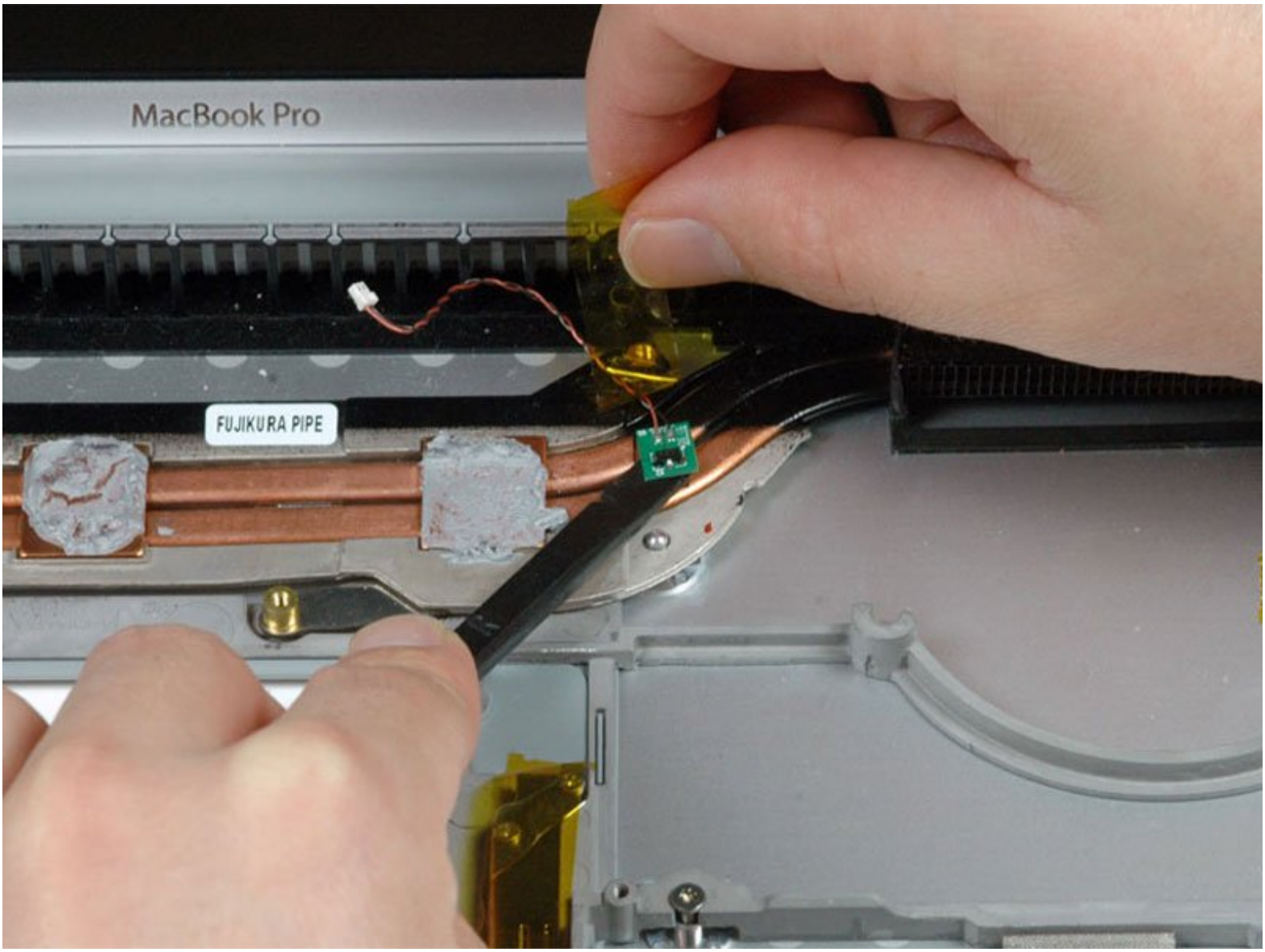
MacBook Pro 15" Core Duo Model A1150 Left Thermal Sensor Replacement

Written By: iRobot



INTRODUCTION

This detects the internal temperature of your machine for heat management.

