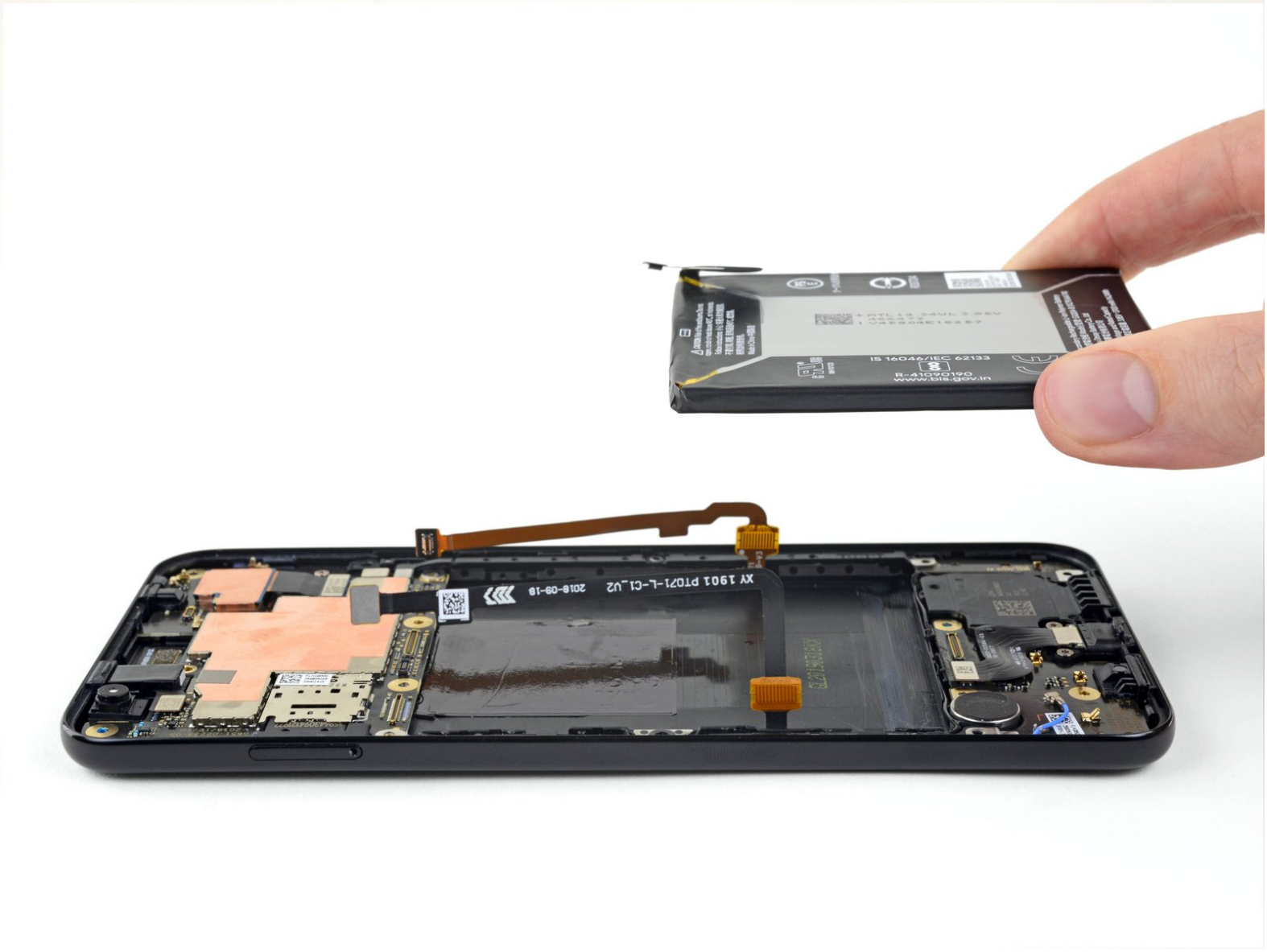
Google Pixel 3a XL Battery Replacement

This repair guide was authored by the iFixit...

Written By: Taylor Dixon



INTRODUCTION

This repair guide was authored by the iFixit staff and hasn't been endorsed by Google. Learn more about our repair guides here.

Follow this guide to replace the battery in your Pixel 3a XL.

If your battery is swollen, take appropriate precautions. **For your safety, discharge your battery below 25% before disassembling your phone.** This reduces the risk of a dangerous thermal event if the battery is accidentally damaged during the repair.

The Pixel 3a XL's display panel is fragile. If you plan to reuse your screen after this repair, be sure to pay special attention to the warnings in the opening procedure.

TOOLS:

- iOpener (1)
- Suction Handle (1)
- iFixit Opening Picks (Set of 6) (1)
- Tweezers (1)
- Spudger (1)
- T3 Torx Screwdriver (1)
- Isopropyl Alcohol (1)

PARTS:

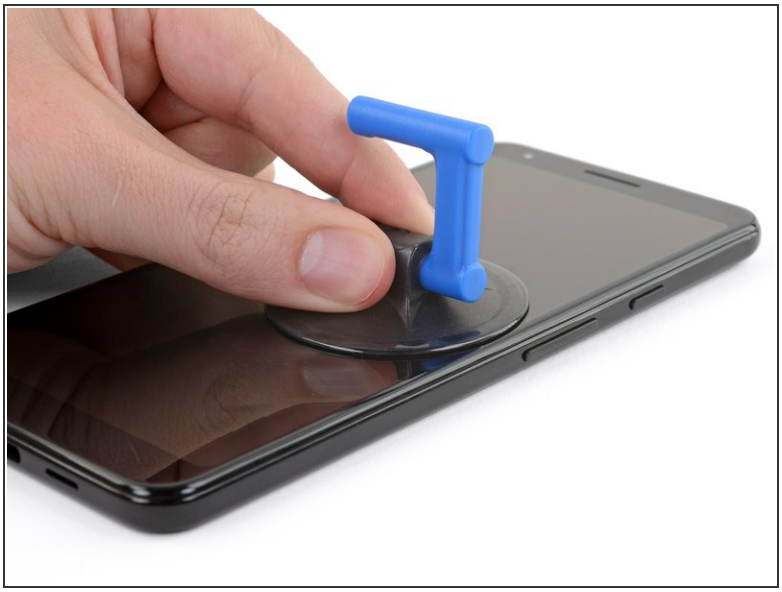
- Google Pixel 3a XL Battery - Genuine (1)
- Google Pixel 3a XL Battery Adhesive Strips - Genuine (1)

Step 1 — Screen

In the following steps, you will be removing the Pixel 3a's screen by cutting through the adhesive holding it in place.

