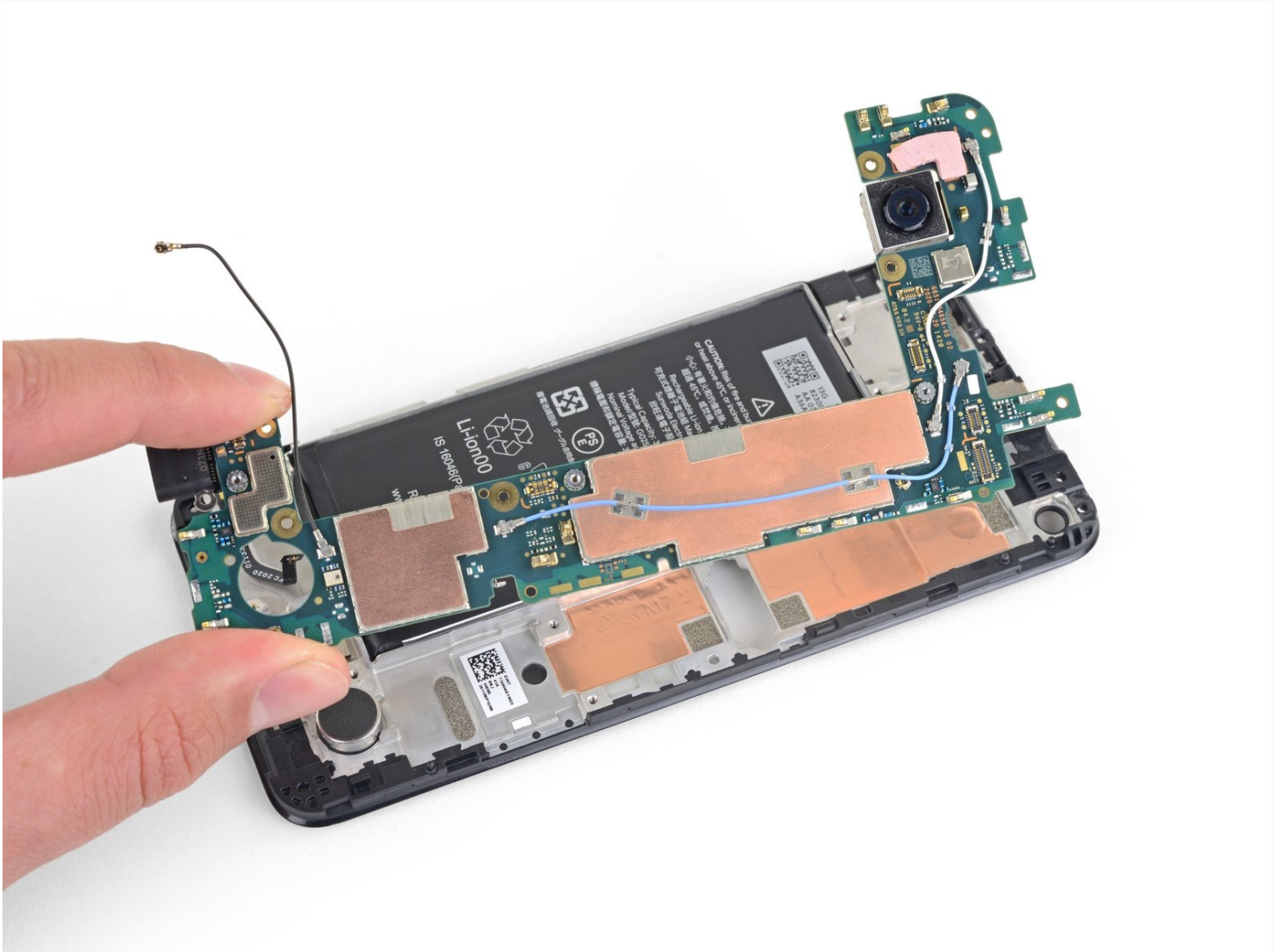




# Google Pixel 4a Motherboard Replacement

This repair guide was authored by the iFixit...

