



MacBook Pro 15" Unibody 2.53 GHz Mid 2009

Upper Case Replacement

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INTRODUCTION

Replacement of the upper case requires removal of most of your MacBook Pro's components.

TOOLS:

- P6 Pentalobe Screwdriver 2009 MacBook Pro Battery (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)
- T6 Torx Screwdriver (1)

PARTS:

- MacBook Pro 15" Unibody (Mid 2009) Upper Case and Trackpad (1)

Step 1 — Lower Case



- Remove the following ten screws securing the lower case to the upper case:
 - Seven 3 mm Phillips screws.
 - Three 13.5 mm Phillips screws.

Step 2



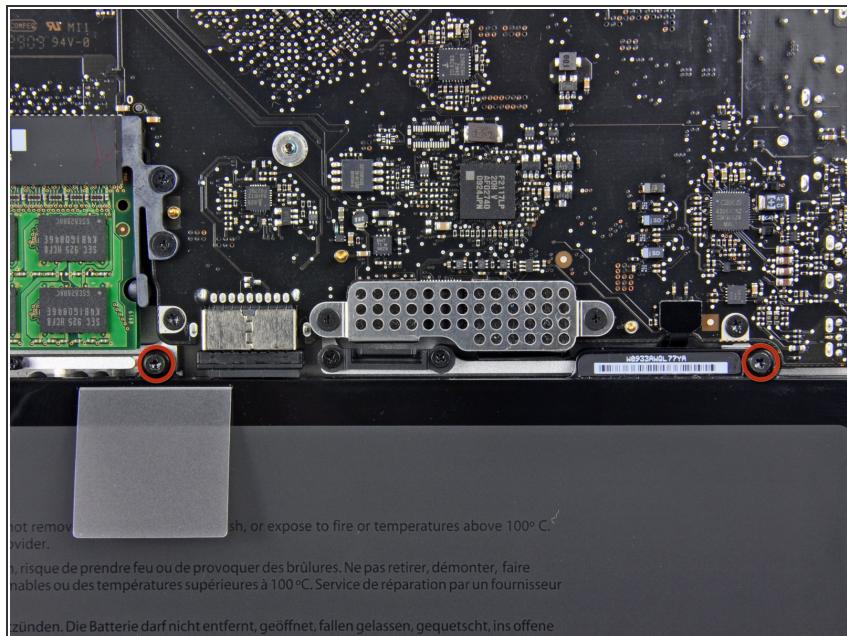
- Using both hands, lift the lower case near the vent to pop it off two clips securing it to the upper case.
- Remove the lower case and set it aside.

Step 3 — Battery



- Three Pentalobe screws secure the battery to the upper case. They can be removed with [this special driver](#).
- i* If you don't have a Pentalobe driver, a 1.5 mm flathead screwdriver can be used in a pinch. Be sure the head of your flathead screwdriver fits snugly across two of the five "points" of the screw head before trying to break the screw free, as a loose fit will easily strip the screw head.
- i* If the head of your screwdriver fits too loosely, find a bigger bit and file it down until it fits snugly before proceeding.
- i* You do not necessarily have to follow steps 3-7 to remove the battery in order to replace the hard drive. However, it is recommended to remove all power sources from electronics before working on them.

Step 4



- Remove the two exposed five-point Pentalobe screws along the top edge of the battery.

Step 5



- Use the tip of a spudger to bend back the finger of the "Warning: Do not remove the battery" sticker while you remove the five-point Pentalobe screw hidden underneath.

Step 6



- Lift the battery by its plastic pull tab and slide it away from the long edge of the upper case.

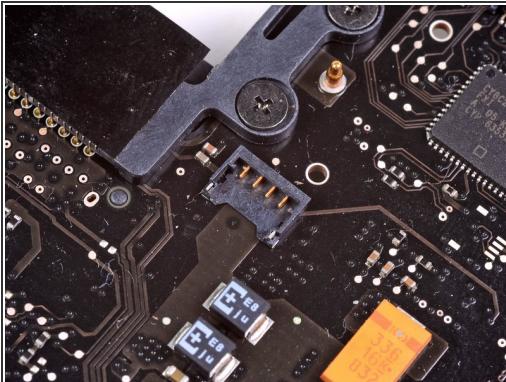
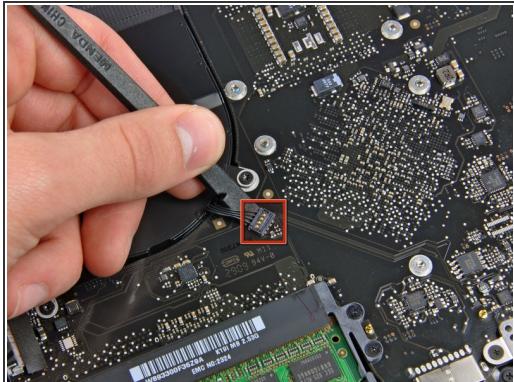
⚠ Do not try to completely remove the battery just yet.

Step 7



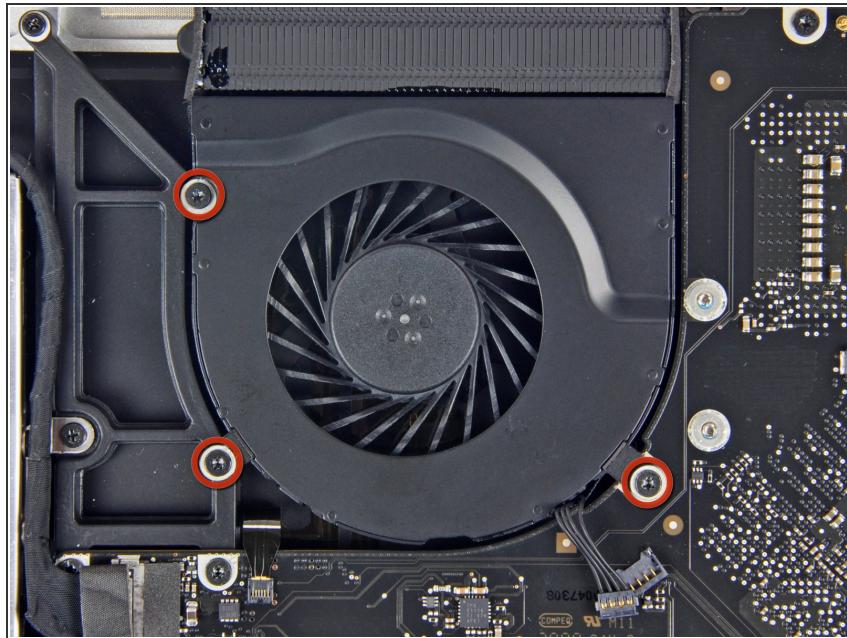
- Tilt the battery back enough to access the battery cable connector.
 - Pull the battery cable connector away from its socket on the logic board and remove the battery from the upper case.
-  If you're installing a new battery, you should [calibrate](#) it as soon as possible.

