



# MacBook Pro 13" Retina Display Early 2013 I/O Board Replacement

Use this guide to replace the I/O board.

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# INTRODUCTION

Use this guide to replace the I/O board.

## TOOLS:

MacBook Pro and Air 5-Point Pentalobe Screwdriver (1)  
iFixit Opening Tool (1)  
Spudger (1)  
Phillips #00 Screwdriver (1)  
T5 Torx Screwdriver (1)  
T6 Torx Screwdriver (1)  
TR8 Torx Security Screwdriver (1)  
Tweezers (1)  
Arctic Silver ArctiClean (1)  
Arctic Silver Thermal Paste (1)

## PARTS:

MacBook Pro 13" Retina (Late 2012-  
Early 2013) Right I/O Board (1)

## Step 1 — Lower Case



- Remove the following ten screws securing the lower case to the upper case:
  - Two 2.3 mm P5 Pentalobe screws
  - Eight 3.0 mm P5 Pentalobe screws
- ☑ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your device.

## Step 2



- Wedge your fingers between the upper case and the lower case.
- Gently pull the lower case away from the upper case.
- Remove the lower case and set it aside.

## Step 3



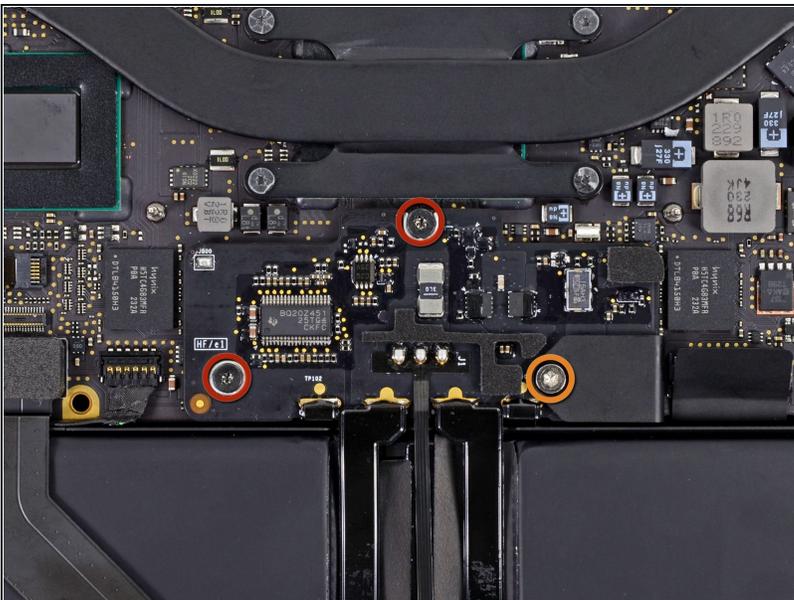
- ☑ During reassembly, gently push down the center of the lower case to reattach the two plastic clips.
- The lower case is connected to the upper case at the center, with two plastic clips.

## Step 4 — Battery Connector



- Remove the plastic cover adhered to the battery contact board.

## Step 5



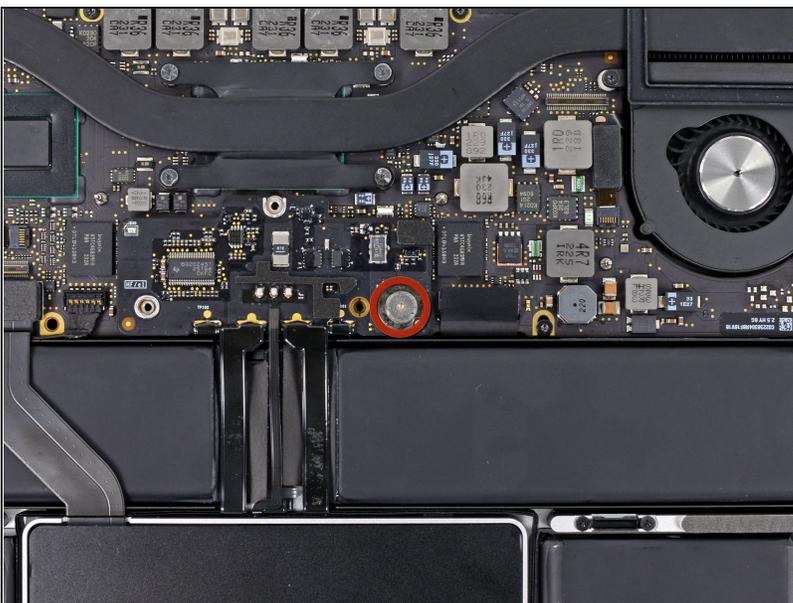
- Remove the following screws securing the battery connector board to the logic board:
  - Two 2.8 mm T6 Torx screws
  - One 7.0 mm T6 Torx shouldered screw

