



MacBook Air 13" Mid 2012 Upper Case Replacement

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

Written By: Andrew Optimus Goldheart



INTRODUCTION

Use this guide to replace the upper case, including the backlit keyboard.



TOOLS:

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



PARTS:

- [MacBook Air 13" \(Mid 2012\) Upper Case with Keyboard](#) (1)
- [MacBook Air 13" \(Mid 2011 Mid 2012\) Trackpad Cable](#) (1)

Step 1 — Lower Case



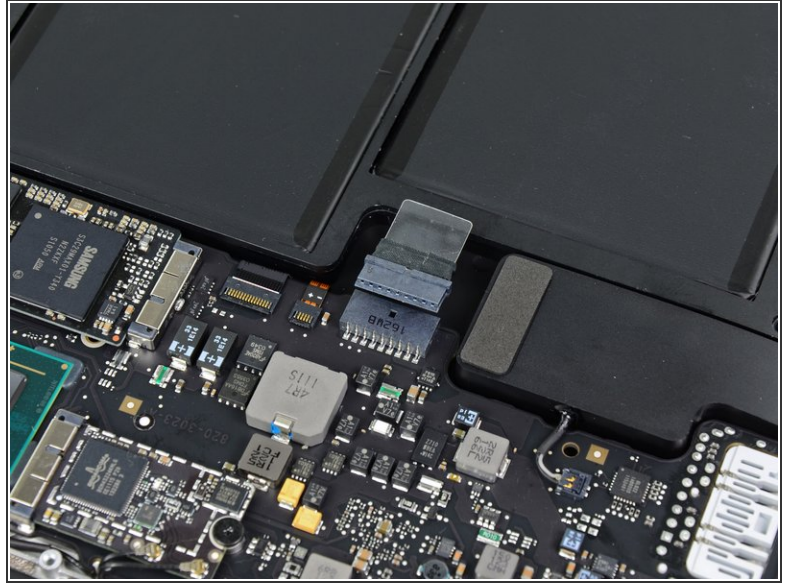
- **i** Before proceeding, power down your MacBook. Close the display and lay it on a soft surface, top-side down.
- Use a [P5 Pentalobe](#) driver to remove ten screws securing the lower case, of the following lengths:
 - Two 9 mm screws
 - Eight 2.6 mm screws




Step 2



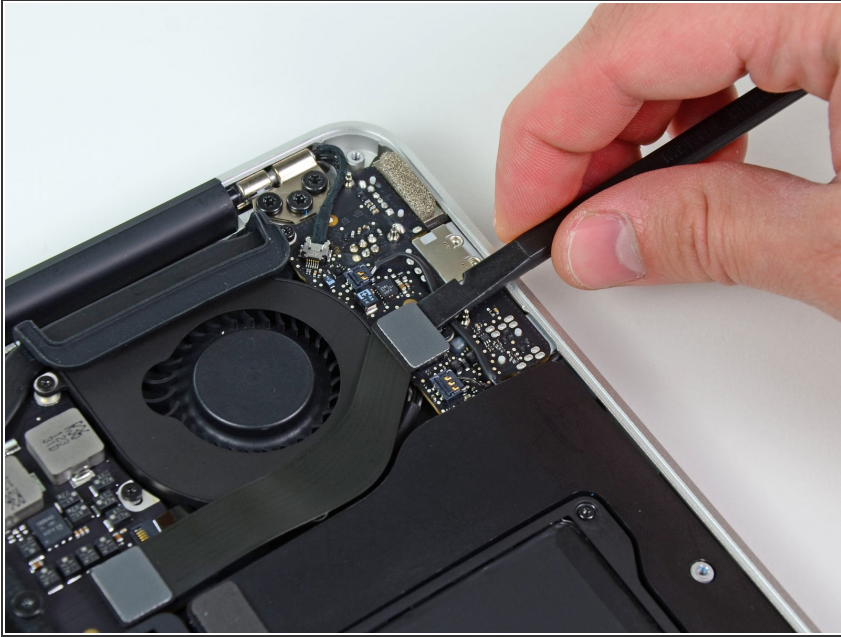
- Wedge your fingers between the display and the lower case and pull upward to pop the lower case off the Air.
- Remove the lower case and set it aside.

Step 3 — Battery Connector



-  As a precaution against accidental discharge or shock, disconnect the battery connector from the logic board.
-  Grab the clear plastic pull tab attached to the battery connector and pull it toward the front edge of the Air to disconnect the battery from the logic board.
-  Be sure to pull the connector horizontally toward the battery, and not straight up from the Air, or you may damage the socket on the logic board.

Step 4 — I/O Board Cable



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

Step 5



- Carefully peel the I/O board cable from the top of the fan.

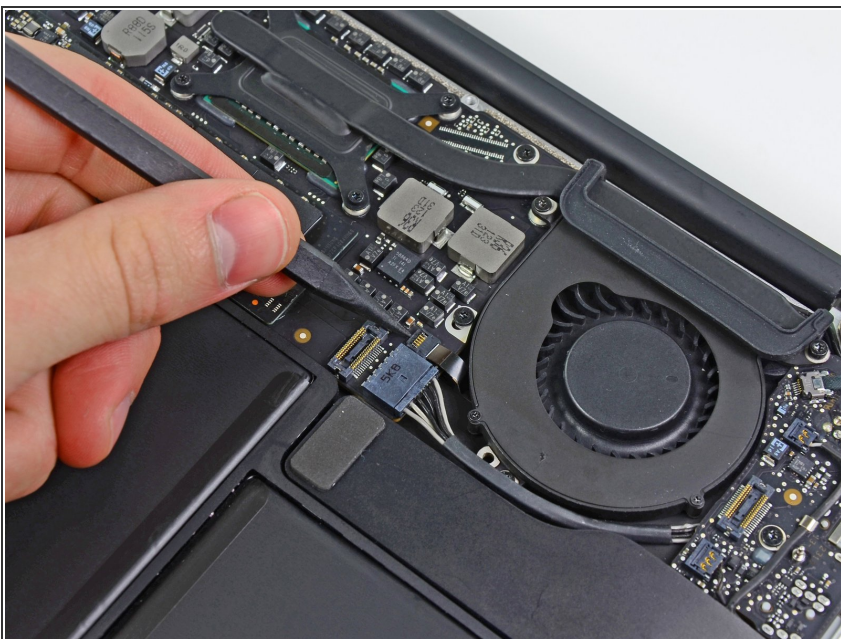
Step 6




 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 tip of a spudger to pry upward on alternating sides of the connector to help "walk" it out of its socket.
- Remove the I/O board cable.

