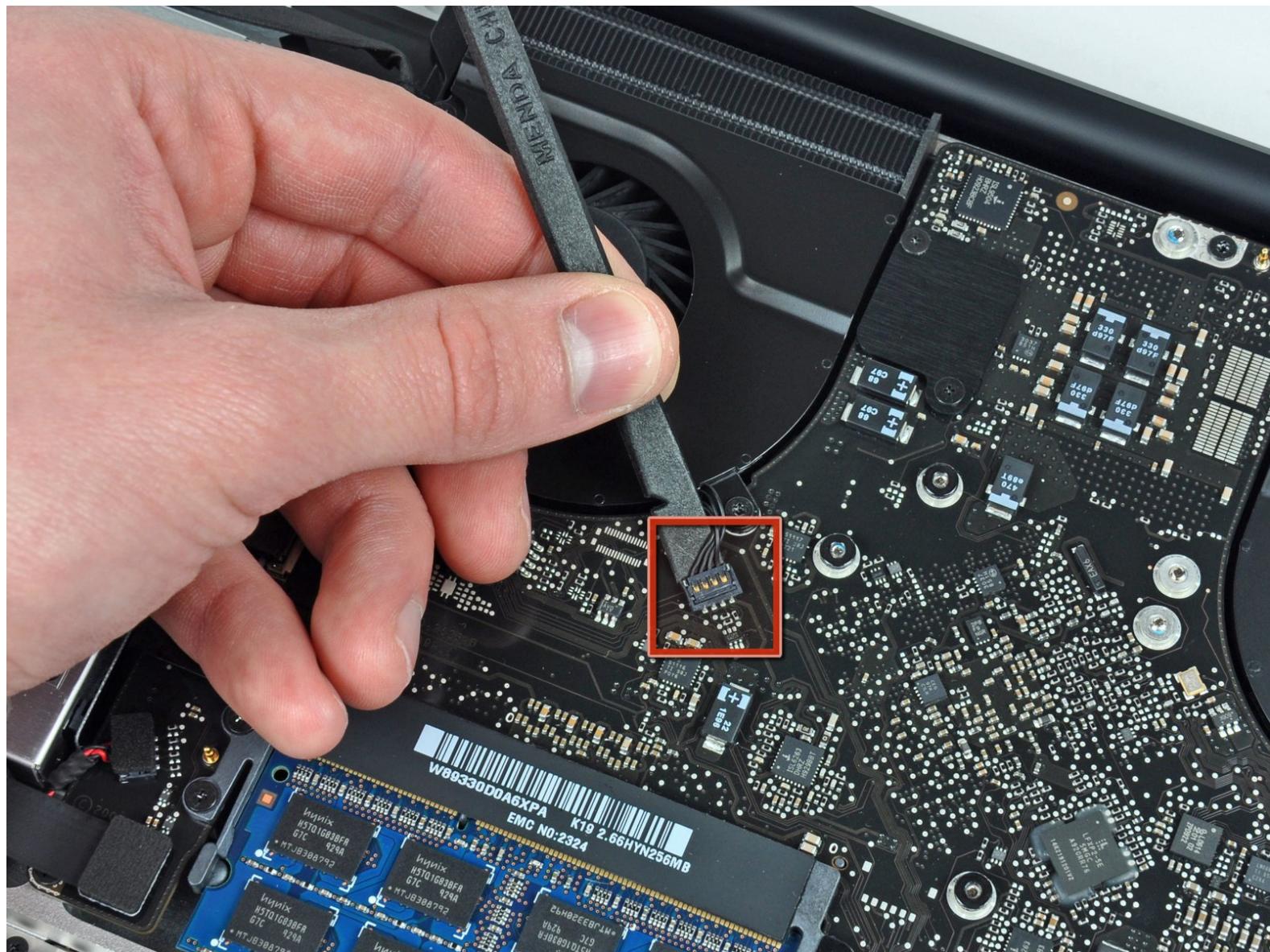




# MacBook Pro 15" Unibody Mid 2009 Logic Board Replacement

Written By: Andrew Bookholt



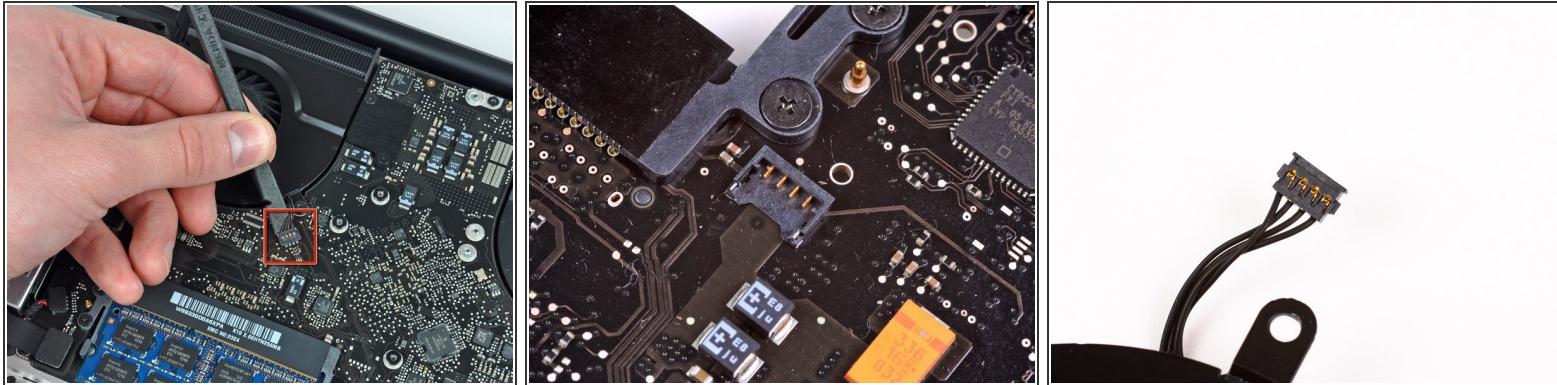
## INTRODUCTION

This guide is an internal prerequisite and should remain unpublished.