## Step 6



- Use [tweezers](#) to remove the small plastic cover located near the bottom right of the battery connector board.

## Step 7



- Remove the wide head 6.4 mm T6 Torx screw securing the battery connector to the logic board assembly.

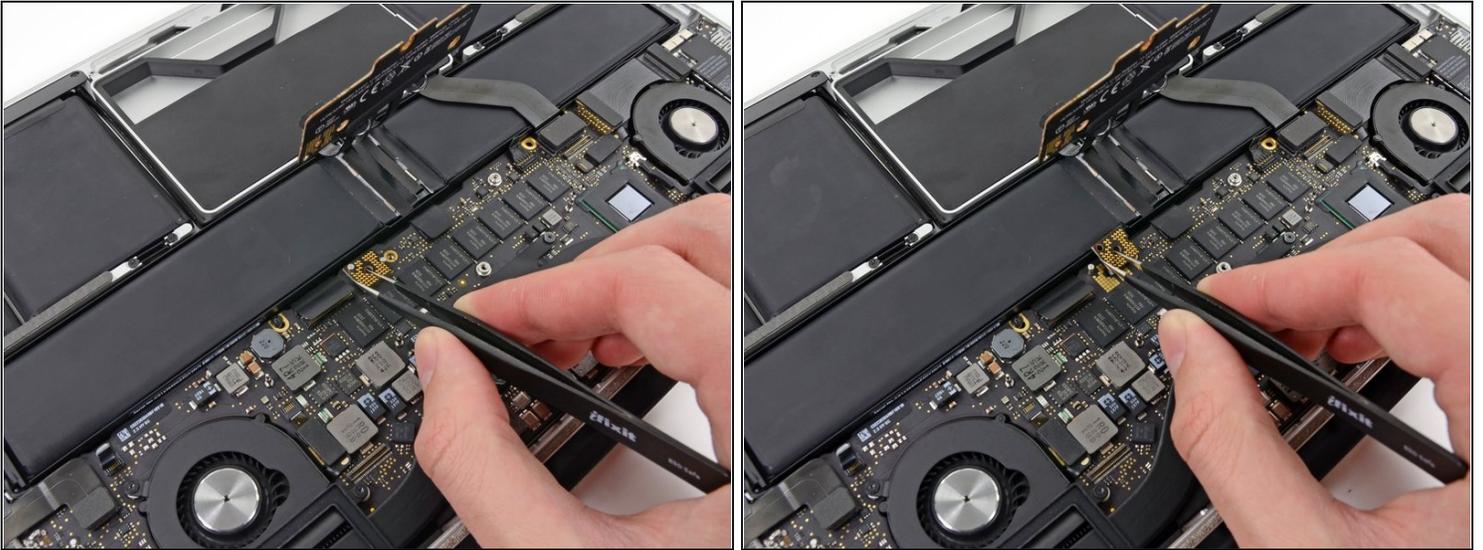
## Step 8



- Carefully lift the battery connector board up off the logic board.
- It is recommended to bend the battery cables just slightly, to keep the board suspended up above the logic board and out of the way.