Step 8 — Fan



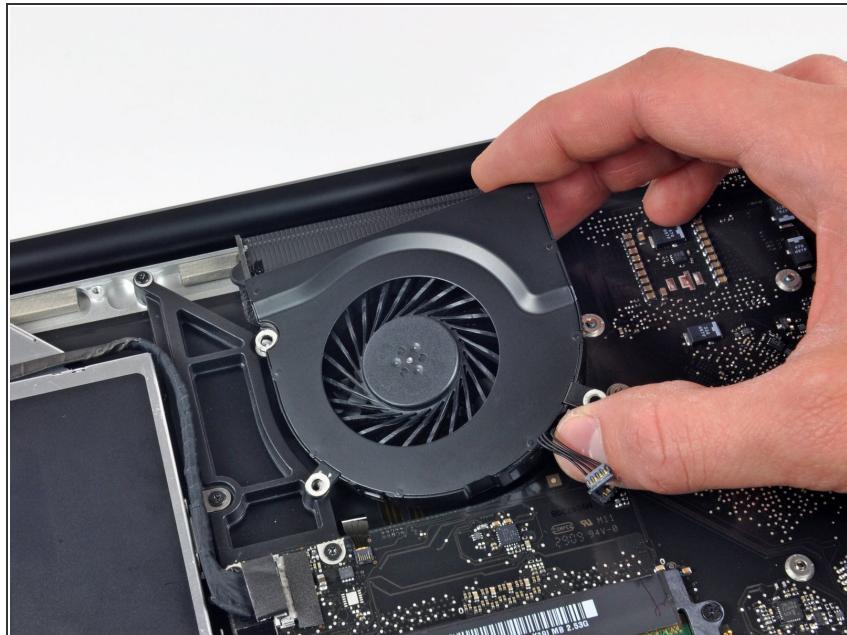
- Use the flat end of a spudger to pry the fan cable connector up off its socket on the logic board.
-  It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
-  The fan socket and the fan connector can be seen in the second and third pictures. Be careful 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 9



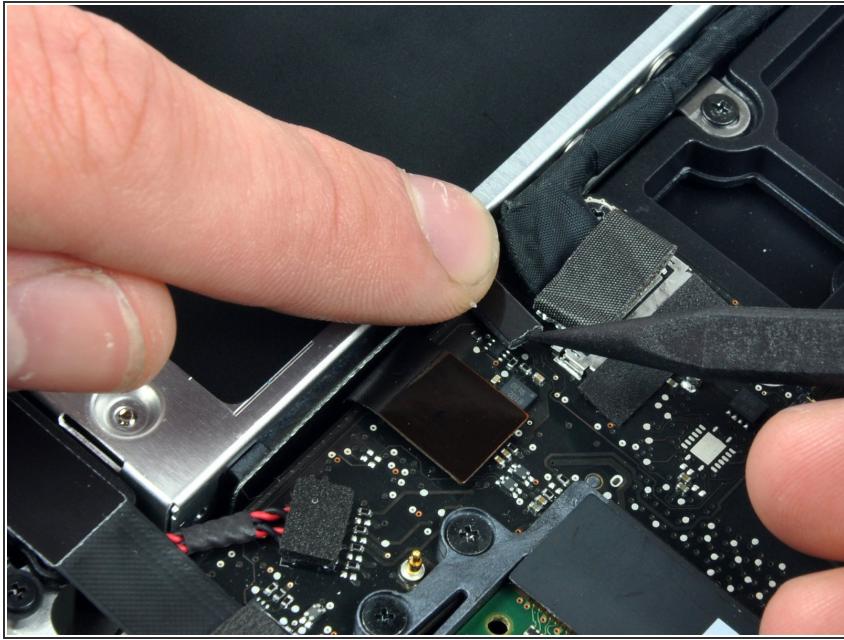
- Remove the three identical T6 Torx screws securing the fan to the upper case.

Step 10



- Lift the fan out of the upper case.

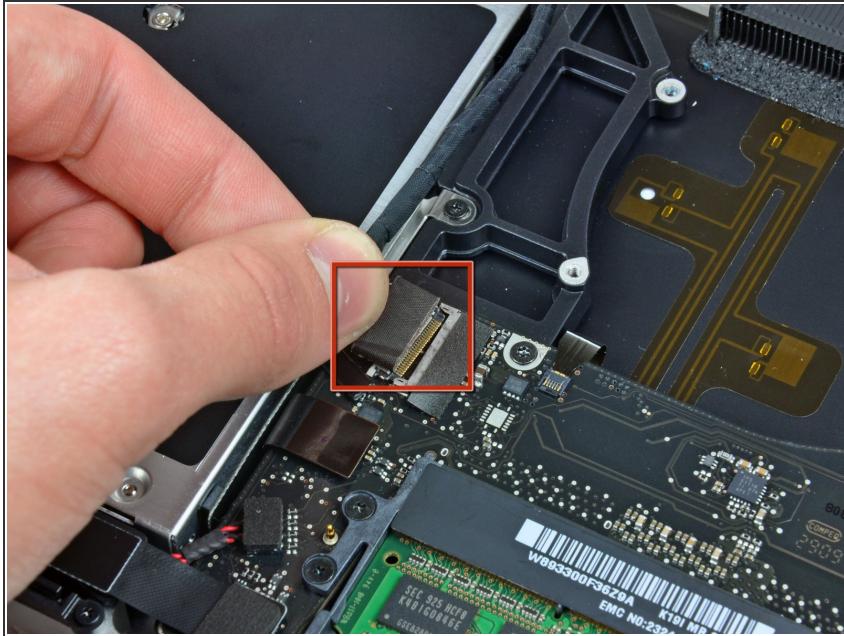
Step 11 — Logic Board



Apple sticks a small strip of clear plastic with adhesive applied to one side to the logic board behind the camera cable connector to keep it in its socket. When moving it out of the way, be sure not to break any surface-mount 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.

