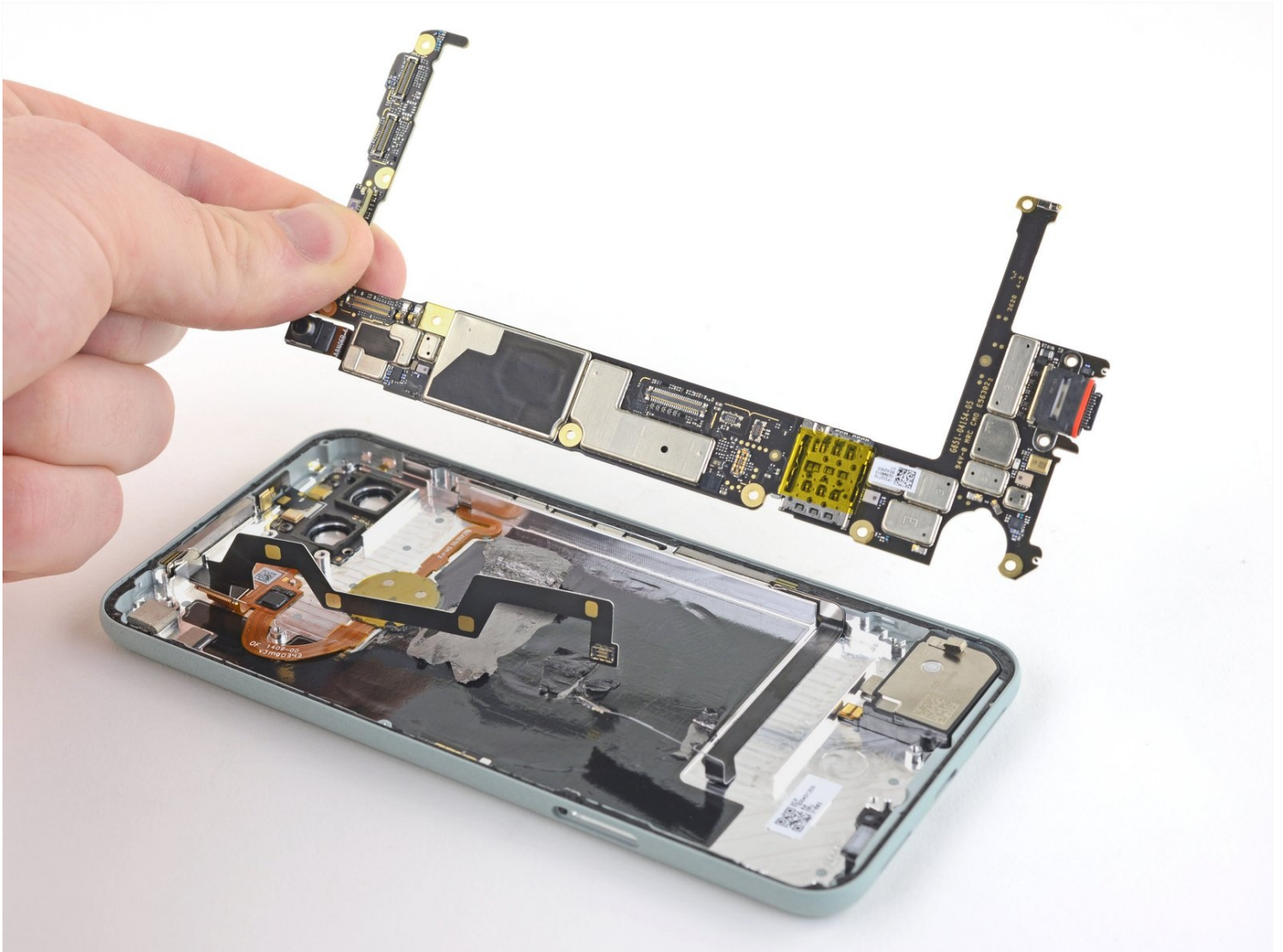




Google Pixel 5 Motherboard Replacement

This repair guide was authored by the iFixit...

Written By: Robert Boyd



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 remove and replace the motherboard on the Google Pixel 5.

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.

Warning: Do not reuse the battery if it has been deformed or damaged, as doing so is a potential safety hazard. Replace it with a new battery.



TOOLS:

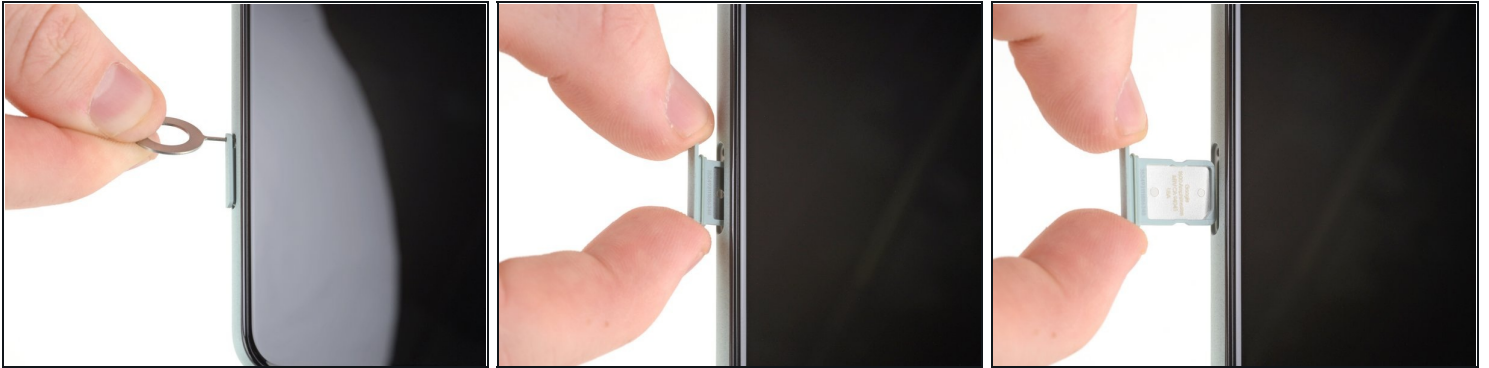
- [Plastic Cards](#) (1)
- [Isopropyl Alcohol](#) (1)
- [SIM Card Eject Tool](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Picks \(Set of 6\)](#) (1)
- [Tweezers](#) (1)
- [Spudger](#) (1)
- [T3 Torx Screwdriver](#) (1)
- [ESD Safe Blunt Nose Tweezers](#) (1)



PARTS:

- [Google Pixel 5 Display Adhesive - Genuine](#) (1)
- [Tesa 61395 Tape](#) (1)

Step 1 — Eject the SIM card tray



- Insert a SIM eject tool, bit, or straightened paper clip into the SIM card tray hole.
 - ⓘ The SIM card tray is located on the left edge of the phone near the bottom.
- Press firmly to eject the SIM card tray.
- Remove the SIM card tray.

