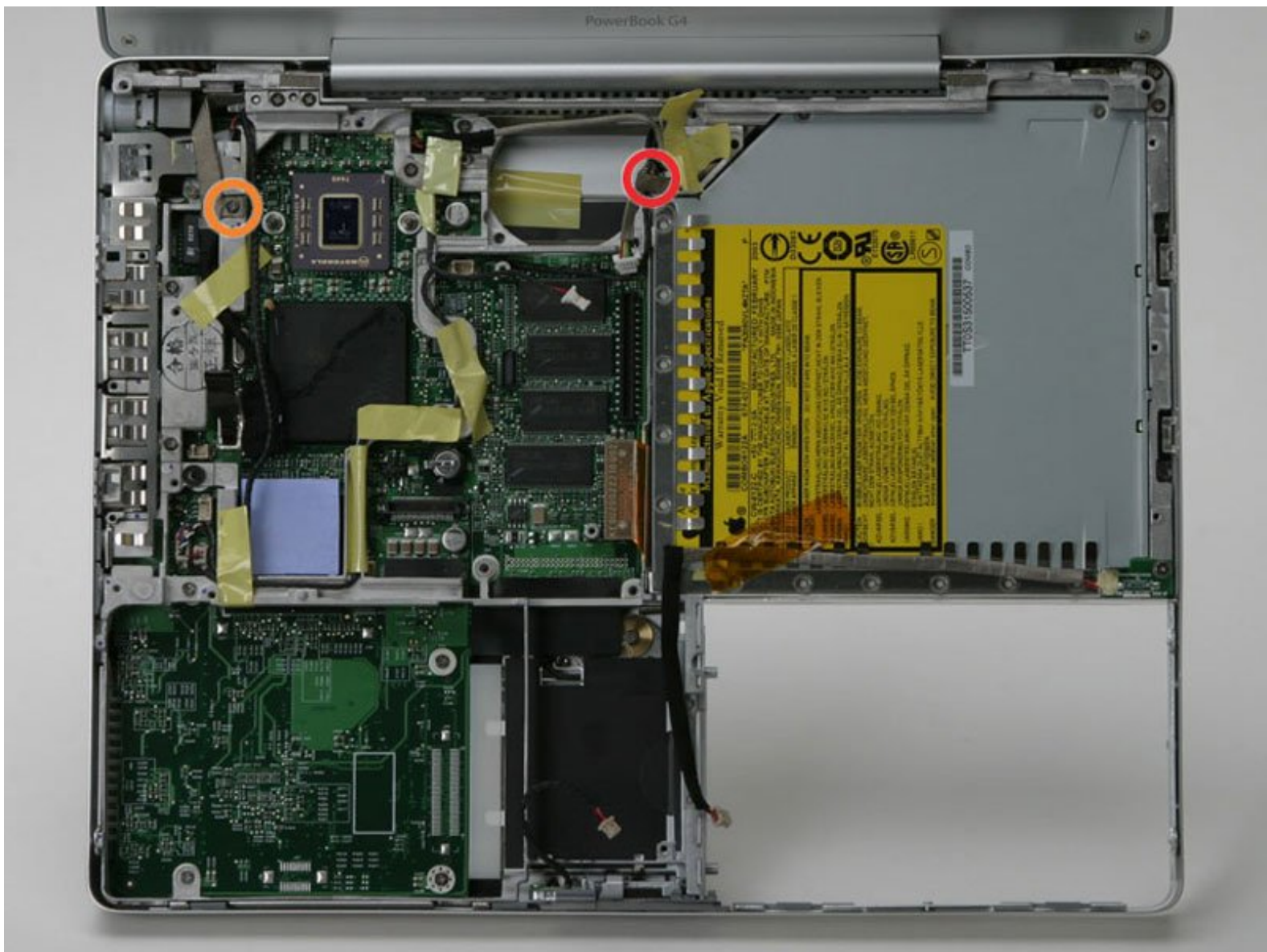# PowerBook G4 Aluminum 12" 867 MHz Metal Framework Replacement

Written By: iRobot

# INTRODUCTION

The internal metal stiffening frame.

## TOOLS:

- 4mm Nut Driver (1)
- Arctic Silver ArctiClean (1)
- Arctic Silver Thermal Paste (1)
- Coin (1)
- Phillips #00 Screwdriver (1)
- T6 Torx Screwdriver (1)

## PARTS:

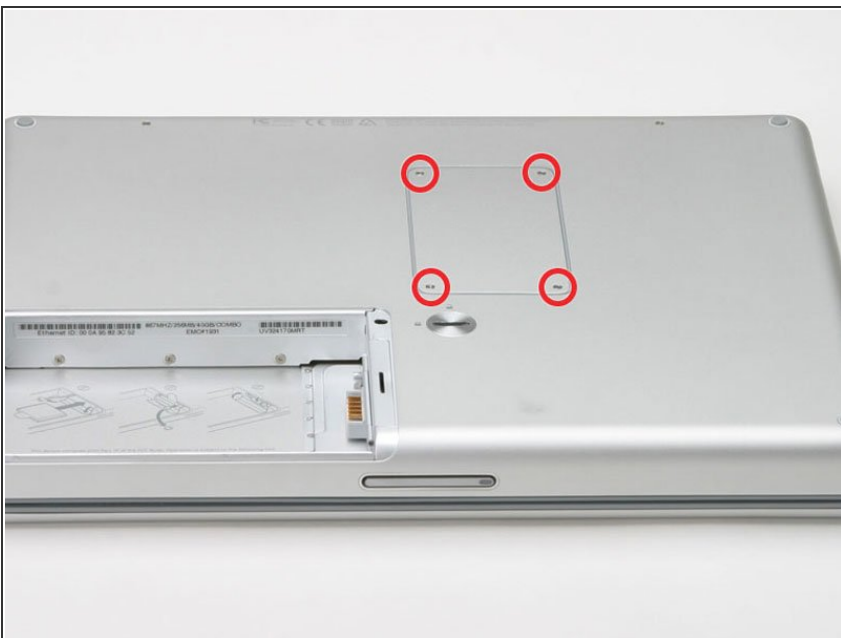- G4 Aluminum 12" 867 MHz Metal Framework (1)

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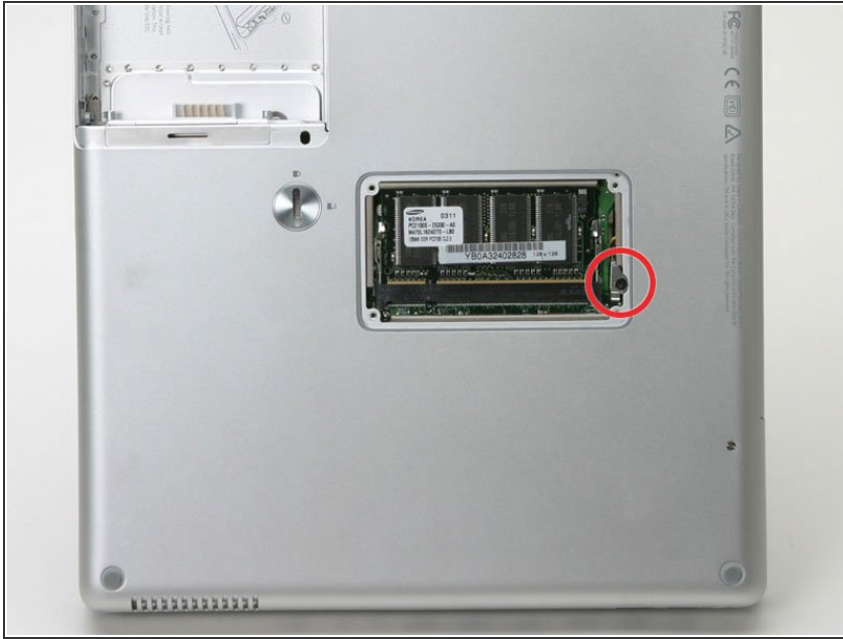www.iFixit.com

## Step 1 — Battery

- Use a coin to turn the battery locking screw 90 degrees to the right.

