

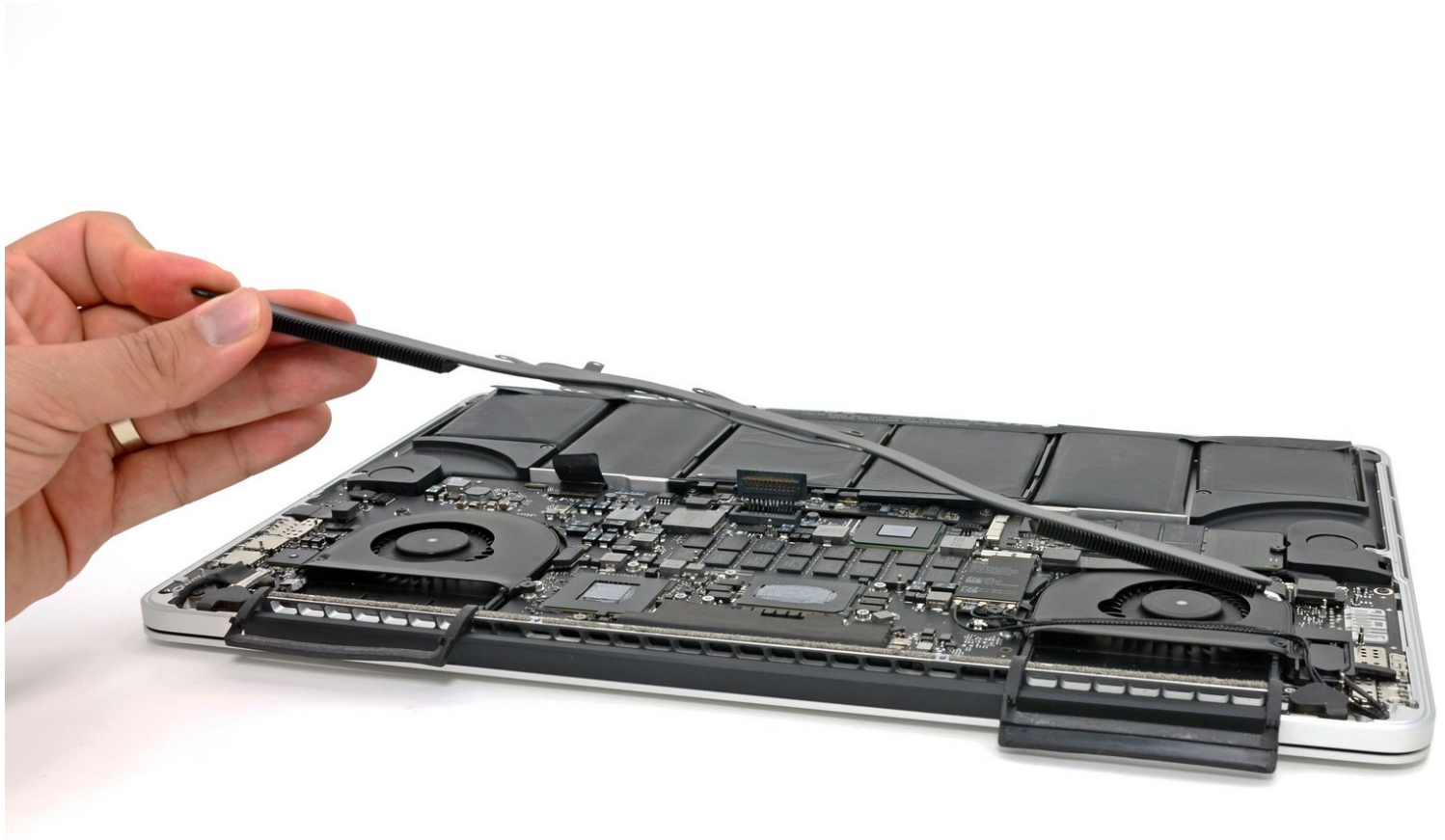


# MacBook Pro 15" Retina Display Early 2013

## Heat Sink Replacement

Replace the heat sink in a MacBook Pro 15" Retina Display Early 2013.

