



MacBook Pro 16" 2019 Battery Disconnection

Safely disconnect the battery prior to beginning repairs. Prerequisite-only guide.

Written By: Carsten Frauenheim



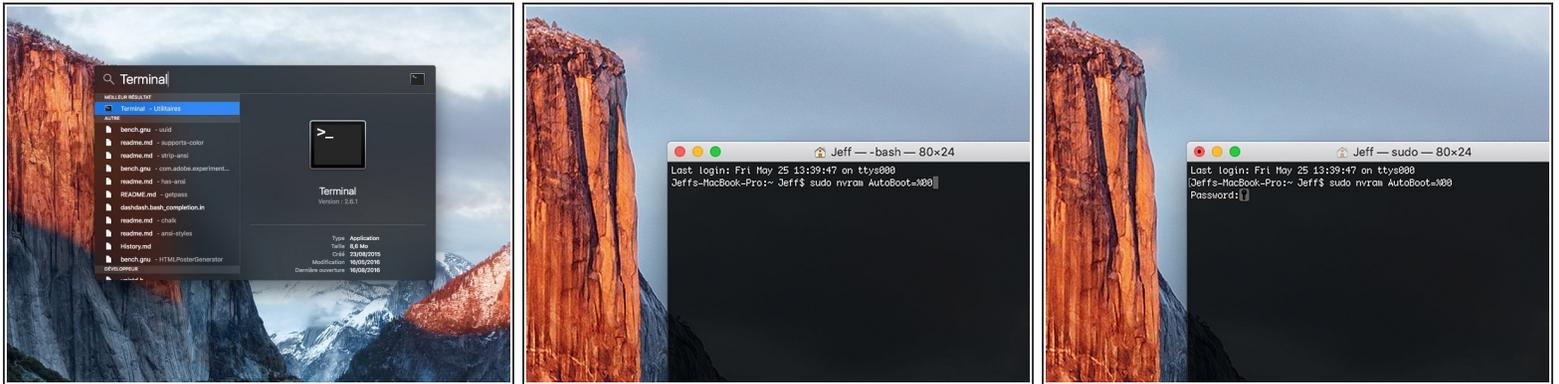
INTRODUCTION

Prerequisite-only guide to disconnecting the battery before making repairs.

TOOLS:

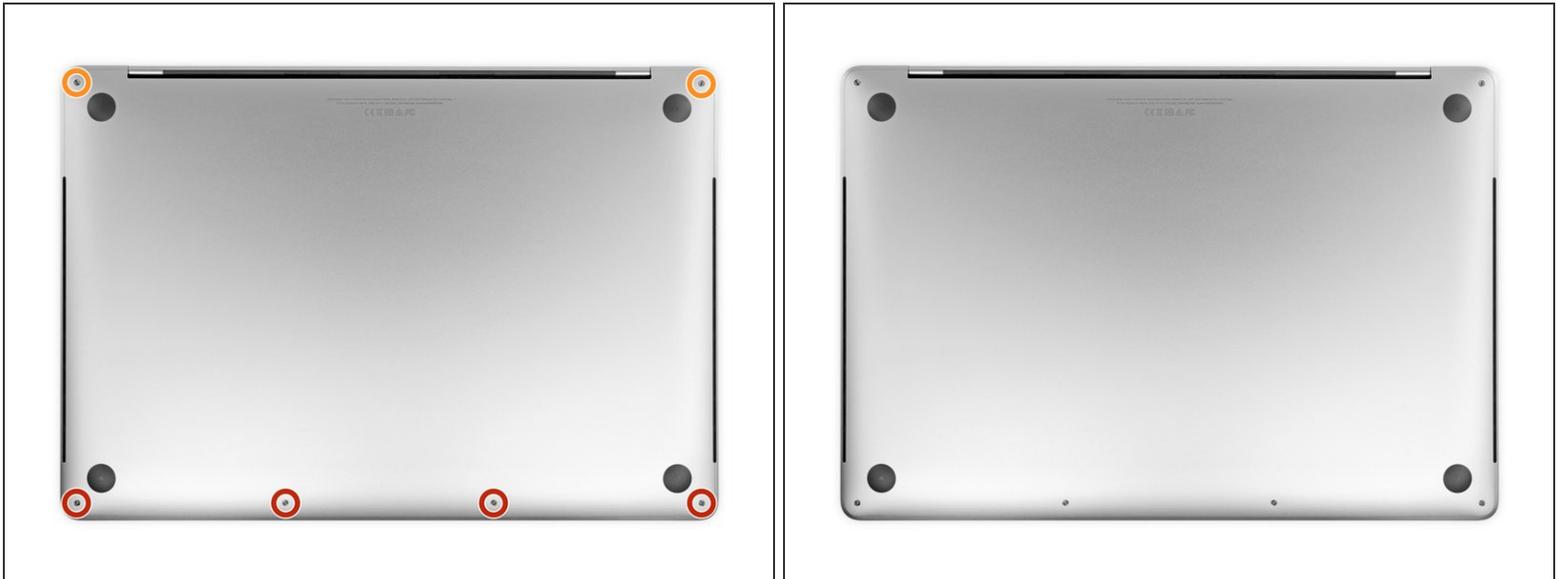
- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
 - [Suction Handle](#) (1)
 - [iFixit Opening Picks \(Set of 6\)](#) (1)
 - [Spudger](#) (1)
 - [Tweezers](#) (1)
 - [T5 Torx Screwdriver](#) (1)
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Step 1 — Disable Auto Boot