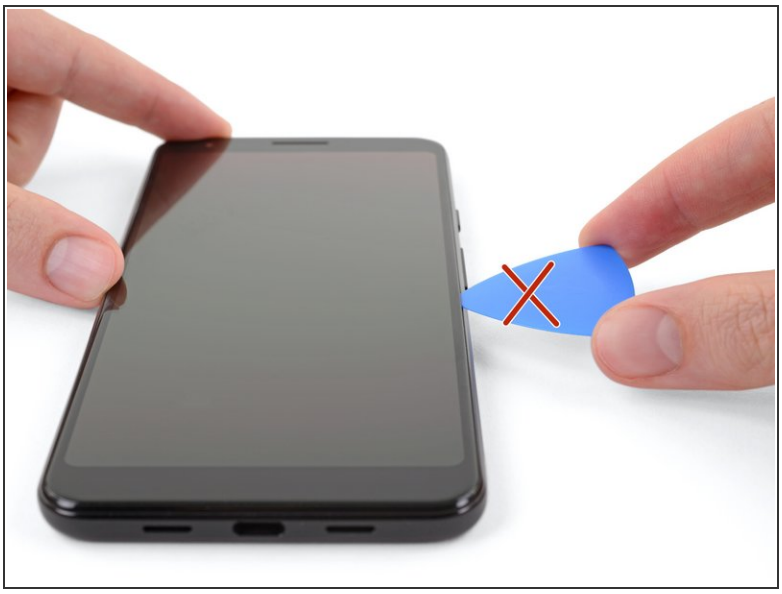
- For reference, the backside of the screen is shown in this step.
  - Note the narrow clearance between the edge of the screen and the OLED panel under the glass. If you plan to re-use your screen, be sure to follow the instructions below closely.
- Also note the two different seams between the body of the phone and the screen:
  - The *screen seam*: where the screen meets the rest of the phone. **This is where the screen will separate, and where you should pry.**
  - The *midframe seam*: where the midframe meets the body of the phone. This part is held down by screws. **Do not pry at this seam.**

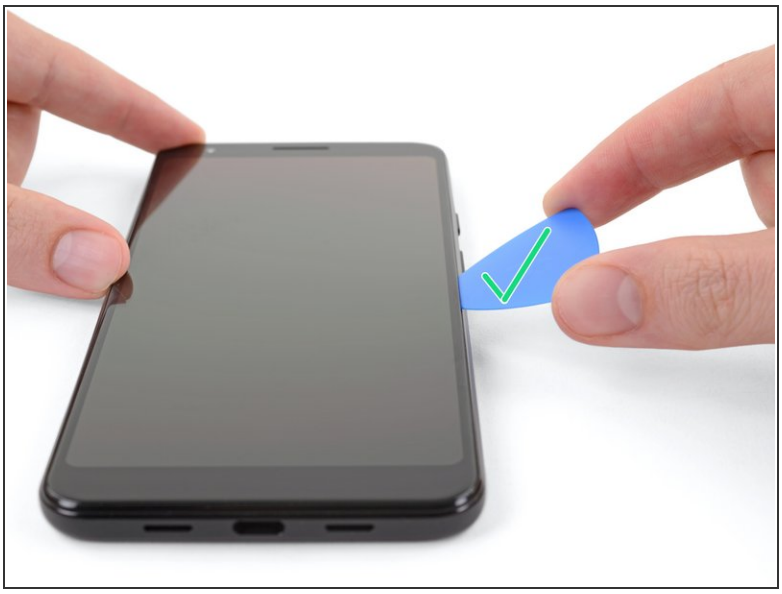
Step 2



- Place a suction cup on the right edge of the screen, just below the volume button.

Step 3





In the next step you will insert an opening pick between the screen and the plastic body of the phone.

- If you aren't careful, the plastic opening tool can damage the fragile OLED display panel underneath the glass.
- **If you want to re-use your phone's screen, make sure you insert your pick at a downward angle, as shown in the second photo of this step.**
  - This will ensure the opening pick slides *under* the OLED panel rather than *between* the glass and the panel, which will ruin the screen.

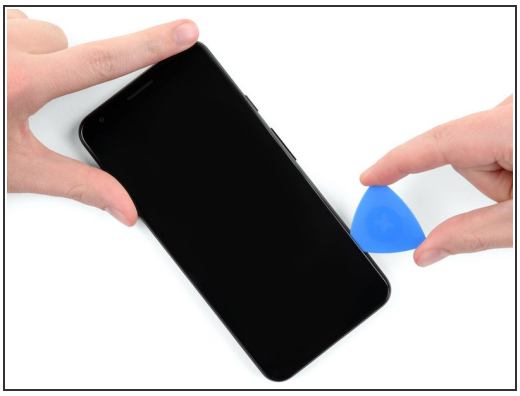
Step 4



- Pull up on the suction cup with a strong, steady force to create a gap between the screen and the phone.
- Insert your opening pick into the gap.
  - **Stop if you feel the tip of the pick hitting against something.** The pick may be pressing against the edge of the OLED panel. Angle the pick downward and try again.

ⓘ Once you have inserted an opening pick, you can remove the suction cup.

Step 5


- Once the pick is inserted, slide it up and down along the right edge of the phone to cut though the adhesive holding the screen in place.

Step 6

The adhesive holding the top and bottom edges of the screen in place is thicker, and considerably stronger than the thin strips holding the sides in place.

- If you plan to reuse your screen, heat up the top edge of the phone with an iOpener, a heat gun, or a hair dryer to loosen the adhesive there before you begin slicing.

