



# Google Pixel 3 Motherboard Replacement

This guide shows how to remove the motherboard for the Google Pixel 3.

Written By: Arthur Shi



## INTRODUCTION

Follow this guide to remove and replace the motherboard for the Pixel 3. The procedure involves removing many small grounding clips, which are easy to lose.

Note that removing the loudspeaker will compromise its ingress seal.

### TOOLS:

- [iOpener](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Picks set of 6](#) (1)
- [Isopropyl Alcohol](#) (1)
- [Spudger](#) (1)
- [Phillips #000 Screwdriver](#) (1)
- [iPhone Standoff Screwdriver](#) (1)
- [Tweezers](#) (1)

### PARTS:

- [Precut Adhesive Card](#) (1)

## Step 1 — Back Cover



- [Heat an iOpener](#) and apply it to the bottom of the phone for one minute.
- When prying above the power button, be careful not to insert the pick too deeply, or you will damage the fingerprint sensor cable.

## Step 2



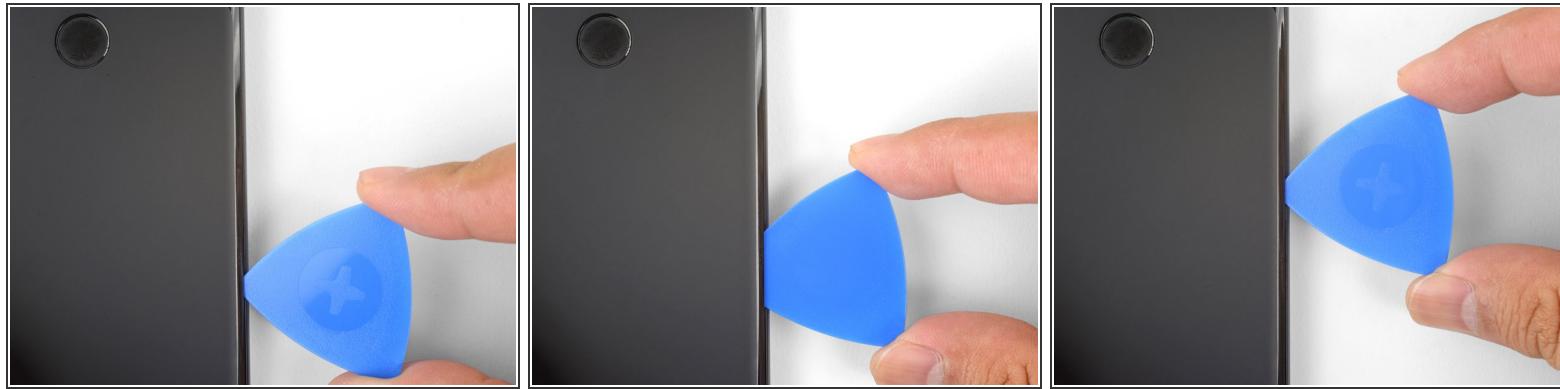
- Apply a suction cup to the heated bottom edge of the phone.
  - *(i)* If your back cover is badly cracked, covering it with a layer of clear packing tape may allow the suction cup to adhere.
- Lift on the suction cup with strong, steady force to create a gap.
  - *(i)* Depending on how aged your phone is, this may take significant force. If you are having trouble, apply more heat and try again.
- Insert an opening pick into the gap.

## Step 3



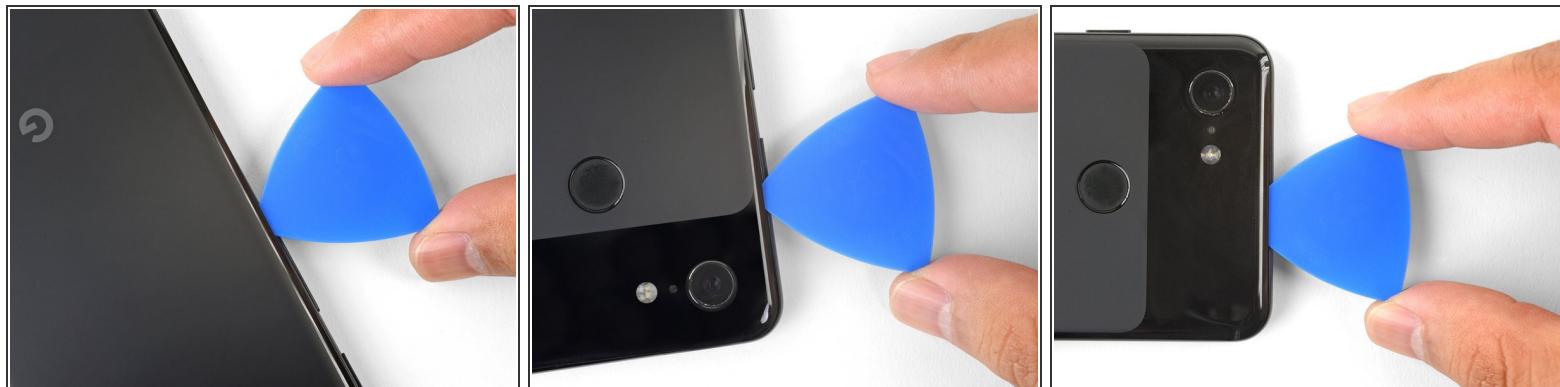
- Slice the adhesive along the bottom edge of the phone and around the right corner.
- Leave a pick in the bottom edge to prevent the adhesive from re-sealing.

## Step 4



- Heat the right edge with an iOpener and continue slicing the adhesive with an opening pick.
- ⓘ The adhesive can be very gummy. Push the pick in and out in a sawing motion to help with slicing.

## Step 5



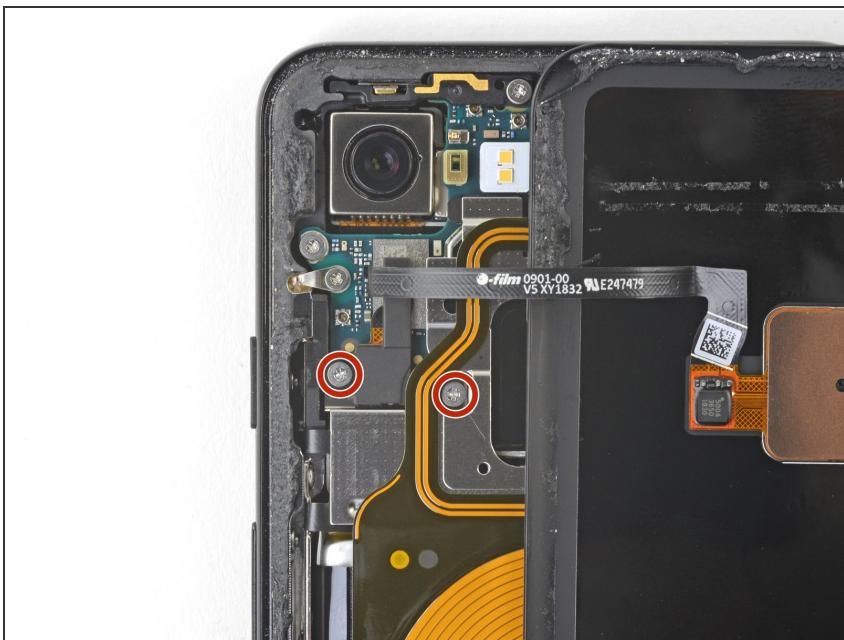
- Continue heating and slicing through the rest of the phone perimeter. Leave a pick in each edge to prevent the adhesive from resealing.
- When slicing above the power button, do not insert the pick more than halfway in to avoid damaging the fingerprint sensor cable.