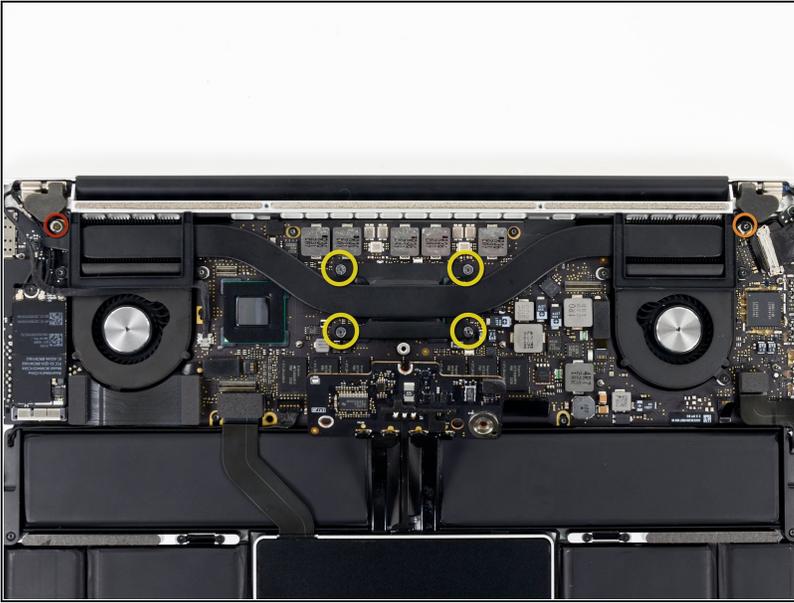
**⚠ Do not fold the board completely over, or crease the cables, as this may damage the battery.**

## Step 9 — Battery Contact Board



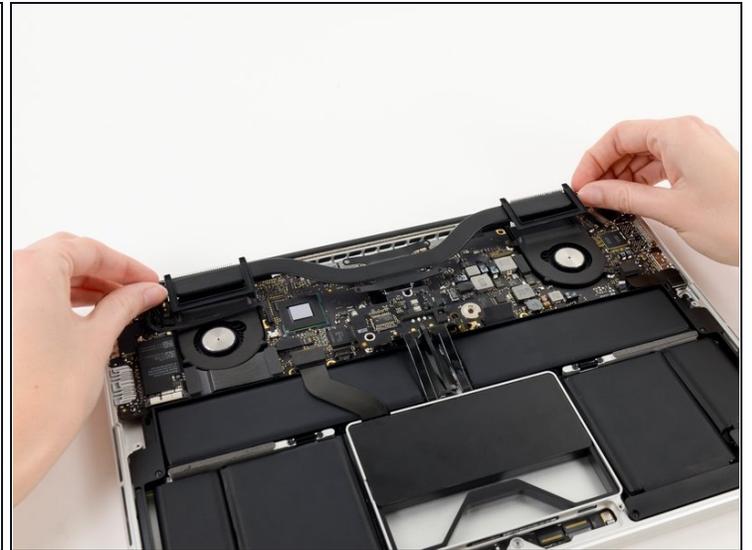
- Grasp the Interposer with [tweezers](#).
  - ① An interposer is the name for an interface that links one electrical connection to another. In this repair, it is the board connecting the battery to logic board.
- Lift the Interposer off the logic board and remove it.
  - ⚠ Removing this board will ensure that the battery remains disconnected throughout your repair, preventing your computer from accidentally powering on. It's also a good idea to take it out so it doesn't fall out unexpectedly.

## Step 10 — Heat Sink Assembly



- Remove the following screws securing the heat sink to the logic board assembly:
  - One 2.4 mm Phillips #00 screw
  - One 3.4 mm T5 Torx screw
  - Four 2.7 mm T5 Torx screws

