



Upgrading your 2.0 GHz 13" Aluminum Unibody MacBook to a Backlit Keyboard

This guide is here to help you upgrade your...

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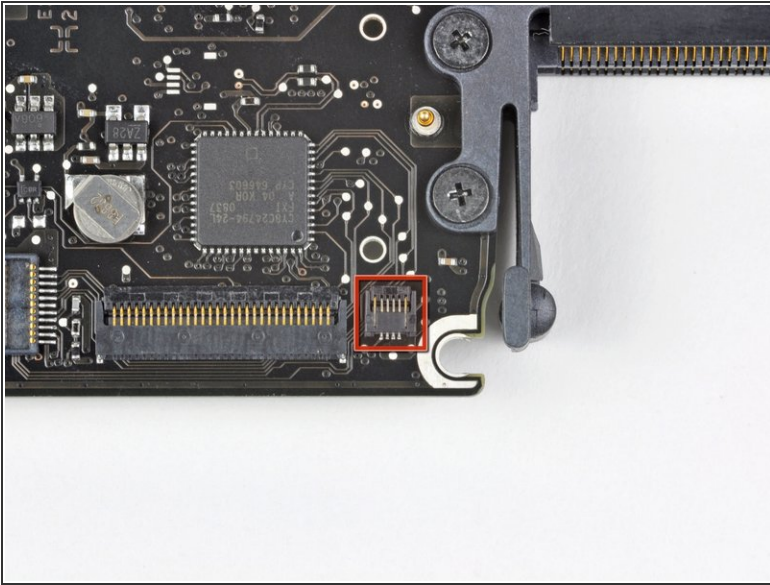
INTRODUCTION

This guide is here to help you upgrade your Late 2008 2.0 GHz Aluminum Unibody MacBook to have a backlit keyboard without buying an entire new topcase. Keyboards can be purchased off Ebay for less than \$75.

TOOLS:

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

Step 1 — Upper Case



- ⚠** Some 2.0 GHz A1278 MacBook Unibody logic boards do not have the necessary socket installed to accept the keyboard backlight ribbon cable attached to the upper case. The first and second pictures show logic boards with and without the socket installed, respectively. If your logic board does not have the backlight ribbon cable socket installed, the keyboard **will** work but the keys **will not** light up.
- i** If your logic board does not have the socket installed to accept the keyboard backlight ribbon cable and you are installing a backlit upper case, simply tuck the keyboard backlight ribbon cable out of the way when you reinstall the logic board into the upper case.

Step 2



- Remove the single Phillips screw securing the hard drive bracket to the chassis.

★ This screw is captive to the hard drive bracket.

Step 3



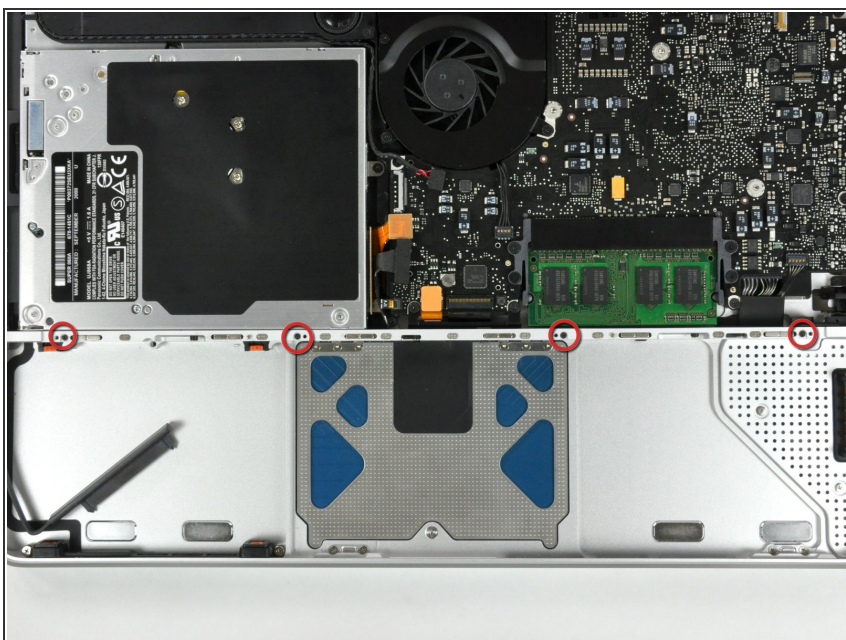
- Lift the hard drive by its pull tab enough to grab and remove the retaining bracket.
- Lift the hard drive out of the chassis, minding the cable attaching it to the computer.

Step 4



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

Step 5



- Remove the four 10.3 mm Phillips screws securing the mid wall to the upper case.

Step 6



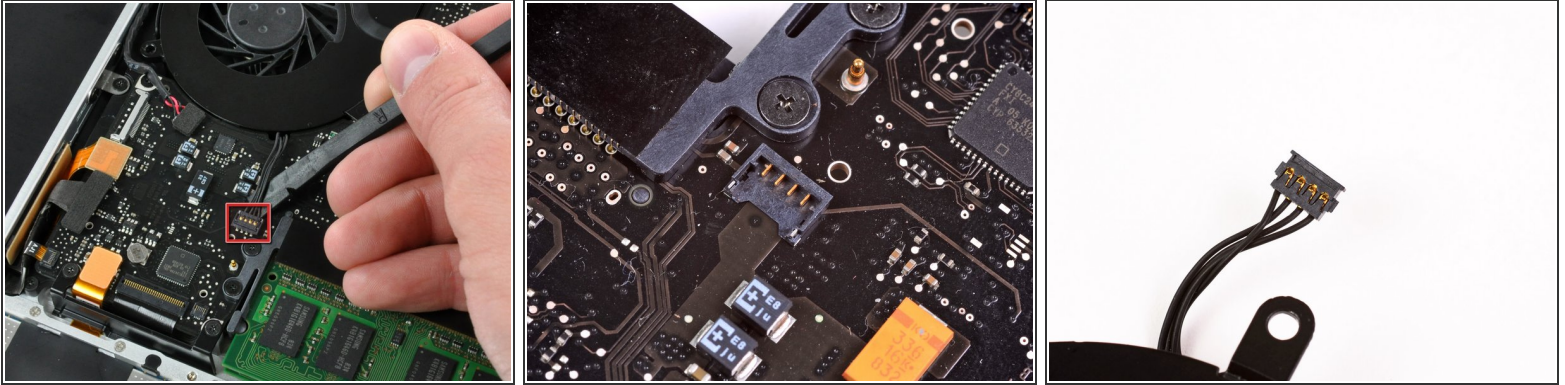
- Lift the mid wall out of the upper case.

Step 7



- Remove the following three screws securing the fan to the upper case:
 - Two 5 mm Phillips screws.
 - One 7 mm Phillips screw.

Step 8



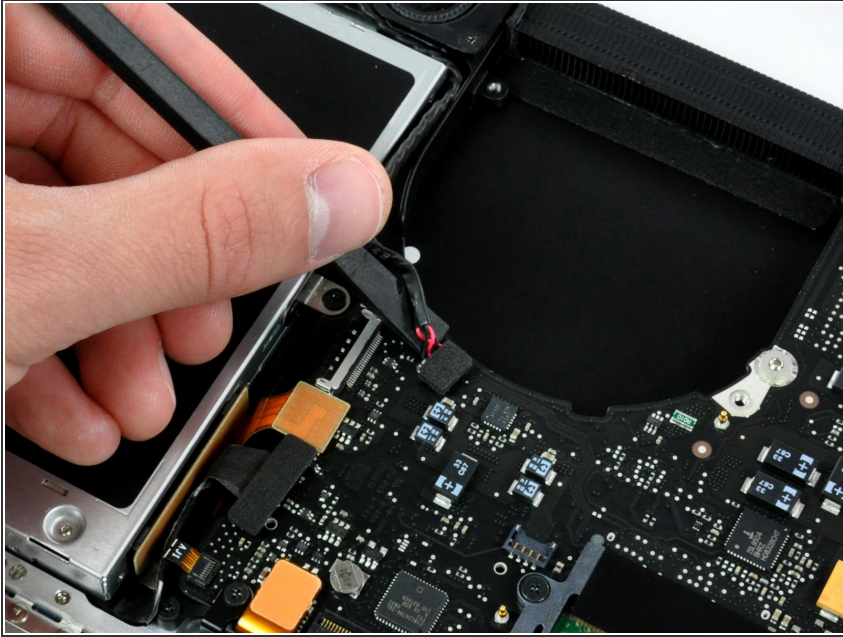
- Use a spudger to pry the fan connector straight up and out of its socket on the logic board.
- ⓘ It is useful to twist the spudger axially from beneath the fan cable wires to release the connector.
- ⚠ The fan socket and the fan connector can be seen in the second and third pictures. Be careful not 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



