MacBook Pro 13" Retina Display Mid 2014 Battery Replacement

Written By: Sam Lionheart (and 6 other contributors)

💬 **Comments: 88**   ⭐ **Favorites: 24**   ✓ **Completions: 77**
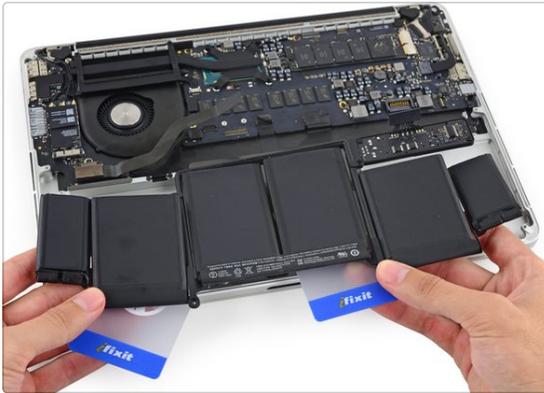
⏱ Difficulty	**Difficult**
☰ Steps	33
🕐 Time Required	**30 minutes - 2 hours**
🔖 Sections	5 ≫
⚠ Flags	0 ≫

Introduction

Use this guide to remove the glued-in battery from your MacBook Pro. This is best done with the help of an iFixit battery replacement kit; the liquid adhesive remover in your kit will dissolve the adhesive securing the battery, allowing you to remove it with ease. Alternatively, you can use an iOpener to apply a modest amount of heat in order to soften the adhesive before prying out the battery.

iFixit adhesive remover is highly flammable. Perform this procedure in a well-ventilated area. Do not smoke or work near an open flame during this procedure.

For your safety, drain your MacBook Pro's battery below 25% before you begin this procedure. A charged lithium-ion battery can create a dangerous and uncontrollable fire if accidentally punctured. If your battery is swollen, take extra precautions.

Note: The solvent used to dissolve the battery adhesive can damage certain plastics, such as the MacBook Pro's plastic speaker enclosures. Take care when applying the solvent.

If you're using the old-style iFixit adhesive remover with separate bottle and syringe (no longer sold), click here for a slightly modified set of instructions.

Tools

🛒 **Buy these tools**

- 🛒 P5 Pentalobe Screwdriver Retina MacBook Pro and Air
- 🛒 Spudger
- 🛒 T5 Torx Screwdriver
- 🛒 iOpener
- 🛒 Plastic Cards
- 🛒 Utility Scissors

Parts

🛒 **Buy these parts**

MacBook Pro 13" Retina (Late 2013 Mid 2014) Battery $99.99	Buy

Step 1   Lower Case
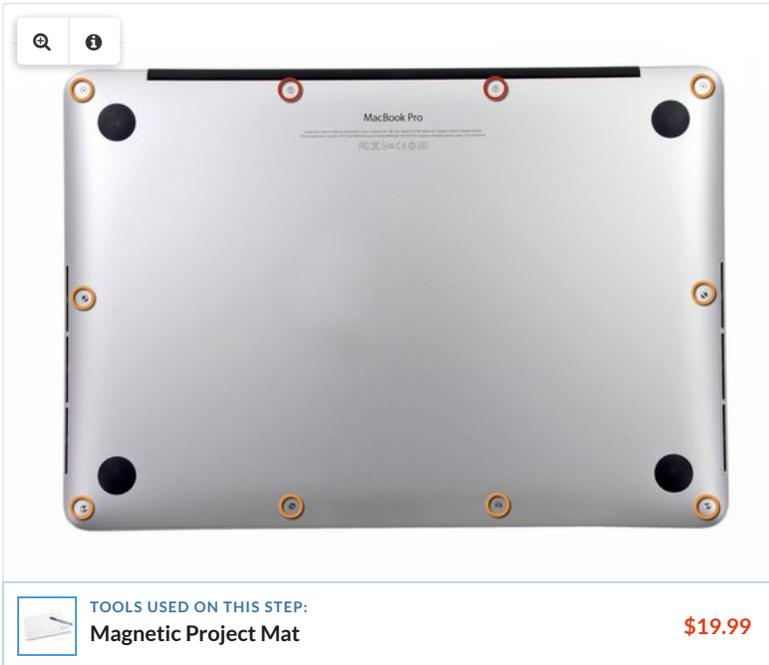
- Remove the following ten screws securing the lower case to the upper case:

  - Two 2.3 mm Pentalobe screws

  - Eight 3.0 mm 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.