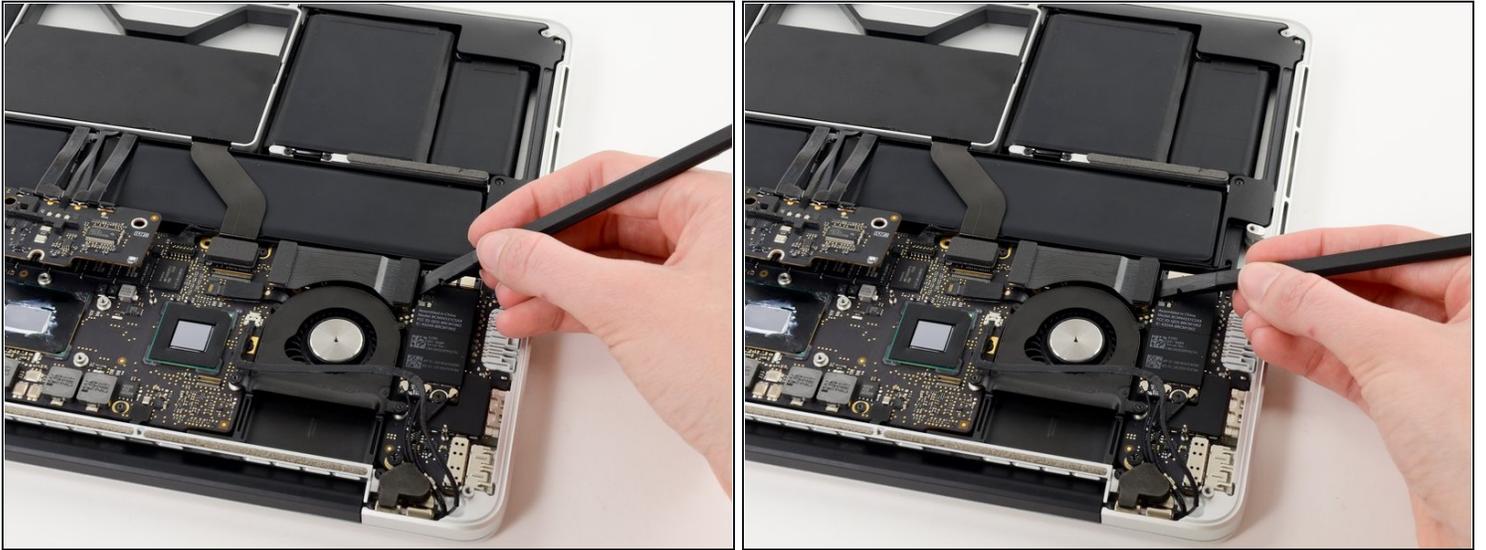
## Step 11



- Lift and remove the heat sink up off the logic board assembly.

**⚠** When reinstalling the heat sink, be sure to apply a new layer of thermal paste. If you have never applied thermal paste before, we have a [guide](#) that makes it easy.