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# 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 motherboard on a Google Pixel 4a.

**The unreinforced display panel on the Pixel 4a is fragile.** Pay special attention to the warnings in the opening procedure if you are reusing the screen.



## TOOLS:

[SIM Card Eject Tool](#) (1)  
[iOpener](#) (1)  
[iFixit Opening Picks \(Set of 6\)](#) (1)  
[Suction Handle](#) (1)  
[T3 Torx Screwdriver](#) (1)  
[Tweezers](#) (1)  
[Spudger](#) (1)



## PARTS:

[Google Pixel 4a Display Adhesive - Genuine](#) (1)  
[Tesa 61395 Tape](#) (1)

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## Step 1 — Eject the SIM card tray



- Insert a SIM eject tool, bit, or straightened paper clip into the SIM tray hole.
- Press directly into the hole to eject the SIM card tray.
- Remove the SIM card tray.

## Step 2 — Precautionary notes



- ① You will need to pry the screen up to remove it from the phone. Read the following notes carefully before proceeding.
- Take note of the two seams on the edge of the phone:
  - *Screen seam*: This seam separates the screen from the rest of the phone. **This is where you should pry.**
  - *Frame seam*: This is where the plastic frame meets the back cover. It is held in place by screws. **Do not pry at this seam.**
- Before you begin, note the following areas on the screen:
  - *Screen flex cable*: Do not insert the opening pick deeper than instructed or you risk damaging this cable.
  - ⚠ **Note the orange ribbon cable under the lower-right corner of the screen, which is susceptible to damage if your opening pick is pressed into it. Only insert your opening pick as little as is necessary to separate the screen adhesive.**
  - *Adhesive perimeter*: Prying beyond this narrow perimeter without angling the pick will damage the OLED panel.

### Step 3 — Heat the right edge of the screen



- [Apply a heated iOpener](#) to the right edge of the display for one minute to soften the adhesive.
- ⓘ 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 4 — Insert an opening pick



- ⓘ If your display is badly cracked, covering it with a layer of clear packing tape may allow the suction cup to adhere. Alternatively, very strong tape may be used instead of the suction cup. If all else fails, you can superglue the suction cup to the broken screen.
- Place a suction cup as close to the right edge of the screen as possible.
- Lift the suction cup with a strong steady force.
- Insert the tip of an opening pick into the *screen seam* **no more than 1 mm**.



## Step 5 — Guide the opening pick under the OLED panel



ⓘ This step shows how to insert the pick without damaging the OLED panel. Do this before beginning to slice the adhesive.

- With the pick **1 mm** into the gap, pivot the pick upwards to a steep angle.
- At a steep angle, carefully push the pick into the gap about 1/4 inch (6 mm). The pick should slide in **below** the OLED panel.

⚠ **Stop if you feel the point of the pick hitting a ridge.** The pick may be pressing against the edge of the OLED panel. Angle the pick and try again.

## Step 6 — Cut the adhesive



- Slide the pick along the right edge of the screen to cut the adhesive.

⚠ **Do not insert the pick more than 1/4 inch (6 mm) or you may damage the screen's flex cable.**

- Leave the pick in the top right corner to prevent the adhesive from re-sealing.

