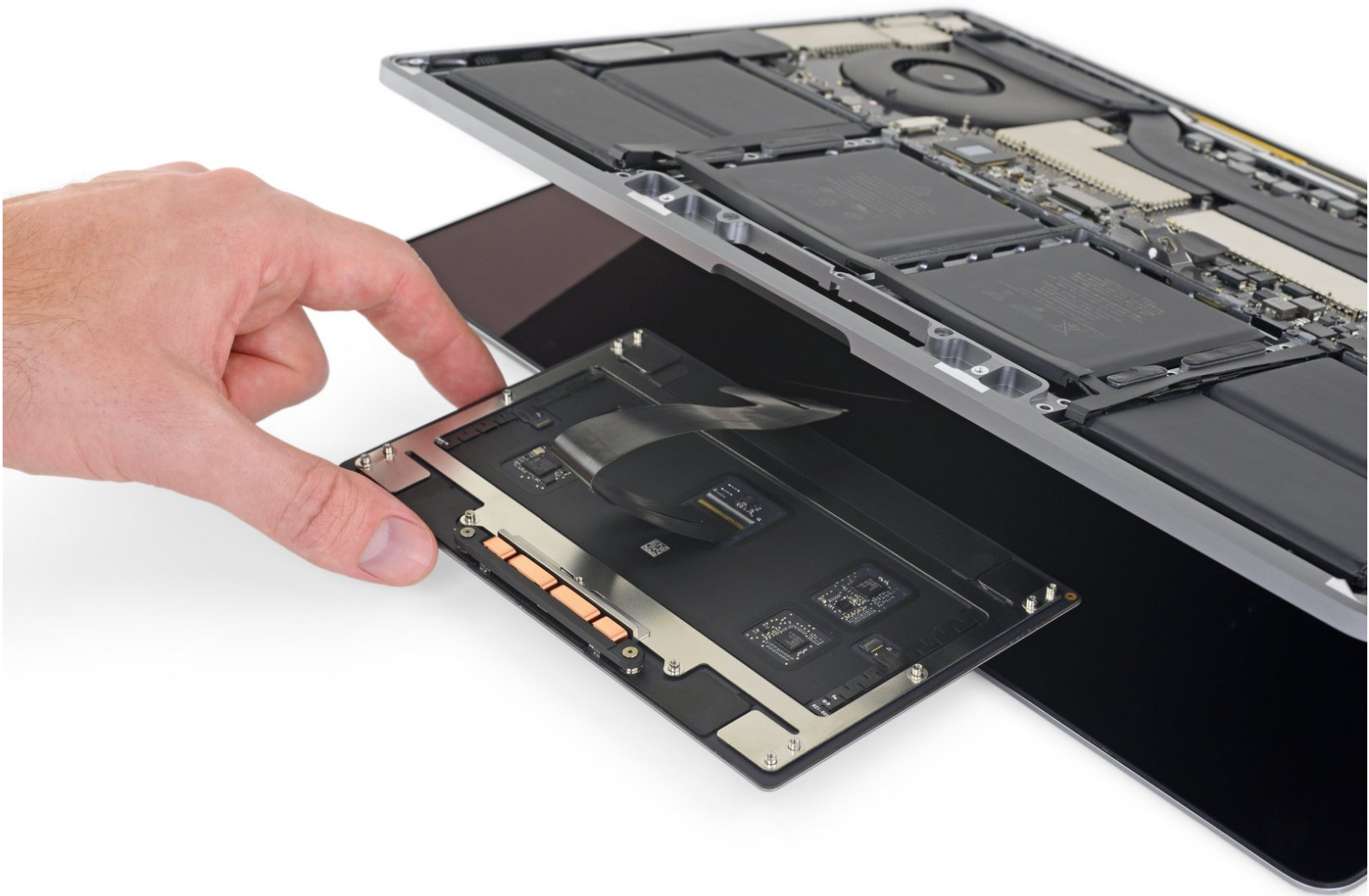




# MacBook Pro 15" Touch Bar Late 2016 Trackpad Assembly Replacement

Prereq-only guide for removing the trackpad in order to safely access the battery.

