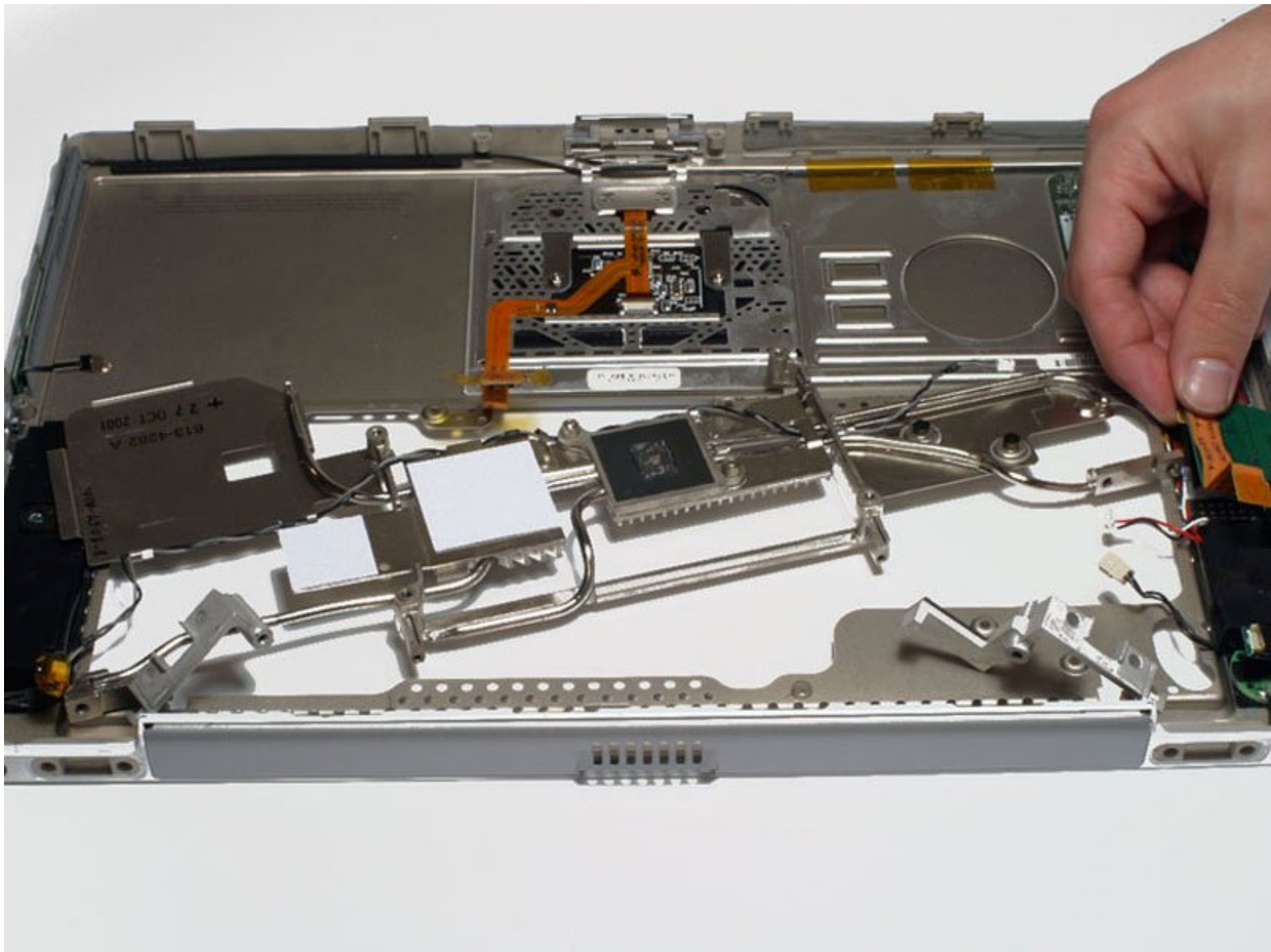




# PowerBook G4 Titanium Onyx Inverter Board Replacement

Written By: iRobot



# INTRODUCTION

The inverter powers the LCD backlight and is not a difficult part to replace.



## TOOLS:

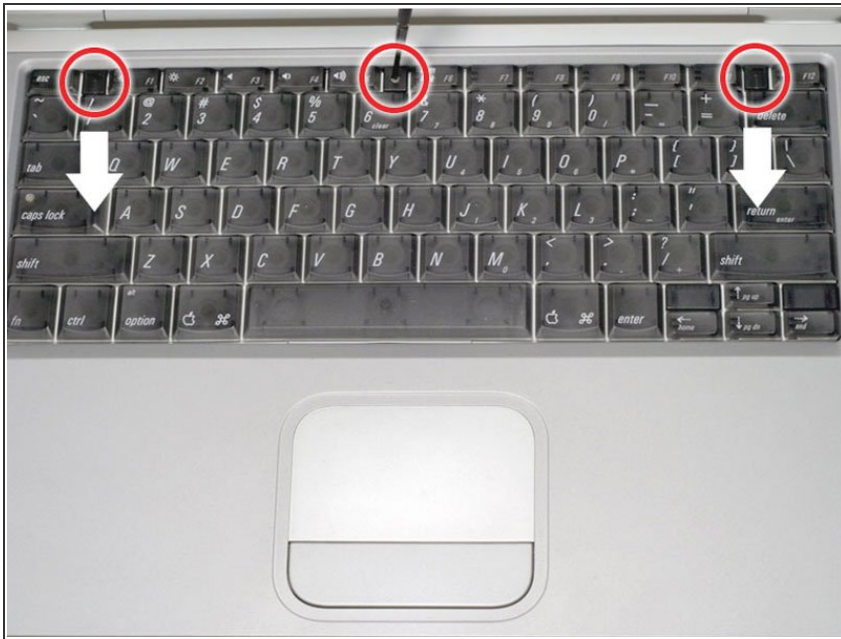
- [5mm Nut Driver](#) (1)
- [T6 Torx Screwdriver](#) (1)
- [T8 Torx Screwdriver](#) (1)