- Lift the battery out of the computer.

## Step 2 — EMI Finger

- Remove the four Phillips screws from the memory door.

- Slide the memory door away from the memory compartment.

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## Step 3

- Remove the long black Phillips screw next to the memory card.

- Remove the small EMI finger beneath the black screw.

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## Step 4 — Keyboard

- On the keyboard, remove the F1, F2, F11, and F12 keys.

- This is scary - take a deep breath before continuing. Place your index finger under the upper left corner of the key and lift up until you hear a click. Then, transfer your finger to the left edge of the key and lift up to pull the key off.

- You're freeing the two tabs on the left of the key from the two small holes in the plastic scissors mechanism.

- 📌 When replacing the keys in the keyboard, place the key directly over the slot where it will go and press down until you hear the key click into place.

## Step 5

- Use your fingernail or a small flathead screwdriver to peel up the gray stickers covering each of the screws.
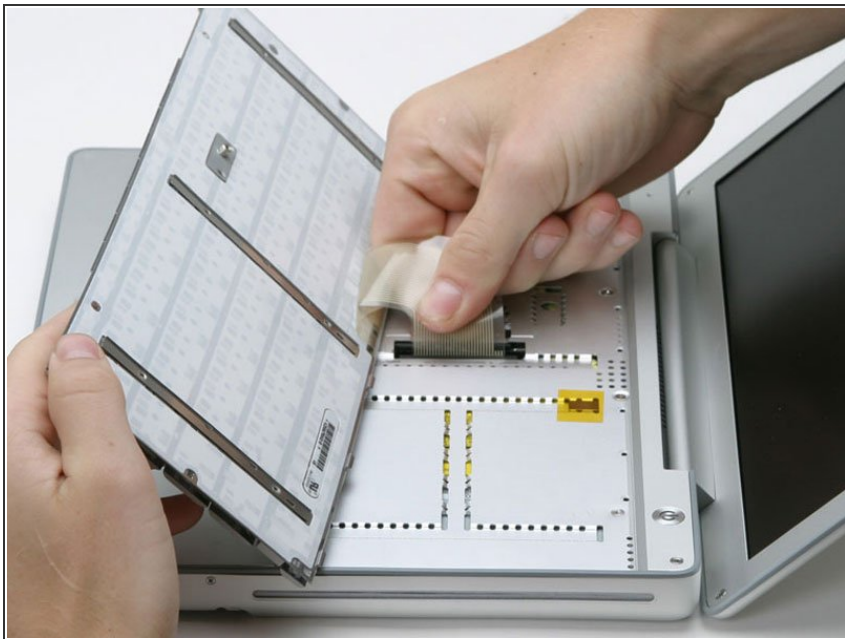
## Step 6

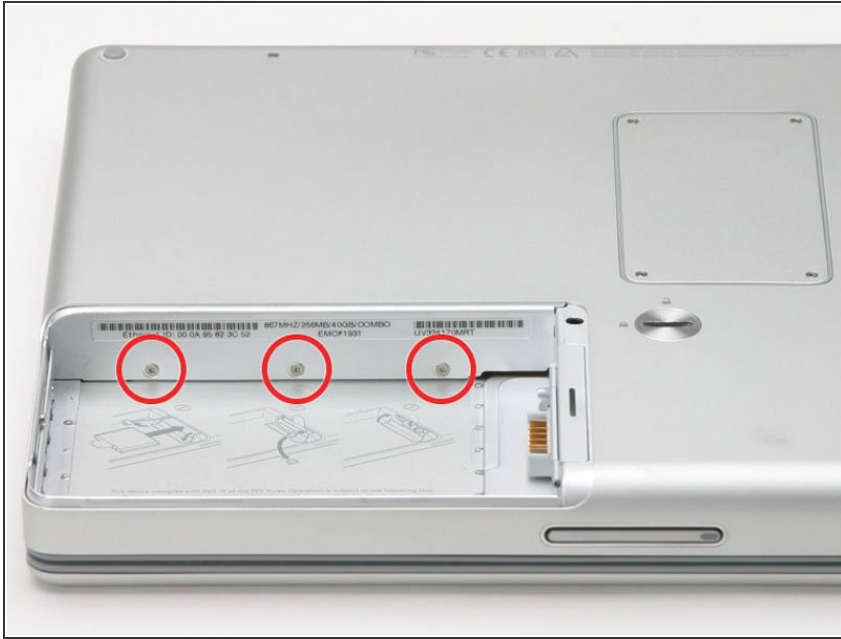- Remove the two short Phillips screws.

## Step 7



- Lift the keyboard by the 'esc' and 'eject' keys and gently lift up until the keyboard is vertical.

## Step 8



- Grasp the keyboard connector ribbon near the connector and disconnect it from the logic board.

## Step 9 — Upper Case



- Remove the three small Phillips screws from within the battery compartment.

## Step 10



- Turn the computer 90 degrees clockwise and remove the two medium-length Phillips screws from the casing.

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## Step 11



● Turn the computer 90 degrees clockwise again, and remove only the bottom screw on either side of the hinge.

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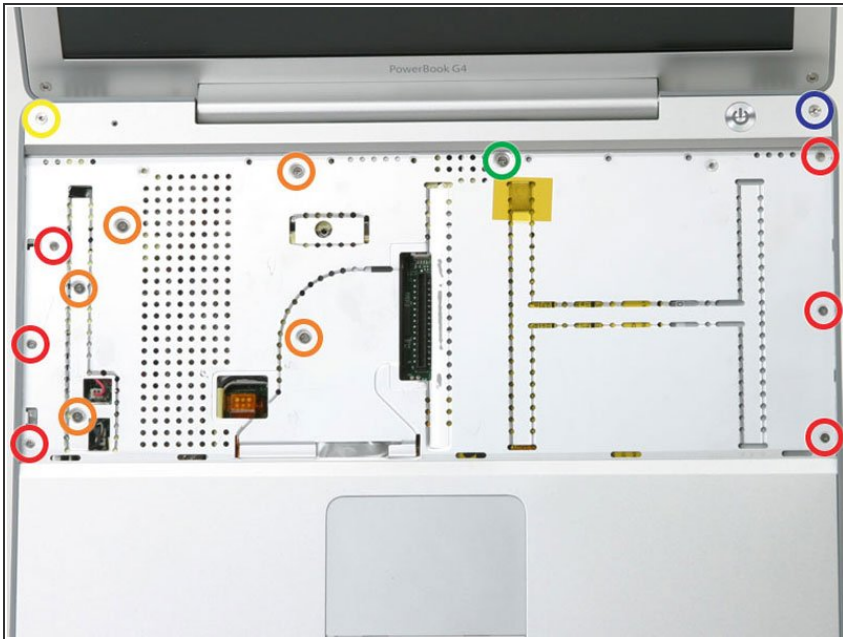
## Step 12

- Turn the computer 90 degrees clockwise just one more time, and remove the two Phillips screws on the exterior wall of the battery compartment.

- ⭐ Remember these two screws are longer and have shoulders.

## Step 13



- Turn the computer over and open it up.

- Remove the following 14 screws:
  - Six 2.5 mm Phillips on either side of the keyboard area.

  - Five 4.5 mm Phillips on the left half of the keyboard area.

  - One 7 mm hex in the upper left corner of the upper case (a T6 Torx driver will do the job nicely).

  - One 15 mm Phillips in the upper middle of the keyboard area.

  - One 16.5 mm hex in the upper right of the upper case (again, a T6 Torx driver will work well).