### TOOLS:

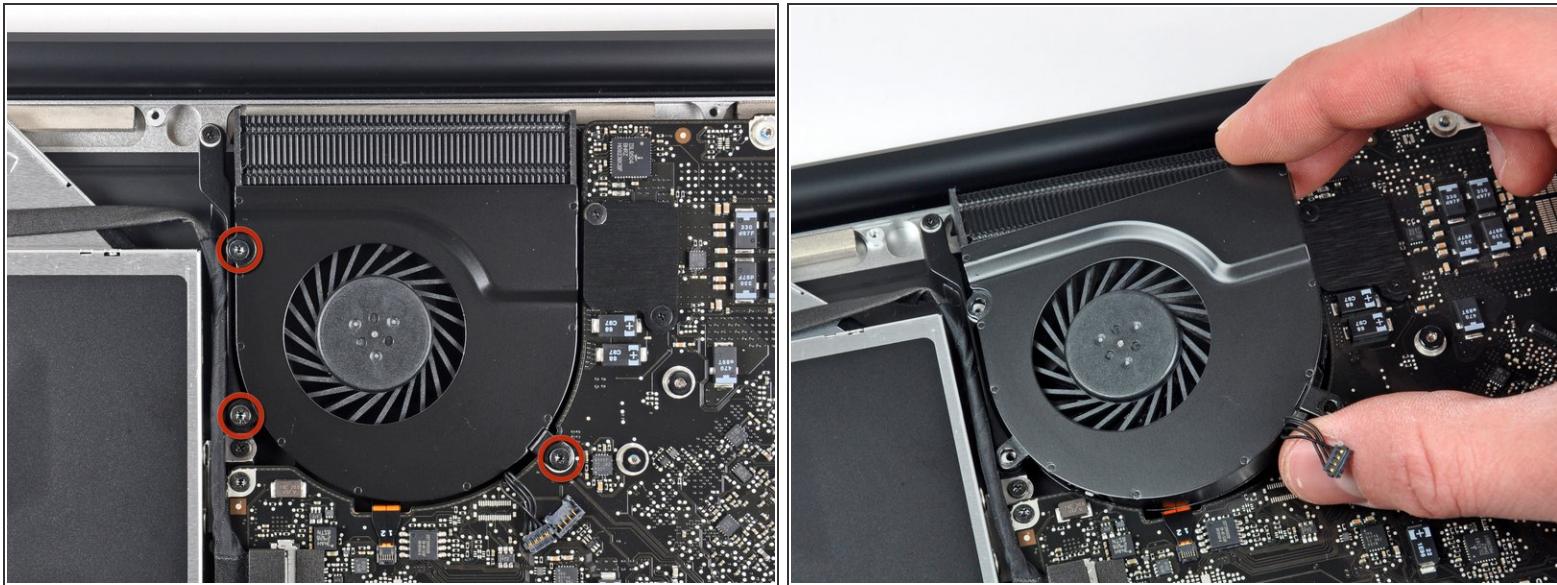
- [T6 Torx Screwdriver](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)

## Step 1 — Logic Board



- Use a spudger to pry the fan connector straight up off the logic board.
- 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.

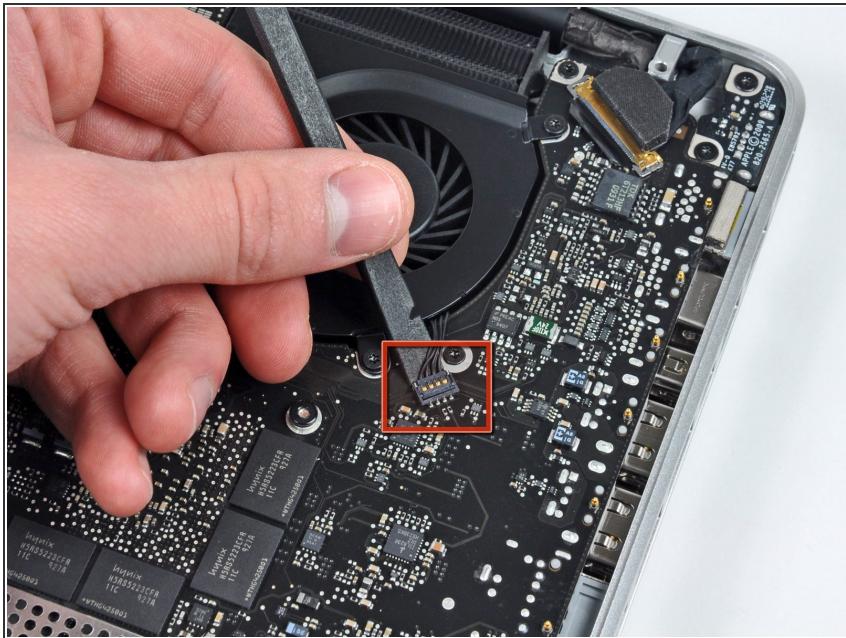
## Step 2



- Remove the three T6 Torx screws securing the left fan to the logic board.
- Lift the fan out of the upper case.

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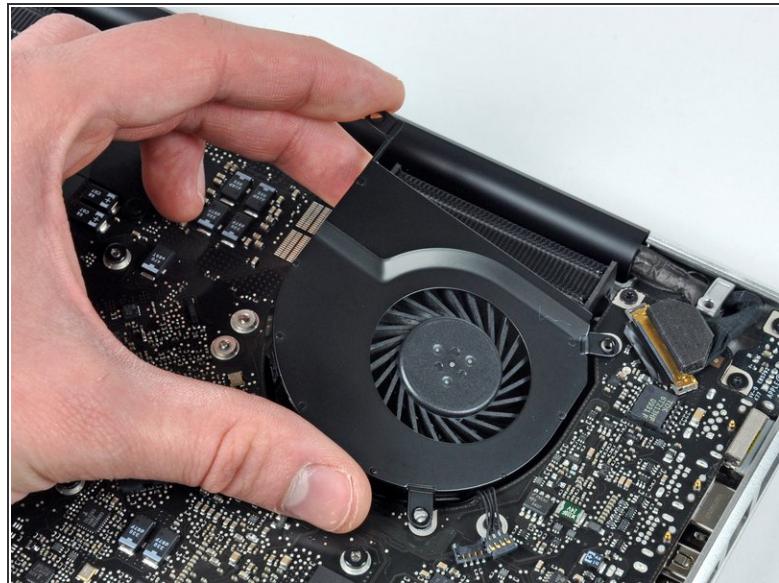
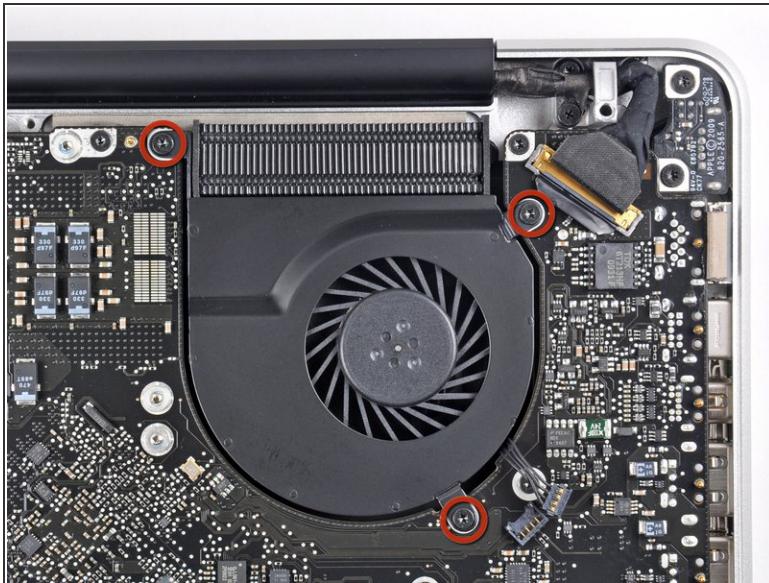
## Step 3



- Use the flat end of a spudger to disconnect the left fan connector from the logic board.