## PARTS:

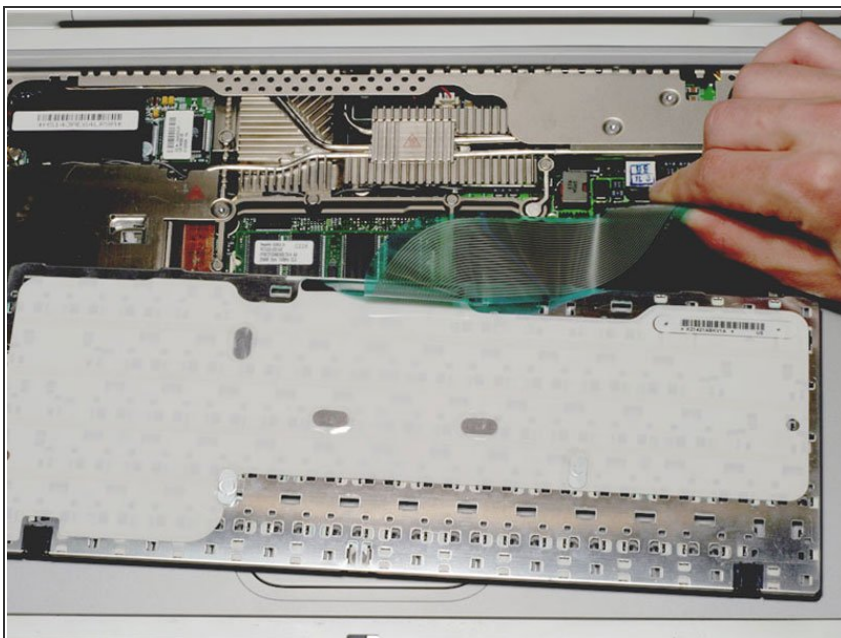
- [G4 Titanium Onyx Inverter Board](#) (1)

## Step 1 — Keyboard



- Remove the battery.
- Turn the keyboard locking screw so that it is parallel to the space bar.
- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.

## Step 2



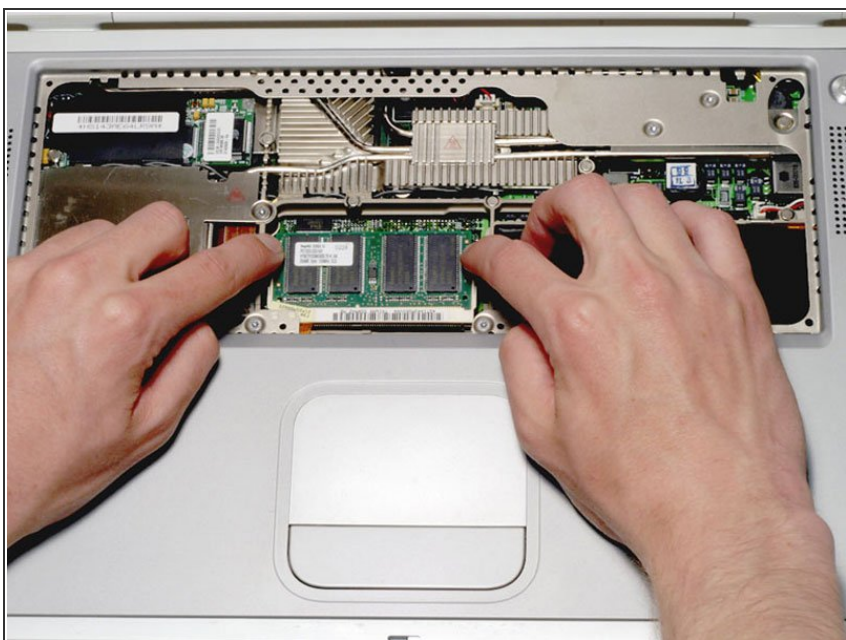
- Rest the keyboard face down on the trackpad area.
- Disconnect the keyboard connector from the logic board.

### Step 3



- Your laptop should look approximately like this.

### Step 4 — 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.
- Repeat this process if a second RAM chip is installed.

## Step 5 — Lower Case



- Turn the G4 over.
- Remove the eight T8 Torx screws from the lower case.

## Step 6



- Using your thumbs, slide the lower case away from you.
- ⓘ The lower case may stick in the front on a tab just above the center of the DVD drive. Be careful as you work the case off, or you may break the thin strip of plastic just above the drive.
- Lift the lower case off.

## Step 7



- Your laptop should look approximately like this.

## Step 8 — Airport Card



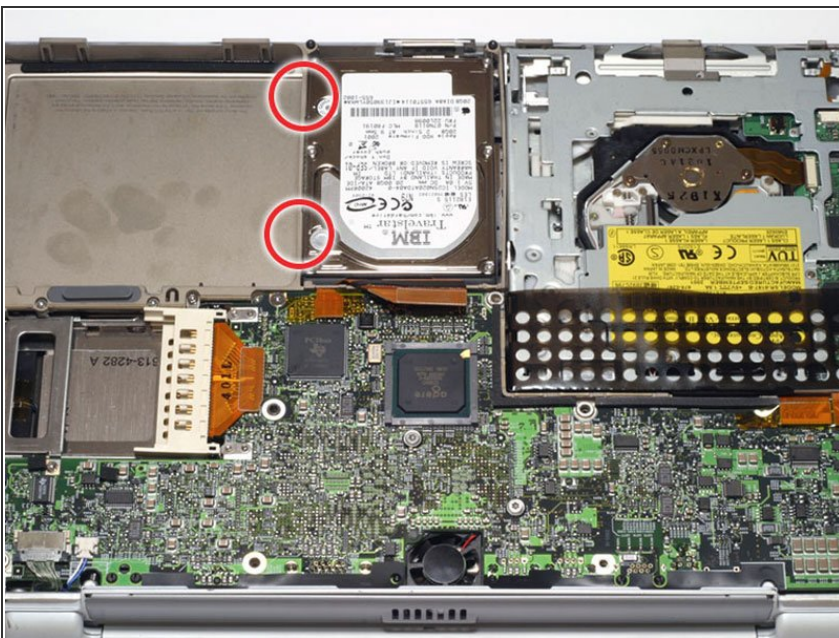
- ❗ Skip this step if your computer does not have an Airport card.
- Firmly grasp the plastic tab attached to the Airport card and pull up and to the left.
- Disconnect the antenna cable from the left side of the Airport card.