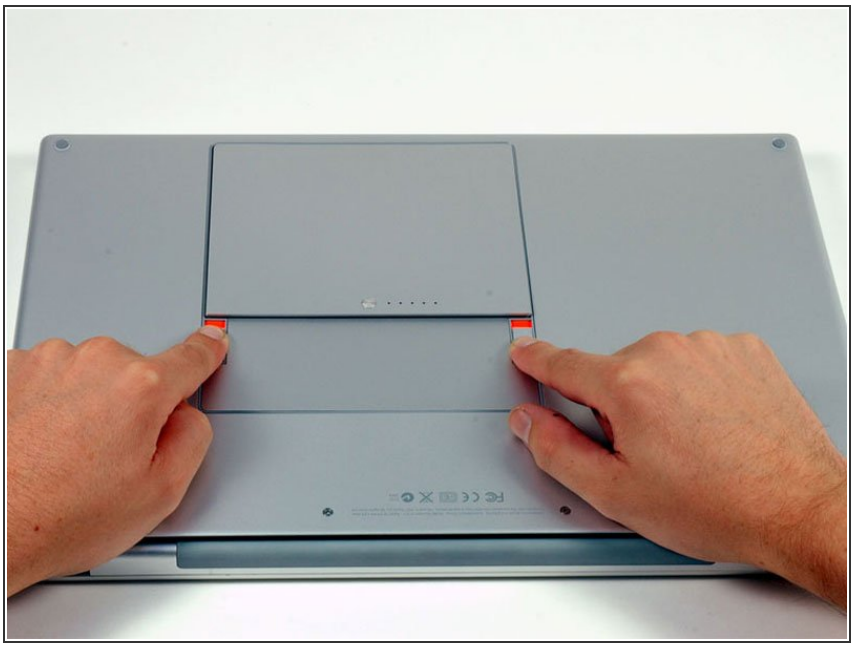
TOOLS:

- Arctic Silver ArctiClean (1)
- Arctic Silver Thermal Paste (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)
- T6 Torx Screwdriver (1)

PARTS:

- MacBook Pro 15" (Model A1150) Left Thermal Sensor (1)

Step 1 — Battery



- Use your fingers to push both battery release tabs away from the battery, and lift the battery out of the computer.

Step 2 — Memory Door

- Remove the three identical Phillips screws from the memory door.

Make sure to record which sets of screws came from where. This will help when re-assembling.

Step 3

- Lift the memory door up enough to get a grip on it, and slide it toward you, pulling it away from the casing.

Step 4 — Upper Case

- Remove the two Phillips screws in the battery compartment near the latch.

Step 5

- Remove the following 6 screws:
  - Two 10 mm T6 Torx screws on either side of the RAM slot.
  - Four 14.5 mm Phillips screws along the hinge.

Step 6

- Remove the four Phillips screws on the port side of the computer.

Step 7

- Rotate the computer 90 degrees and remove the two Phillips screws from the rear of the computer.

Step 8

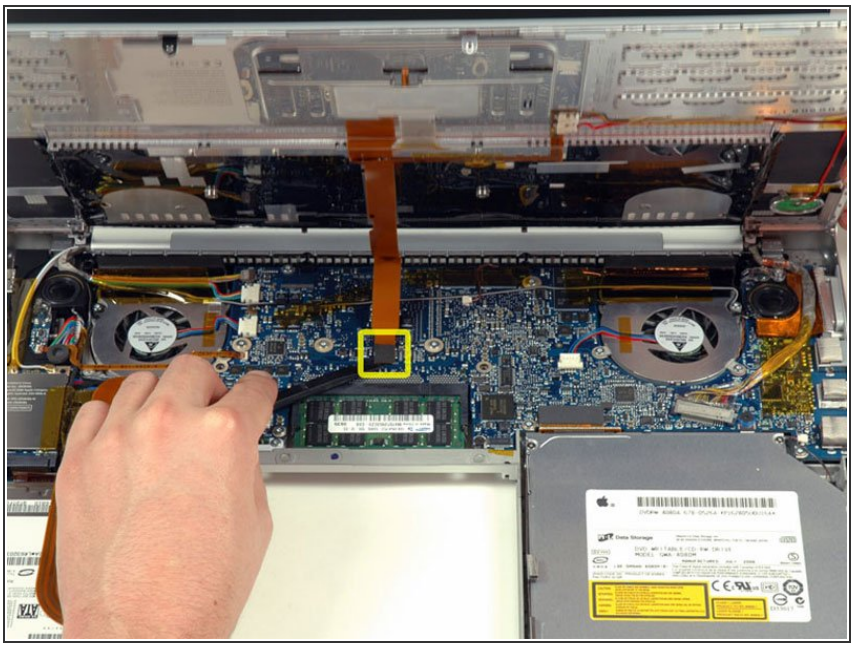
- Rotate the computer 90 degrees again and remove the four Phillips screws from the side of the computer.

Step 9

Do not yank the upper case off quickly. The case is attached to the logic board via a ribbon cable.

- Lift up at the rear of the case and work your fingers along the sides, freeing the case as you go. Once you have freed the sides, you may need to rock the case up and down to free the front of the upper case. This stage can be quite tricky. Over the DVD reader are 4 tabs set back which pull out vertically.
- Note that the two small tongues on the left hand front of the upper case may bend while you remove the upper case. When re-installing, you may need to bend them back to fit in the grooves in the lower case.

Step 10



- Disconnect the trackpad and keyboard ribbon cable from the logic board, removing tape as necessary.
- Remove the upper case.

Step 11 — Optical Drive

- Disconnect the orange SuperDrive ribbon cable from the logic board, removing tape as necessary.