## Step 14
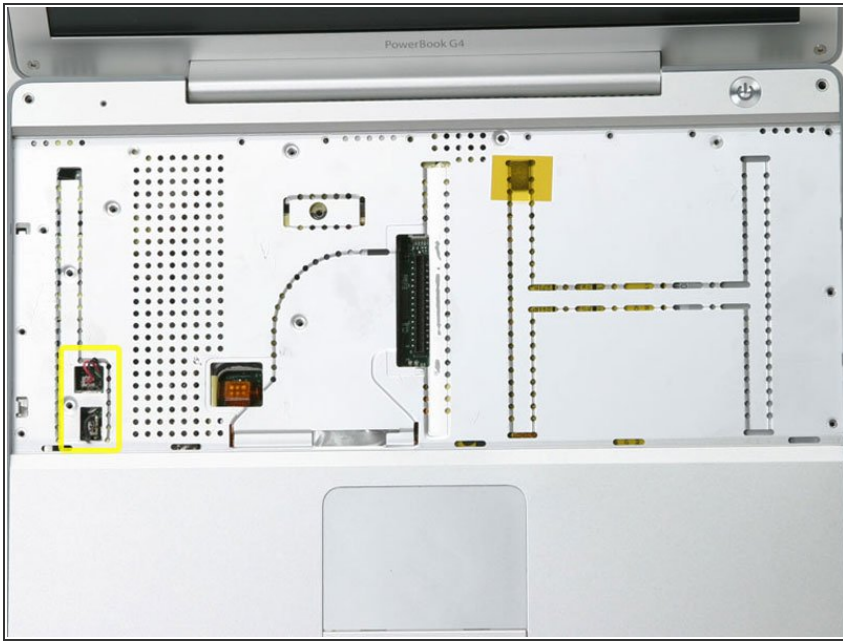


- Peel up the two pieces of foil tape on the left side of the keyboard area.

- ⚠ The connectors at the ends of the cables are attached very firmly to the sockets on the logic board. Pulling directly on the cable will either separate the cable from its connector or the socket from the logic board.

- Carefully disconnect the microphone and power cables from the logic board. Using your fingernails or a dental pick, carefully pry the connectors from their sockets. Make sure you're pulling only on the connector and not on the socket.

## Step 15
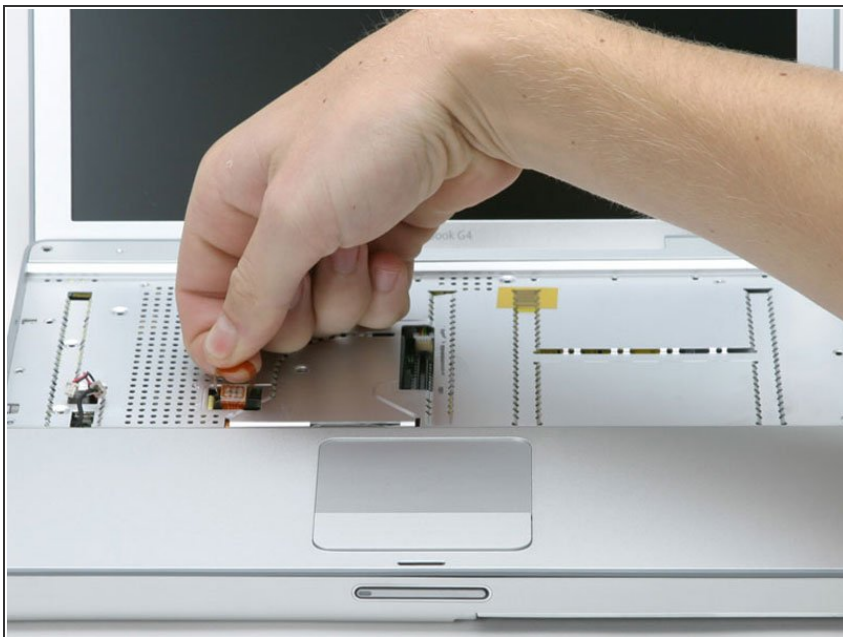


- Use the orange plastic loop to disconnect the trackpad cable.

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## Step 16



● Starting at one of the upper corners near the screen, work around the frame, separating the upper case from the lower case.
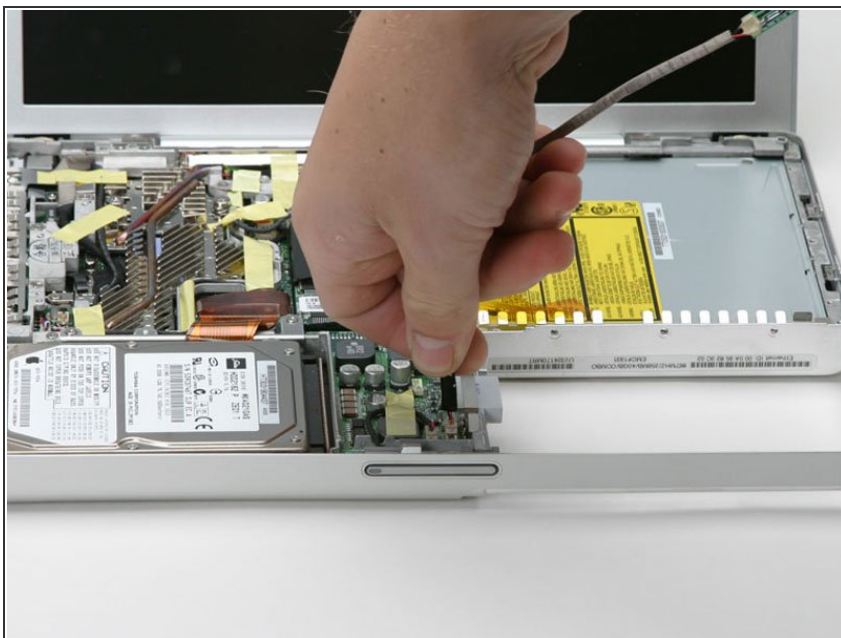
## Step 17



● Lift the upper case off the computer.

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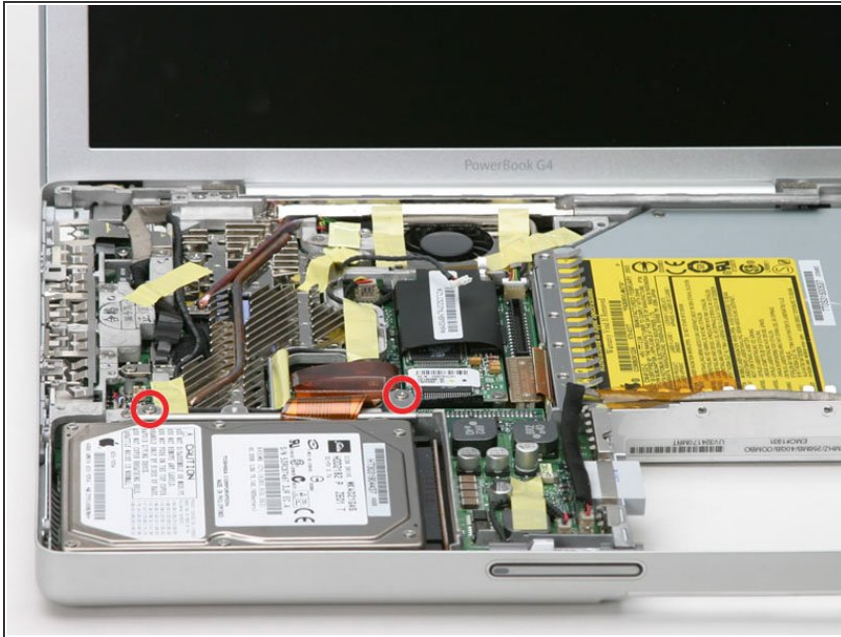
## Step 18 — Reed Switch



- Remove the single Phillips screw from the reed switch board on the right side of the computer.