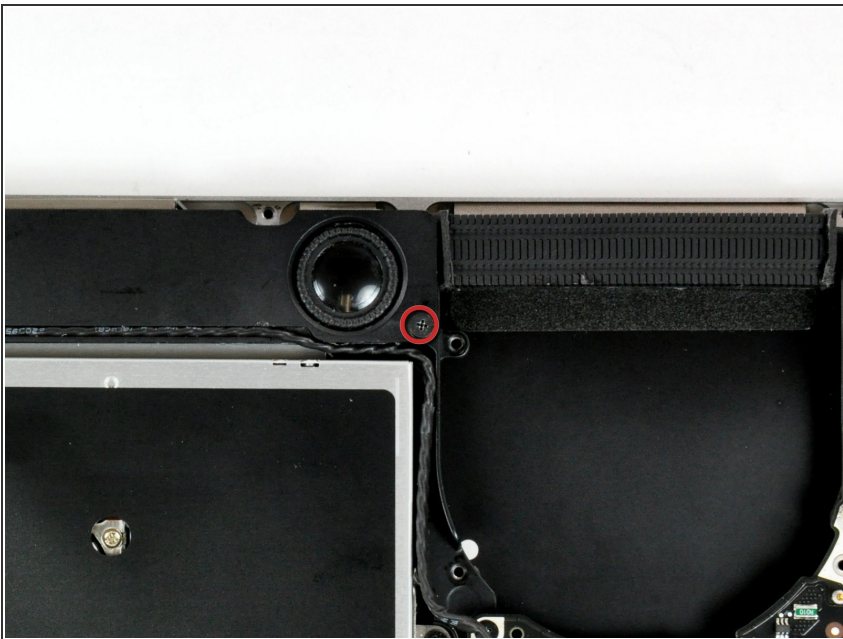
- Lift the fan out of the upper case.

Step 10



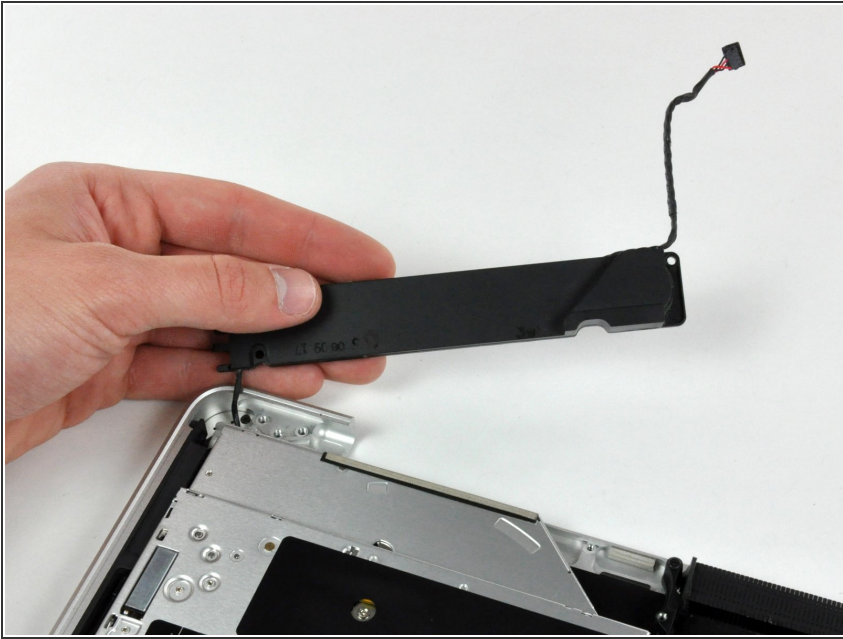
- Using the flat end of a spudger, pry the subwoofer connector straight up off the logic board.

Step 11



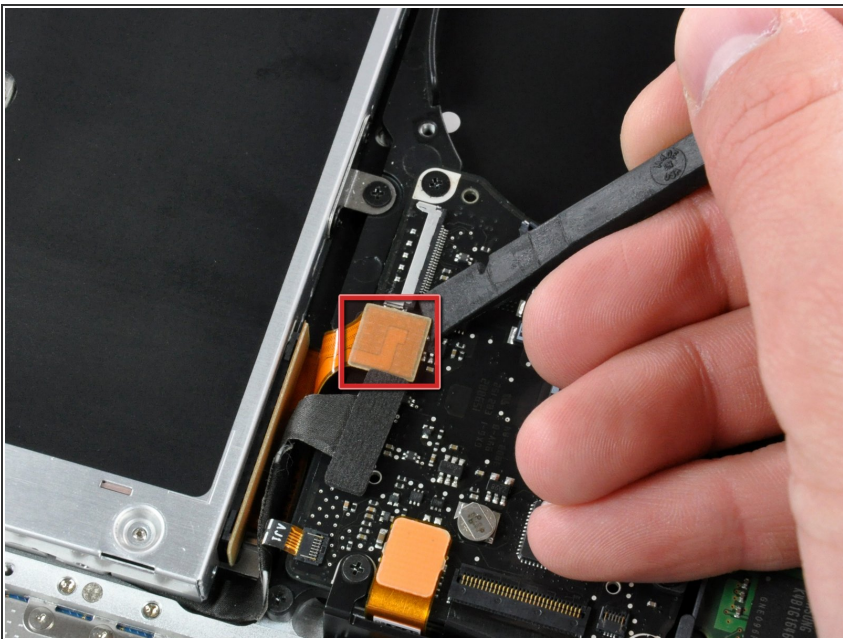
- Remove the single Phillips screw securing the subwoofer to the upper case.

Step 12



- ❗ The subwoofer is still connected to the right speaker, so don't completely remove it just yet.
- Lift the subwoofer off the optical drive, and set it above the computer.

Step 13



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

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

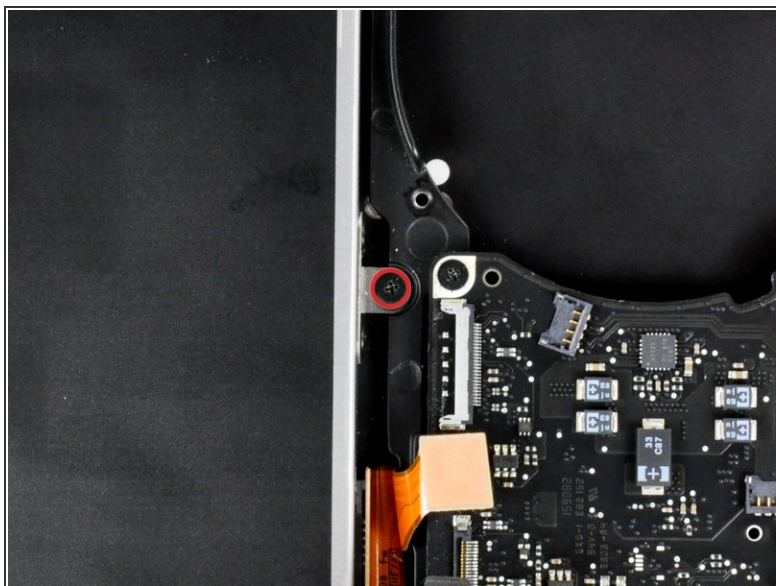
SUPER 068A 676-1451C P083725U3XKA
 MANUFACTURED : SEPTEMBER 2008 U

MODEL UJ868A +5V --- 1.6 A MADE IN CHINA
 COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.
 Panasonic Communications Co., Ltd. 12AFPR
 1-6-1, 4-Chrome Minoshima-Hakata-Ku Fukuoka, Japan D33883

DO NOT OPEN THE DRIVE.
 NO USER ADJUSTMENT OR
 SERVICEABLE PARTS INSIDE.
 DO NOT PUSH COVER.

ES-04007

THE PARTS LIST FOR THIS DRIVE ARE LISTED AT THE BOTTOM OF THE FOLLOWING U.S. PATENTS: 6,837,064; 6,888,817;
 6,724,904; 5,474,686; 5,715,441; 4,431,837; 4,359,717; 5,106,215; 5,264,695; 5,607,703;
 6,207,303; 6,224,445; 5,757,876; 5,896,994; 6,584,940; 6,342,078; 5,763,988; 5,912,884; 4,765,441



- Remove the three 2.5 mm Phillips screws securing the optical drive to the upper case.