Step 12

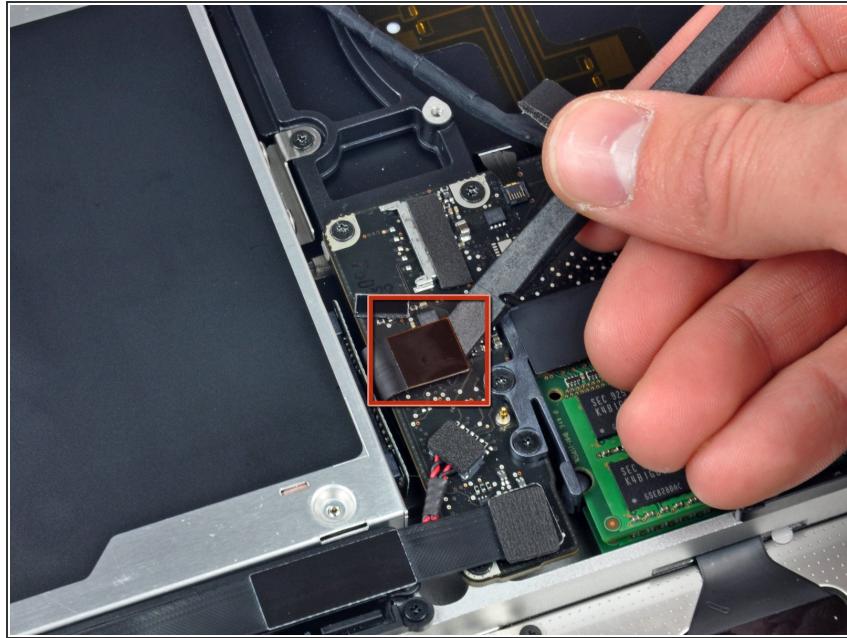


- Disconnect the camera cable by pulling the male end straight away from its socket.



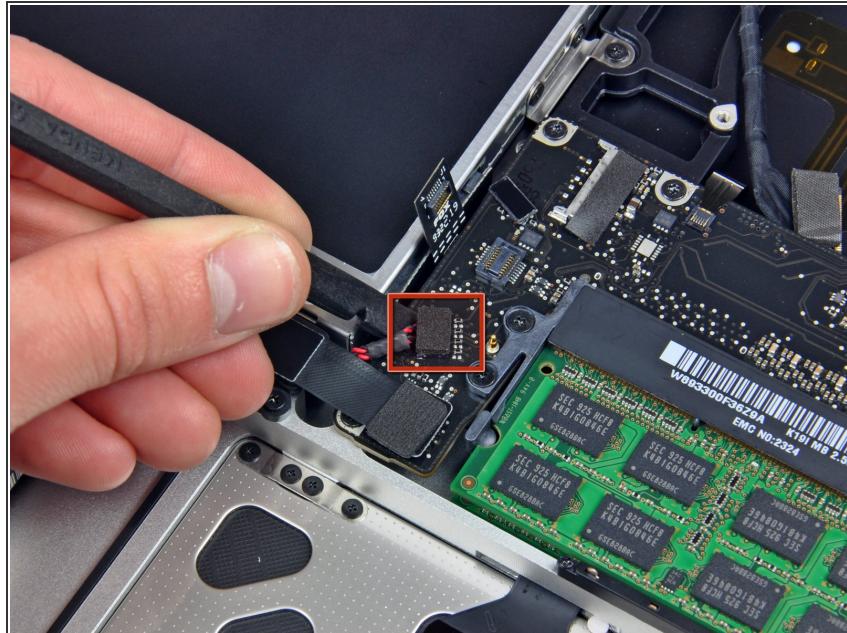
Pull the connector parallel to the face of the logic board, not straight up.

Step 13



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

Step 14



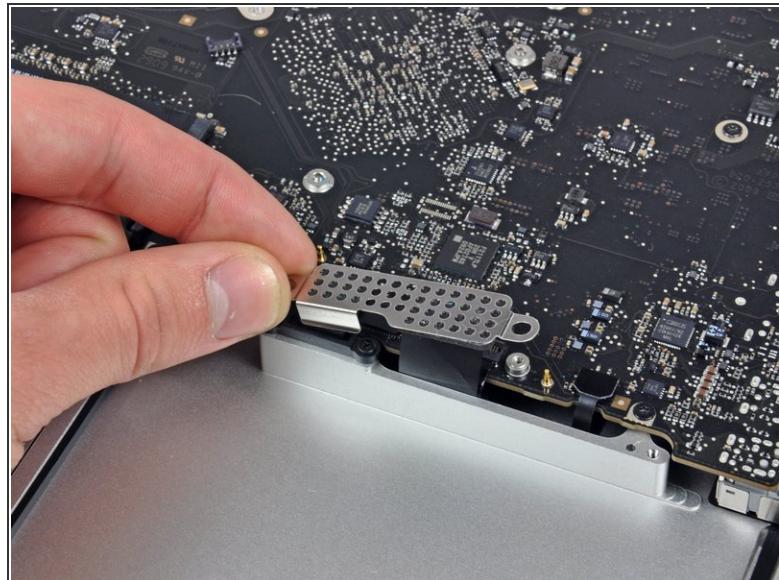
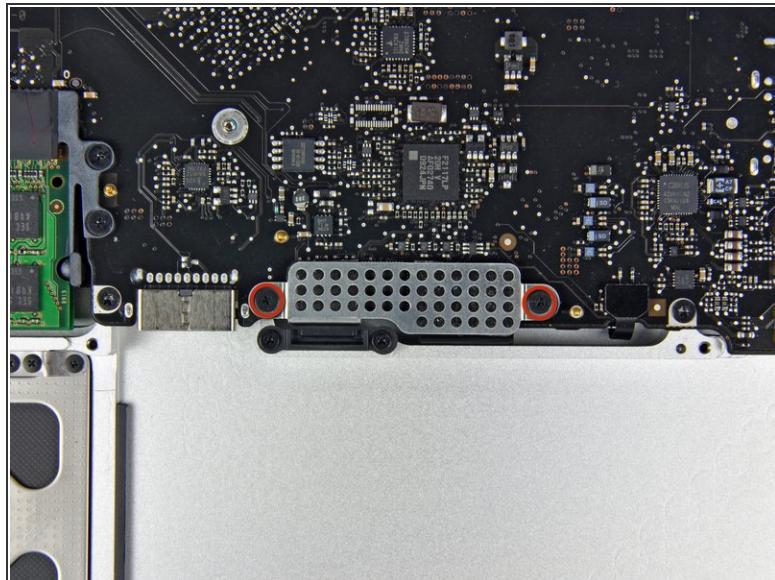
- Using the flat end of a spudger, pry the subwoofer connector straight up off the logic board.

