



MacBook Air 13" Early 2015 Upper Case Replacement

Use this guide to replace the upper case,...

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INTRODUCTION

Use this guide to replace the upper case, including the keyboard, of your MacBook Air 13" Early 2015.

TOOLS:

- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [TR8 Torx Security Screwdriver](#) (1)

PARTS:

- [MacBook Air 13" Mid 2013 to 2017 Upper Case with Keyboard](#) (1)
- [MacBook Air 13" \(Mid 2013 to 2017\) Trackpad Cable](#) (1)

Step 1 — Lower Case



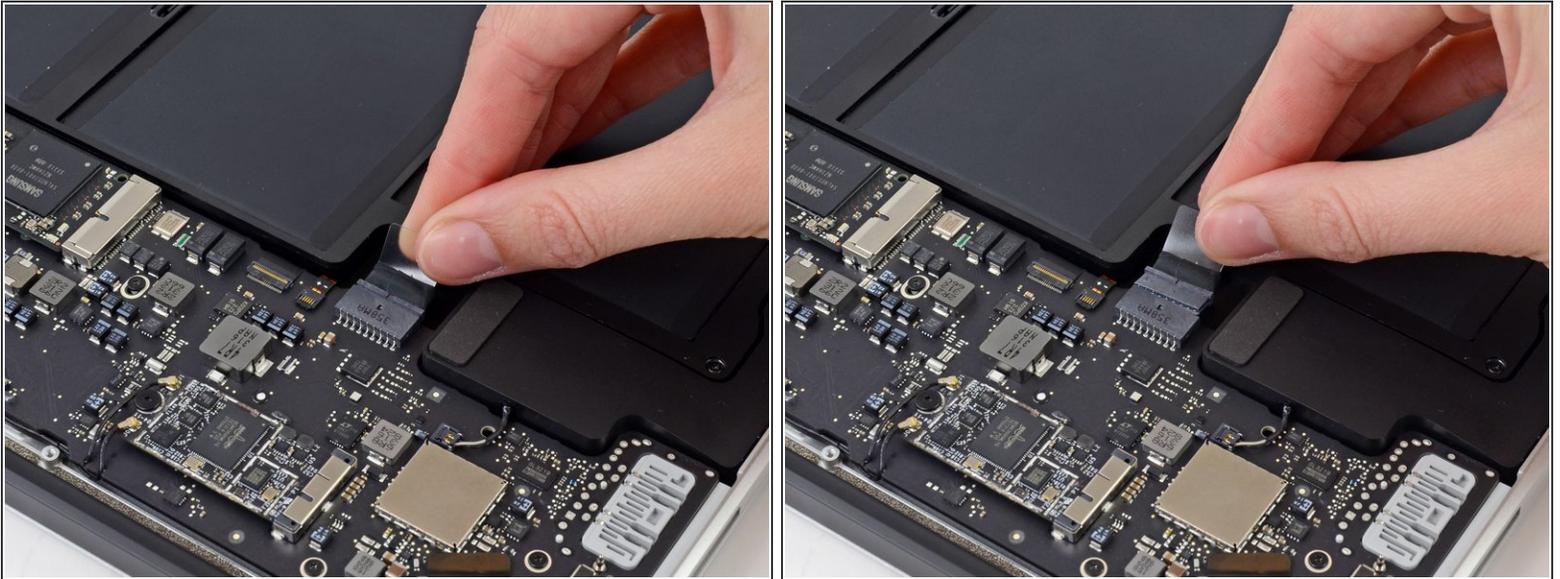
- ⓘ Before proceeding, power down your MacBook. Close the display and lay it on a soft surface, top-side down.
- Use a [P5 Pentalobe](#) driver to remove ten screws securing the lower case, of the following lengths:
 - Two 9 mm screws
 - Eight 2.6 mm screws

Step 2



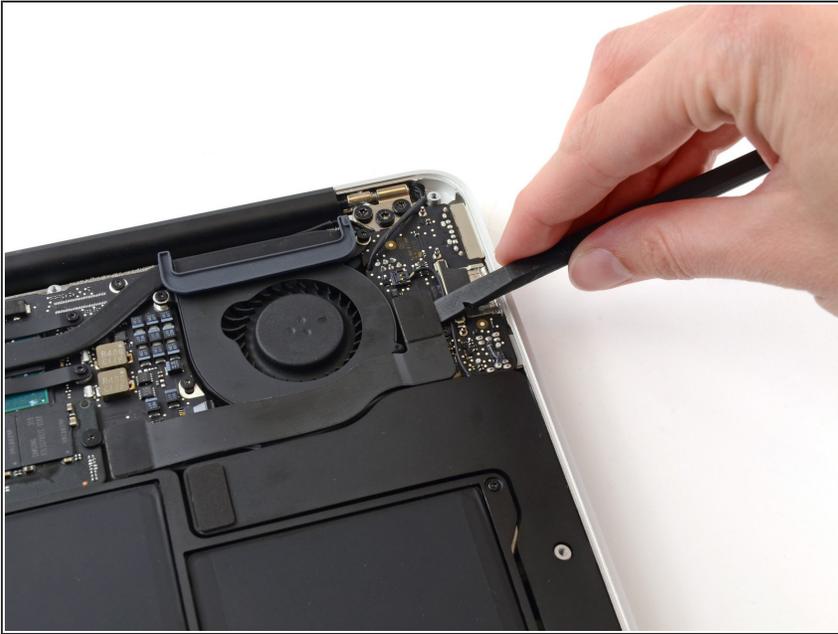
- Wedge your fingers between the display and the lower case and pull upward to pop the lower case off the Air.
- Remove the lower case and set it aside.

Step 3 — Battery Connector



- ⓘ To ensure that everything is de-energized and won't turn on while you're working, it is recommended that you disconnect the battery.
- Grab the clear plastic pull tab attached to the battery connector and pull it parallel to the board toward the front edge of the Air.
- ⚠ Do not lift upward on the connector as you disconnect it or you risk damage to the connector socket.

Step 4 — I/O Board Cable



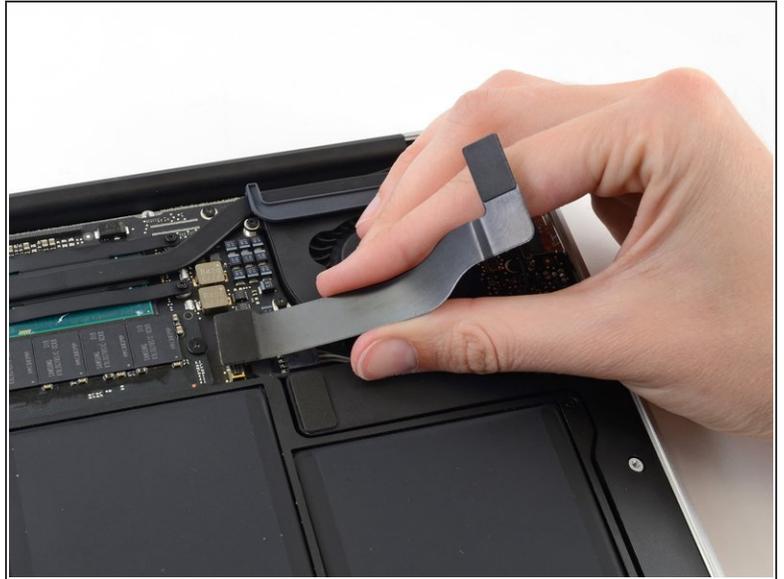
- Use the flat end of a spudger to pry the I/O board cable connector up out of its socket on the I/O board.