## Step 6



- Once you have sliced around the perimeter of the phone, carefully lift the **left edge** of the back cover.
- ⚠** Do not attempt to remove the back cover. It is still attached to the phone by the fingerprint sensor cable.
- Flip the back cover along its long axis and rest it so that the fingerprint sensor cable is not strained.

## Step 7



- Remove the two 4.1 mm long Phillips screws securing the fingerprint connector bracket.
- 📌** During reassembly, be careful not to over-tighten these screws, or you may damage your display.

## Step 8



- Use the point of a spudger to slide the fingerprint connector bracket out from under the NFC coil.
- Remove the fingerprint connector bracket.

## Step 9



- Use the point of a spudger to pry up and disconnect the fingerprint connector from its socket.

*(i)* 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 10



- Remove the back cover.
- ☒ Before you install a replacement back cover, be sure to remove all adhesive residue from the phone frame. Use an opening tool to scrape and high concentration isopropyl alcohol to clean the surface.
- ☒ If you are re-using the back cover, be sure to clean off any adhesive, and apply new back cover adhesive.
- ☒ If you are installing a replacement back cover, be sure compare it with the original part. Transfer any remaining parts (such as the flash diffuser) over to your replacement part.

## Step 11 — Wireless coil removal



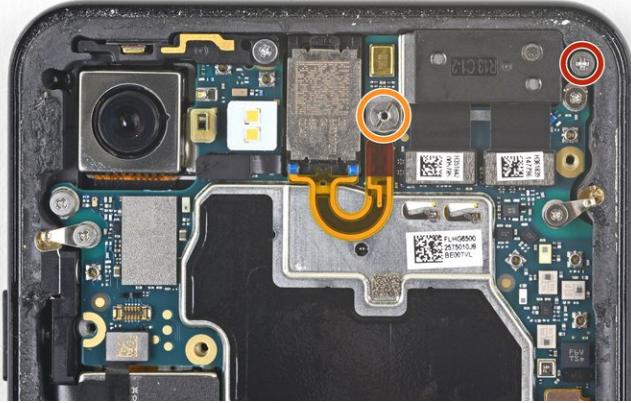
- Remove the five Phillips screws securing the wireless charging coil:
  - Two 1.9 mm screws
  - Two 4.2 mm screws
  - One 4.3 mm screw
- Remove the wireless charging coil.

## Step 12 — Battery disconnect



- Use the point of a spudger to pry up and disconnect the battery connector from its socket near the right edge of the phone.

## Step 13 — Front-Facing Cameras



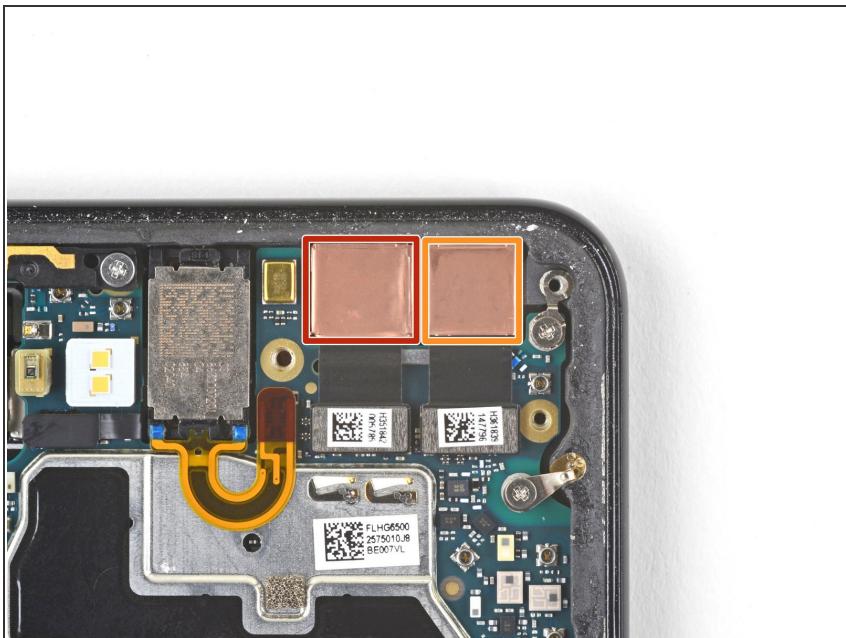
- Remove the two screws securing the camera bracket:

- One 4.1 mm Phillips screw
- One 4 mm standoff screw

*(i)* Standoff screws are best removed using a [standoff bit](#). In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.

- Remove the camera bracket.