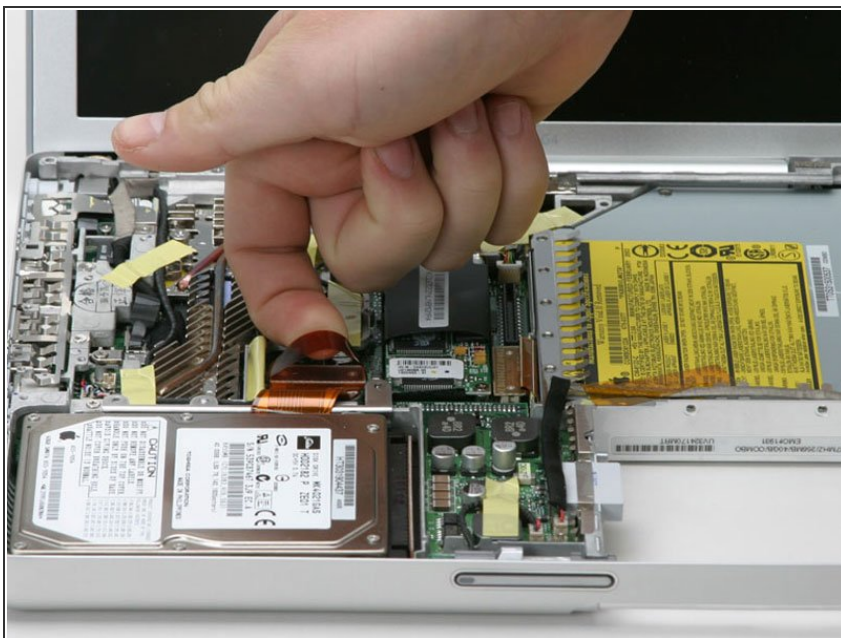- Deroute the cable connecting the reed switch board to the DC-to-DC board.

## Step 19



- Disconnect the reed switch cable from the DC-to-DC board.
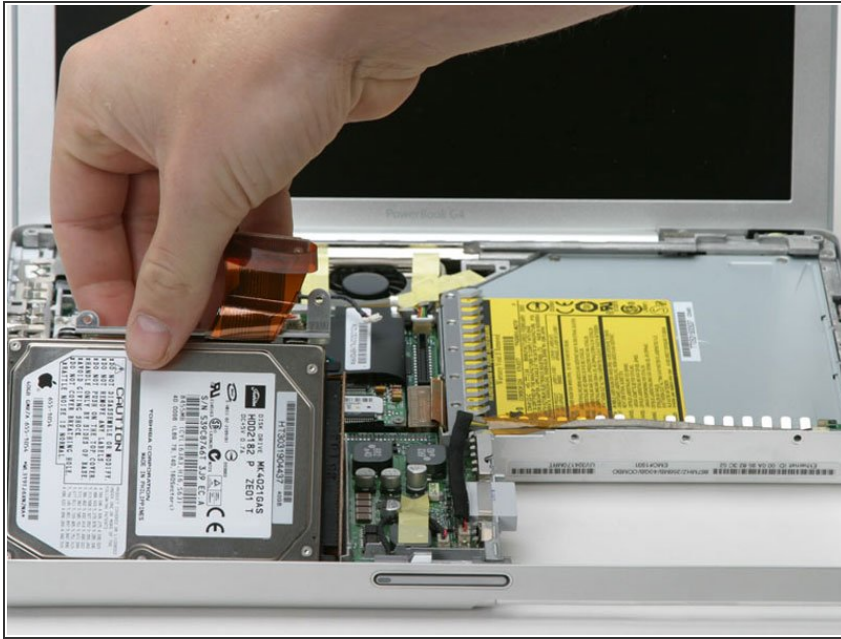
    

## Step 20 — Hard Drive



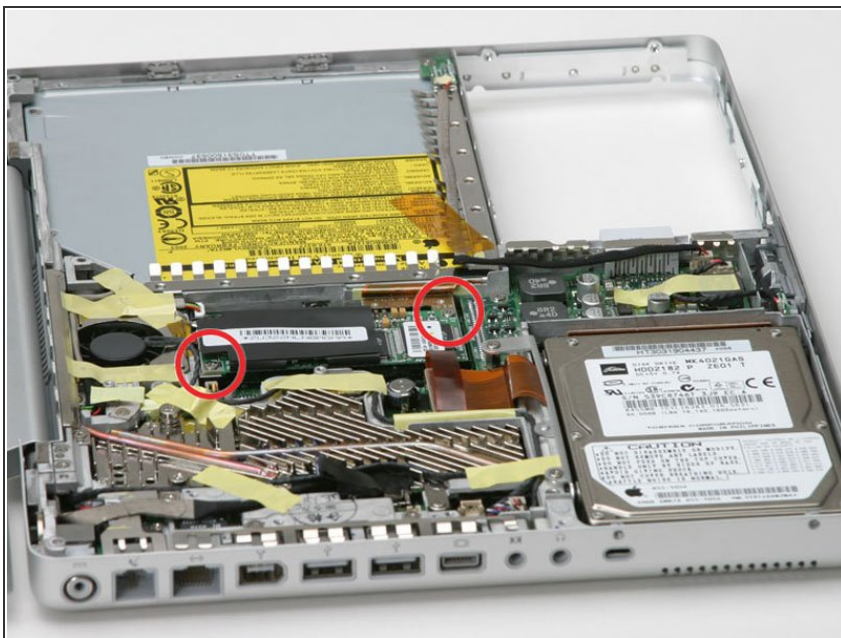- Remove the two Phillips screws from the hard drive bracket.

## Step 21



- Use the orange plastic loop to disconnect the hard drive cable from the logic board.
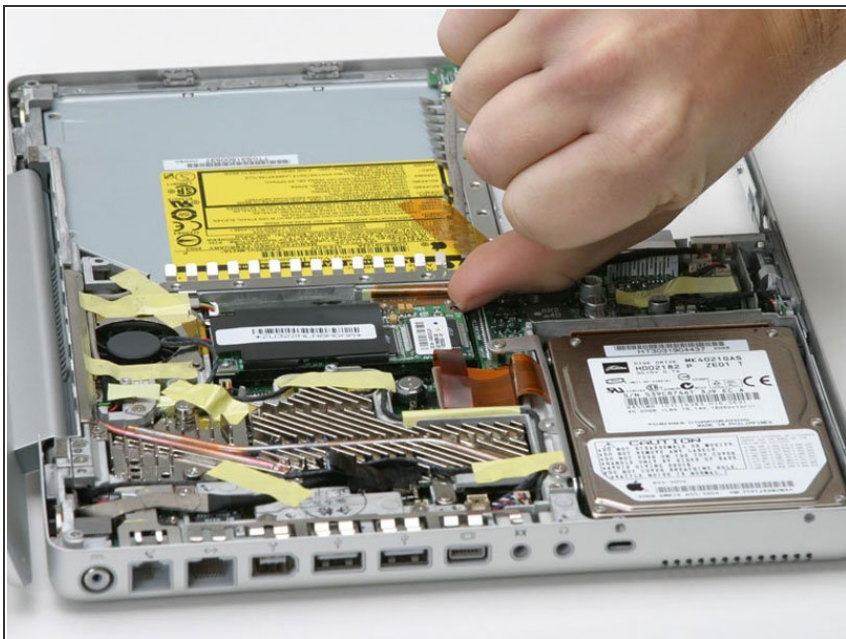
## Step 22



- Use the orange cable to pull the hard drive up, then pull it and the hard drive bracket out of the computer.