Step 15



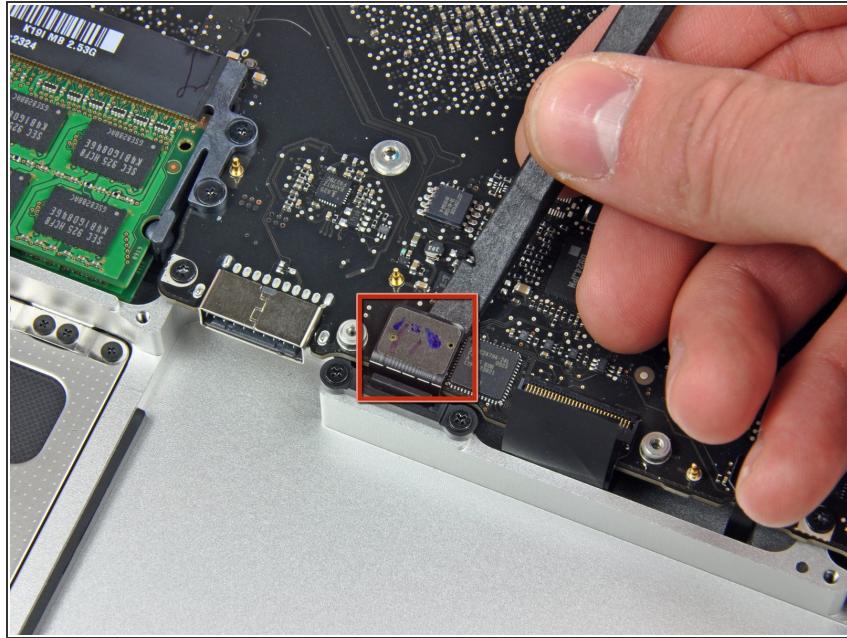
- Use the flat end of a spudger to pry the hard drive/IR sensor cable connector up off the logic board.

Step 16



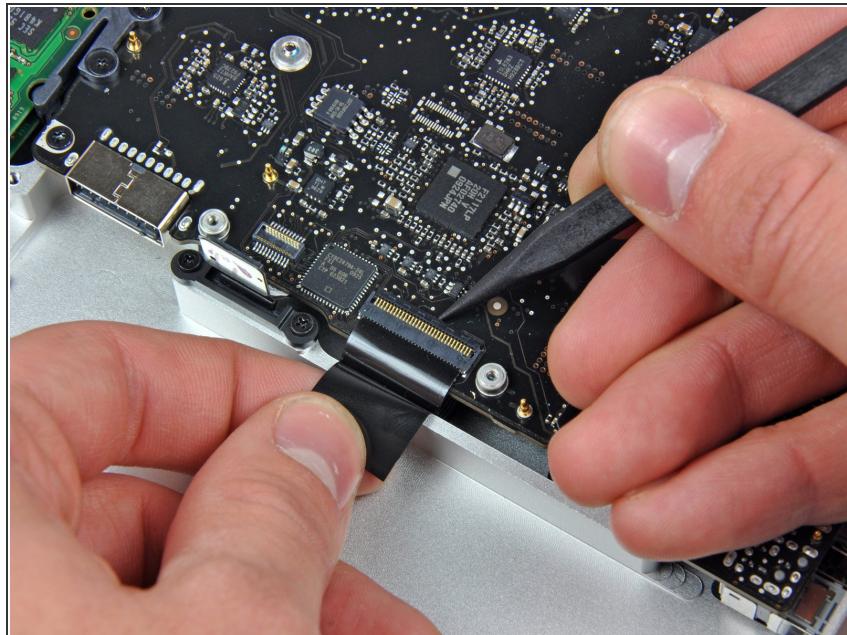
- Remove the two 1.5 mm Phillips screws securing the cable cover to the logic board.
- Lift the cable cover out of the upper case.

Step 17



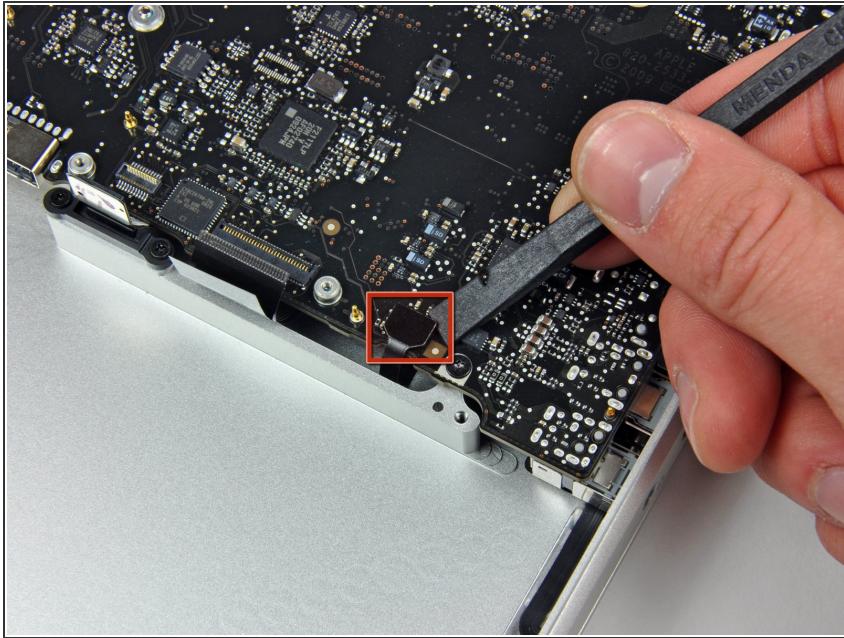
- Use a spudger to pry the trackpad flex ribbon cable connector up off the logic board.