## Step 14

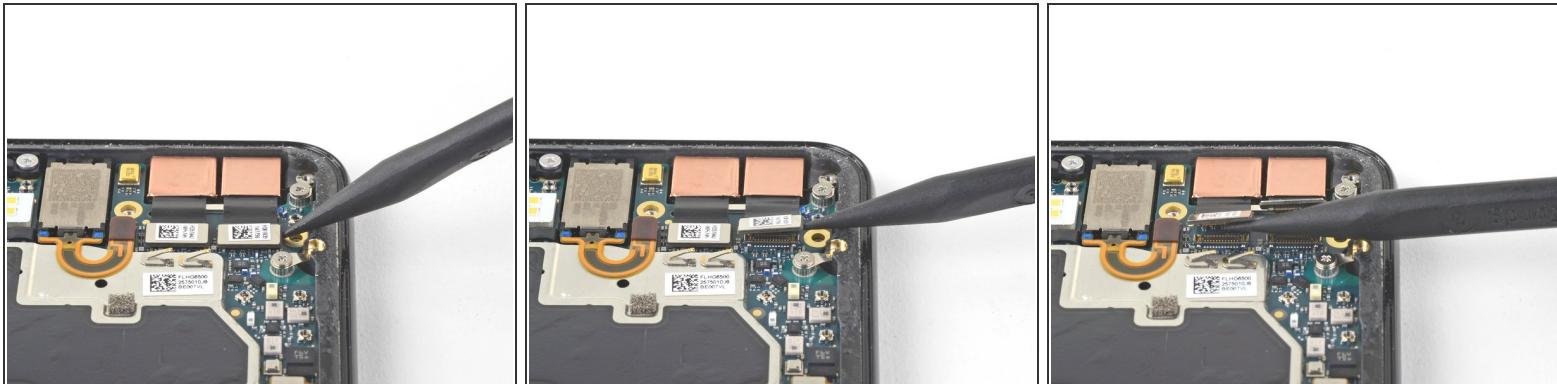


**i** If you are replacing front-facing cameras, determine which one you need to replace:

- Normal view camera
- Wide-angle camera

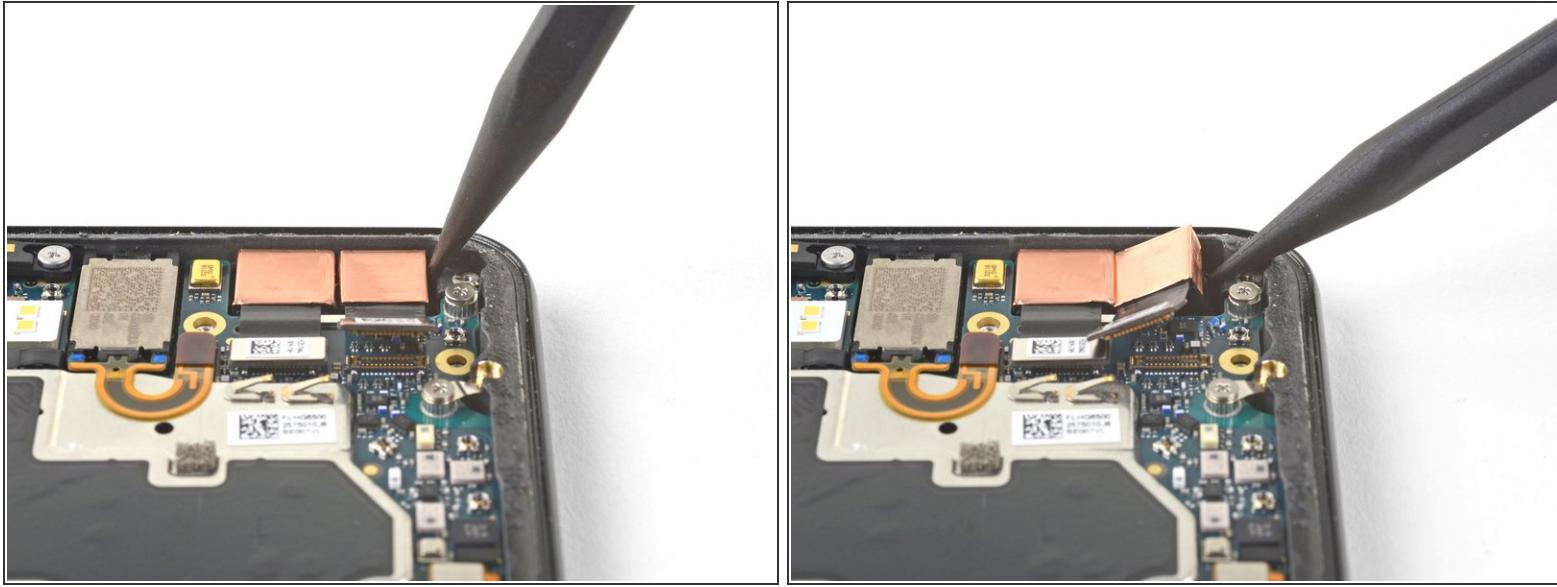
**i** If you are doing the motherboard removal procedure, you will need to remove both cameras.

## Step 15



- Use the point of a spudger to pry up and disconnect the connector for the camera(s) you are replacing.

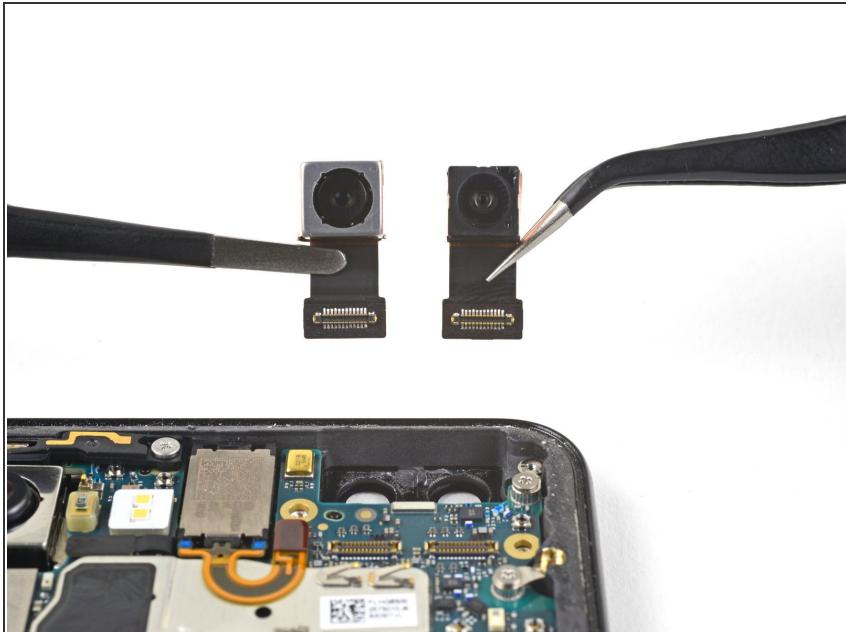
## Step 16



*(i)* The cameras are held in place with adhesive.

- Insert the point of a spudger behind the edge of the camera module and pry up to loosen it from the frame.

## Step 17



- Remove the camera(s).
- ☒ If the adhesive holding the camera module is in good condition, you can re-use the adhesive. Otherwise, replace the adhesive with double-sided [Tesa tape](#).
- ☒ When installing a replacement camera module, make sure that the phone frame lens are free of adhesive residue or debris.

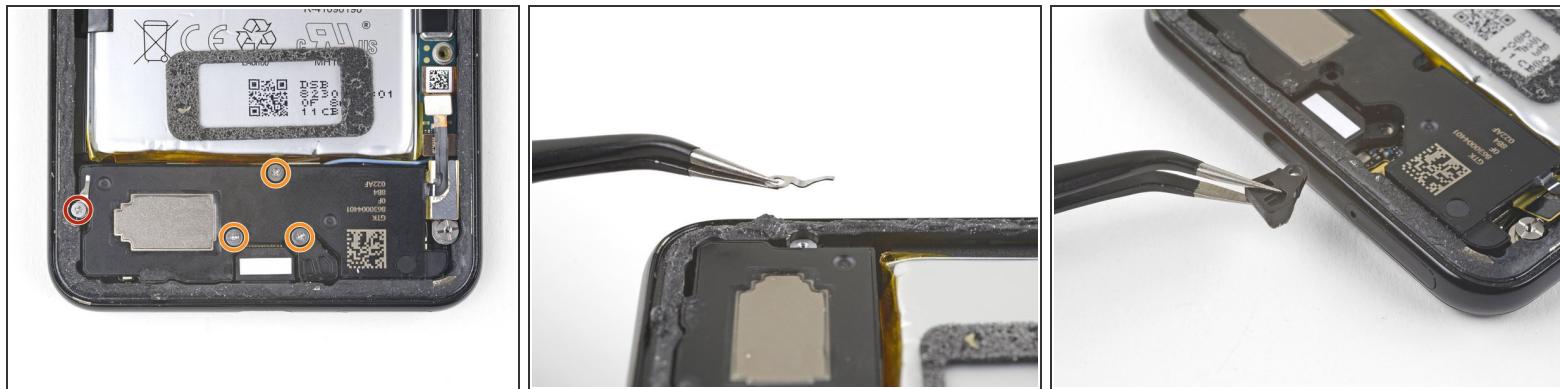
## Step 18 — Loudspeaker



- Use the point of a spudger to pry up and disconnect the loudspeaker connector from its motherboard socket near the right edge of the phone.