- 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. *This command may not work on all Macs.*
- 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 — Remove lower case screws



⚠ Completely power off and unplug your MacBook Pro before you start. 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 3.7 mm screws
 - Two 7.3 mm screws
- ☞ Note how the screws come out at a slight angle—you must reinstall them the same way.
- ☞ 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 — Unclip lower case



- Press a suction handle into place near the front edge of the lower case, between the screw holes.
- Pull 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 other side, using an opening pick to to release the second clip.

Step 6



- Lift the front edge of the lower case (the side opposite the display hinge) enough to slide your fingertips underneath and get a good grip on it.

- ⓘ Two additional hidden clips near the middle of the cover should pop free at this point, if they haven't already.

⚠ Don't lift more than an inch or so, and don't try to remove the lower case yet.

Step 7

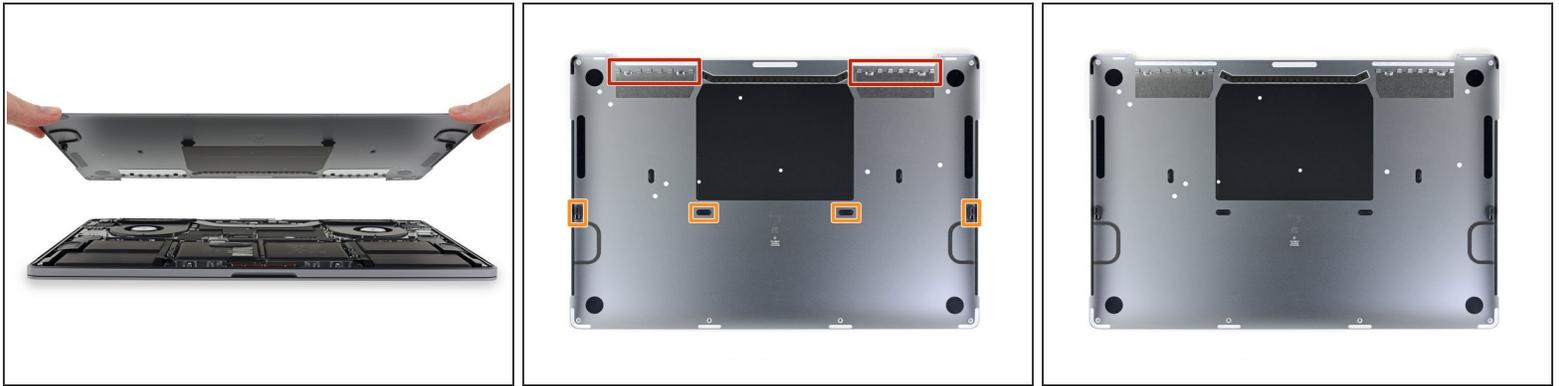


- Pull firmly to slide the lower case towards the front edge of the MacBook (away from the hinge area) to separate the last of the clips securing the lower case.
 - Pull first at one corner, then the other.

