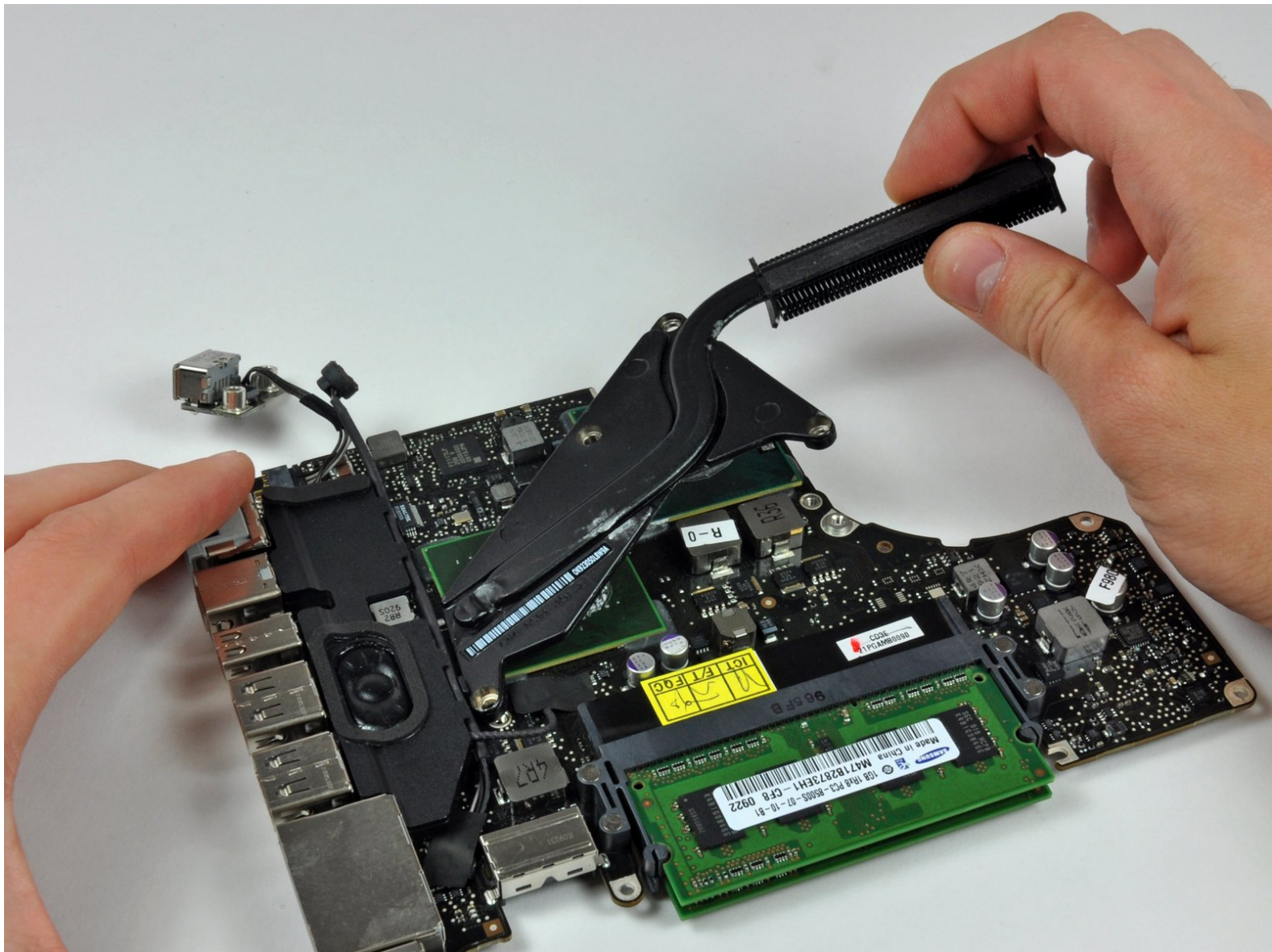




MacBook Pro 13" Unibody Mid 2010 Heat Sink Replacement

Remove the heat sink to replace thermal paste or damaged cooling fins on your MacBook Pro 13" Unibody Mid 2010.

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INTRODUCTION

Remove the heat sink to apply [better thermal paste](#).



