



# MacBook Pro 13" Retina Display Early 2013 Left Fan Replacement

Use this guide to replace the left fan.

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# INTRODUCTION

Use this guide to replace the left fan.



## TOOLS:

MacBook Pro and Air 5-Point Pentalobe Screwdriver (1)

iFixit Opening Tool (1)

T6 Torx Screwdriver (1)

Tweezers (1)

Phillips #00 Screwdriver (1)

T5 Torx Screwdriver (1)

Spudger (1)

Arctic Silver ArctiClean (1)

Arctic Silver Thermal Paste (1)



## PARTS:

MacBook Pro 13" Retina (Late 2012-Early 2013) Left 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



- ★ 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.

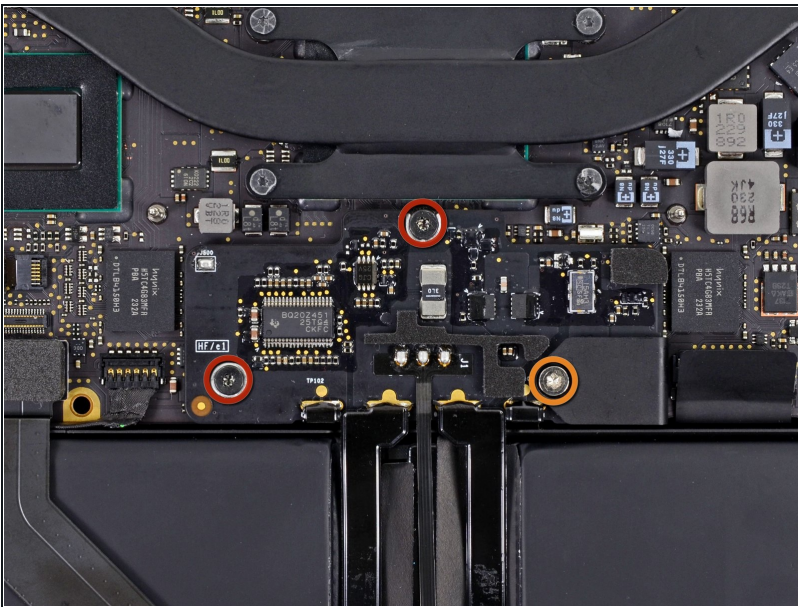


## Step 4 — Battery Connector



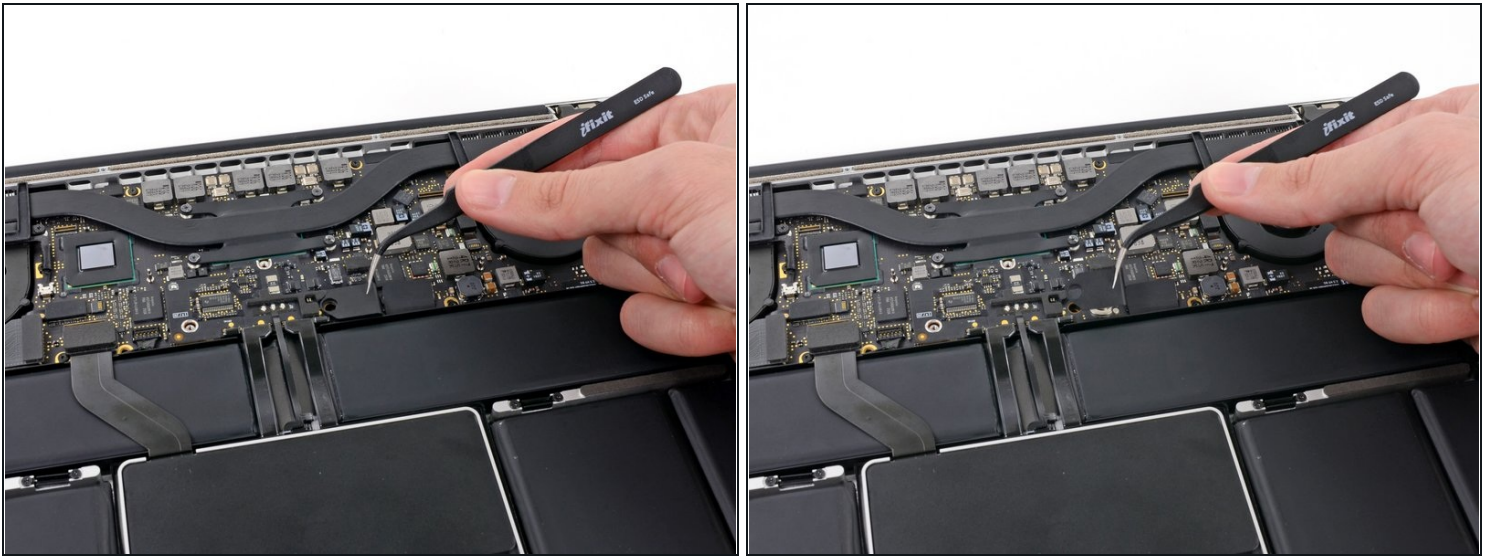
- Remove the plastic cover adhered to the battery contact board.