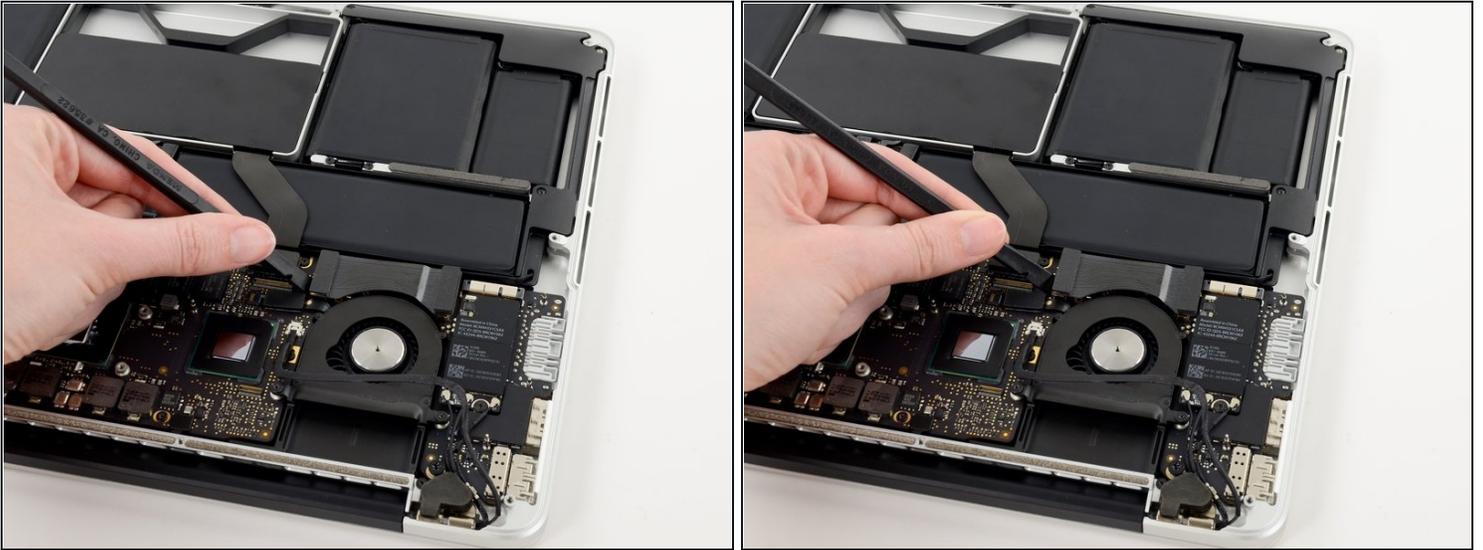
## Step 12 — I/O Board Data Cable



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

⚠ When prying the I/O board data cable connector from its socket, make sure to pry the connector itself and **not** the socket. Prying the socket may cause irreversible damage to the I/O board.

## Step 13



- Wedge the flat end of a spudger beneath the left side of the I/O board data cable connector.
- Gently twist the spudger to disconnect the I/O board data cable connector from its socket on the logic board.

## Step 14



- Lift and remove the I/O board data cable from the MacBook Pro.

## Step 15 — Right Fan



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

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

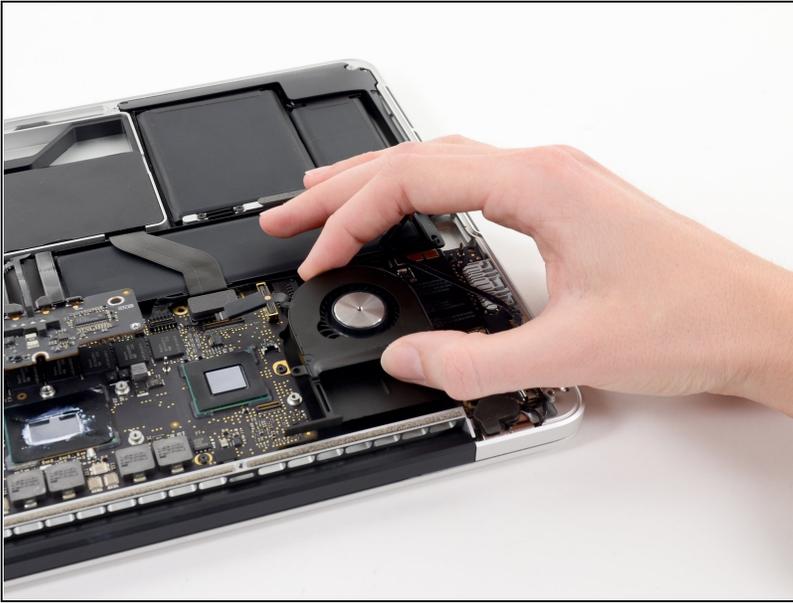
- Pull the right fan ribbon cable straight out of its socket on the logic board.

## Step 16



- Remove the three 3.1 mm T5 Torx screws securing the right fan to the logic board assembly.