## Step 23 — Modem



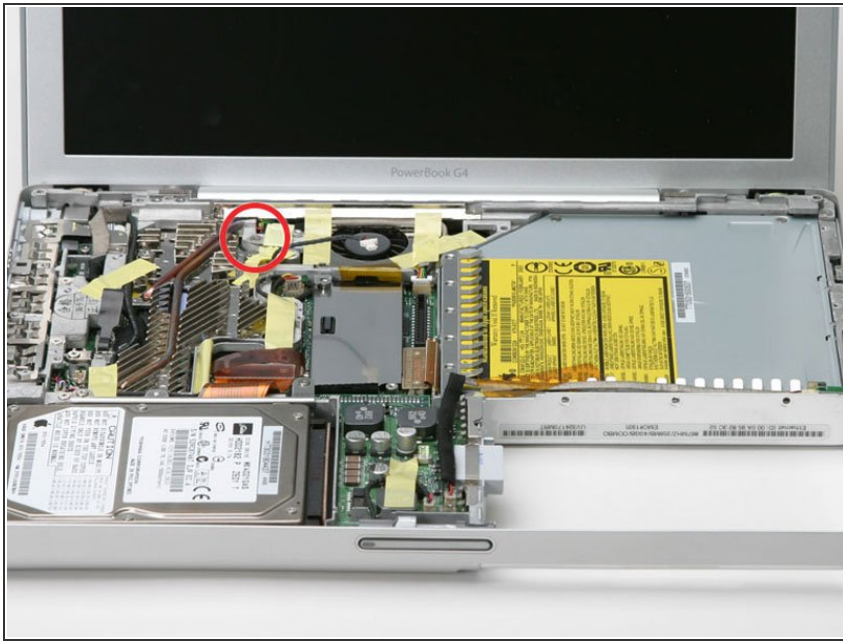- Remove the two Phillips screws from the corners of the modem.

## Step 24



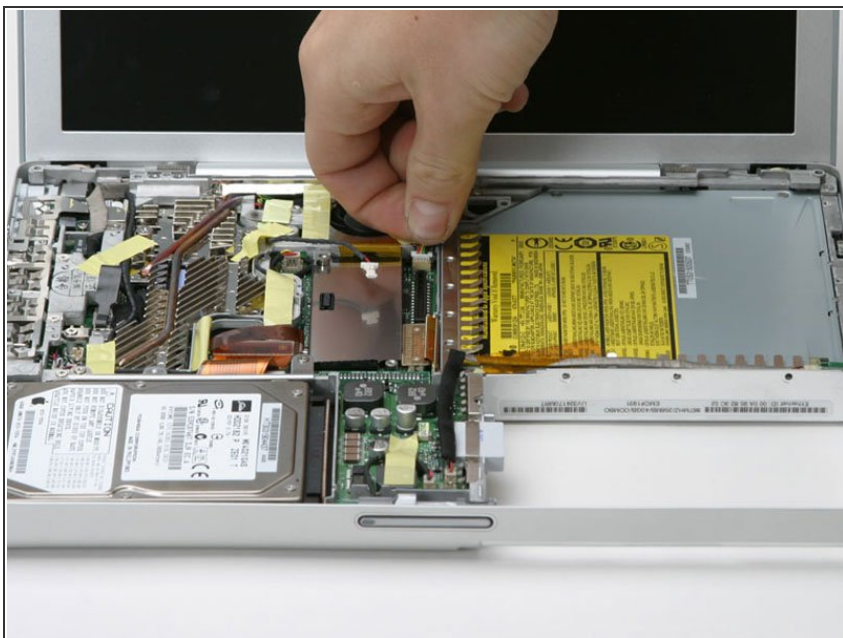● Pry the modem up from the trackpad side.

## Step 25



● Disconnect the modem cable from the modem.
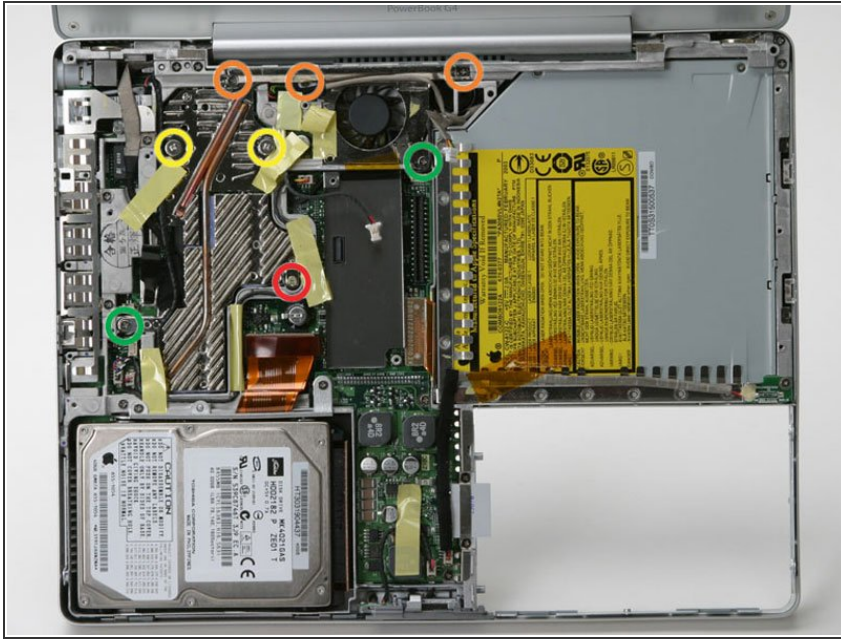
        www.iFixit.com        

## Step 26 — Heat Sink & Fan



- Remove the single Phillips screw fastening the inverter cable.

## Step 27



- Disconnect the Bluetooth cable and deroute it.

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## Step 28



- Peeling up yellow tape as necessary, remove the following 8 screws:
  - One 4.5 mm Phillips on the right side of the heat sink.
  - Three 6 mm Phillips near the display.
  - Two large 7.5 mm Phillips with springs (don't forget to remove the springs). If the springs are not releasing, needle nose pliers can help get this done.
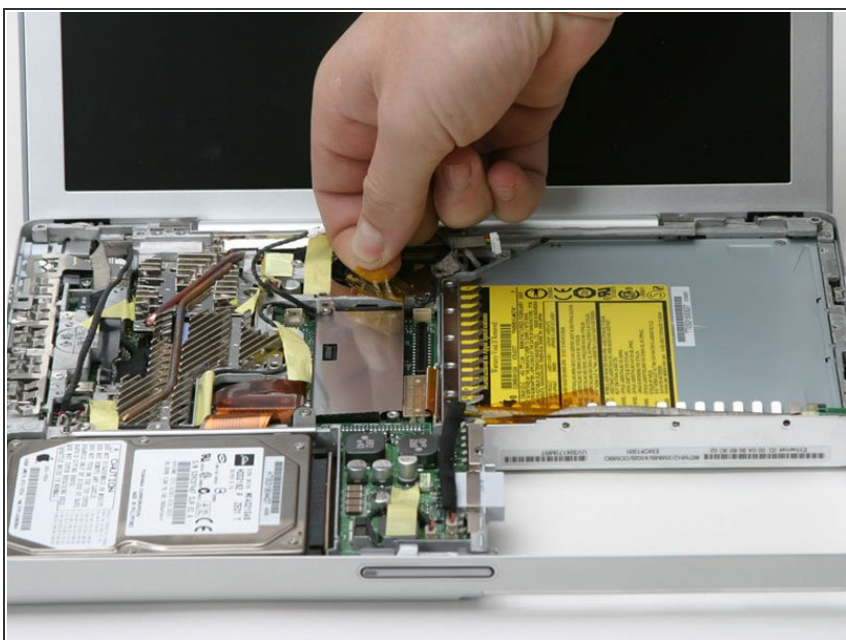  - Two 13 mm screws from the left side of the heat sink and the right side of the fan.