Step 5



- Carefully peel the I/O board cable from the adhesive securing it to the top of the fan.
- ★ During reassembly, make sure this cable is in the correct orientation. It will fit if reversed, but the laptop will not boot.

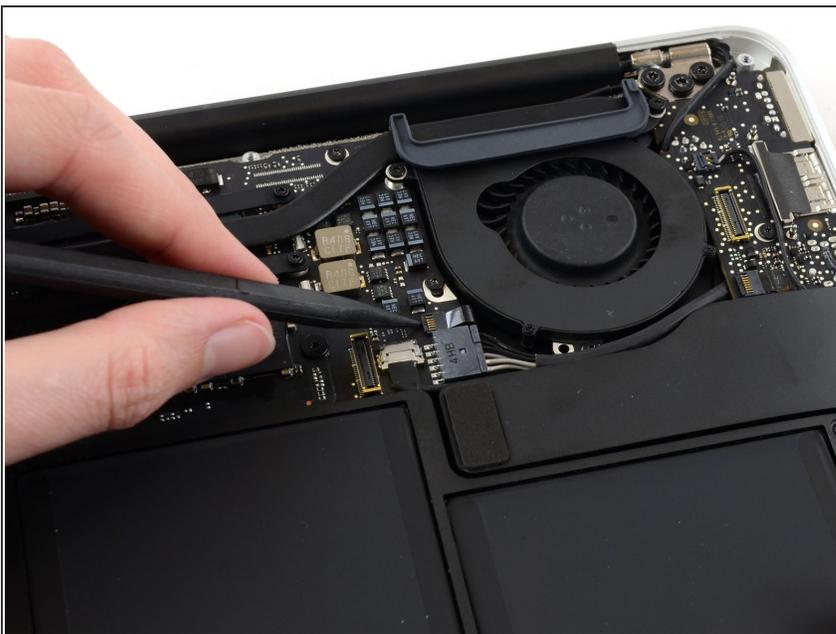
Step 6



⚠ The following connector has an especially deep socket. Use care when disconnecting it.

- While gently pulling the I/O board cable upward near its connection to the logic board, use the flat end of a spudger to pry up on alternating sides of the connector to help "walk" it out of its socket.
- Remove the I/O board cable.

Step 7 — Fan



- Use the tip of a spudger to carefully flip up the retaining flap on the fan cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

Step 8



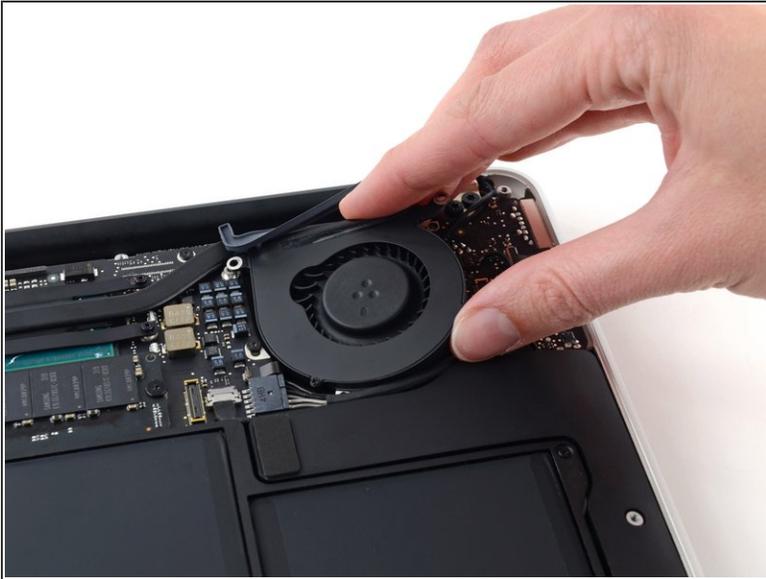
- Peel the rubber gasket off the adhesive on the top of the fan.

Step 9



- Remove the following three screws securing the fan to the upper case:
 - One 5.2 mm T5 Torx screw
 - One 3.3 mm T5 Torx screw
 - One 4.4 mm T5 Torx screw with a short head

Step 10



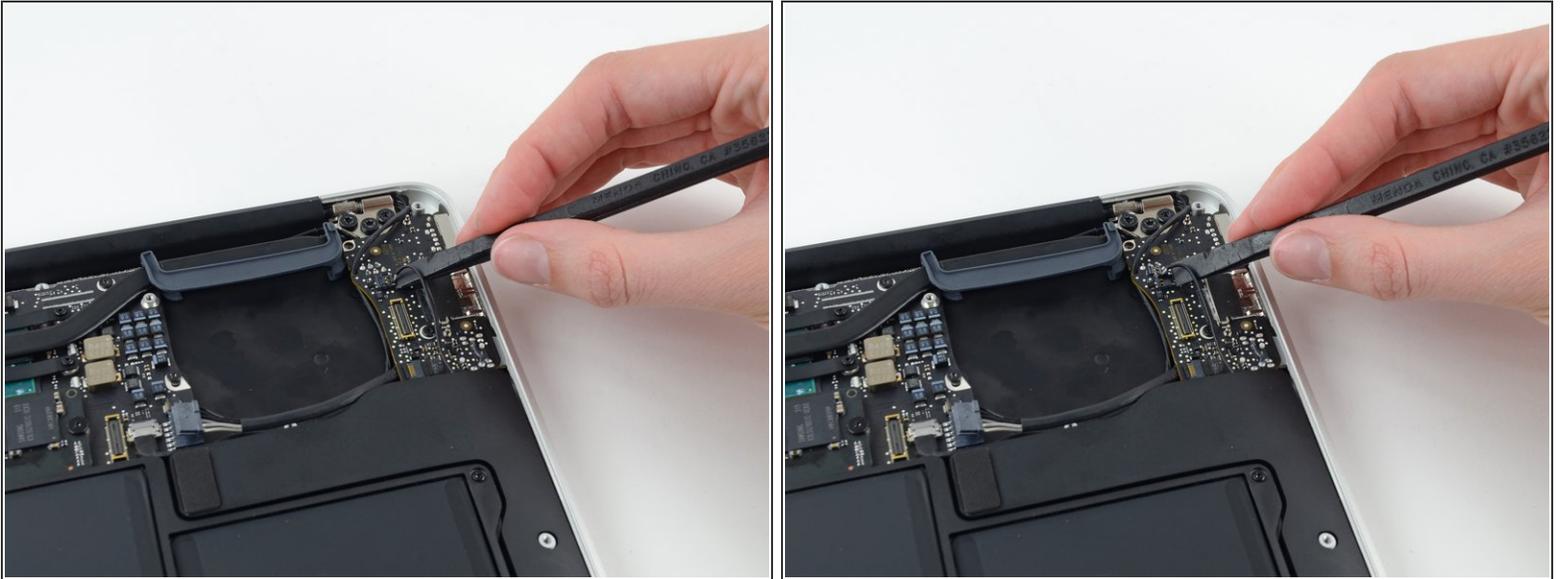
- Lift the fan from the I/O board side and pull it free from the upper case.
- Removing the fan will also disconnect the fan ribbon cable. Be careful not to snag it.