Step 7

- Carefully slide your opening pick around the upper-right-hand corner of the screen.

As shown in step one, the gap between the display and the edge of the glass screen is larger here than on the sides.

- If you plan to reuse your screen, take special care in this step to either **keep your pick deep in the phone *under* the OLED display** (as shown in this step's photos), or **only insert it 5 mm into the device** to avoid coming into contact with the display under the glass.

Step 8



- Continue to separate the adhesive along the top edge of the display.

As you slice along this edge, you may bump into the camera and proximity sensor housed here. Don't pry aggressively, just work around them.

Step 9



- Slide your opening pick down the left side of the phone to separate the adhesive there.

Step 10

The adhesive holding the bottom edge of the screen in place is thicker, and considerably stronger than the thin strips holding the sides in place.

- If you plan to reuse your screen, heat up the bottom edge of the phone with an iOpener, a heat gun, or a hair dryer to loosen the adhesive there before you begin slicing.

Step 11



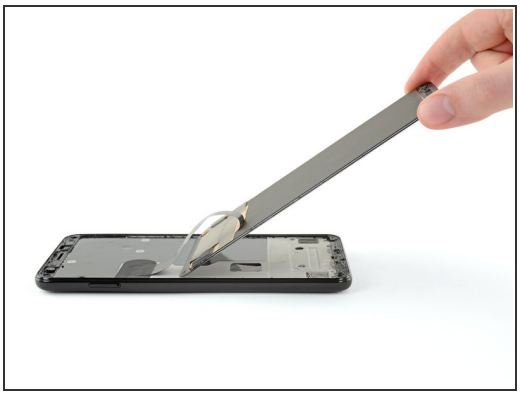
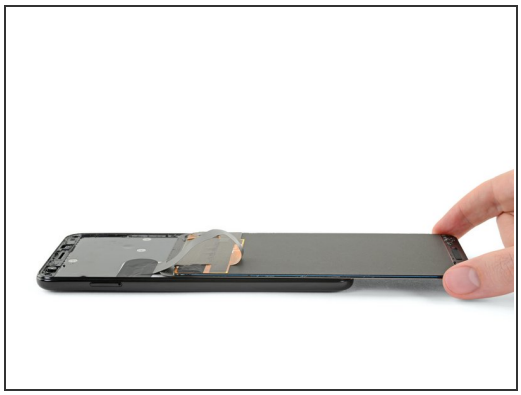
- Slide your opening pick along the bottom edge of the phone to separate the last of the adhesive holding the screen in place.

As shown in step one, the gap between the display and the edge of the screen is larger here than on the sides.

- If you plan to reuse your screen, take special care in this step to either **keep your pick deep in the phone *under* the OLED display** (as shown in this step's photos), or **only insert it 5 mm into the device** to avoid coming into contact with the display under the glass.

- **Don't try to remove the screen yet!** It is still connected to the phone by a display cable.

Step 12

- Lift the screen by its top edge (where the front-facing camera is) and carefully flip it 180° so that the screen is resting face-down on the phone.

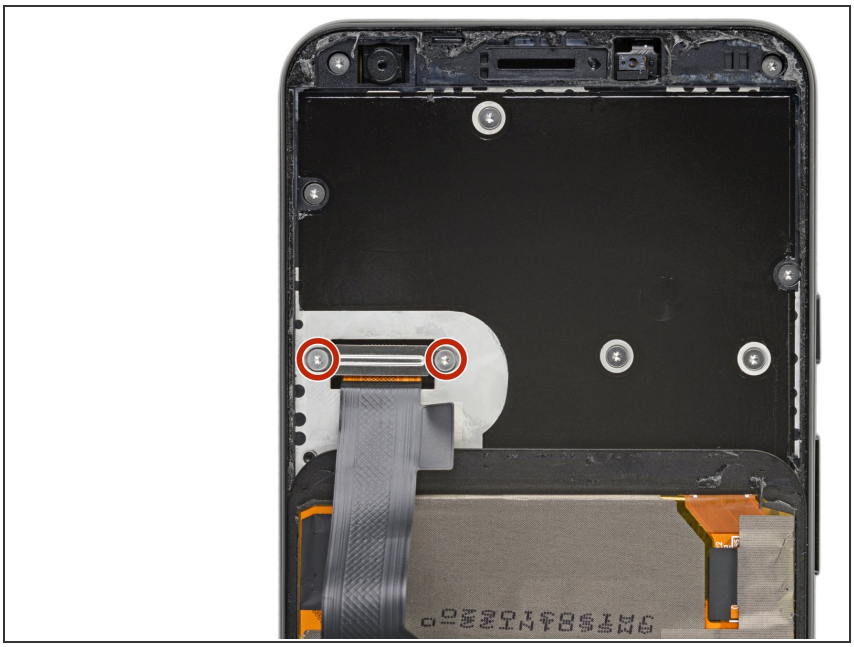
If you plan to reuse your screen, be careful not to stress the display cable during this step.

Step 13

- Use tweezers to remove the black sticker covering the display cable bracket.

If the sticker is in good condition, you can reuse it during reassembly. Otherwise, you can replace it with a piece of electrical tape.

Step 14



- Remove the two 4.3mm T3 screws holding the display cable bracket in place.

Due to manufacturing tolerances, a T4 Torx driver may fit better into these T3 screws.

Throughout this repair, keep track of each screw and make sure it goes back exactly where it came from.