TOOLS:

- [Arctic Silver ArctiClean](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T6 Torx Screwdriver](#) (1)
- [Tri-point Y0 Screwdriver](#) (1)



PARTS:

- [MacBook Pro 13" Unibody \(Mid 2010\) Heat Sink](#) (1)

Step 1 — Lower Case



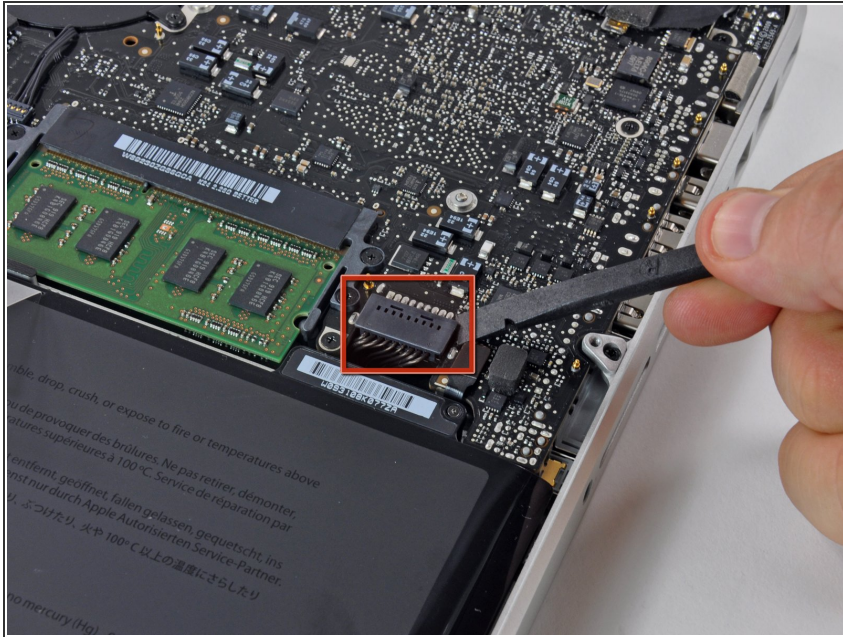
- Remove the following 10 screws securing the lower case to the MacBook Pro 13" Unibody:
 - Seven 3 mm Phillips screws.
 - Three 13.5 mm Phillips screws.

Step 2



- Slightly lift the lower case and push it toward the rear of the computer to free the mounting tabs.

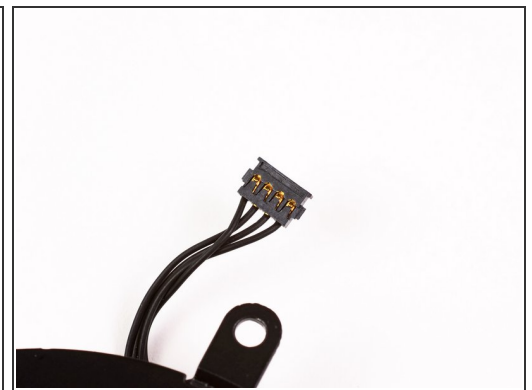
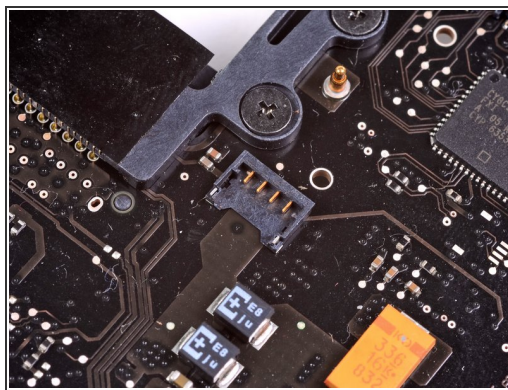
Step 3 — Battery



⚠ For precautionary purposes, we advise that you disconnect the battery connector from the logic board to avoid any electrical discharge.

- Use the flat end of a spudger to lift the battery connector up out of its socket on the logic board.

Step 4 — Fan



- Use a spudger to pry up the fan connector out of its socket on the logic board.
- i** It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
- ⚠** The fan socket and the fan connector can be seen in the second and third pictures. Be careful not to break the plastic fan socket off the logic board as you use your spudger to lift the fan connector straight up and out of its socket. The layout of the logic board shown in the second picture may look slightly different than your machine but the fan socket is the same.