## Step 7



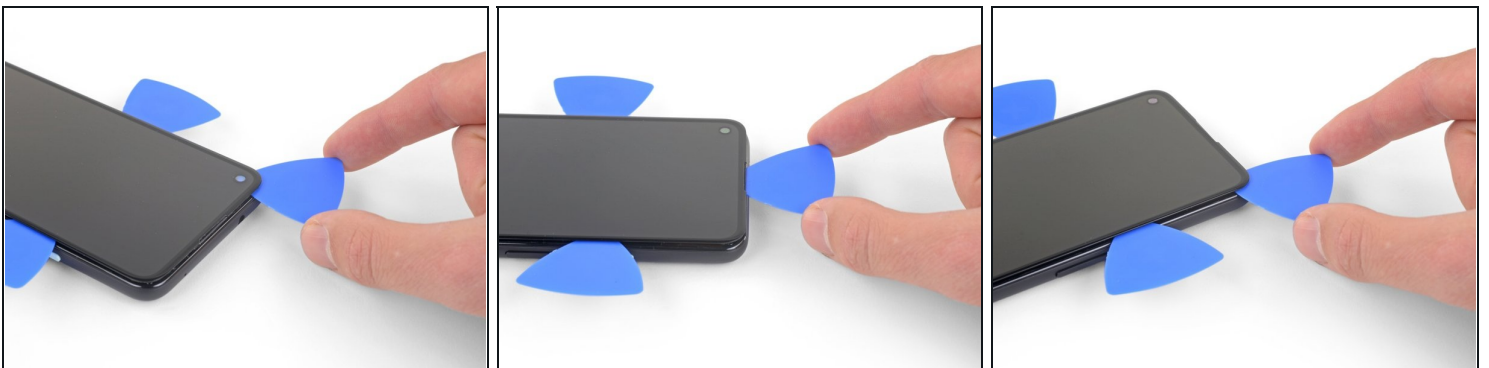
- ① The screen adhesive is very weak and you should not need to re-apply heat. If the screen does feel hard to slice, apply heat to the difficult area for one minute and try again.
- Insert another opening pick into the right edge of the phone at an angle where a gap has already formed to prevent damage to the OLED panel.
- Slide the opening pick around the bottom of the phone to cut the adhesive.
  - ⚠ There is a delicate cable under the bottom-right corner of the screen. If you feel your opening pick snag on anything, pull it out and try again. Make sure your pick is angled downward and only inserted as little as is necessary to separate the adhesive (no more than 2 mm deep).
- Leave the pick inserted along the bottom edge to prevent the adhesive from resealing.

## Step 8



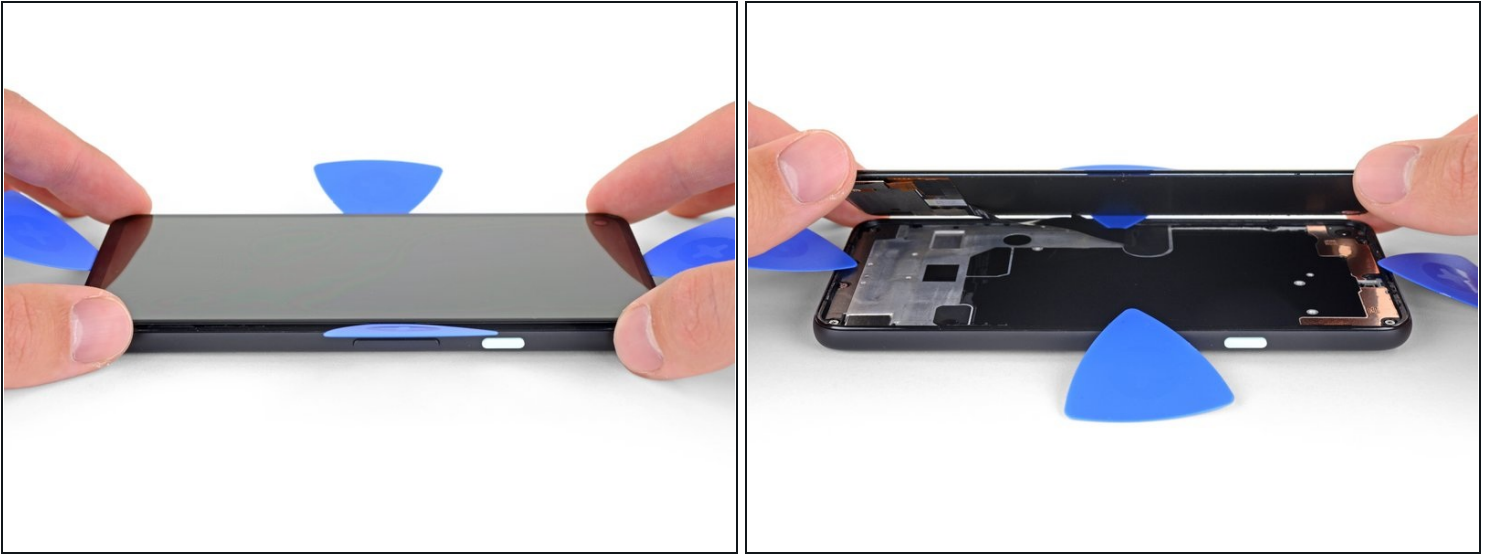
- Insert another opening pick into the bottom edge of the phone at an angle where a gap has already formed to prevent damage to the OLED panel.
- Use the pick to slice through the left edge of the phone.
  - ⓘ If the screen feels hard to slice, heat the left edge for one minute and try again.
- Leave the pick inserted along the left edge of the phone to prevent the adhesive from re-sealing.