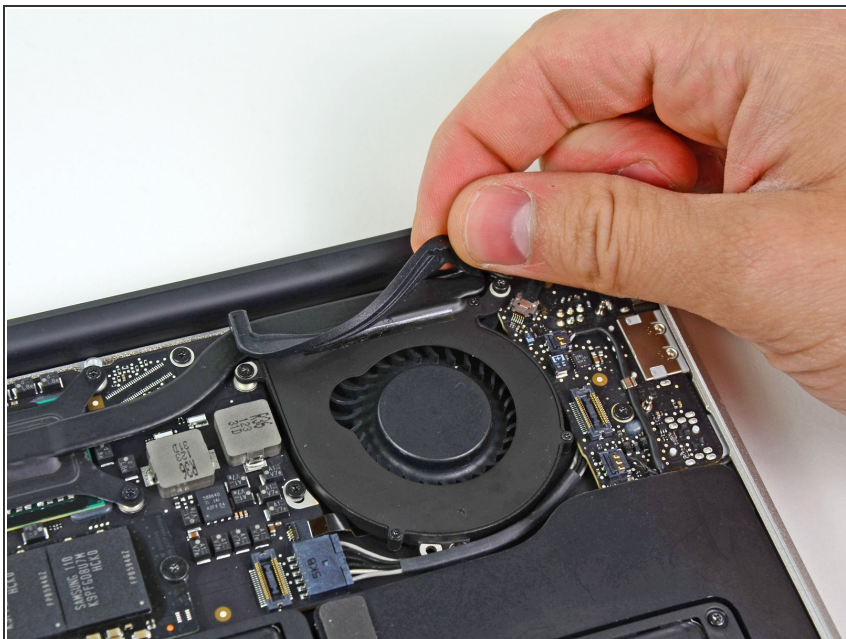
Step 7 — Fan



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

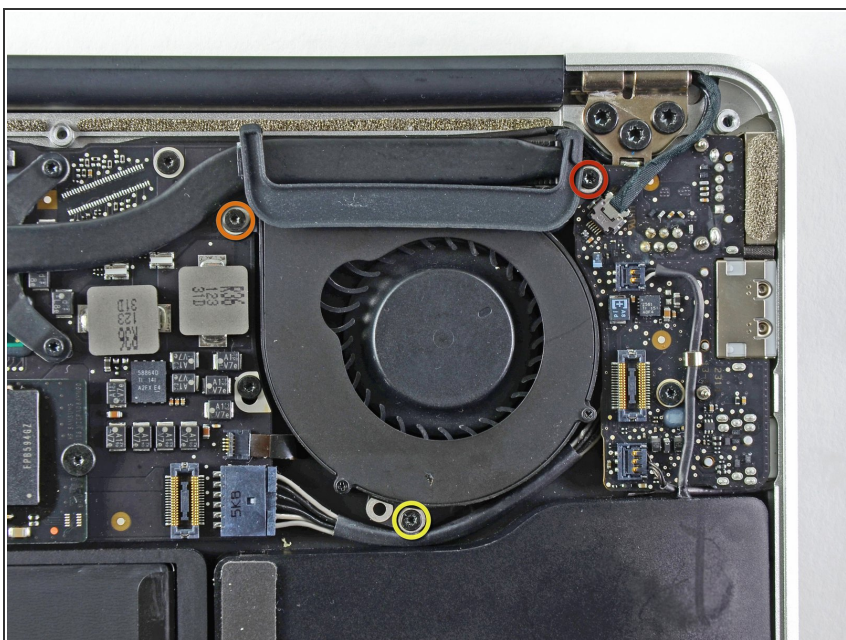
 Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

Step 8



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

Step 9



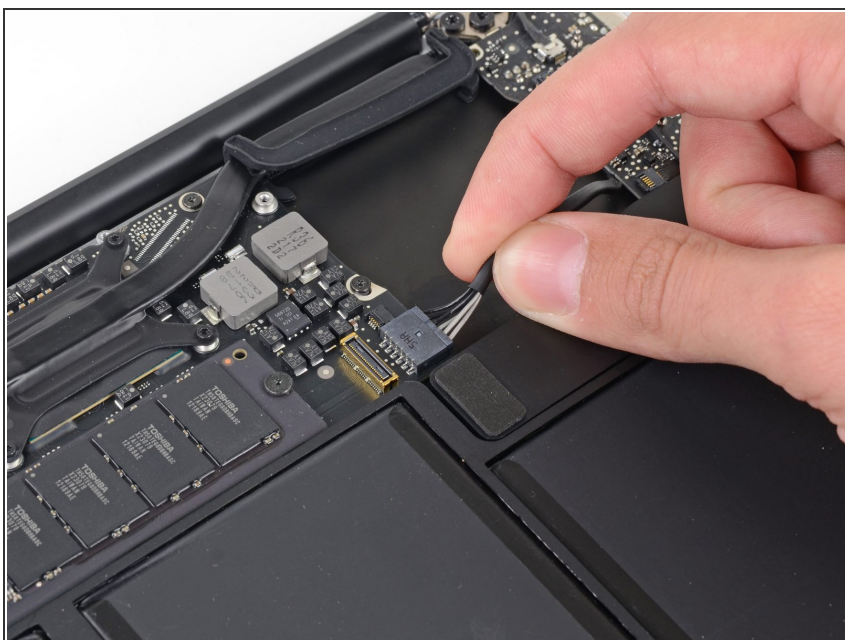
- Remove the following three screws securing the fan to the upper case:
 - One 3.6 mm T5 Torx screw
 - One 2.7 mm T5 Torx screw
 - One 3.6 mm T5 Torx screw with a short head

Step 10



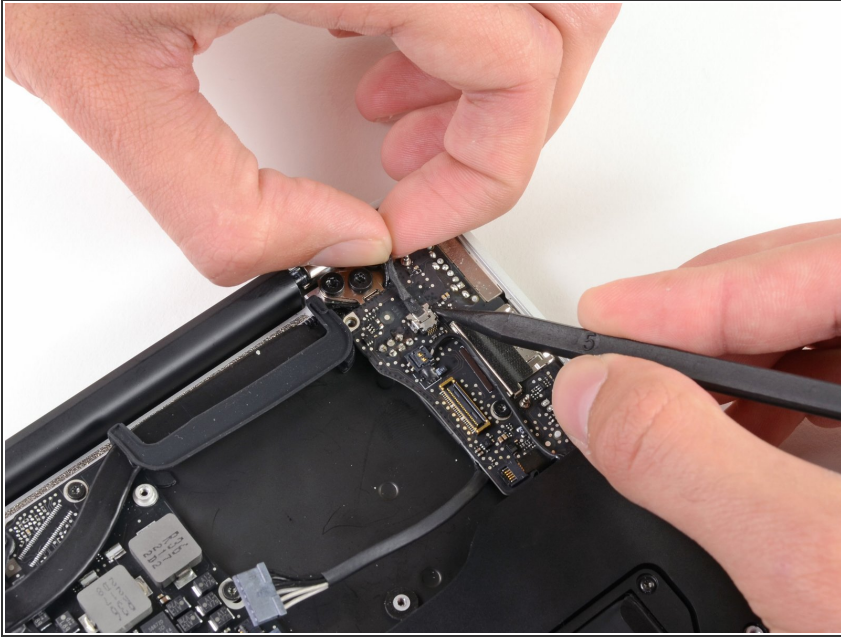
- Lift the fan out of the upper case and carefully pull the fan ribbon cable out of its socket as you remove it from the Air.