Step 5



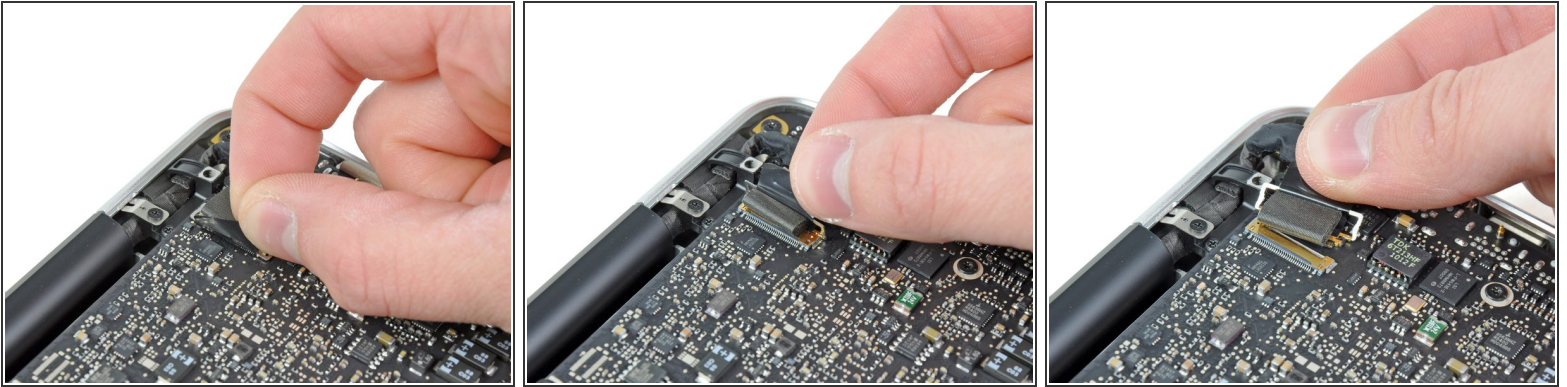
- Remove the following three screws:
 - One 7 mm T6 Torx screw
 - Two 5.4 mm T6 Torx screws


Step 6



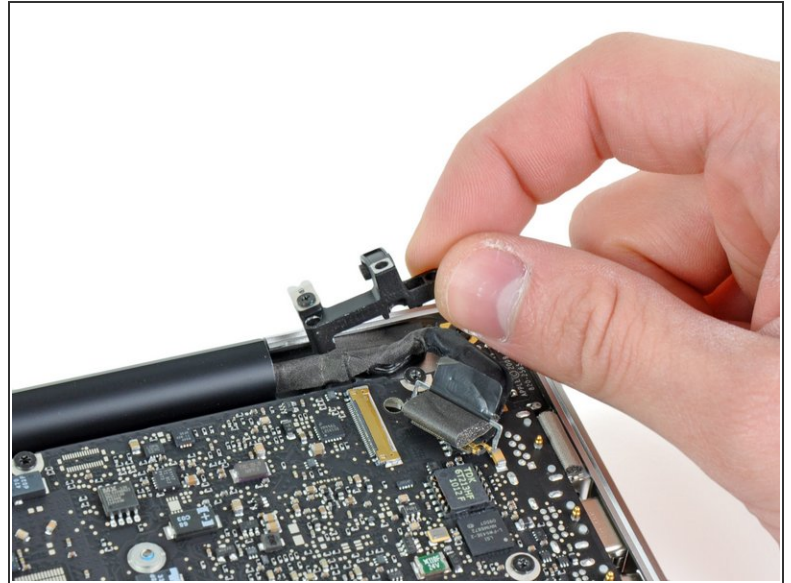
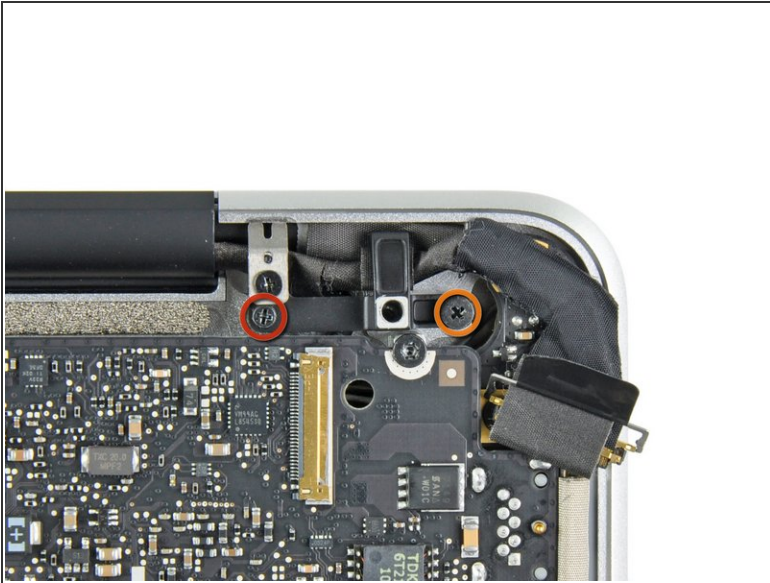
- Lift the fan out of the upper case.