Step 15

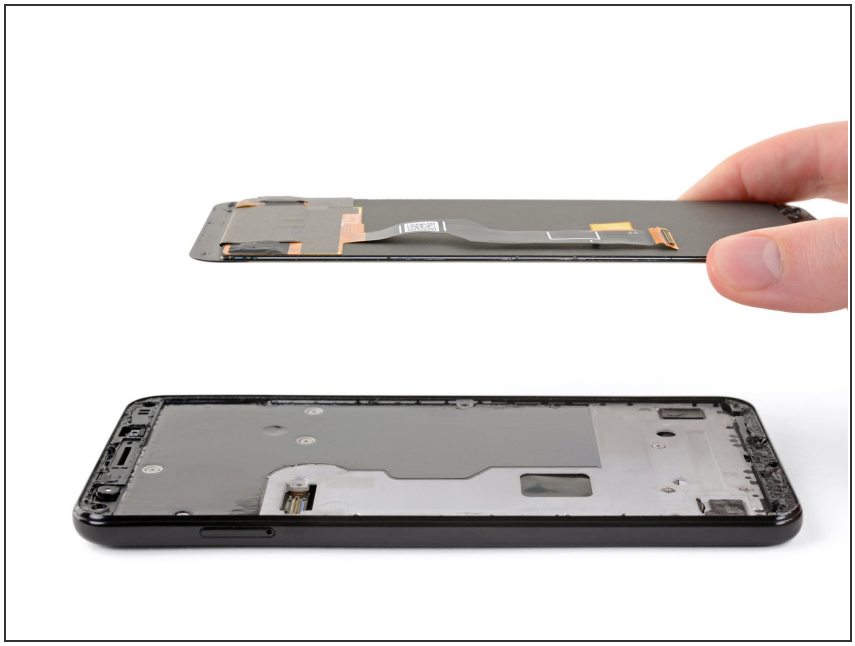


- Remove the display cable bracket.
- Pry up on the cable connector with the pointy end of a spudger to disconnect the screen from the phone.

When you disconnect connectors like these, be careful not to dislodge the small surface-mounted components surrounding the socket.

To re-attach press connectors like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend, causing permanent damage.

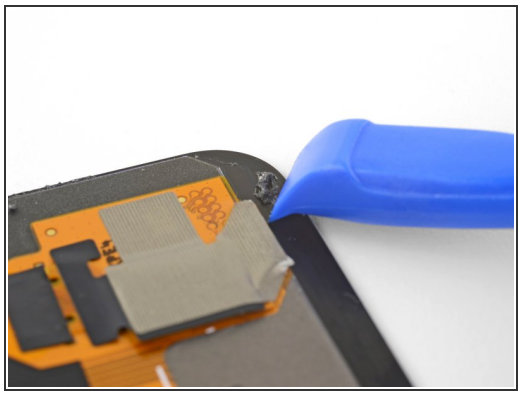
Step 16



- Remove the screen from the phone.
- Compare your new replacement part to the original part. You may need to transfer remaining components such as the speaker grille and the camera bracket to the new part.

Step 17





To reinstall the screen:

- Use tweezers or an opening tool to remove all traces of adhesive from the phone frame. You can use high concentration isopropyl alcohol to help with the cleaning.
- If you plan to re-use the screen, be sure to remove all adhesive residue from the screen. **Be careful with metal tools to avoid scratching the screen.**
- Apply pre-cut adhesive or double-sided tape (such as Tesa tape) to re-attach the screen to the frame.

During the boot-up process after reassembly, the screen will go through a calibration sequence. Do not touch the screen during this process, as it could result in improper touch calibration and create touch issues.

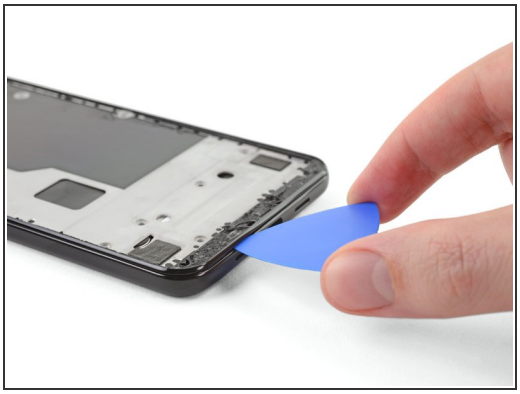
Step 18 — Midframe

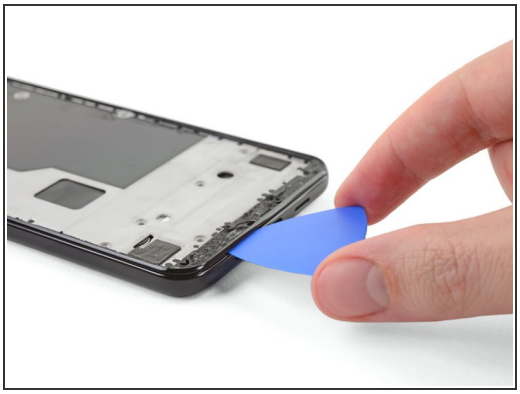
- Remove the following 4.3mm screws:
  - 14 silver T3 Torx screws
  - 2 black T3 Torx screws

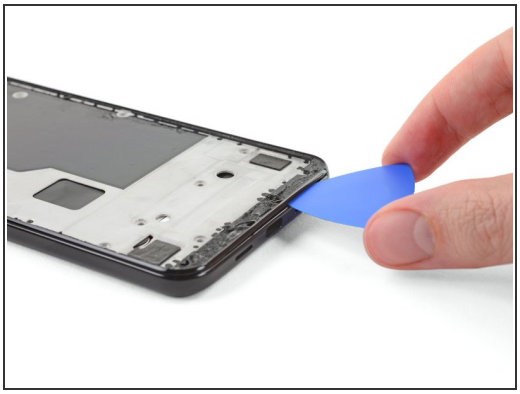
Due to manufacturing tolerances, a T4 Torx driver may fit better into these T3 screws.

Throughout this repair, keep track of each screw and make sure it goes back exactly where it came from.

Step 19







The midframe is still held in place by plastic clips.

- Insert an opening pick into the seam along the bottom of the phone.
- Slide the pick along the seam to release the clips holding the midframe to the rest of the phone.