Step 18



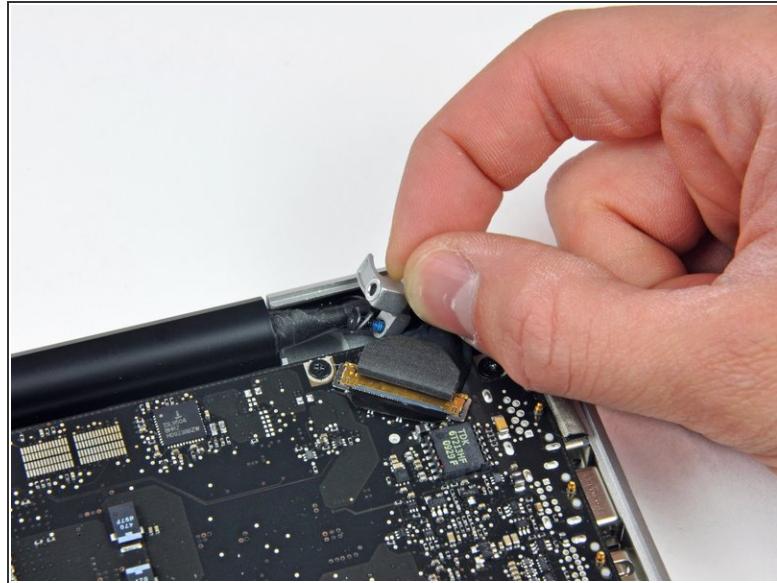
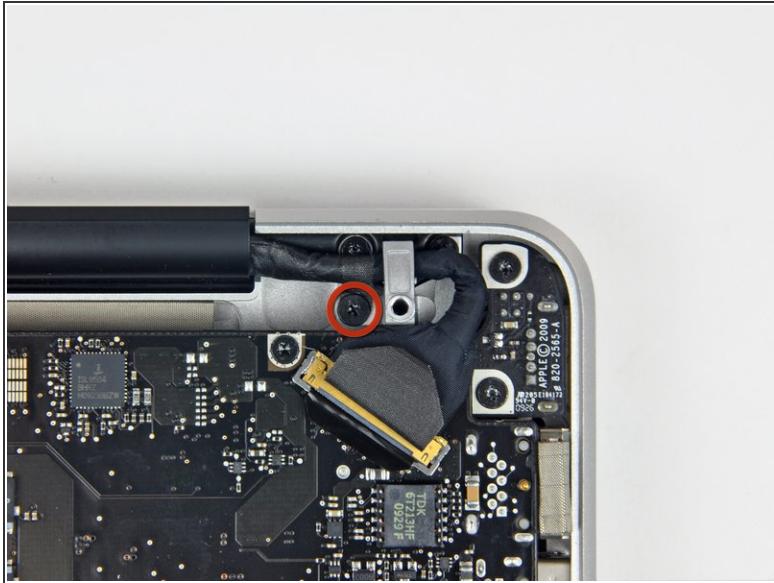
- Using the tip of a spudger, flip up the keyboard ribbon cable retaining flap.
- Pull the keyboard ribbon cable straight out of its socket.

Step 19



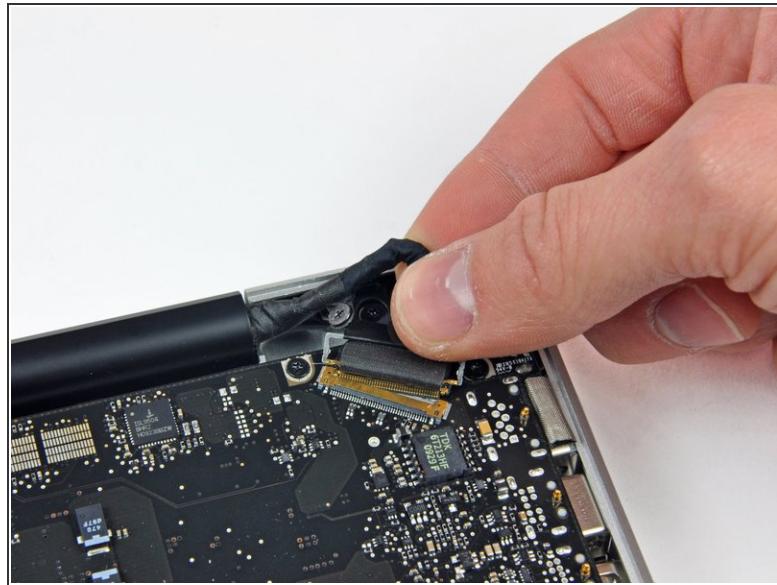
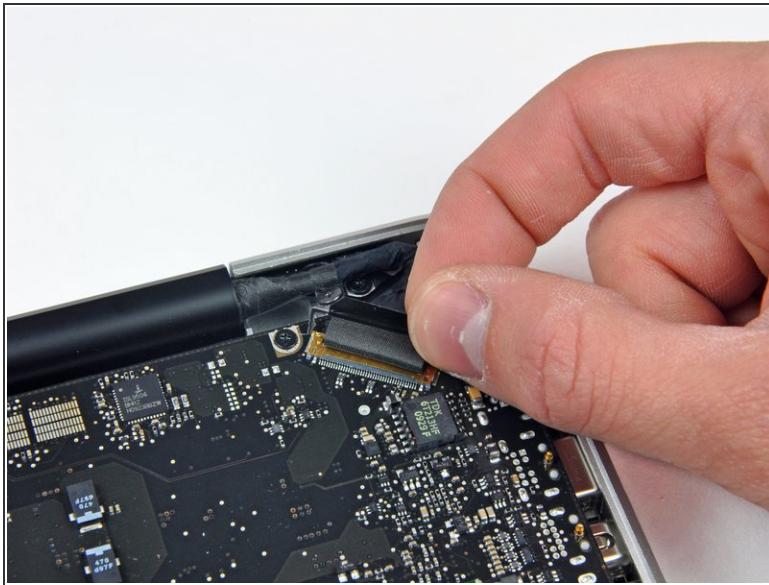
- Use a spudger to pry the battery indicator ribbon cable connector up off the logic board.