Step 2 — Heat the bottom edge of the screen



- [Heat an iOpener](#) and apply it to the bottom edge of the screen for one minute.
 - ⓘ A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the phone—the display and internal battery are both susceptible to heat damage.

Step 3 — Screen removal information



- ⓘ While you're waiting for the adhesive to loosen, take note of the following:
- *Screen seam*: This seam separates the screen from the rest of the phone. **Do not pry at this seam.**
 - *Bezel seam*: This is where the plastic bezel designed to protect the screen meets the frame. It's held in place by [plastic clips](#). **This is where you should pry.**

Step 4 — Anti-Clamp instructions



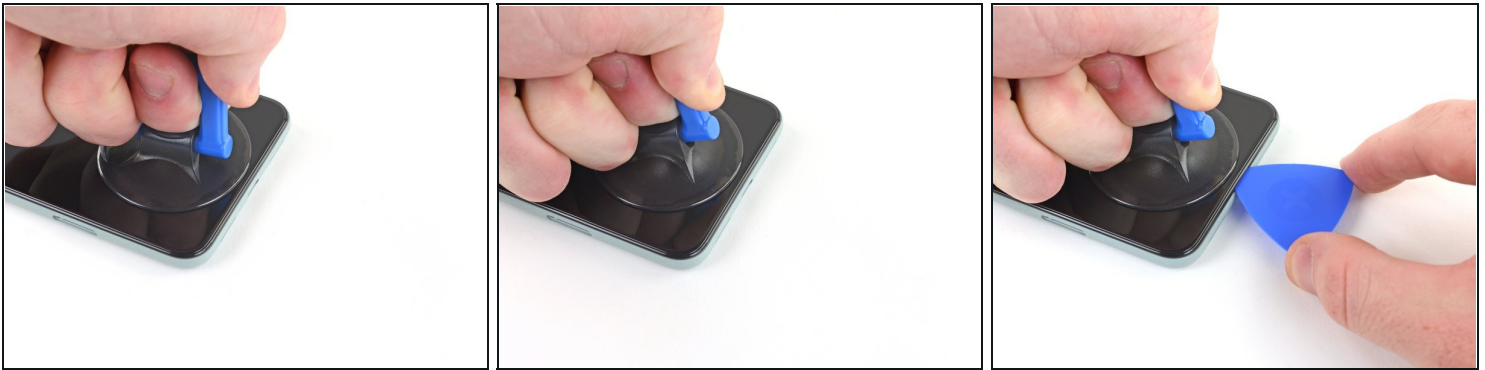
- ① The next two steps demonstrate the [Anti-Clamp](#), a tool we designed to make the opening procedure easier. **If you aren't using the Anti-Clamp, skip down two steps for an alternate method.**
- ① For complete instructions on how to use the Anti-Clamp, [check out this guide](#).
- Pull the blue handle towards the hinge to disengage opening mode.
- Position the suction cups near the bottom edge of the screen—one on the front, and one on the back.
- Push down on the cups to apply suction to the desired area.
- ① If you find that the surface of your device is too slippery for the Anti-Clamp to hold onto, you can use packing tape to create a grippier surface.

Step 5



- Push the blue handle away from the hinge to engage opening mode.
 - Turn the handle clockwise until you see the cups start to stretch.
 - ⓘ Make sure the suction cups remain aligned to each other. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.
 - Wait one minute to give the adhesive a chance to release and present an opening gap.
 - Insert an opening pick under the screen and its bezel frame when the Anti-Clamp creates a large enough gap.
 - ⓘ If the Anti-Clamp doesn't create a sufficient gap, apply more heat to the area and rotate the handle clockwise half a turn.
- ⚠ Don't crank more than a half a turn at a time, and wait one minute between turns. Let the Anti-Clamp and time do the work for you.**
- **Skip the next step.**

Step 6 — Insert an opening pick



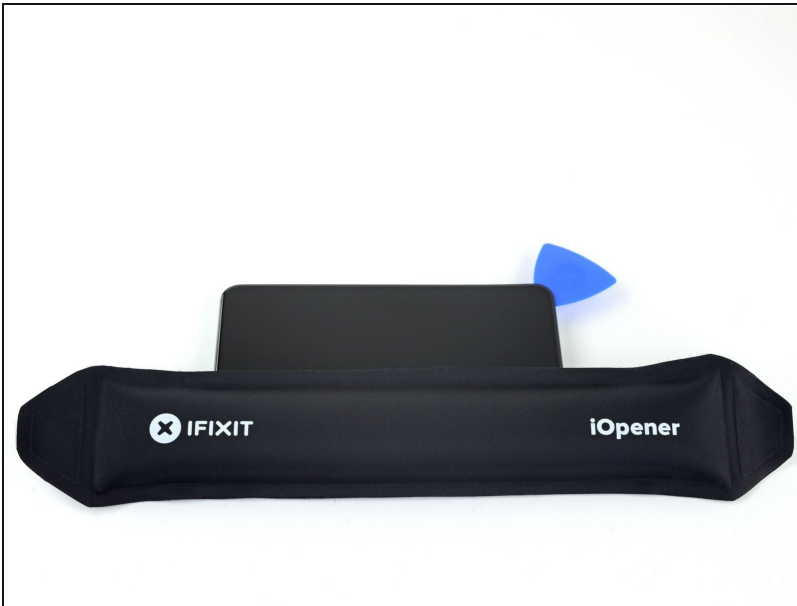
- Apply a suction cup to the screen, as close to the heated edge as possible.
 - ① If your screen is badly cracked, follow [this guide](#) to tape over the cracked screen. If all else fails, you can superglue the suction cup to the broken screen.
- Pull up on the suction cup with strong, steady force to create a gap.
 - ① Depending on the age of your device, this may be difficult. If you have trouble, apply more heat and try again.
- Insert the opening pick into the gap.

Step 7 — Slice the bottom adhesive



- Slide the opening pick back and forth along the bottom of the screen to slice the adhesive.
- Leave the pick inserted in the bottom right corner to prevent the adhesive from re-sealing.