Step 11 — I/O Board



- Disconnect the I/O board by pulling the 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.

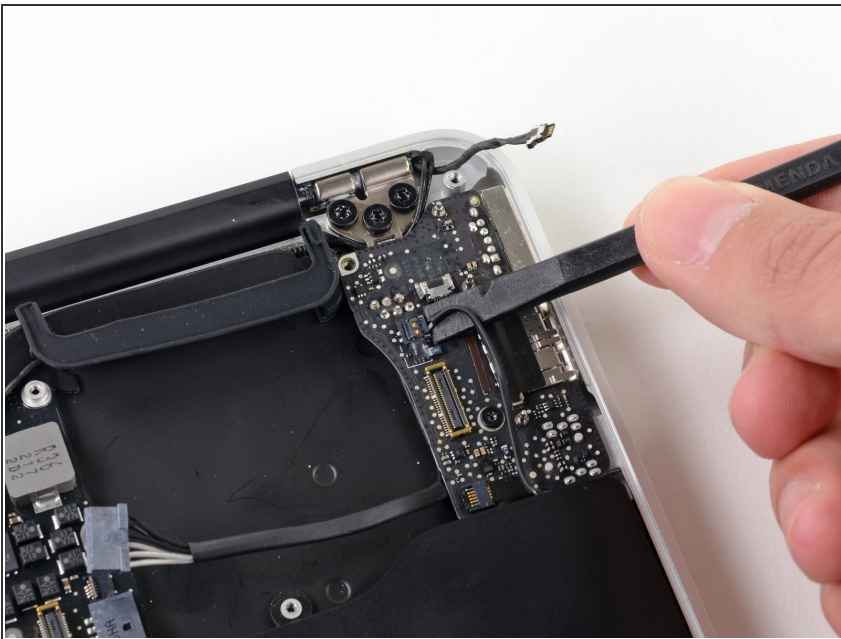
Step 12



- Pull the camera cable parallel to the face of the I/O board toward the hinge of the Air to disconnect it from its socket, using the tip of a spudger to help push the connector out of its socket.

⚠ Do not lift upward on this cable as you disconnect it, as its socket may break off the logic board.

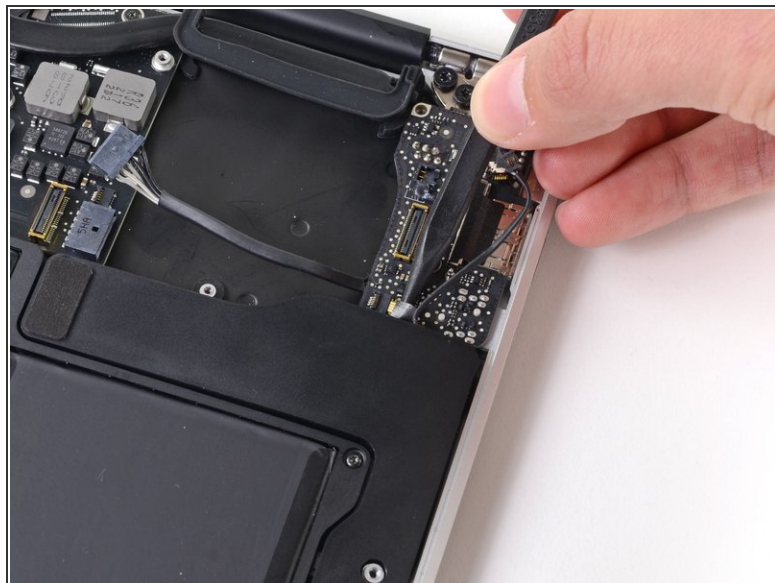
Step 13



- 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.

ⓘ Pry up from beneath the wires.

Step 14



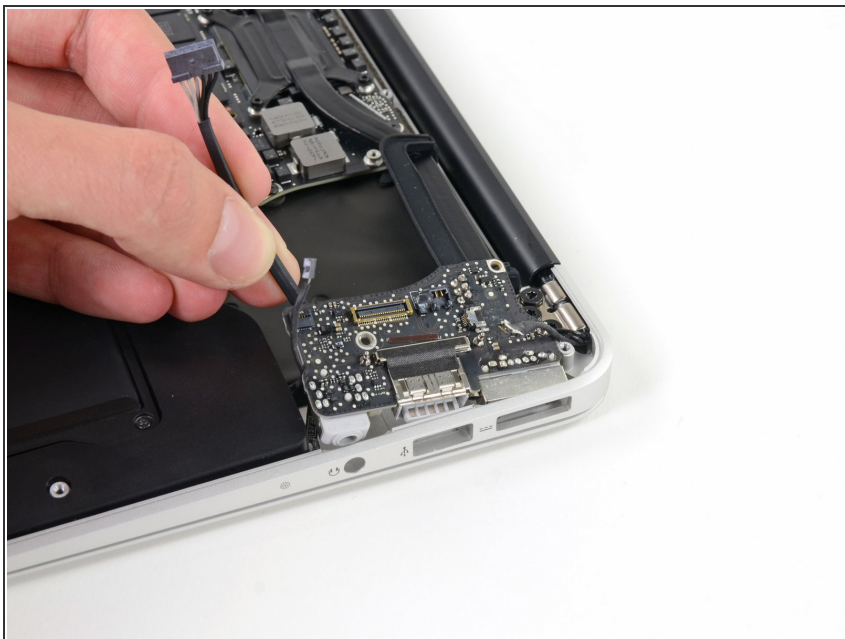
- Use the tip of a spudger to flip up the retaining flap securing the microphone ribbon cable to the I/O board.
- Use the tip of a spudger to remove the volume button ribbon cable from its ZIF connector on the I/O board.

Step 15



- Remove the single 4.0 mm T5 Torx screw securing the I/O board to the upper case.

Step 16



- Carefully lift the I/O board from its edge nearest the logic board and remove it from the upper case.