Step 11 — I/O Board



- Disconnect the I/O board by pulling its power cable away from its socket on the logic board.
- ⓘ Pull the cable parallel to the face of the logic board toward the right edge of the Air.

Step 12



- Use the flat end of a spudger to pry the left speaker cable connector up and out of its socket on the I/O board.

i Pry up from beneath the wires.

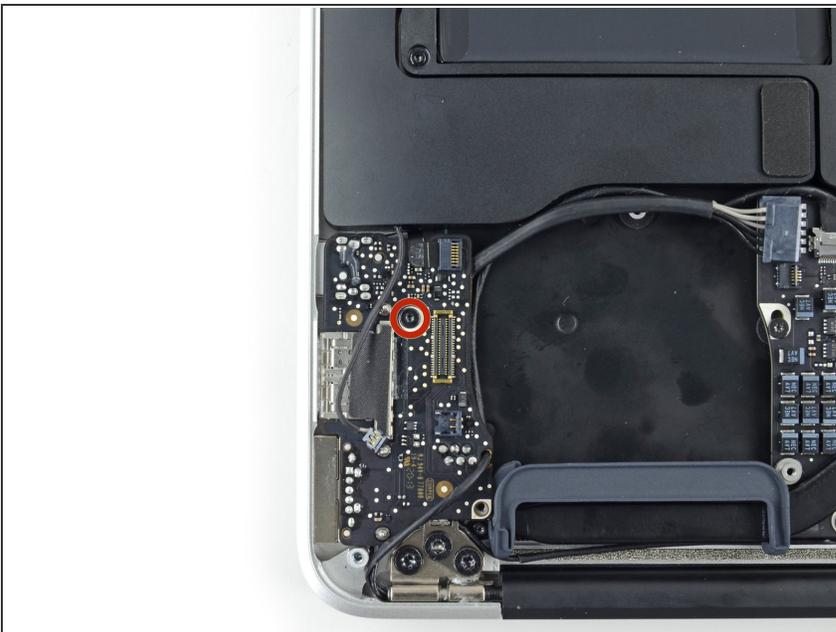
Step 13



- Use the tip of a spudger to carefully flip up the retaining flap on the microphone ribbon cable ZIF socket.

⚠ Make sure you are flipping up the retaining flap, **not** the socket itself.

Step 14



- Remove the single 4.1 mm T5 Torx screw securing the I/O board to the upper case.

Step 15



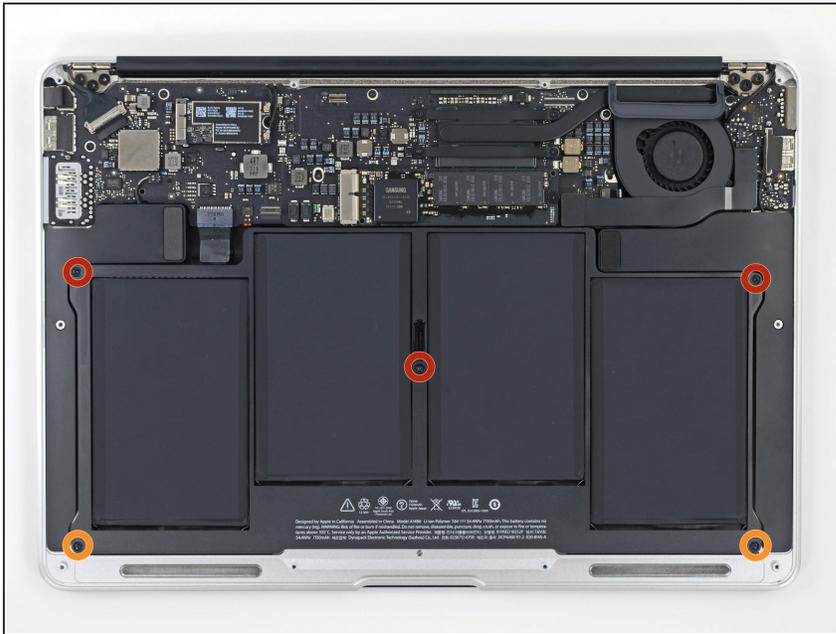
- Gently de-route the camera cable from its notch on the I/O board and push it out of the way with the tip of a spudger.

Step 16



- Lift the I/O board from the logic board side and pull it free from the upper case.
- Removing the I/O board will also disconnect the microphone ribbon cable. Be careful not to snag it.

Step 17 — Battery



- Remove the following five screws securing the battery to the upper case:
 - Three 6.9 mm T5 Torx screws
 - Two 3.0 mm T5 Torx screws

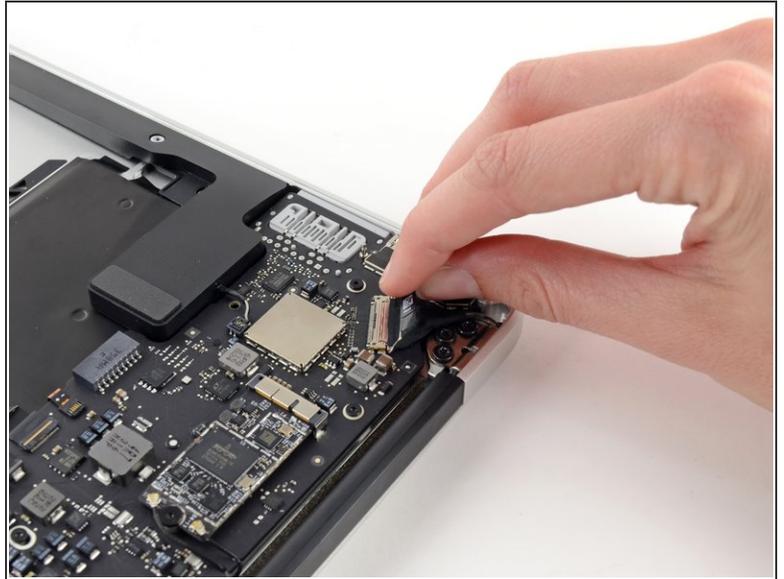
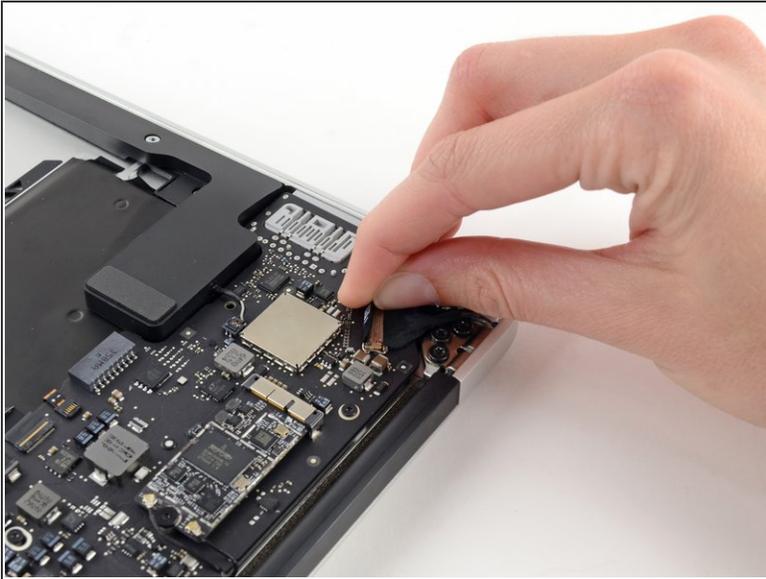
Step 18



⚠ When handling the battery, avoid squeezing or touching the four exposed lithium polymer cells.