 Pull to the side—not up.

 This may require a lot of force.

Step 8 — Remove lower case



- Remove the lower case.

🔗 To reinstall the lower case:

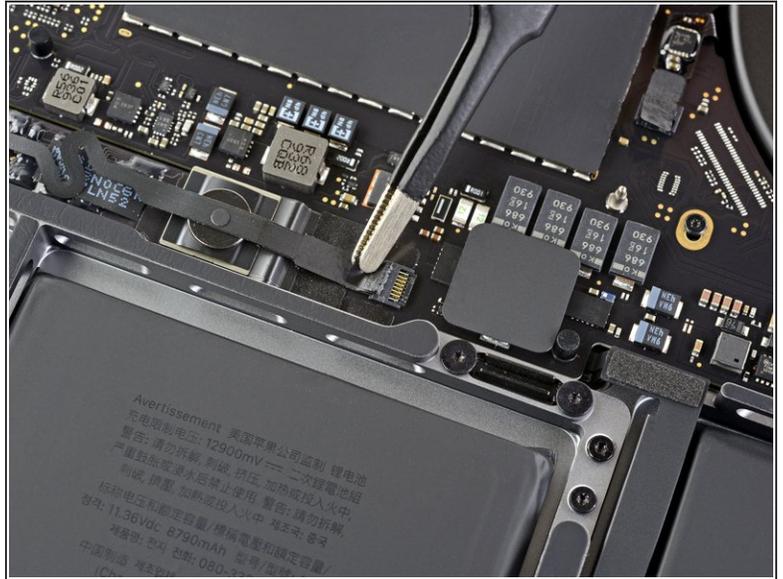
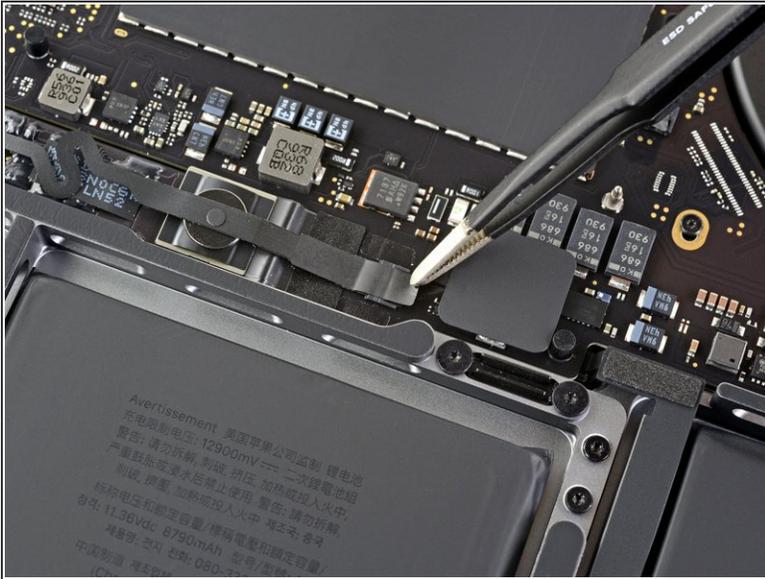
- [Set it in place](#) and align the sliding clips near the display hinge. Press down and slide the cover toward the hinge. It should stop sliding as the clips engage.
- When the sliding clips are fully engaged and the lower case looks correctly aligned, press down firmly on the lower case to engage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