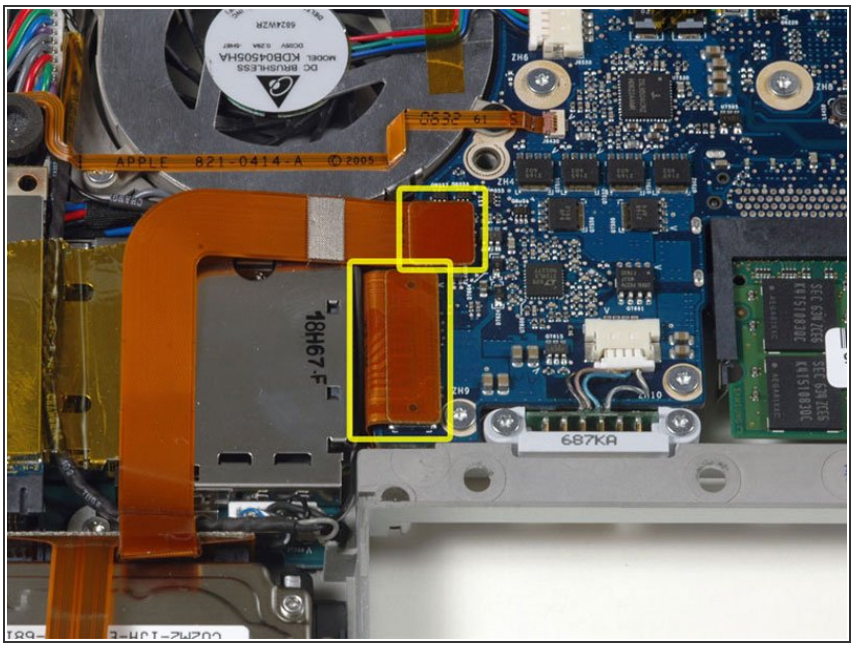
Step 12

- Remove the following 3 screws:
  - Two 3.3 mm silver Phillips screws on either side of the SuperDrive.
  - One 4.8 mm black Phillips screw at the top right corner of the drive.
  - The 4.8mm screw may be a T6 Torx

Step 13

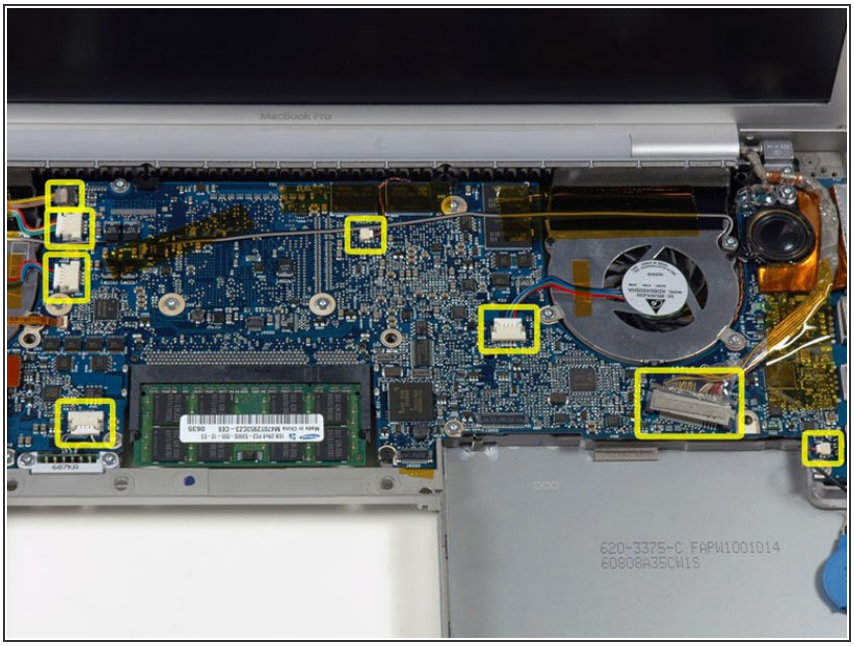
- Lift the optical drive up and out of the computer.