Step 16



- Lift the optical drive from its right edge and pull it out of the computer.

Step 17



- Peel the hard drive cable from the adhesive securing it to the upper case, and maneuver the plastic retaining block out of the upper case.

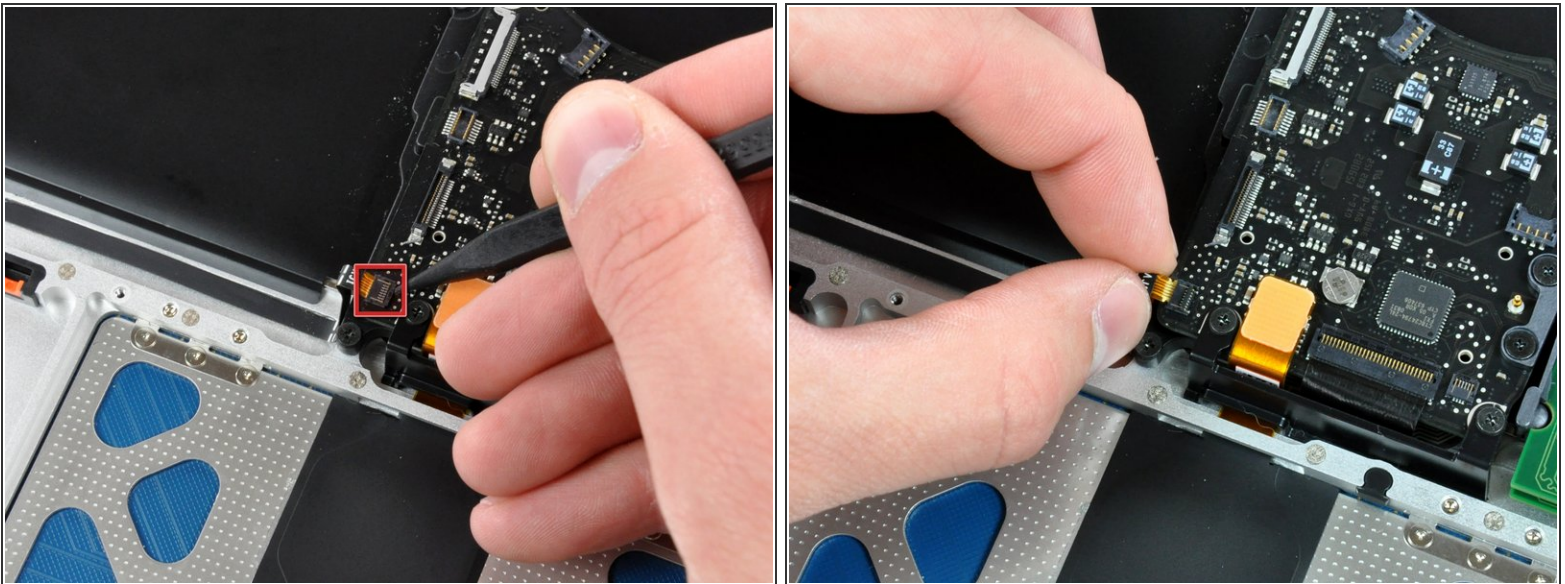
i The hard drive cable and the plastic retaining block are attached together.

Step 18



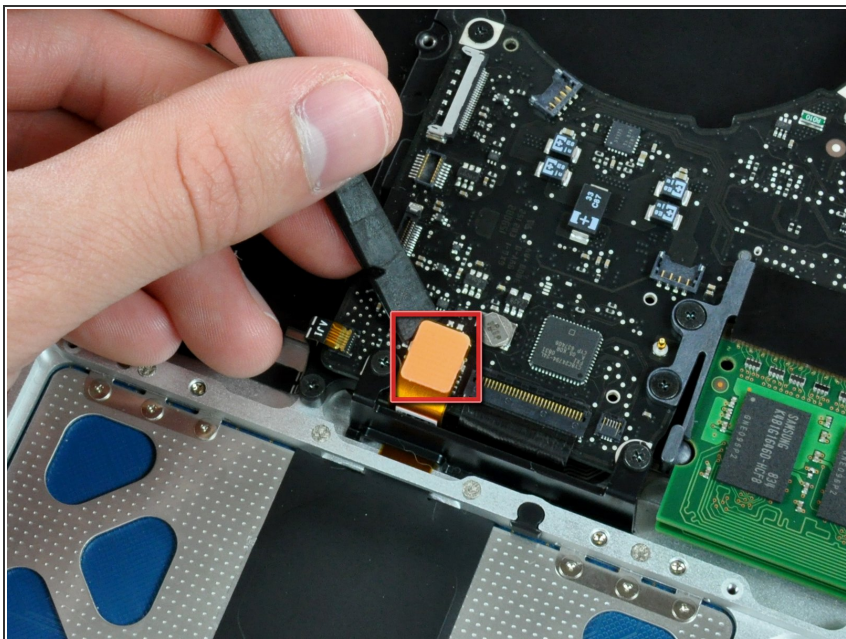
- Peel back the small piece of black tape covering the right speaker cable.
- Use the tip of a spudger to pry the right speaker up off the adhesive securing it to the upper case.
- Lift the subwoofer and right speaker assembly out of the upper case.

Step 19



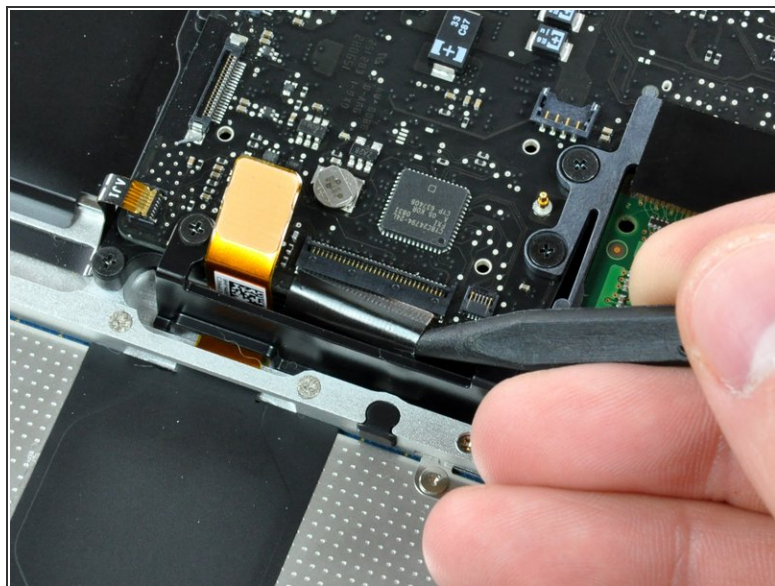
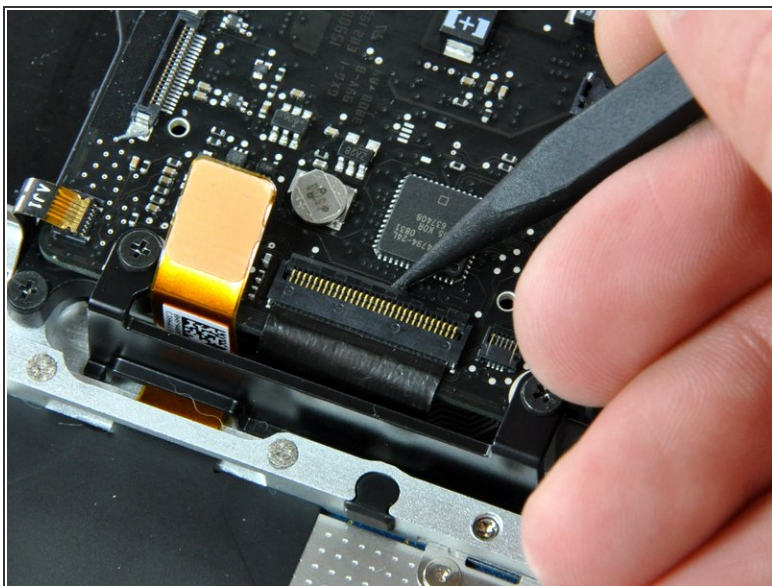
- Use the tip of a spudger to flip up the locking lever to release the IR sensor ribbon cable from its socket.
- Pull the IR sensor ribbon cable straight away from the logic board.