Step 7 — Logic Board



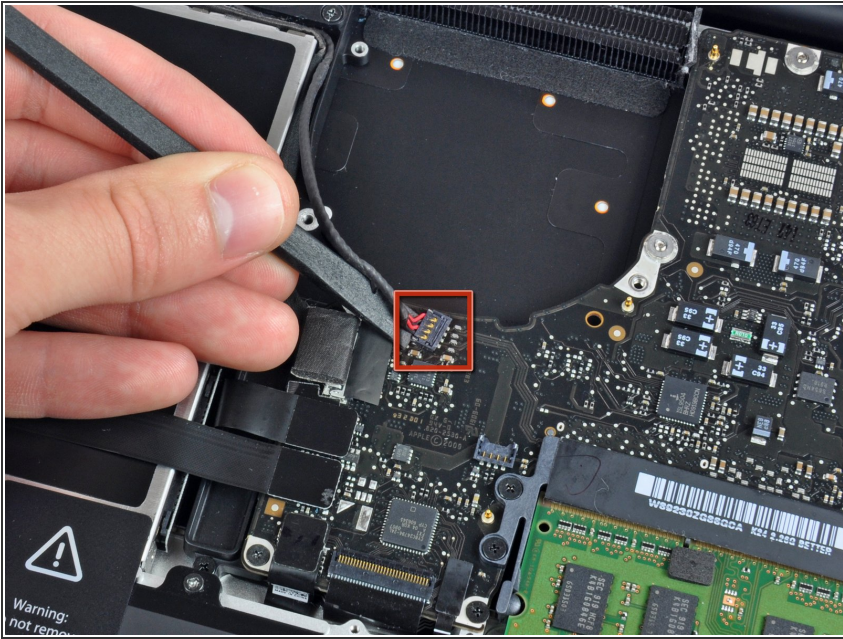
- Grab the plastic pull tab secured to the display data cable lock and rotate it toward the DC-In side of the computer.
- Gently pull the display data cable connector away parallel to the board.
 Do not pull the connector upwards, or you may damage the connector.

Step 8



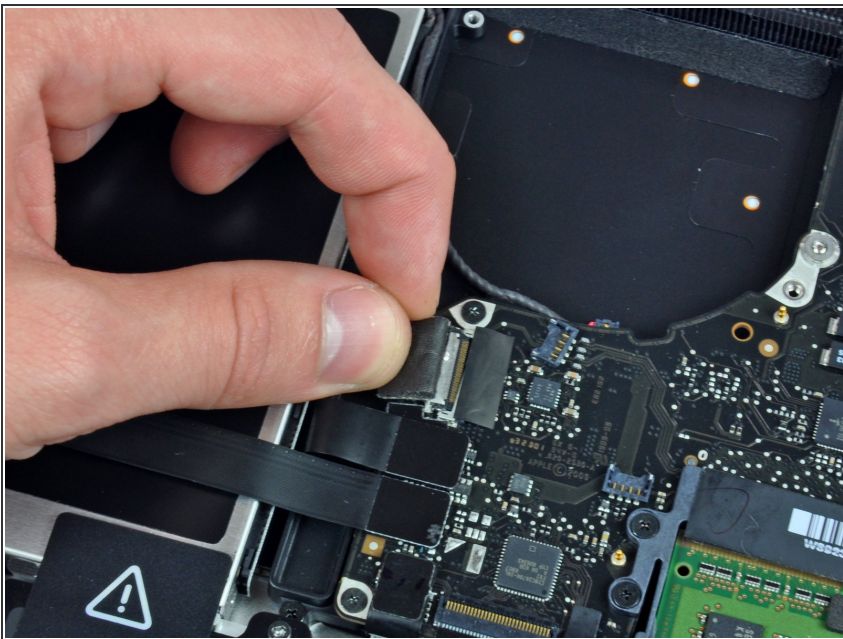
- Remove the following two screws securing the display data cable bracket to the upper case:
 - One 8.6 mm Phillips
 - One 5.6 mm Phillips
- Lift the display data cable bracket out of the upper case.

Step 9



- Use the flat end of a spudger to pry the subwoofer and right speaker connector up off the logic board.

