



Battery Disconnection

Prerequisite-only guide to safely disconnect...

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INTRODUCTION

Prerequisite-only guide to safely disconnect the battery on a 2019 MacBook Pro 13" before undertaking a repair.

TOOLS:

P5 Pentalobe Screwdriver Retina MacBook Pro and Air (1)

Suction Handle (1)

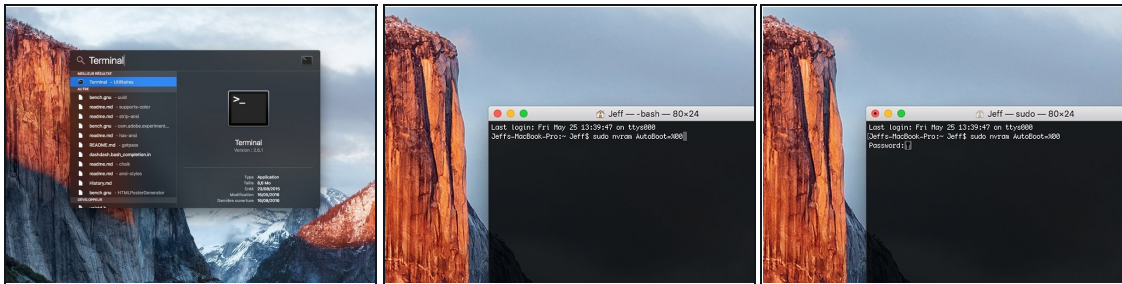
iFixit Opening Picks (Set of 6) (1)





Tweezers (1)

Spudger (1)

T5 Torx Screwdriver (1)

Step 1 — Disable Auto Boot



-  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."*
-  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 the lower case



⚠ Before you proceed, unplug and power down your MacBook. Close the display and lay it on a soft surface, top-side down.

- Use a P5 Pentalobe driver to remove the six screws securing the lower case:
 - Two 6.2 mm screws
 - Two 5.3 mm screws
 - Two 3.4 mm 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 3



- Apply a suction handle to the lower case near the front-center area of the MacBook Pro.
- Lift the suction handle to create a slight separation between the lower case and the chassis.

Step 4



- Insert one corner of an opening pick into the space between the lower case and the chassis.
- Slide the opening pick around the nearest corner and halfway up the side of the case.
 - ❗ This releases the first of the hidden clips securing the lower case to the chassis. You should feel and hear the clip pop free.

Step 5



- Repeat the previous step on the opposite side, sliding your opening pick under the lower case and up the side to pop the second clip free.

Step 6




- Insert your opening pick once again under the front edge of the lower case, near one of the two centermost screw holes.
- Give the pick a firm twist to pop free the third clip securing the lower case to the chassis.
- Repeat this procedure near the other of the two centermost screw holes, popping the fourth clip free.

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.

 It may help to pull first at one corner, then the other.


 Pull to the side—not up.

 This may require a lot of force.

Step 8

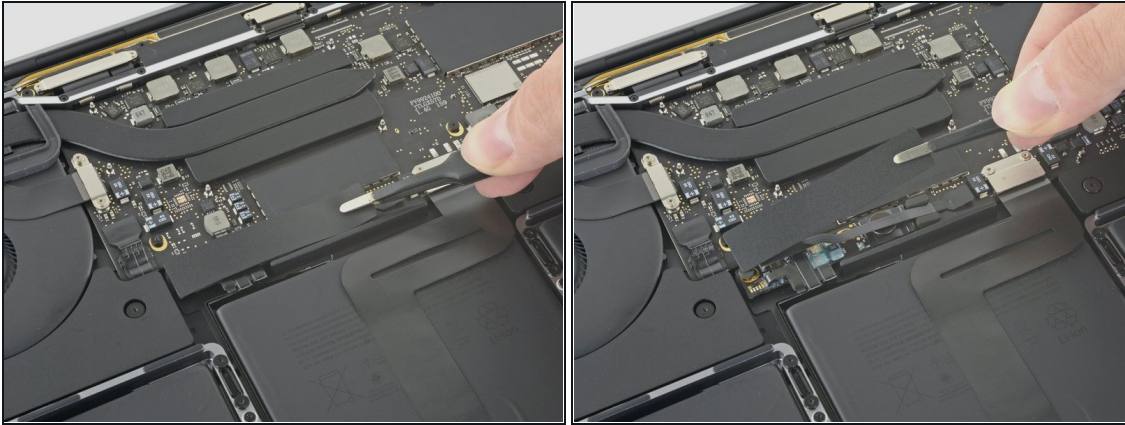


- Remove the lower case.

