover up and off, rotating it toward yourself.

Step 22 — Inverter



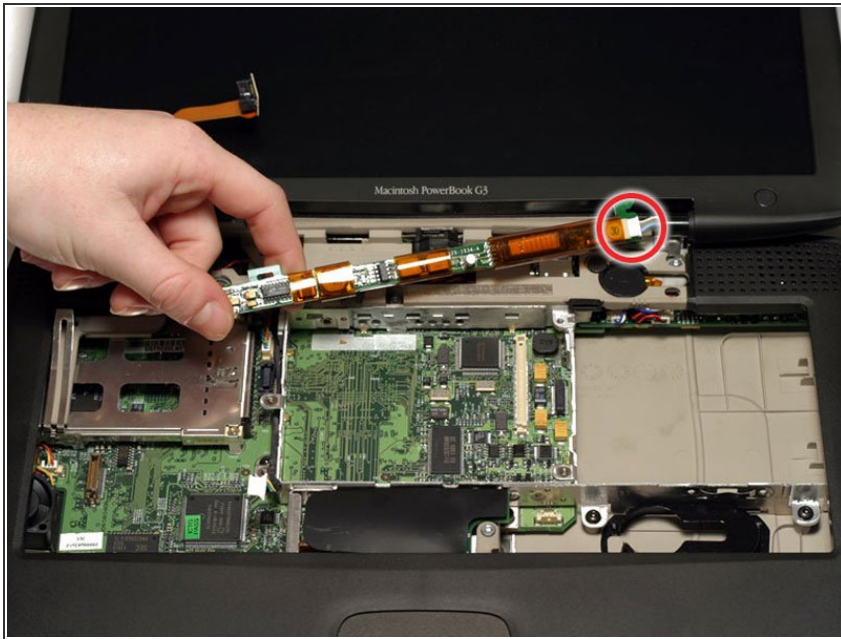
- Grasp the orange display data cable and disconnect it from the logic board.
- Pull the display cable straight up so that it is vertical.

Step 23



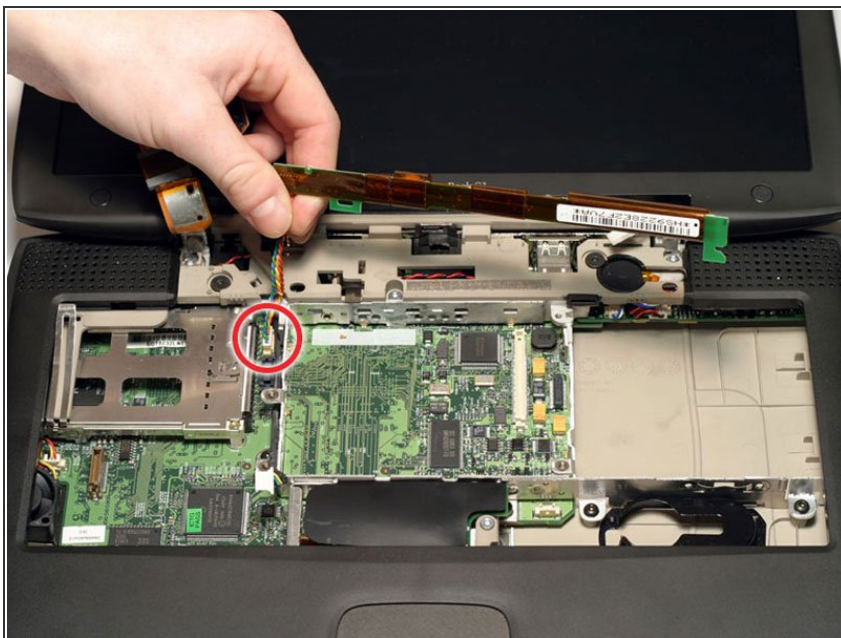
- Grasp the thin display inverter board at its left end, push the left end forward to get the board beyond the tab, and then lift the entire board up.
- ⓘ There are two tabs that hold the display inverter in place that you need to get past in order to pull the board free.