## Step 17



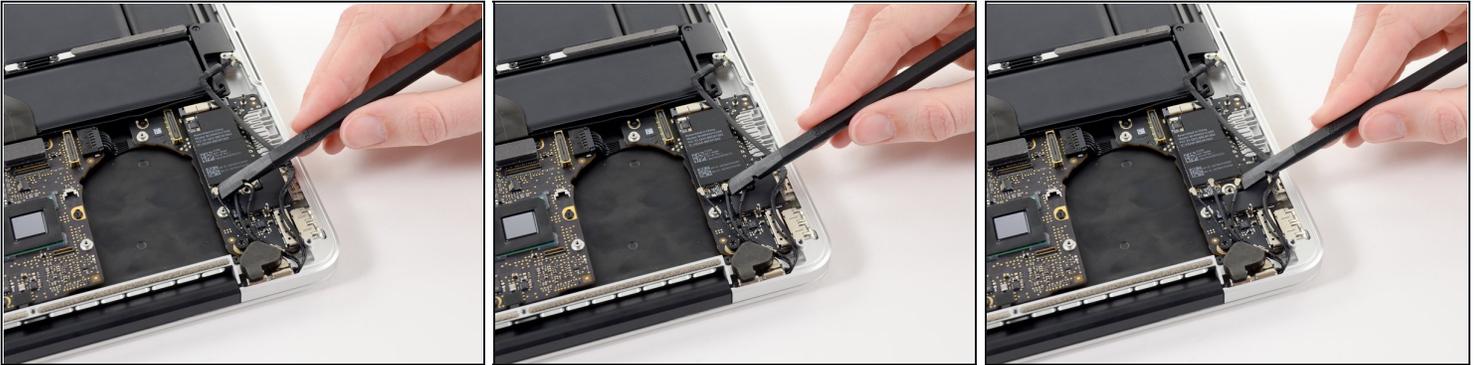
- Lift and remove the right fan out of the upper case.

## Step 18 — AirPort Board Assembly



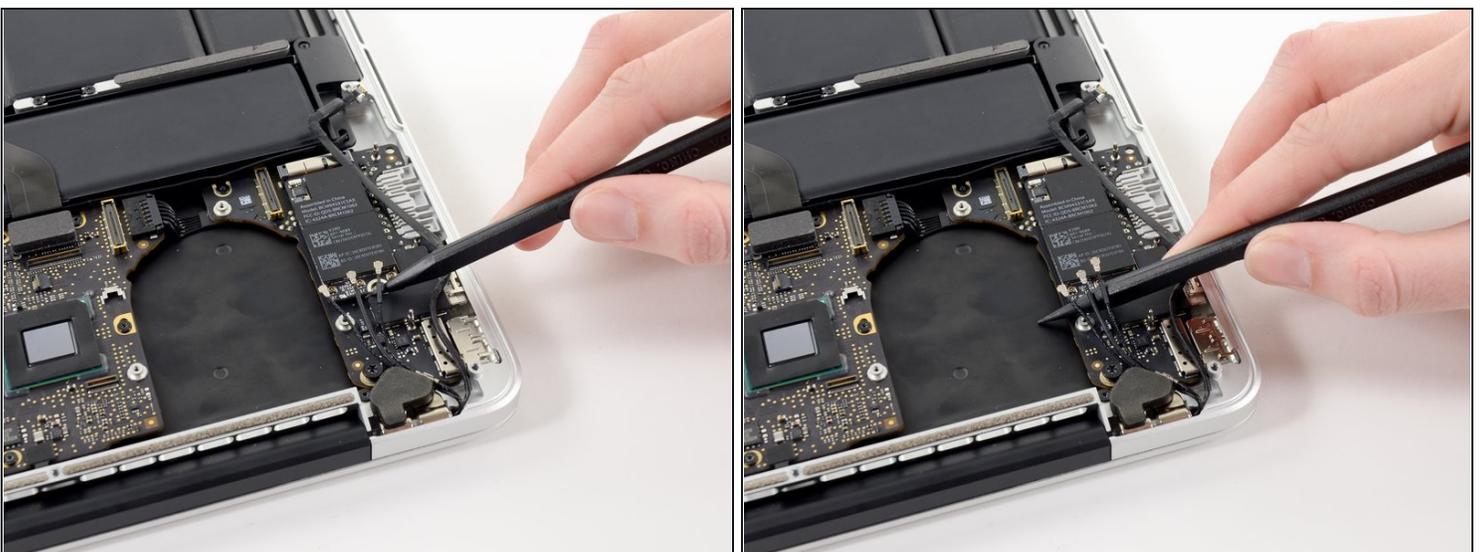
- Remove the single 2.7 mm T5 Torx screw securing the AirPort board to the I/O board.