## Step 9 — Hard Drive



- Disconnect the hard drive ribbon from the logic board using a spudger or the tip of your finger, removing tape as necessary.

## Step 10



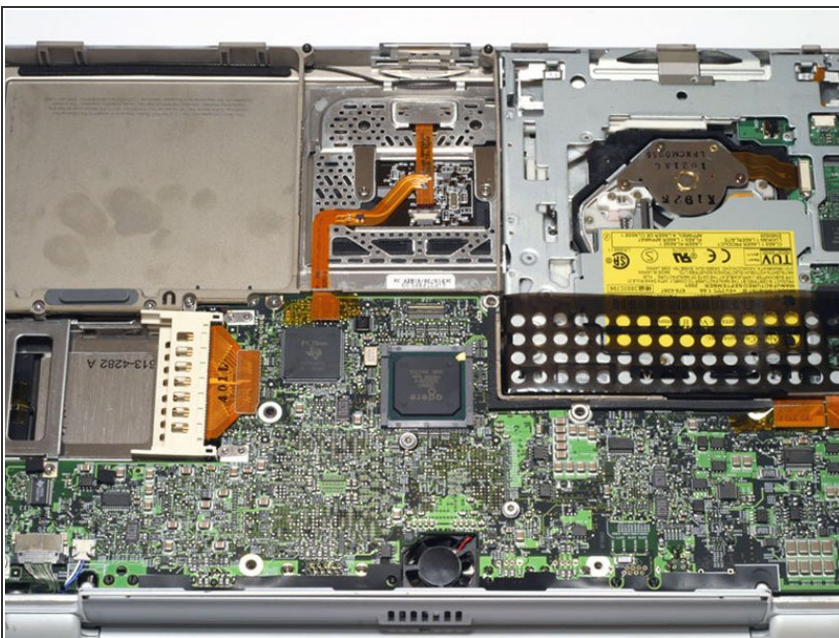
- To free the hard drive, remove the two T8 Torx screws from the right wall of the battery housing.

## Step 11



- Remove the hard drive by gently grasping the orange ribbon cable and lifting the left edge up and out of the computer.
- ⓘ There are four rubber bumpers that fit over the hard drive screws. Ensure that these bumpers come out when you remove the hard drive.

## Step 12



- Your laptop should look approximately like this.

## Step 13 — DVD Drive



- i If your G4 has a CD-RW or Combo drive, the pictures in the following steps will not exactly match your computer.
- Before continuing, place a soft cloth on your work surface to rest the computer on. Turn the G4 over, making sure the DVD drive doesn't fall out. Place the computer on the cloth.

## Step 14



- Bend the silver metal EMI clip so that it is vertical. This part may fall out after removing the DVD drive.
- ★ The EMI clip is not essential for reassembling the computer. If the clip falls out, don't worry about putting it back in.

## Step 15



- Turn the G4 over.
- Disconnect the orange DVD ribbon cable from the logic board using a spudger or the tip of your finger

## Step 16



- Remove the DVD drive by lifting the right edge up and out of the computer.
- ⓘ If you have a CD or any other object jammed in your optical drive, we have an [optical drive repair guide](#).

## Step 17 — Modem



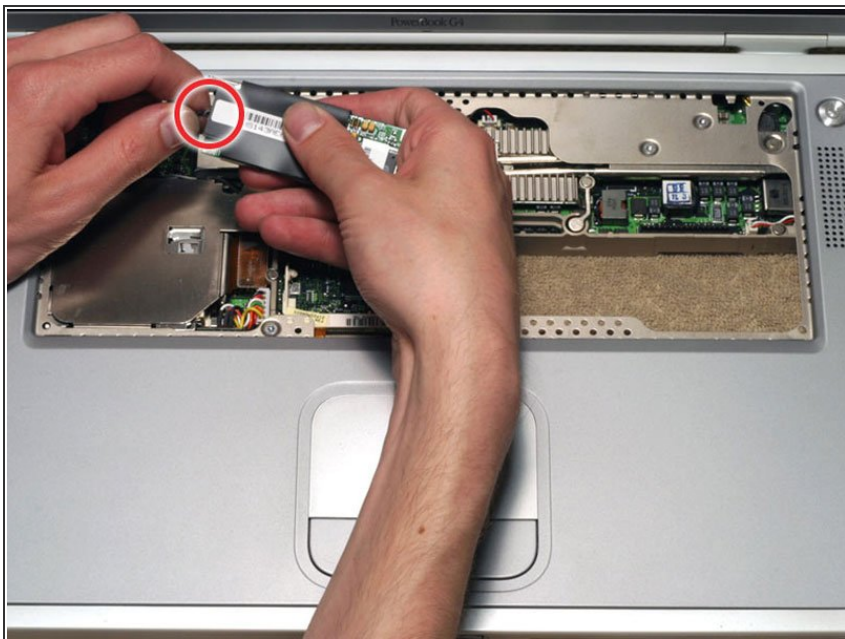
- Turn the G4 over.
- Using a 5 mm nut driver or needle-nose pliers, remove the hex nut from the modem.