Step 17 — Battery



- Remove the following five screws securing the battery to the upper case:
 - Three 6.3 mm T5 Torx screws
 - Two 2.4 mm T5 Torx screws

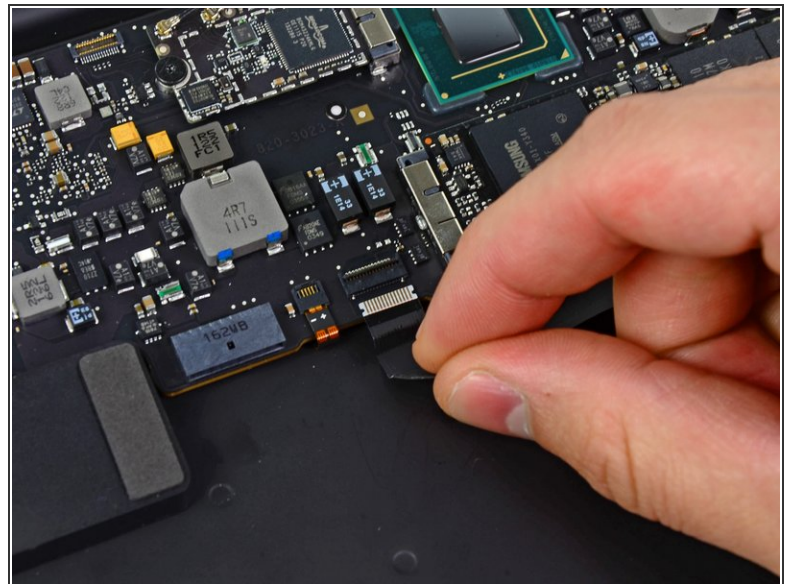
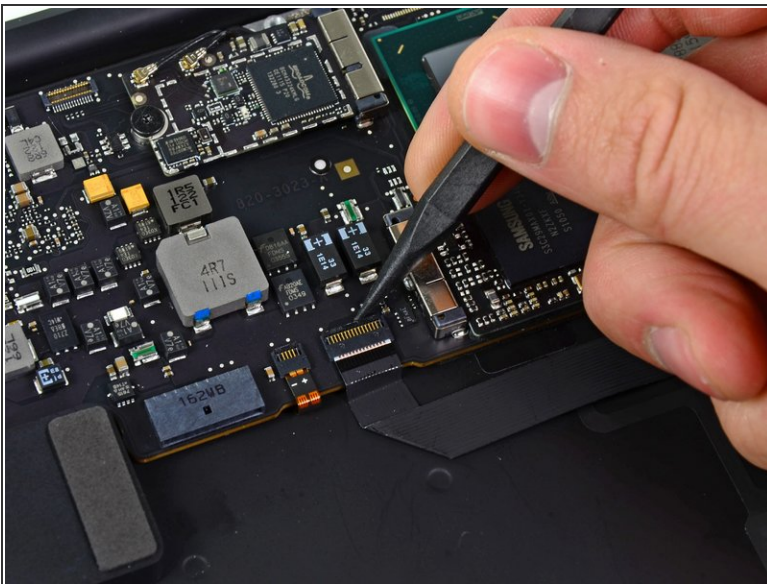
Step 18



⚠ 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.

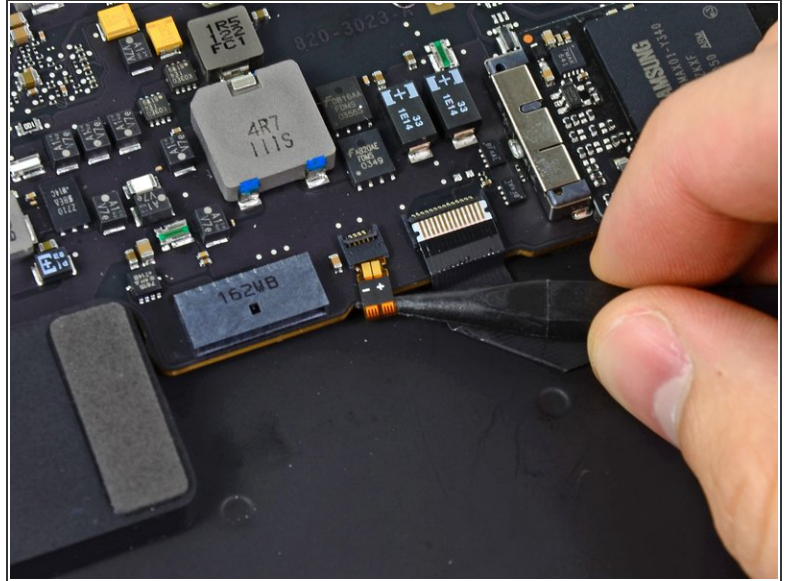
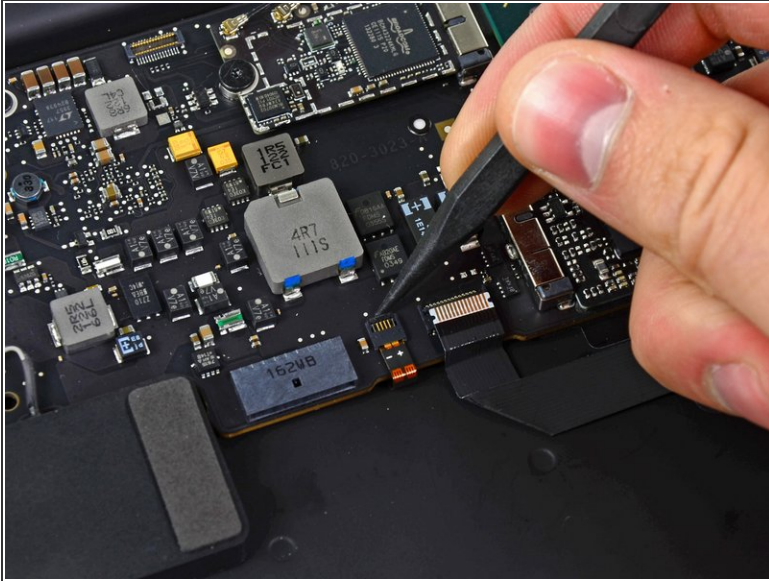
Step 19 — Logic Board