Step 24



- Disconnect the white inverter cable connector from the right end of the board.

Step 25



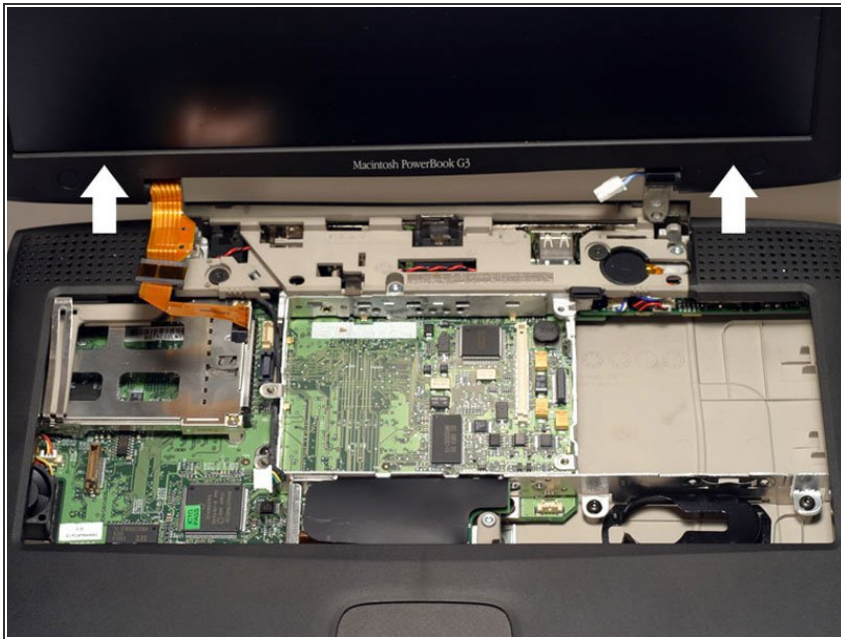
- Disconnect the inverter plug, pulling directly up from the logic board.

- Turn the laptop around so that its back faces you.
- Open the port door located at the back of the laptop.
- Remove the four black Torx screws.

This image shows the rear of a MacBook Pro. The Apple logo is centered on the dark, textured surface. Below the logo is a horizontal row of ports and connectors. From left to right, these include: a FireWire 800 port (labeled '8'), a Thunderbolt port (labeled '1'), a USB port (labeled '2'), an Ethernet port (labeled '3'), another FireWire 800 port (labeled '4'), a VGA port (labeled '5'), and an Audio port (labeled '6'). Below the ports are several status indicator lights and buttons, including a power button and a sleep button. The bottom edge of the laptop is visible, showing the hinge mechanism.

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Step 28



- Hold the display on both sides and pull directly up until its hinges are free of their mounts.

Step 29



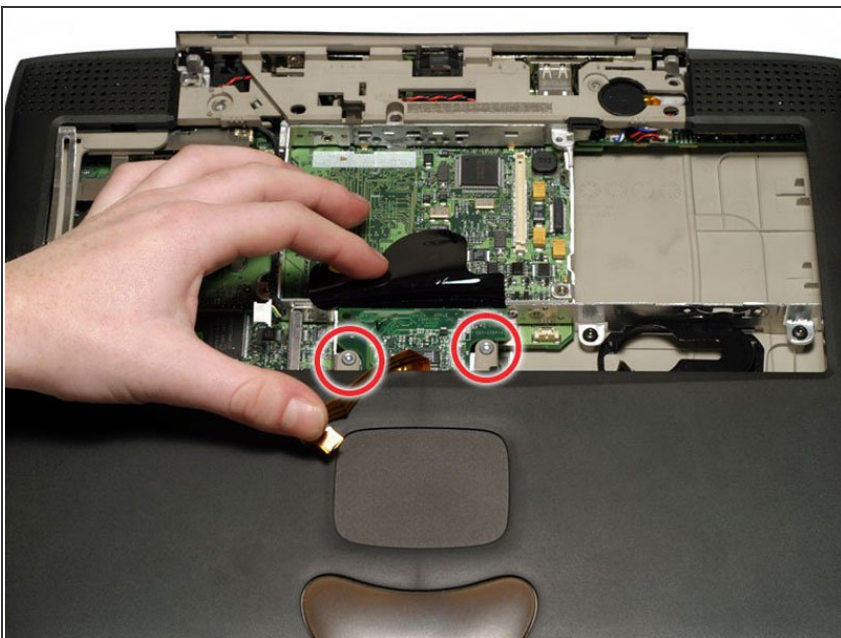
- Your laptop should look approximately like this.