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## INTRODUCTION

Things heating up inside your MacBook Pro with Retina Display? Could be trouble with the heat sink. Use this guide to show you how to remove the heat sink in the Early 2013 MacBook Pro with Retina display.



### TOOLS:

- [MacBook Pro and Air 5-Point Pentalobe Screwdriver](#) (1)
- [Spudger](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [Arctic Silver ArctiClean](#) (1)



### PARTS:

- [MacBook Pro 15" Retina Heat Sink](#) (1)

## Step 1 — Lower Case



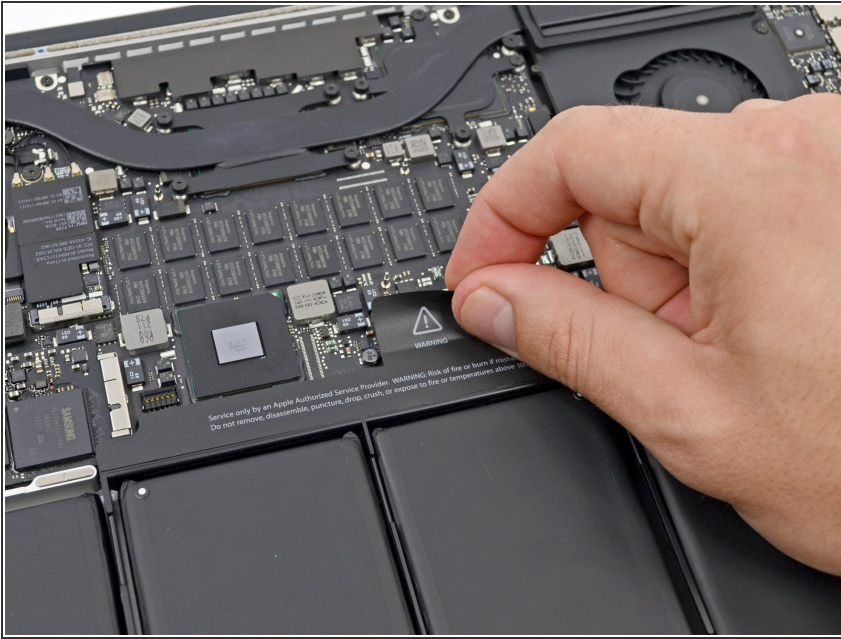
- Remove the following P5 pentalobe screws securing the lower case to the MacBook Pro:
  - Eight 3.0 mm
  - Two 2.3 mm