Step 8 — Heat the left edge of the screen



- Apply a heated iOpener to the left edge of the screen for one minute.

Step 9



- Insert another opening pick into the bottom left corner of the screen.
- Slide the opening pick around the left corner.
⚠ Do not insert the pick more than 1/4 inch (6 mm) or you may damage the screen's flex cable located in the middle of the left edge.
- Continue to slide the pick up towards the front camera to slice the adhesive on the left edge of the screen.
- Leave the pick inserted to prevent the adhesive from re-sealing.

Step 10



- Insert another opening pick into the top left corner of the screen.
- Slide the pick around the front camera and across the top edge of the phone.
 - ❗ If the adhesive is difficult to slice, apply heat to the area for one minute and try again.
- Slide the pick to the top right corner of the phone and leave the pick inserted.

Step 11



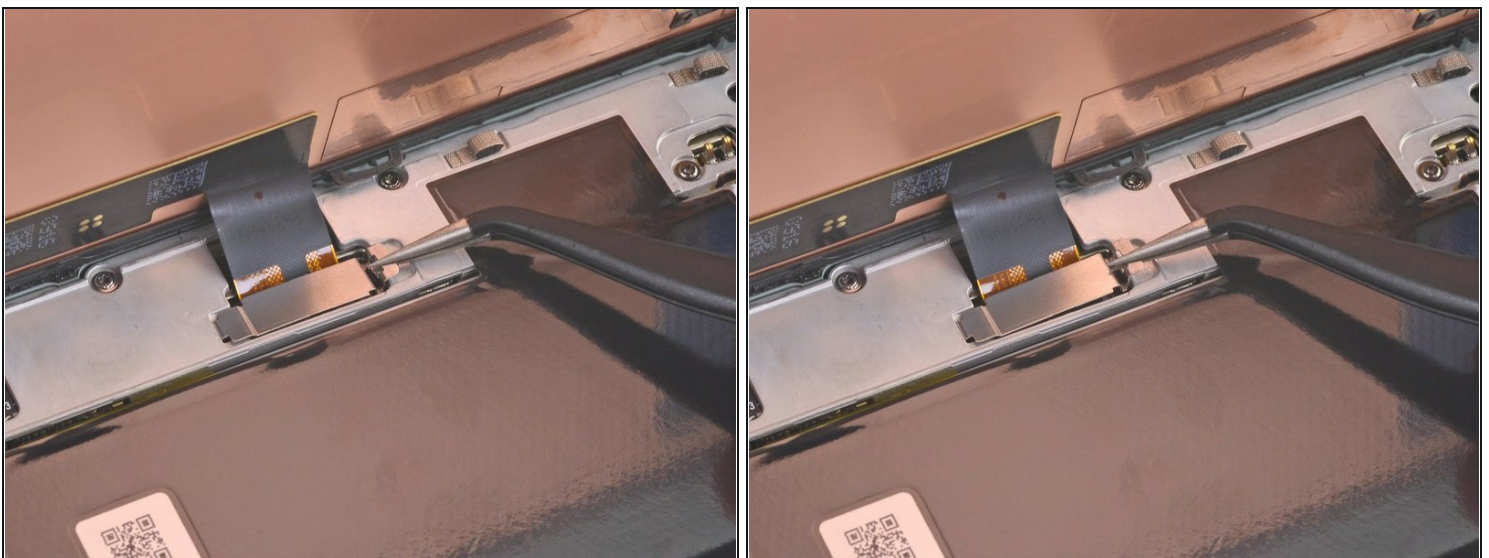
- Insert an opening pick into the bottom right corner of the screen.
- Slide the pick up to the top right corner to slice the last edge of adhesive.
 - ❗ You may need to run an opening pick around the edges again to ensure all the adhesive is cut. It is applied the thickest on the four corners.

Step 12 — Open up the screen



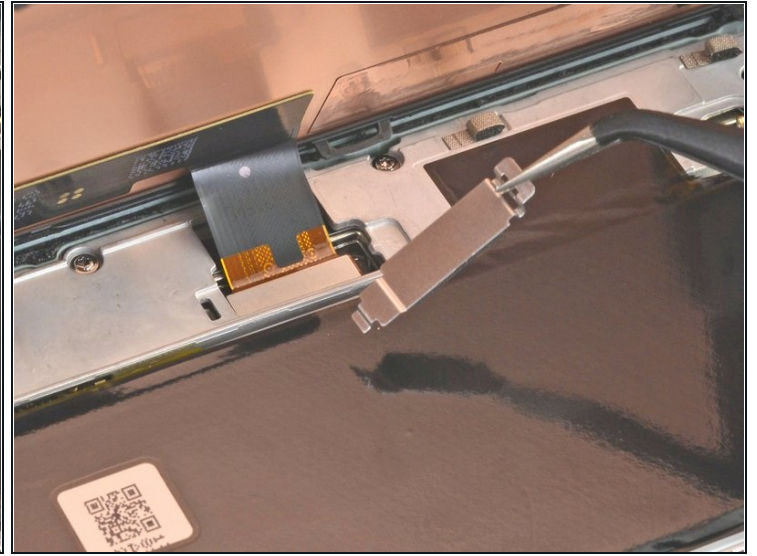
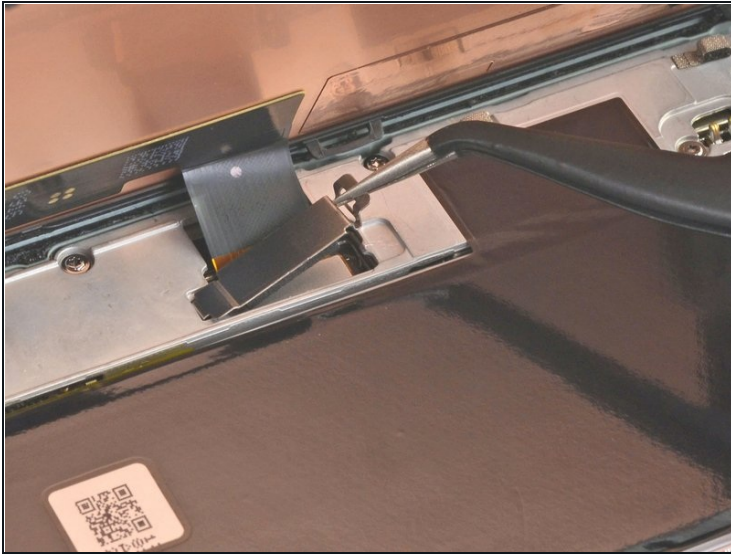
- Use the opening pick from the top left corner to lift up the left edge of the screen a few millimeters. This will keep the clips from snapping back down into the case.
- Lift up on the right side of the screen and open up the phone like a book.
⚠ Do not open the screen more than 90 degrees to prevent damaging the screen flex cable.