Step 9 — Remove battery board sticker



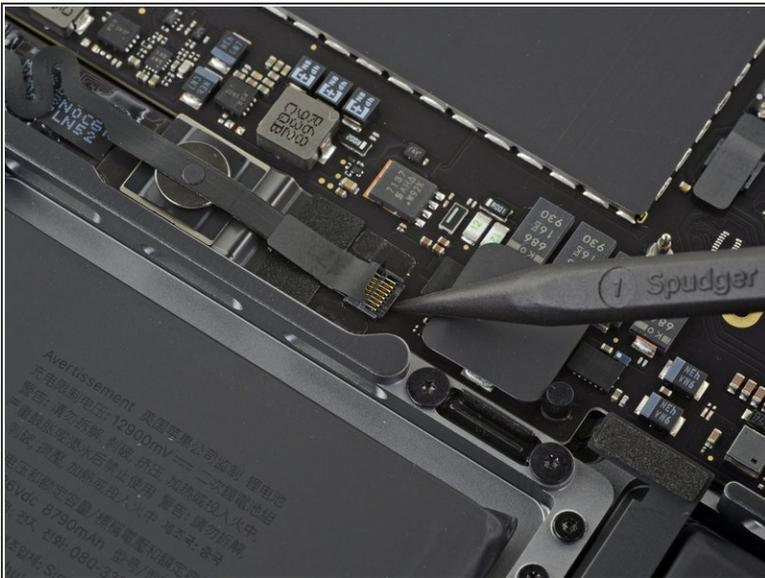
- Peel up and remove the insulating sticker covering the battery board, on the edge of the logic board nearest the battery.
- If the cover doesn't peel up easily, apply mild heat with an iOpener, hair dryer, or heat gun to soften the adhesive underneath, and try again.

Step 10



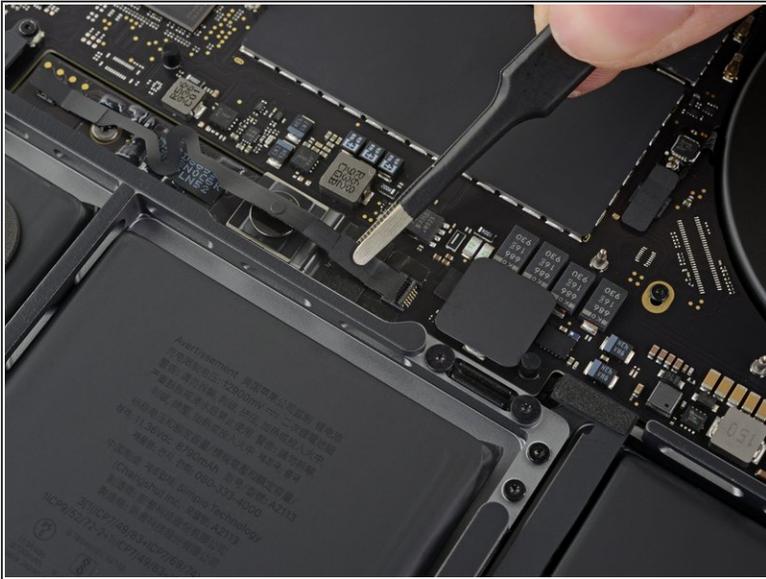
- Peel back any tape covering the battery board data cable connector.