## Step 29
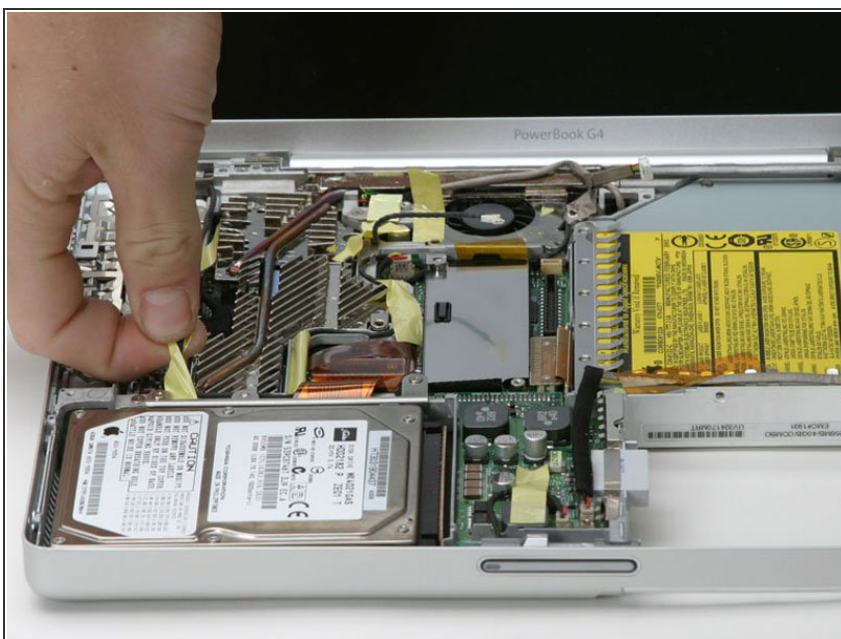


- Remove the yellow tape to free the cable from the left side of the heat sink.

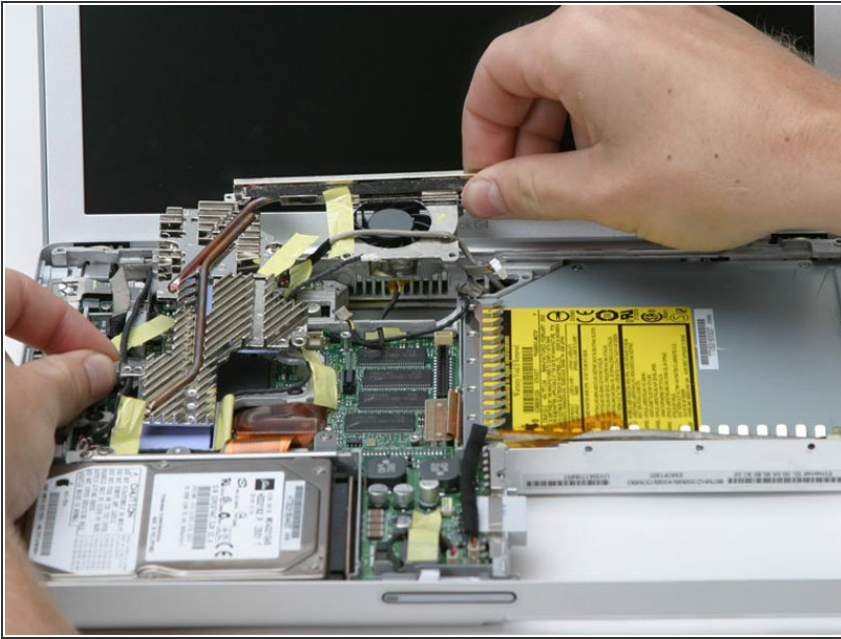## Step 30
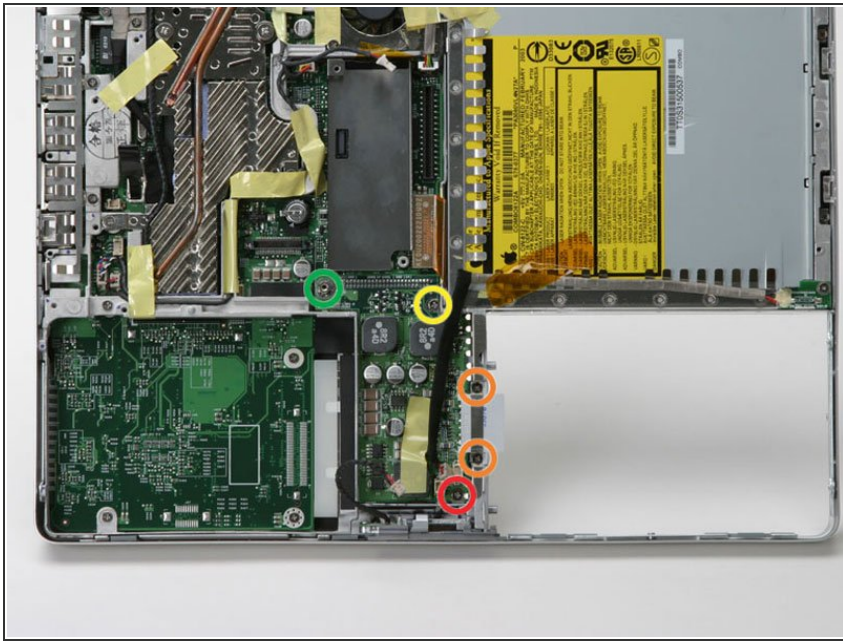


- Disconnect the fan cable from the logic board.

## Step 31



- Remove the orange tape on the trackpad side of the fan to free the fan cable.

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## Step 32

- Grasp the heat sink near the copper conductor and lift it out of the computer, freeing it from tape and cables as necessary.

- (i) If you need to mount the heat sink back into the laptop, we have a [thermal paste guide](#) that makes replacing the thermal compound easy.

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## Step 33 — DC-to-DC Board



- Remove the following five screws:
  - One 3 mm Phillips near the screen latch (mind the big magnet on the screen latch).
  - Two 3.5 mm Phillips attaching the EMI fingers to the metal framework.
  - One 10 mm Phillips near the optical drive.
  - One 14 mm long 4 mm standoff in the upper left corner. You can remove this standoff either with a 4 mm nut driver or needlenose pliers.
- Lift the EMI fingers above the battery connector away from the metal framework.
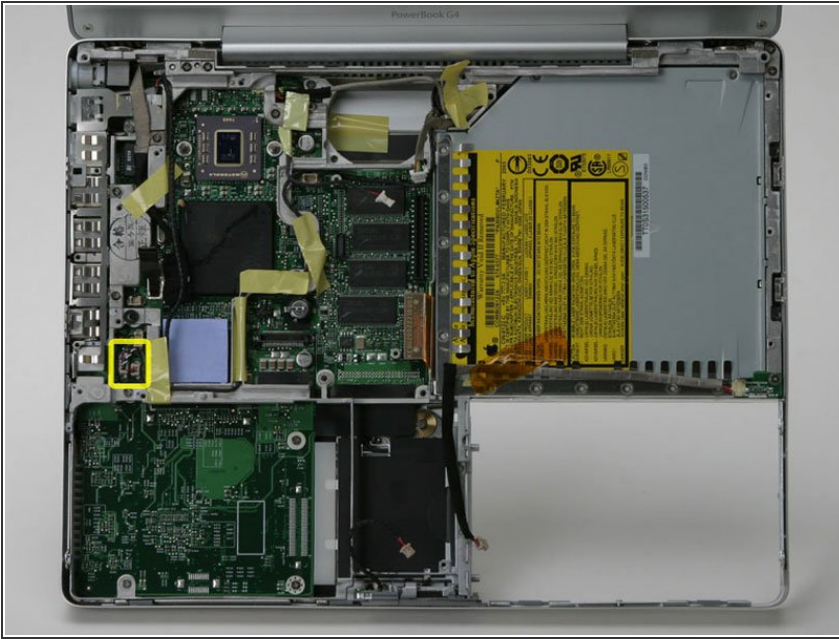
## Step 34
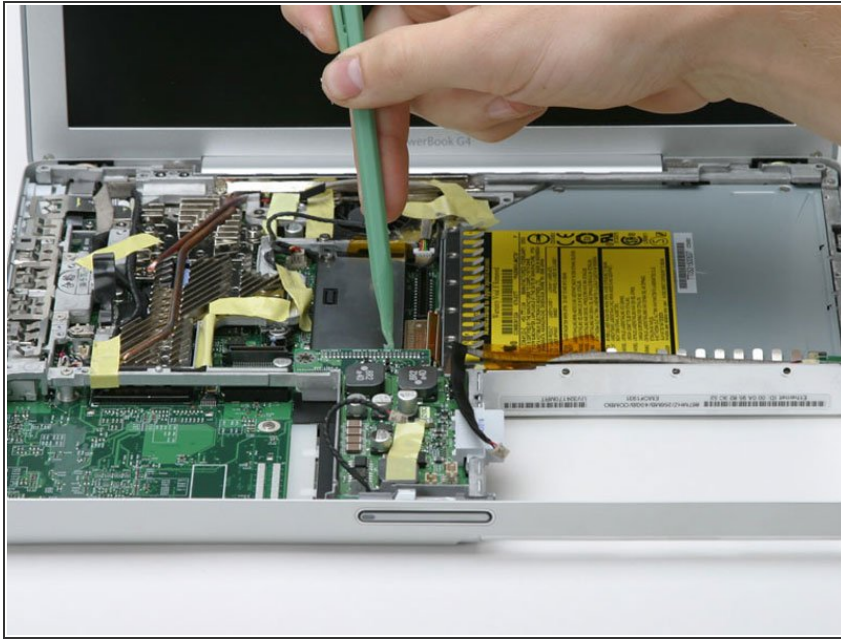