 To reinstall the lower case:

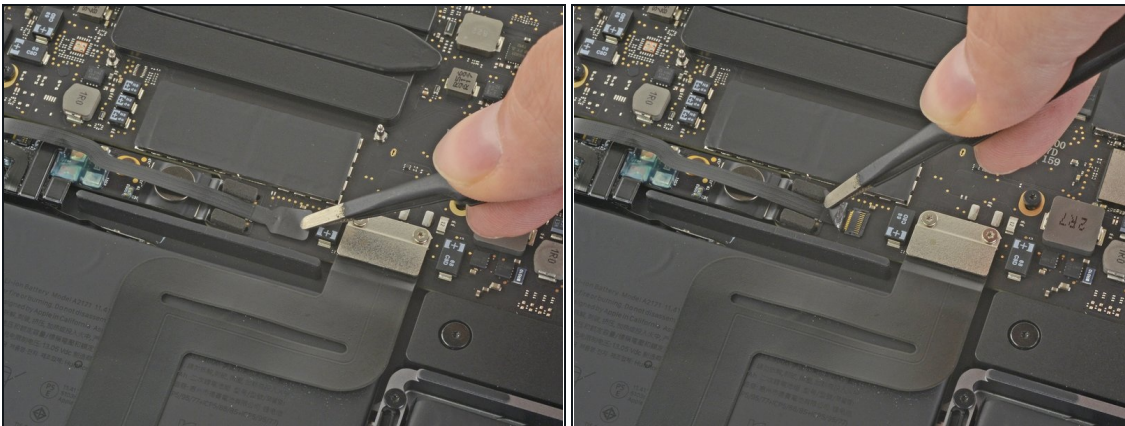
- [Set it in place](#) and align the sliding clips near the display hinge. Press down and slide the cover toward the hinge. It should stop sliding as the clips engage.
- When the sliding clips are fully engaged and the lower case looks correctly aligned, press down firmly on the lower case to engage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

Step 9 — Disconnect the battery



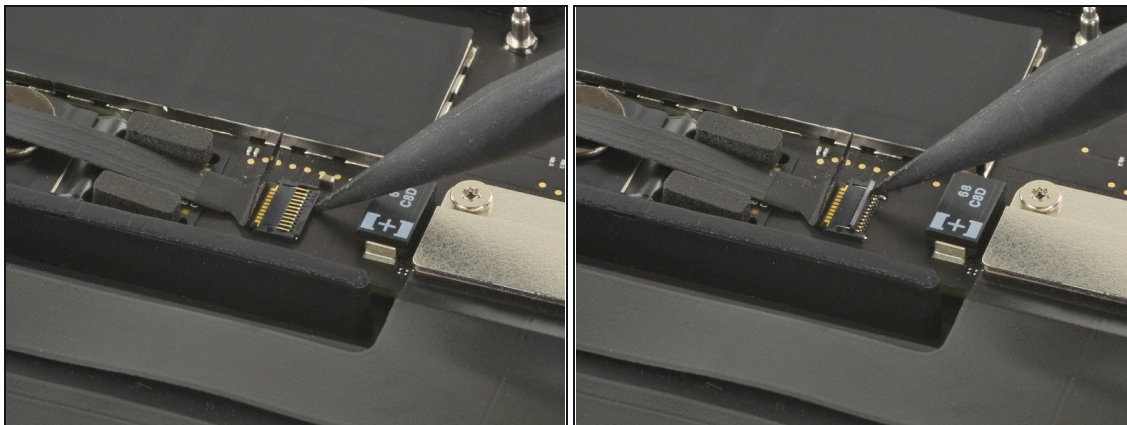
- Carefully peel up the large piece of tape covering the battery connector, on the edge of the logic board nearest the battery.
- Remove the tape.

Step 10



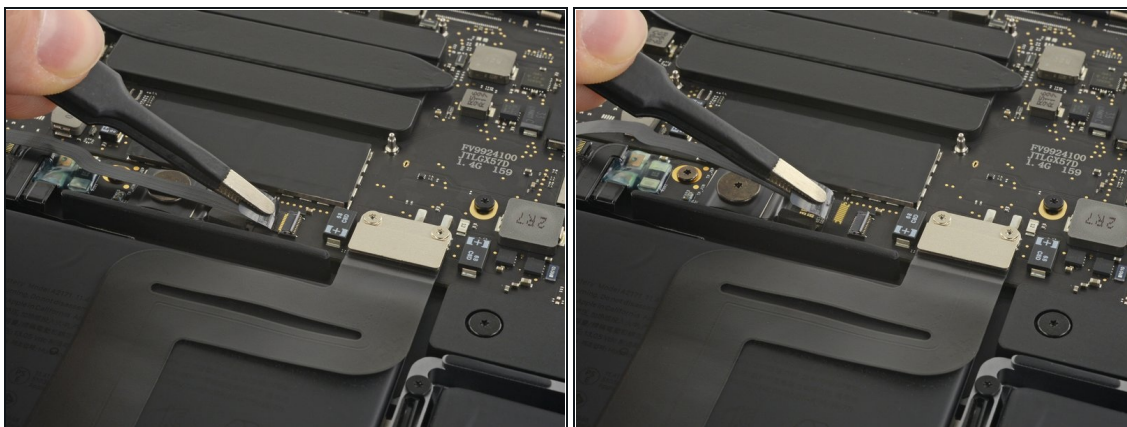
- Gently peel back the small piece of tape covering the battery board data cable connector.
 - ① The tape is integrated into the ribbon cable and will not detach completely. Simply peel it back enough to access the connector.