Step 10



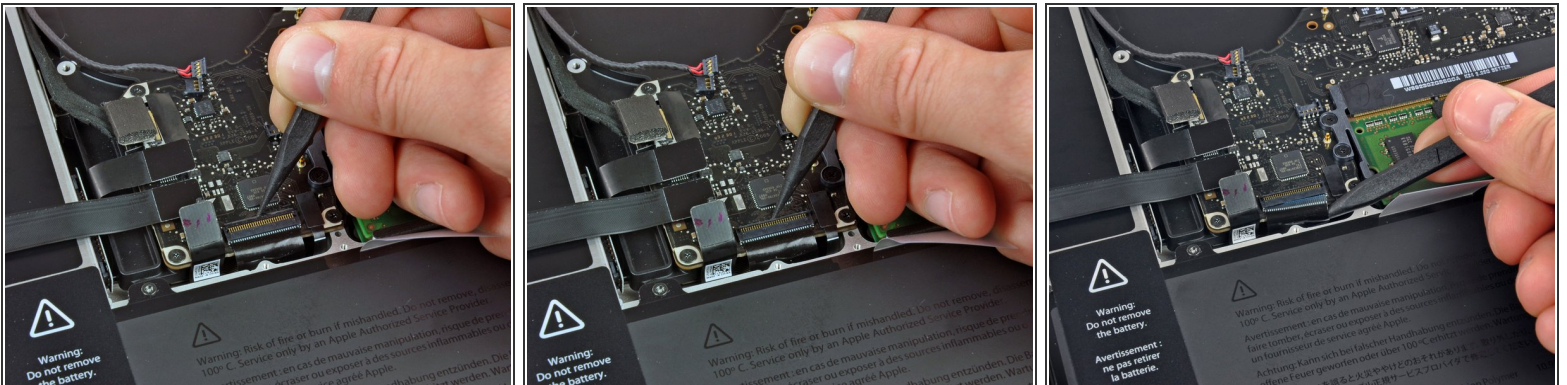
- Pull the camera cable connector toward the optical drive to disconnect it from the logic board.
- ⓘ This socket is metal and easily bent. Be sure to align the connector with its socket on the logic board before mating the two pieces.

Step 11



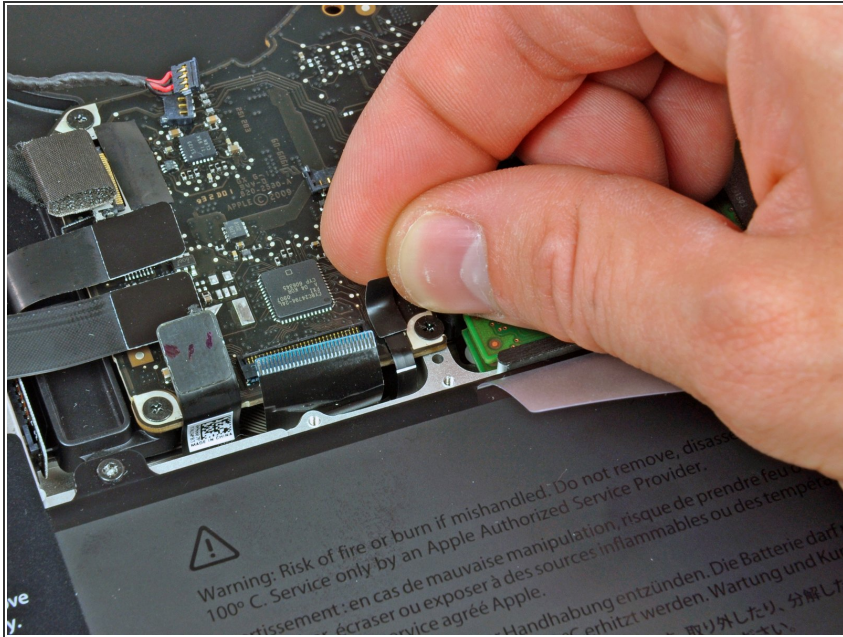
- Use the flat end of a spudger to pry the optical drive, hard drive, and trackpad cable connectors up off the logic board.

Step 12



- Use your fingernail or the tip of a spudger to flip up the cable retaining flap on the ZIF socket for the keyboard ribbon cable.
- Use your spudger to slide the keyboard ribbon cable out of its socket.

