



# MacBook Pro 13" Retina Display Early 2013

## Right Fan Replacement

Replace the Right Fan in your MacBook Pro 13" Retina Display Early 2013.

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# INTRODUCTION

Use this guide to replace the right fan.



## TOOLS:

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



## PARTS:

- [MacBook Pro 13" Retina Right Fan](#) (1)

## Step 1 — Lower Case



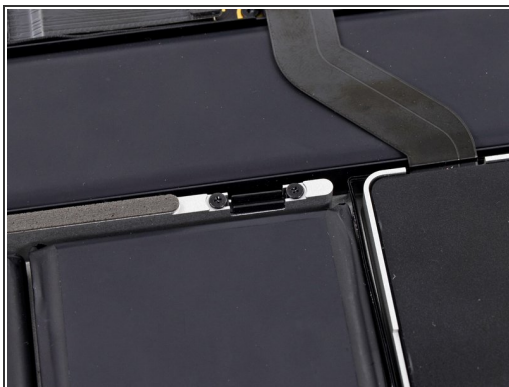
- Remove the following ten screws securing the lower case to the upper case:
  - Two 2.3 mm P5 Pentalobe screws
  - Eight 3.0 mm P5 Pentalobe screws
- ☑ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your device.



## 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



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

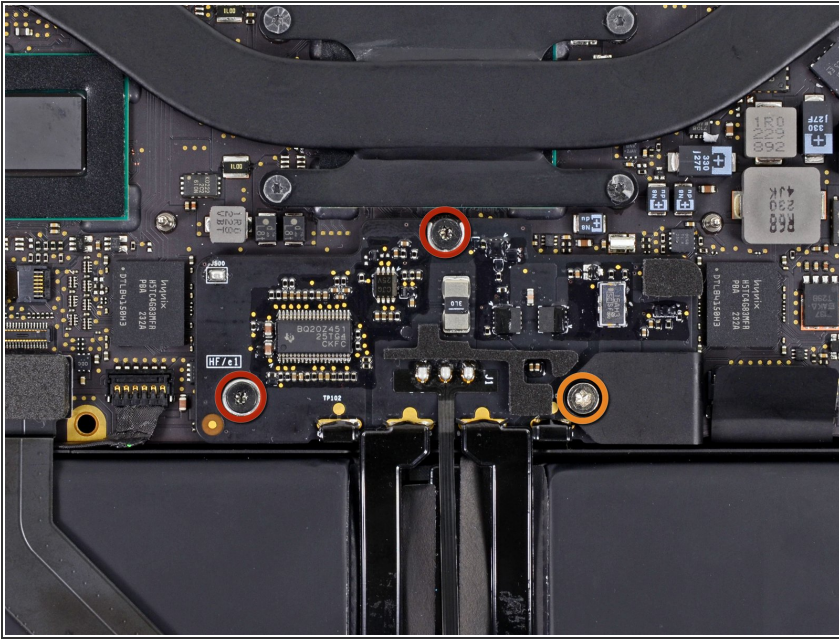
## Step 4 — Battery Connector



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

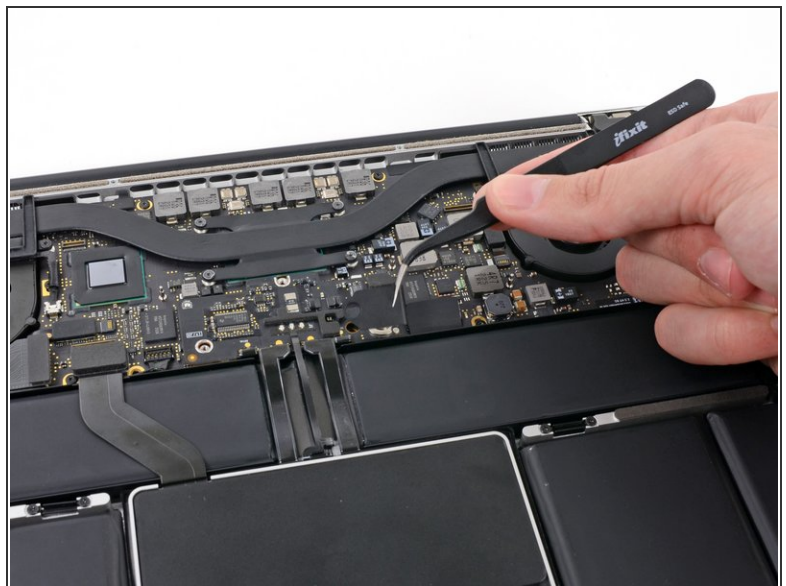


## Step 5



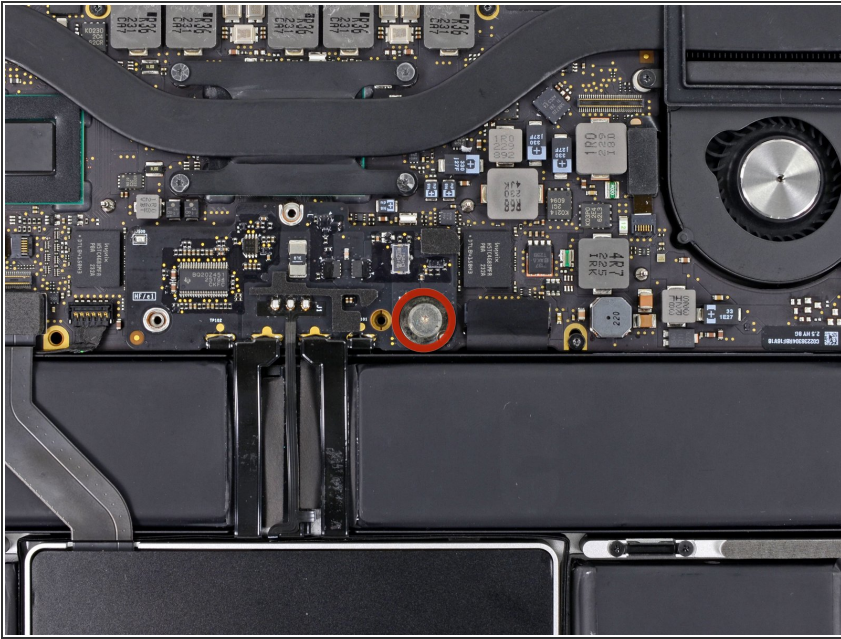
- Remove the following screws securing the battery connector board to the logic board:
  - Two 2.8 mm T6 Torx screws
  - One 7.0 mm T6 Torx shouldered screw

## 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.

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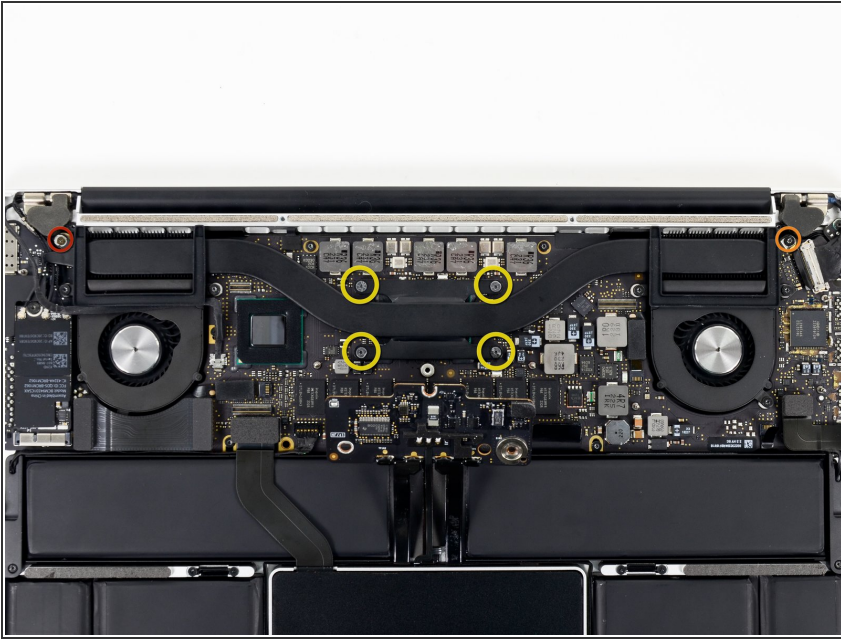