Step 30 — Upper Case



- Remove the three long silver and two short black Torx screws from the beige plastic casing.

Step 31



- Turn the Lombard so that the trackpad is nearest you and slide the thin plastic shield away from you, out from under the black casing.
- Disconnect the newly revealed thin orange ribbon from the logic board, to the left of the trackpad.
- Remove the two long silver Torx screws.

Step 32



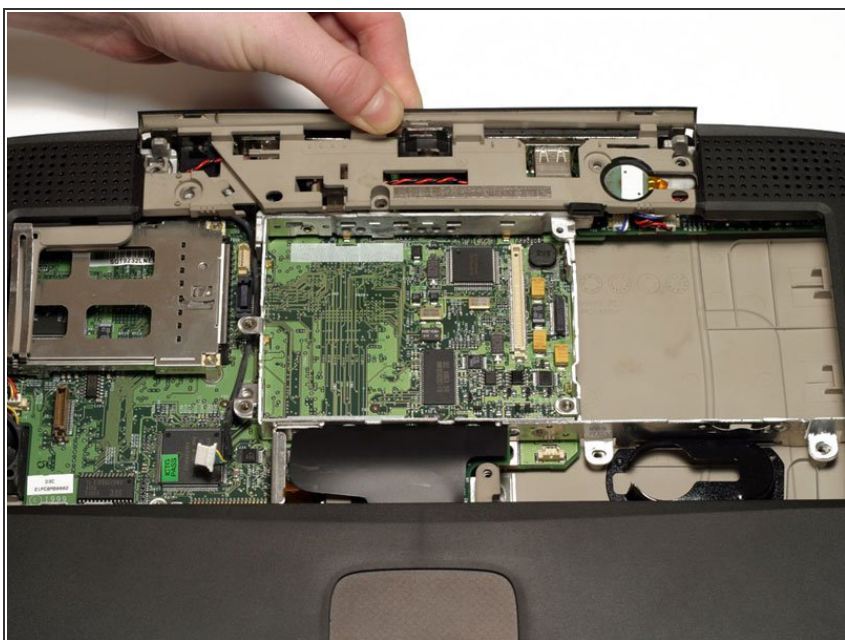
- Turn the laptop over.
- Remove the seven Torx screws from the bottom casing.
- ☑ There are two long screws in the front left and front right corners; make sure to put these back in the proper place when reassembling.