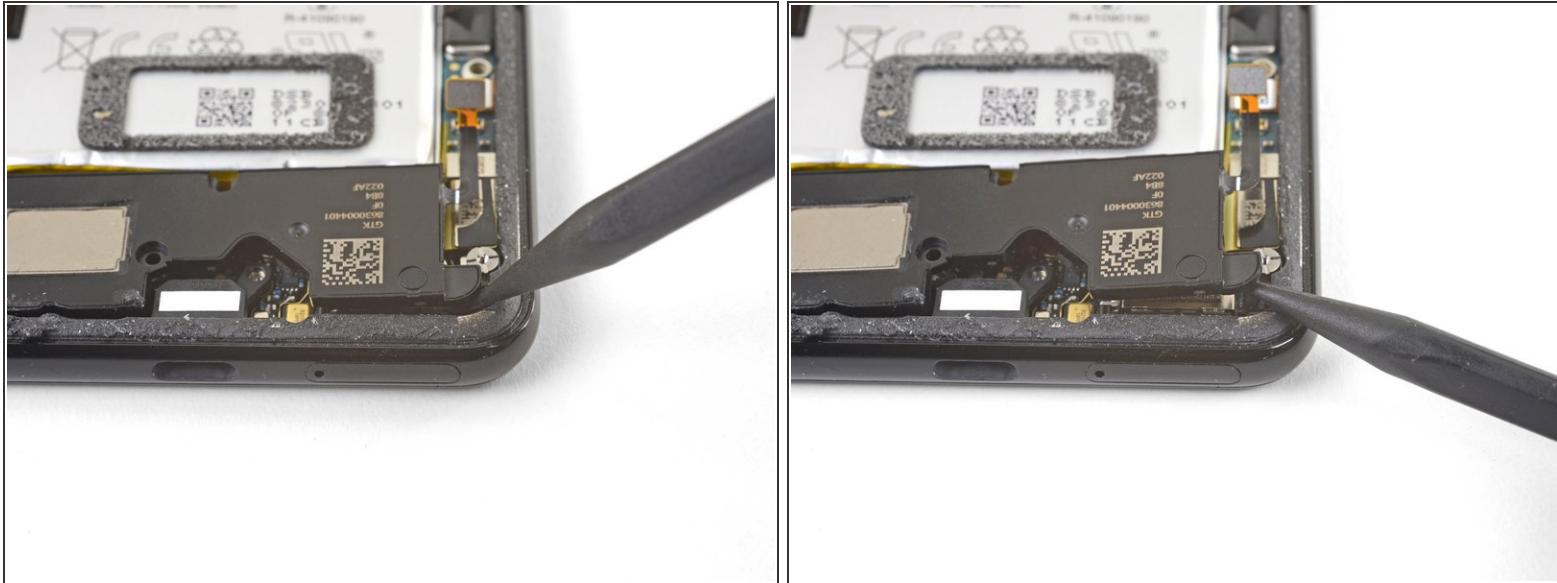
 Be careful not to puncture the battery with the spudger.

## Step 19



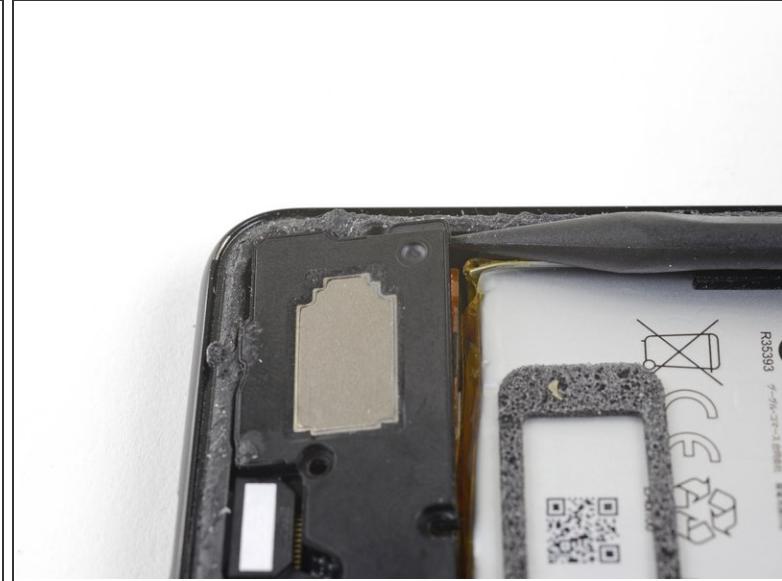
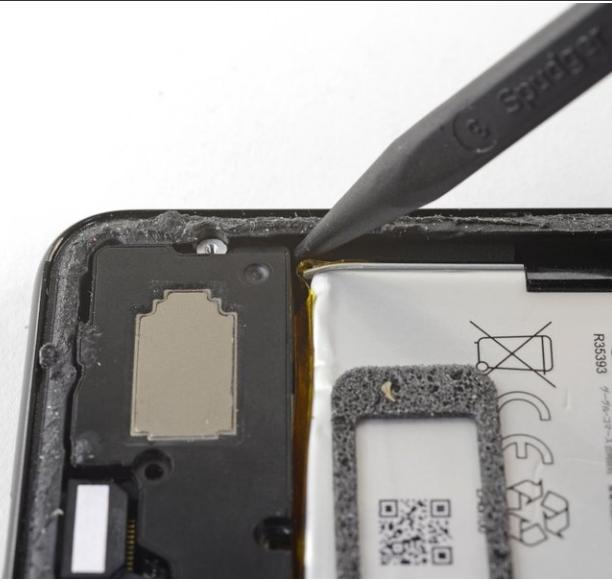
- Remove the following four Phillips screws:
  - One 1.9 mm screw
  - Three 4.3 mm screws
- Remove the tiny grounding clip from the left screw hole. Be careful not to lose it.
  - The grounding clip installs such that the contoured edge faces the left side of the phone.
- Remove the small plastic insert from the right side of the USB-C port.

## Step 20



- ⓘ The loudspeaker is still held in place by a strong adhesive gasket. Before attempting to remove it, pry it up in a few different places to break the adhesive seal.
- Insert the point of a spudger under the bottom right corner of the loudspeaker.
- Pry up to loosen the loudspeaker from the phone.