## Step 18



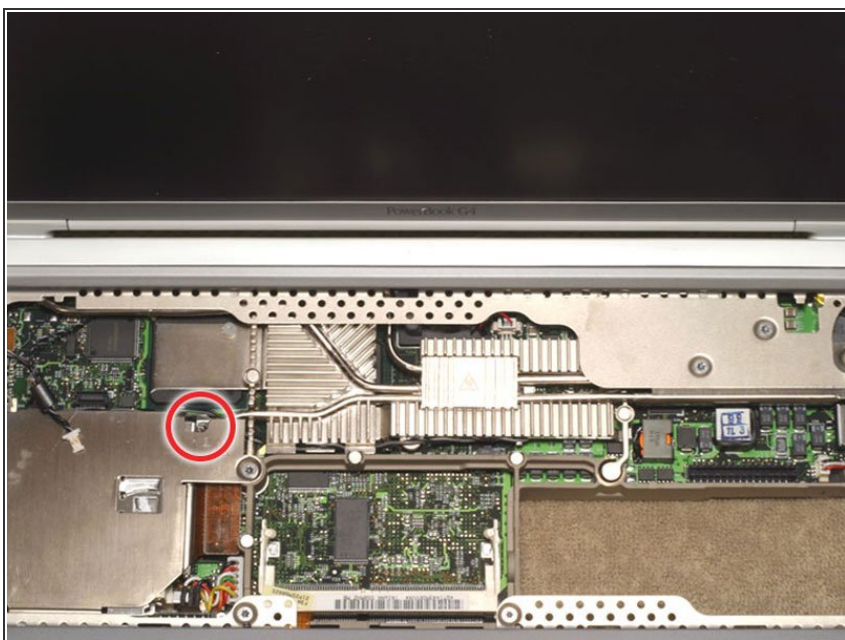
- Lift the modem out by pulling up and to the right.
- ⓘ The plastic shielding on the modem may catch on the computer's case. Rocking the modem from side to side will help free the modem.

## Step 19



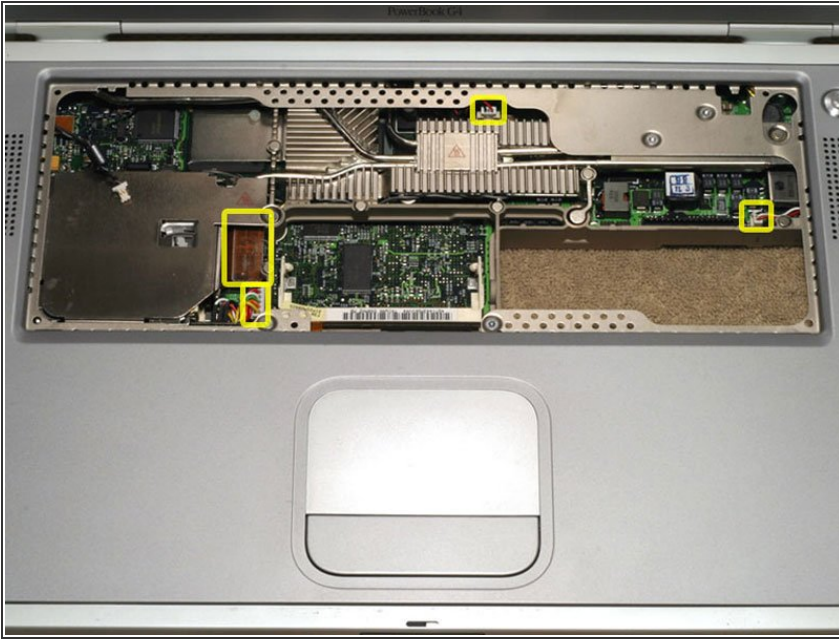
- Disconnect the connector cable from the modem.

## Step 20 — Logic Board



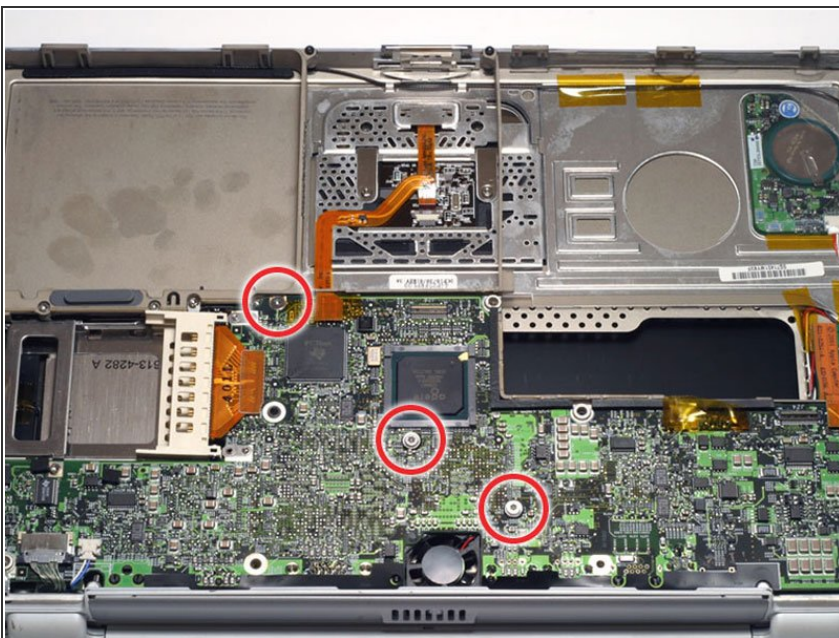
- Remove the single T8 Torx screw located near the silver heat pipe.

## Step 21



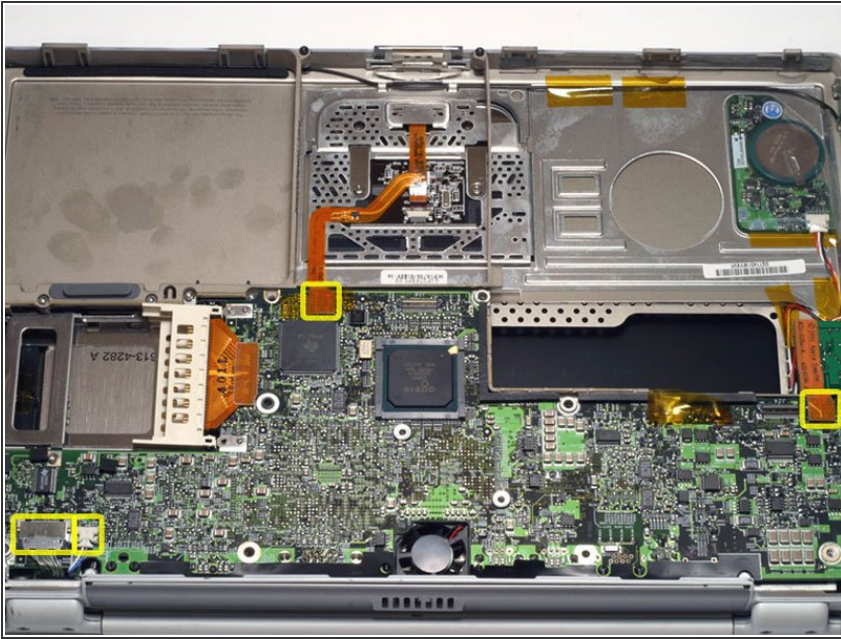
- Disconnect the three indicated connectors from the logic board.
- Disconnect the orange PC card cage connector from the logic board.
- ⓘ The large multicolor cable may be difficult to free.