## Step 2



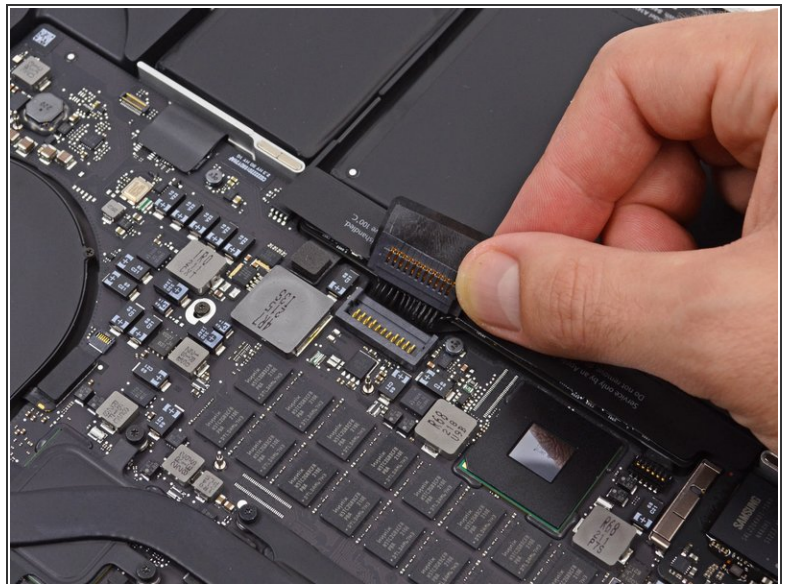
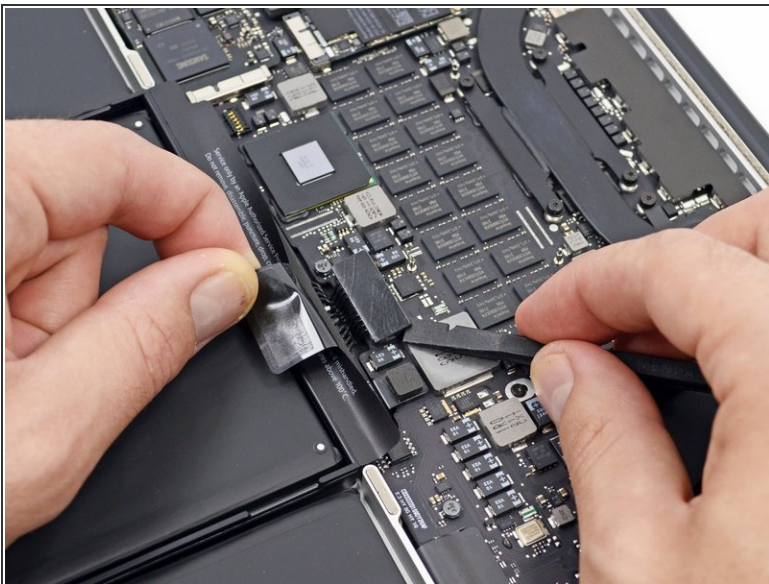
- Lifting from the edge nearest the clutch cover, lift the lower case off the MacBook Pro.
- Set the lower case aside.

## Step 3 — Battery Connector



- Peel back the warning label covering the battery connector.

## Step 4



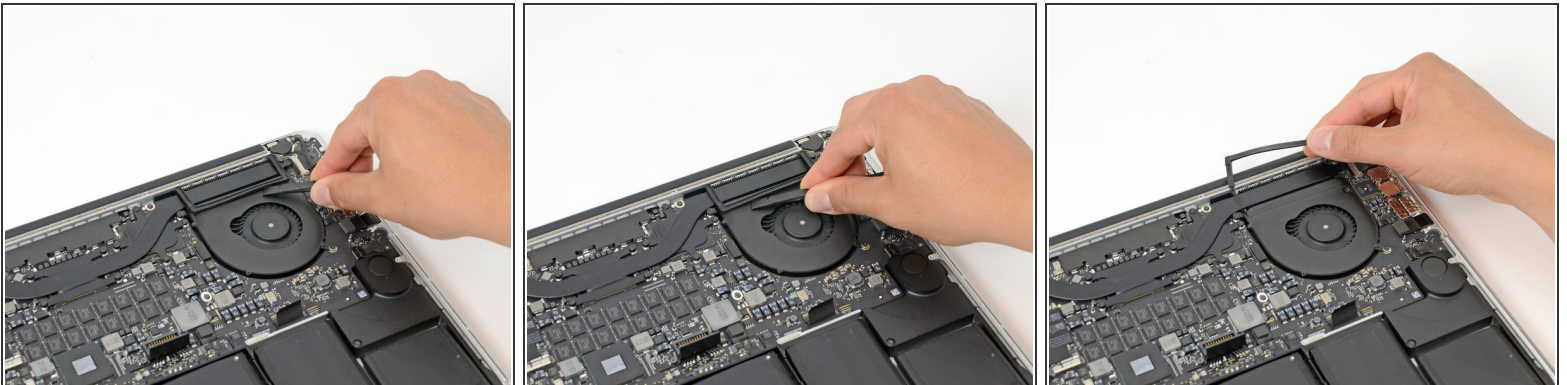
- Using the flat end of a spudger, gently pry the battery connector straight up out of its socket on the logic board.
- Bend the battery cables back and out of the way, ensuring that the battery connector doesn't accidentally make contact with the logic board.