- 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 20

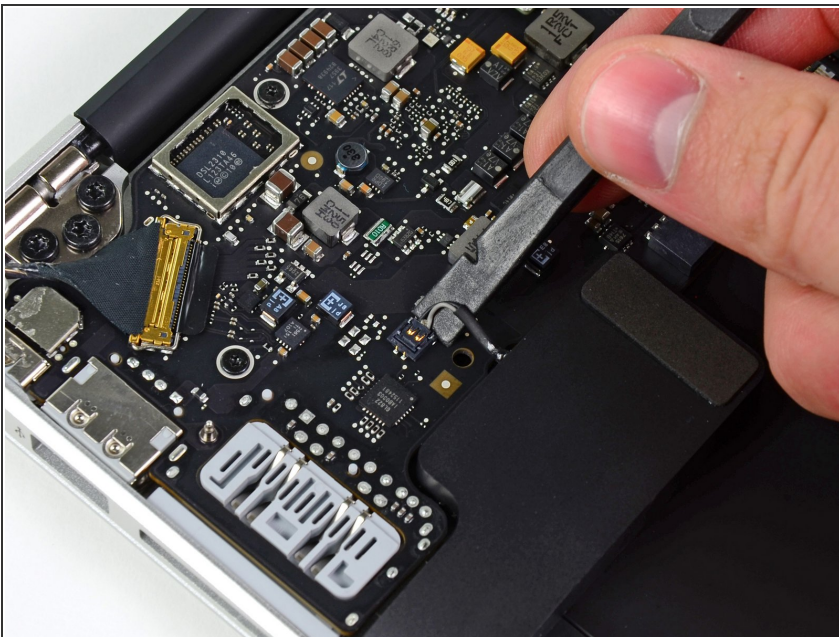


- Use the tip of a spudger to flip up the retaining flap on the keyboard backlight ribbon cable ZIF socket.

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

- Use your spudger to help pull the cable out of its socket.

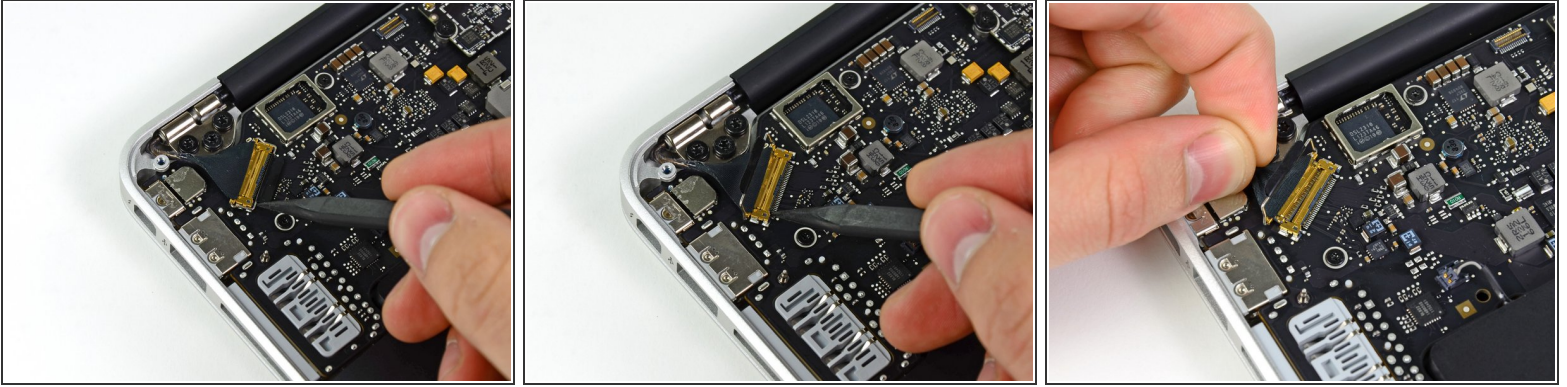
Step 21



- Use the flat end of a spudger to pry the right speaker cable connector up and out of its socket on the logic board.

ⓘ Pry up from beneath the cables.

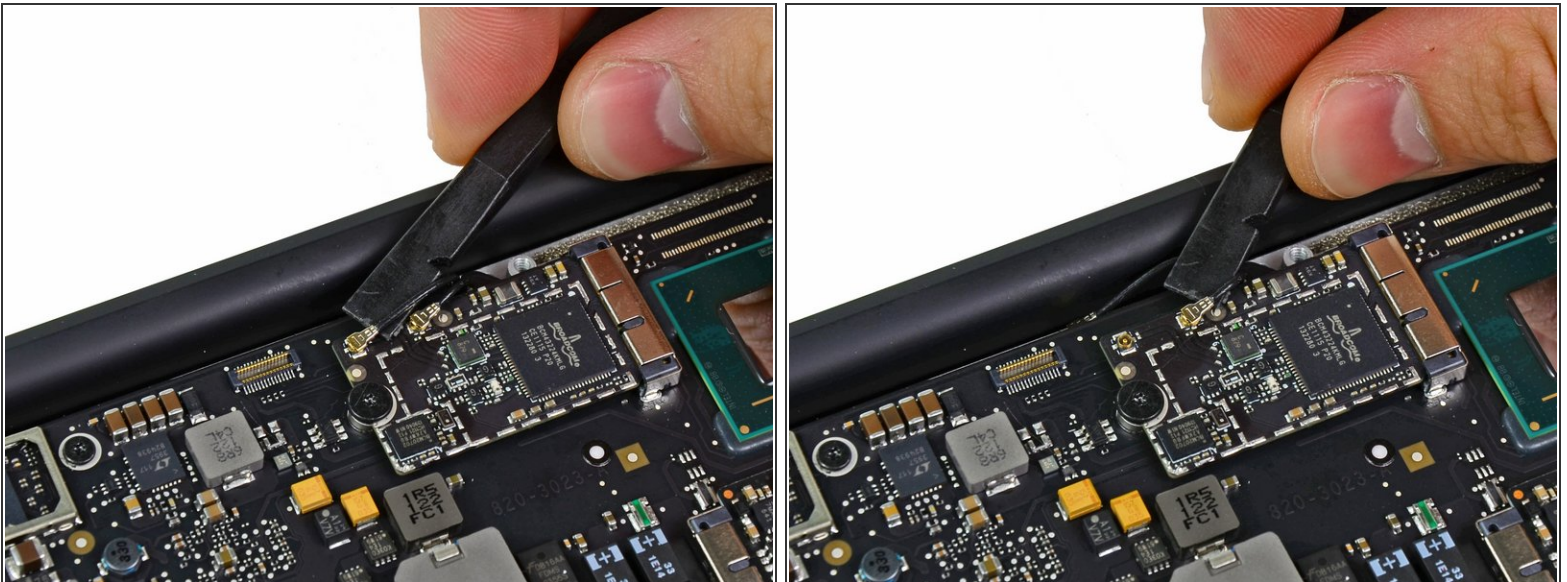
Step 22



- Gently push the tip of a spudger under the black plastic flap stuck to the display data cable lock to make the lock pop upward and away from the socket.
- While holding the lock away from the socket, use the tip of a spudger and your fingers to gently remove the display data cable from its socket.