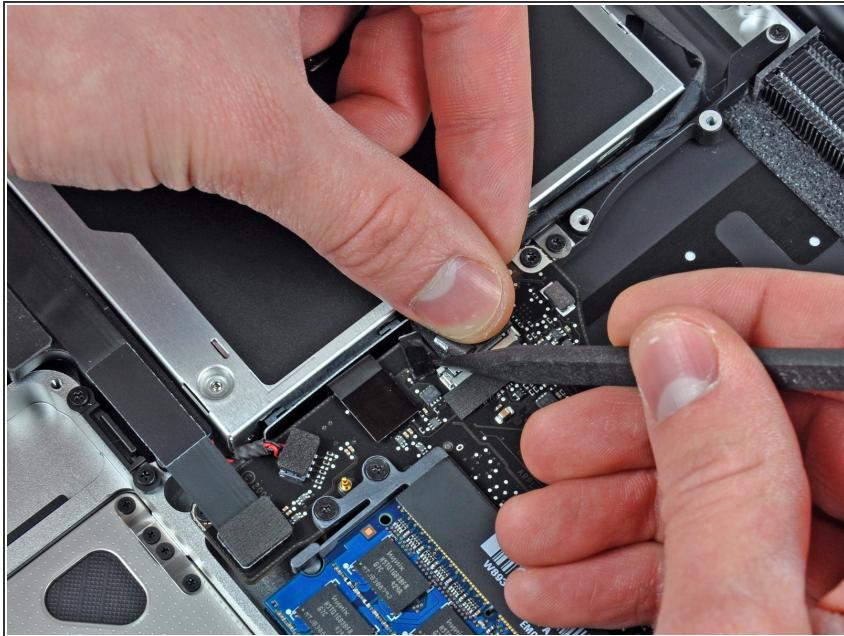
 Pry up from beneath the wires.

## Step 4



- Remove the three T6 Torx screws securing the left fan to the logic board.
- Lift the left fan out of the upper case.

## Step 5



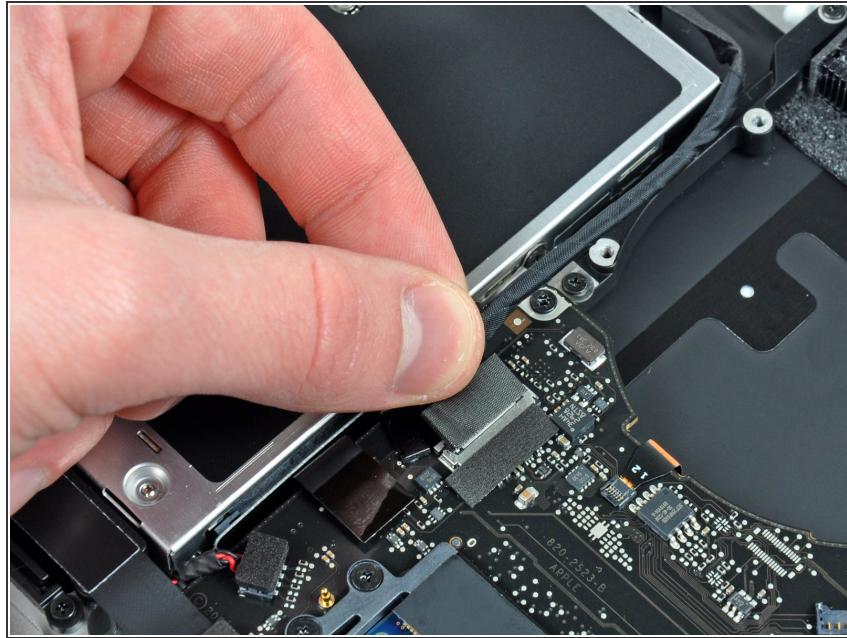
**i** The camera cable connector is not secured by any locking or snapping mechanism. Hence, Apple sticks a small strip of black plastic with adhesive applied to the side facing the logic board behind the camera cable connector to keep it in its socket.

**!** When moving the strip (cable retainer) out of the way, be sure not to break any surface-mounted components off the logic board.

- Hold the end of the cable retainer down with one finger while you use the tip of a spudger to slightly lift the other end and rotate it away from the camera cable connector.
- Disconnect the camera cable by pulling the male end straight away from its socket.

**!** Pull the connector parallel to the face of the logic board, not straight up.

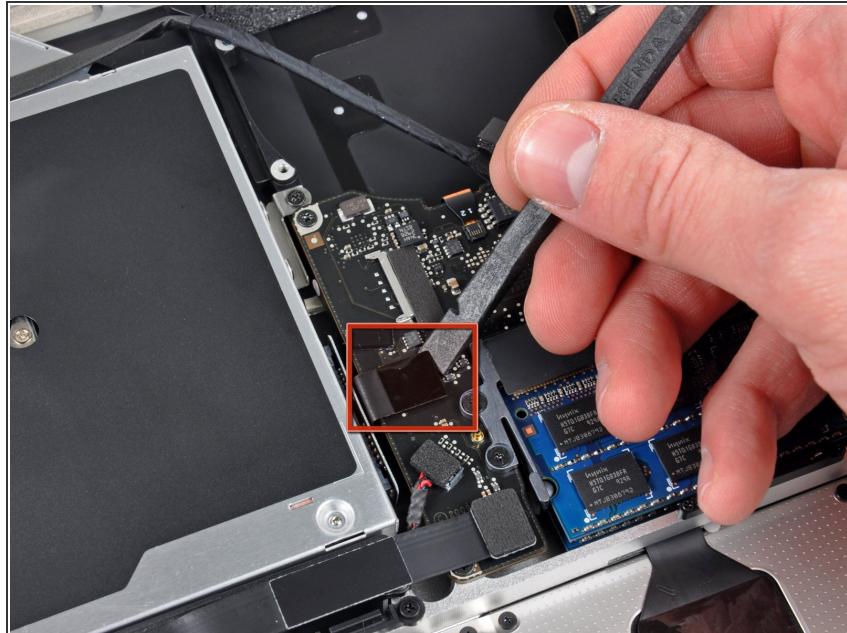
## Step 6



- Disconnect the camera cable by pulling the male end straight away from its socket.