## Step 5



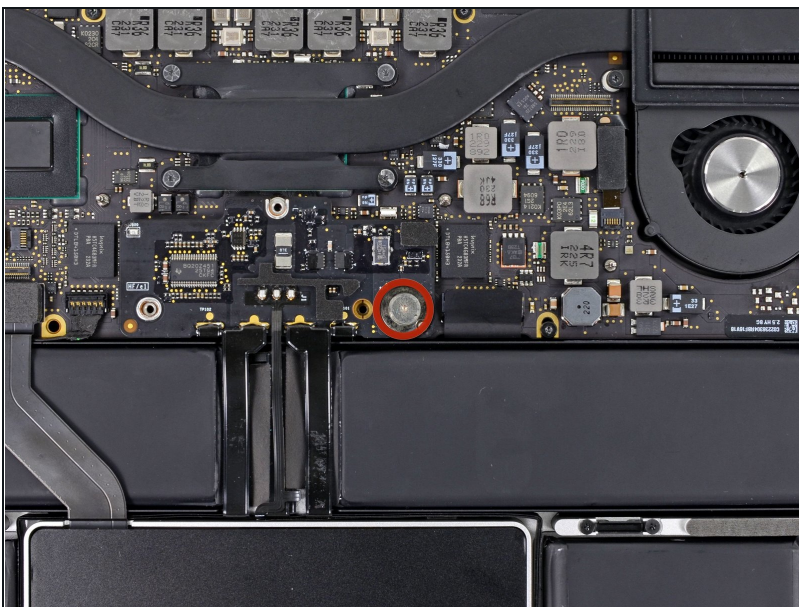
- Remove the following screws securing the battery connector board to the logic board:
  - Two 2.8 mm T6 Torx screws
  - One 7.0 mm T6 Torx shouldered screw