## Step 21



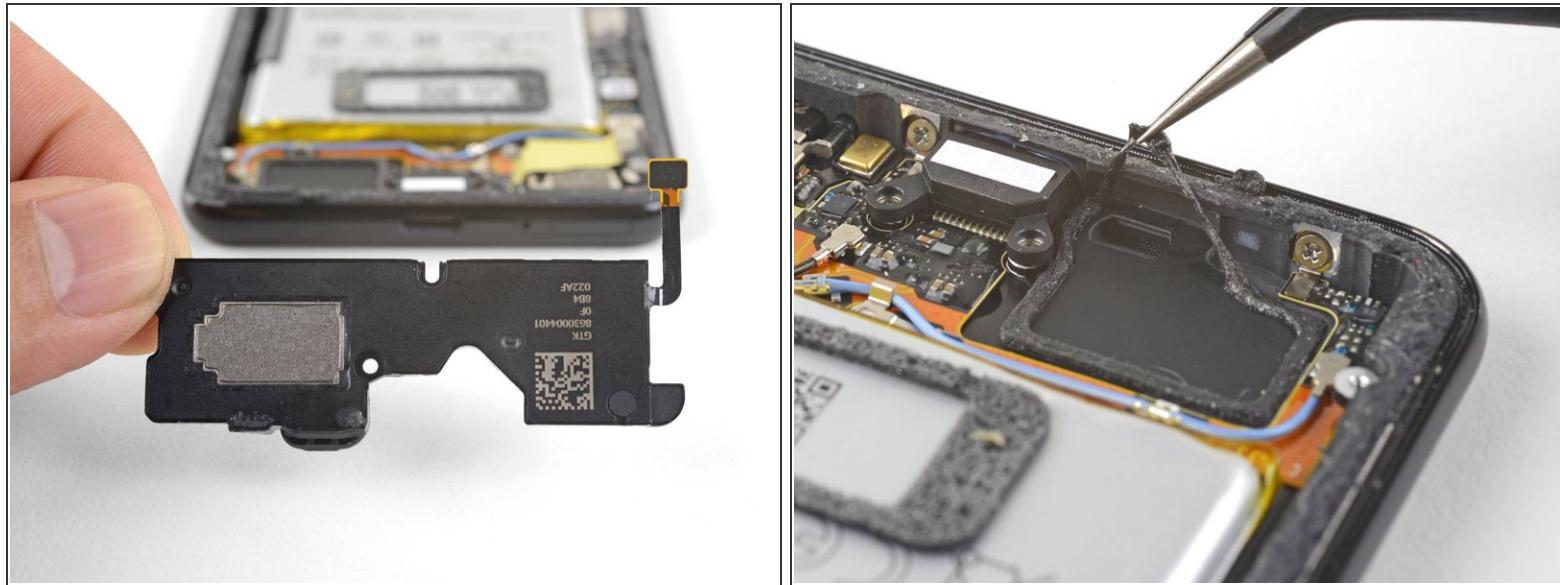
- Insert the point of a spudger under the top left corner of the loudspeaker.
- ⚠ Be careful not to puncture the battery with the spudger.
- Pry up to loosen the loudspeaker.

## Step 22



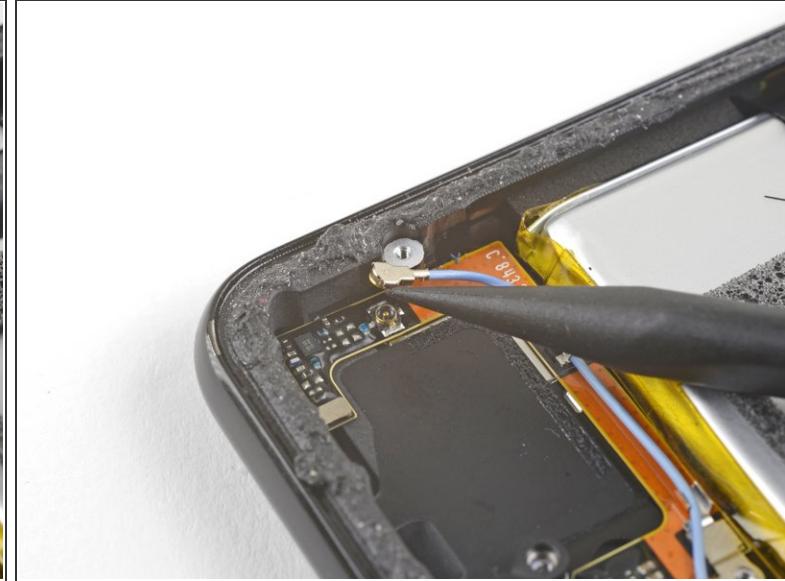
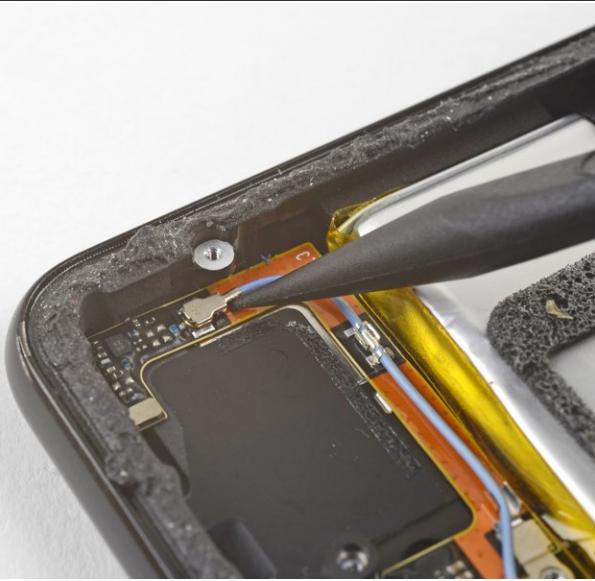
- Insert the flat end of the spudger under the top edge of the loudspeaker, towards the left edge.
- Pry up to loosen the loudspeaker.