## Step 9



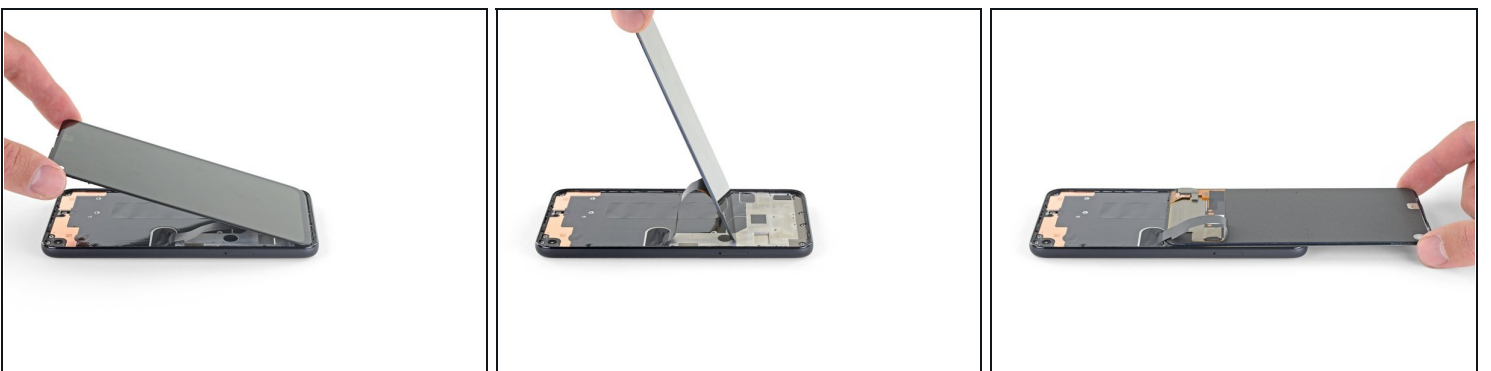
- ⓘ There's a mesh covering the earpiece speaker on the top edge of the screen. If you don't have a replacement mesh, take care not to damage or lose this component.
- Insert another opening pick into the left edge of the phone at an angle where a gap has already formed to prevent damage to the OLED panel.
- Slide the pick around the top edge of the phone to cut the adhesive.
  - ⓘ If the screen feels hard to slice, heat the top edge for one minute and try again.

## Step 10



- Once you have cut around the perimeter of the phone, carefully lift the right edge of the screen, opening the phone like a book.
- ⓘ Do not remove the screen yet.
- Use an opening pick to carefully cut through any remaining adhesive.

## Step 11 — Flip the screen over



- Lift from the top edge and swing the screen over the bottom edge until you can rest it glass-side down.
- ⚠ Be careful not to put any stress on the attached ribbon cable.