- Lift the end of the DC-to-DC board closest to the display and pull the board out of the computer.

## Step 35 — Metal Framework
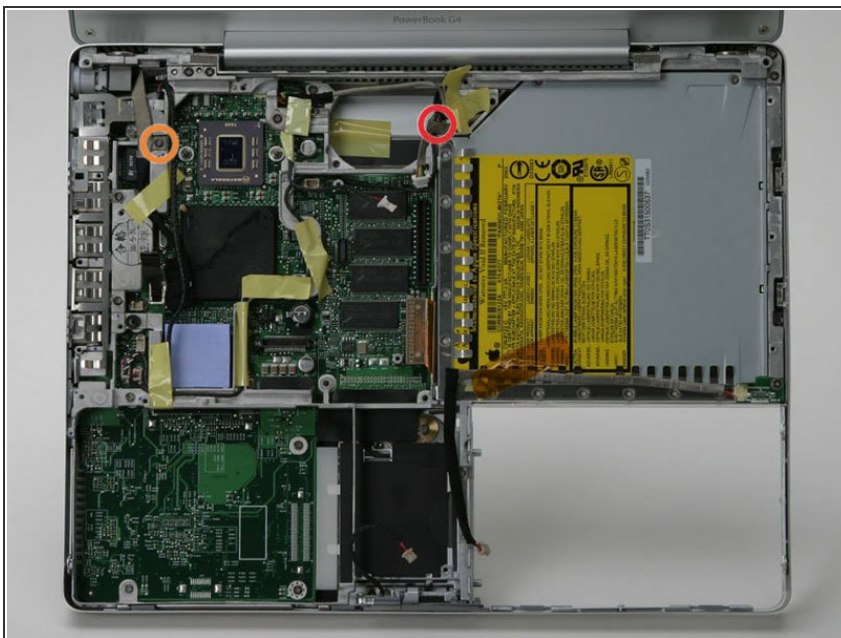


- Disconnect the multicolor connector from the upper right corner of the logic board.

- Remove the following 2 screws:
  - One Phillips buried under the cable to the right of the fan area.
  - One Phillips holding down the display data cable on the left side of the computer.
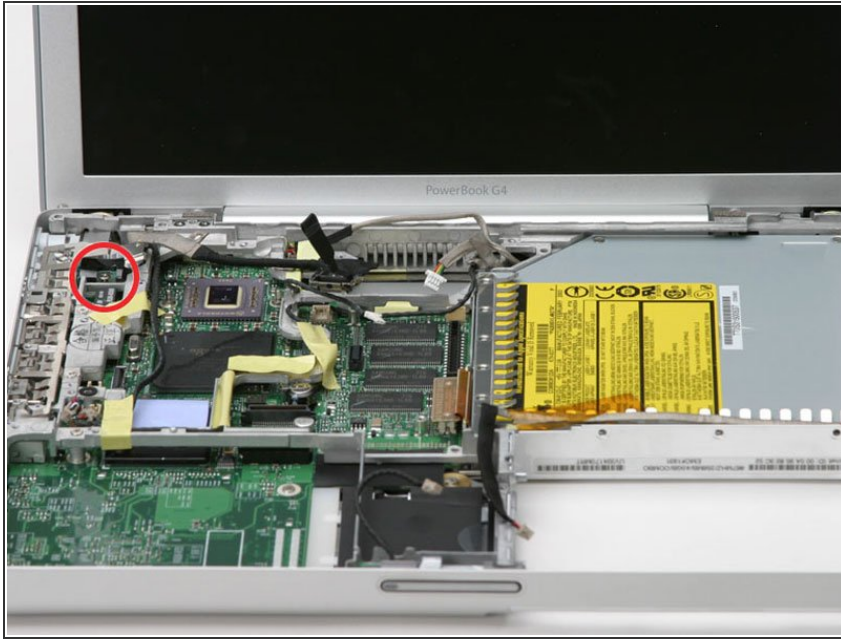
## Step 36



- Disconnect the two connectors on the left side of the computer near the ports.
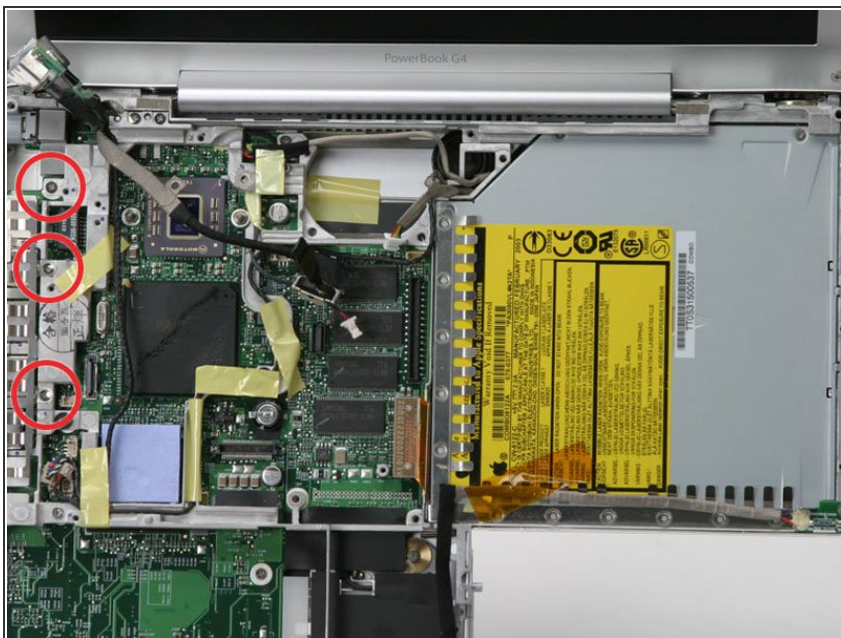
## Step 37
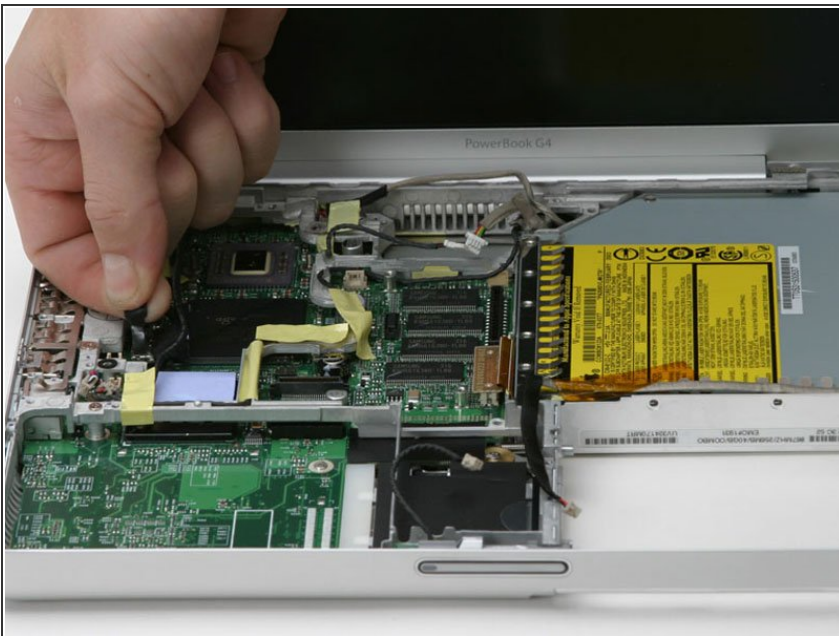