## 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

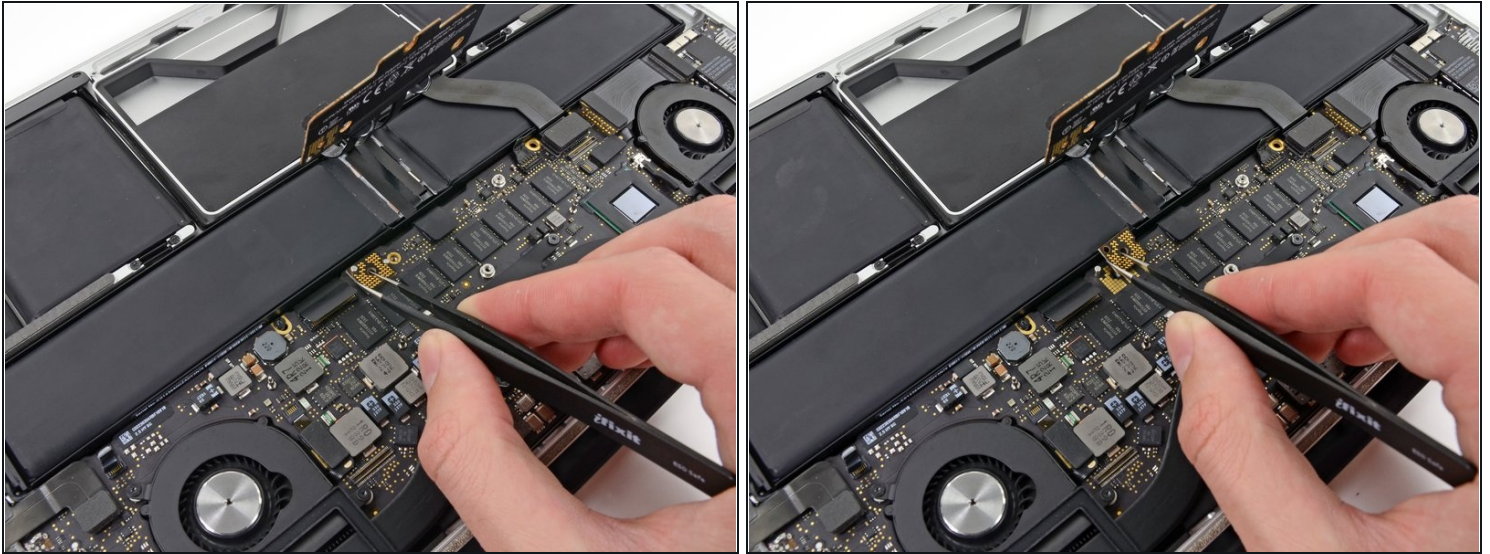


- Carefully lift the battery connector board up off the logic board.
- It is recommended to bend the battery cables just slightly, to keep the board suspended up above the logic board and out of the way.

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

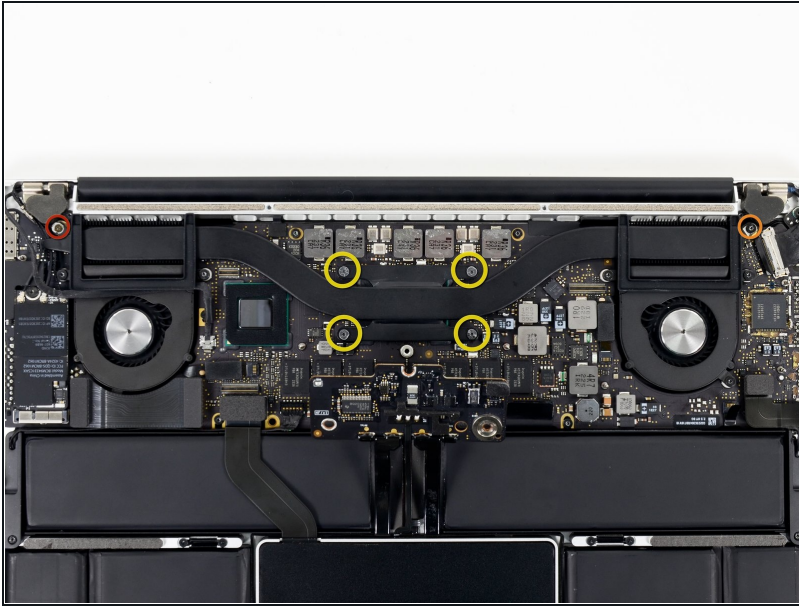


## Step 9 — Battery Contact Board



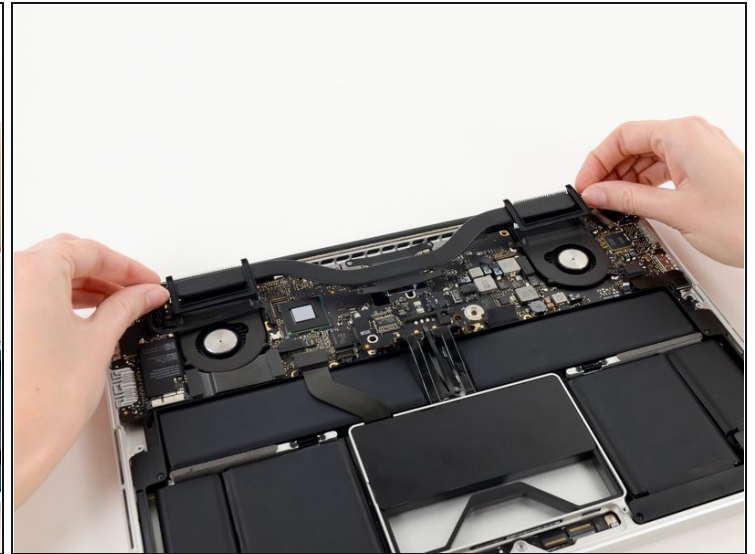
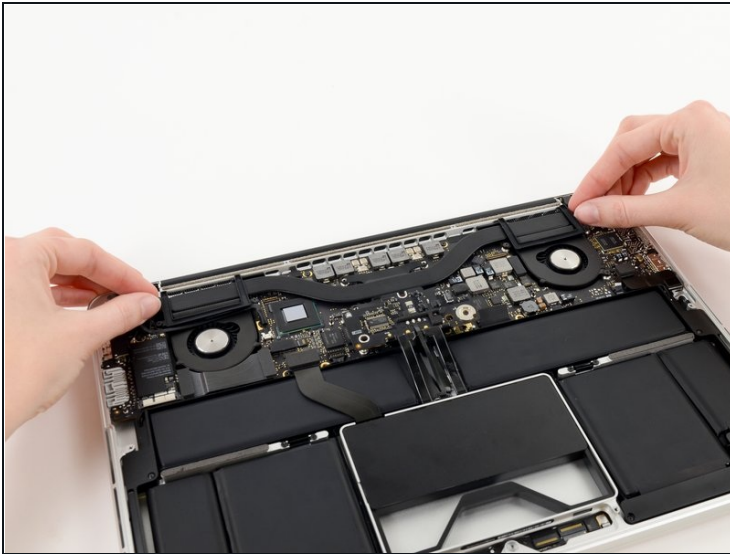
- Grasp the Interposer with [tweezers](#).
  - ① An interposer is the name for an interface that links one electrical connection to another. In this repair, it is the board connecting the battery to logic board.
- Lift the Interposer off the logic board and remove it.
  - ⚠ Removing this board will ensure 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