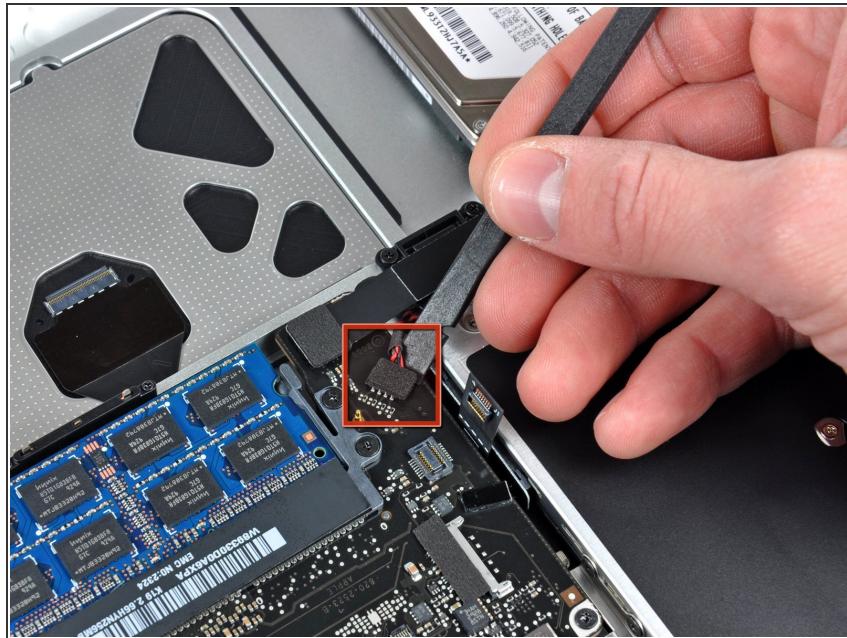
 Pull the connector parallel to the face of the logic board, not straight up.

## Step 7



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

## Step 8

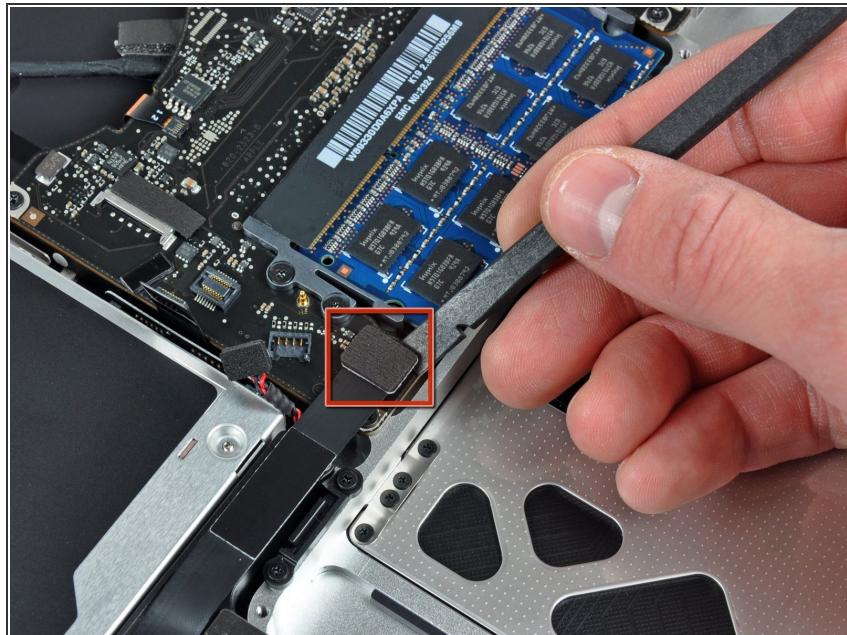


- Using the flat end of a spudger, pry the subwoofer connector straight up from the connector jack.

 Be careful to pry the connector, not the socket. It's possible to accidentally pry the socket up from the logic board.

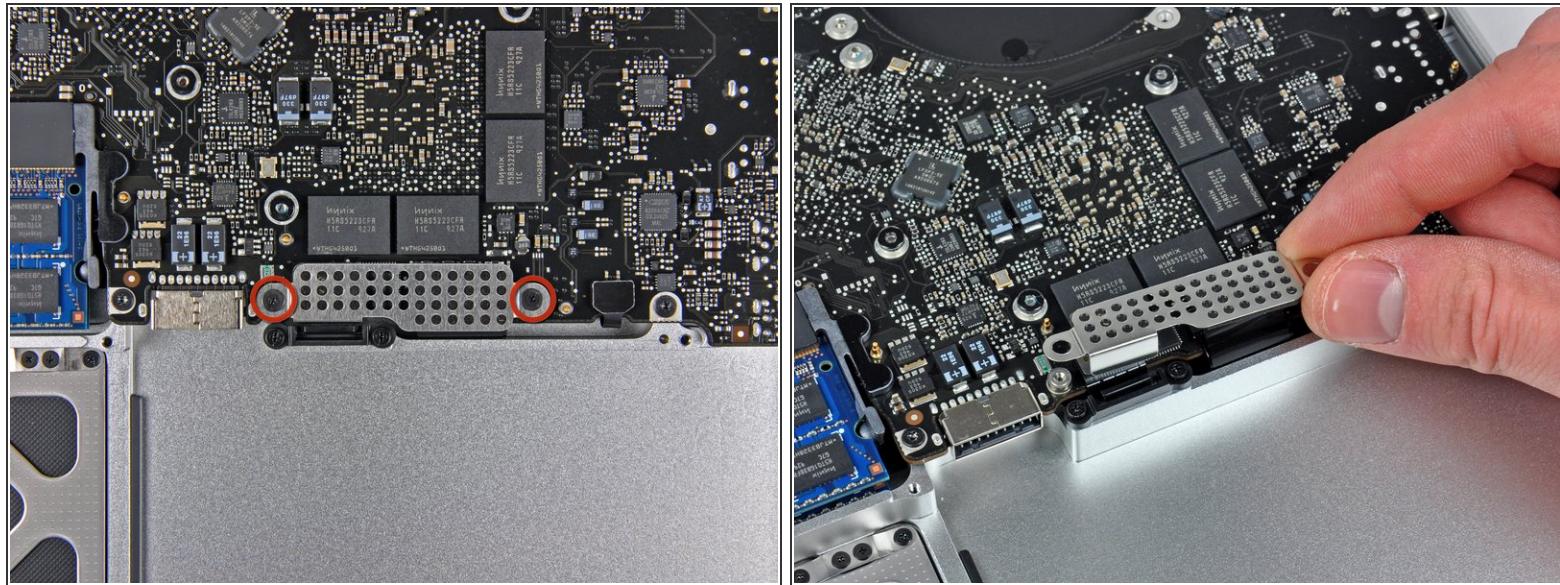
 Removing the foam applied to the top of the connector will make it easier to see and avoid prying up the socket.