Step 14 — Logic Board



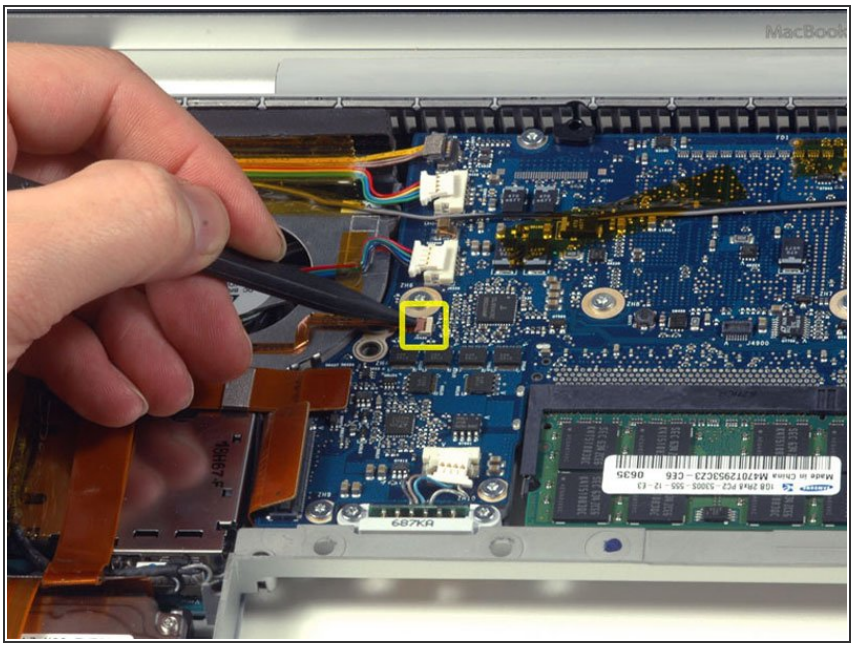
- Disconnect the hard drive and ExpressCard connectors from the left side of the logic board.

Step 15



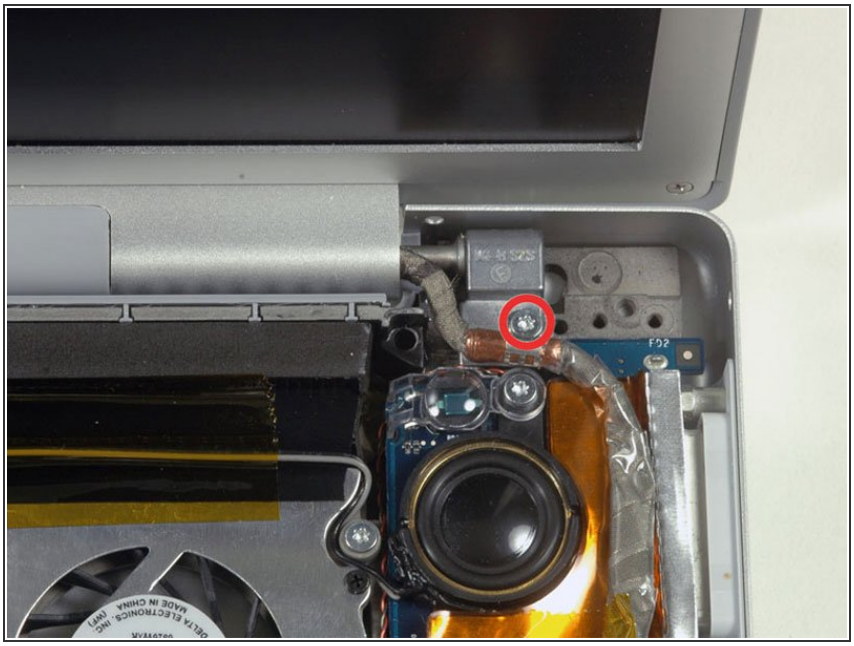
- Disconnect the eight indicated connectors from the logic board, removing tape as necessary.

Step 16



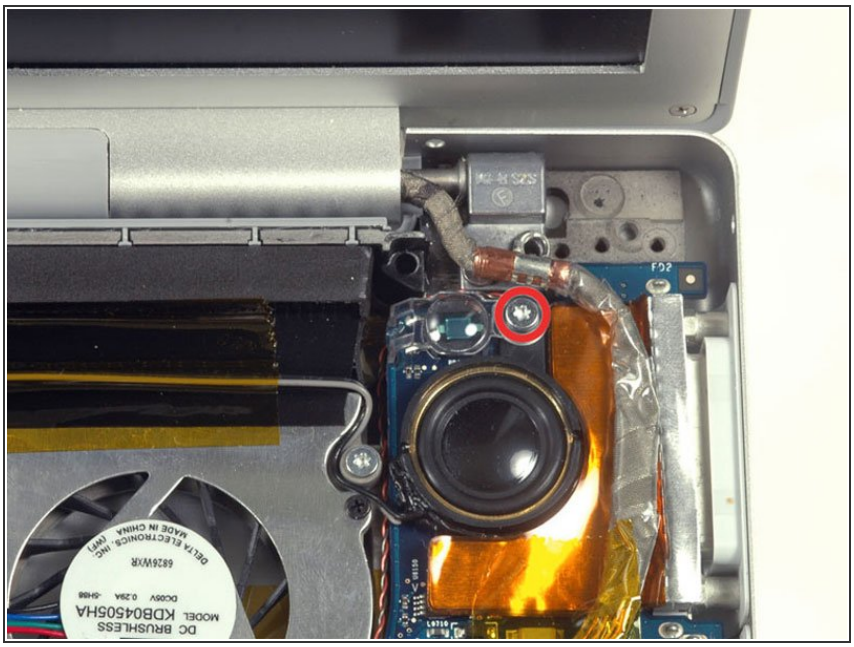
- Use a spudger to flip up the brown plastic flap securing the left ambient light sensor cable to the logic board.
- Slide the left ambient light sensor cable to the left and out of its connector.