Step 13 — Disconnect the screen



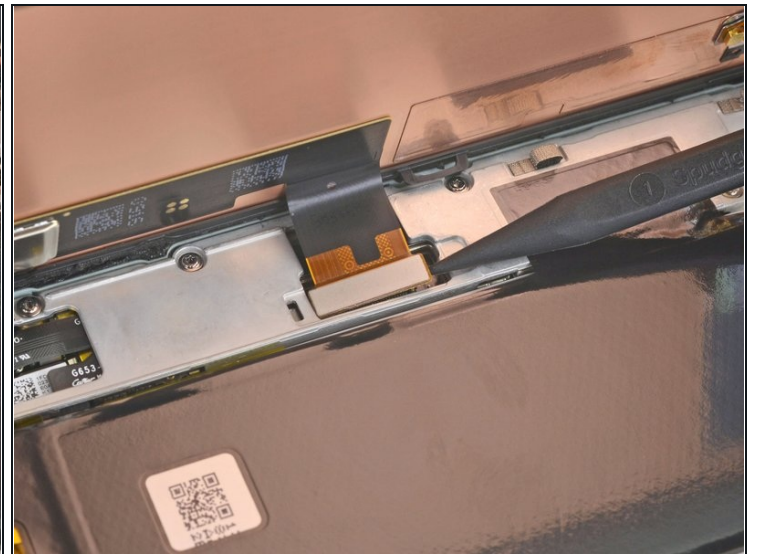
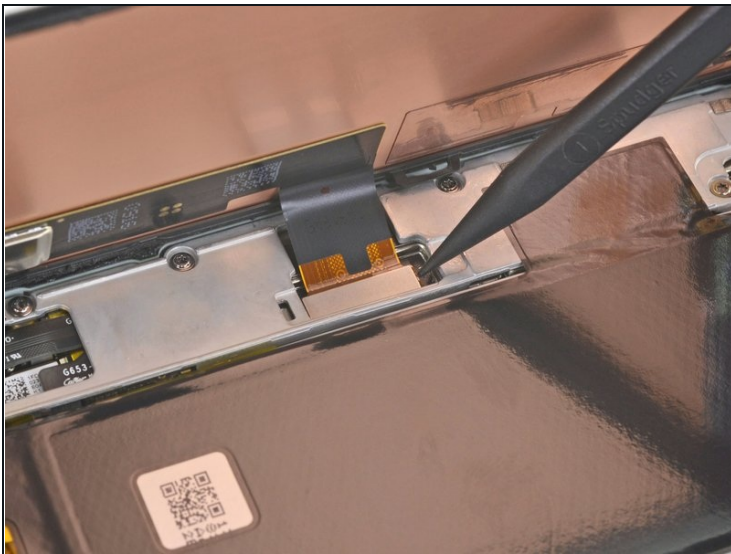
- Use tweezers to grip the screen connector cover securing the screen flex cable.
- Push the clip in towards the connector to unlatch it.

Step 14



- Remove the screen connector cover.
- ⓘ Make sure to keep this component to reinstall it during reassembly.

Step 15



- Use the tip of the spudger to pry up and disconnect the screen flex cable.
 - ✦ 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



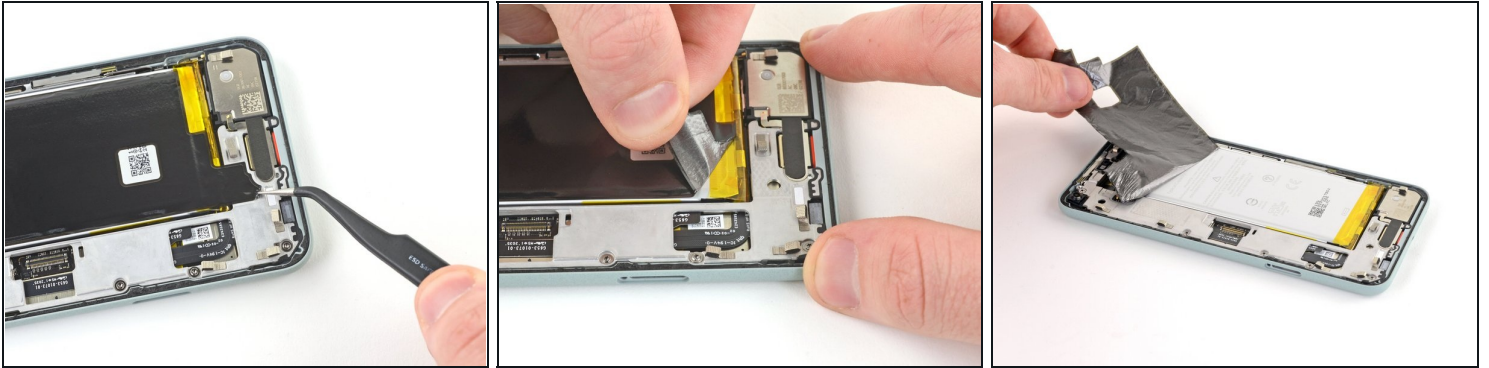
- Remove the screen.

① Use tweezers to pick off the [remaining adhesive](#) on the case.

⚠ If you use isopropyl alcohol to clean the adhesive off the display, be sure to not let it splash onto any unintended components, as this can weaken their adhesive bond.