Step 20



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

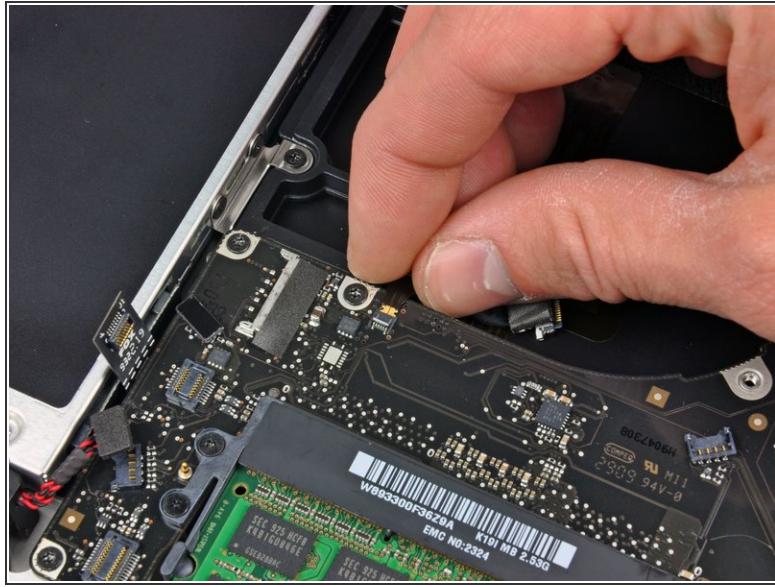
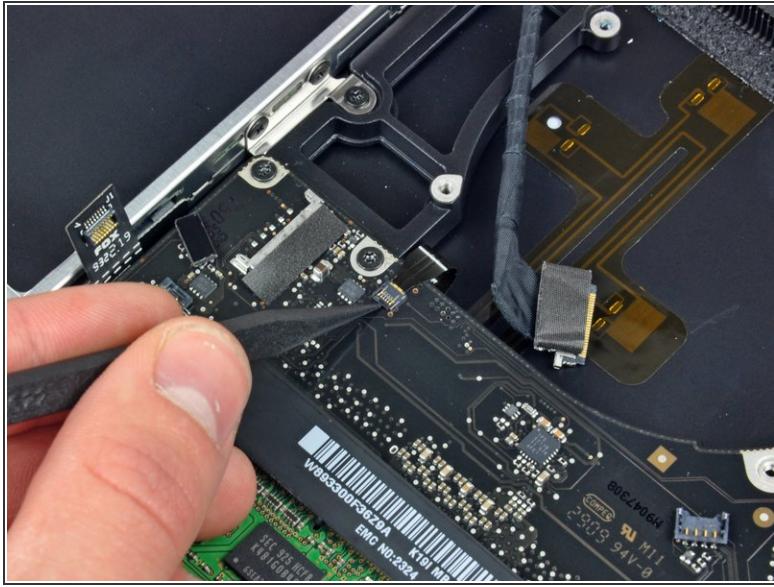
Step 21



- Grab the plastic pull tab secured to the display data cable lock and rotate it toward the DC-in side of the computer.
- Pull the display data cable connector straight away from its socket.

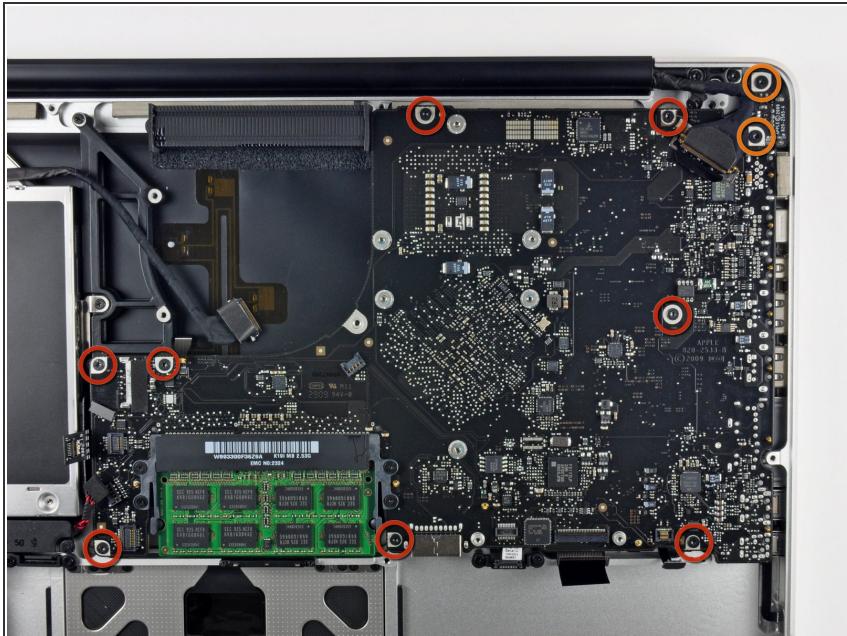
 Make sure to pull the connector parallel to the face of the logic board, not straight up from its socket.

Step 22



- 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.

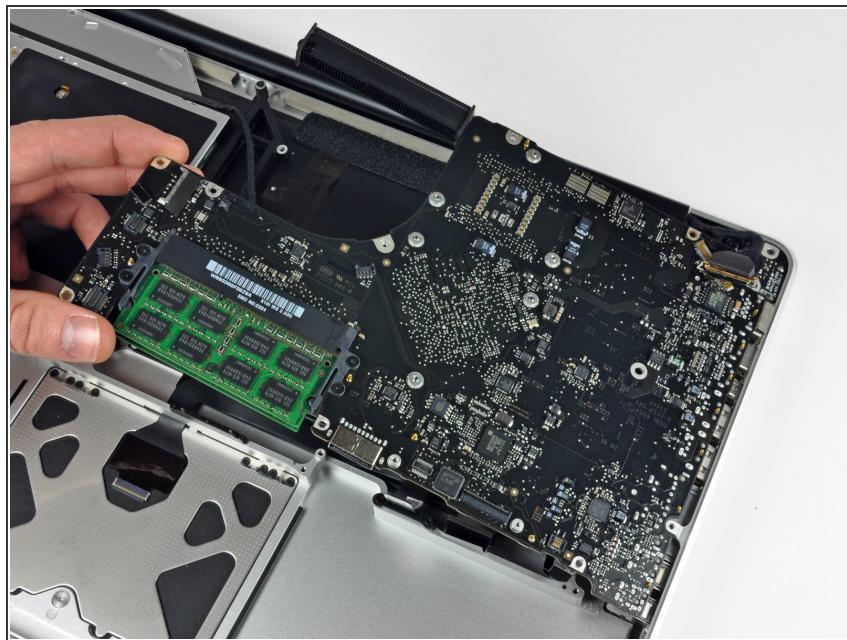
Step 23



- Remove the following screws:
 - Eight 3.5 mm T6 Torx screws securing the logic board to the upper case.
 - Two T6 Torx screws securing the DC-In board to the upper case.