Step 17



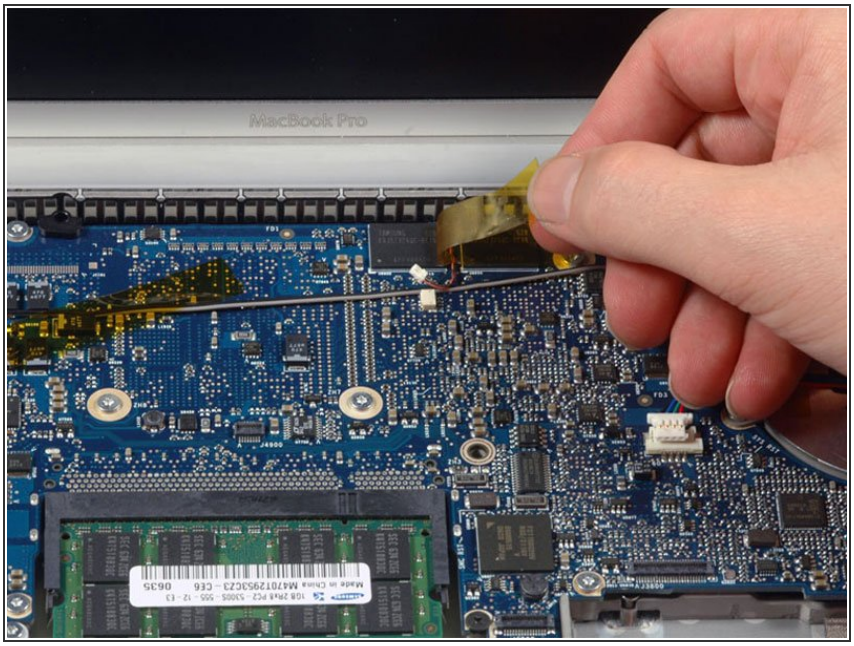
- Remove the silver T6 Torx screw securing the ground loop on the display data cable to the casing.

Step 18



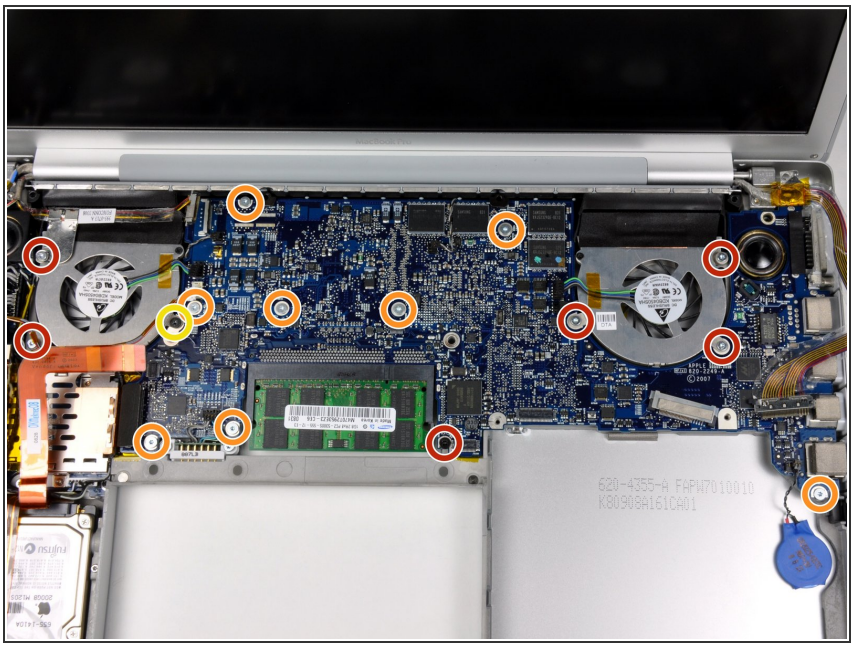
- Remove the single silver T6 Torx screw securing the clear plastic shield over the right ambient light sensor.
- Lift the clear plastic shield off the right ambient light sensor.

Step 19



- Peel up the orange Kapton tape securing the right thermal sensor cable to the logic board.

Step 20



- Remove the following 16 screws, moving cables as necessary:
  - One 4.4 mm black Phillips screw to the right of the RAM slot.
  - Nine 4.7 mm silver T6 Torx screws securing the logic board to the lower case.
  - One 6.2 mm black T6 Torx screw on the right side of the left fan.
  - Five 9.4 mm silver T6 Torx screws securing the left and right fans.