- Use the black plastic pull tab to disconnect the display data cable from the logic board.

- Deroute the display data cable, pulling up the yellow tape at the RJ-11 board.

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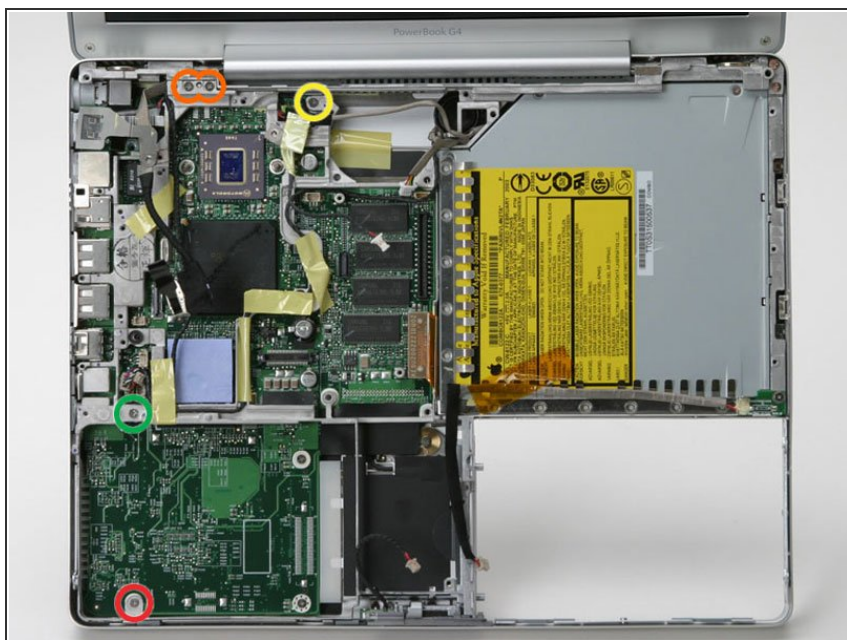
## Step 38



- Remove the single Phillips screw from the RJ-11 board.

## Step 39



- Lift up the RJ-11 board from the left side and remove the Phillips screw from the metal framework.

- Remove the two Phillips screws securing the EMI fingers to the ports.

- Lift away the EMI fingers.

## Step 40



- Remove the following 5 screws:
  - One 4.5 mm Phillips in the bottom left corner of the logic board.
  - Two 6 mm Phillips to the left of the display hinge.
  - One 10 mm Phillips to the upper left of the fan area.
  - One 13 mm Phillips to the right of the headphone jack on the metal framework.

## Step 41
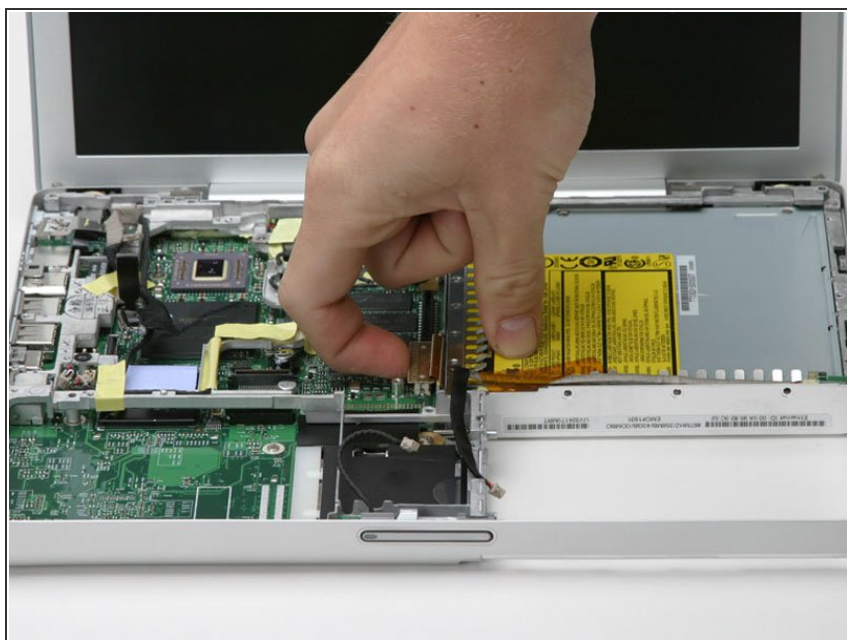


- Disconnect the orange optical drive cable from the logic board.

## Step 42
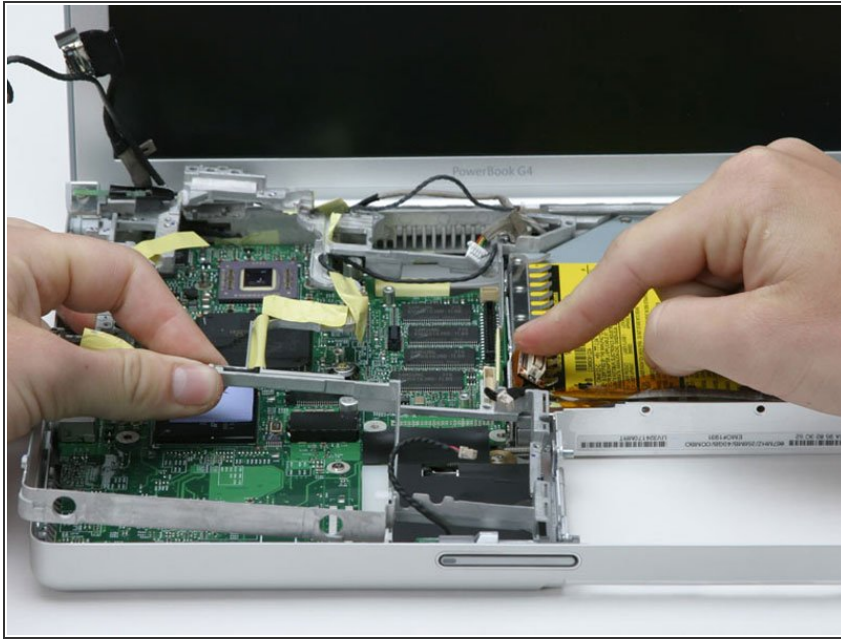


- Lift the metal framework out of the computer. Be careful that the orange optical drive cable doesn't catch on the framework and be sure you haven't forgotten to disconnect any other connectors.

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