Step 20



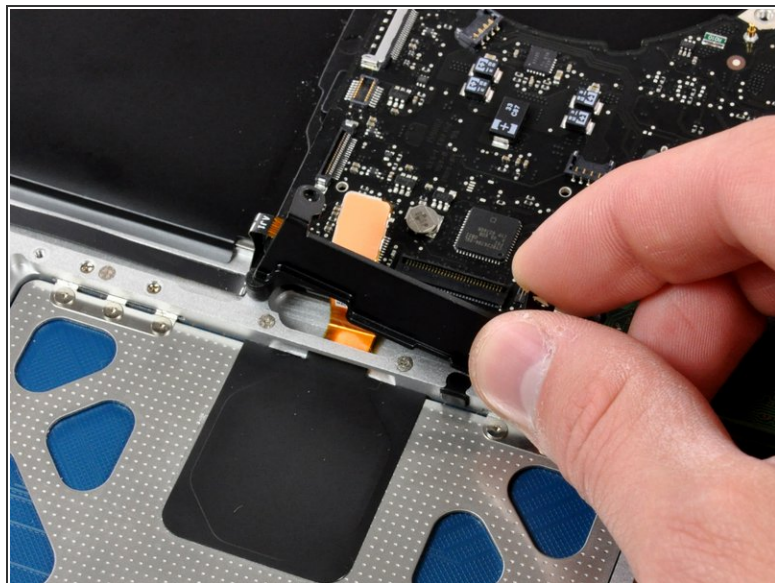
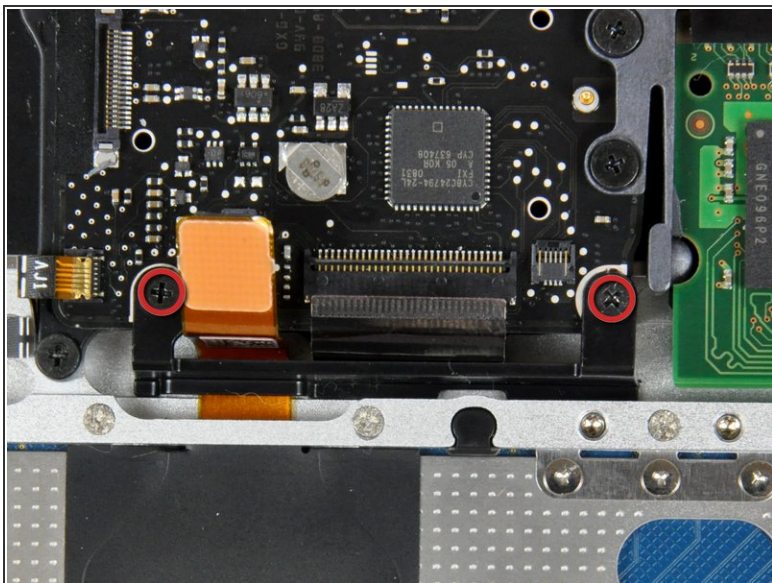
- Use the flat end of a spudger to pry the trackpad connector straight up off the logic board.

Step 21



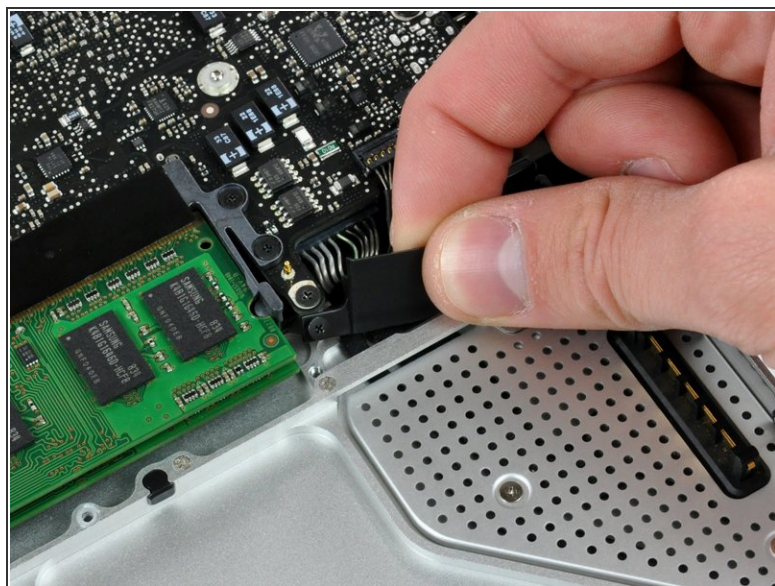
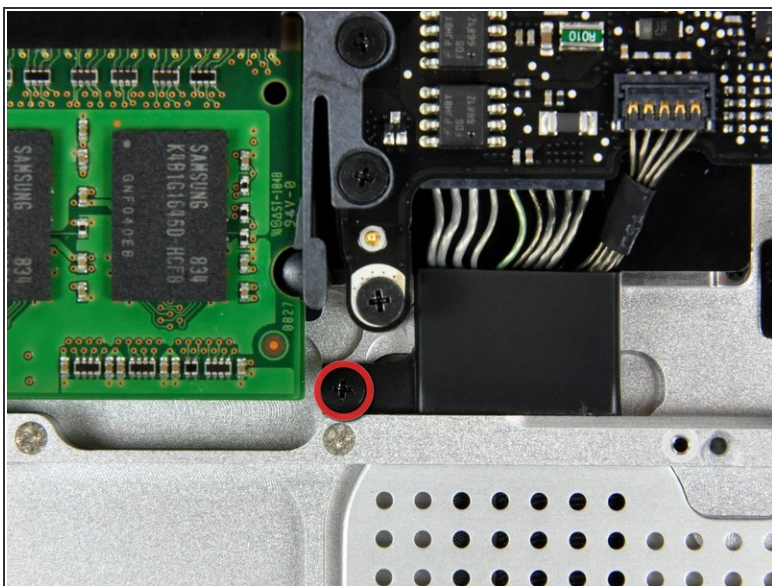
- Using the tip of a spudger, flip up the keyboard ribbon cable retaining flap.
- Pull the keyboard ribbon cable straight out of its socket.

Step 22



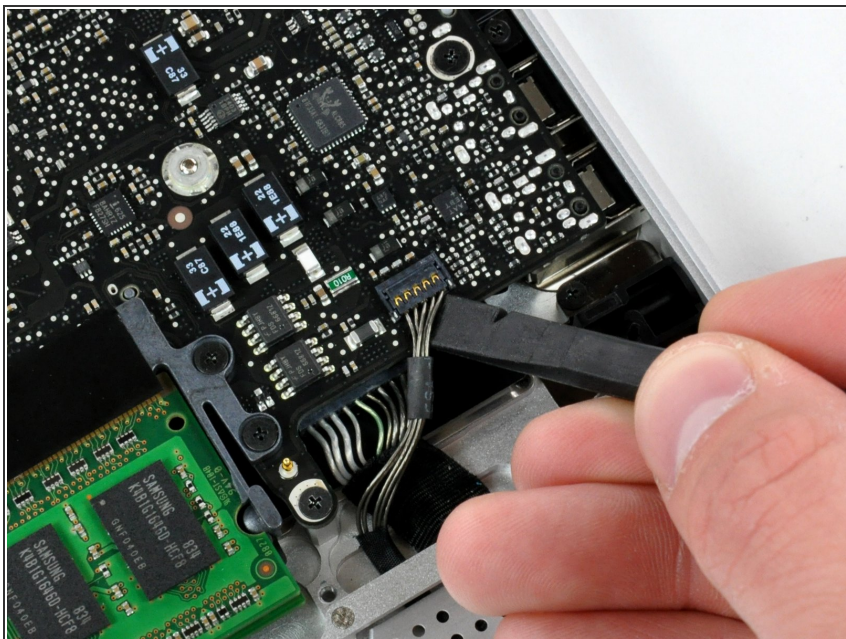
- Remove the two 5 mm Phillips screws securing the keyboard flex bracket to the upper case.
- Lift the keyboard flex bracket out of the upper case.