## Step 22



- Turn the G4 over.
- Remove the three T8 Torx screws from the logic board.
- ⓘ Be sure not to lose the rubber washers protecting the logic board from the lower two screws.

## Step 23



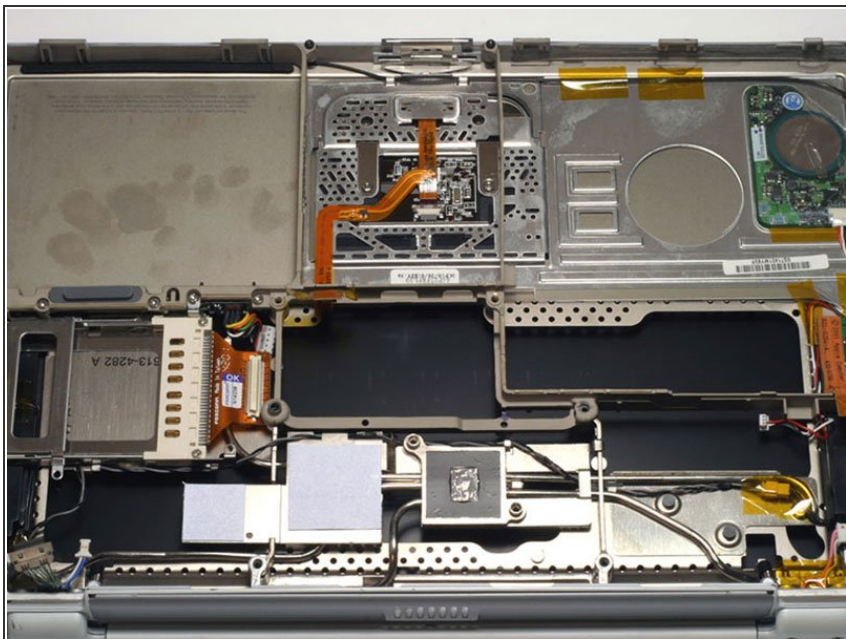
- Disconnect the indicated connectors from the logic board, removing tape as necessary.

## Step 24



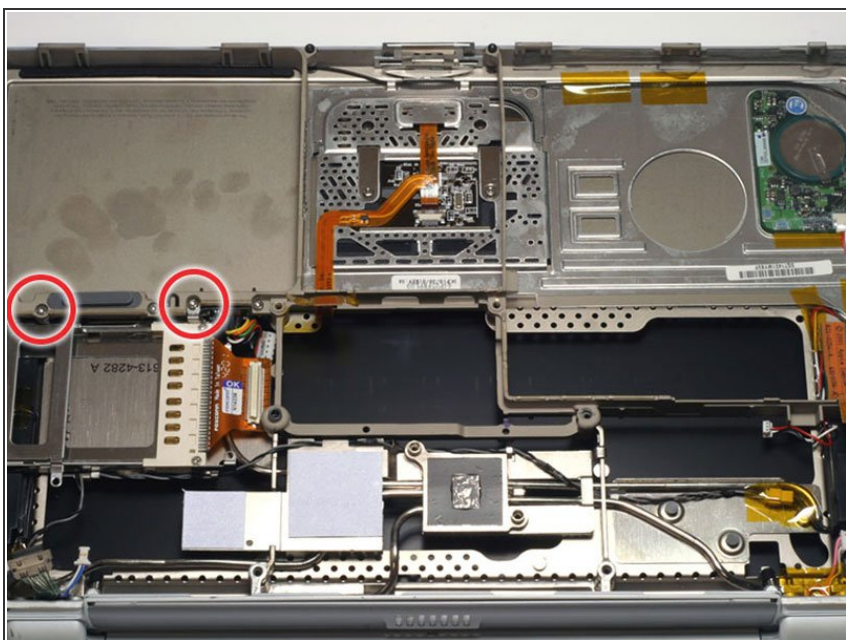
- Carefully lift the logic board up and pull it away from you.
- ⓘ This step requires some force, but if the logic board will not come up, make sure you have removed all screws and connectors necessary.
- Remove the logic board from the computer.

## Step 25



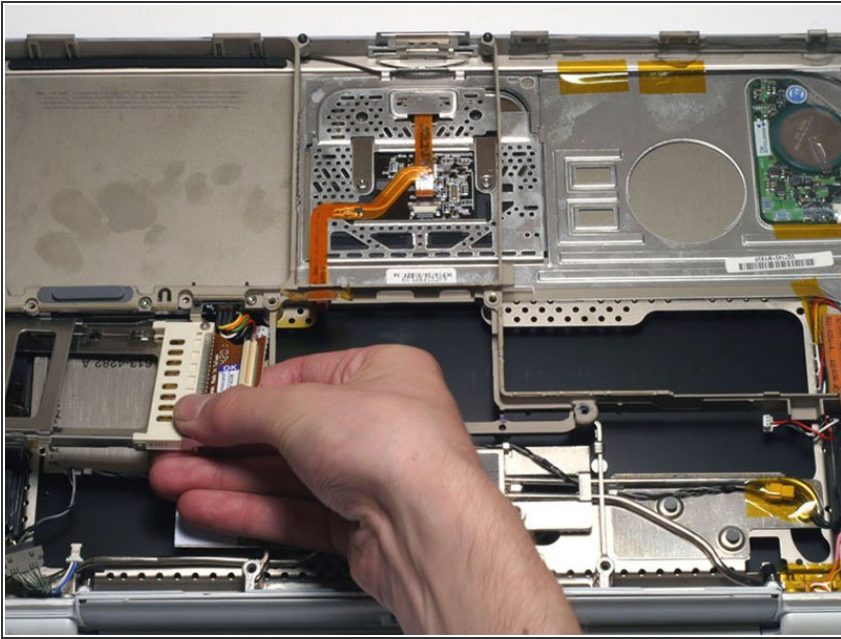
- Your laptop should look approximately like this.