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# INTRODUCTION

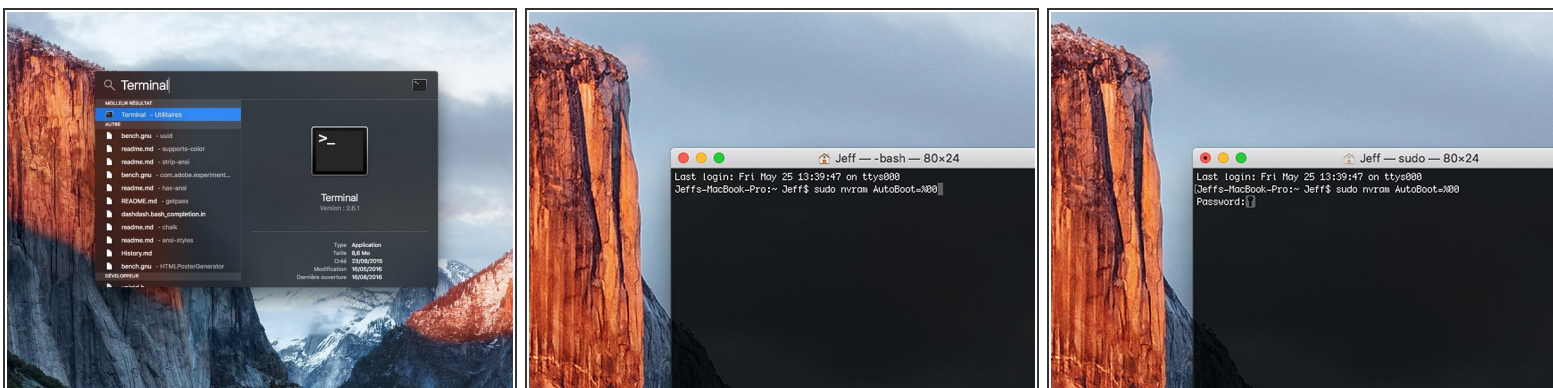
Prerequisite-only guide: remove the trackpad so that it isn't damaged when removing the battery.

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## TOOLS:

- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
  - [Suction Handle](#) (1)
  - [iFixit Opening Picks set of 6](#) (1)
  - [Spudger](#) (1)
  - [T3 Torx Screwdriver](#) (1)
  - [T5 Torx Screwdriver](#) (1)
  - [Tweezers](#) (1)
  - [iOpener](#) (1)  
(Optional)
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## Step 1 — Disable Auto Boot



**i** Before starting this procedure, you must disable your Mac's **Auto Boot** feature. Auto Boot powers on your Mac when you open the lid, and may be accidentally triggered during disassembly. [Use this guide](#) or follow the abbreviated instructions below to disable Auto Boot.

- Power on your Mac and launch **Terminal**.
- Copy and paste the following command (or type it exactly) into Terminal:
  - **sudo nvram AutoBoot=%00**
- Press **[return]**. If prompted, enter your administrator password and press **[return]** again. *Note: Your return key may also be labeled ↵ or "enter."*


**i** You can now safely power down your Mac and open the bottom case, without it accidentally powering on.

**★** When your repair is complete and your Mac is successfully reassembled, re-enable Auto Boot with the following command:

- **sudo nvram AutoBoot=%03**


## Step 2 — Lower Case




 Completely power off and unplug your MacBook Pro before you begin. Close the display and flip the entire laptop upside-down.

- Use a P5 Pentalobe driver to remove six screws securing the lower case, of the following lengths:

- Four 4.7 mm screws
- Two 6.6 mm screws

 Note the orientation of the screws as you remove them—they need to be reinstalled at a slight angle.

 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 3



- Press a suction handle into place near the front edge of the lower case, between the screw holes.
- Lift up on the suction handle just enough to open a small gap under the lower case.

### Step 4



- Slide the corner of an opening pick into the gap you just created underneath the lower case.
- Slide the opening pick around the nearest corner and then halfway up the side of the MacBook Pro.
- ❗ This releases the first of the hidden clips securing the lower case. You should feel and hear the clip pop free.



## Step 5




- Repeat the previous step on the opposite side, using your opening pick to release the second clip.