## Step 19



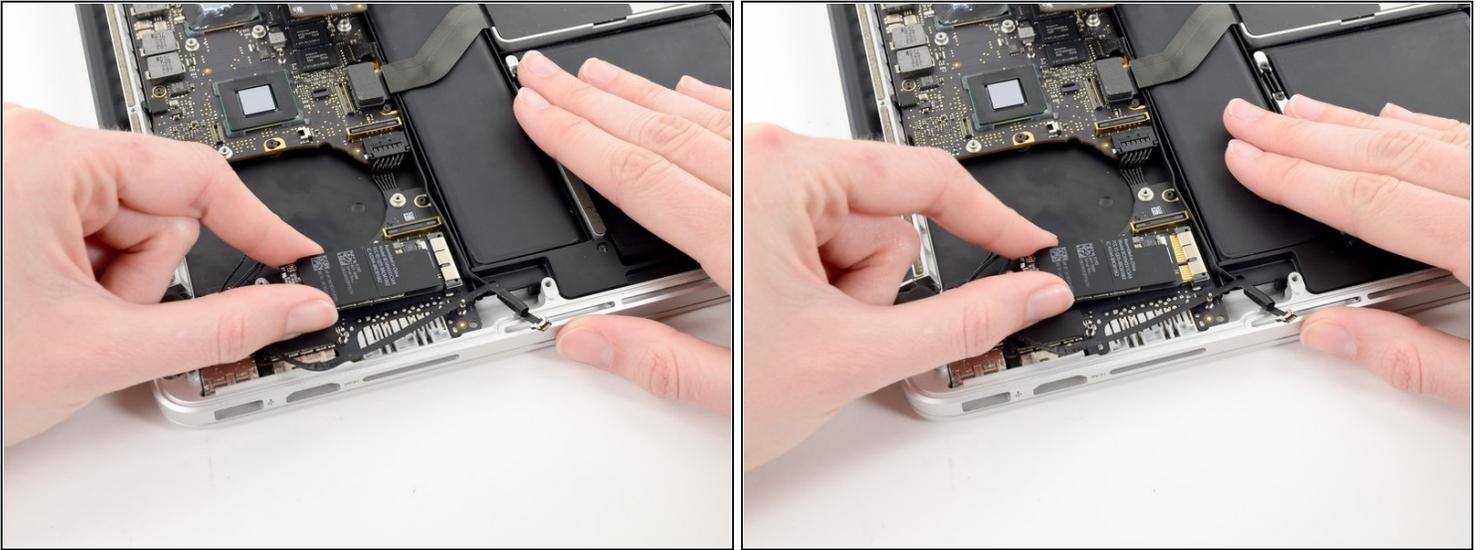
- Use the flat end of a spudger to pry and disconnect the three antenna cable connectors from the AirPort board.
- ☒ The three cables are coded with black sleeves of different lengths. During reassembly:
  - Connect the long-sleeved cable to the center socket.
  - The short-sleeved cable connects next to the screw.
  - The remaining cable has no sleeve, and connects in the last empty socket, next to the fan.

## Step 20



- Move the antenna cables aside, clear of the AirPort board.

## Step 21



- Pull the AirPort board straight out of its socket on the I/O board.