## Step 26 — PC Card Cage



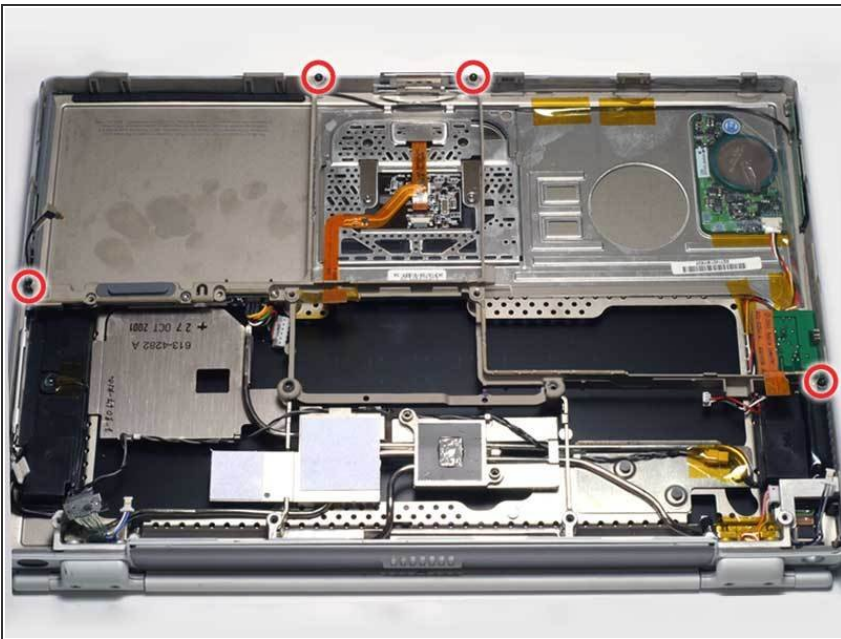
- Remove the two T8 Torx screws that secure the PC Card cage.

## Step 27



- Remove the PC Card cage by pulling it to the right and twisting slightly toward you.

## Step 28 — Display

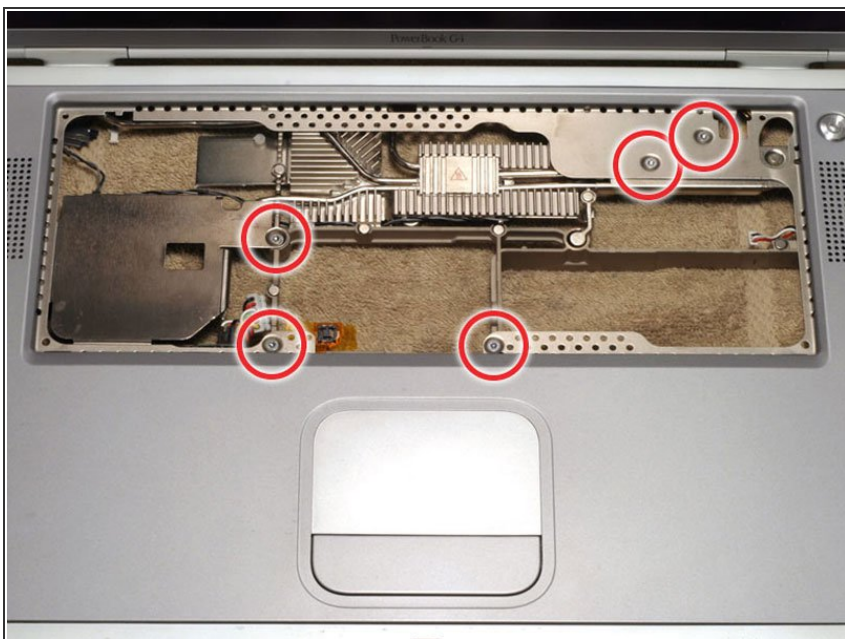


- ⚠ Performing the following steps incorrectly can easily damage the display and render it inoperable. The

multicolored display data cable is especially fragile.

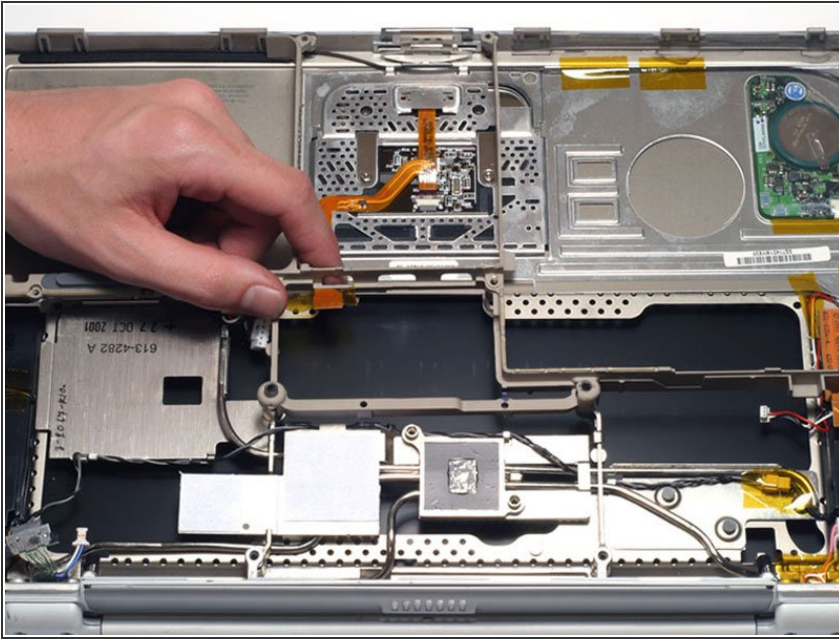
- Remove the four black T8 Torx screws from the plastic framework.

