



## INTRODUCTION

Use this guide to remove or replace the heat sink.

Don't forget to follow our [thermal paste application guide](#) after you have removed your heat sink.

### TOOLS:

- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
- [Spudger](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [Arctic Silver ArctiClean](#) (1)
- [Arctic Silver Thermal Paste](#) (1)

### PARTS:

- [MacBook Pro 13" Retina \(Late 2013/Early 2015\) Heat Sink](#) (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



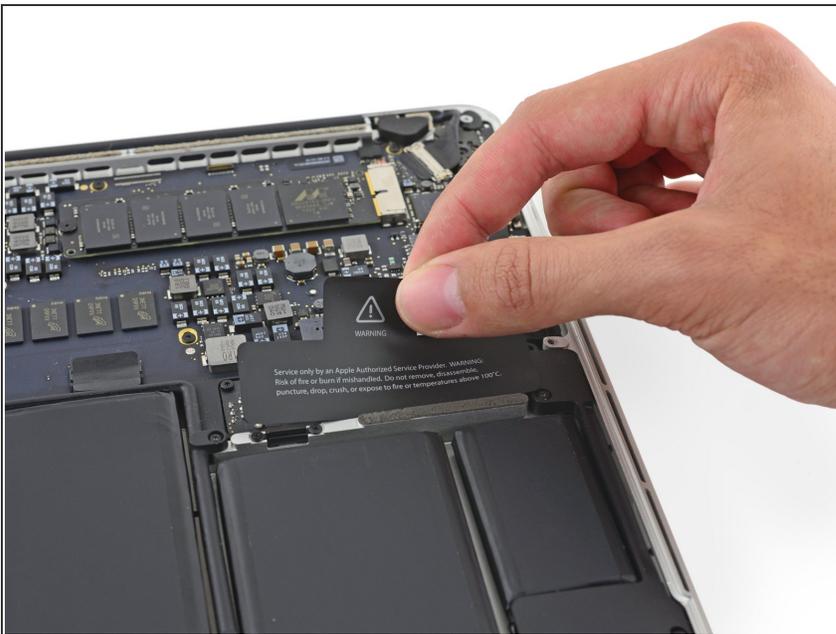
- Wedge your fingers between the upper case and the lower case.
- Gently pull the lower case away from the upper case to remove it.

### Step 3



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

### Step 4 — Battery Connector



-  If necessary, remove the plastic cover adhered to the battery contact board.

## Step 5



- Use the flat end of a spudger to lift the battery connector straight up out of its socket on the logic board.

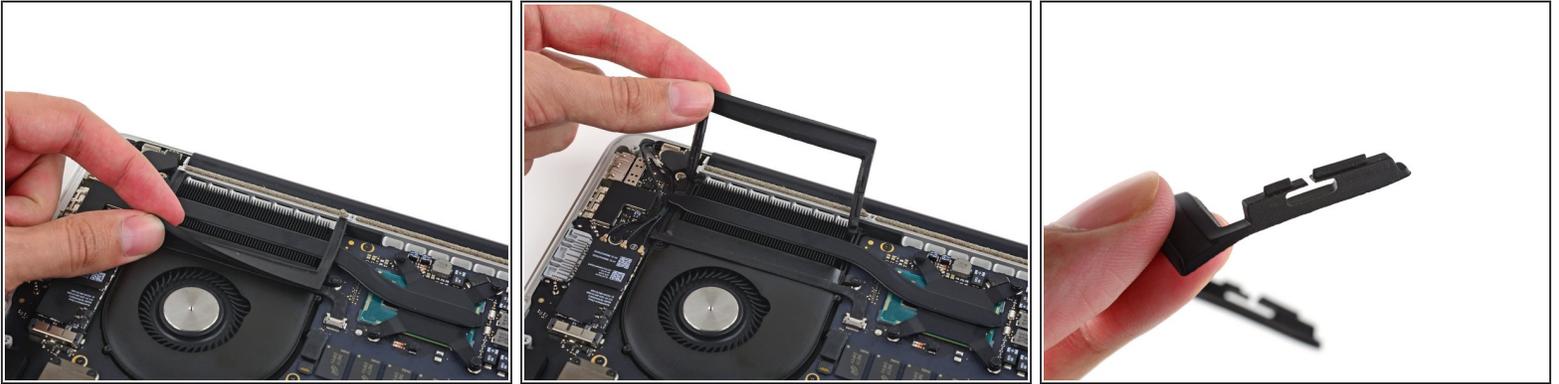
⚠ Be sure you lift up only on the connector itself, **not** the socket, or you risk permanent damage to the logic board.