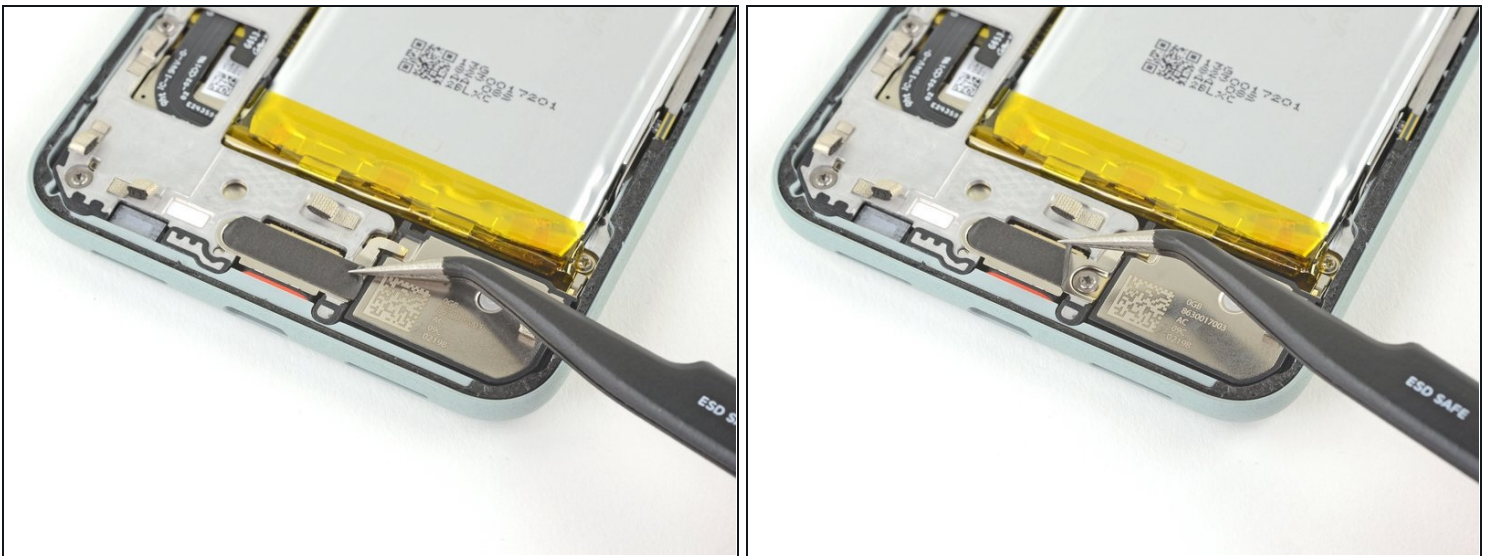
- ☑ If you replaced the screen, check the screen's front-facing camera hole and remove any protective liners covering it.
- ☑ If your replacement screen's display cable is held down by tape, remove the tape before installation.
- ☑ If you are using a custom-cut adhesive, follow [this guide](#) to correctly apply new screen adhesive.
- ☑ If you are using Tesa tape to reattach the screen, [follow this guide](#).
- ☑ 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 17 — Remove the graphite tape



- Use tweezers to lift up the graphite tape until you are able to grip it with your fingers.
⚠ Take care not to puncture or bend the battery with your tool—a punctured or bent battery may leak dangerous chemicals or cause a thermal event.
- Peel off the graphite tape.

Step 18



- Use tweezers to peel off the graphite pad covering the charging plate cover.
i If you are able to keep the graphite pad in good condition, you may reapply it during reassembly.

Step 19 — Remove the charging plate cover



- Use a T3 Torx driver to remove the two 4.6 mm-long screws securing the charging plate cover to the midframe.

ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

Step 20



- Use tweezers to remove the charging plate cover.
- ⓘ Make sure to keep this component to reinstall it during reassembly.

Step 21



- Use a T3 Torx driver to remove the eight 4.6 mm-long screws securing the midframe.

Step 22 — Remove the midframe



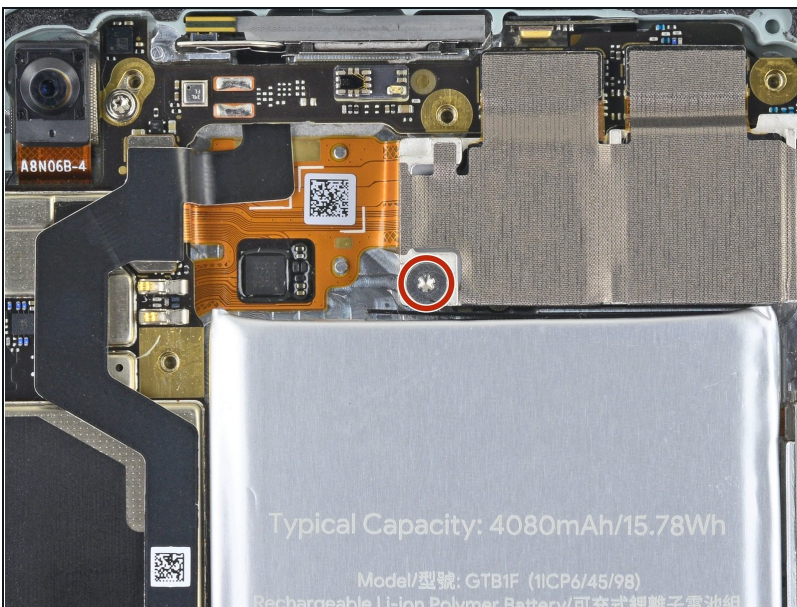
- Use tweezers to lift up the right side of the midframe.
 - Remove the midframe.
- ⓘ The spacer at the top of the phone is likely to fall out when you remove the midframe. Remember to save this spacer for reassembly. See pictures in the [motherboard replacement guide](#).

Step 23 — Disconnect the battery



- Use the pointed end of the spudger to pry the battery connector straight up and disconnect it from the motherboard.

Step 24 — Remove the shouldered screw



- Use a T3 Torx driver to remove the 4.1 mm shouldered screw.

Step 25 — Disconnect the rear cameras



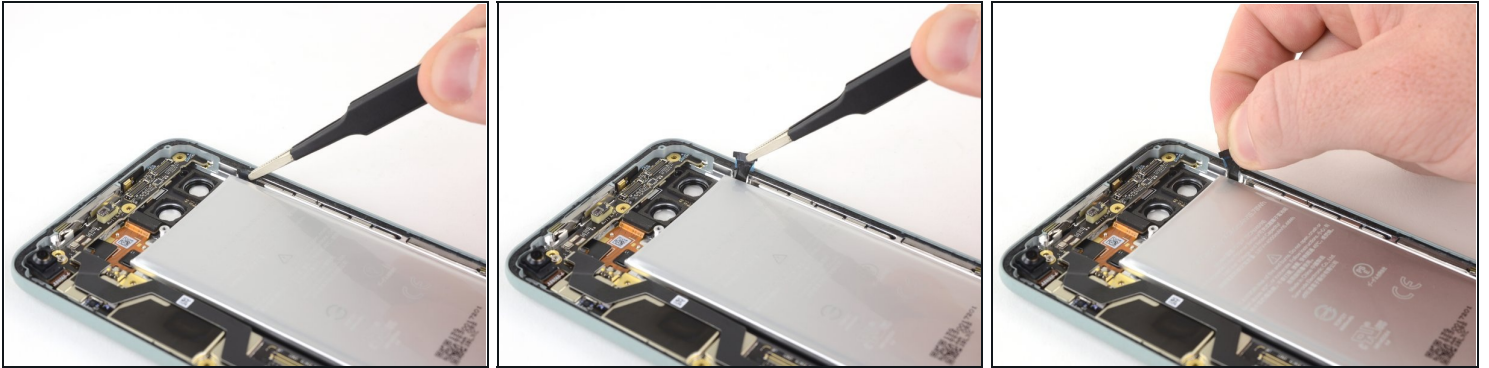
- Use the spudger to disconnect the two rear camera press connectors from the motherboard.
 - ① Use your finger to hold down the rear camera assembly and prevent bending the motherboard.