Step 33



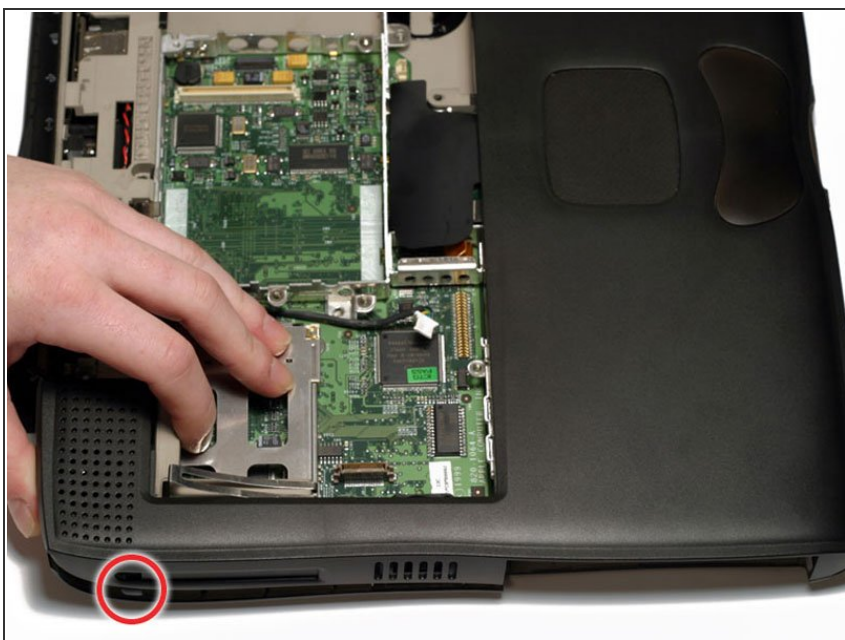
- Turn the laptop back over.
- Remove the three short black Torx screws from the metal frame.
- Remove the short black Torx screw to the far left that fastens the logic board to the casing.
- ☑ There is a small black plastic spacer that goes between the bottom left screw and the logic board.

Step 34



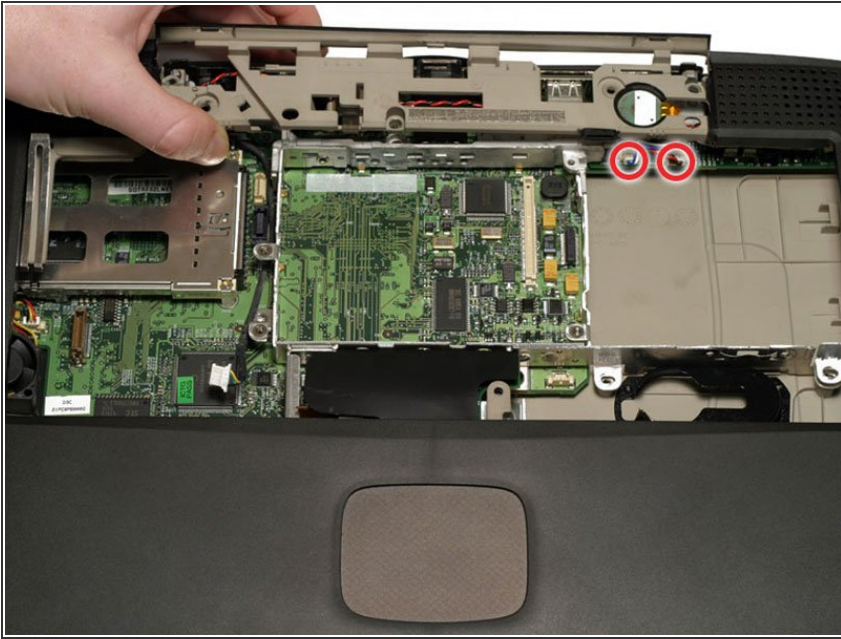
- Grasp the upper plastic casing where it locks into the internal frame and pull back. When the plastic tab has cleared the slot that the casing locks into, pull up enough to keep it from locking back into place.