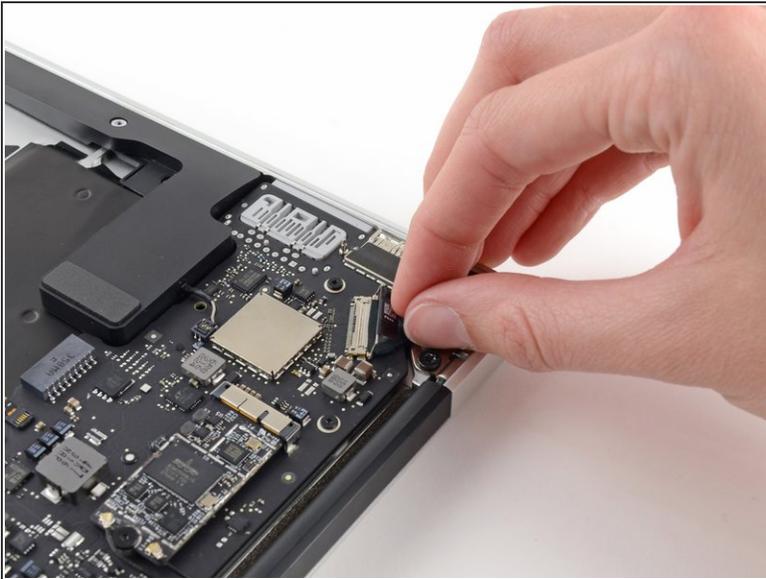
- Lift the battery from its edge nearest the logic board and remove it from the upper case.
- ☑ Your replacement battery may arrive with a [plastic film](#) lightly adhered to the top surface. Remove this film when you install the battery. However, [if the film is glued on and is difficult to remove](#), you should leave the film in place.
- ☑ If you're installing a new battery, you should [calibrate](#) it after installation:
 - Charge it to 100%, and then keep charging it for at least 2 more hours. Then, unplug and use it normally to drain the battery. When you see the low battery warning, save your work, and keep your laptop on until it goes to sleep due to low battery. Wait at least 5 hours, then charge your laptop uninterrupted to 100%.
 - If you notice any unusual behavior or problems after installing your new battery, you may need to [reset your MacBook's SMC](#).

Step 19 — Logic Board Assembly



- Grab the plastic pull tab secured to the display data cable lock and rotate it towards the top side of the computer.