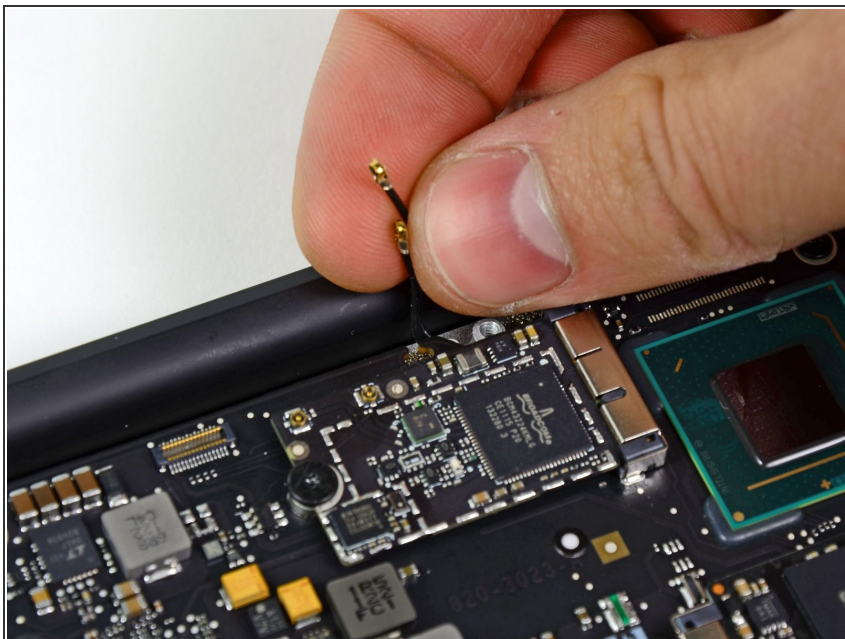
⚠ Do not pull upward on the display data cable as you disconnect it, as its socket may break off the logic board.

Step 23



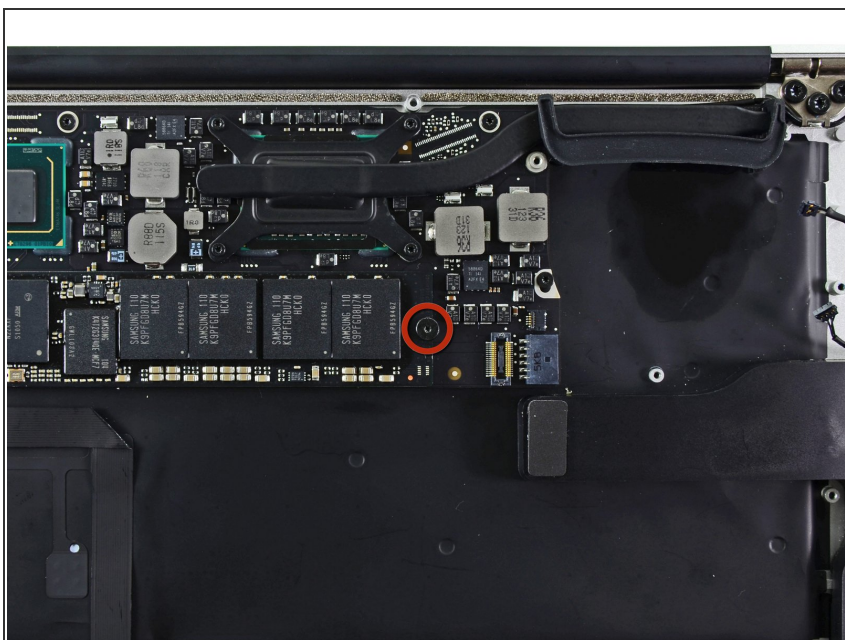
- Use the flat end of a spudger to pry both antenna cable connectors up and off their sockets on the Airport/Bluetooth card.

Step 24



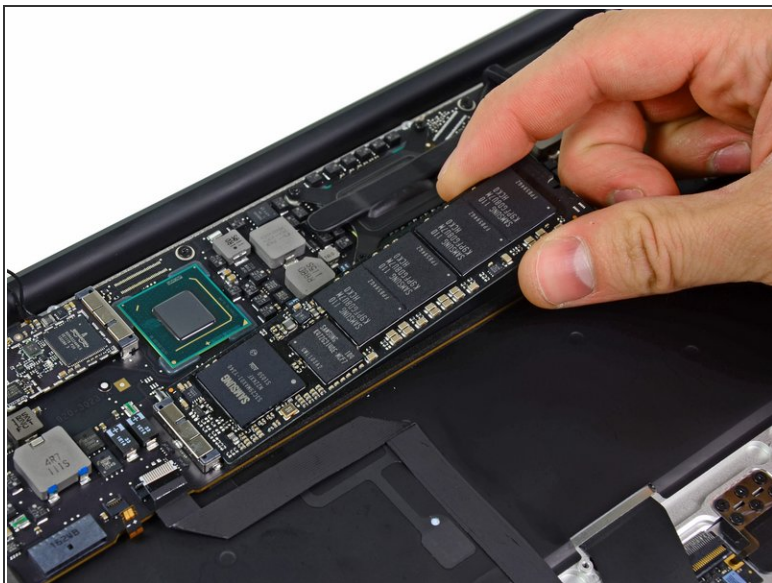
- Gently de-route the antenna cables from the slot cut into the logic board.

Step 25




- Remove the single 2.85 mm T5 Torx screw securing the SSD to the logic board.

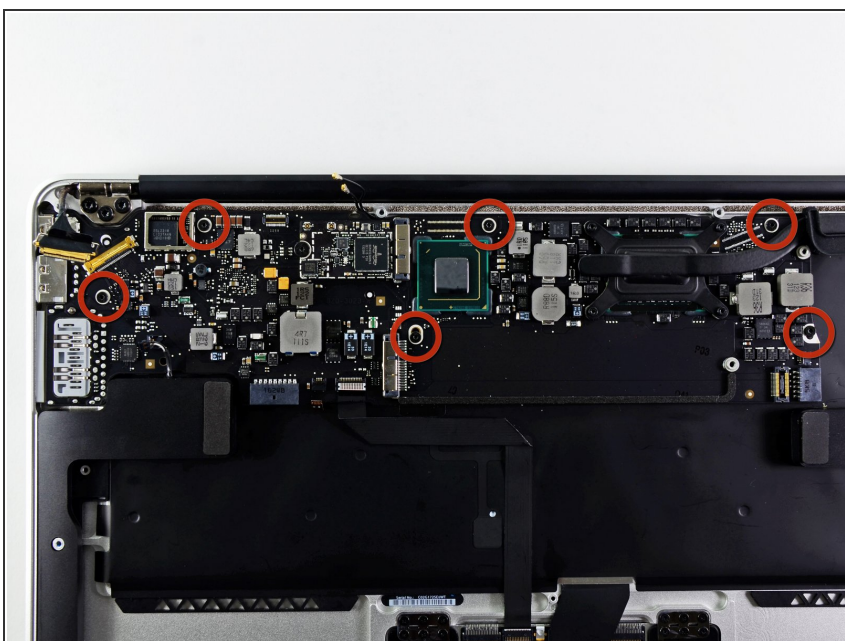
Step 26



 To avoid damaging its socket, do not lift the end of the SSD excessively.