Step 20

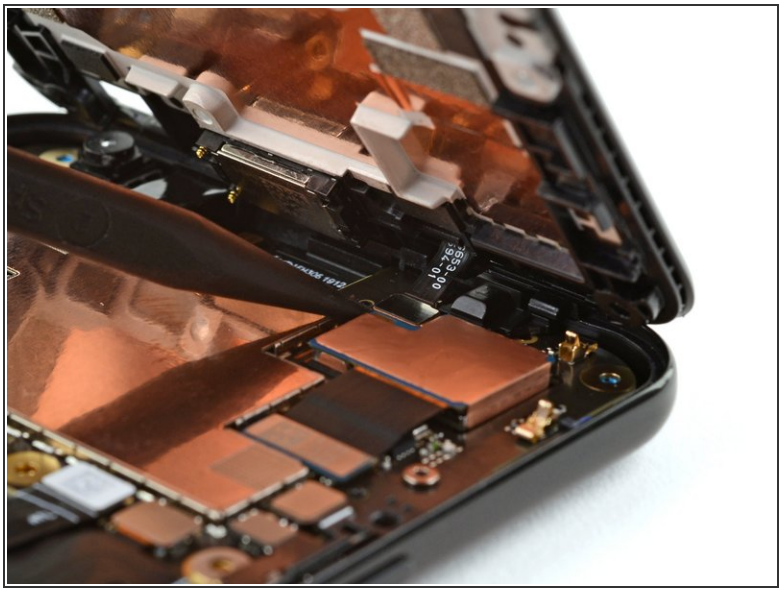
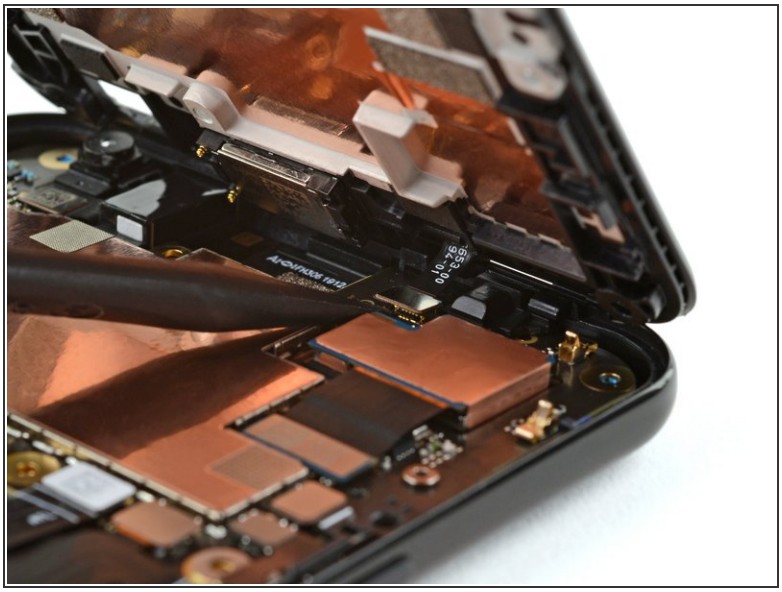


- Slide the opening pick along the left and right edges of the phone to release the midframe clips there.

  Once the clips along the bottom of the phone are separated, the flat edge of the opening pick should be enough to separate the rest of the clips.

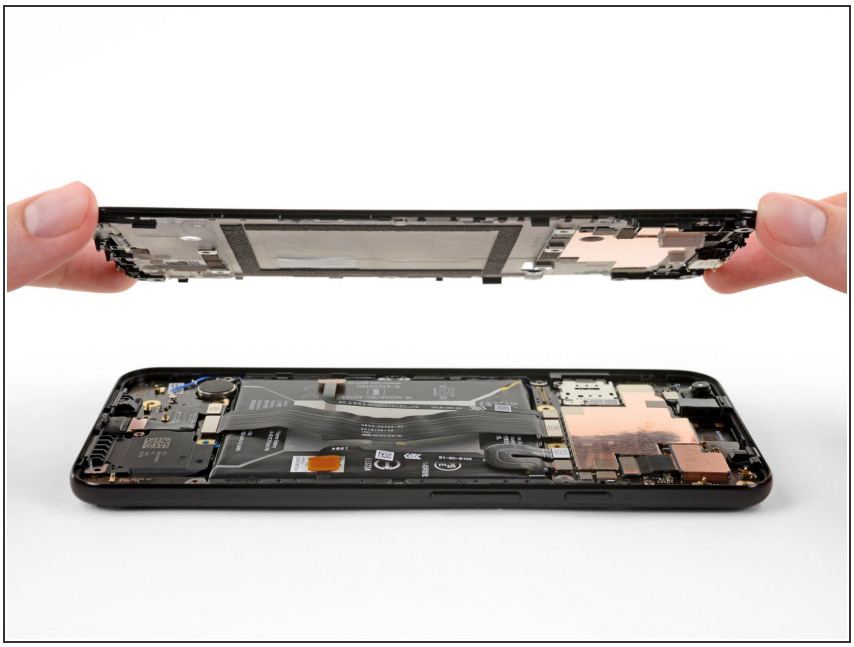
- Lift up the bottom edge of the midframe but **don't completely remove it yet.** The midframe is still connected to the phone by a fragile cable.

Step 21

- Use a spudger to pry up and detach the proximity sensor cable from the motherboard.

Step 22



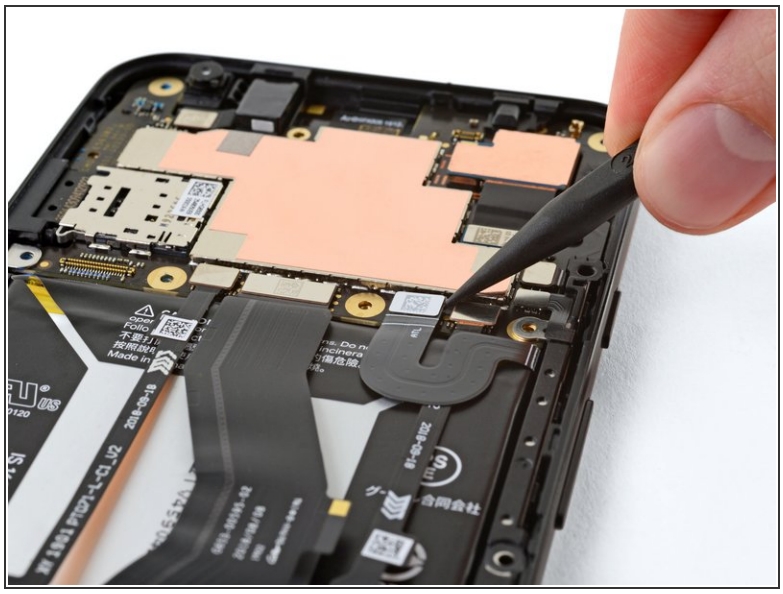
- Remove the midframe from the phone.