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

Step 24

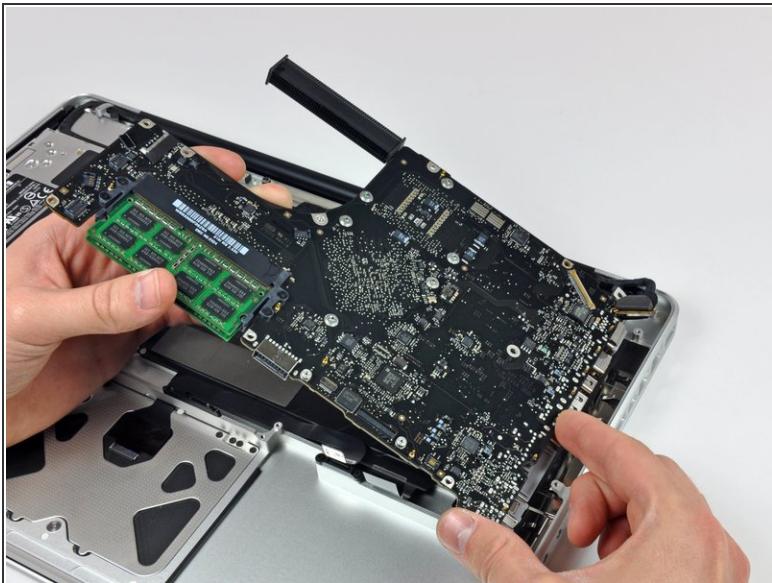
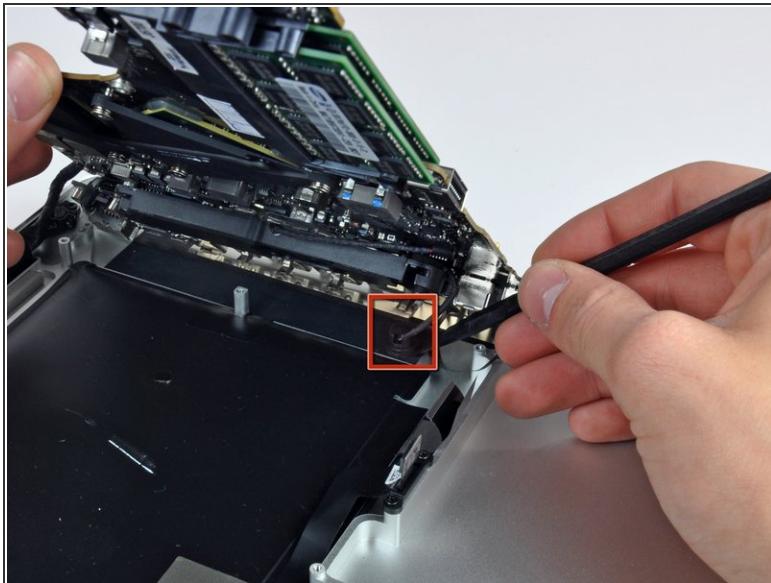


- Carefully lift the logic board assembly from the left side and work it out of the upper case, minding the port side that may get caught during removal.

 Do not entirely remove the logic board yet!

 Ensure that the logic board is free from all connections to the upper case (except the battery connector) before proceeding.

Step 25



- 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 26 — Upper Case



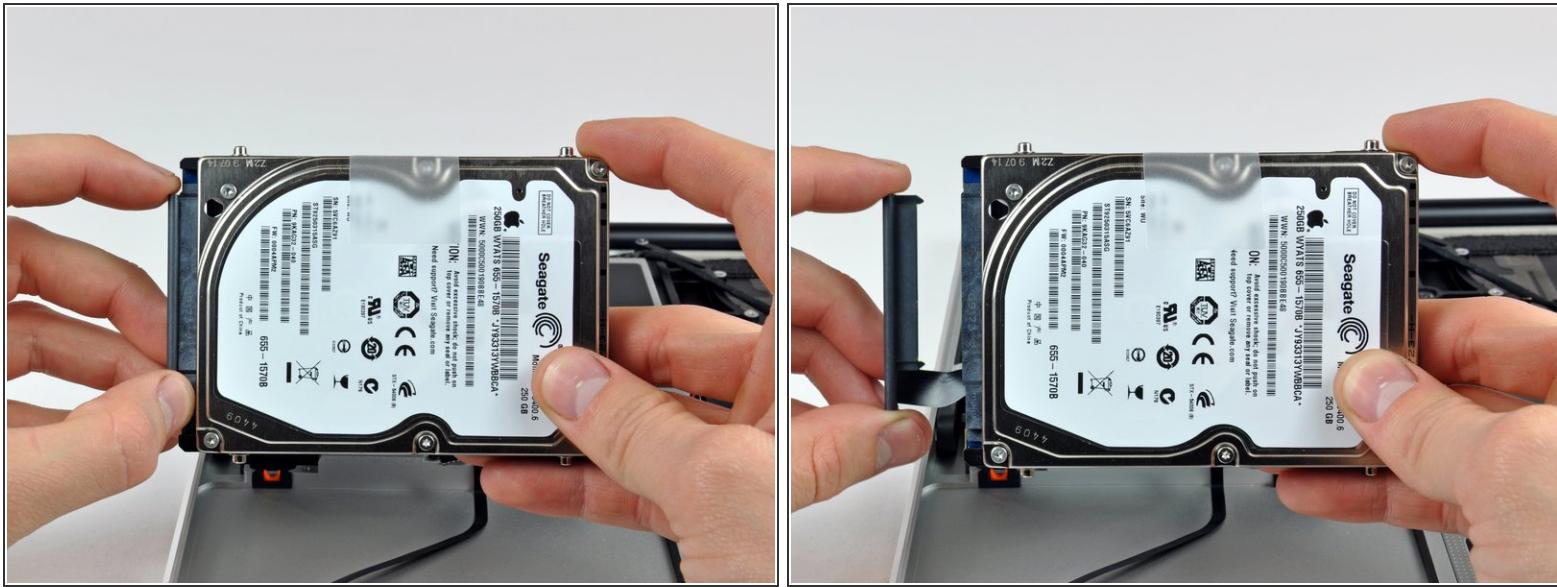
- Remove the two Phillips screws securing the hard drive bracket to the upper case.
- *(i)* These screws are captive to the hard drive bracket.
- Remove the hard drive bracket from the upper case.

Step 27



- Lift the hard drive out of the upper case by its plastic pull tab, minding the cable attaching it to the computer.

Step 28



- Remove the hard drive from its cable by pulling the cable connector straight away from the drive.