## Step 6



- Lift the front edge of the lower case (the side opposite the display hinge) just enough to slide your fingertips underneath and get a good grip on it.
- ⓘ Two additional hidden clips near the middle of the cover may pop free at this point, if they haven't already.

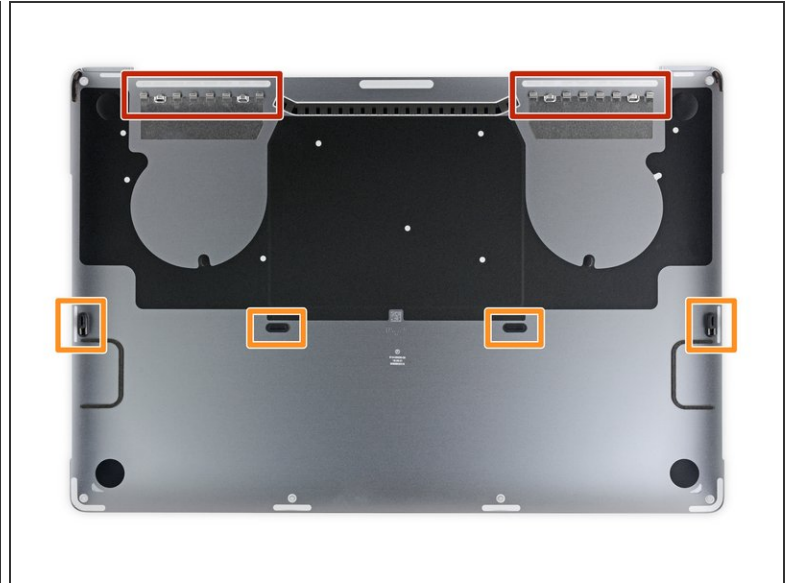
 Don't lift very far and don't try to remove the lower case yet.

## Step 7



- Pull the lower case firmly towards the front of the MacBook (away from the hinge area) to separate the last of the clips securing the lower case.
  - Pull first at one corner, then the other.
- ⚠ Pull to the side—not up.
- ⓘ This may require a lot of force.

## Step 8



- Remove the lower case.