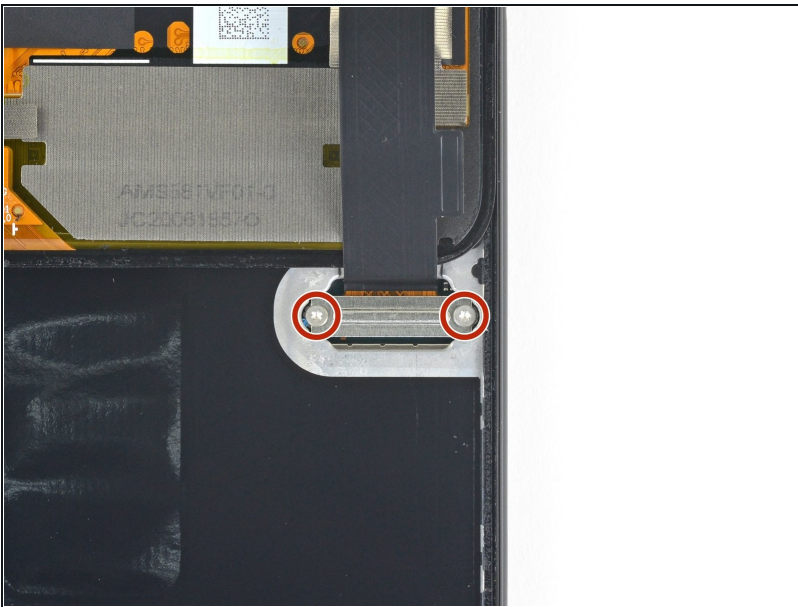


## Step 12 — Disconnect the display



- Use a pair of tweezers to carefully peel up the black tape covering the screen connector bracket.
- ★ If it is in good condition, you can re-use this tape during reassembly. Otherwise, replace it with a piece of electrical tape.

## Step 13



- Use a T3 Torx driver to remove the two 2.1 mm screws securing the screen connector bracket.
- ① Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

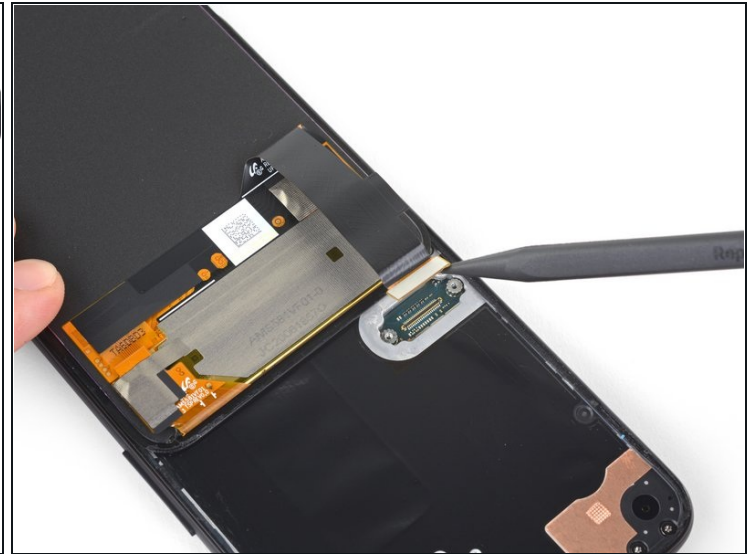


## Step 14



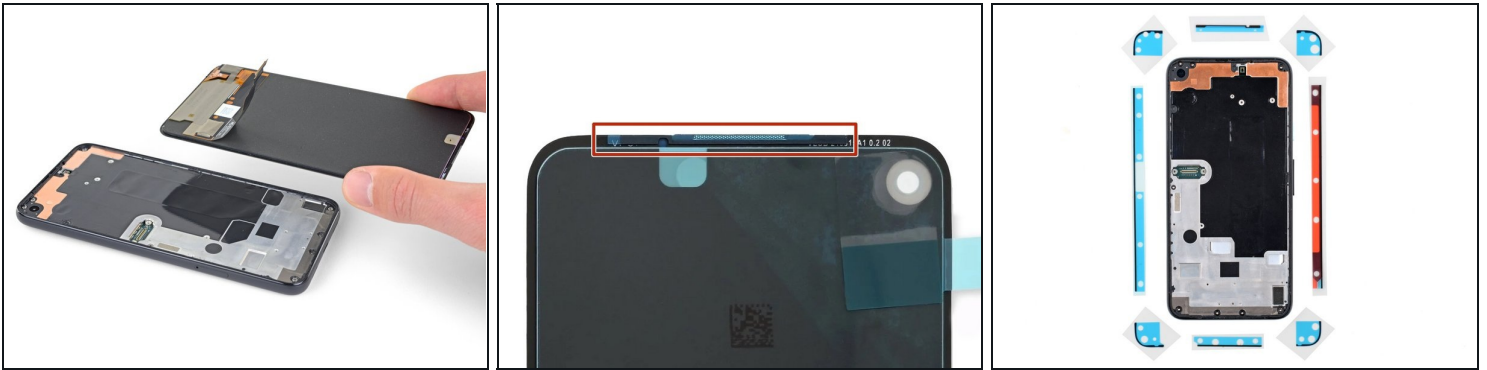
- Use a pair of tweezers to remove the screen connector bracket.
- ☑ Make sure to keep this component to reinstall it during reassembly.