Step 35



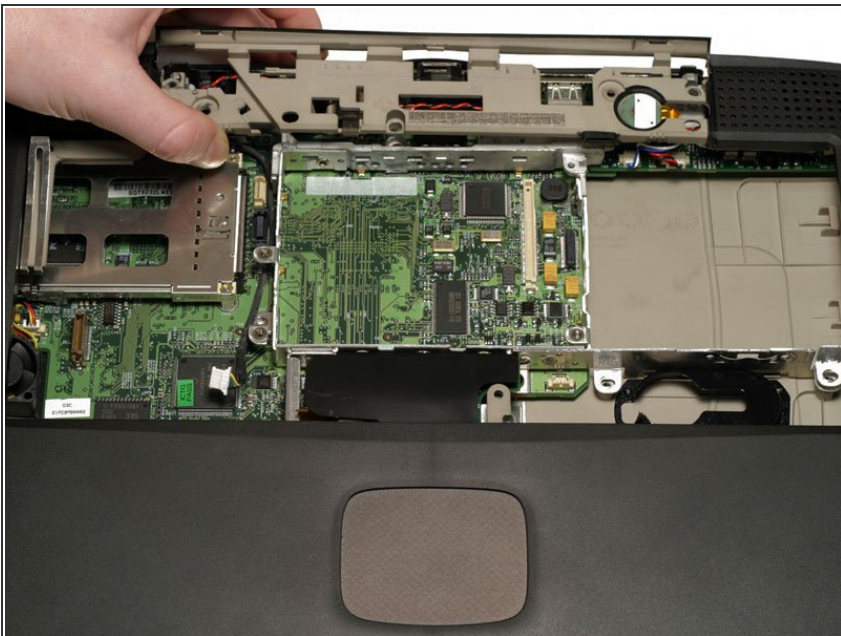
- The PC card eject button on the laptop's left side prevents the upper casing from lifting up. In order to bypass the button, push it in far enough so that you can pull the upper casing's left side out and up beyond the button.

Step 36



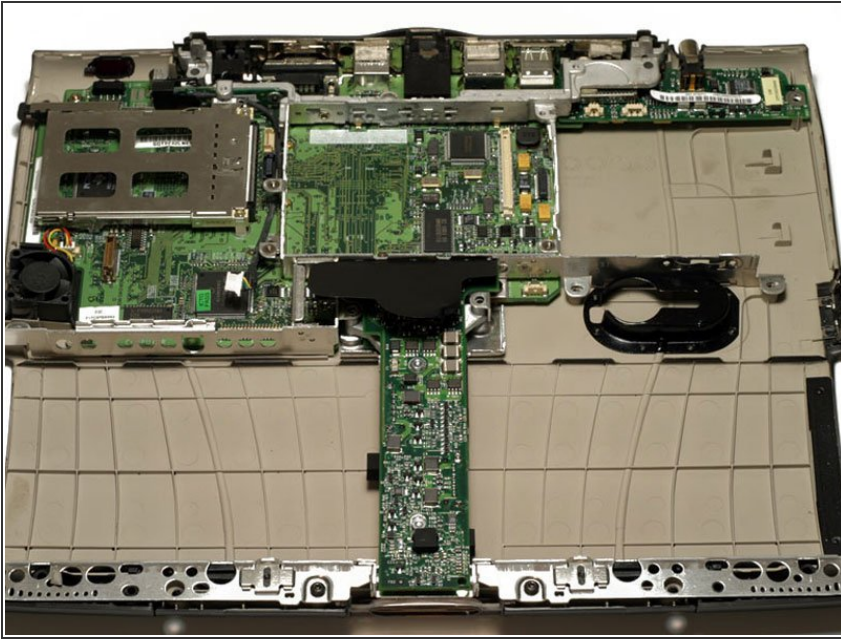
- Lift the left side of the case partly up so that you can access and disconnect the audio in/out cables from the sound card in the upper right of the case.
- ⓘ Be careful not to lift the upper casing too far before you have disconnected the audio in/out cables or you may damage the sound card.