Step 23



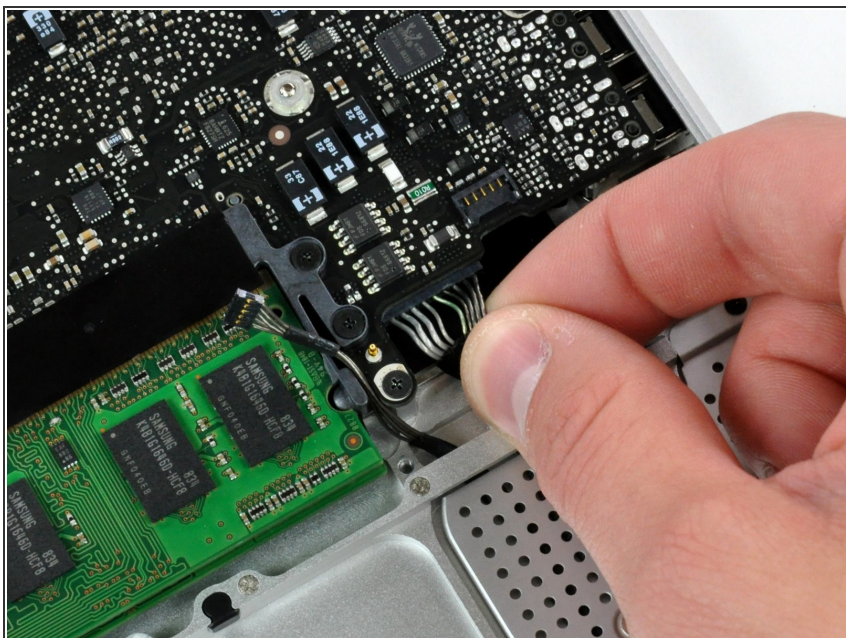
- Remove the single Phillips screw securing the battery cable cover to the upper case.
- Remove the battery cable cover from the upper case.

Step 24



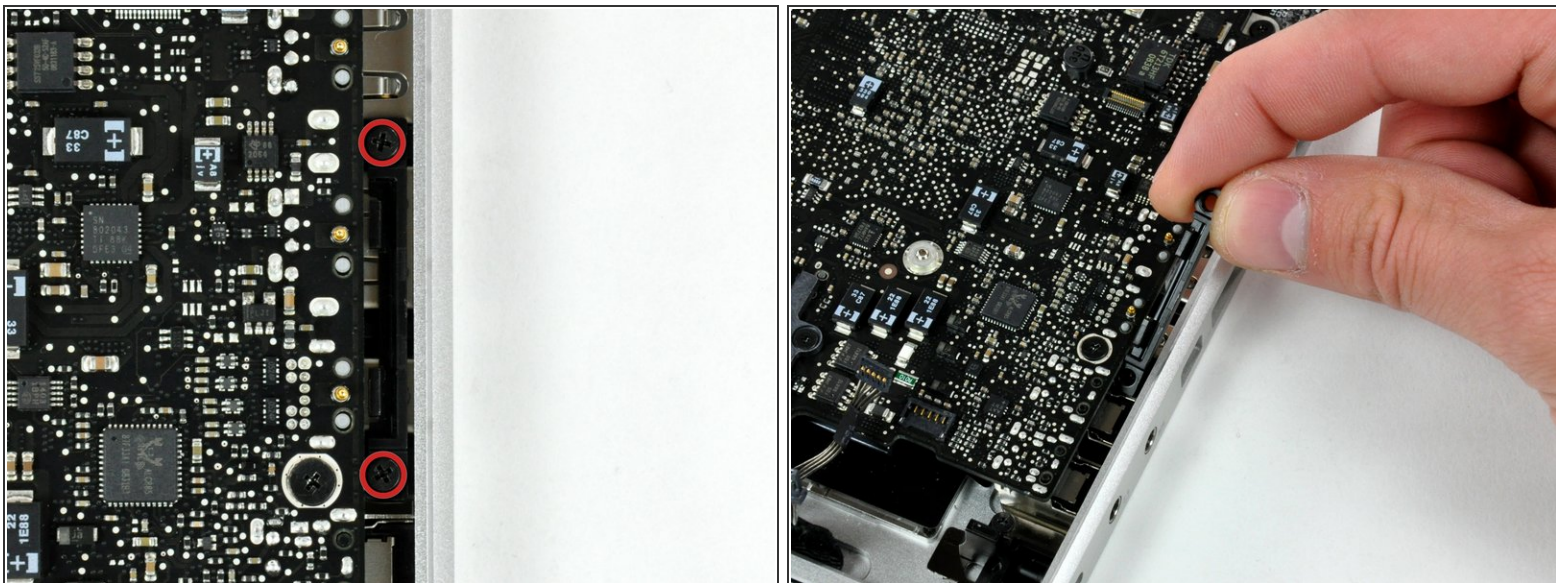
- Use a spudger to pry the battery level indicator cable connector straight up off the logic board.

Step 25



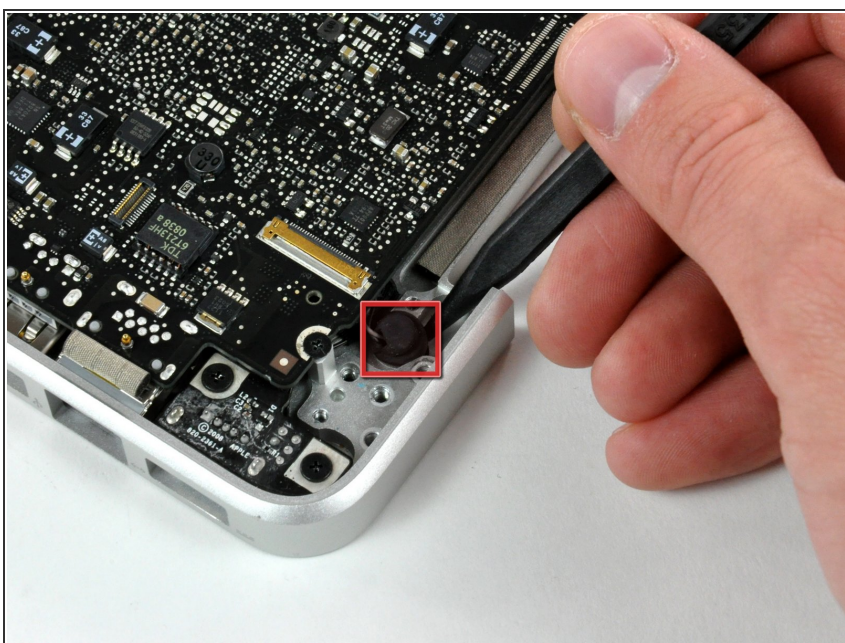
- Disconnect the battery cable connector by pulling it straight away from the logic board.
- ① If you cannot grasp the cable with your fingers, a spudger and tweezers may be helpful for removal.

Step 26



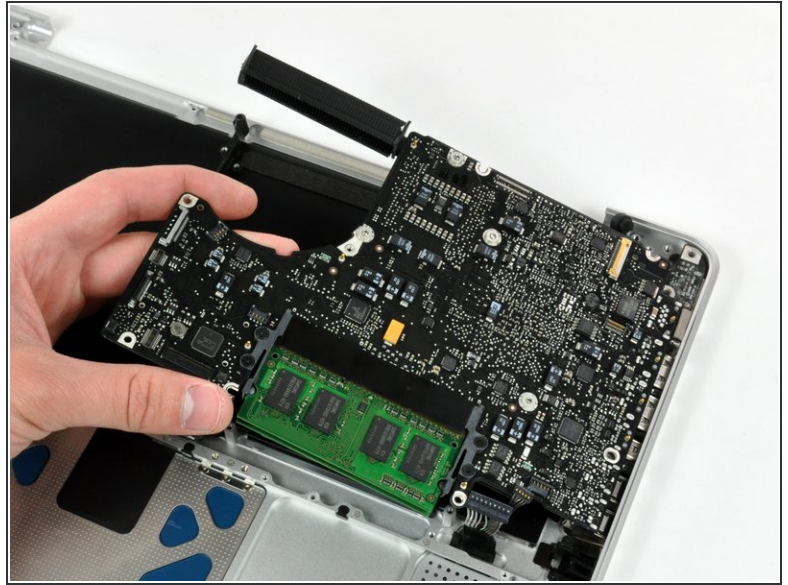
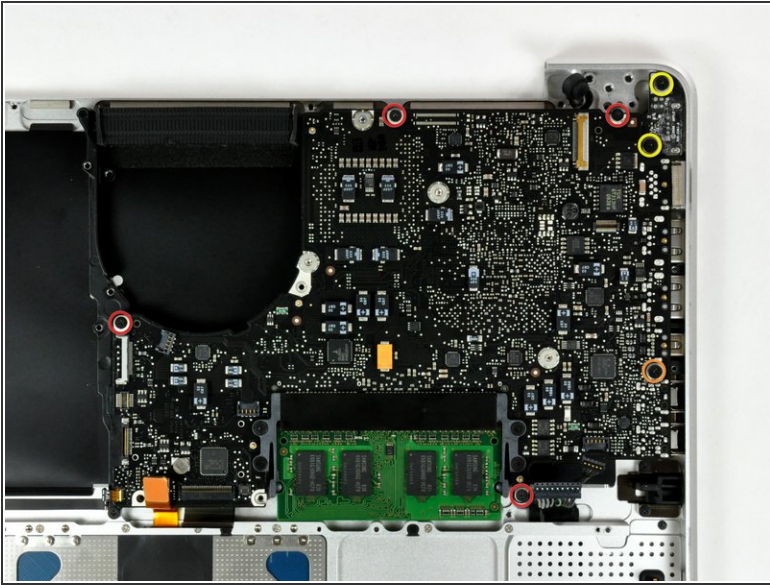
- Remove the two 4mm Phillips screws securing the bottom case clip to the upper case.
- Lift the bottom case clip out of the upper case.