## Step 23



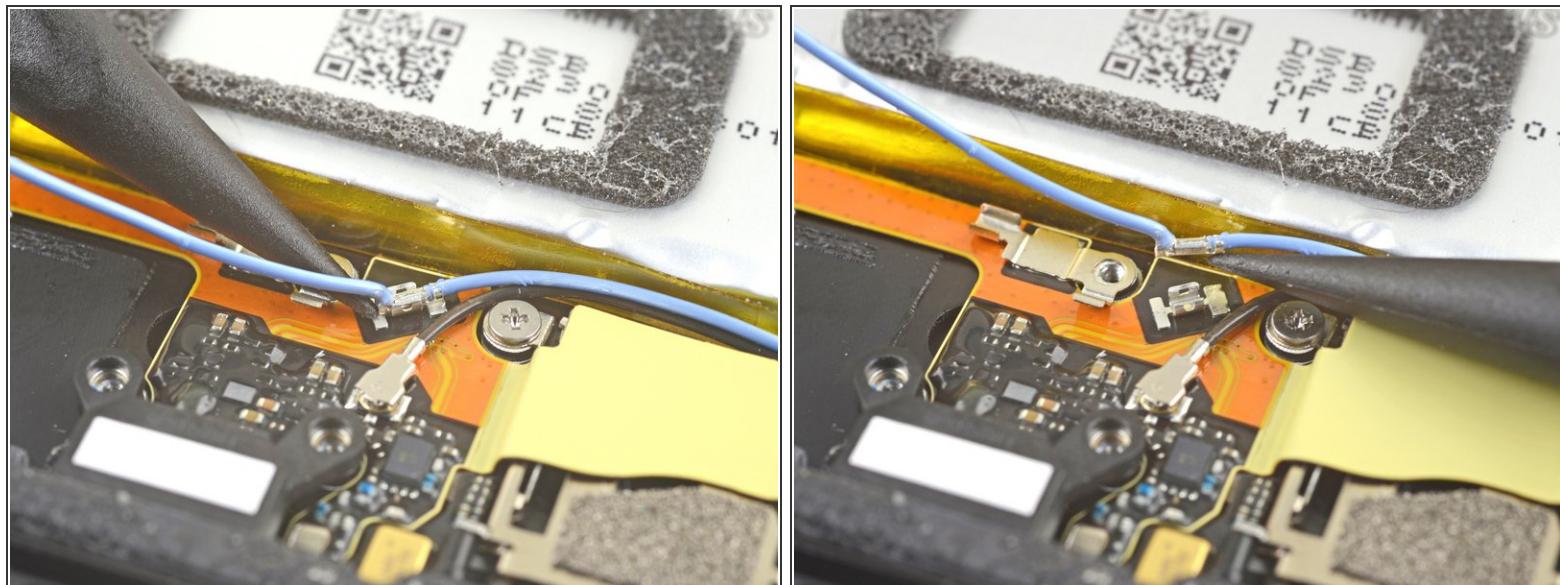
- Remove the loudspeaker.
- ☒ Before you install a replacement loudspeaker, check the adhesive gasket.
  - If it is in good condition, you can re-use the gasket. Make sure that the gasket does not cover the exit hole.
  - If the gasket is pulled out of place, remove it and replace the adhesive with a pre-cut strip or Tesa tape.

## Step 24 — Google Pixel 3 Antenna Cable Disconnect



- Use the point of a spudger to pry up and disconnect the blue antenna cable from its socket on the charging assembly.

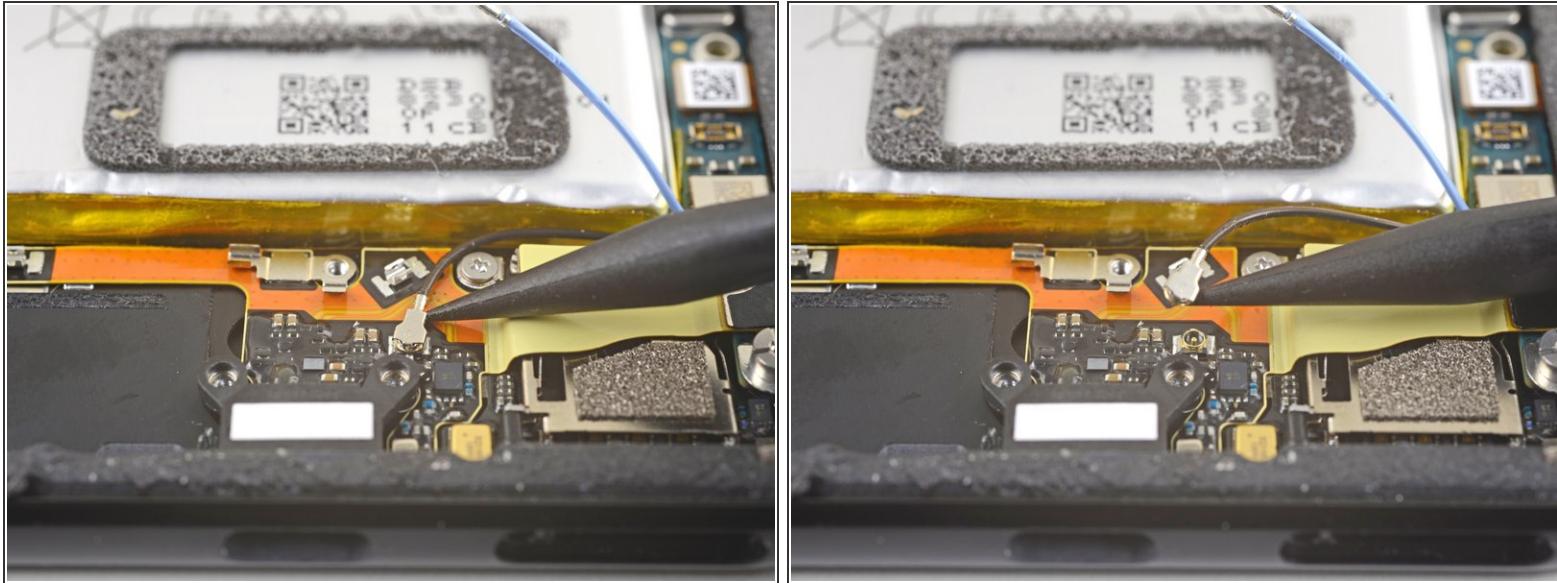
## Step 25



- Use the point of a spudger to carefully pry up and release the blue antenna cable from its grounding clips.

*(i)* The cable is fragile and prone to breaking. If it feels like the wire is firmly clamped in place, use the point of a spudger to push the clip open slightly, then try again.

## Step 26



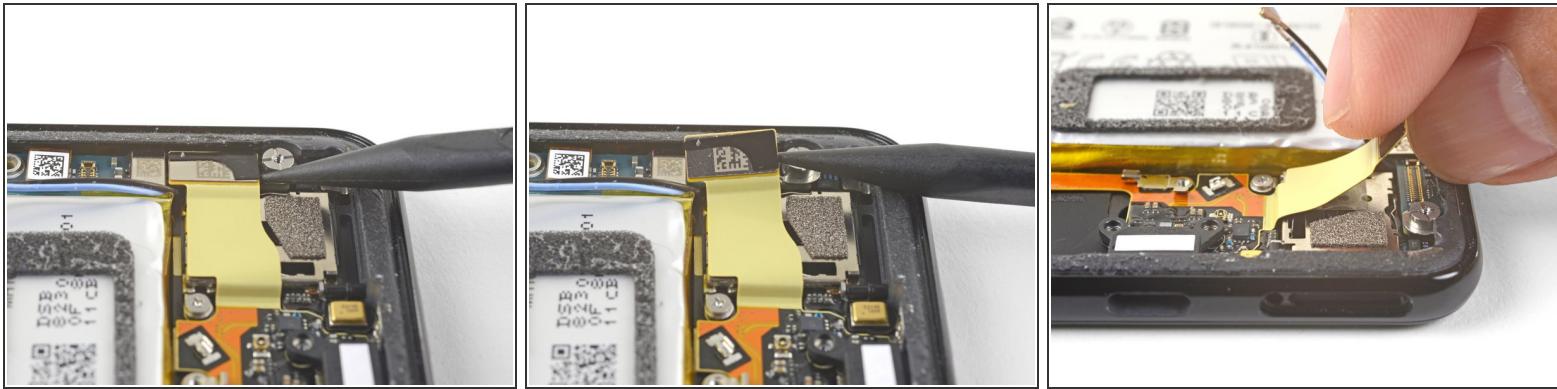
- Use the point of a spudger to pry up and disconnect the black antenna cable from its socket near the USB-C port.