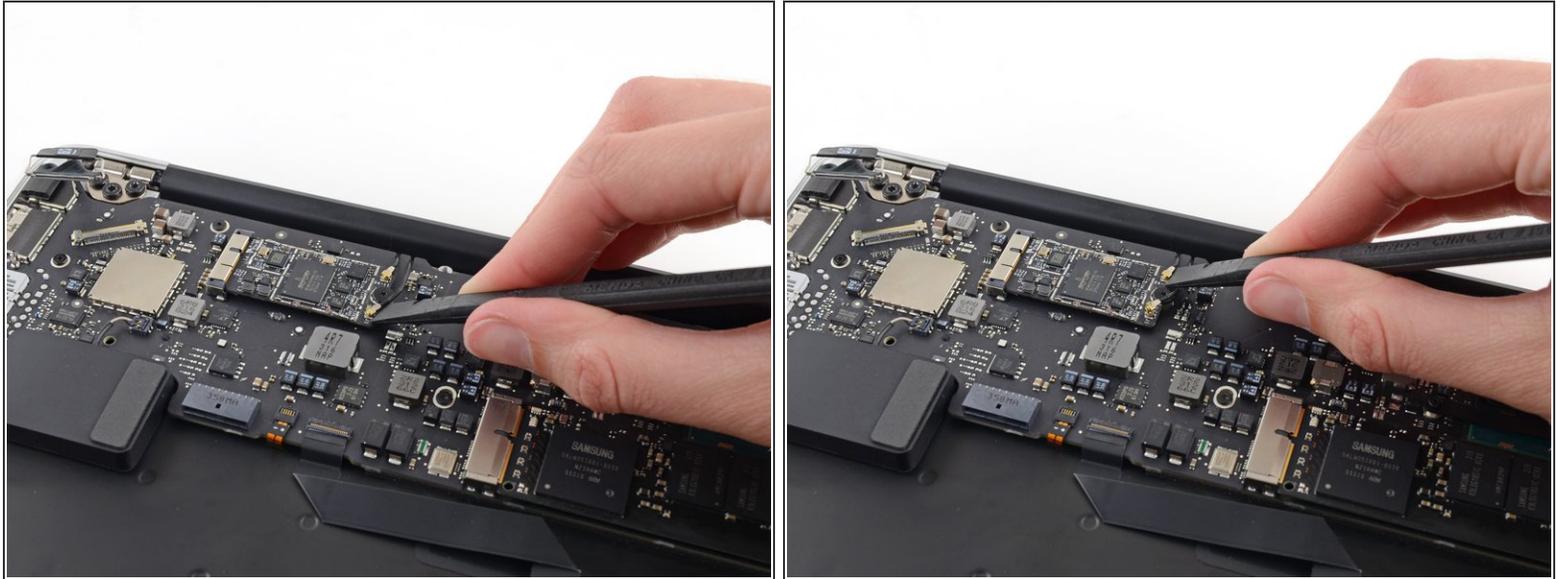
Step 20



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

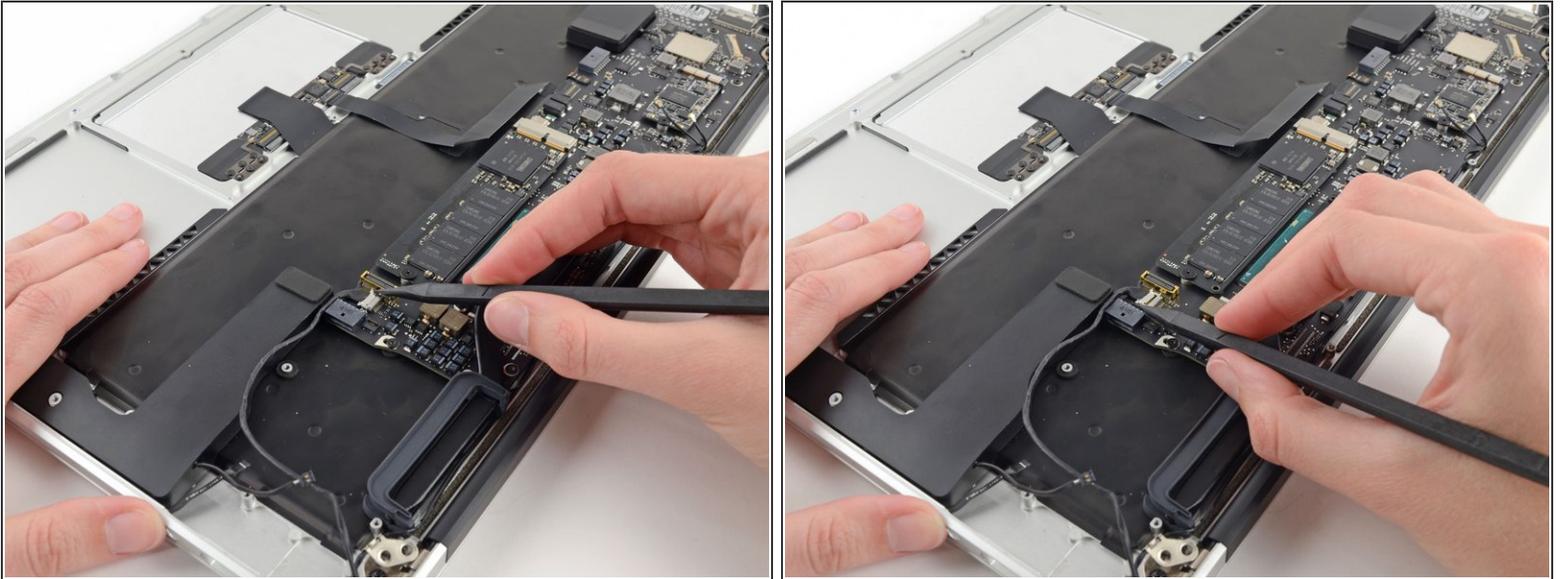
⚠ Make sure to pull the connector parallel to the logic board, do **not** lift straight up from its socket.

Step 21



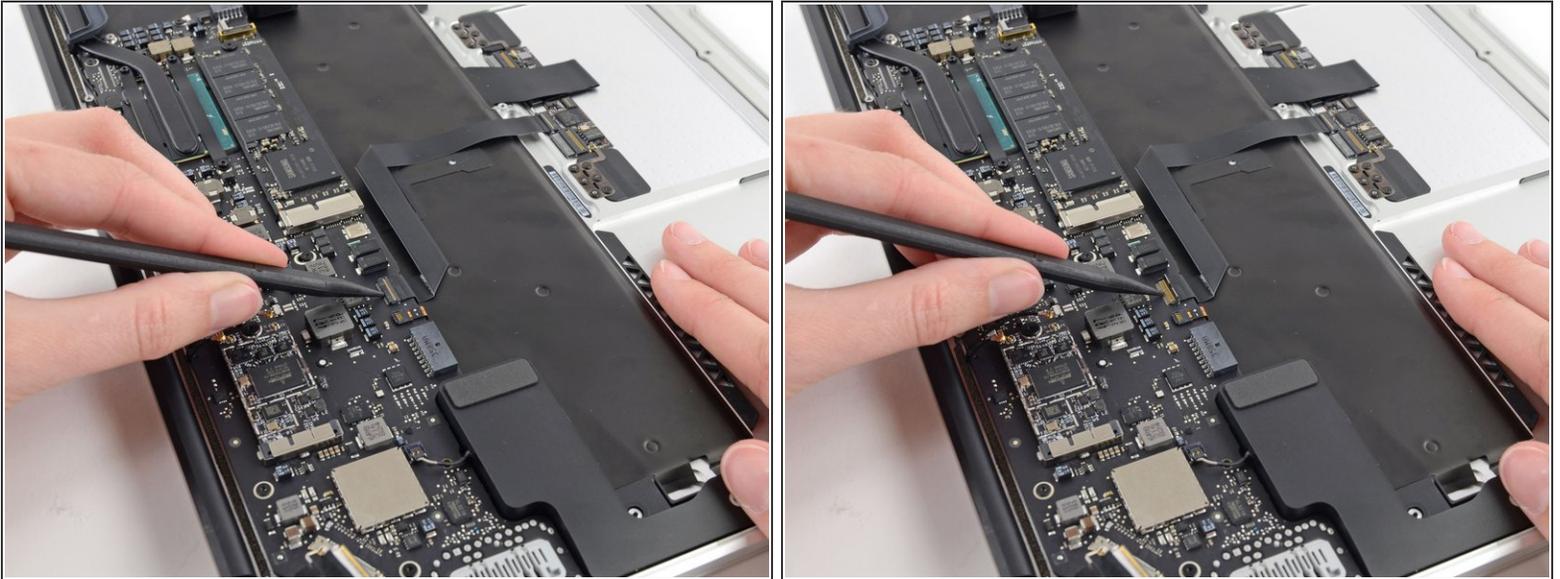
- Use the flat end of a spudger to pry both antenna cable connectors up and off their sockets on the AirPort/Bluetooth card.

Step 22



- Disconnect the camera cable connector with the tip of a spudger.
 - ⓘ Push first on one side of the connector, then on the other side to carefully "walk" it out of its socket.
 - Pull the camera cable parallel to the face of the I/O board toward the front edge of the Air to disconnect it from its socket.
- ⚠ Do not lift upward on this cable as you disconnect it, as its socket may break off the logic board.**

Step 23

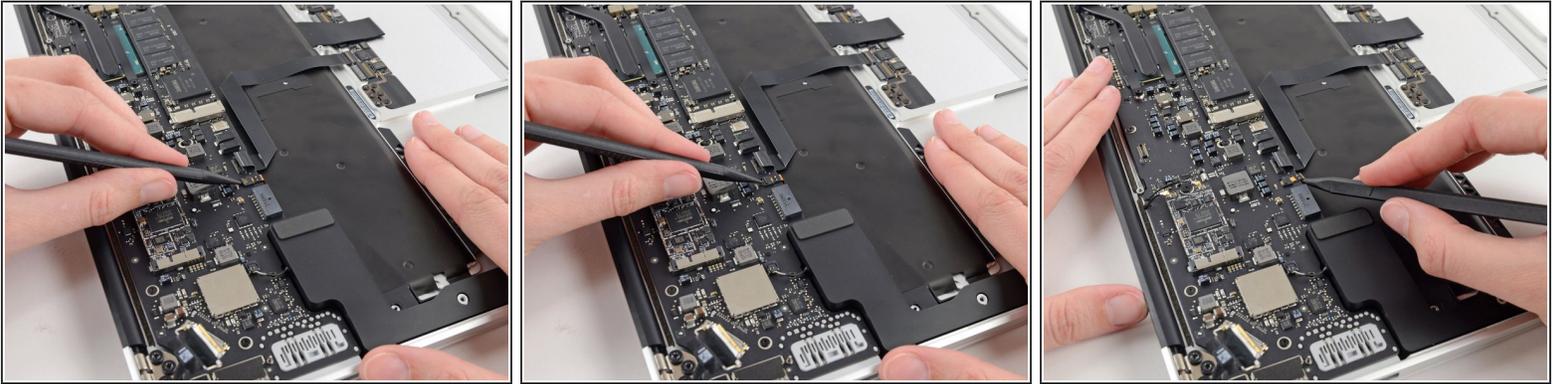


- Use the tip of a spudger or your fingernail to flip up the retaining flap on the trackpad ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

- Pull the trackpad ribbon cable straight out of its socket toward the front edge of the Air.