Step 27



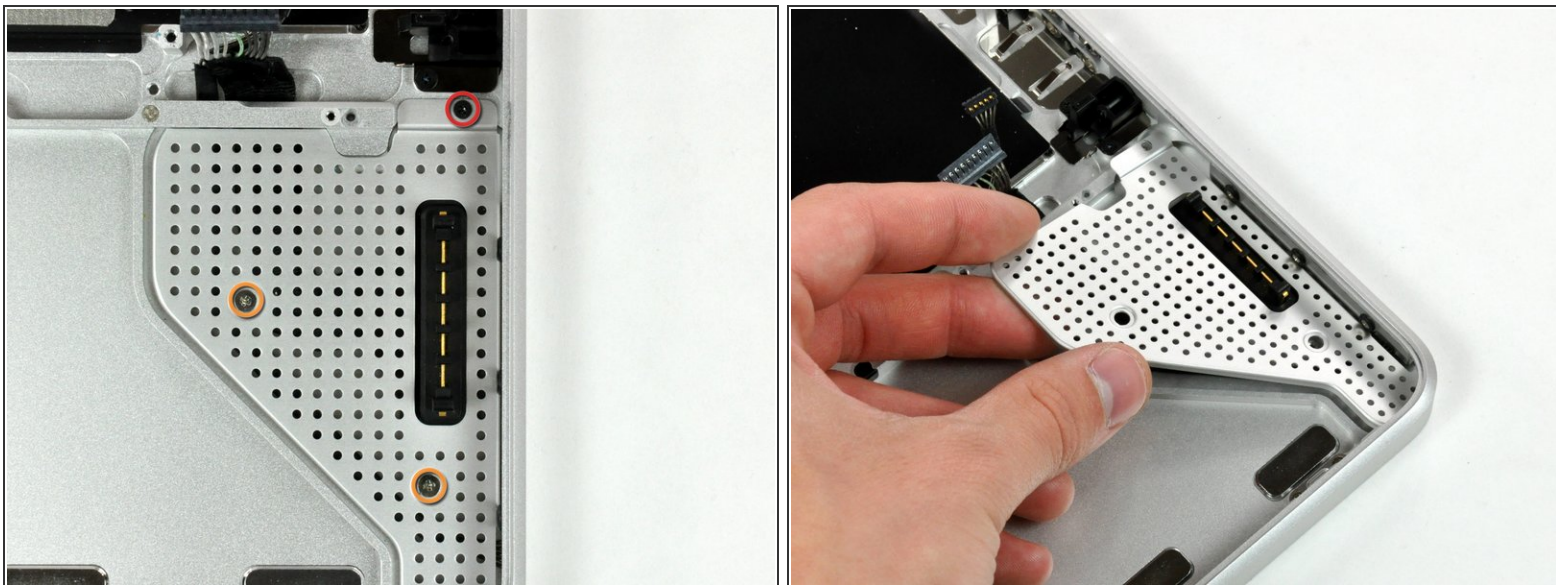
- Use the tip of a spudger to release the microphone from the upper case.

Step 28



- Remove the following five screws securing the logic board to the upper case:
 - Four 3 mm Phillips screws.
 - One 3.5 mm Phillips screw.
- Remove the two 7 mm Phillips screws securing the DC-in board to the upper case.
- Lift the logic board from its left edge and pull it out of the upper case.

Step 29



⚠ If you are buying a new upper case from us, the next two steps are not necessary. Your upper case will come with these parts preinstalled.

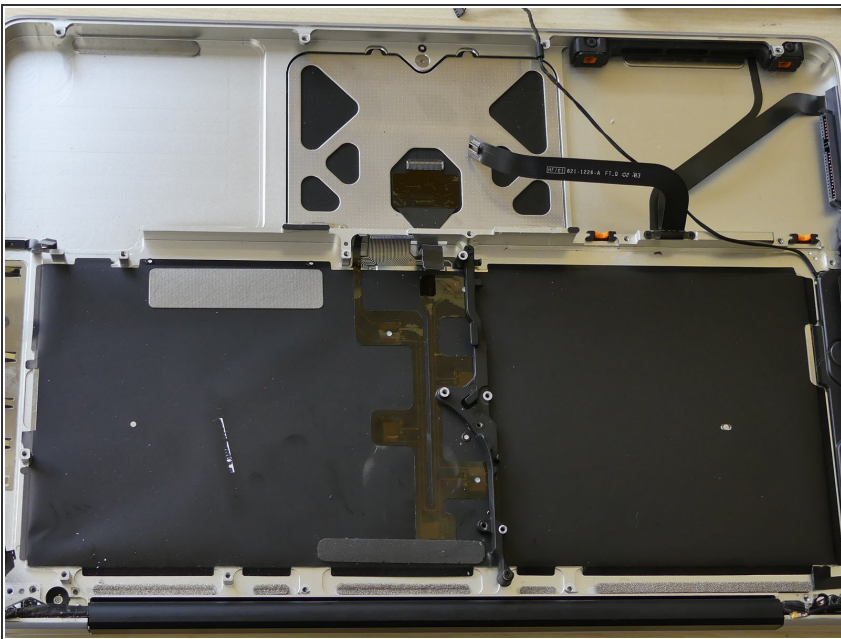
- Remove the following screws securing the battery connector cover to the upper case:
 - One 2.5 mm Phillips screw.
 - Two 1.5 mm Phillips screws.
- Lift the battery connector cover out of the upper case.

Step 30



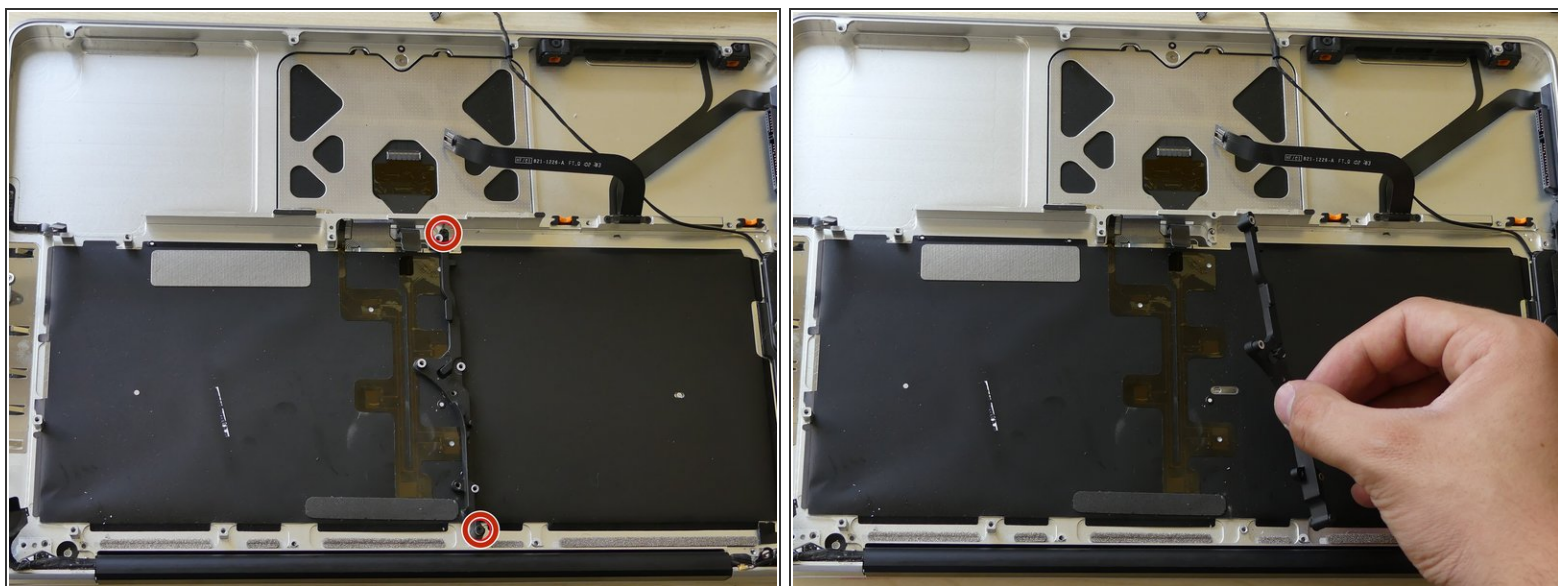
- De-route the battery connector cable through the gap in the upper case and remove it from the computer.
- ❗ If you are installing an Upper Case that is missing the black bracket in the middle then transfer it from the old case to the replacement.