Step 37



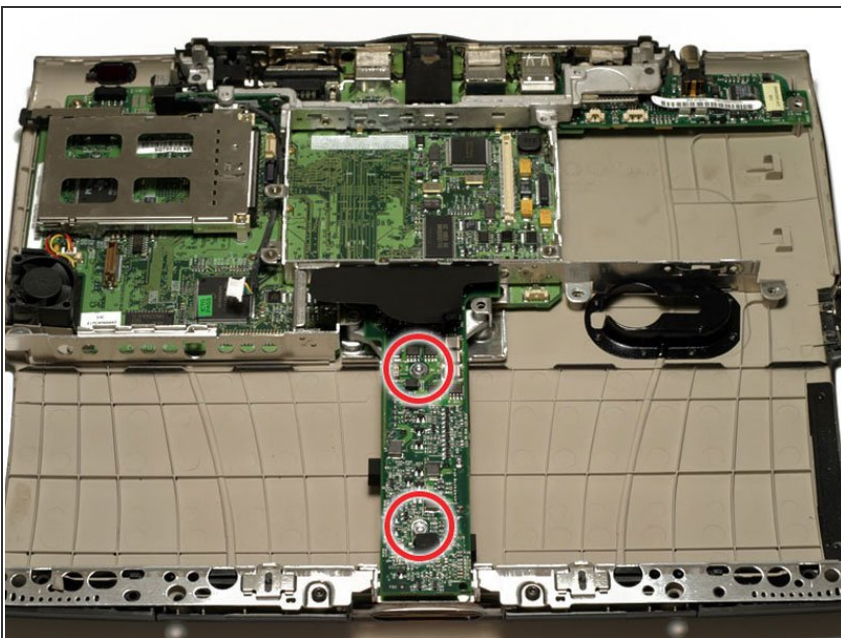
- Remove the upper casing. Note that there are two tabs on the laptop's front that often cause the upper case to stick.

Step 38



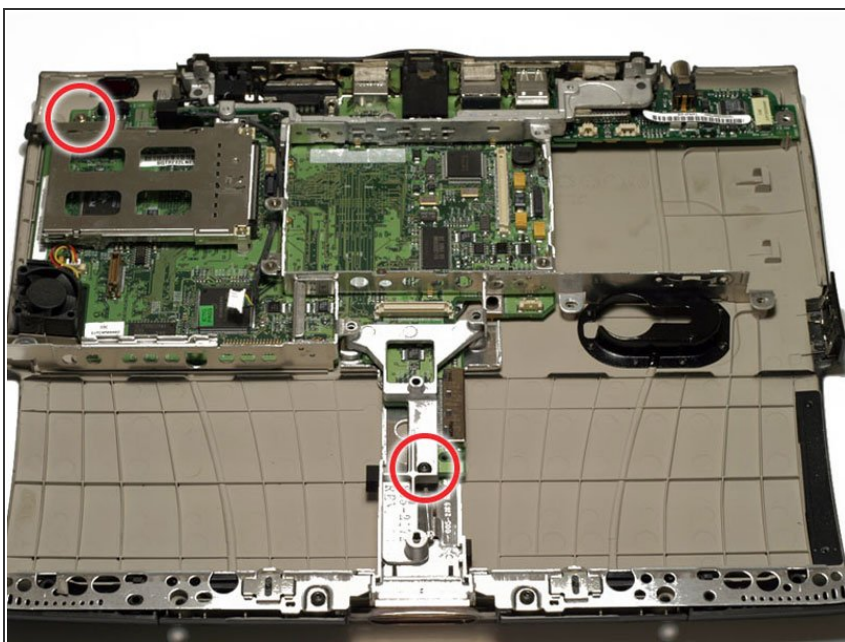
- Your laptop should look approximately like this.

Step 39 — Power Card



- Remove the two long silver Torx screws from the power card in the center of the laptop.
- Grasp the power card near the black plastic shield and lift up.