## Step 9



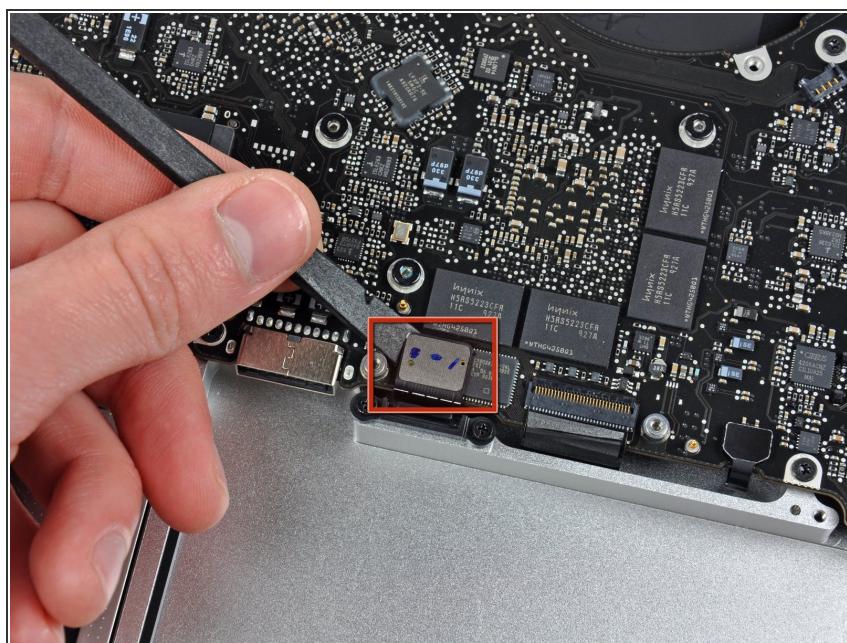
- Use the flat end of a spudger to pry the hard drive/IR sensor cable connector up off the logic board.

## Step 10



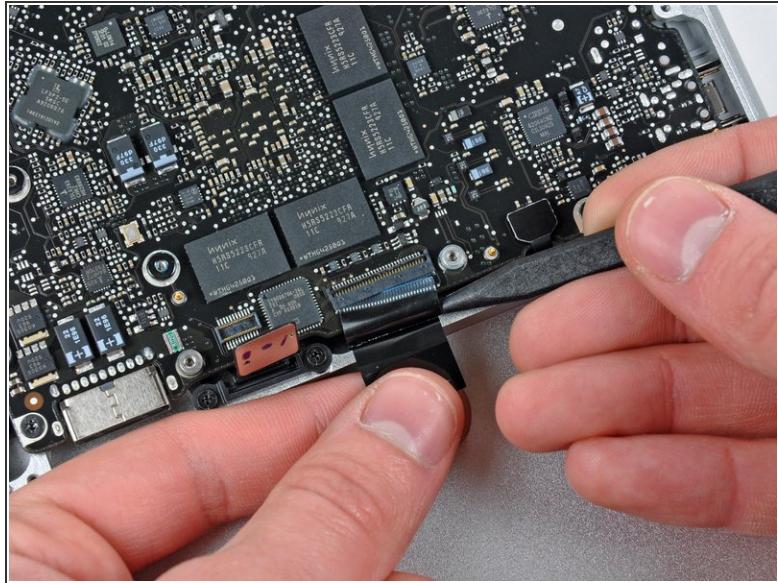
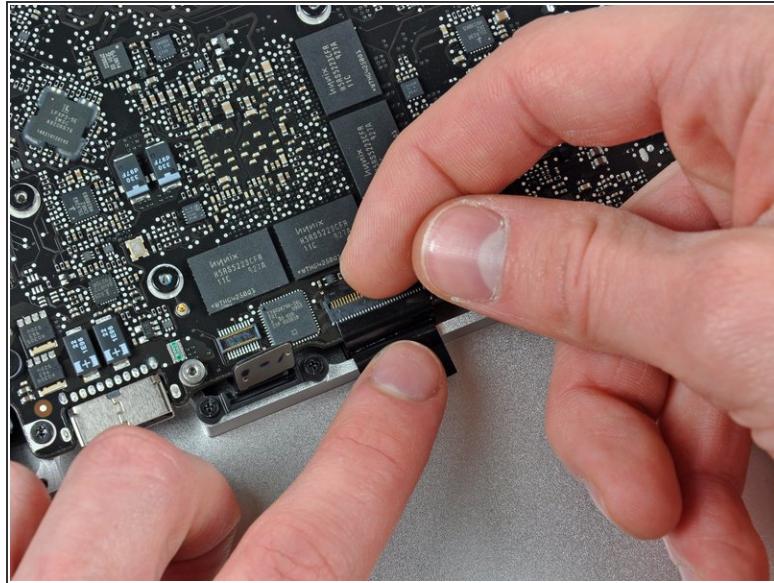
- Remove the two 1.5 mm Phillips screws securing the cable cover to the logic board.
- Lift the cable cover out of the upper case.

## Step 11



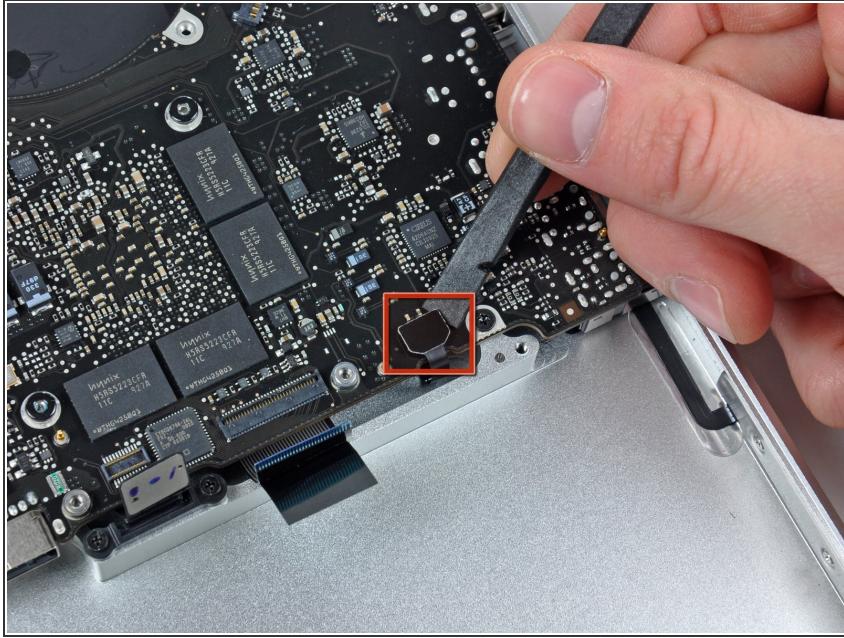
- Use a spudger to pry the trackpad flex ribbon cable connector up off the logic board.