TOOLS USED ON THIS STEP:
Magnetic Project Mat   **$19.99**

💬 8 comments

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.

💬 Add a comment

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.

💬 4 comments

Step 4   Battery Connector

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

💬 2 comments

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.

💬 10 comments

Step 6

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

💬 4 comments

Step 7   Right Speaker

- Remove the two 2.1 mm T5 Torx screws securing the logic board end of the I/O board cable bracket.

💬 3 comments

Step 8
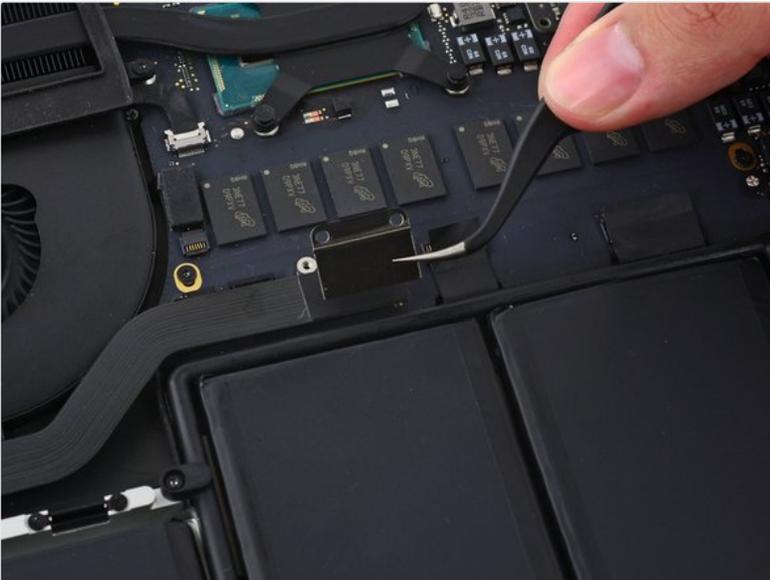
- Grasp the I/O board cable bracket with a pair of tweezers and remove it from the MacBook.

💬 Add a comment

Step 9

- Use the flat end of a spudger to pop the I/O board connector straight up off its socket on the logic board.

- ⚠ Be careful to only pry up on the I/O board cable, **not** on the socket itself or you risk damaging your logic board.

💬 Add a comment

Step 10

- Lift the logic board end of the I/O board cable straight up to bend it out of the way.

- ⚠ To avoid damage to the cable, fold only at the bend in the I/O board end of the cable.

💬 One comment

Step 11
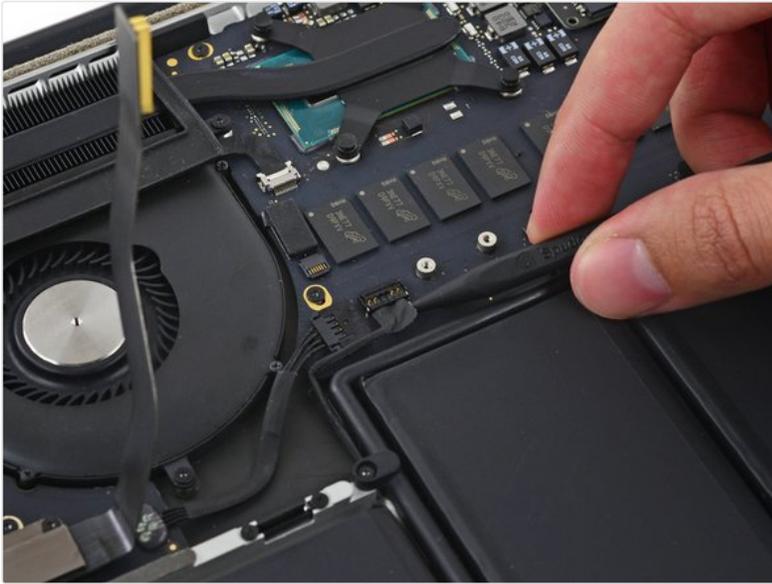
- Carefully tuck the tip of a spudger under the right speaker cable near the connector and lift it up out of its socket on the logic board.

💬 2 comments

Answers

We are a community of people helping each other fix stuff. Come hang out with us.