Step 24

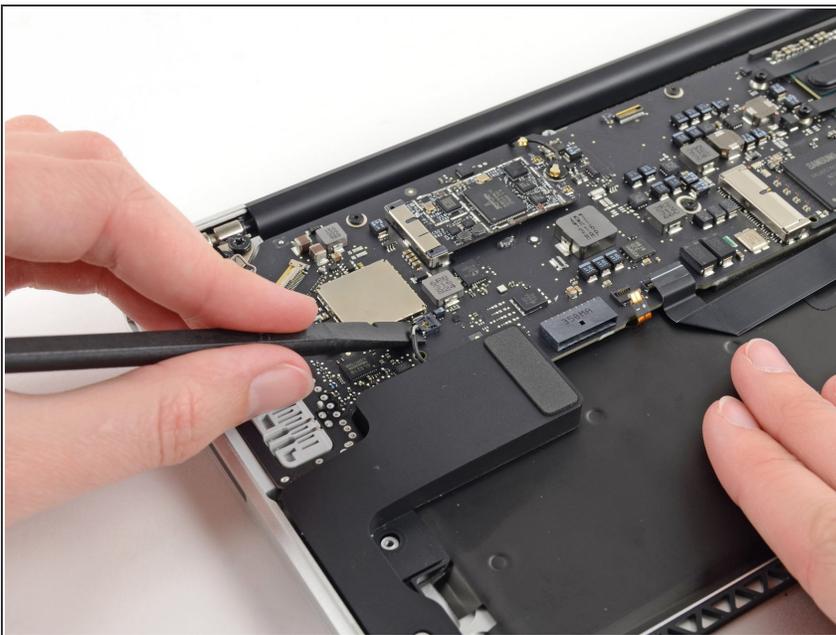


- Use the tip of a spudger to flip up the retaining flap on the keyboard backlight ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

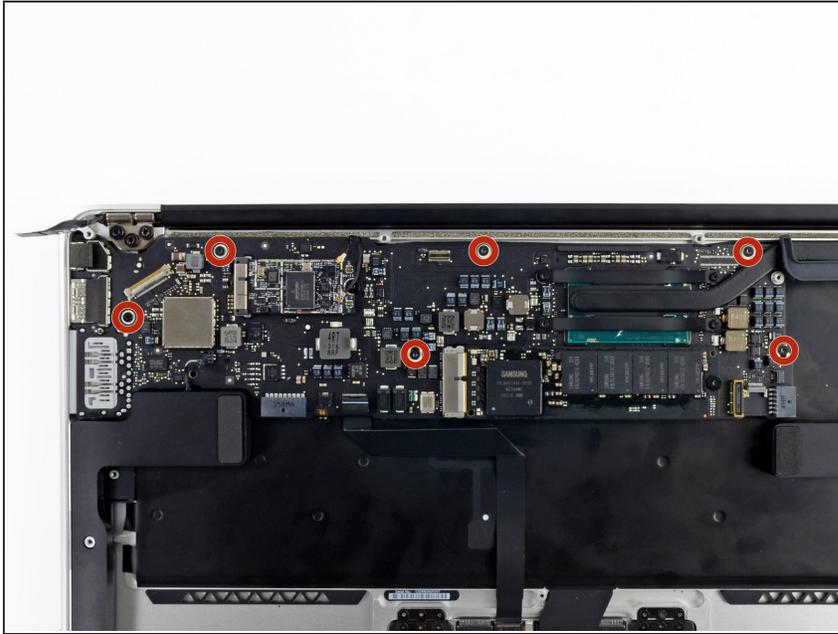
- Use your spudger to gently pull the keyboard backlight ribbon cable out of its socket.

Step 25



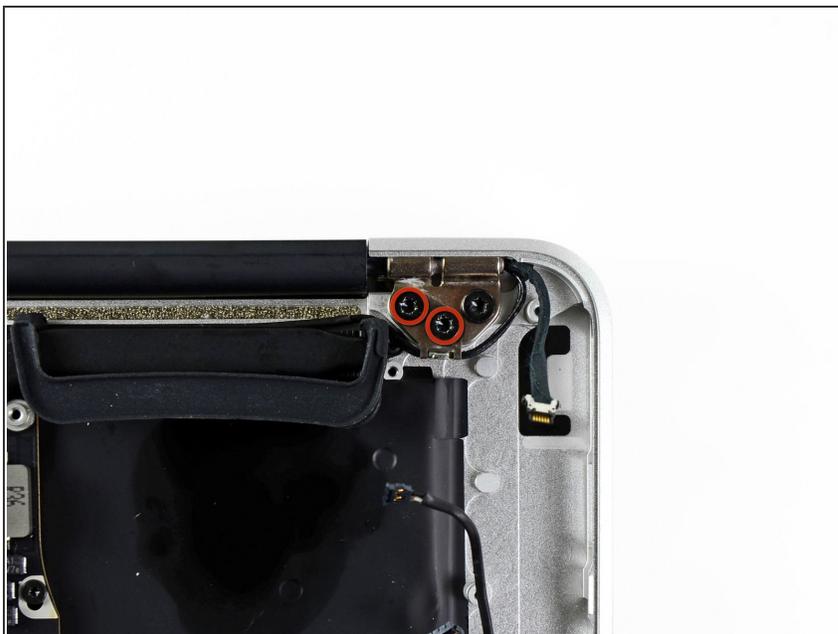
- Use the flat end of a spudger to pry the right speaker cable connector up and out of its socket on the logic board.
- ⓘ It is recommended to pry up from beneath the cables.

Step 26



- Remove the six 6.3 mm T5 Torx screws securing the logic board to the upper case.
- ⓘ On some models these may be 4.1 mm T5 Torx screws.

Step 27



- Remove the inner two 4.9 mm T8 Torx screws securing the antenna cable retainer and left clutch hinge to the upper case.