## Step 12



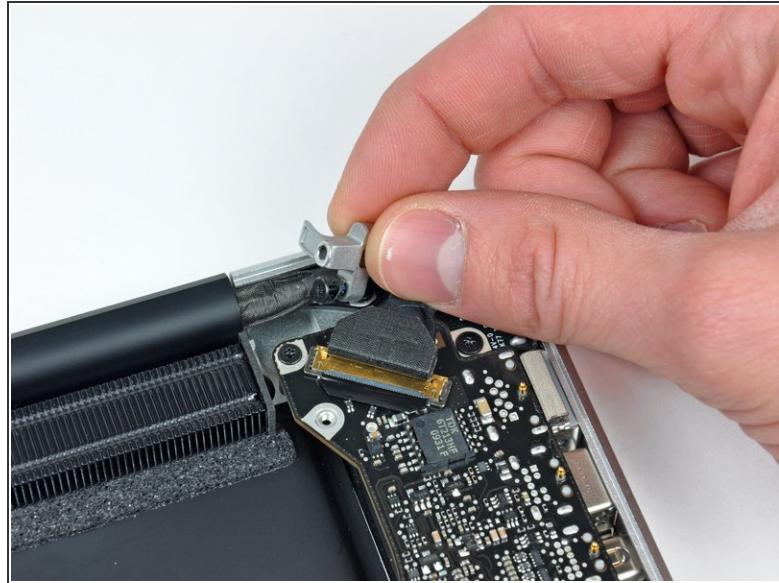
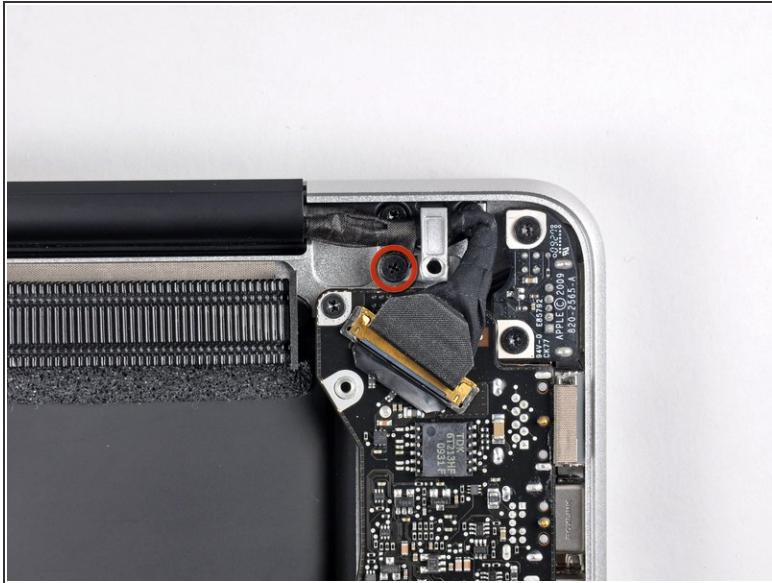
- Use your fingernail to flip up the locking flap on the ZIF socket for the keyboard ribbon cable. The locking flap is located at the opposite side of the socket compared to the keyboard ribbon cable. Hook your fingernail under it and carefully lift it up vertically.
- ⚠ Do not attempt to slide the keyboard ribbon cable out of its socket before you have unlocked the ZIF socket. Ribbon cables are fragile and excessive force will easily break them.
- Use the tip of a spudger to slide the keyboard ribbon cable out of its socket.

## Step 13



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

## Step 14

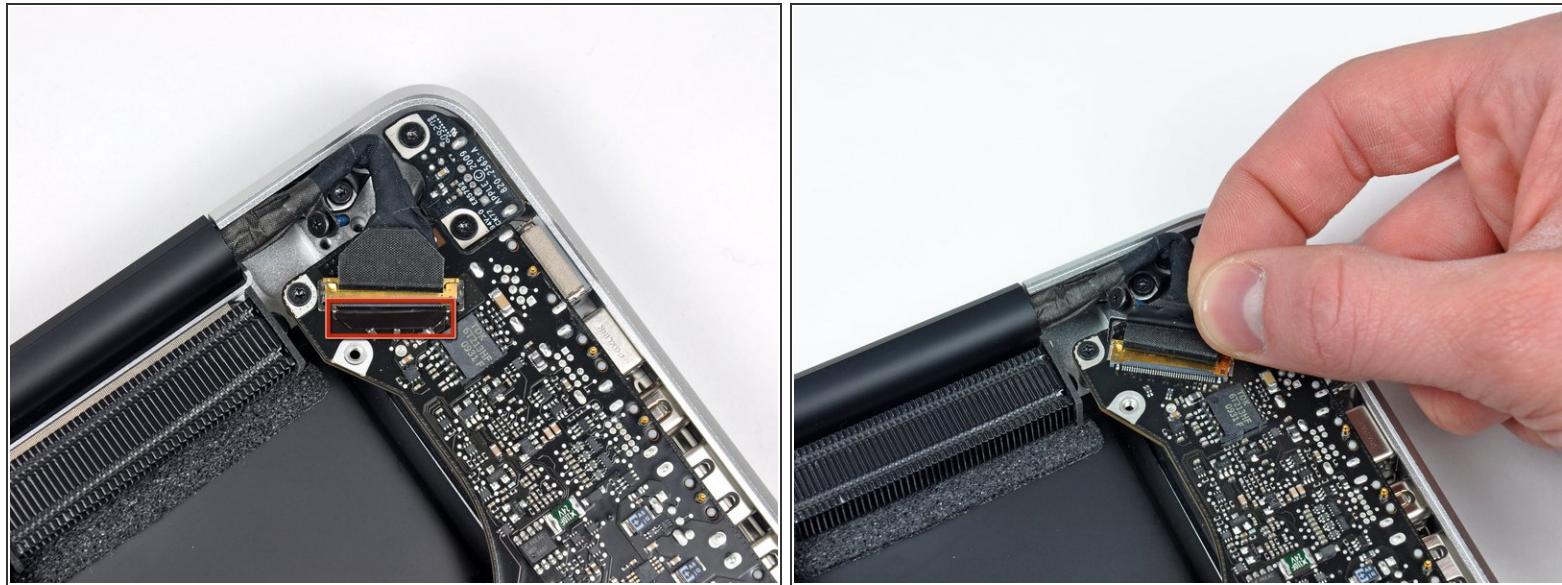


- Remove the single 7 mm Phillips screw securing the display data cable retainer to the upper case.