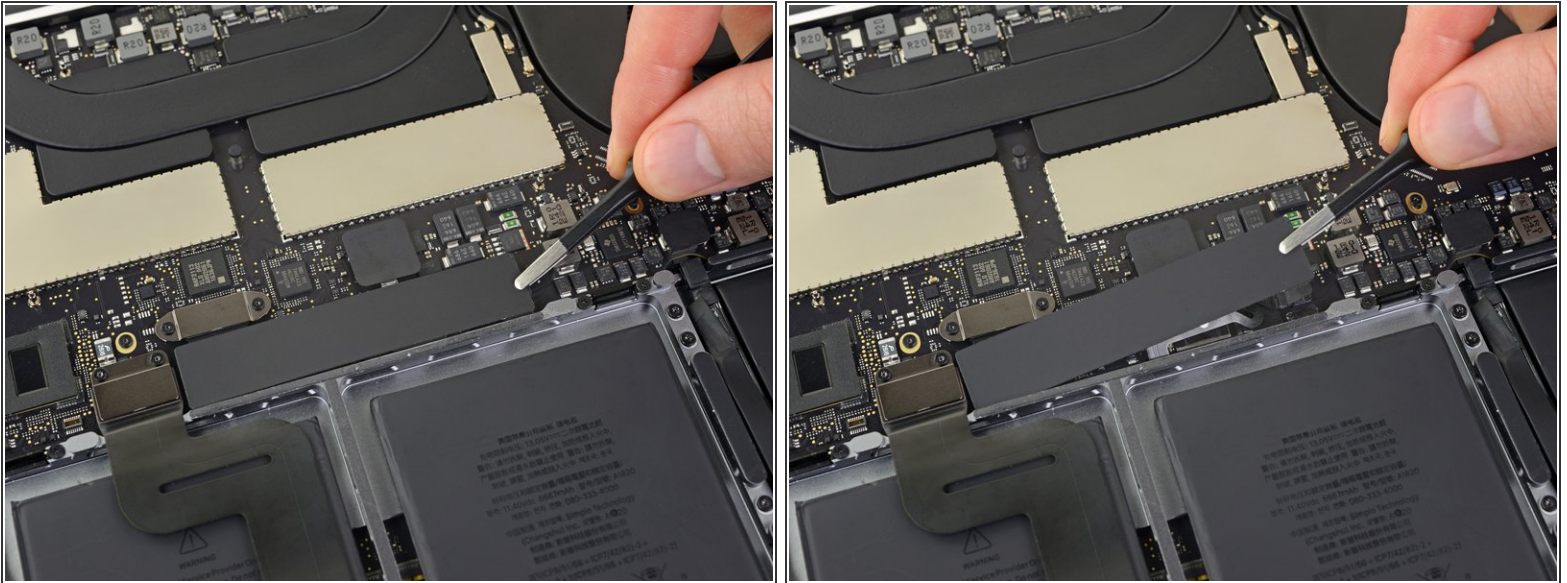


To reinstall the lower case:

- [Set it in place](#) and align the sliding clips near the display hinge. Press down and slide the cover toward the hinge. It should stop sliding as the clips engage.
- When the sliding clips are fully engaged and the lower case looks correctly aligned, press down firmly on the lower case to engage the four hidden clips. You should feel and hear them click into place.