Answers Forum

Step 12

- Carefully peel the right speaker cable off the upper case.

○ Add a comment

Step 13
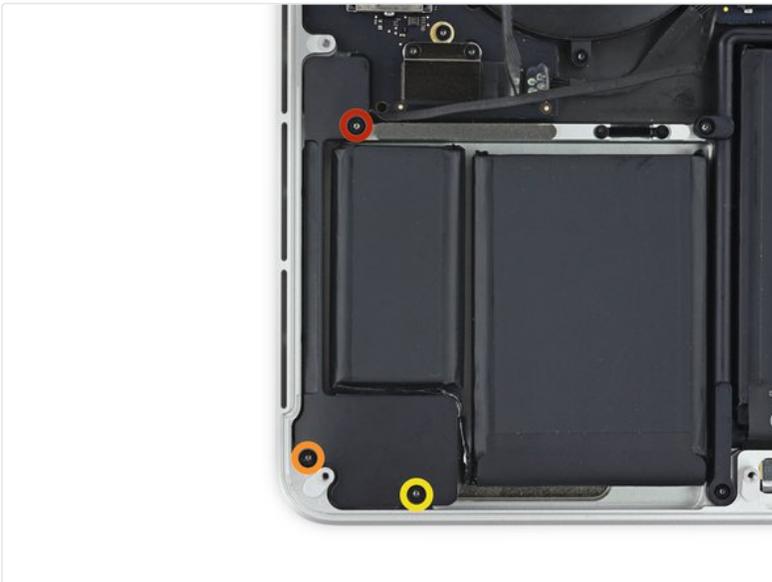
- Remove the following screws securing the right speaker to the upper case:

  - One 5.7 mm T5 Torx screw

  - One 6.5 mm T5 Torx screw

  - One 3.8 mm T5 Torx screw

○ Add a comment

Step 14
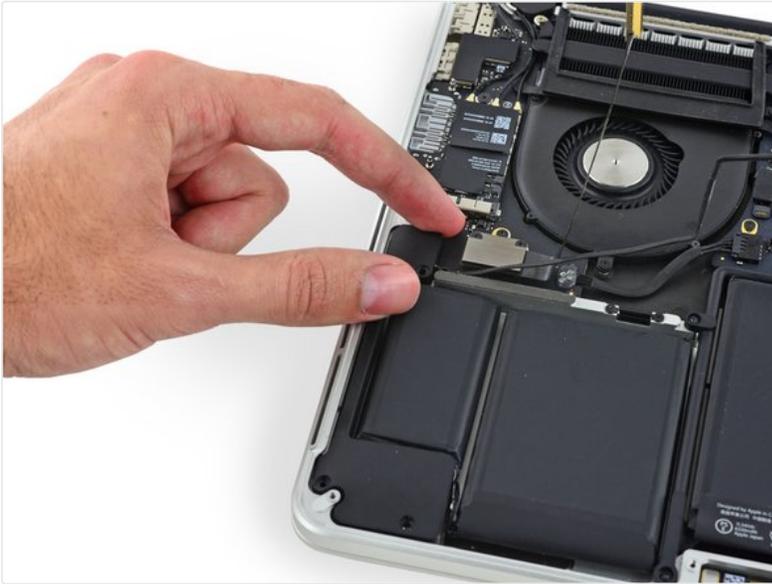
- Lift the right speaker from the cable end and pull it free from the case.

○ Add a comment

Step 15   Left Speaker
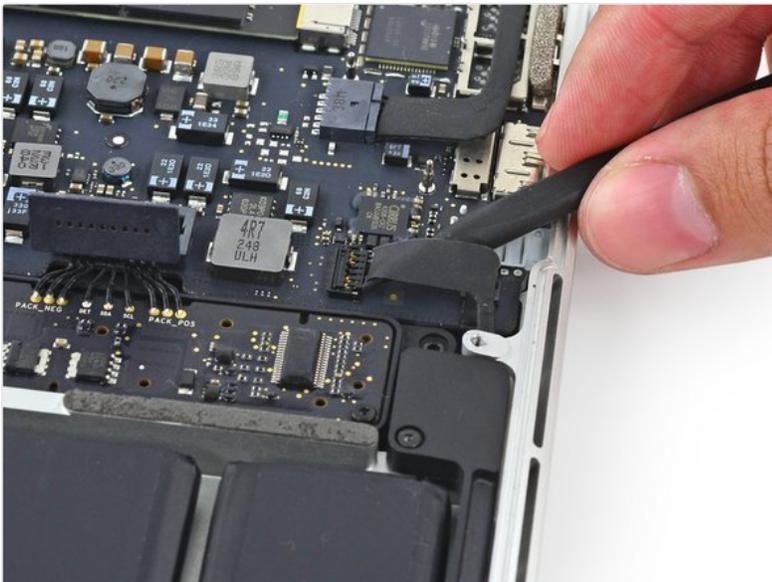
- Insert the tip of a spudger under the left speaker cable near the connector and lift it up out of its socket on the logic board.