Step 11 — Disconnect battery board data cable



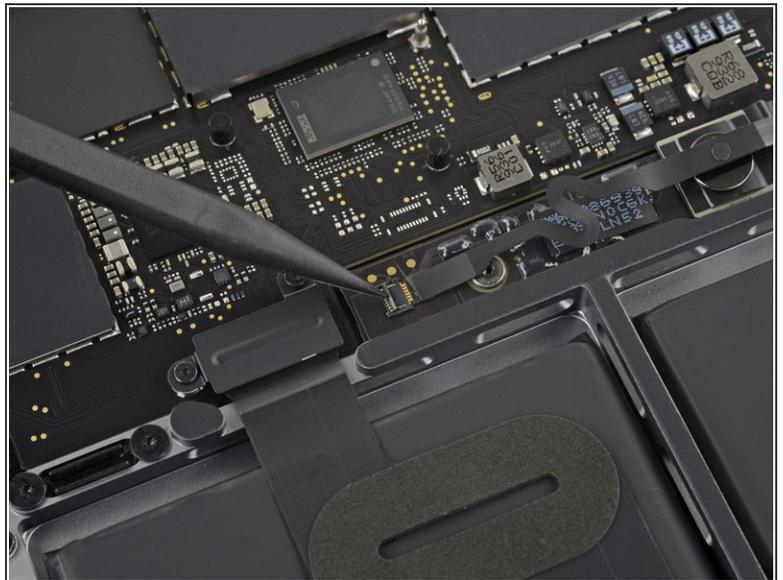
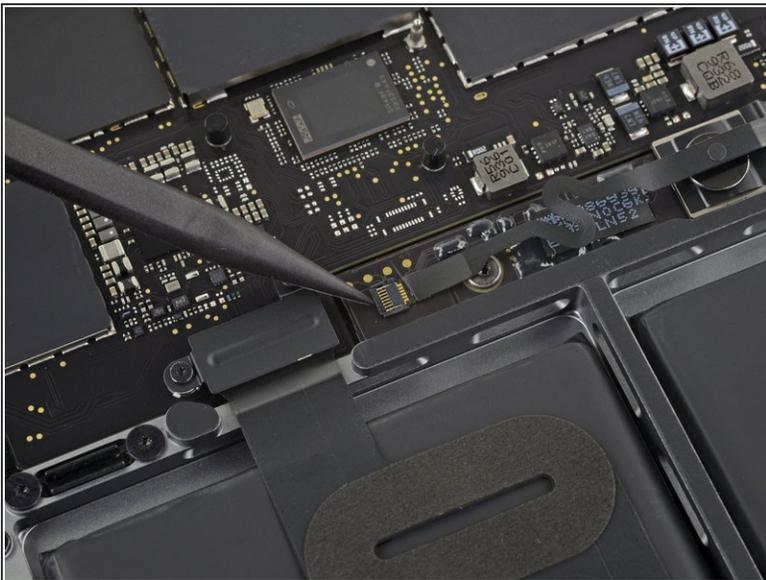
- Use a spudger to gently pry up the locking flap on the [ZIF connector](#) for the battery board data cable.

Step 12



- Disconnect the battery board data cable by sliding it out from its socket on the logic board.
⚠ Slide parallel to the logic board. Don't pull up.

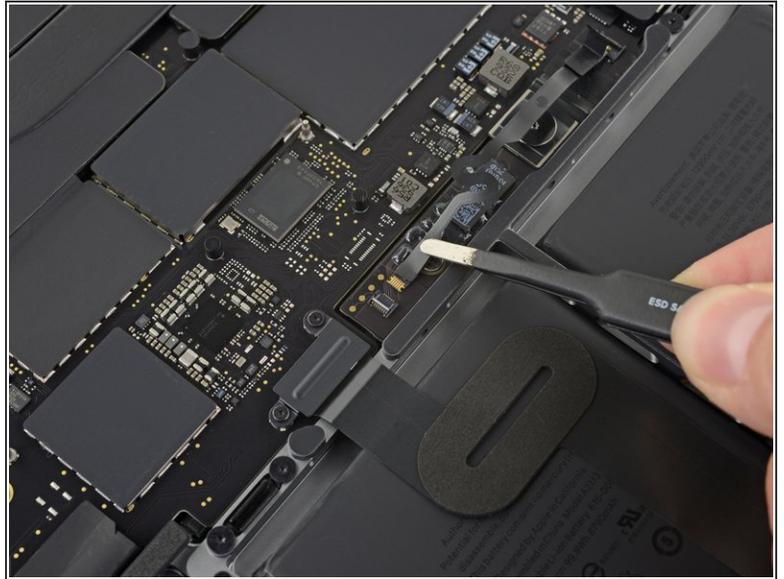
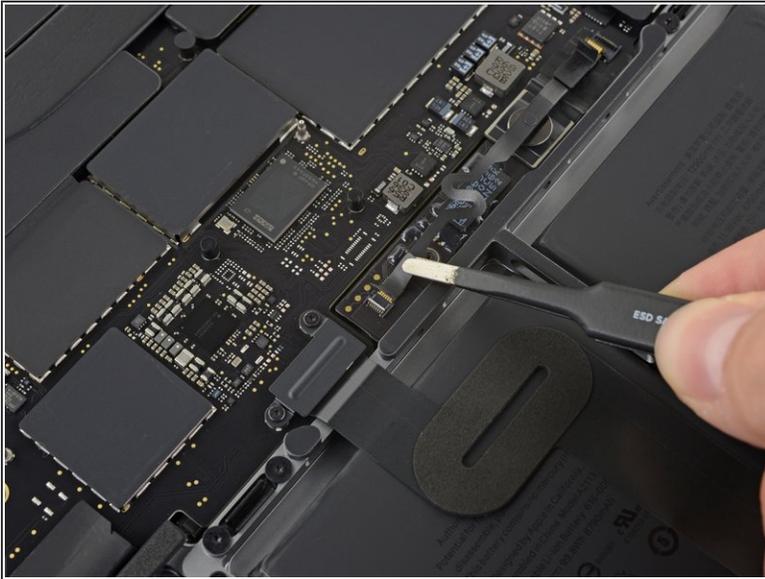
Step 13