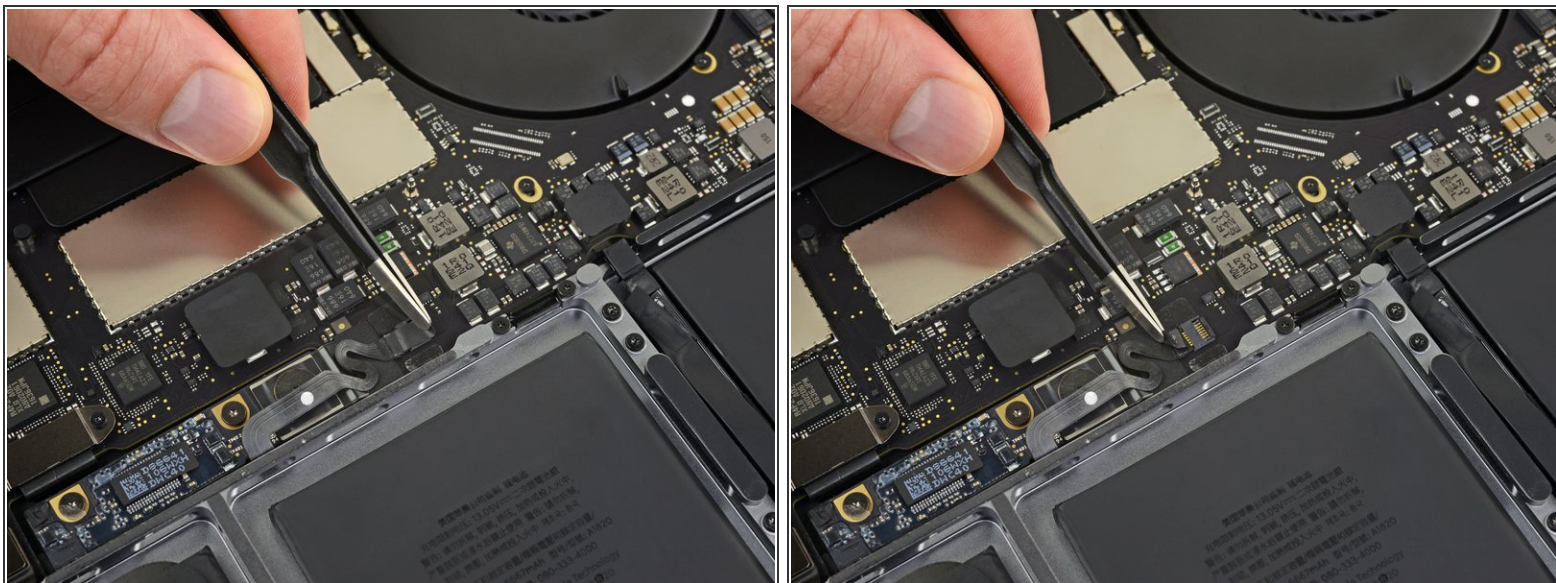


## Step 9 — Battery Connector



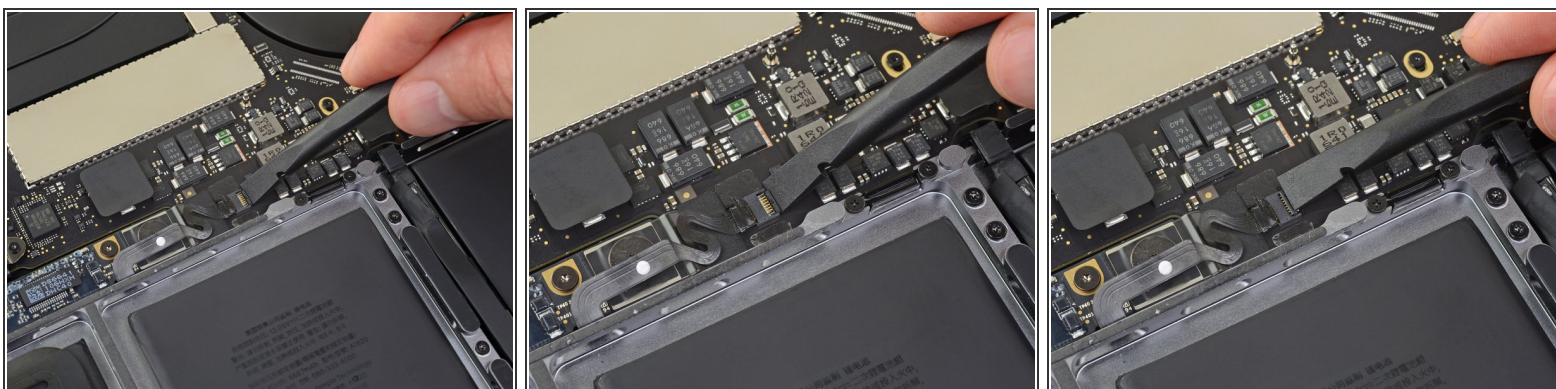
- Peel up and remove the large rectangular battery board cover, on the edge of the logic board nearest the battery.
  - If the cover doesn't peel up easily, apply mild heat with an iOpener, hair dryer, or heat gun to soften the adhesive underneath, and try again.
- ☒ If the cover doesn't seat securely during reassembly, try rotating it 180 degrees. It must be oriented correctly in order for the adhesive pads underneath to contact the board screws.

## Step 10



- Peel back the tape covering the battery board data cable connector.
- ⓘ The tape may not detach completely; just peel it back enough to access the connector.

## Step 11



- Use a spudger to gently pry up the locking flap on the [ZIF connector](#) for the battery board data cable.