## Step 9 — Battery Contact Board



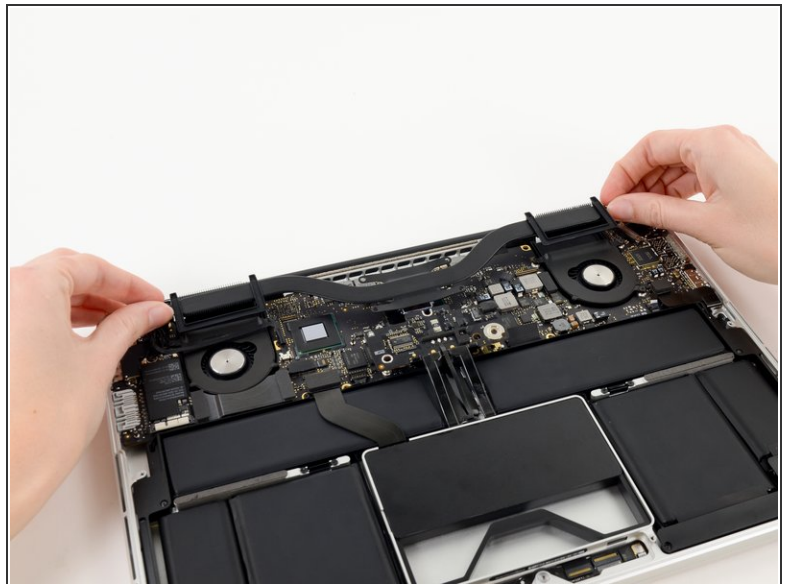
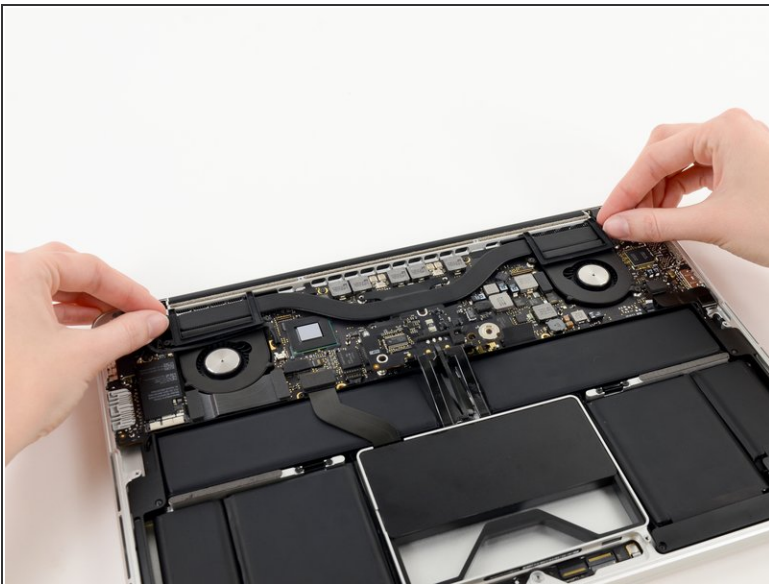
- Grasp the Interposer with tweezers.
  - ❗ An interposer is the name for an interface that links one electrical connection to another. In this repair, it is the board connecting the battery to logic board.
- Lift the Interposer off the logic board and remove it.
  - ⚠ Removing this board will ensure 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.

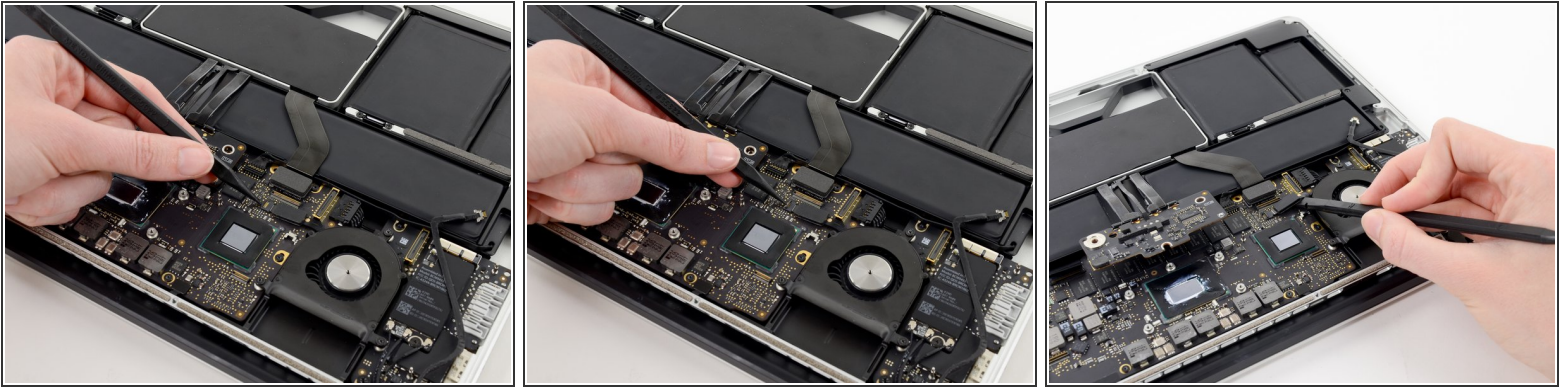
## Step 14



- 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.

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