## Step 6



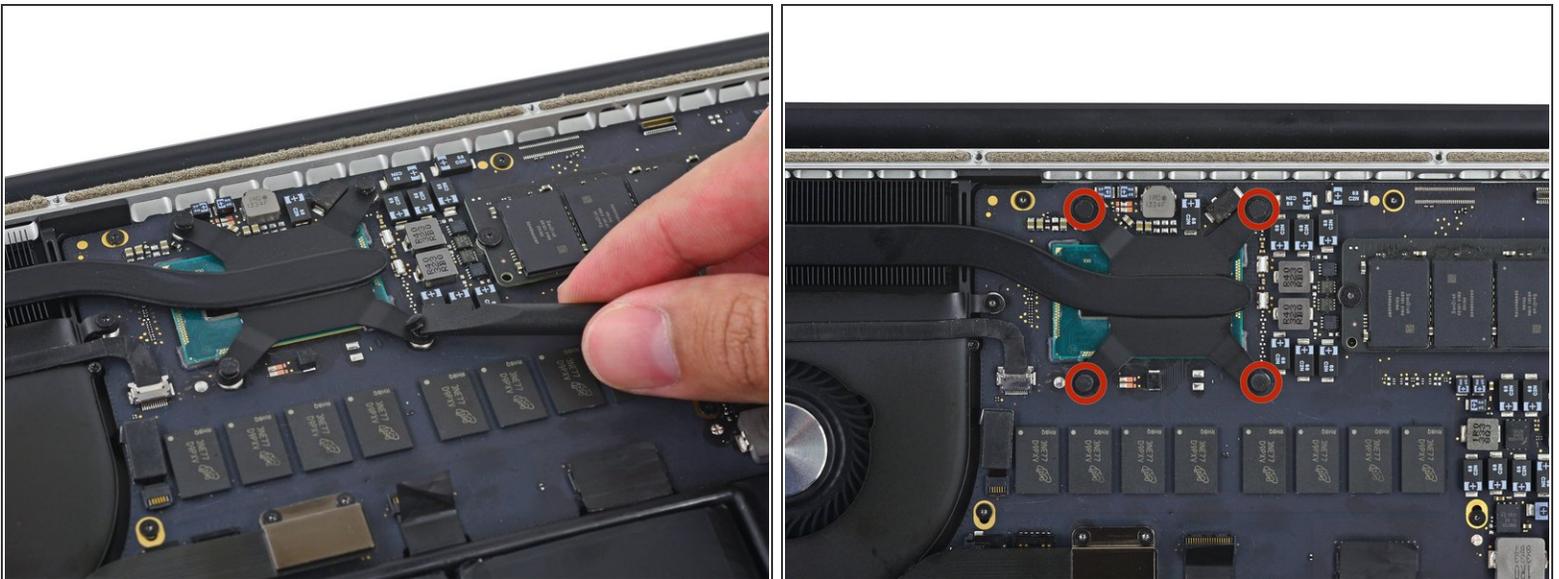
- ☑ Bend the battery connector up out of the way to prevent accidental contact with its socket during your repair.

## Step 7 — Heat Sink



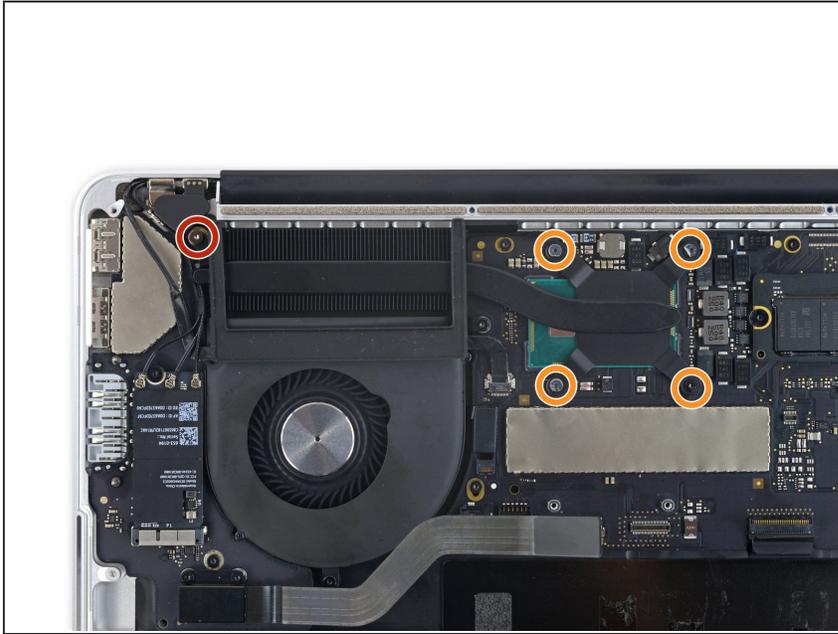
- Carefully remove the rubber fan bumper from the edge of the heat sink.
- ☑ The fan bumper wraps around the heat sink and fits into slots in the fan duct. During reassembly, be sure to fit the tabs into the notches in the fan duct.