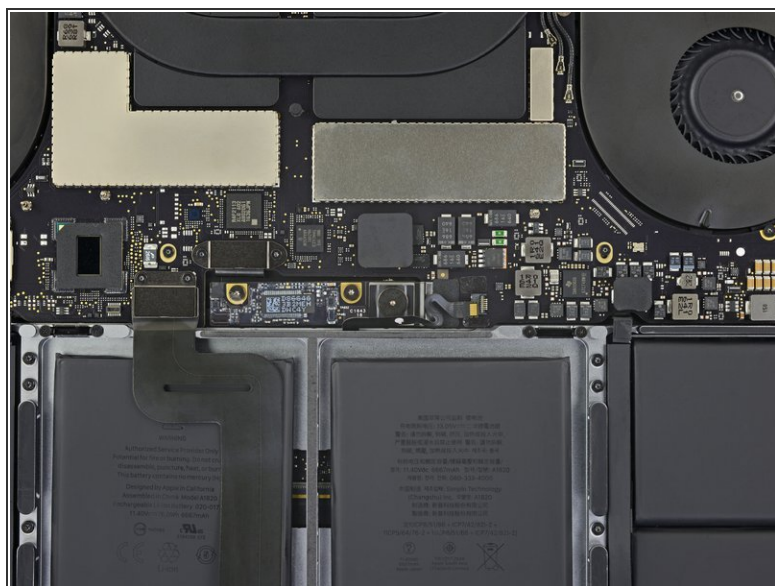
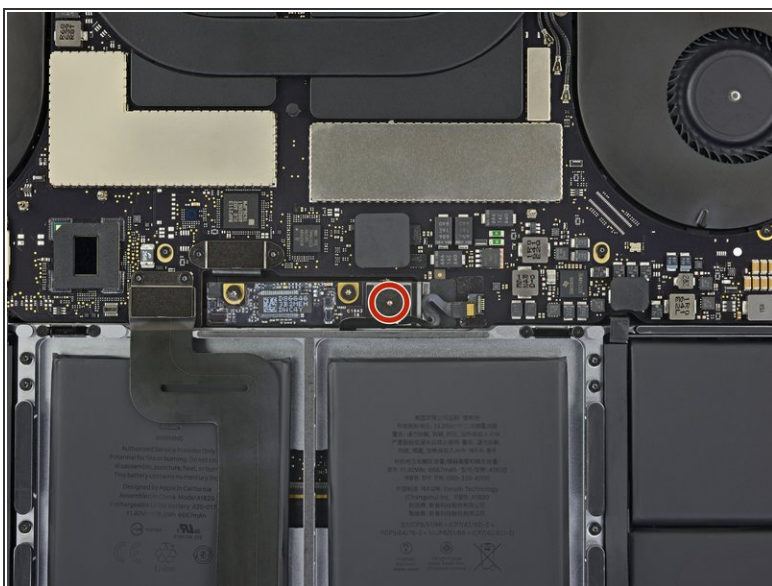


## Step 12



- Disconnect the battery board data cable by sliding it out from its socket.
- Slide parallel to the logic board, in the direction of the cable.

## Step 13



- Use a T5 Torx driver to remove the 3.7 mm pancake screw securing the battery power connector.

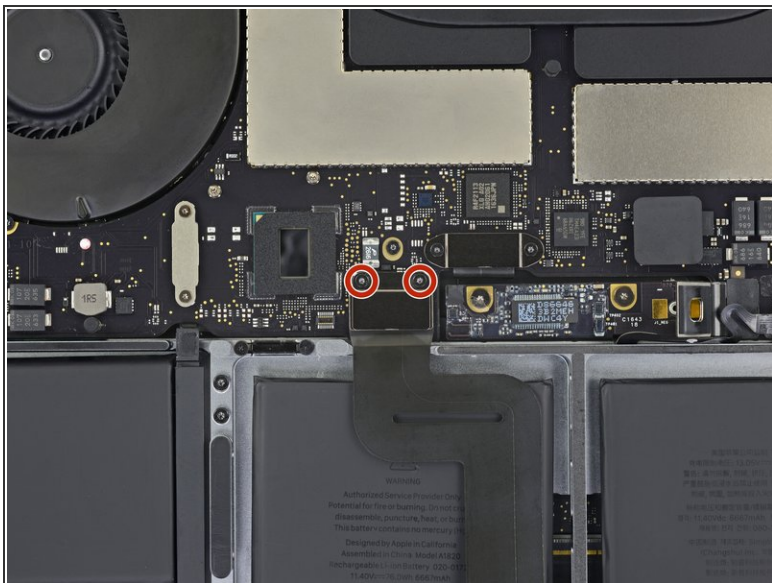
## Step 14



- Use a spudger to gently lift the battery power connector, disconnecting the battery.
- ⚠ Lift the connector high enough to keep it separated from its socket while you work. If it accidentally makes contact, it could damage your MacBook Pro.



## Step 15 — Trackpad Assembly



- Use a T3 Torx driver to remove the two 1.9 mm screws securing the trackpad cable's cover bracket.
- Remove the bracket.