○ One comment

Step 16

- Remove the following screws securing the left speaker to the upper case:

  - One 5.7 mm T5 Torx screw

  - One 6.5 mm T5 Torx screw

  - One 3.8 mm T5 Torx screw

💬 Add a comment

Step 17

- Lift the corner of the left speaker up and slide it out the battery to remove it from the upper case.

⚠️ Be careful **not** to snag the speaker cable on the screw hole post in the side of the case.

💬 Add a comment

Step 18 Battery
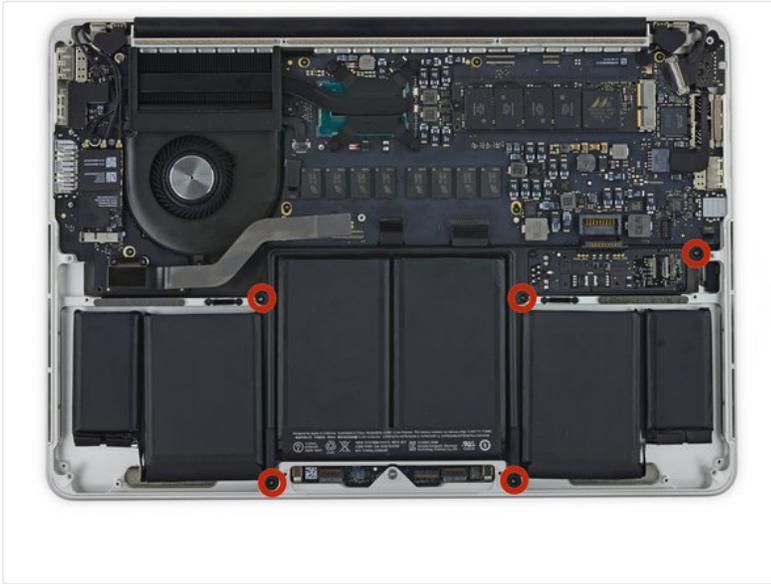
- Remove the five 3.7 mm T5 Torx screws securing the battery to the upper case.

💬 13 comments

Step 19

- ⓘ The liquid adhesive remover provided in your iFixit battery replacement kit can affect the antireflective coating on your MacBook Pro's display.

- To protect your display, place a sheet of aluminum foil between the display and keyboard and leave it there while you work.

💬 Add a comment

Step 20

- (i) If you have an iFixit battery kit with liquid adhesive remover, it's time to get it prepped.

- Alternatively, if you are using the hot iOpener method, skip the following three steps.

- ⚠ iFixit adhesive remover contains acetone, a mild skin and eye irritant.

  - Wear eye protection when handling and applying the adhesive remover. (Eye protection is included in your kit.)

  - **Do not** wear contact lenses without eye protection.

  - Protective gloves are also included in your kit. If you are concerned about skin irritation, put your gloves on now.

💬 Add a comment

Step 21

- Pull off the black rubber stopper from your bottle of adhesive remover.

⚠️ Twist to loosen or remove the bottle cap before you cut the applicator tip.

ⓘ This unseals the bottle and allows the pressure to equalize before you cut the applicator tip. **If you skip this step, the adhesive remover may spray out unexpectedly when the tip is cut.**

- Use scissors to cut off the sealed tip of the applicator.

ⓘ Cutting close to the narrow tip will give you better control so you can apply the adhesive remover in small amounts.

⚠️ Twist and close the bottle cap securely before you proceed further.

💬 One comment

Step 22

- Apply a few drops of adhesive remover evenly under the edge of the rightmost battery cell.

  - ⓘ You don't need to use very much. The small bottle contains more than twice the amount of solvent needed to remove all the battery cells.