- Peel back any tape covering the battery board data cable connector.
- Pry up and disconnect the locking flap on the connector at the opposite end of the battery board data cable.

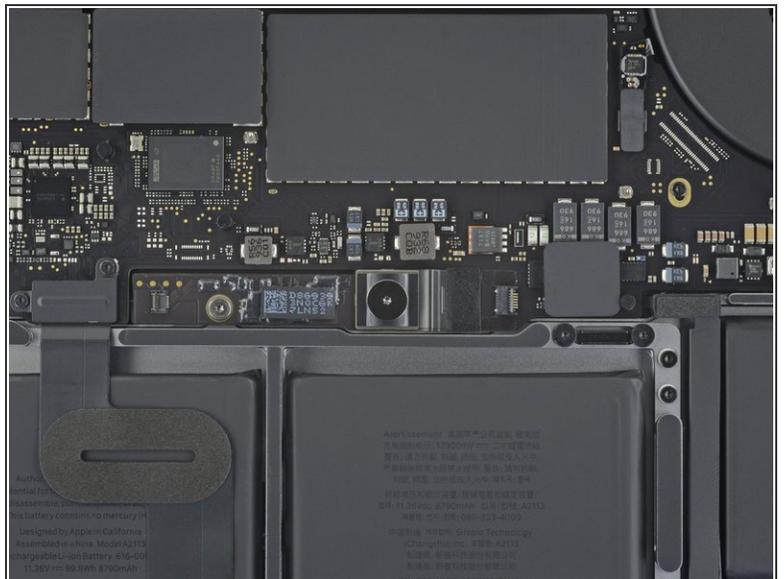
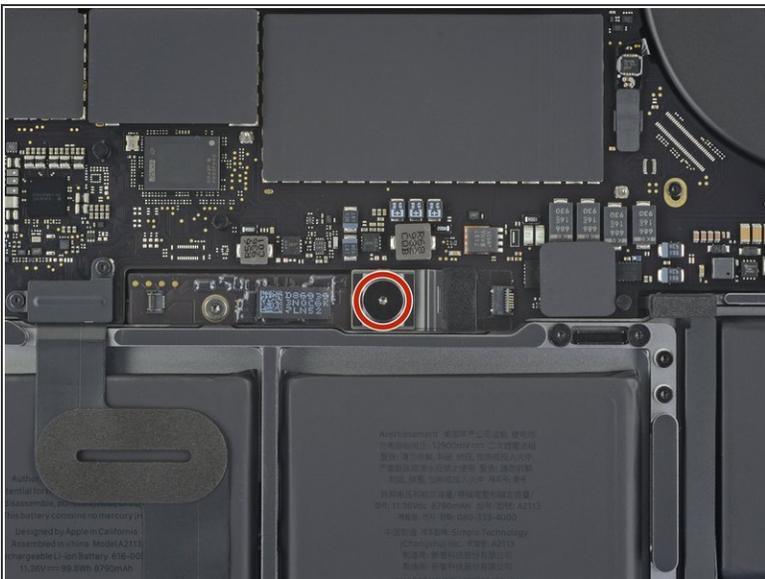
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Step 14 — Remove battery board data cable



- Slide the battery board data cable out of its socket on the battery board, and remove it completely.
- ☞ Take care not to reinstall this cable backwards or upside-down.

Step 15 — Disconnect the battery



- Use a T5 Torx driver to remove the 6.7 mm pancake screw securing the battery power connector.

Step 16



- Use a spudger to 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.

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