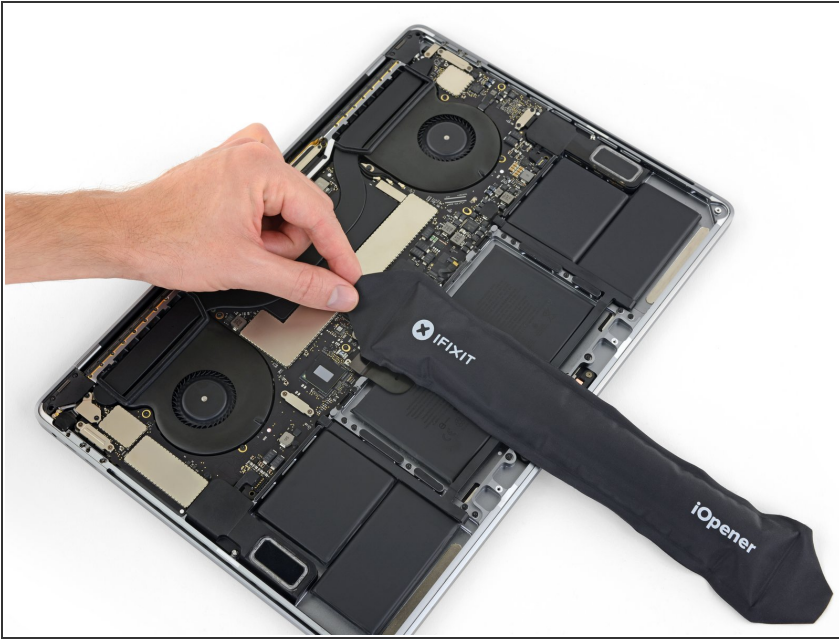
## Step 16



- Use a spudger to disconnect the trackpad cable by prying its connector straight up from the logic board.