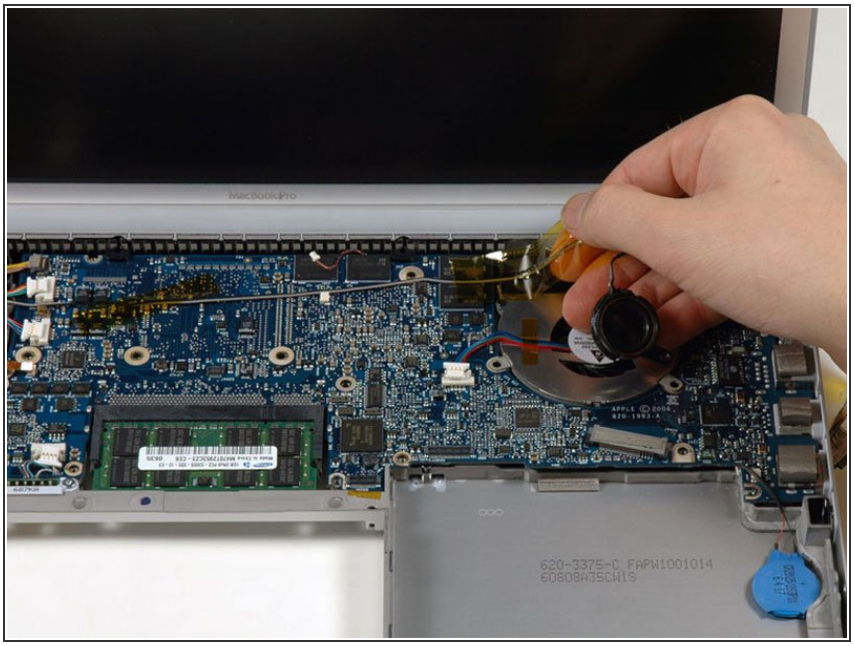
Step 21

- Move the display data cable to the right, removing tape as necessary.
- Peel up and remove the orange foil shield near the right speaker.

Step 22

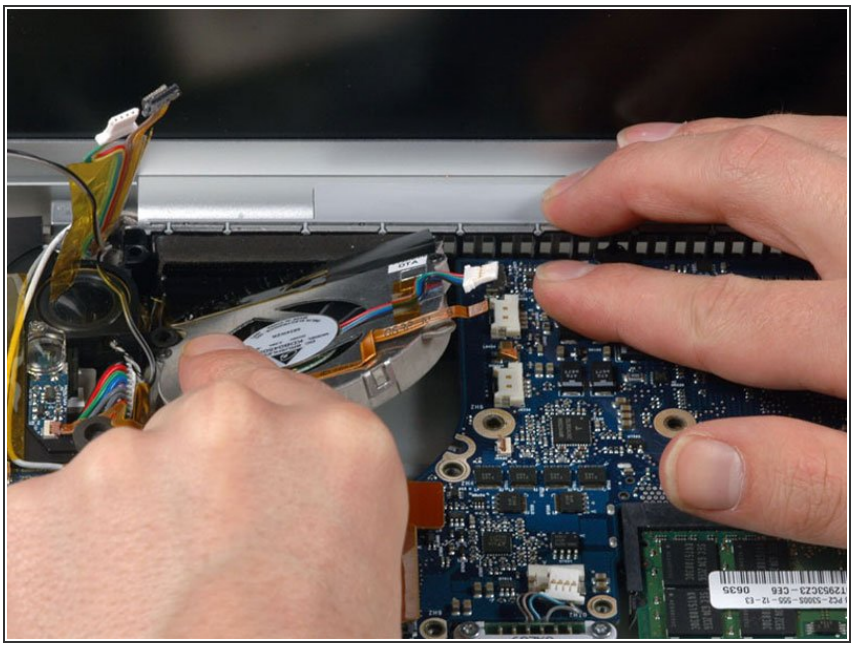
- Rotate the speaker clockwise approximately 30 degrees until it comes free from the logic board.

Step 23



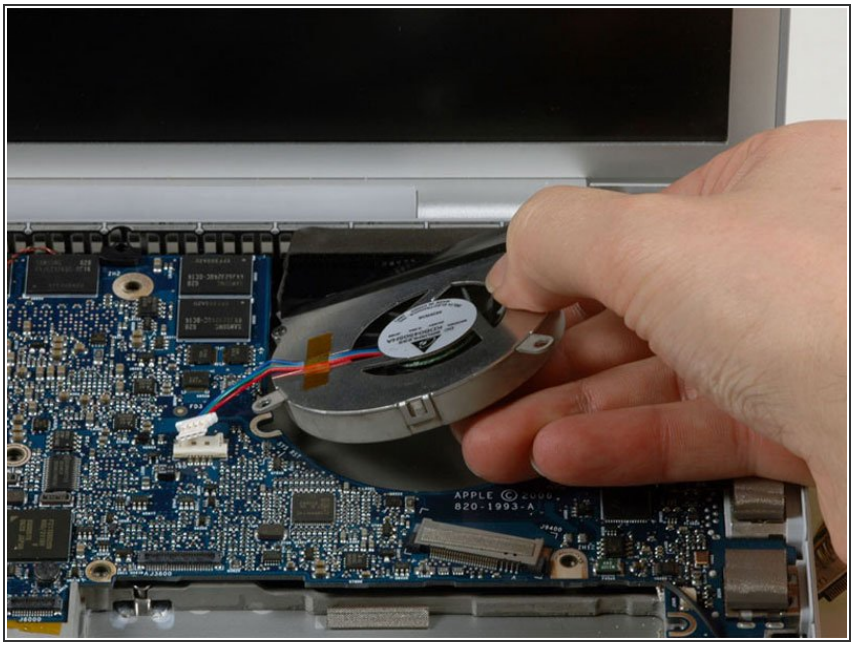
- Peel up the gray and black speaker wires from the top of the logic board, removing tape as necessary.