- Wait 2-3 minutes for the liquid adhesive remover to penetrate underneath the battery cell before you proceed to the next step.

- ⚠ Use more adhesive remover if needed, but do not apply more than a few drops at a time. Using too much can allow the adhesive remover to make its way to the backside of your keyboard and potentially damage it.

💬 2 comments

Step 23

- ⓘ If you don't have a liquid adhesive remover, you'll be using a hot iOpener to warm and soften a section of the adhesive securing the battery to the upper case, and then carefully prying at that point.

- Use the hot iOpener to cover half of the two right-most battery cells.

- After about a minute, reheat the iOpener and move it to cover the other half of the right-most battery cells.

💬 4 comments

Step 24

- Push a plastic card between the right-most battery cell and the upper case, cutting the adhesive between the two.

- ⚠ Throughout this procedure, be careful not to damage any of the battery cells with your tools. A damaged lithium-ion battery may leak dangerous chemicals and/or catch fire. Use only plastic pry tools.

- When using the hot iOpener method, if you encounter significant resistance to prying, stop and use the iOpener to reheat the section you're working on.

💬 5 comments

💬 In addition to using the wheat bag/iOpener to loosen the batteries, I found it useful each time I inserted the plastic card under the batteries to give the card a 'wipe' with isopropyl alcohol to ensure that it didn't stick to the adhesive holding the batteries down. it also presumably eases the glue away from the batteries somewhat.

MarkB - 02/16/2015

💬 Do the same tools and steps work on a MacBook Pro 15" late 2015 model?

Sean - 08/18/2015

💬 Heat can be dangerous to Li-Ion batteries, no???

Alex - 11/13/2015

> Excessive heat can be dangerous, but the iOpener is designed to never get hot enough to cause permanent damage. Using a heat gun or hot plate could be dangerous, but the iOpener method is the safest one we know of =)
>
> Sam Lionheart - 11/16/2015

💬 I found it helpful to use some dental floss to help loosen each cell and then pry the rest off with the card

Dallin Christensen - 05/03/2018

💬 Add a comment

Add Comment

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Step 25

- Use the plastic card to pry the right-most battery cell up from the rear case.

💬 Add a comment

Step 26

- Repeat this procedure with the adjacent battery cell:

  - Apply a small amount of liquid adhesive remover under the battery cell, and wait 2-3 minutes for it to penetrate and soften the adhesive.

  - Alternatively, re-heat this section with your iOpener if needed.

  - Push a plastic card about an inch between the battery cell and the upper case, and slowly pry the cell up to separate all of the adhesive.

💬 Add a comment

Step 27

- Temporarily leave your plastic card underneath the two rightmost battery cells to prevent them from re-adhering to the upper case.

- If using an iOpener, reheat it and reapply it, this time to the left-most battery cells.

  - (i) Again, leave the iOpener in each position for about a minute, reheating in between, to heat each half of the left-most battery cells.

💬 Add a comment

Step 28

- Repeat the above procedure to separate the two leftmost battery cells from the upper case.

  - Remember to apply a small amount of adhesive remover to each battery cell, and wait 2-3 minutes for it to penetrate and soften the adhesive.

  - Use a second plastic card to separate the two leftmost battery cells from the upper case.

💬 Add a comment

Step 29

- Leave the second card in the corner between the two left cells.

- ⓘ In the following steps, you can either use a third card, or the card from the right corner. The right corner adhesive should be dry/cool enough that the cells can easily be pulled up again when needed.

💬 Add a comment

Step 30

- To separate the adhesive securing the final two, middle battery cells, apply a few more drops of liquid adhesive remover (or your iOpener) to each cell.

  - It may help to elevate one side of your MacBook Pro a few inches so that the adhesive remover flows in the correct direction, underneath the battery cells. You can use a sturdy book or foam block to prop up one side of your MacBook Pro while you work.

  - Insert the card about an inch between the left-center battery cell and the upper case, separating the adhesive between the cell and the case.

💬 2 comments

Step 31

- Pull the card back out and insert it about an inch between the right-center battery cell and the upper case, separating the adhesive between the cell and case.

💬 Add a comment

Step 32

- ⓘ By this point, the outer cells should be free, and you should only encounter resistance from the two center cells. If this is not the case, go back and completely loosen the four outer-most cells from the upper case.

- Pry up on the two center cells to separate the last of the adhesive and lift the battery from the device.