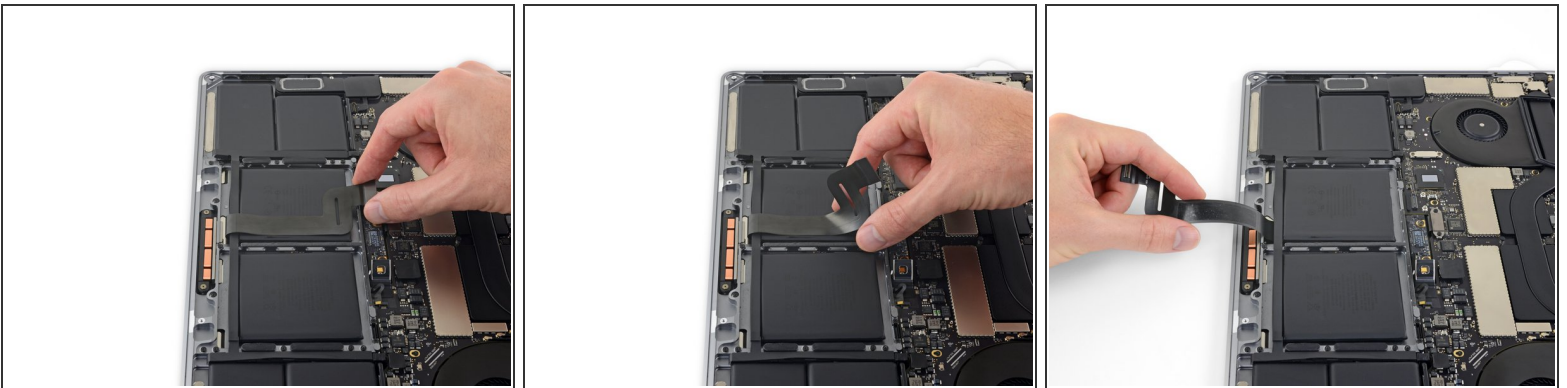


## Step 17



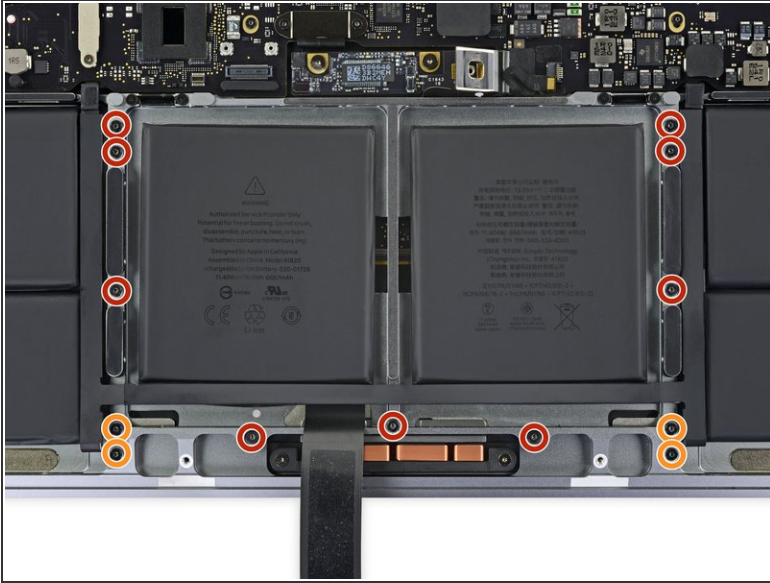
- Apply mild heat to the trackpad ribbon cable to soften the adhesive securing it to the battery.
- You can use an iOpener, hair dryer, or heat gun, but be careful not to overheat the battery. The cable should be warm, but not too hot to touch.

## Step 18



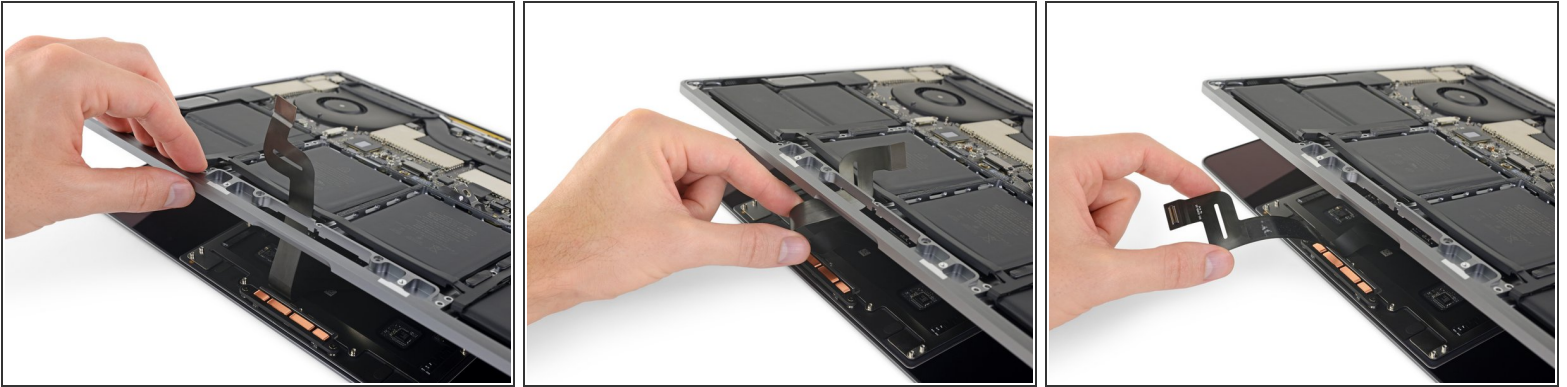
- Carefully peel the trackpad cable up off the battery, and push it out of the way.
- ⚠ Don't fold or tear the cable. If you have trouble, don't force it—apply more heat and try again.

## Step 19



- Use a T5 Torx driver to remove the 13 screws securing the trackpad assembly:
  - Nine 5.8 mm screws
  - Four 4.9 mm screws
- ☑ These screws look very similar, so don't mix them up.
- ☑ These screws can loosen over time due to the clicking action on the Force Touch trackpad. Adding a little blue threadlocker as you install them can help keep them secure.
- ☑ Install the screws loosely and check the trackpad alignment before tightening them down.

## Step 20



- Swing the display open slightly, but keep the MacBook upside-down. The trackpad assembly should separate and lay flat on the display.
  - Gently feed the trackpad's ribbon cable through its slot in the chassis.
- ☒ Carefully note the correct slot for the trackpad cable during reassembly—it goes through the narrow slot alongside the battery, not the bigger slot near the MacBook Pro's front edge.

## Step 21



- As you remove the trackpad assembly, be very careful not to lose the nine small metal washers resting on the screw posts. (They will fly off and get lost with very little provocation.)
- Remove the trackpad assembly.

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