Step 24



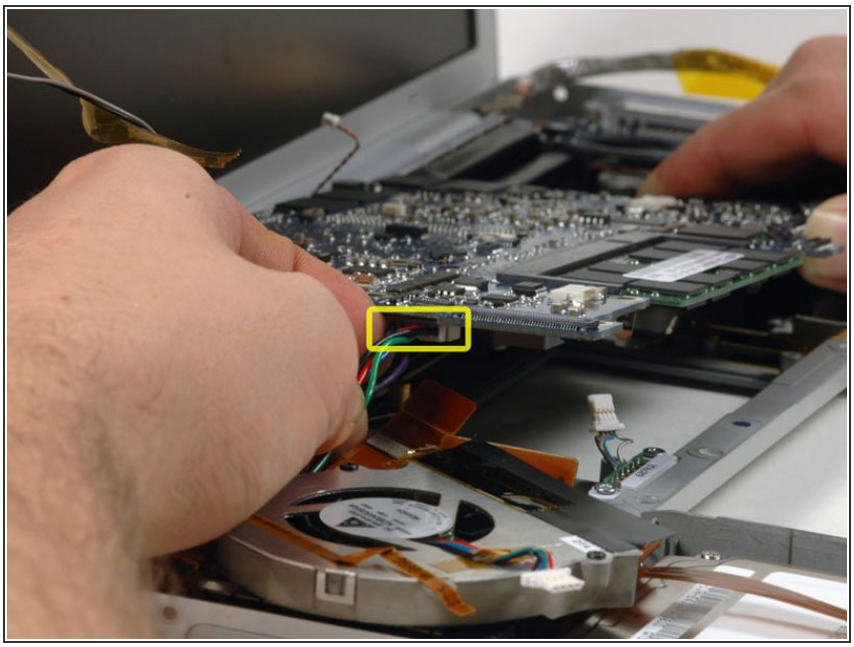
- Peel up the iSight and inverter board cables from above the left fan.
- Hold the logic board down with one hand and use your other hand to lift the left fan up from its housing. There is a piece of black tape securing the fan to the heat sink. Carefully peel this tape up from the heat sink as you lift the fan up.
- Place the fan above the Airport card. It is not necessary to entirely remove the fan from the computer.

Step 25



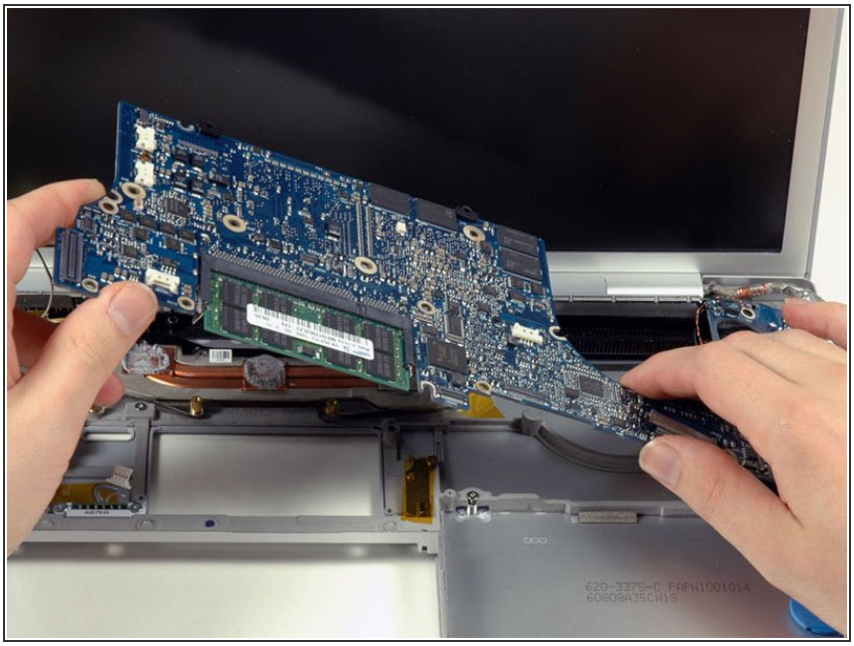
- It may be helpful to hold the heat sink in place while removing the right fan.
- Lift the right fan up while carefully peeling up the tape which secures the fan to the heat sink.
- Remove the right fan from the computer.