## Step 15



- Use the tip of a 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.

### To install a new screen:

- Check if your replacement screen has speaker mesh and top edge adhesive pre-installed.
  - If it does, you won't need the [top edge adhesive](#).
  - If it doesn't, remove the larger clear liner from the [top edge adhesive](#) and apply it to the **screen** (not the frame). Make sure the larger cutout lines up with the speaker mesh.
- Follow [this guide](#) to apply the custom-cut adhesive.
  - ① Use the third photo as a reference to position your adhesives.

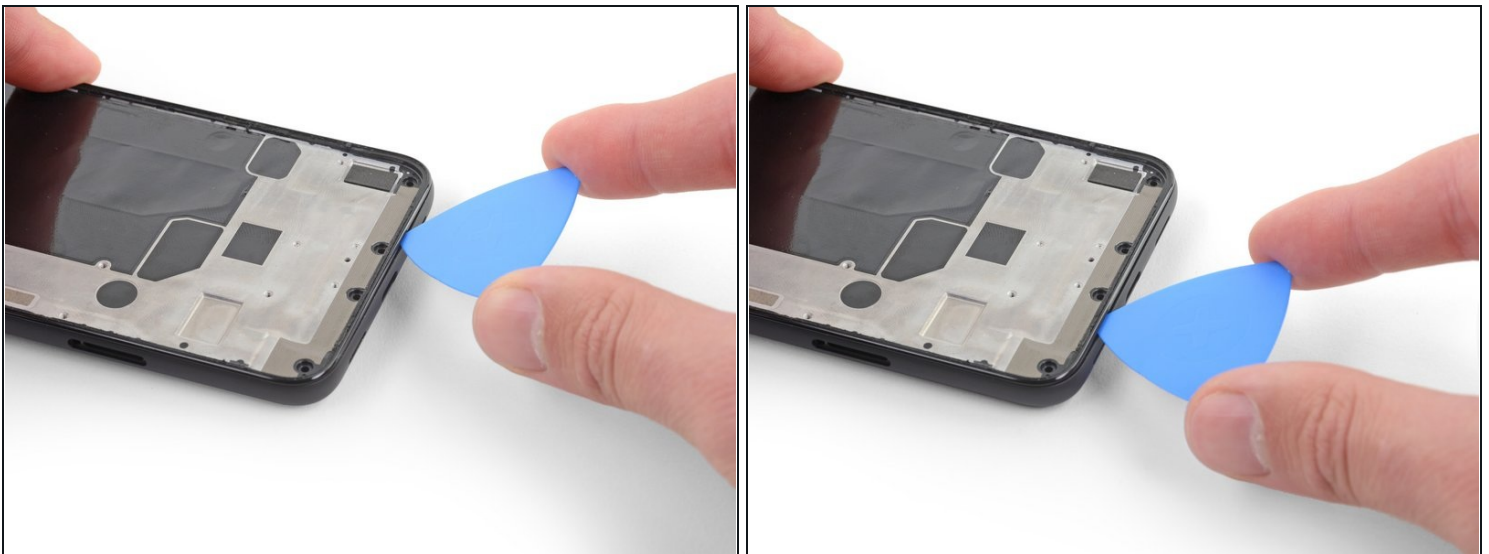
 During the boot-up process after reassembly, the screen will go through a calibration sequence. Don't touch the screen during this process, as it could result in improper touch calibration and create touch issues.