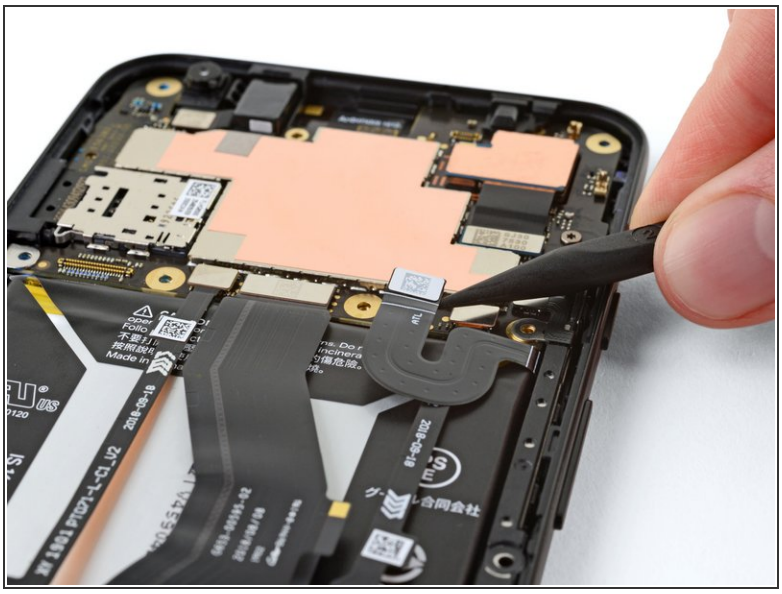
Step 23

During reassembly, align the top edge of the midframe with the top of the phone, then use a spudger to carefully press the proximity sensor cable connector onto its socket.

- This takes a bit of patience and finesse. Once you have the connector aligned, you can also use a finger to gently press the connector onto the socket.

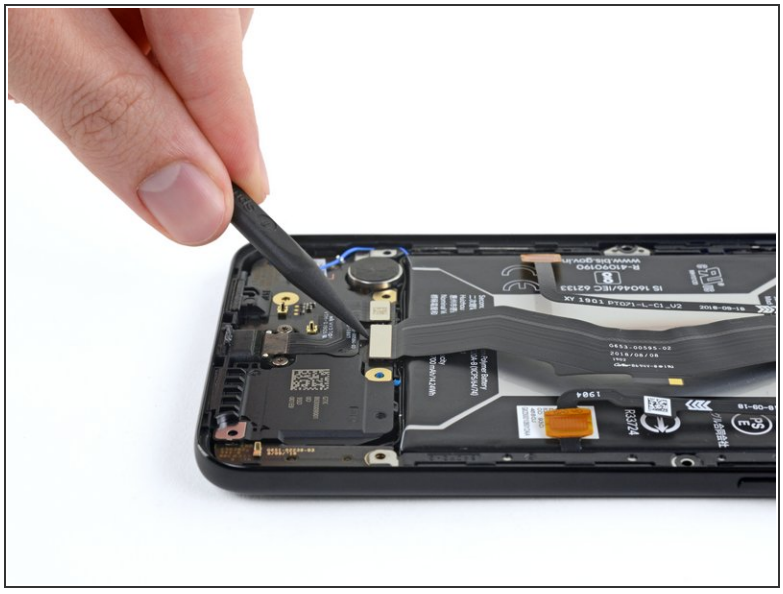
Step 24 — Battery Disconnect





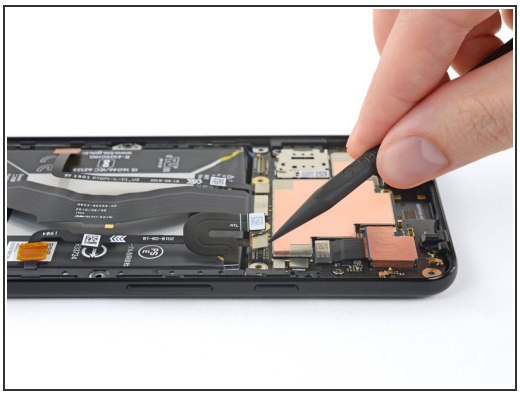
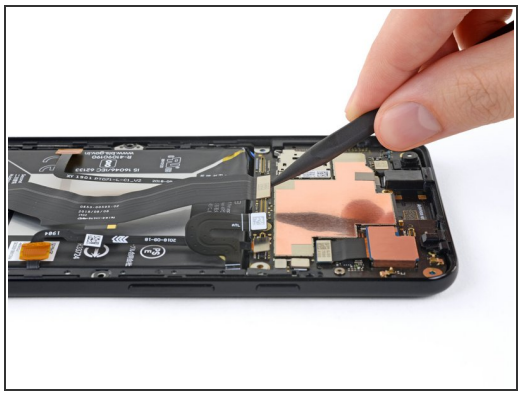
- Use a spudger to pry up and disconnect the battery connector.