Step 26 — Remove the rear cameras



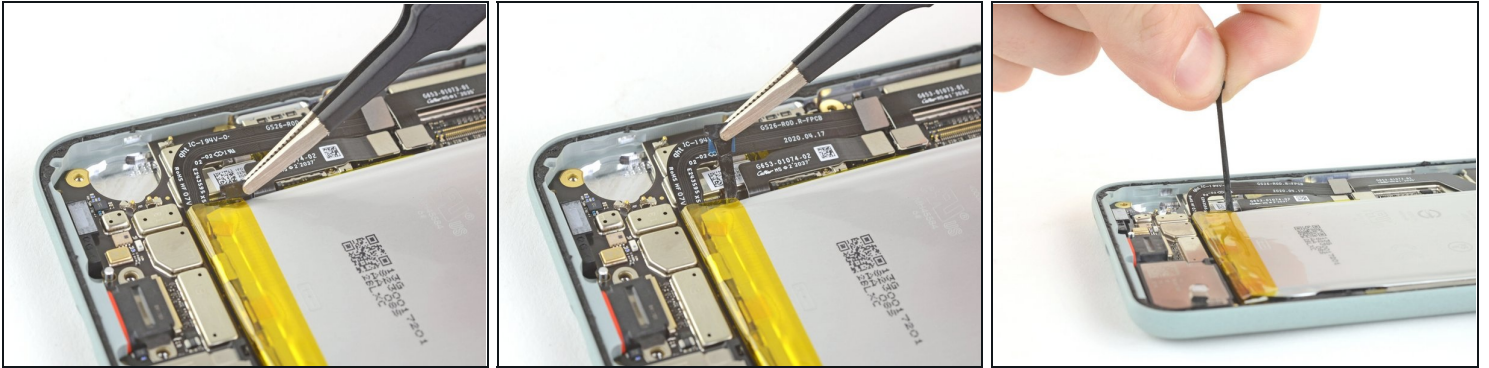
- Use tweezers to lift up on the rear camera assembly to remove it from its housing.
- ☑ If your replacement camera module has a plastic spacer, be sure to remove it before you install the module.
- ☑ Make sure the lens surface is smudge and dust free before you install the camera assembly.

Step 27 — Remove adhesive pull tabs



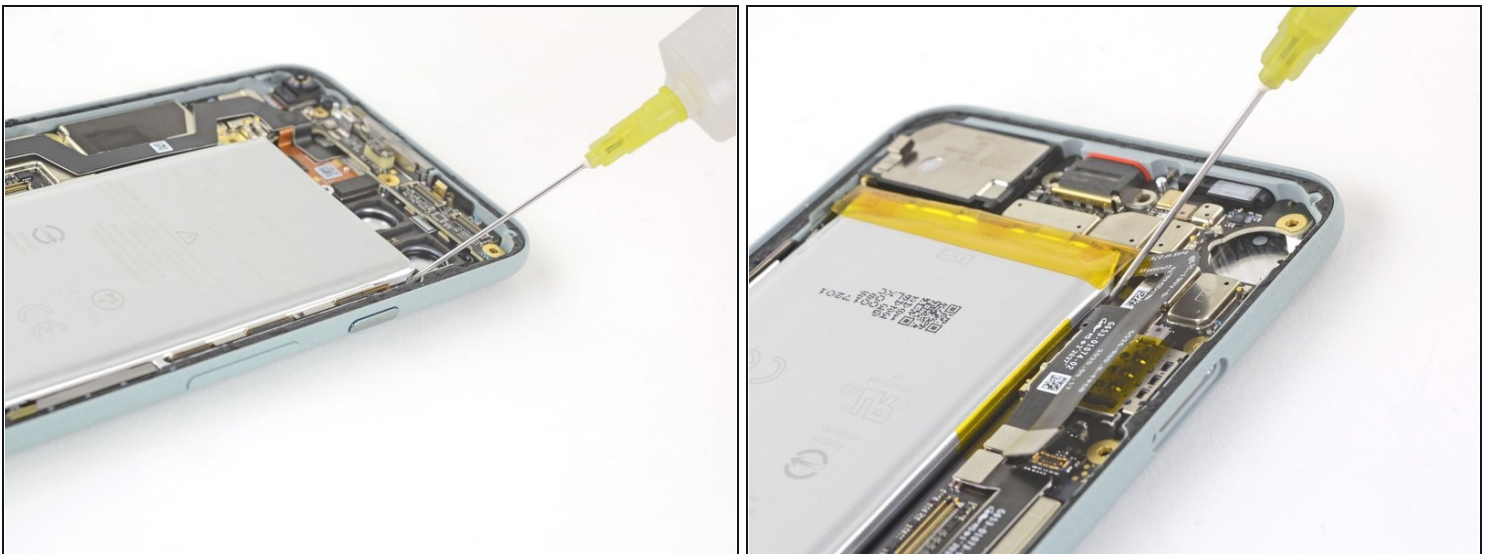
- Use blunt nose tweezers to grip the black adhesive pull tab located on the top right edge of the battery. Lift the pull tab with the tweezers until you are able to grip it with your fingers.
- Pull on the pull tab with a **slow, steady force at a shallow angle** to prevent the pull tab from snapping in the middle.
 - ⚠ Try to keep the adhesive strips flat and unwrinkled during this procedure; twisted or wrinkled strips will stick together and break instead of pulling out cleanly.
 - ⓘ If the adhesive becomes hard to pull, you can roll it around a spudger and continue pulling.
- If the pull tab breaks prematurely, use tweezers to retrieve the remaining length of adhesive and continue pulling.
 - ⓘ If you are unable to retrieve it, move on to the next step.