## Step 17 — Remove the midframe screws



- Use a T3 Torx driver to remove the eight 4.3 mm screws securing the back cover to the midframe.

## Step 18 — Separate the back cover from the midframe



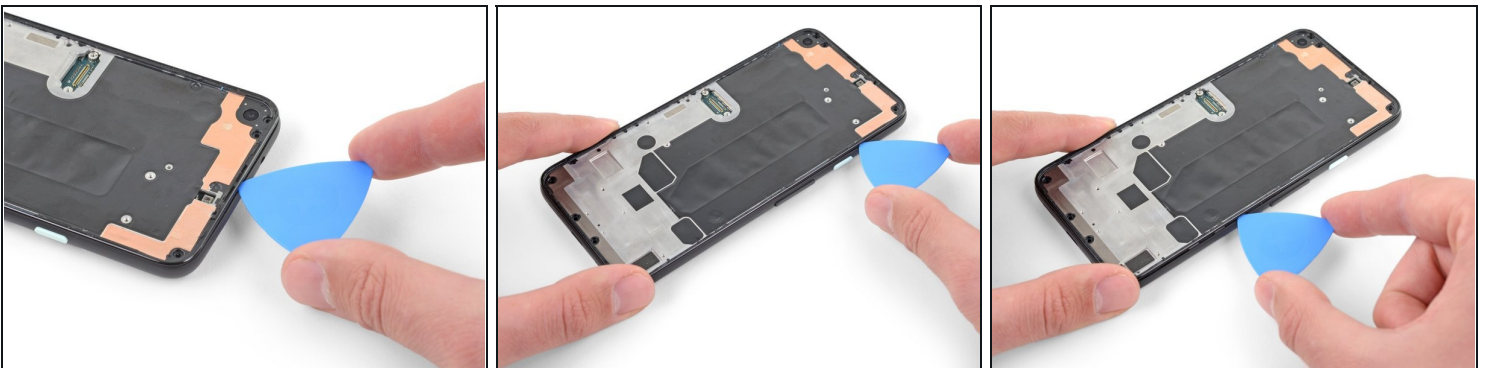
- Insert an opening pick into the seam between the midframe and the back cover.
- Slide the opening pick along the bottom edge of the phone to release the plastic clips securing the back cover to the midframe.

## Step 19



- Slide the opening pick around the left edge of the phone to release the plastic clips securing the back cover to the midframe.

## Step 20



- Slide the opening pick around the top and right edges of the phone to release the rest of the clips.