## Step 27



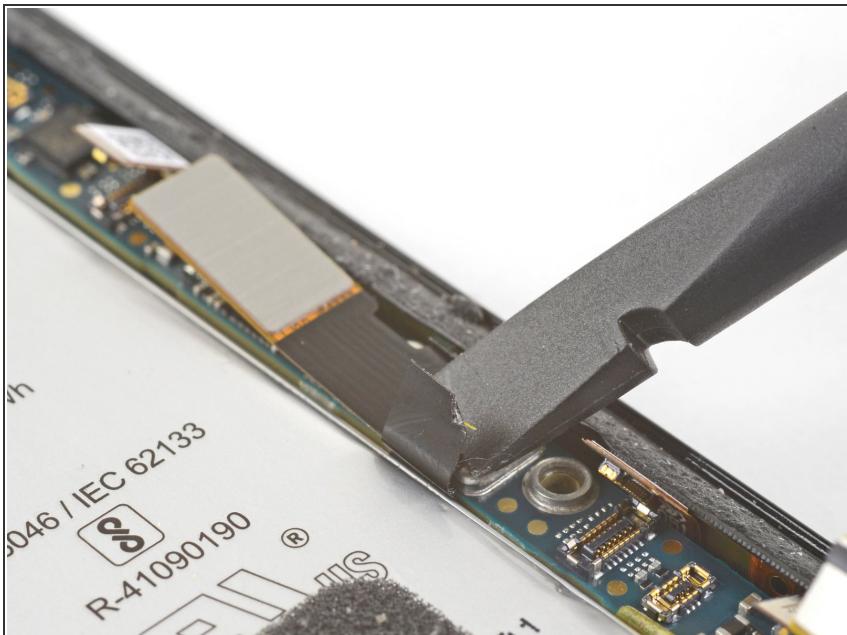
- Carefully de-route both antenna cables and move them away from the charging assembly.

## Step 28



- Use the point of a spudger to pry up and disconnect the charging assembly's connector from its motherboard socket, near the right edge of the phone.
- Carefully peel the flex cable from the top of the SIM card reader.

## Step 29 — Motherboard



- Use the flat end of a spudger to carefully pry up the black tape holding the display flex cable in place, near the right edge of the phone.

 Do not use metal tools to pry, or you may damage the flex cable.

## Step 30



**⚠** Whenever you use the spudger near the battery, be very careful not to puncture the battery.

- Slide the point of a spudger in the crevice underneath the black tape bridging across the battery and the motherboard.
- Slide the spudger along the crevice to pry up the tape from the battery side.
- Carefully peel the tape from the battery and fold it out of the way.

## Step 31



- Use a spudger to pry up and disconnect the following seven press-fit connectors from their motherboard sockets:
  - External buttons connector
  - Top microphone connector
  - Earpiece connector
  - Left squeeze sensor connector
  - Screen connector
  - Right squeeze sensor connector
  - SIM tray connector

## Step 32



- Use the flat of a spudger to carefully pry up and bend the earpiece speaker's flex cable upwards, out of the way of the motherboard.

## Step 33



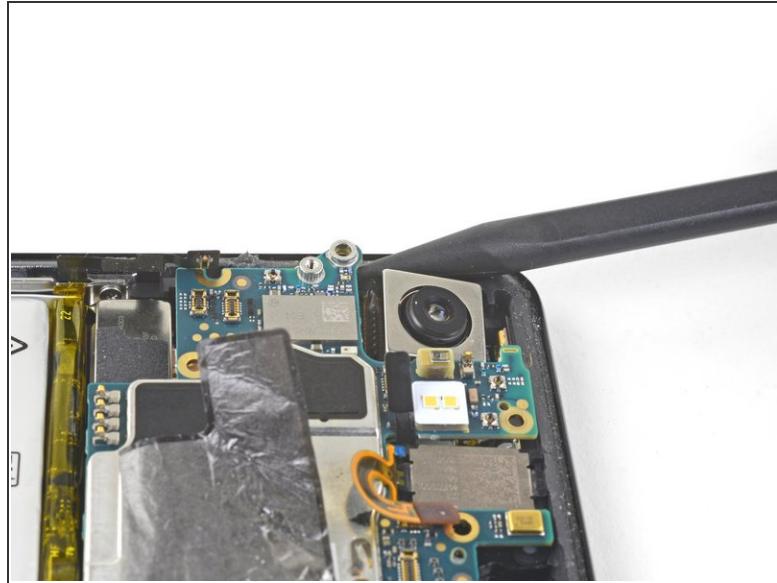
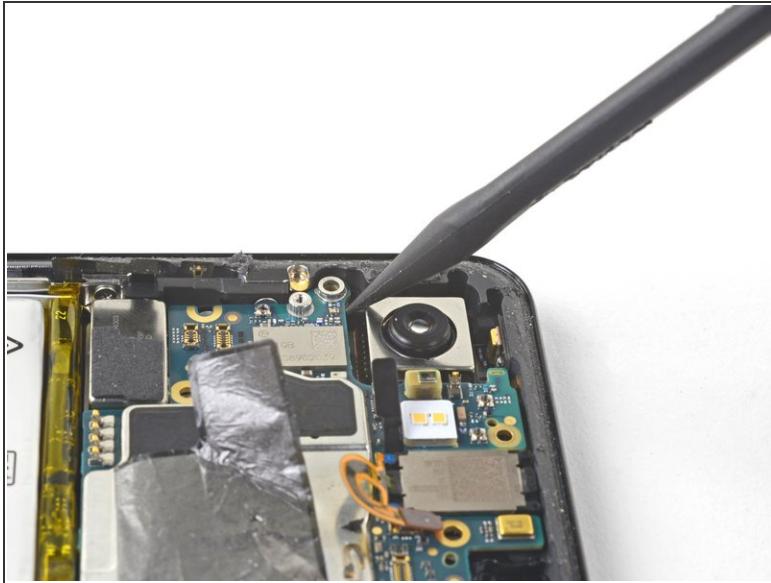
- ① Some of these screws hold very small grounding clips in place. *Be careful not to lose these clips* as you remove the screws.
- Remove the six screws securing the motherboard in place:
  - One 4.2 mm Phillips screw
  - Three 1.9 mm Phillips screws
  - One 4.3 mm Phillips screw
  - One 3.83 mm standoff screw
- ① Standoff screws are best removed using a [standoff bit](#). In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.
- Remove and retain the three small metal grounding clips.