Step 13



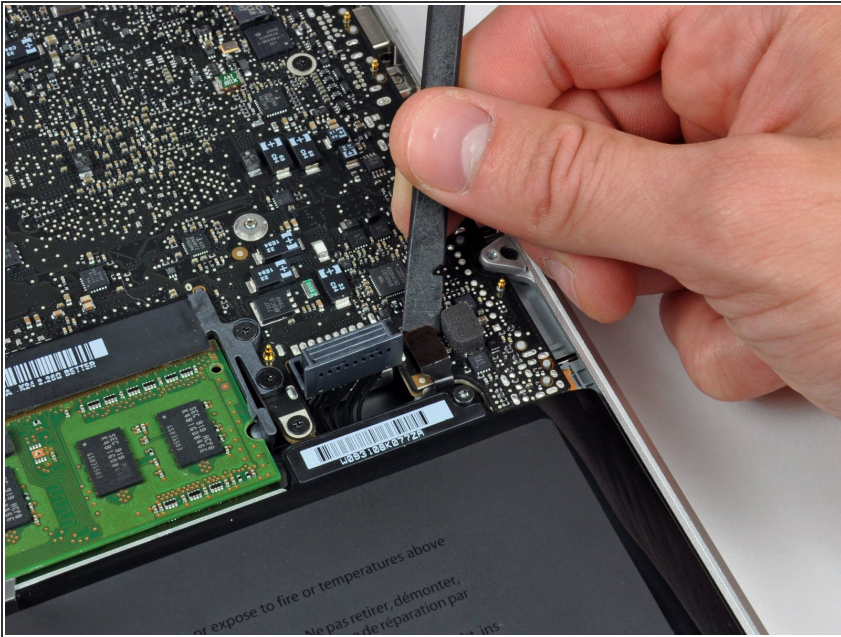
- Peel the small strip of black tape off the keyboard backlight ribbon cable socket.

Step 14



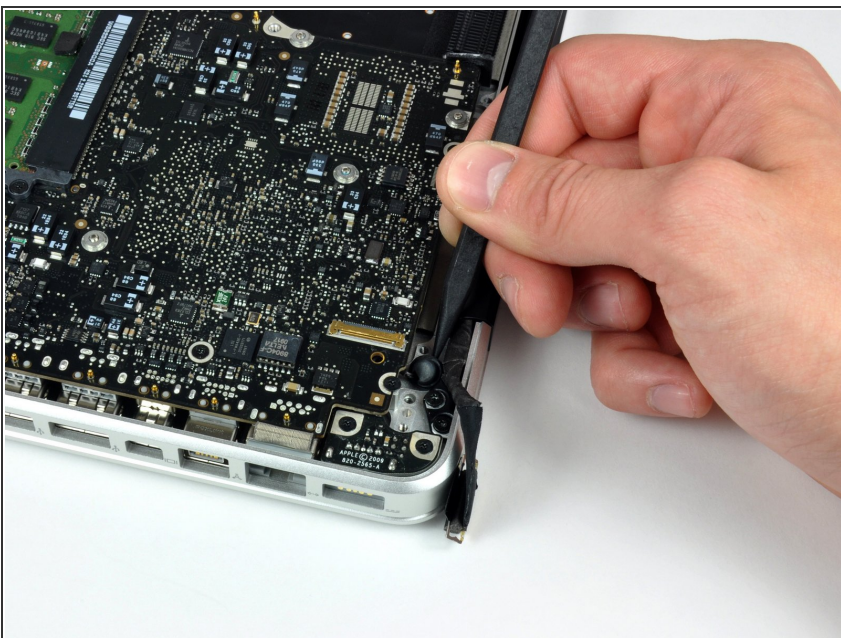
- Use the tip of a spudger to flip up the cable retaining flap on the ZIF socket for the keyboard backlight ribbon cable.
- Use your spudger to slide the keyboard backlight ribbon cable out of its socket.