## Step 5 — Heat Sink



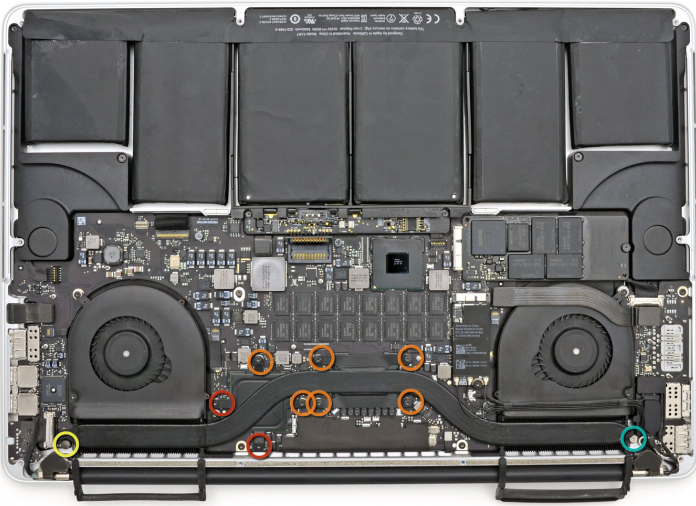
- Insert the flat end of a spudger underneath the rubber heat sink cover on the right fan.
- Slide the spudger underneath the length of the cover, releasing the adhesive.
- Lift the cover and rotate it off of the heat sink.

## Step 6



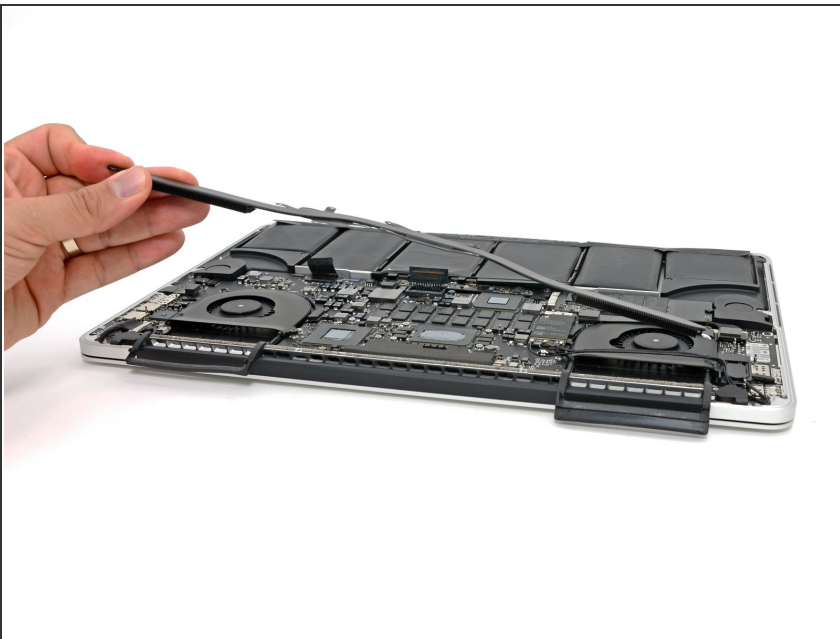
- In the same manner described above, release the adhesive and flip back the heat sink cover on the left fan.

## Step 7



- Remove the following ten screws securing the heat sink to the logic board:
  - Two 2.4 mm T5 Torx screws
  - Six 3.4 mm T5 Torx screws
  - One 5.2 mm Raised Head T5 Torx screw
  - One 3.5 mm T5 Torx screw

## Step 8



- Grasping the heat sink from one side, lift the heat sink off of the MacBook Pro, pulling it free from the computer.
- ⓘ The thermal paste may make it difficult to remove the heat sink. Pull the heat sink off gently but forcefully to avoid damaging any components on the logic board.
- ★ When installing the new heat sink, do not forget to replace the thermal paste underneath the heat sink. See our [Applying Thermal Paste](#) guide for further instructions.

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