- Pull the drive straight out of its socket and remove it from the logic board.
-  When reinstalling the SSD, be sure it is properly seated before reinstalling its retaining screw.

Step 27



- Remove the six 6.3 mm T5 Torx screws securing the logic board to the upper case.

Step 28



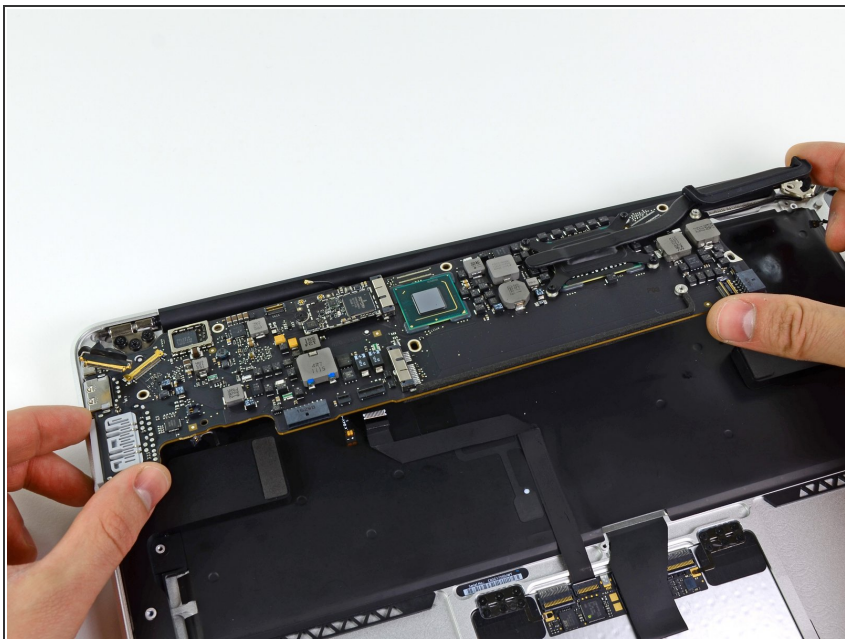
- Remove the inner two 4.9 mm T8 Torx screws securing the antenna cable retainer and left clutch hinge to the upper case.

Step 29



- 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 30



- Carefully remove the logic board assembly from the upper case, minding any cables that may get caught.
- ⓘ Hold the antenna cables out of the way as you lift the heat sink end of the logic board out of the upper case.

Step 31 — Display Assembly



- Gently de-route the antenna cables out of the channel cut into the upper case.

Step 32



- Remove the inner two 4.9 mm T8 Torx screws securing the right display hinge to the upper case.
- ⓘ We intentionally have you leave the third screw in to aid in future steps.

Step 33



- Open the display until it is perpendicular to the upper case and place it on a table as shown.
- While holding the Air steady, remove the remaining 4.9 mm T8 Torx screw from the lower display bracket.

Step 34



⚠ Before removing the last 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.

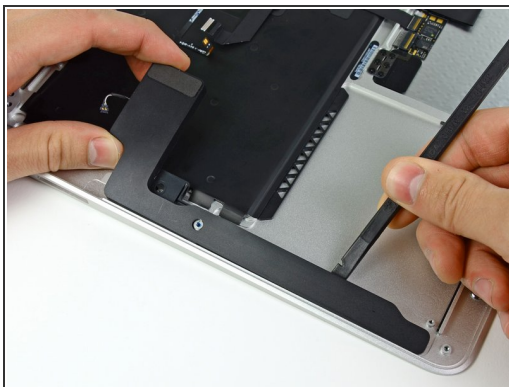
- Remove the last 4.9 mm T8 Torx screw securing the display to the upper case.

Step 35



- Push the upper case slightly toward the display assembly, then rotate it away from the front of the display assembly.
- Once the two display hinges have cleared the upper case, remove the display and set it aside.

Step 36 — Upper Case



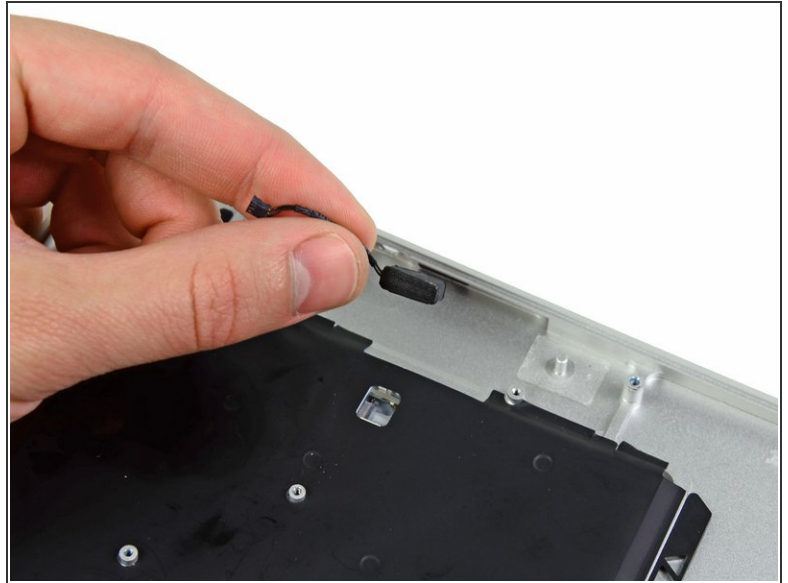
- Use the flat end of a spudger to pry the right speaker off the adhesive securing it to the upper case.
- Remove the right speaker from the upper case.