Step 11



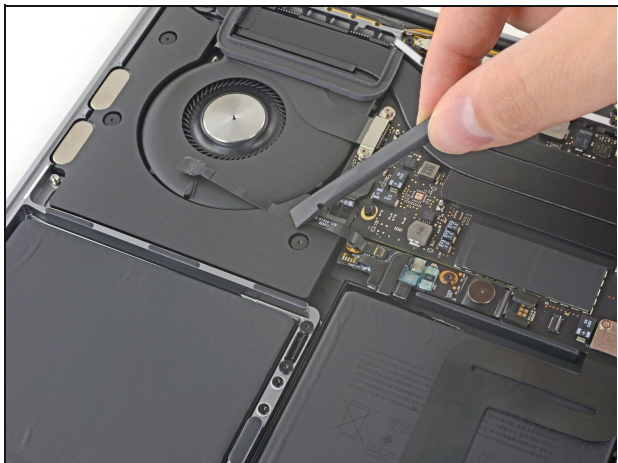
- Use the tip of a spudger to flip up the small black locking tab securing the cable in its connector.
- ⓘ Locking tabs on [ZIF connectors](#) are fragile, so be gentle when using the tip of the spudger.

Step 12



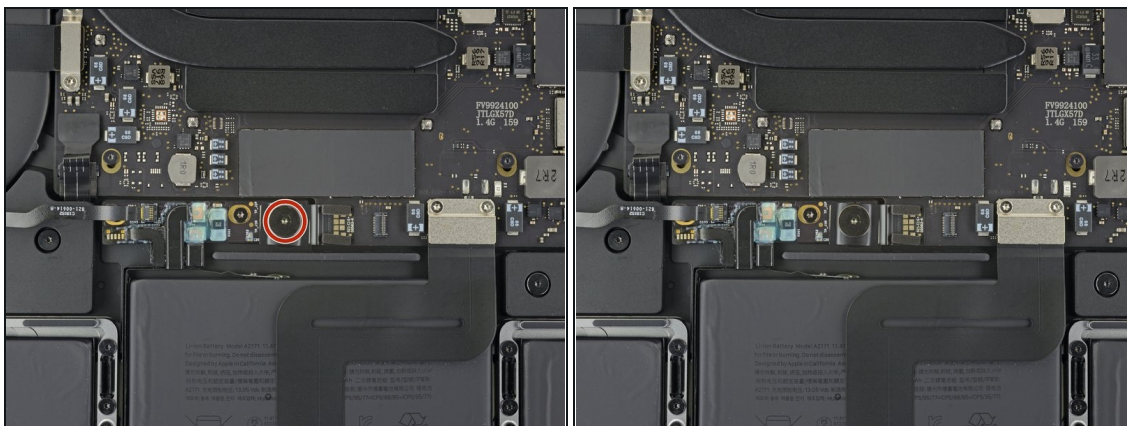
- Disconnect the battery board data cable by sliding it out from its socket.
- Slide parallel to the logic board, in the direction of the cable.

Step 13



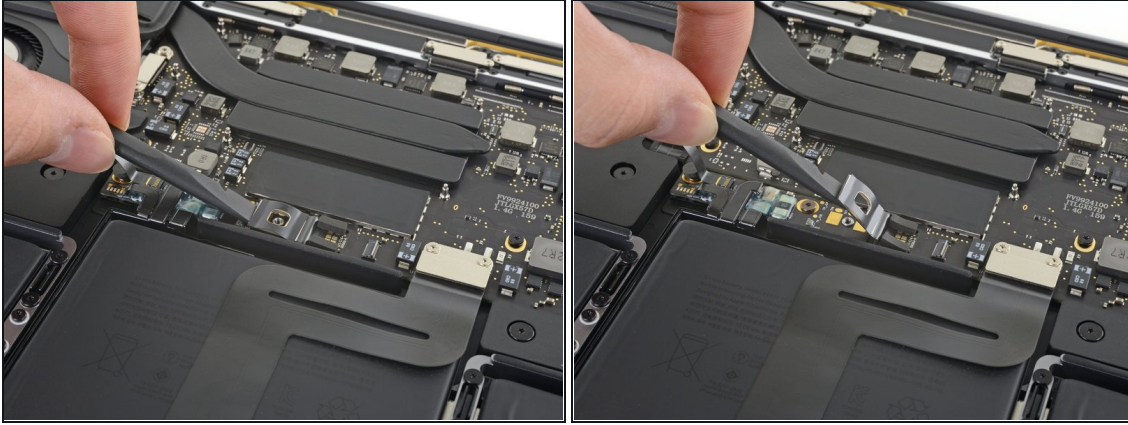
- Fold the battery board data cable back and out of the way.
- ☒ If you're replacing your battery, you may need to completely remove and transfer this cable to your new battery. Disconnect both ends and carefully remove the cable. During installation, be careful not to install it upside-down or backwards—note the orientation in the photos.

Step 14



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

Step 15



- Use a spudger to gently lift the battery power connector, disconnecting the battery.
- Lift the connector high enough so that it stays separated from its socket.

 If it accidentally makes contact during the course of your repair, it could damage your MacBook Pro.

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