## Step 29



- Remove the five silver T8 Torx screws from the metal framework.

## Step 30



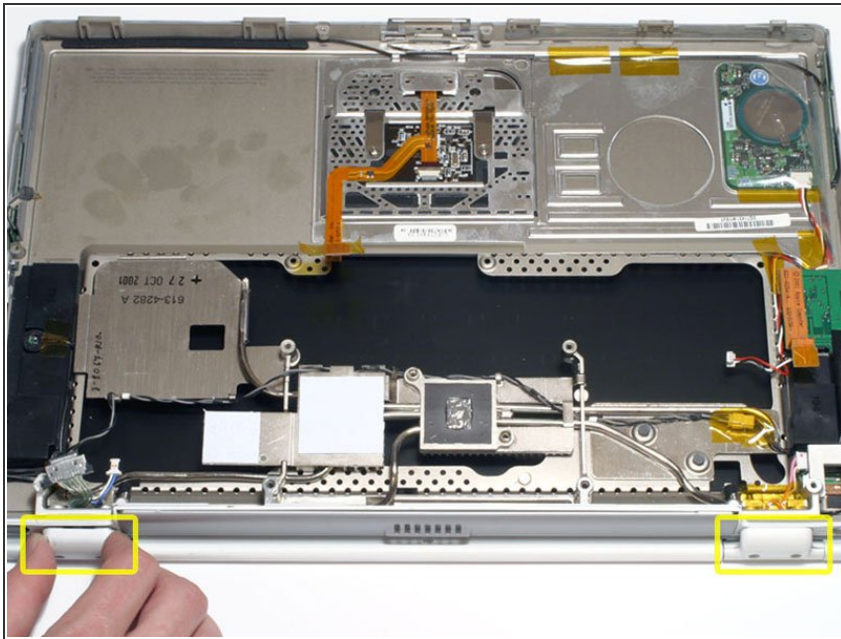
- Turn the G4 over.
- Grasp the plastic framework and pull directly up.

## Step 31



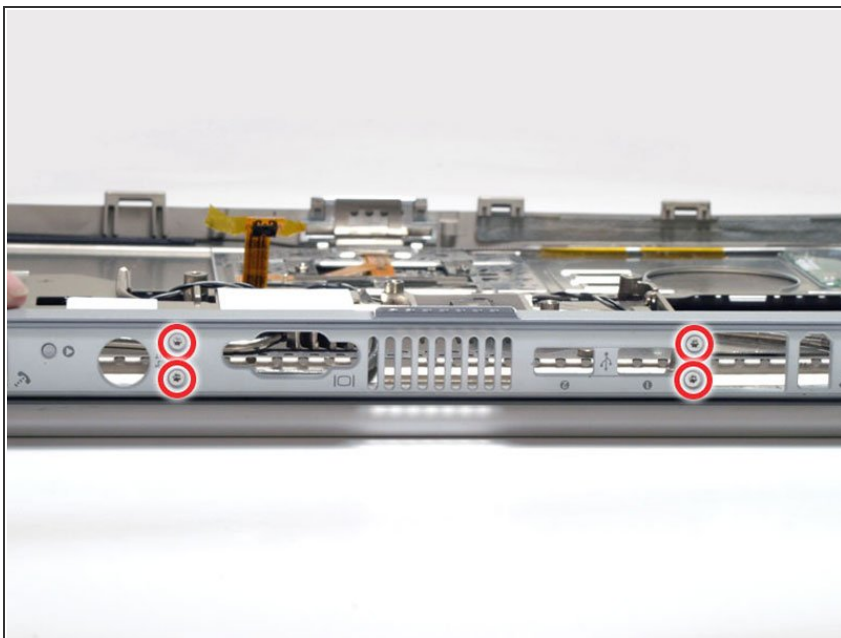
- Position the display at a 45 degree angle and rest the computer on a soft cloth with the back panel ports facing up.
- Remove the two T8 Torx screws from each clutch cover.

## Step 32



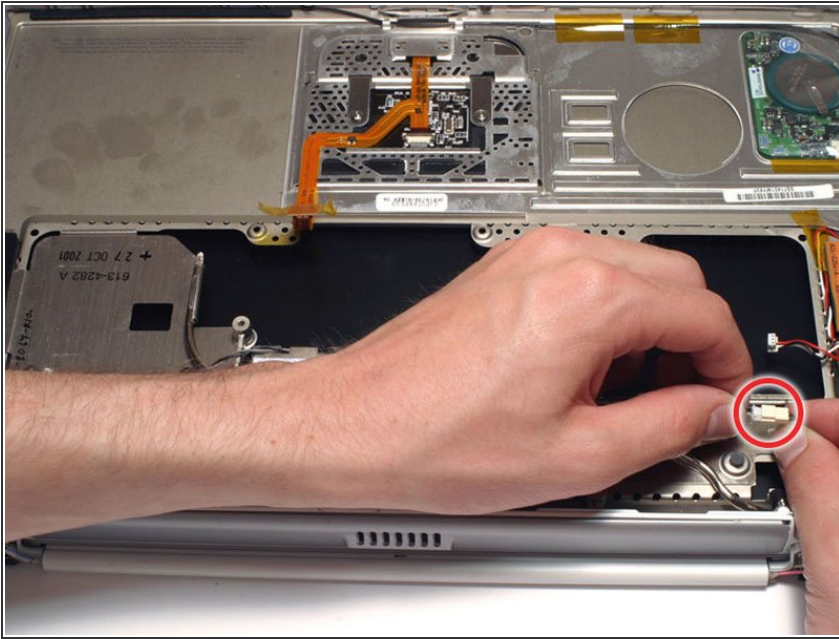
- Close the display and pull off both clutch covers. You can use a non-metal flathead screwdriver if the clutch covers do not come off easily.

## Step 33



- Open the back panel port cover and remove the four T6 Torx screws.
- ★ The upper screw on each side fastens a small metal mount in place. Be sure to put this part back in when reassembling the computer.

## Step 34



- Disconnect the audio cable at the right side of the computer, removing tape as necessary.