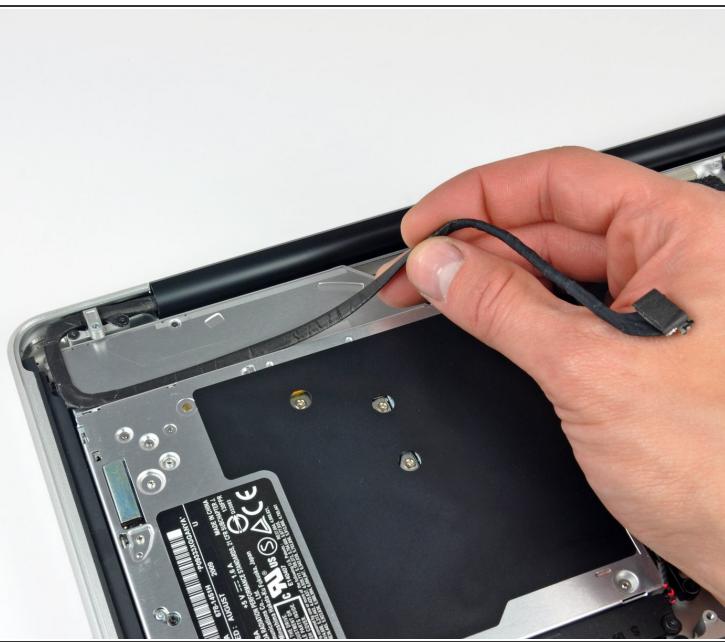
Step 29



- Remove the following four screws securing the hard drive and IR sensor cable to the upper case:
 - Two 1.5 mm Phillips screws.
 - Two 4 mm Phillips screws.
- Slide the hard drive and IR sensor bracket away from the edge of the upper case.
- Carefully peel the hard drive and IR sensor cable from the upper case.
- Remove the hard drive/IR sensor cable from the upper case and set it aside.

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Step 30



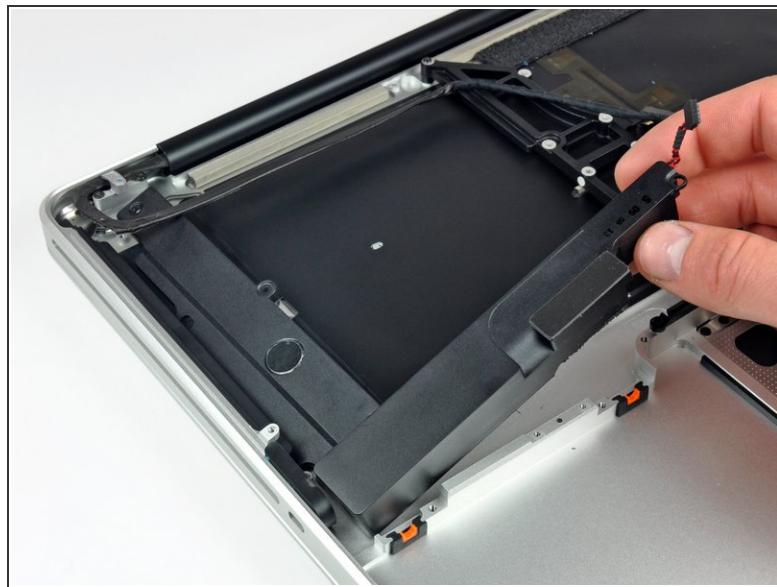
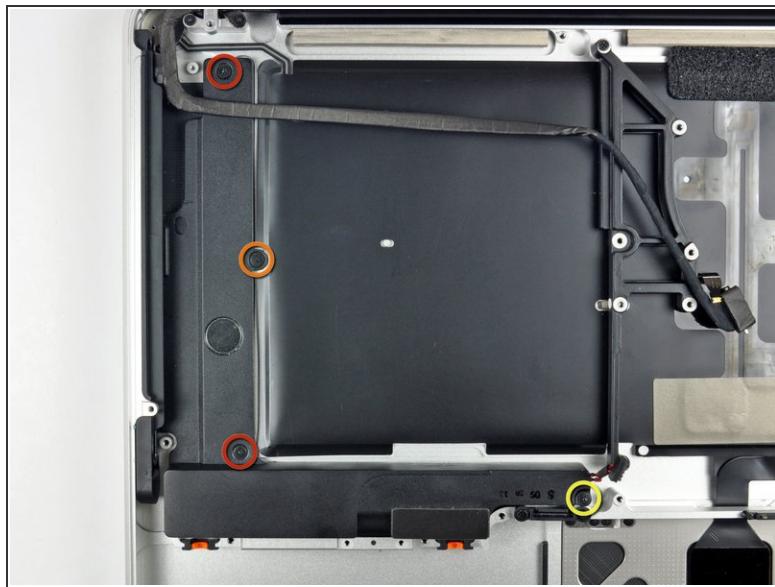
- Peel the camera cable off the adhesive securing it to the optical drive.

Step 31



- Remove the three 3.5 mm Phillips screws securing the optical drive to the upper case.
- Lift the optical drive from its left edge and pull it out of the computer.

Step 32



- Remove the following four screws securing the subwoofer and right speaker to the upper case:
 - Two 3.2 mm Phillips screws.
 - One 2.6 mm Phillips screw.
 - One 5 mm Phillips screw.
- Lift the subwoofer and right speaker assembly out of the upper case.

Step 33



- Remove the two 8 mm Phillips screws securing the camera cable retainer to the upper case.
- One of the screws may remain captive in the camera cable ground loop. If replacing the display, be sure to transfer this screw to the new unit.
- Lift the camera cable retainer out of the upper case.

Step 34



- Remove two outer 6 mm Torx screws securing each side of the display to the upper case (4 screws total).

(i) We intentionally have you leave one screw in each hinge to aid in the following steps.

Step 35



- Open your MacBook Pro so the display is perpendicular to the upper case.
- Place your opened MacBook Pro on a table as pictured.
- While holding the display and upper case together with your other hand, remove the 6 mm Torx screw from the lower display bracket.

Step 36



⚠ Be sure to hold the display and upper case together with your other hand. Failure to do so may cause the freed display/upper case to fall, potentially damaging each component.

- Remove the last remaining 6 mm Torx screw securing the display to the upper case.

Step 37



- Grab the upper case with your right hand and rotate it slightly toward the top of the display so the upper display bracket clears the edge of the upper case.
- Rotate the display slightly away from the upper case.
- Lift the display away from the upper case, minding any brackets or cables that may get caught.

Step 38



- ⓘ If you are moving components to a new Upper Case, you will need to remove the bracket in which the logic board and other components are secured to.
- ⓘ Remove the two phillips head screws and set the bracket aside.

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