Step 37



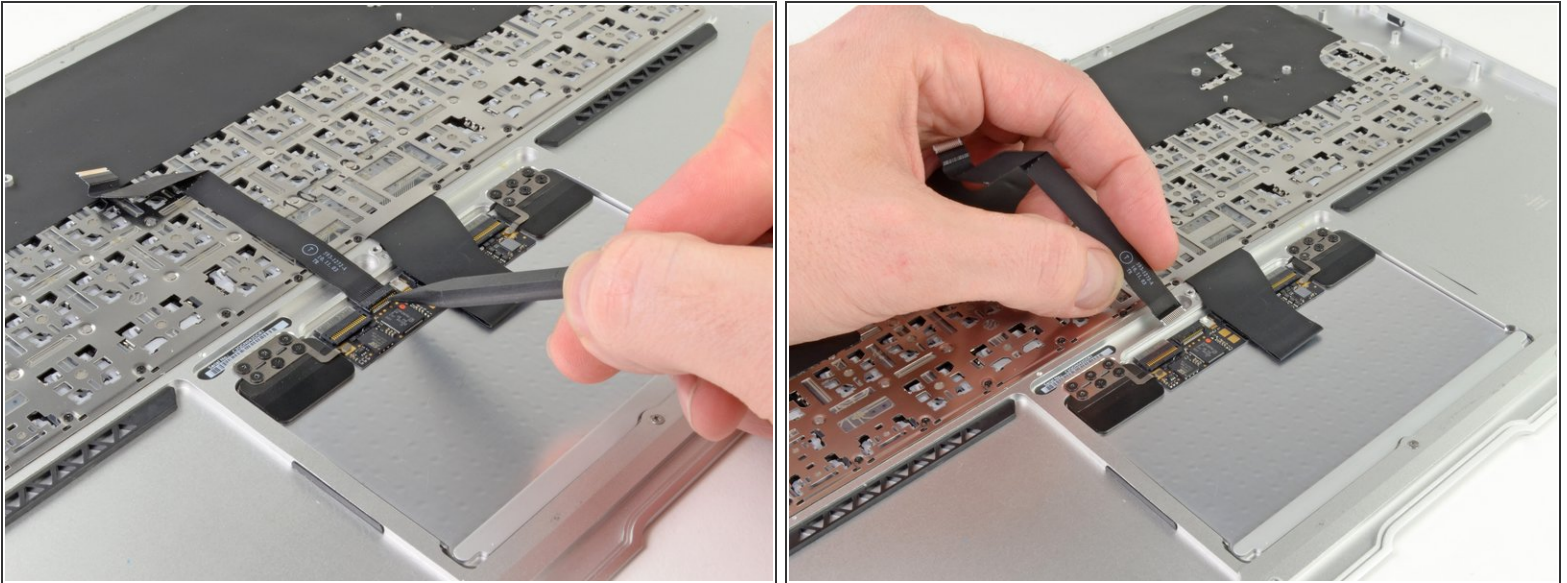
- Use the flat end of a spudger to pry the left speaker off the adhesive securing it to the upper case.
- Remove the left speaker from the upper case.

Step 38



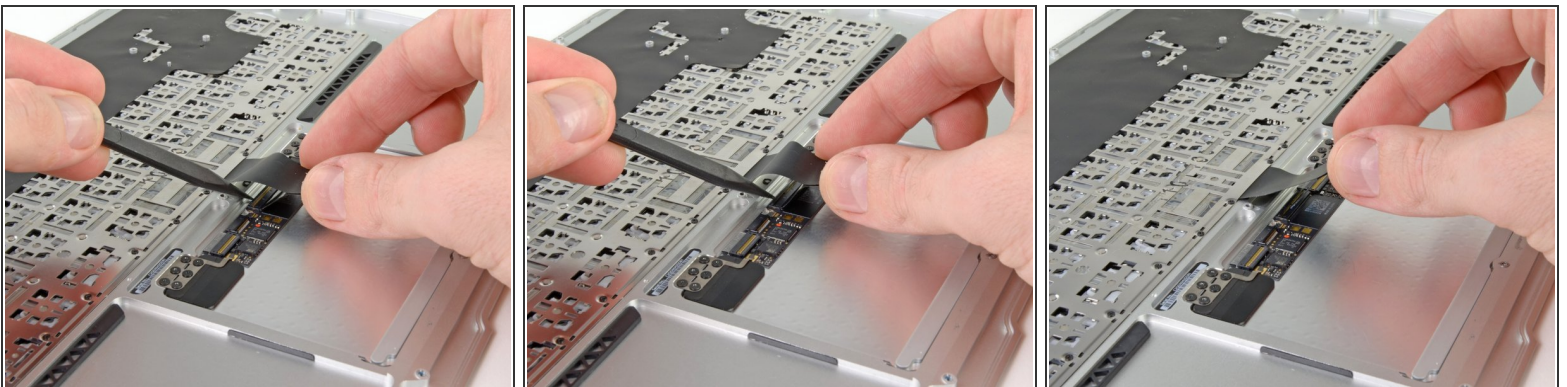
- Use the tip of a spudger to pry the microphone away from the left side of the upper case.
- Remove the microphone from the upper case.
- Upper case remains.

Step 39 — Upper Case



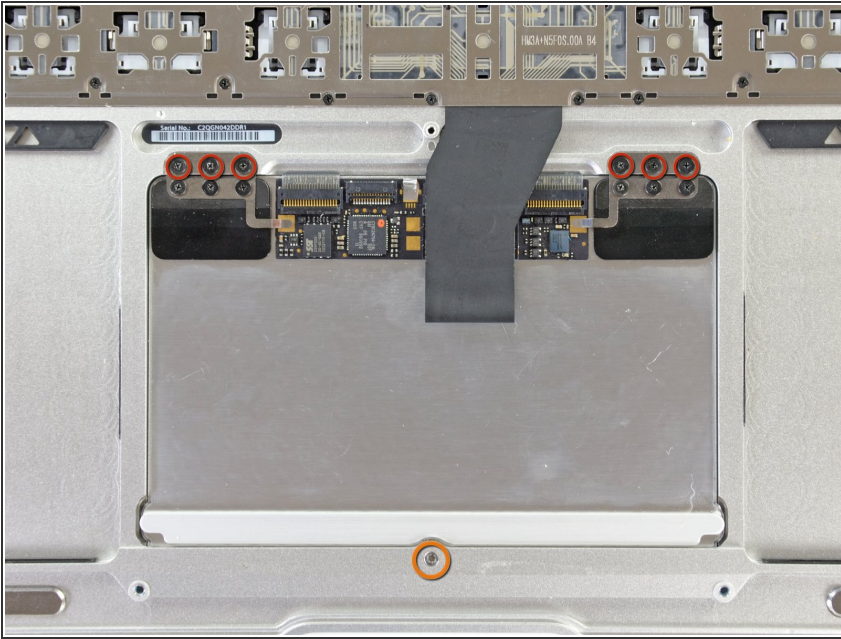
- Use the tip of a spudger or your fingernail to flip up the retaining flap on the trackpad ribbon cable ZIF socket.
⚠ Be sure you are prying up on the hinged retaining flap, **not the socket itself.**
- Pull the trackpad ribbon cable straight out of its socket toward the rear edge of the Air.

Step 40



- 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 41



- 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 42



- 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.