Step 31 — Installing the Backlit Keyboard



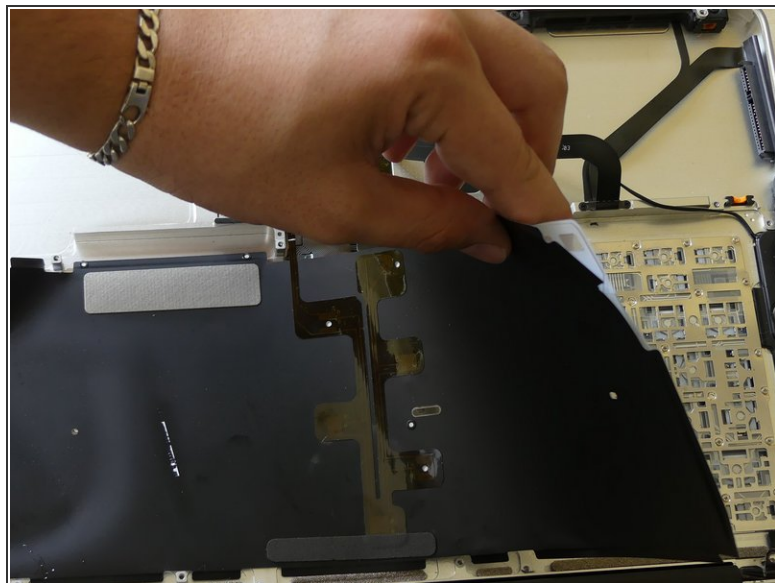
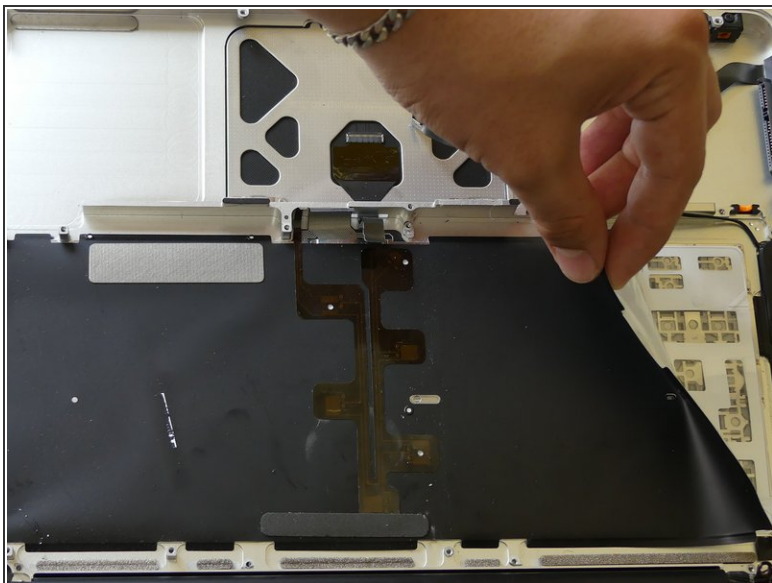
- Now that you have removed the display (only required if a new top case is used to replace the keyboard), logic board, optical drive, and various other components from the upper case (or top case), you should have something that looks like this.
- We are ready to begin!

Step 32



- You have to remove these two screws from the bracket.

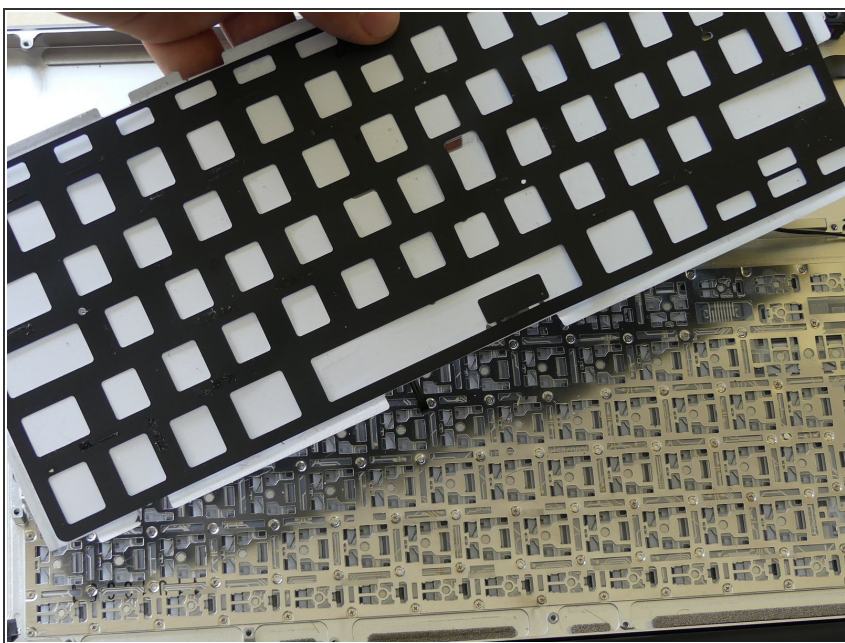
Step 33



- First, you'll notice the large black piece of plastic over the back of the keyboard.
- You will need to use a spudger or a small straight edge screwdriver to carefully unstick the the edges of the plastic from the upper case.

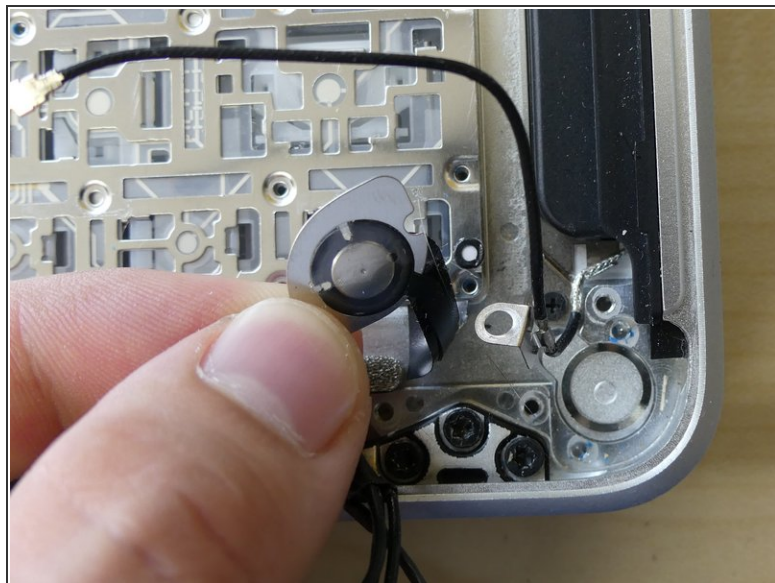
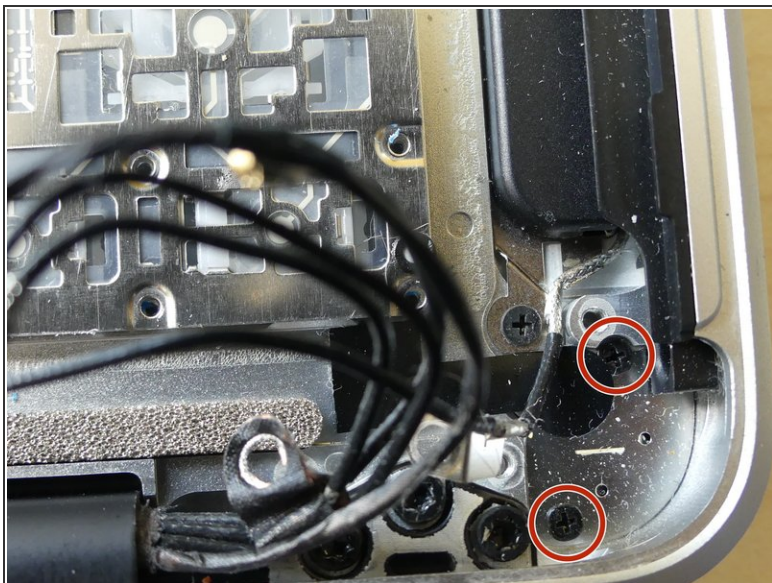
⚠ Be careful not to tear the plastic as it is very thin.