Step 25 — Battery



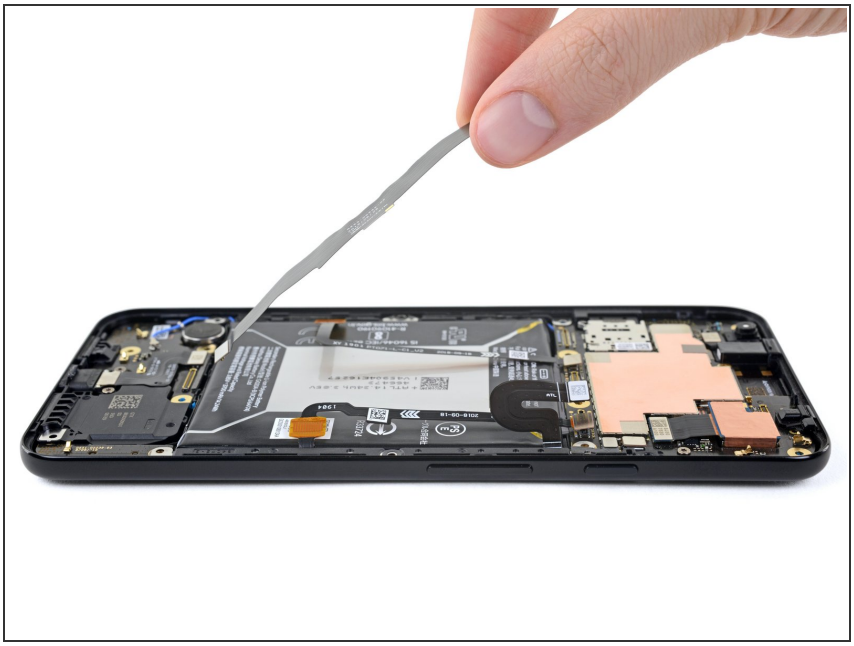
- Use the pointy end of a spudger to lift up and disconnect the lower half of the thick board interconnect cable that runs over the battery.

Step 26

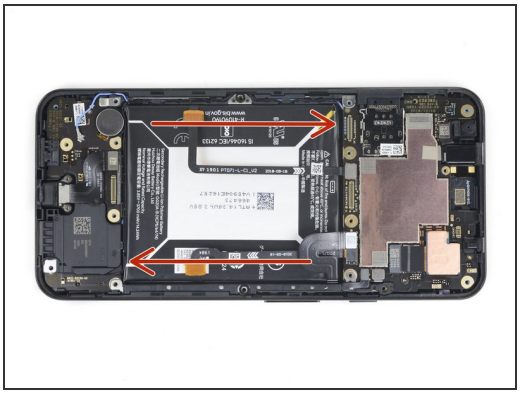

- On the other end of the battery, pry up and disconnect the other side of the interconnect cable, as well as the two squeeze sensor cables on either side of it.

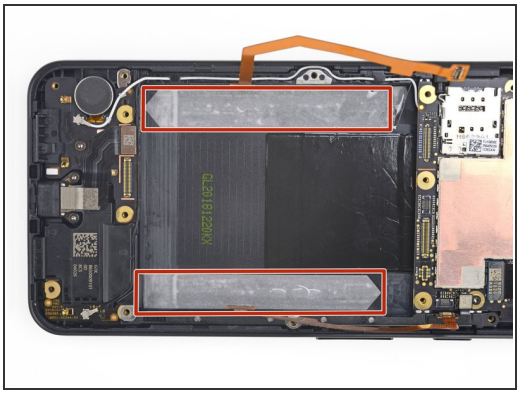
Step 27

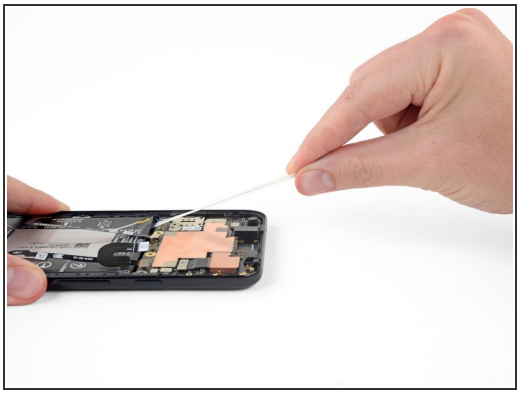


- Remove the interconnect cable.

Step 28







- In the following steps, you'll pull out the two adhesive tabs underneath the battery. This special stretch-release adhesive loses its tack when stretched, allowing you to lift out the battery with ease.

If the strips break, don't panic! They don't always work as intended. Here are a few tips to increase your odds of success:

- Don't press down on the battery. Hold the phone firmly by its sides.
- Keep the strips flat and unwrinkled as you pull.
- Pull very slowly, giving the strip time to stretch and separate. It takes around 15-30 seconds of stretching to remove each strip.
- Pull at a low angle so the strip doesn't snag along the bottom edge of the battery.

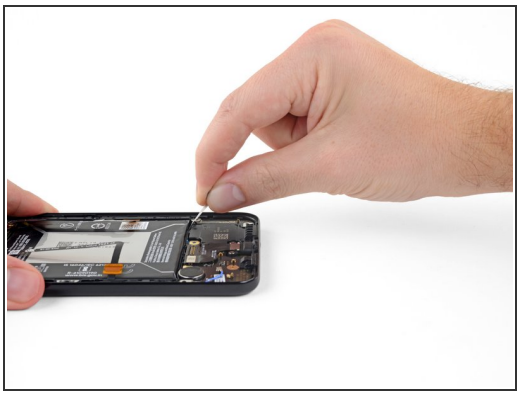
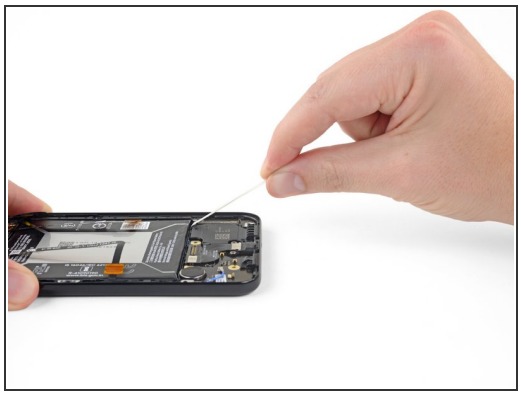
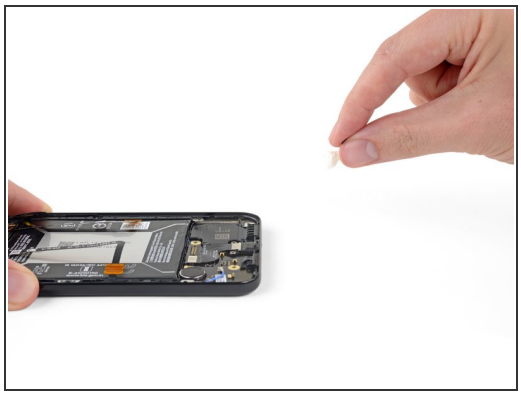
Step 29

- Use tweezers to carefully pull out the right adhesive strip's pull-tab from the bottom right corner of the battery.