## Step 34



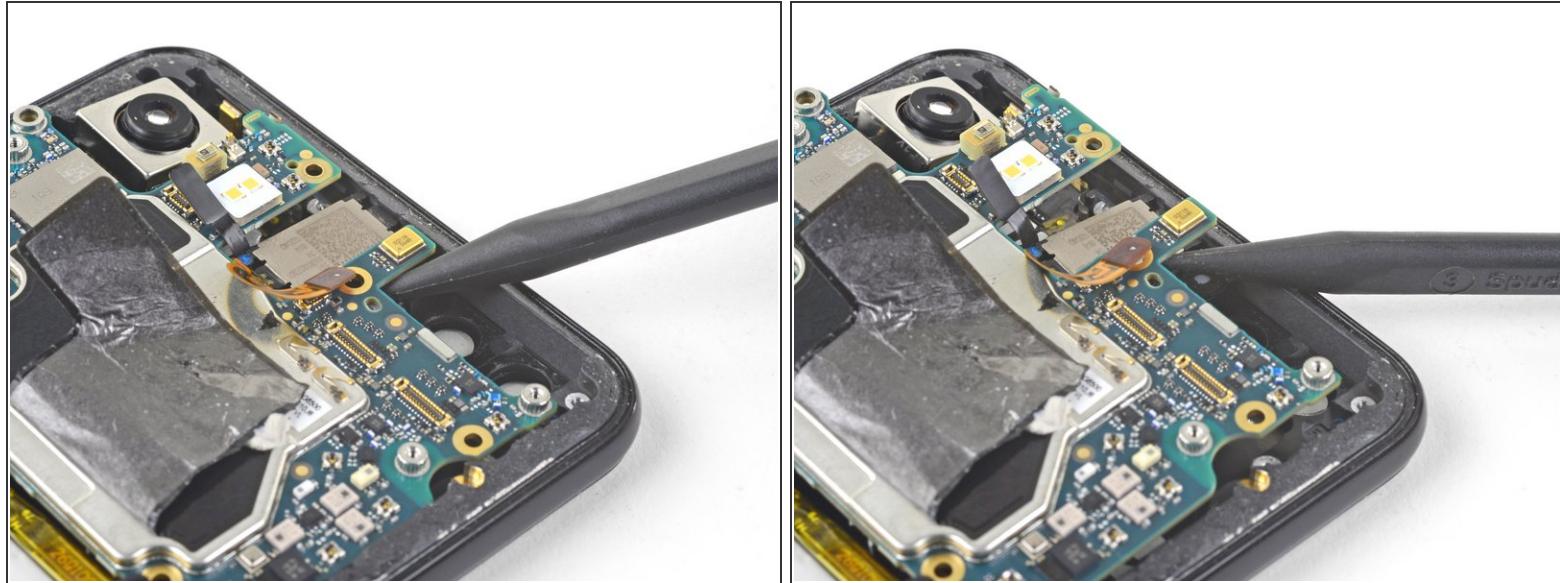
- Carefully remove the antenna bracket from the top left edge of the phone.
- ☒ To reinstall the small metal grounding clips:
  - Orient the clips such that the silver side is facing upwards.
  - The teardrop shaped clips should have their points facing towards the phone edge.
  - The double-holed clip dips downwards towards the frame's top-right screw hole.

## Step 35



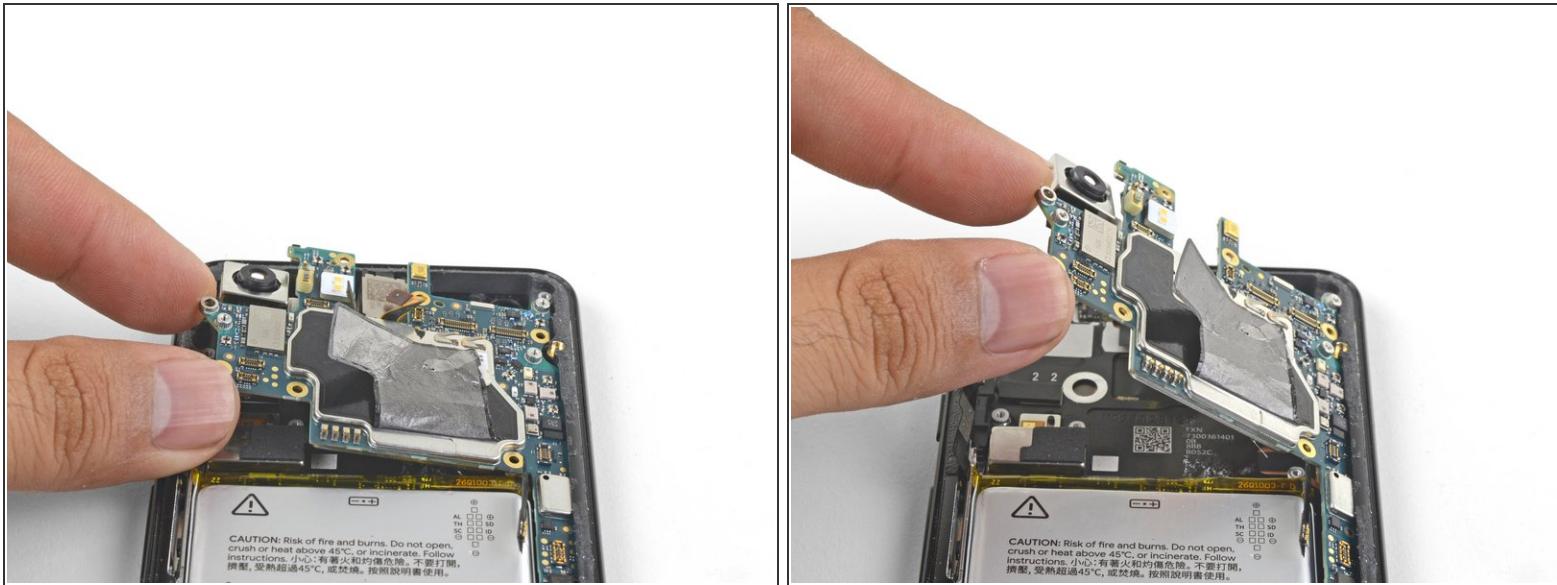
- Insert the point of a spudger near the top left corner of the motherboard, right below the rear-facing camera.
- Pry up gently to loosen the motherboard, bending all flex cables away to accommodate for the movement.
  - If the motherboard feels firmly seated, check for any flex cables or screws that may still be connected.

## Step 36



- Insert the spudger underneath the top edge of the motherboard and carefully pry up to loosen the motherboard.
- *(i)* The earpiece speaker's flex cable will press tightly against the motherboard. Take your time and carefully guide the motherboard around the flex cable.

## Step 37



- Lift the left edge of the motherboard and carefully swing upwards it towards the right. Carefully push any press connectors snagging the motherboard out of the way.

## Step 38



- Carefully lift the top end of the motherboard away from the frame.
- Remove the motherboard.

☞ When you reinstall the motherboard, be careful not to trap any [flex cable connectors](#) underneath it.

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

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

Repair didn't go as planned? Check out our [Google Pixel 3 Answers community](#) for troubleshooting help.