Step 34



- Now you will see a large clear plastic wafer stuck to the back of the keyboard.
- You can remove this easily buy peeling it up slowly.

Step 35

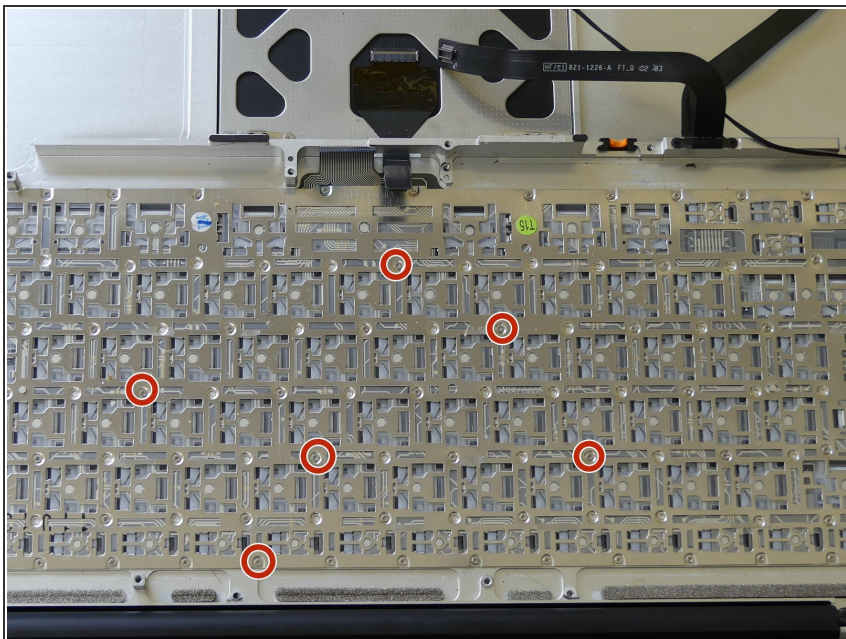


- Now that you can see the back of the individual keys, stop there.

⚠ You now need to unscrew the 2 small, black Philips screws from the back of the power button assembly. Failing to do this will tear the the power button's ribbon cable when you try to remove the keyboard.

- After you do this, remove the power button by pressing on the power button from the top of the upper case. The power button and a small metal ring (spring) will come out.

Step 36

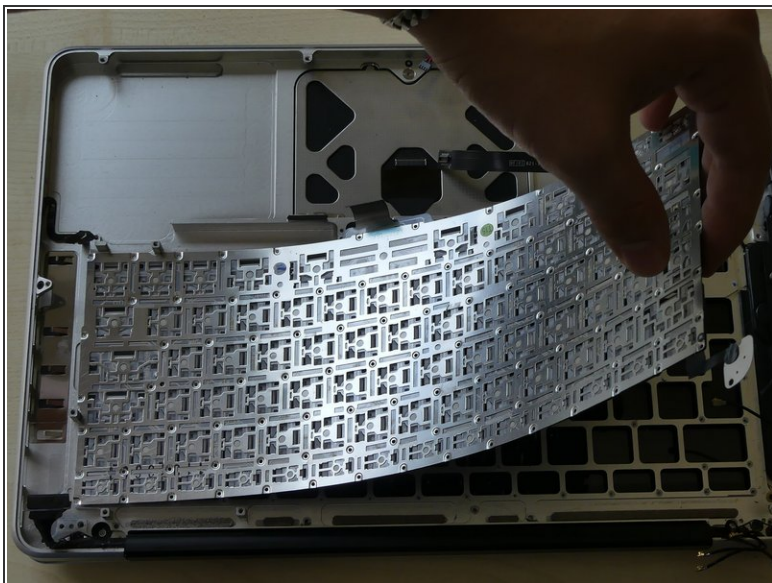


- Now you have all probably noticed the horde of tiny black screws that cover the back of your keyboard. Yes, unfortunately we have to take 'em out!

⚠ Be very careful here as you don't want to strip the small screw heads and you also don't want to lose any. I've found that having a magnet to pick up the screws is helpful. A small container to put them in is also useful for keeping them out of the carpet.

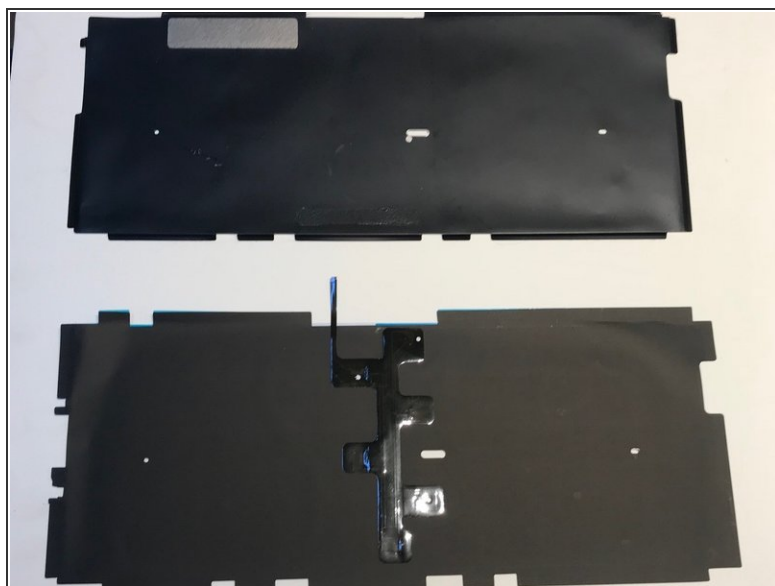
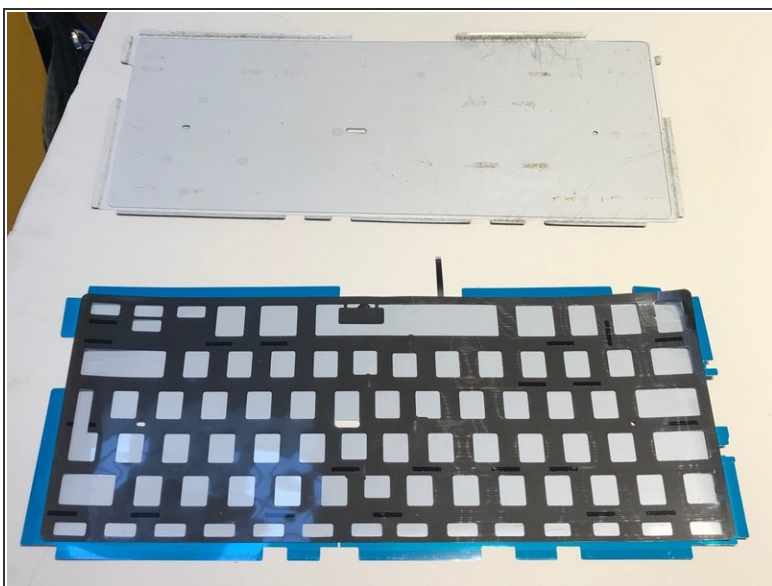
ⓘ There are a total of 66 screws.

Step 37



- Now that you have removed all of the screws, you can gently press on the face side of the keyboard and it will come right out. (If you have removed **all** the screws.)
- Here is an image of the top case without its keyboard. I hope you're not winded yet. We're only half way there!

Step 38



- Now you are going to install that new backlit keyboard you've always wanted!

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