 This screw may remain captive in the display data cable ground loop. If replacing the display, be sure to transfer this screw to the new unit.

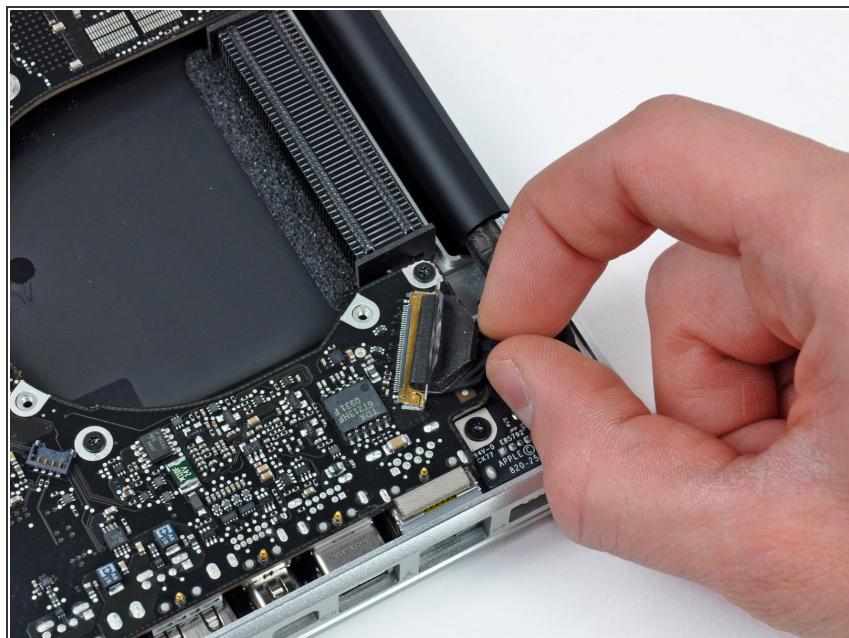
- Remove the display data cable retainer from the upper case.

## Step 15



- Grab the plastic pull tab secured to the display data cable lock and rotate it toward the DC-in side of the computer.

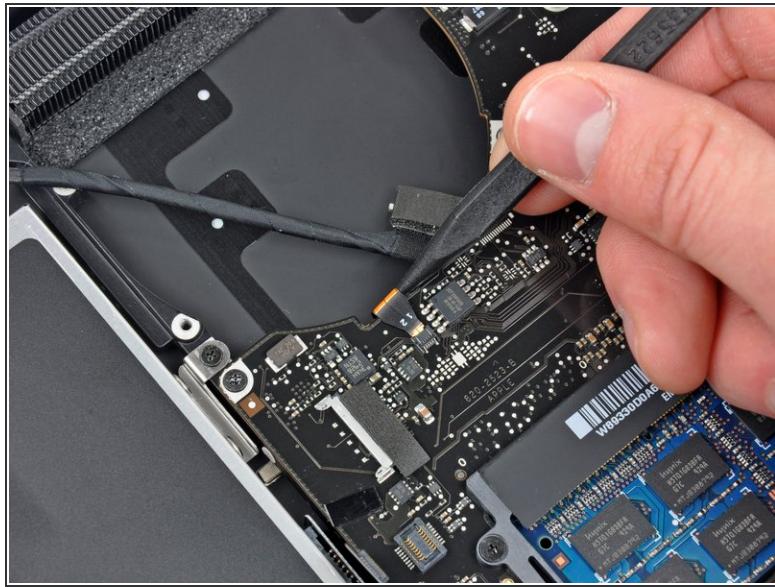
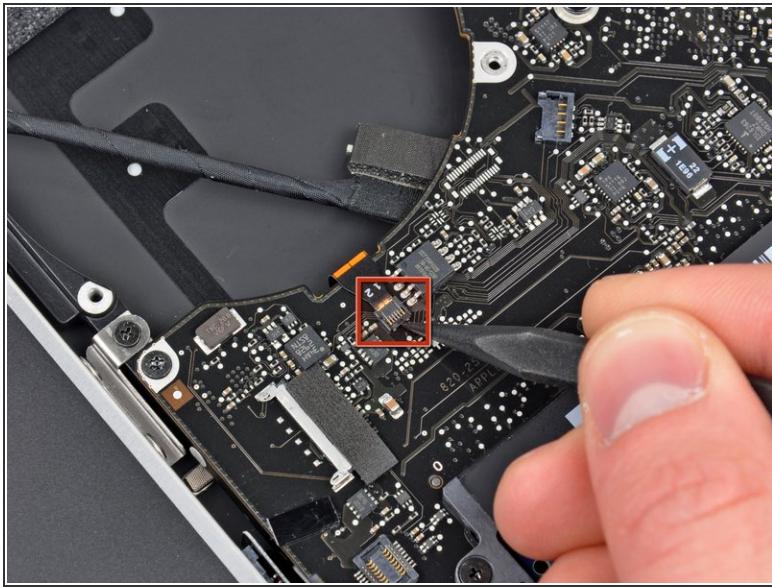
## Step 16



- Pull the display data cable connector straight away from its socket.

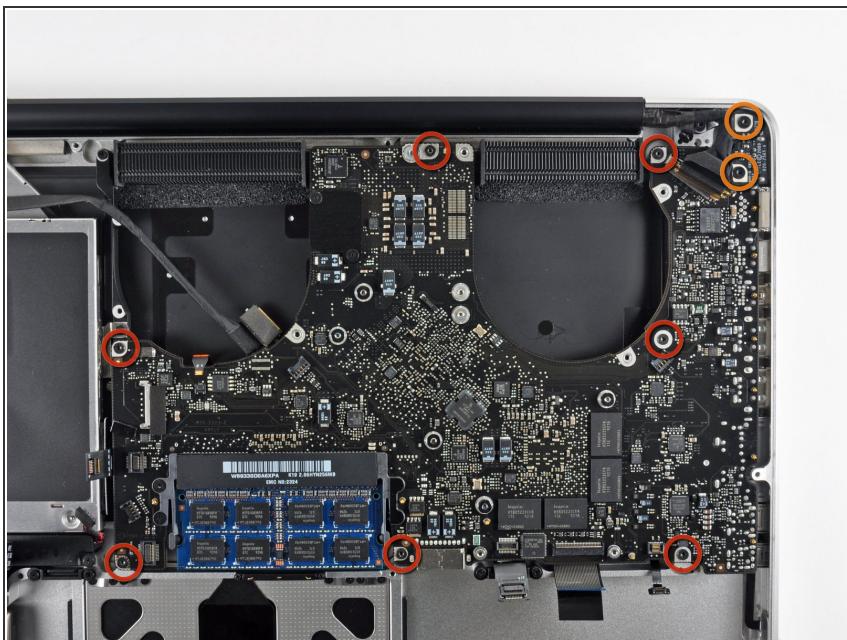
 Make sure to pull the connector parallel to the face of the logic board, not straight up from its socket.