Step 15



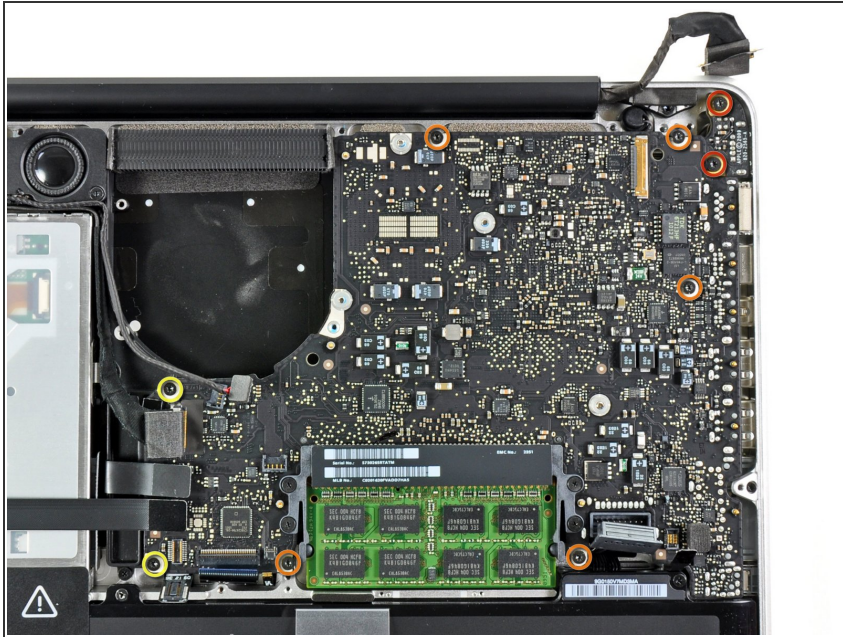
- Use the flat end of a spudger to pry the battery indicator cable connector up off the logic board.

Step 16



- Use the tip of a spudger to pry the microphone off the adhesive attaching it to the upper case.

Step 17



- Remove the following screws:
 - Two 7 mm T6 Torx screws from the DC-In board
 - Five 3.3 mm T6 Torx screws
 - Two 4 mm T6 Torx screws

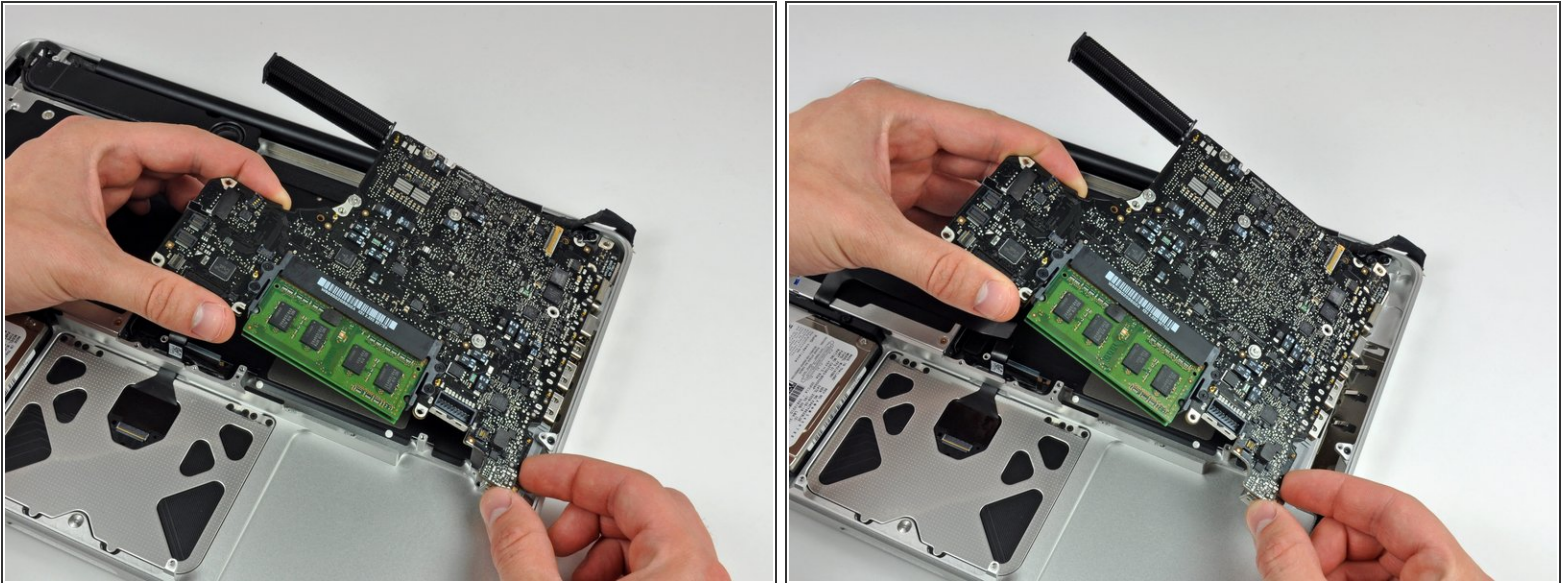
Step 18



i Removing the battery before lifting out the logic board is not strictly required, but makes removing the logic board easier and safer. If you leave your battery in, be especially careful not to bend the logic board against the battery's case near its bar code.