💬 One comment

Step 33
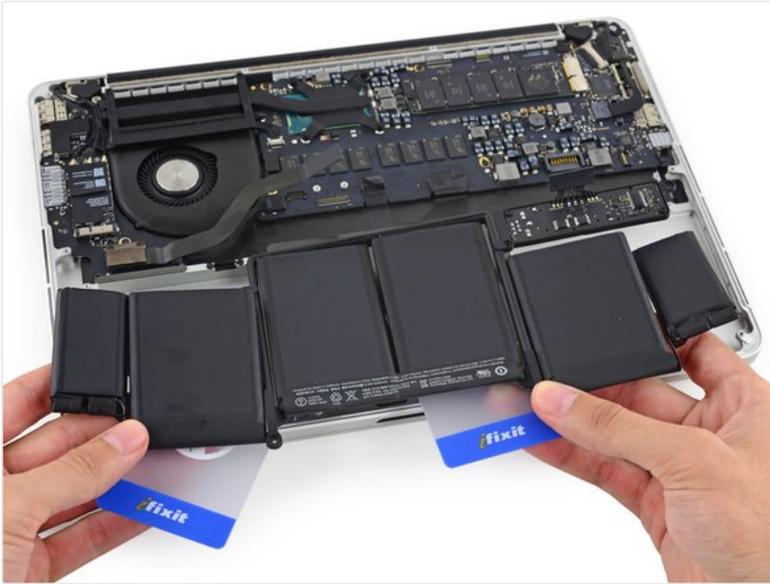
- Remove the battery.

- 📌 Before installing your new battery, remove all the old adhesive from the MacBook Pro's case.

  - With a little luck, you can slowly pull out each strip of adhesive with your fingers.

  - Otherwise, soak each section of adhesive with a bit of adhesive remover for 2-3 minutes, and then scrape it out with an opening pick or one of the other tools in your kit. This can take quite a bit of work, so be patient.

  - Mop up any remaining adhesive remover and give your MacBook Pro a few minutes to air dry.

- 📌 The replacement battery included in your iFixit kit comes with adhesive pre-installed. Test the battery's fit and alignment carefully before peeling off the film covering the adhesive, and then press each cell firmly into place. If any additional films/liners are present that weren't on your original battery, remove them now.

- Calibrate your battery before using it: allow it to drain overnight, then charge it to 100% and drain it again until your MacBook Pro shuts down automatically. Charge it again and use it normally.

- ⚠️ If you notice any unusual behavior or problems after installing your new battery, you may need to reset your MacBook Pro's SMC.

💬 2 comments

💬 RECOMMENDATION: The battery connector and associated screw are critical when considering battery alignment. Also don't forget the left and right speaker assemblies when aligning the two small outer cells. I didn't consider these and had issues.
Also, keep the transparent top film on the battery to keep the cells aligned with respect to each other, and always support all the cells if handling upside down.

Cameron Malek - 01/24/2018

> I agree, if you don't reinstall the speaker assemblies before installing the battery, they may be impossible to put back in after the battery has adhered
>
> Dallin Christensen - 05/03/2018

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⚑ CONCLUSION

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

✓ **Give the author +30 points!**

77 other people completed this guide.

Author

Sam Lionheart
Member since: 10/18/2012
348,253 Reputation
535 Guides authored

with 6 other contributors

Badges: **48**

+45 more badges

Team

iFixit
Community
109 Members
7,378 Guides authored

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23 COMMENTS   💬 Add a comment

💬 What is the part number for the mid 2014 13 inch MacBook Pro battery? I see a lot of batteries for sale for the mid 2013 online. Are they compatible?

johnpaeng - 03/28/2016

> MacBook Pro 13" Retina (Late 2013-Mid 2014) Battery here is a battery replacement.
>
> Jeppe Werring - 09/05/2016

💬 Macbook Pro A1502 not charging after disassembly/assembly (I just wanted to clean the touchpad). MagSafe is orange but the Macbook is not charging - running only when plugged in. MacOS says the battery needs to be replaced - even if it has 82% charged.. I alson tried reset of SMC and PRAM with no effect..
Any advice? Thanks

tommy69 - 03/31/2016

> Same problem here. Did you find a solution?
>
> Tim Bo - 06/18/2016

> guys same problem, did you find some solution? @tim_bo @tommy69
>
> Alpay - 02/11/2017

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