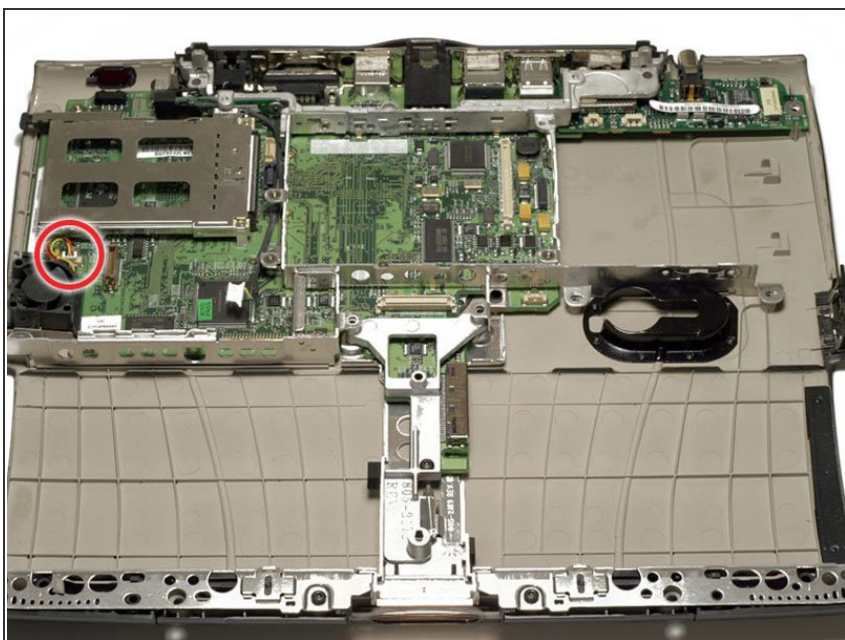
Step 40 — Framework



- Remove the single short black Torx screw anchoring the metal framework to the lower casing.
- Use a five millimeter nut driver or needle-nose pliers to remove the small metal nut from the bolt in the laptop's back left corner.

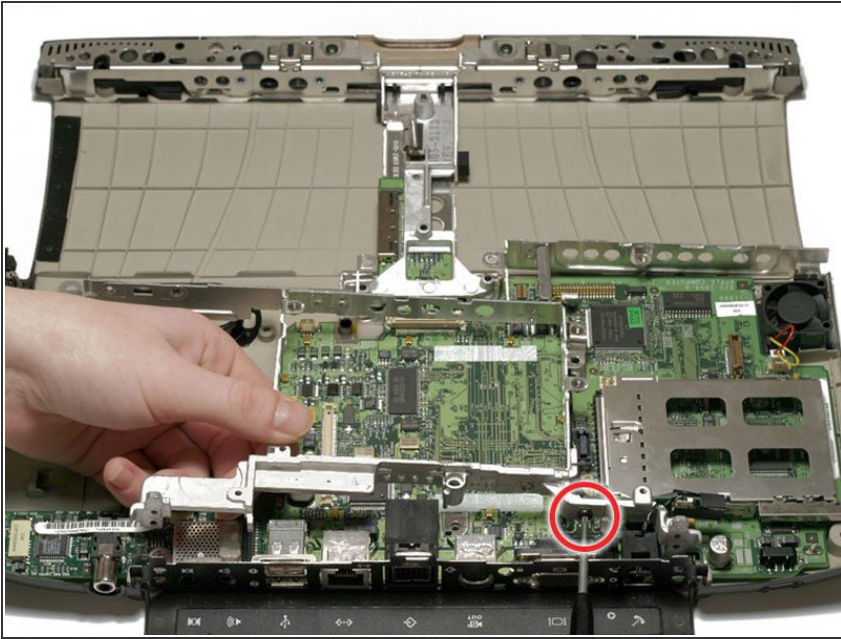
⚠ If you're using pliers, be extremely careful not to let them slip or you may damage the logic board.