Step 28



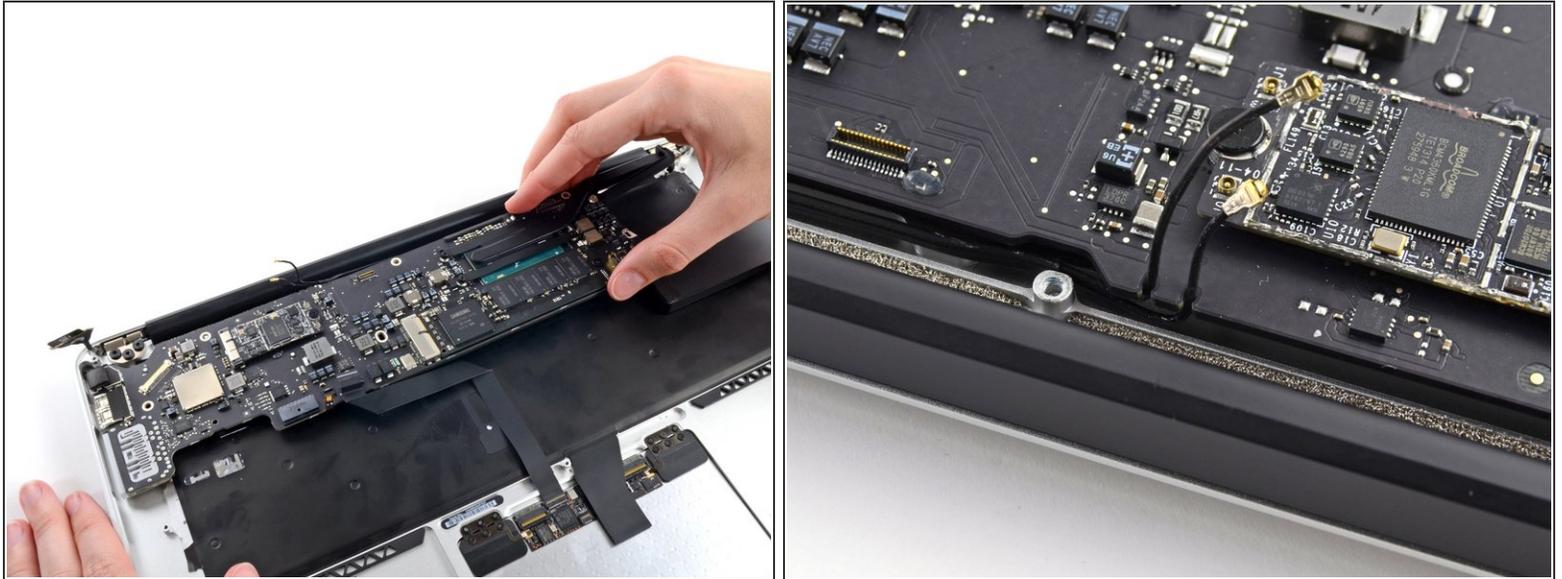
- Push the antenna cable retainer away slightly and remove the 3 mm T5 Torx screw securing the end of the heat sink to the upper case.

Step 29



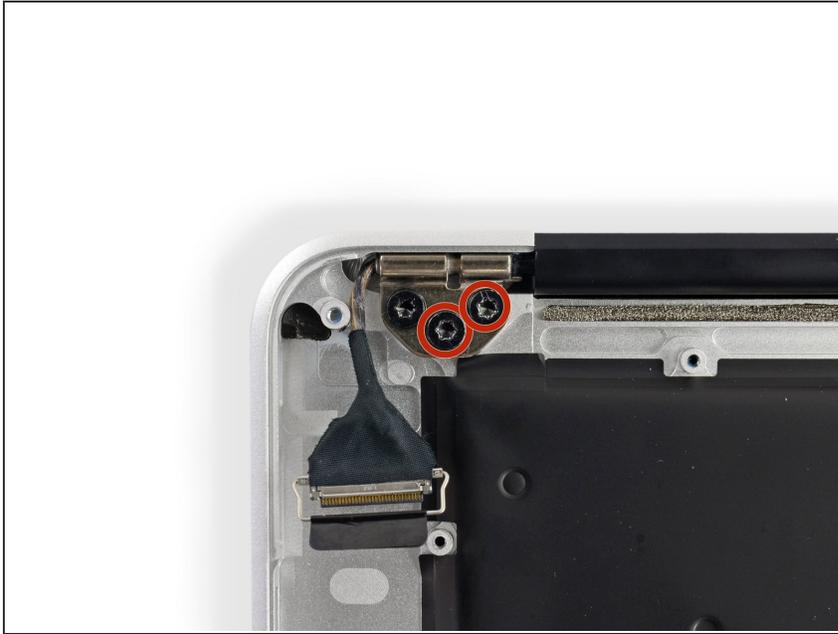
- Slide the flat end of a spudger under the right speaker from the end nearest the hinge to the front edge of the Air to loosen the adhesive.
- Remove the right speaker from the upper case.

Step 30



- Carefully remove the logic board assembly from the upper case, minding any cables that may get caught.
- During reassembly:
- Keep loose cables clear of the board so they aren't caught under it.
 - Make sure the antenna cables are inserted into their respective notches, as highlighted in the second picture.

Step 31 — Display Assembly



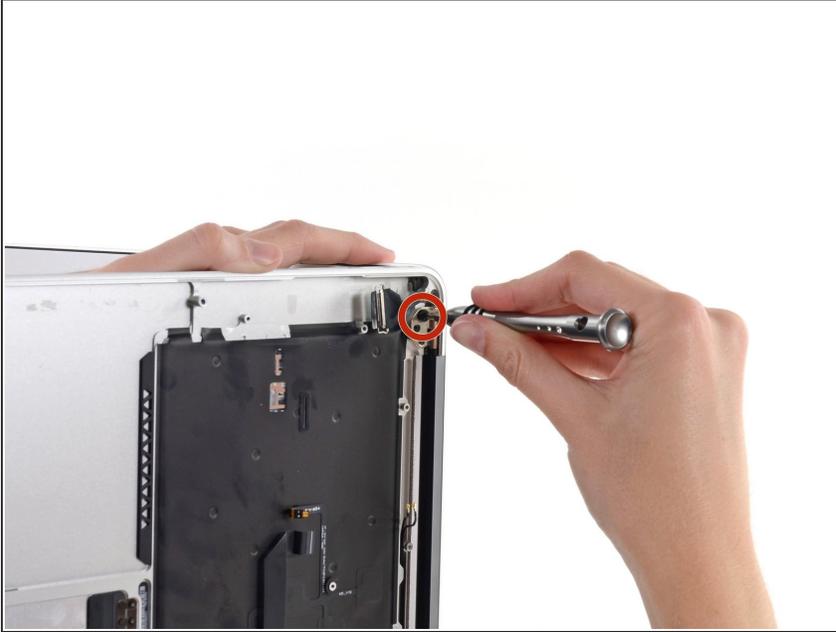
- Remove the inner two 5.6 mm T8 Torx screws securing the right display hinge to the upper case.
- ⓘ Leaving the third screw in place for now will aid in rest of the procedure.

Step 32



- ⓘ Open the display so that it is perpendicular to the upper case and place it on a table as shown.

Step 33



- While holding the Air steady, remove the remaining 5.6 mm T8 Torx screw from the display bracket.

Step 34



- ★ Flip the computer over so the last display screw is more easily accessible.
- ⓘ Before removing the final display screw, be sure to hold the display and upper case steady with your other hand. Failure to do so may allow the components to fall onto the table, causing potentially expensive damage.
- Remove the last 5.6 mm T8 Torx screw securing the display to the upper case.