## Step 22 — I/O Board



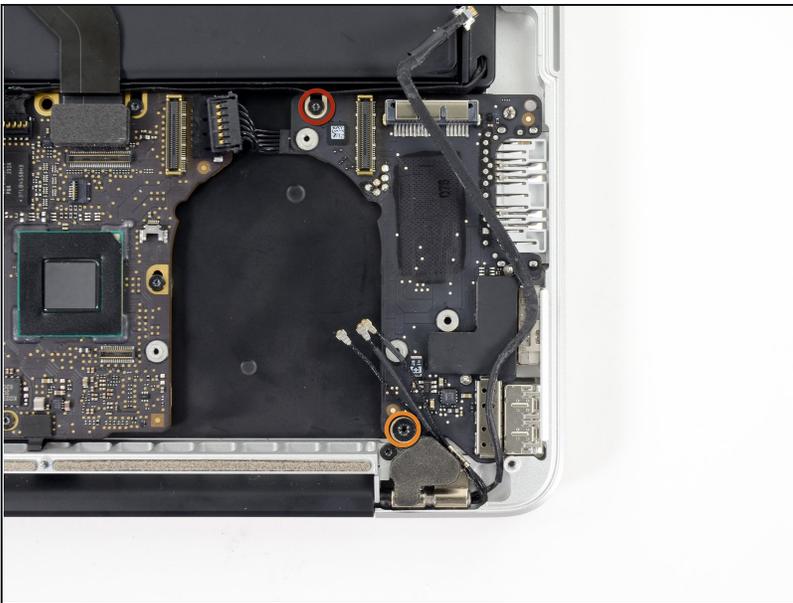
- Use the tip of a spudger to push the edges of the I/O board power connector straight out of its socket on the logic board.
- ⓘ It is recommended to carefully push on both sides of the connector to "walk" it out of its socket.

## Step 23



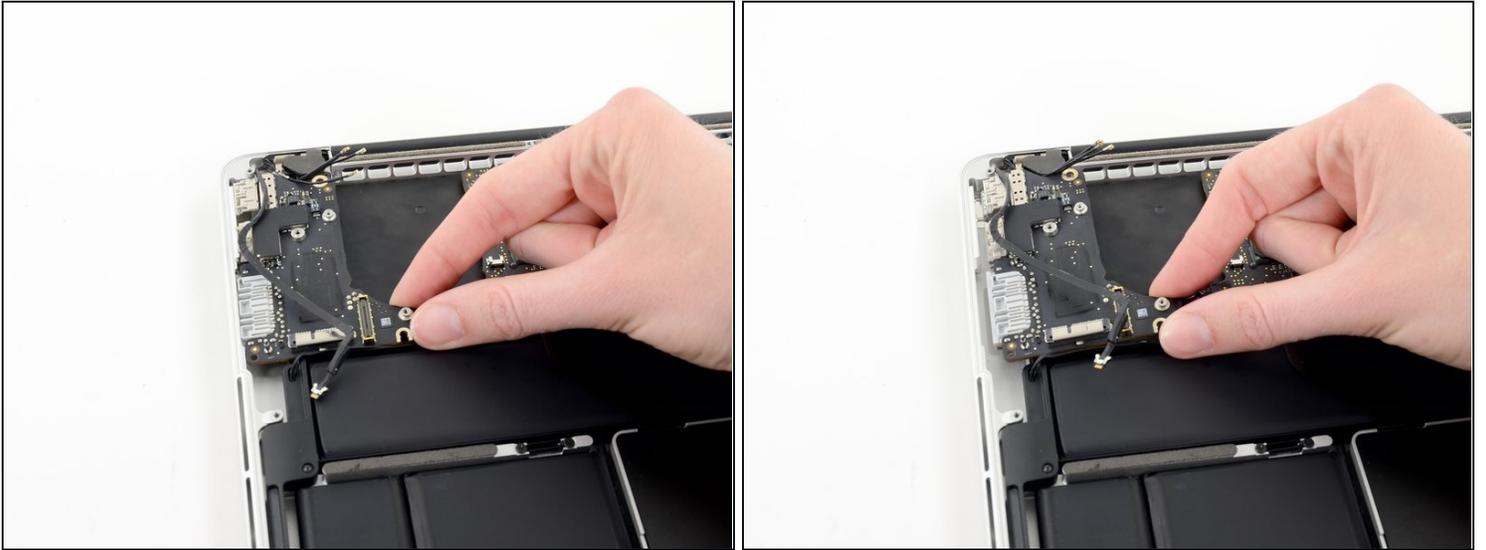
- Pull the I/O board connector straight out of its socket on the logic board.

## Step 24



- Remove the following two screws securing the I/O board to the upper case:
  - One 3.5 mm T5 Torx screw
  - One 4.9 mm T8 Torx screw

## Step 25



- Carefully pull and remove the I/O board away from its recess in the upper case.

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