Step 28



- Use the same process to remove the pull tab located at the bottom left edge of the battery.
 - ① If this tab breaks prematurely and you are not able to retrieve it with tweezers, move on to the next step.

Step 29 — Loosen the adhesive



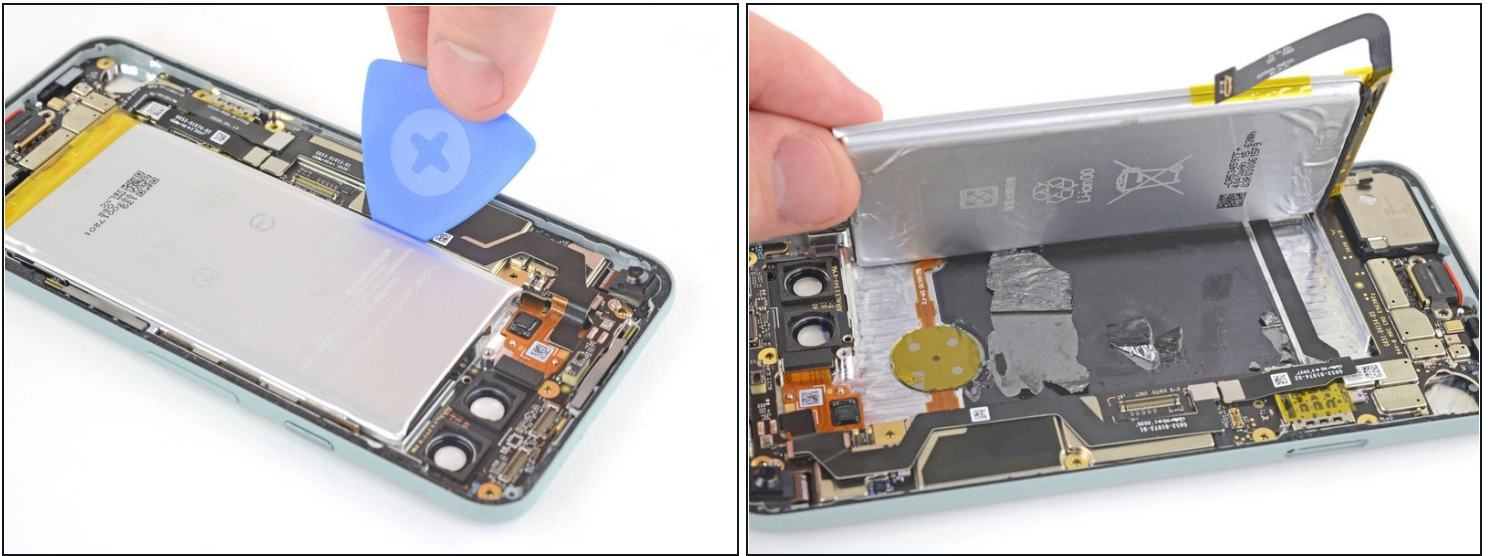
- If any of the adhesive strips broke off underneath the battery and could not be retrieved, apply a few drops of high concentration (over 90%) isopropyl alcohol into the opening of the affected tab.

Step 30



- Tilt the phone so that the alcohol flows towards the remaining adhesive.
- Wait one minute for the adhesive to soften, then proceed to the next step.

Step 31 — Remove the battery



- Insert an opening pick into the gap along the left side of the battery.
- Use the opening pick to slice the remaining adhesive at the top and bottom of the battery.
- ⚠️ Avoid scraping the two flex cables under the battery with your opening pick.
 - ① This may be difficult as the adhesive is [strategically located](#) between the cables and the battery tray. A possible solution is to cut a plastic card to fit between the flex cables and battery tray edge.
- ⚠️ Do not bend the battery.
- ⚠️ Avoid the [earpiece contact pins](#) located near the top left corner of the battery as you pry up with your opening pick.
- If you cannot pry the battery up, add a few more drops of isopropyl alcohol to the adhesive. A [plastic card](#) can also be helpful during this process.

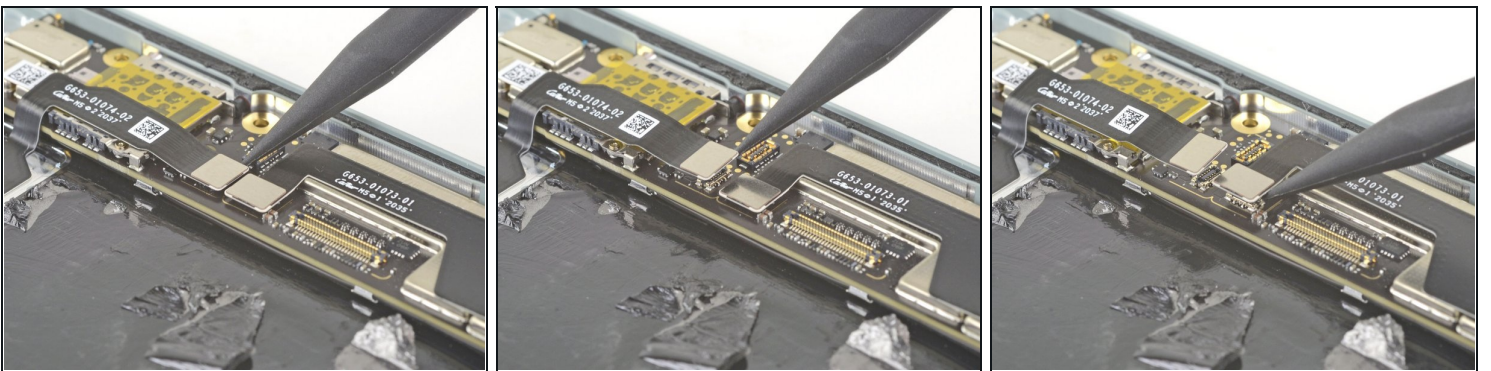
Step 32



⚠ Do not reuse the battery if it has been deformed or damaged, as doing so is a potential safety hazard. Replace it with a new battery.

- Remove your old battery.