## Step 8



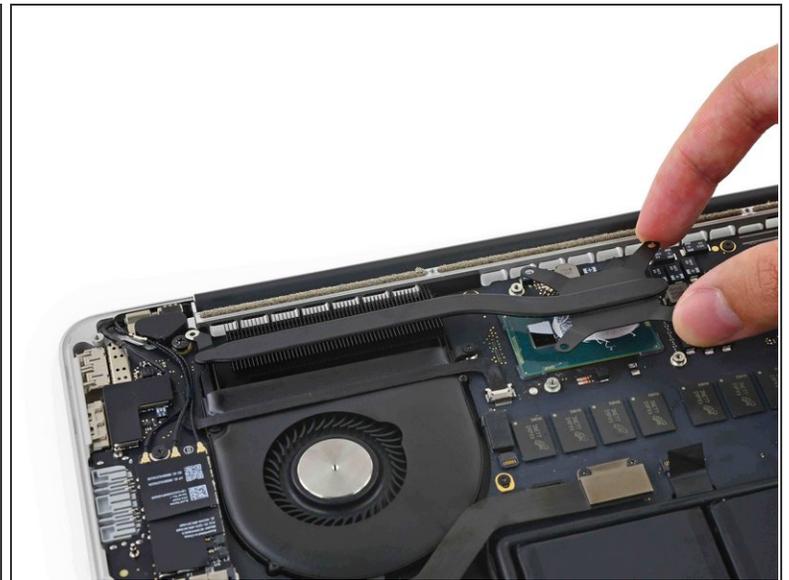
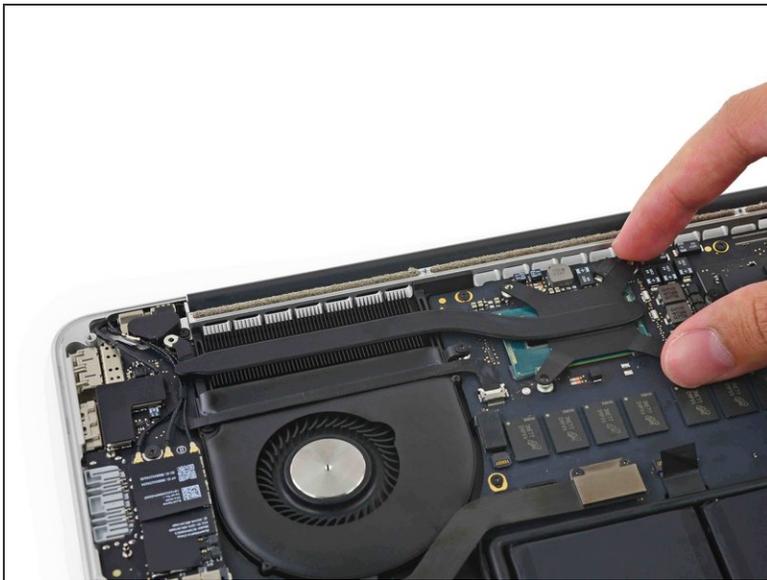
- Use the flat end of a spudger to peel the four foam stickers off of the heat sink screws.

## Step 9



- Remove the following screws securing the heat sink to the logic board:
  - One 2.7 mm T5 screw (silver)
  - Four T5 screws (black)

## Step 10



- Remove the heat sink from the laptop.
- ☞ When reassembling your computer, follow our [thermal paste application guide](#) to reapply the thermal paste.

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