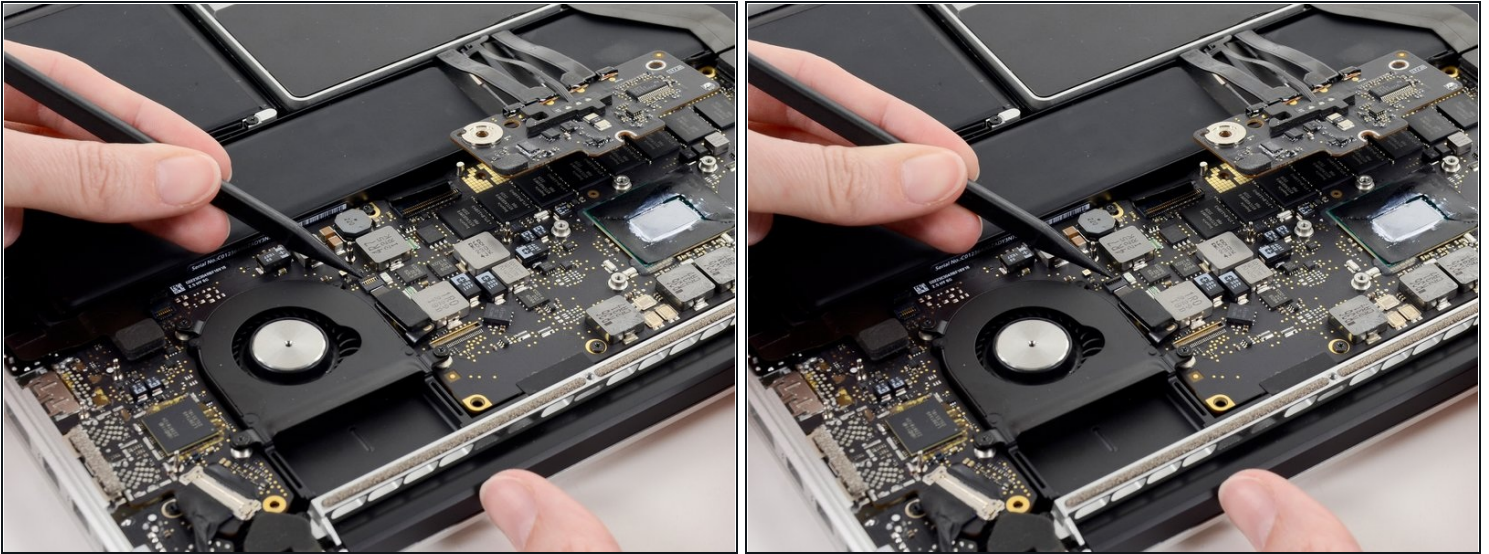


- Lift and remove the heat sink up off the logic board assembly.

⚠ 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.