Step 26



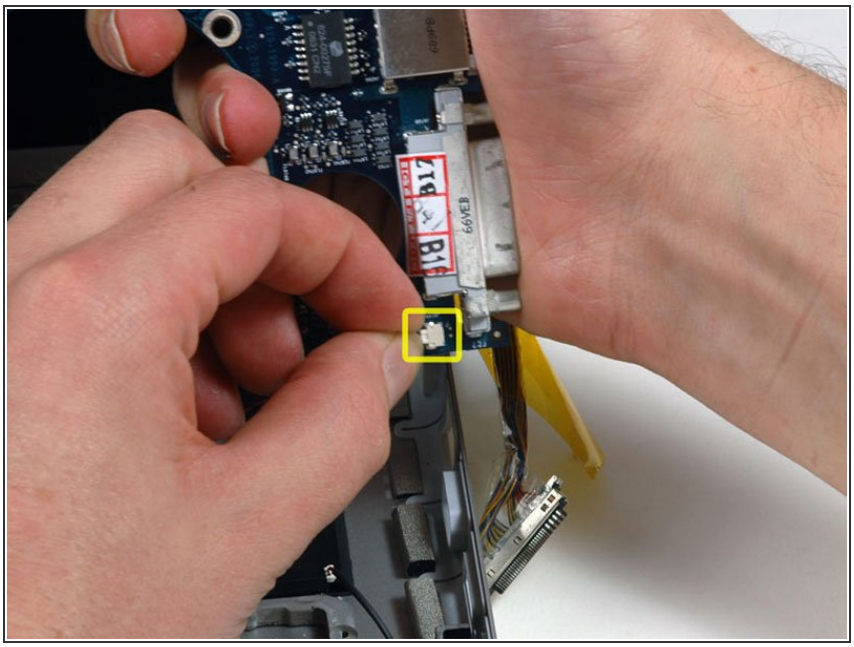
- Lift up the left side of the logic board and disconnect the multi-colored power cable from the bottom of the board.

Step 27



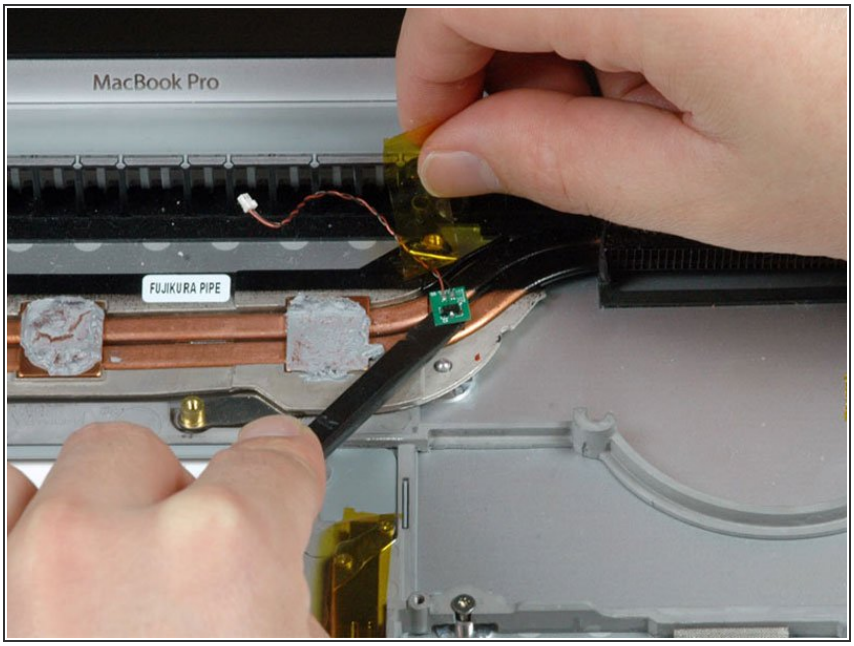
- The logic board is still attached to the computer by one more cable, so don't lift the logic board too far out of the computer yet.
- Grasp the logic board at the left side and at the thin section, and rotate the logic board out of the lower case.
- To properly reassemble your MacBook Pro, you'll have to clean off and replace the old thermal compound from the chips on the back of the logic board. Use our Applying Thermal Paste Guide to prepare the processor and heat sink surfaces.

Step 28



- Disconnect the right thermal sensor cable from the bottom of the logic board near the DVI port.

Step 29 — Left Thermal Sensor



- Peel back the orange Kapton tape covering the left thermal sensor.
- Use a spudger to pry the left thermal sensor off the heat sink.

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