Step 33 — Disconnect the press connectors



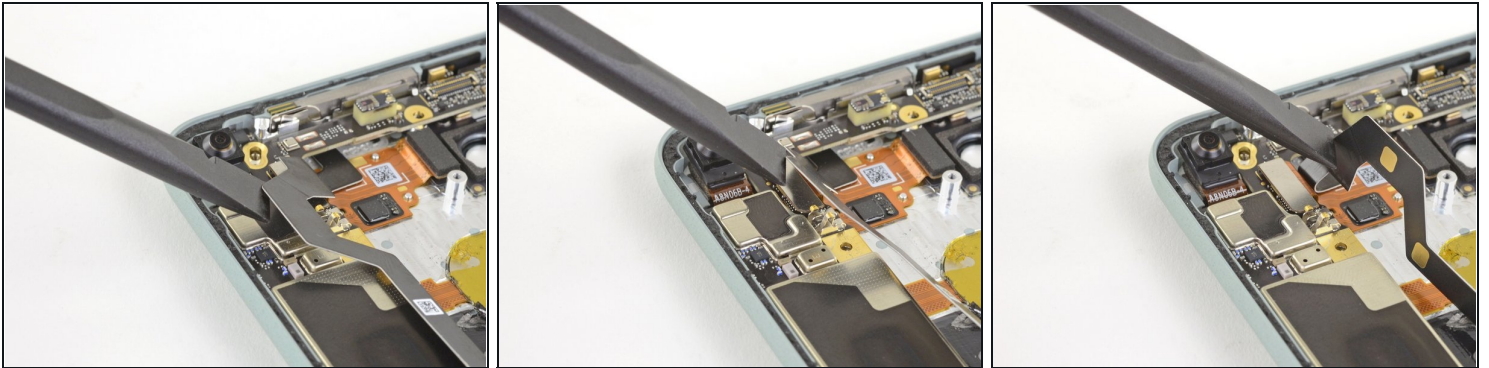
- Use the pointed end of a spudger to disconnect the two press connectors by lifting them straight up from the motherboard.

Step 34 — Remove the motherboard screws



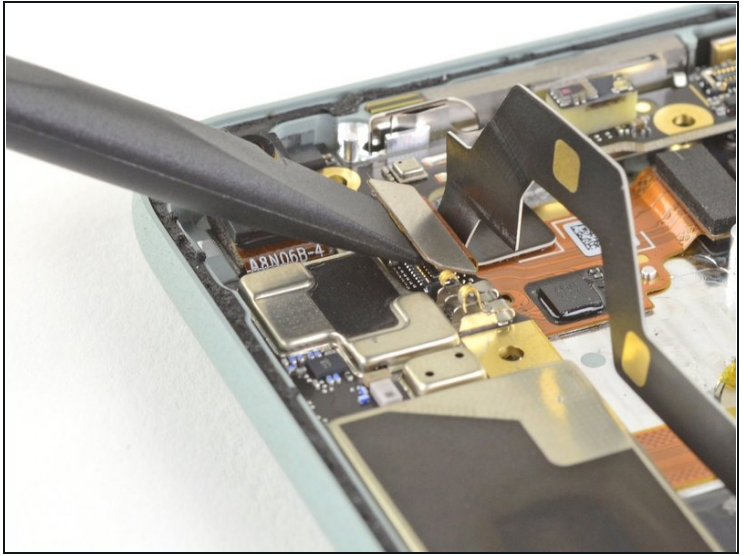
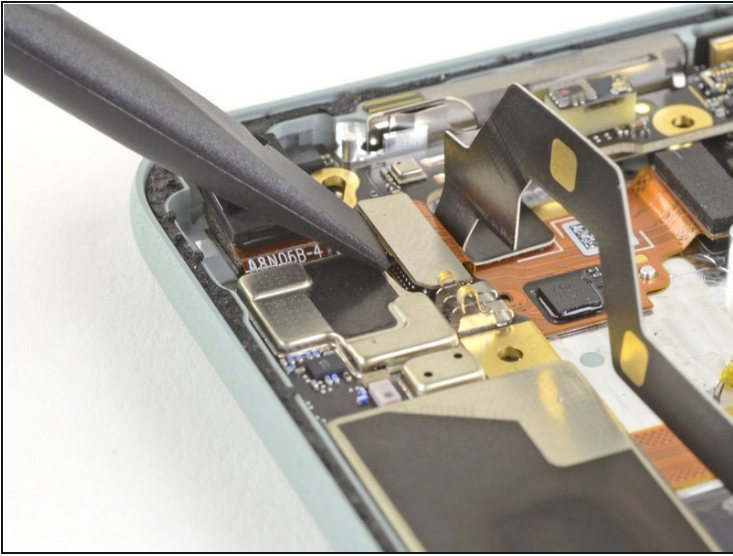
- Use a T3 Torx driver to remove the two 2.9 mm screws securing the motherboard to the rear case.

Step 35 — Bend the flex cable out of the way



- Use a spudger to gently fold the flex cable covering the rear case press connector out of the way.

Step 36 — Disconnect the press connector



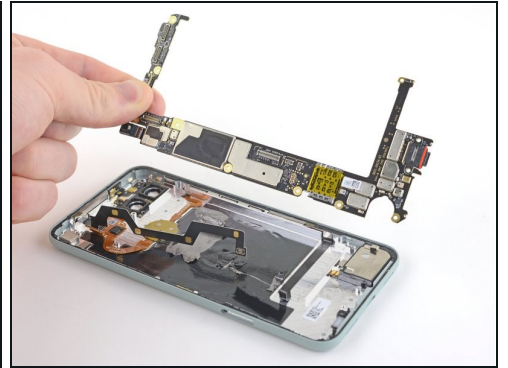
- Use the spudger to disconnect the rear case press connector.

Step 37 — Remove the motherboard



- Insert the pointed end of the spudger into the screw holes near the front facing camera.
- Push the motherboard down towards the bottom of the phone, then lift up to free the top of the motherboard from the rear case.

Step 38



- Use your fingers to pull the motherboard up towards the top of the rear case to free the charging port.
⚠ Do not bend or twist the motherboard.
- ⓘ If the motherboard gets caught on the case, use a spudger to go around the edges and loosen it up.
- Remove the motherboard.

Step 39



- ★ After removing the motherboard, the top spacer will usually fall out. To replace it, reposition the midframe without screwing it down. Grasp the spacer with the tweezers and compress the interior foam to squeeze it into position. Then screw the midframe into place.

⚠ Grip the spacer by the body and not by the delicate end tabs.

Compare your new replacement part to the original part—you may need to transfer remaining components or remove adhesive backings from the new part before installing.

To reassemble your device, follow the above steps in reverse order.

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Try some [basic troubleshooting](#), or ask our [Answers community](#) for help.