Step 35



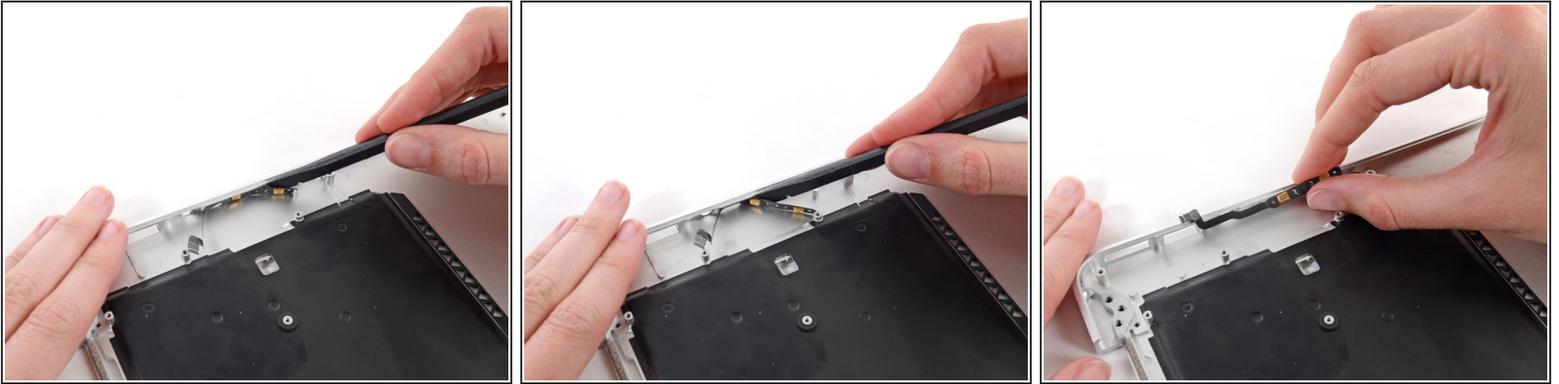
- Open the Air slowly until the hinges slide out of their notches.
- ⓘ The antenna cables may still be routed through a channel in the upper case. Make sure the cables don't get snagged as you remove the display.
- Once the two display hinges have cleared the upper case, remove the display and set it aside.

Step 36 — Upper Case



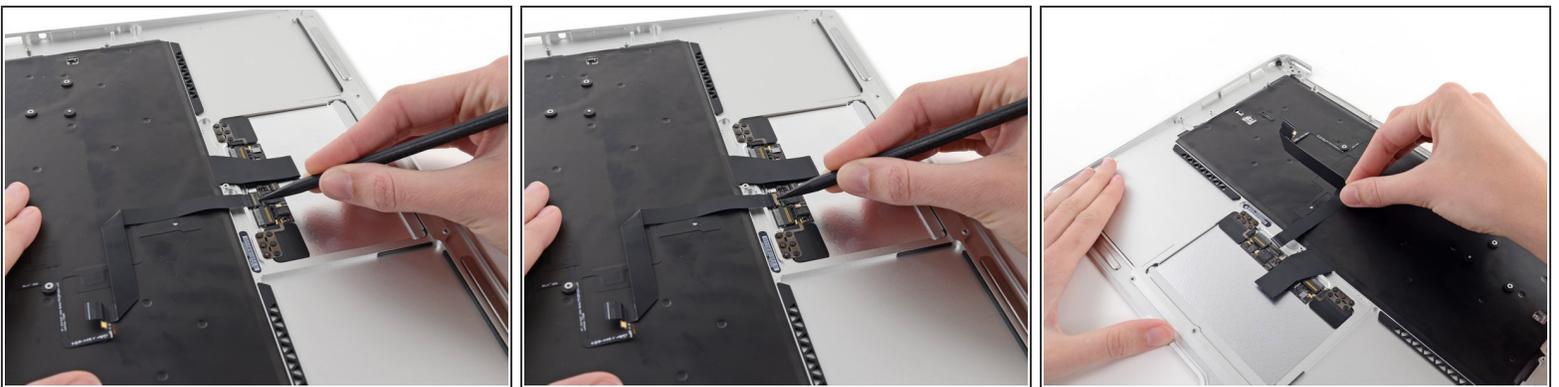
- Use the flat end of a spudger to pry the left speaker off the adhesive securing it to the upper case.
- Remove the left speaker from the upper case.

Step 37



- Use the flat end of a spudger to pry the microphone off the adhesive securing it to the left side of the upper case.
 - If needed, apply a little heat from an iOpener or hairdryer to soften the adhesive.
- Remove the microphone from the upper case.

Step 38 — Upper Case



- Use the tip of a spudger or your fingernail to flip up the retaining flap on the trackpad ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not the socket itself.**

- Pull the trackpad ribbon cable straight out of its socket toward the rear edge of the Air.

Step 39

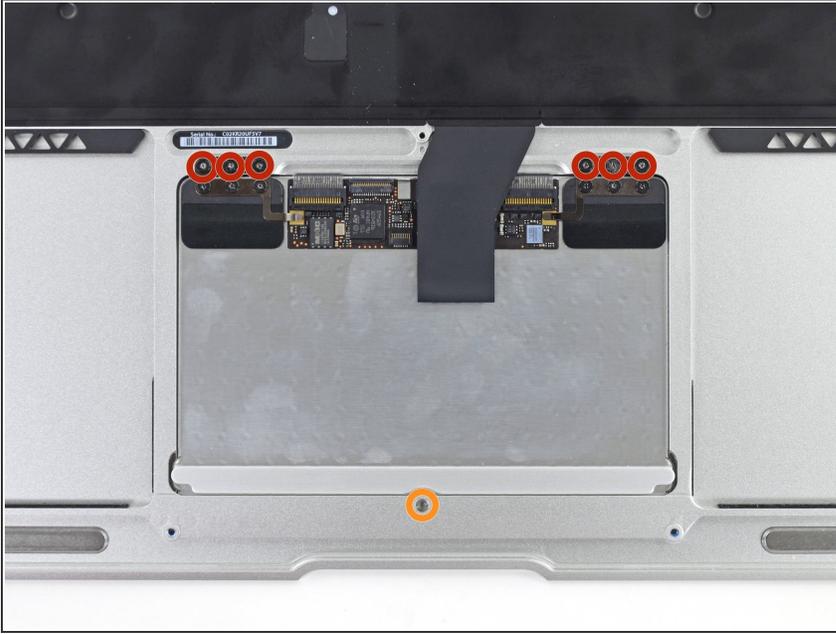


- While carefully lifting the keyboard ribbon cable with one hand, use the tip of a spudger or your fingernail to flip up the retaining flap on the keyboard ribbon cable ZIF socket.

⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

- Pull the keyboard ribbon cable straight out of its socket toward the front edge of the Air.

Step 40



- Remove the following seven screws:
 - Six 1.6 mm Phillips screws securing the trackpad to the upper case.
 - One 1.4 mm T5 Torx set screw from its tapped hole near the front edge of the upper case.
- ☑ During reassembly, do not over-tighten the set screw, as the button will cease to click at a certain point. Adjust the set screw until the movable side of the trackpad has minimal play.

Step 41



- Carefully lift the edge of the trackpad closest to the keyboard from its recess in the upper case by lifting it away from the brackets attached to the upper case.
- Remove the trackpad from the upper case.
- The upper case remains.

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

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Try some [basic troubleshooting](#), or ask our [Answers community](#) for help.