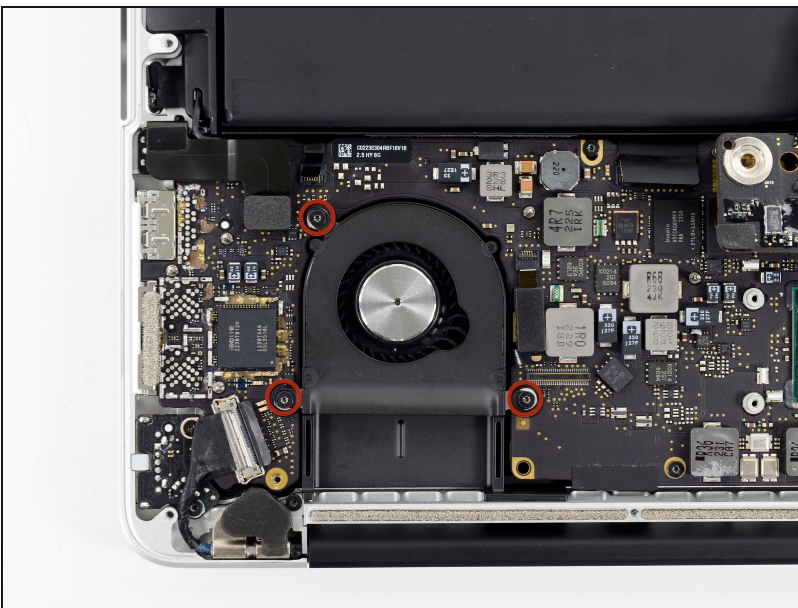
## Step 12 — Left Fan



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

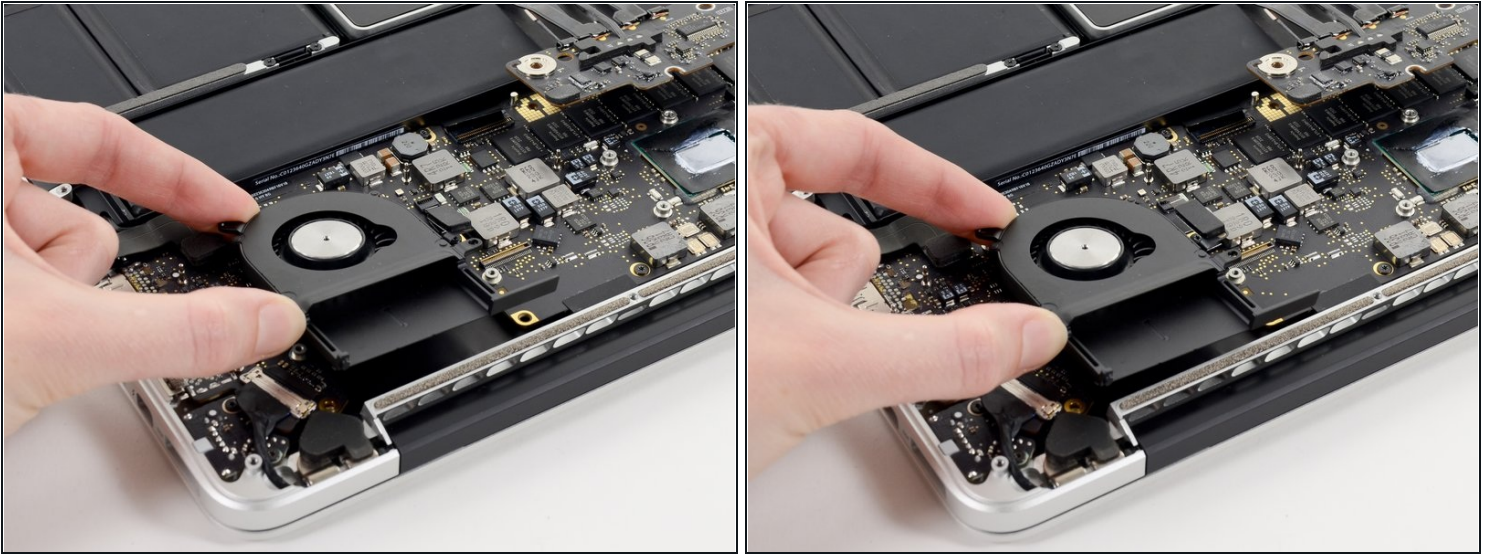
⚠ Be sure you are prying up on the hinged retaining flap, **not** the socket itself.

## Step 13



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

## Step 14



- Lift and remove the left fan out of the upper case.
- ☒ Make sure to pull the left fan straight away to simultaneously pull the left fan ribbon cable out of its socket on the logic board.

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