⚠ Be very careful not to puncture the battery pack with your tweezers.

ⓘ Stop pulling once you are able to grab the tab with your fingers.

Step 30

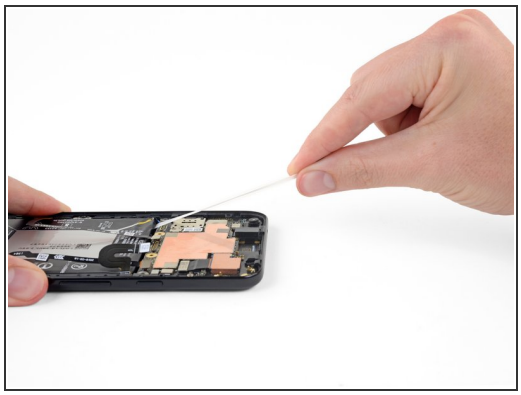
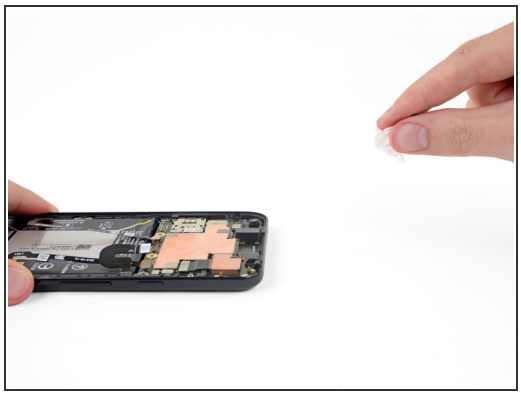




- Grab the right adhesive tab and slowly pull it away from the battery, toward the bottom of the phone.
- Pull steadily, maintaining constant tension on the strip until it slips out from between the battery and the rear case.

The strip will stretch to many times its original length. Continue pulling and re-grab the strip near the battery if necessary.

If the battery adhesive tabs break during the removal process, use your fingers or blunt tweezers to retrieve the remaining length of adhesive, and continue pulling.

Step 31

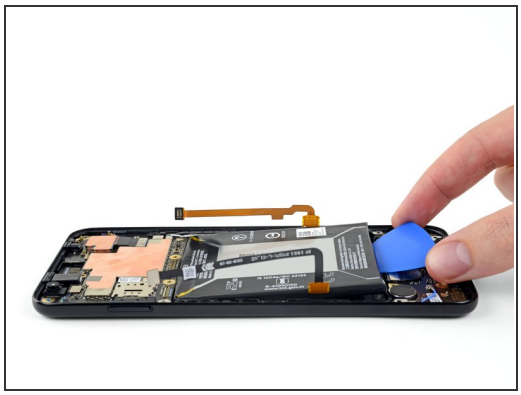
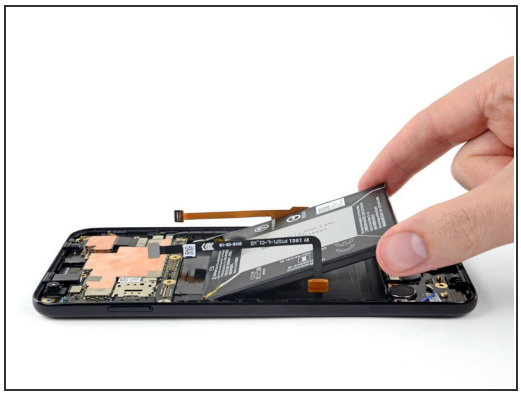
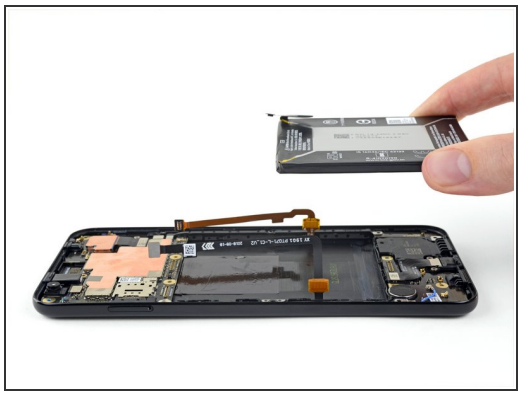
- Repeat the previous two steps for the left adhesive strip with the pull tab at the upper-left edge of the battery.

If your adhesive strips broke underneath the battery and you were unable to retrieve them, you can try these two alternate removal methods:

- Prepare an iOpener or use a hair dryer to heat the rear case directly behind the battery. Once the case is just barely too hot to touch, use an opening pick or a spudger to carefully pry the battery out of the phone. **Do not apply the iOpener or any other form of heat directly to the battery.**
- Apply some high-concentration isopropyl alcohol or adhesive remover along one edge of the battery and then tilt the phone so the liquid will run underneath the battery and weaken the adhesive. Wait a few minutes, then use an opening pick or a spudger to carefully pry the battery out of the phone.

If you do have to pry, try your best not to deform the battery. Soft-shell lithium-ion batteries can leak dangerous chemicals, catch fire, or even explode if damaged. Do not use excessive force or pry at the battery with metal tools.

Step 32

- Lift up one edge of the battery with an opening pick and lift the battery out of the phone.

To install a new battery:

- Remove any battery adhesive remaining on the phone.
- Install replacement stretch-release adhesive or double-sided tape such as Tesa tape in the phone's battery cavity where the original adhesive was applied.
- Gently set the battery in place. *Temporarily* connect the battery's connector to the motherboard to ensure that the battery is properly positioned.
- Press the battery firmly in place with your fingers.
- Disconnect the battery from the motherboard and resume re-assembly.

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

For optimal performance, calibrate your newly-installed battery: Charge it to 100% and keep charging it for at least 2 more hours. Then use your device until it shuts off due to low battery. Finally, charge it uninterrupted to 100%.

Take your e-waste to an R2 or e-Stewards certified recycler.

Repair didn't go as planned? Check out our Google Pixel 3a XL Answers community for troubleshooting help.