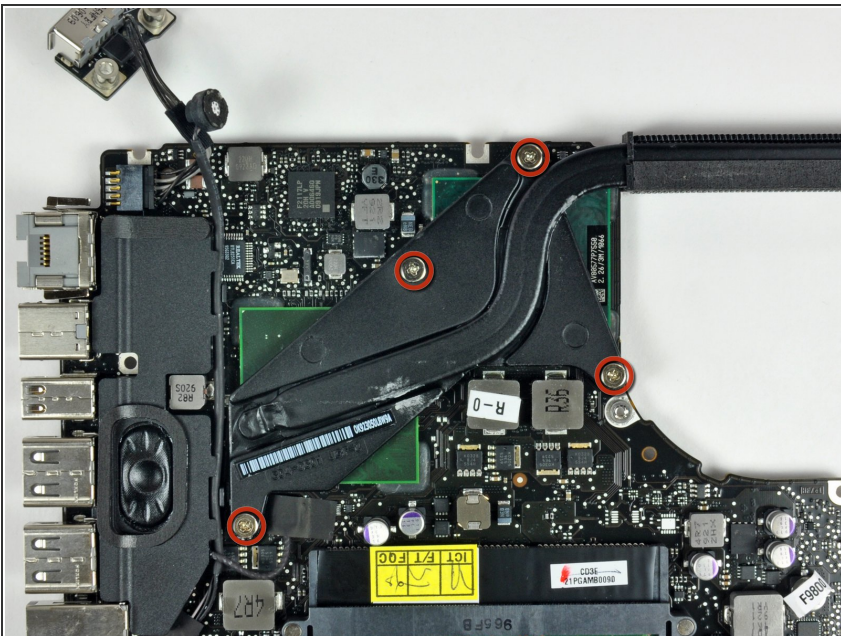
- Remove the following Tri-point screws securing the battery to the upper case:
 - One 5.5 mm Tri-point screw
 - One 13.5 mm Tri-point screw
- Lift the battery out of the upper case.

Step 19



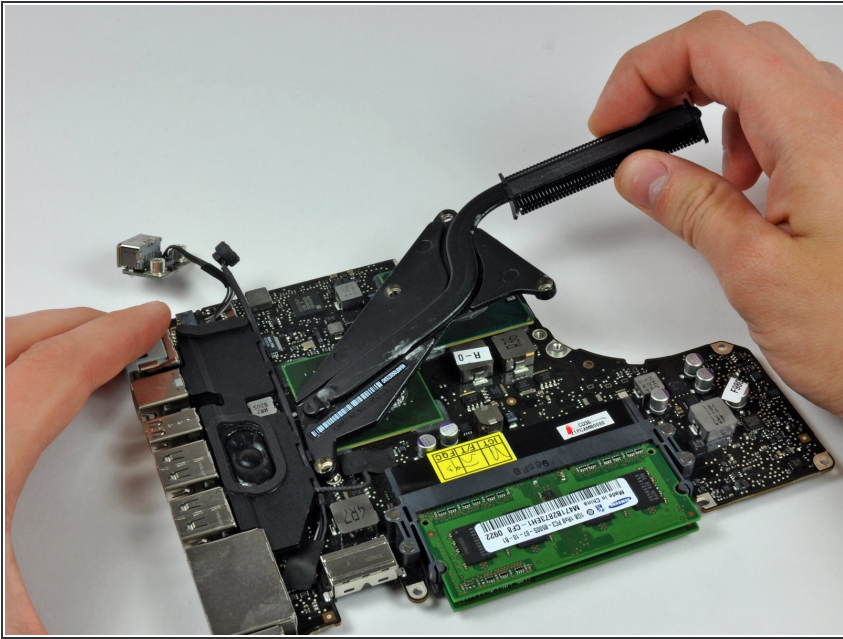
- Lift the logic board from its left edge and raise it until the ports clear the side of the upper case.
- Pull the logic board away from the side of the upper case and remove it, minding the DC-In board that may get caught.

Step 20 — Heat Sink



- Remove the four 8.5 mm Phillips screws securing the heat sink to the logic board.
- ⓘ A spring is held under each of these screws.

Step 21



- Gently lift the heat sink off the logic board.
- ⓘ When you mount the heat sink back onto the logic board, be sure to apply a new layer of thermal paste. We have a [guide](#) that makes replacing the thermal paste easy.

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