## Step 17



- Using the tip of a spudger, flip up the keyboard backlight ribbon cable retaining flap.
- Pull the keyboard backlight ribbon cable straight out of its socket.

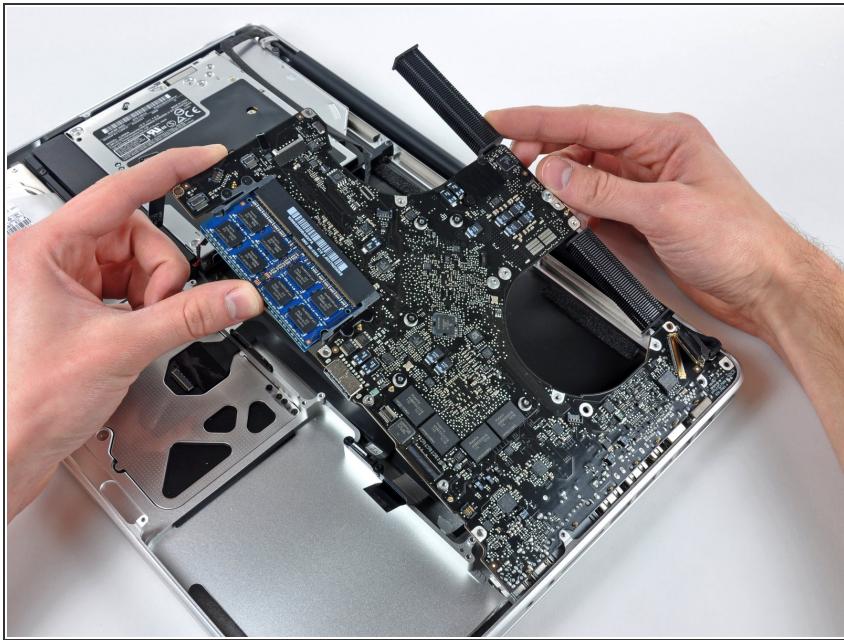
## Step 18



- Remove the following screws:
  - Seven 3.3 mm T6 Torx screws securing the logic board to the upper case.
  - Two 8 mm T6 Torx screws securing the DC-In board to the upper case.

 Do not remove the logic board yet! There are components on the underside of the logic board attached to the the upper case that must first be disconnected.

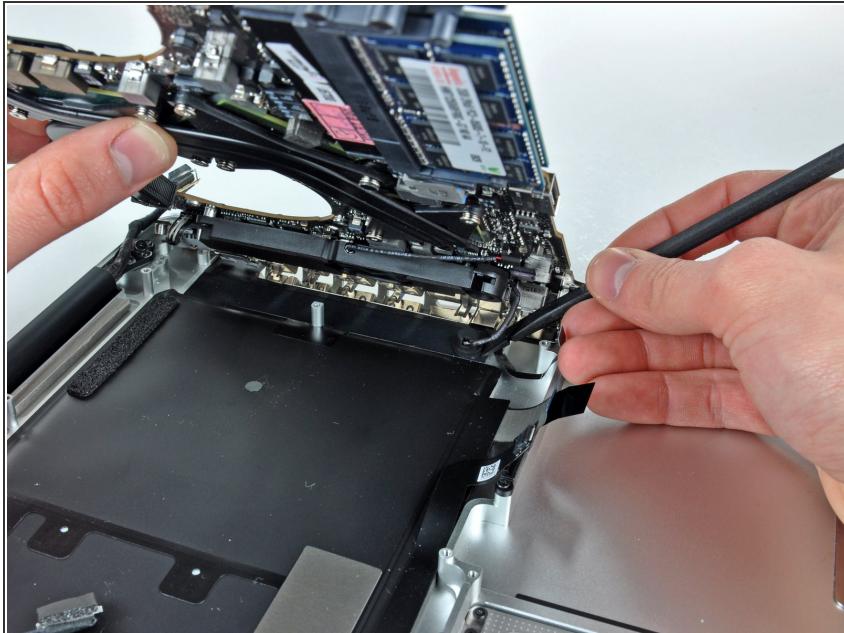
## Step 19



- Carefully lift the logic board assembly from the left side and work it out of the upper case, minding the port side that may get caught during removal.

 Do not entirely remove the logic board yet!

## Step 20

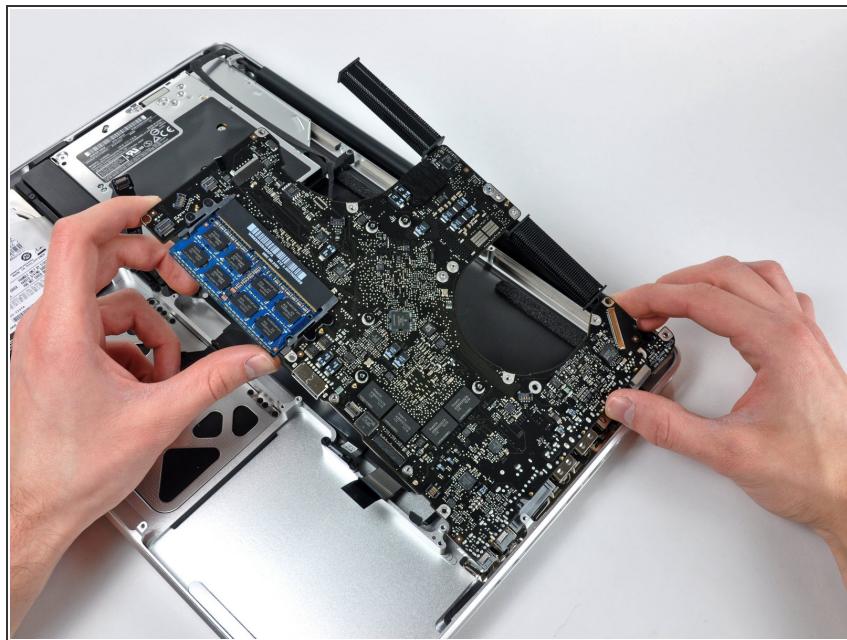


- Lift the logic board enough to gain clearance and use a spudger to pry the microphone up off the upper case.

- Slide the logic board away from the port openings and lift the assembly out of the upper case.

 Before reinstalling the logic board, it is easiest to press the microphone down into its housing in the left speaker to keep it in place.

## Step 21



- Slide the logic board away from the port openings and lift the assembly out of the upper case.

 Before reinstalling the logic board, it is easiest to press the microphone down into its housing in the left speaker to keep it in place.

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