Step 41



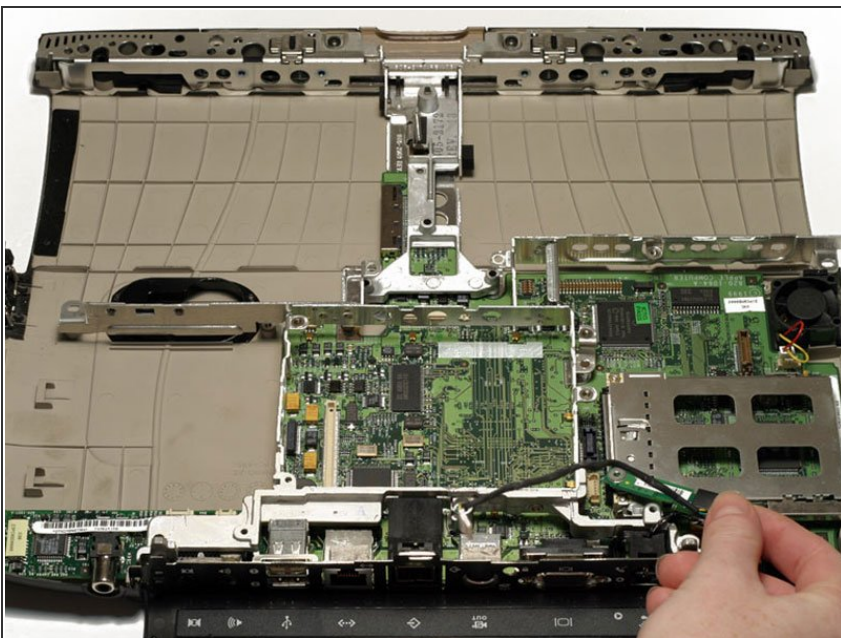
- Disconnect the fan cable from the left side of the logic board.

Step 42



- Turn the laptop so that its back is facing you.
- Lift up on the left side of the metal framework and remove the single black Torx screw.

Step 43



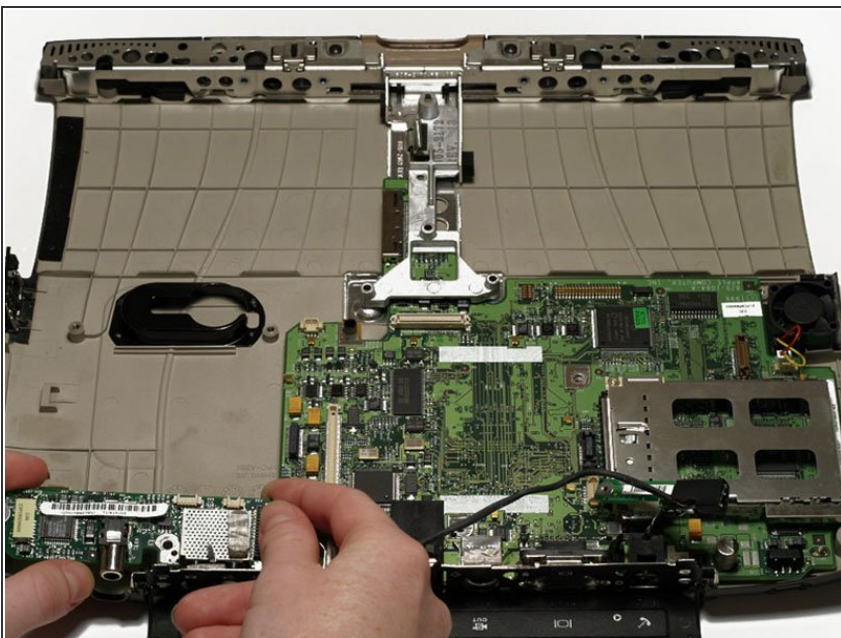
- Grasp the EMI Filter by its black end and rotate it toward the front of the laptop. Pull the filter up and beyond the screw bracket.
- Remove the metal framework.

Step 44



- Your laptop should look approximately like this.

Step 45 — Sound Card



- Lift the sound card out by pulling up on both the right and left sides.
- ⓘ If the sound card sticks, pull the black metal wall of the casing toward you while lifting the right side of the sound card up.

To reassemble your device, follow these instructions in reverse order.