## Step 35

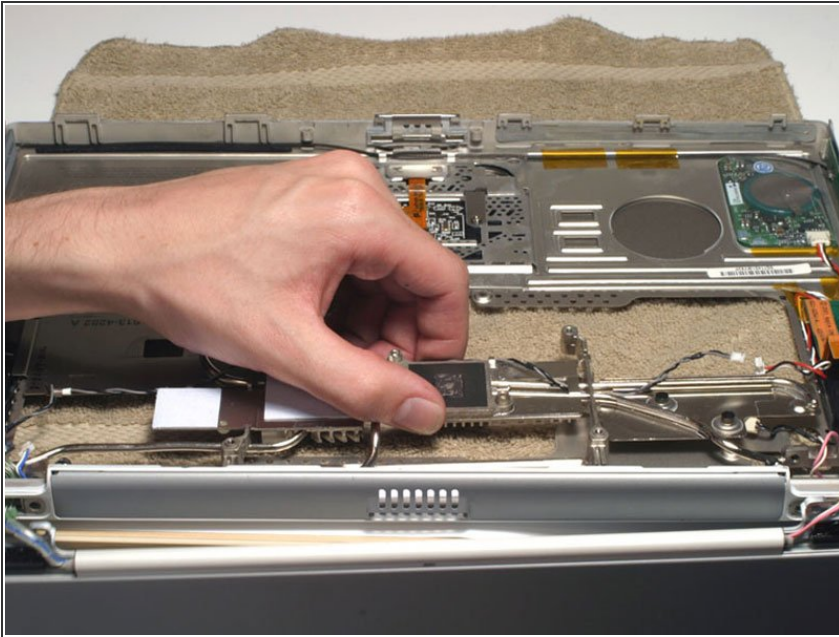


- Open the display to a 90 degree angle. Rest the trackpad face down on the work surface and allow the display to hang over the edge. If possible, adjust your chair or work surface height so the display will rest on your legs and the trackpad will lie flat on the work surface.

- Remove the four T8 Torx screws that fasten the display to the trackpad. The screw closest to the

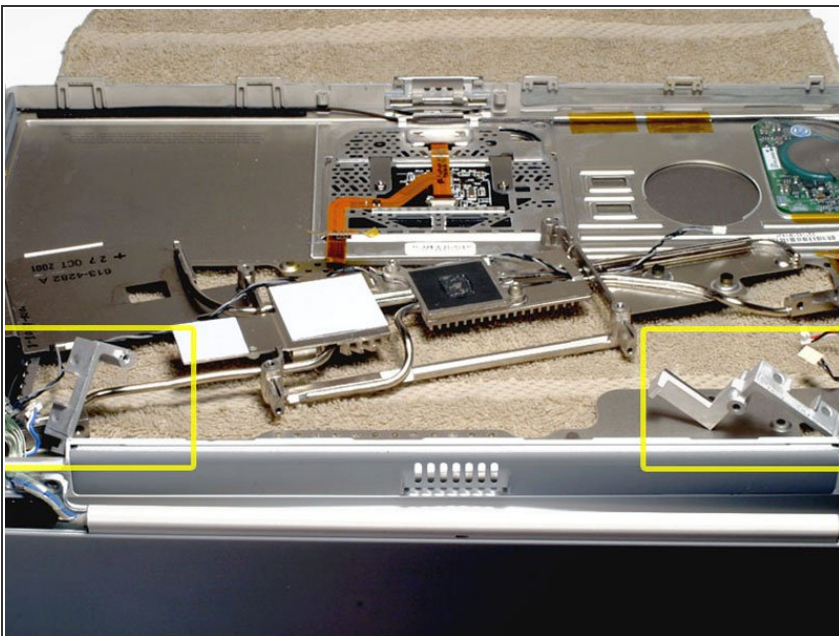
display data cable has a tapered head.

## Step 36



- Grasp the metal heat exchanger and pull up and away from you. You may need to move the inverter cable on the right side of the computer in order to rotate the heat exchanger.

## Step 37



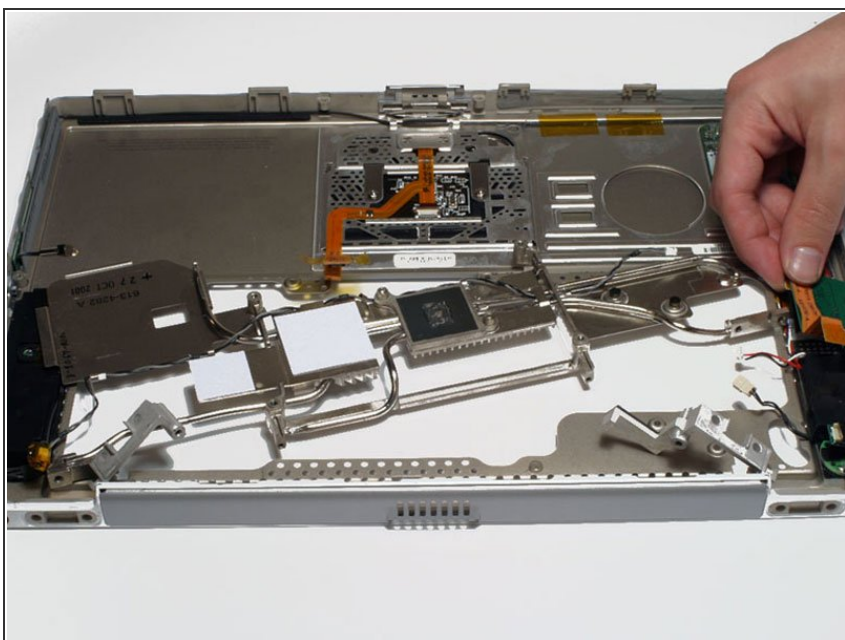
- Lift up the metal brackets on either side of the upper case.

## Step 38



- Disconnect the inverter cable and carefully thread it through the slot in the upper case.
- Carefully thread the display and backlight cables individually through the slot in the upper case. Be very careful with the display cable as it is easily damaged.
- Remove the display assembly.

## Step 39 — Inverter Board



- Lift the inverter board out of the computer.

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