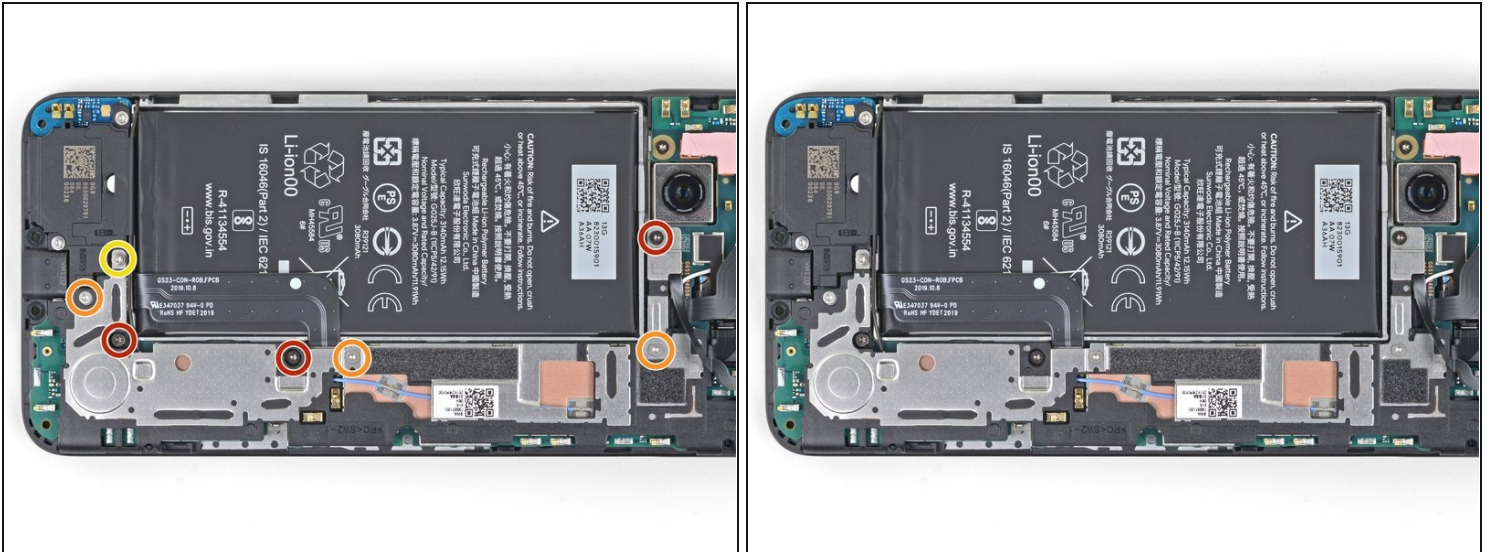


## Step 21



- Carefully swing the back cover from the bottom of the phone over the top and around the back.
- Lay the back cover on the work surface and lightly rest the midframe on the back cover, being careful not to put any stress on the attached ribbon cables.

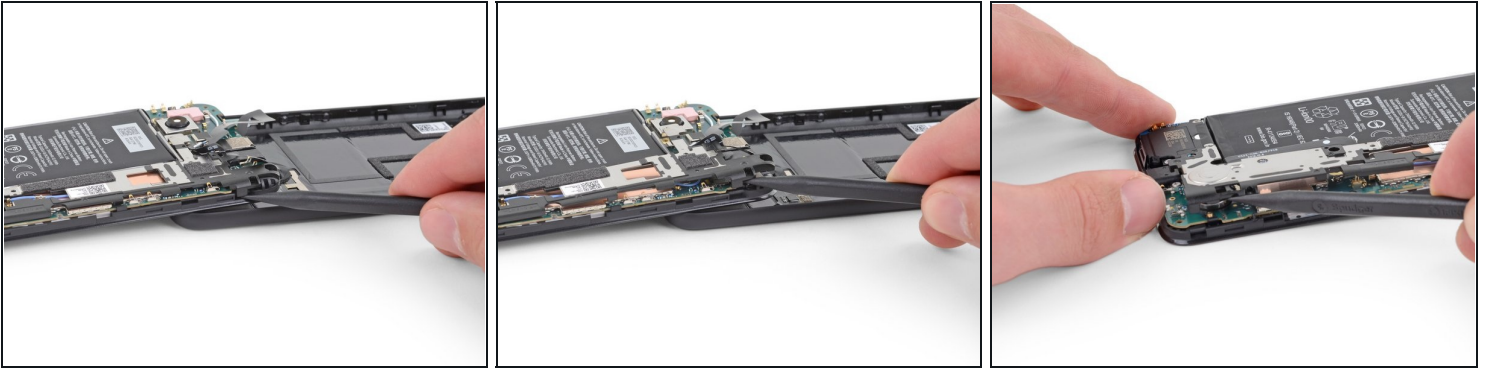
## Step 22 — Remove the motherboard bracket



- Use a T3 Torx driver to remove the seven screws securing the motherboard bracket:
  - Three 2.9 mm-long black screws
  - Three 2 mm-long screws
  - One 4.1 mm-long screw



## Step 23



- Use the tip of a spudger to unclip the motherboard bracket from the upper-right and lower-right corners of the motherboard.

## Step 24



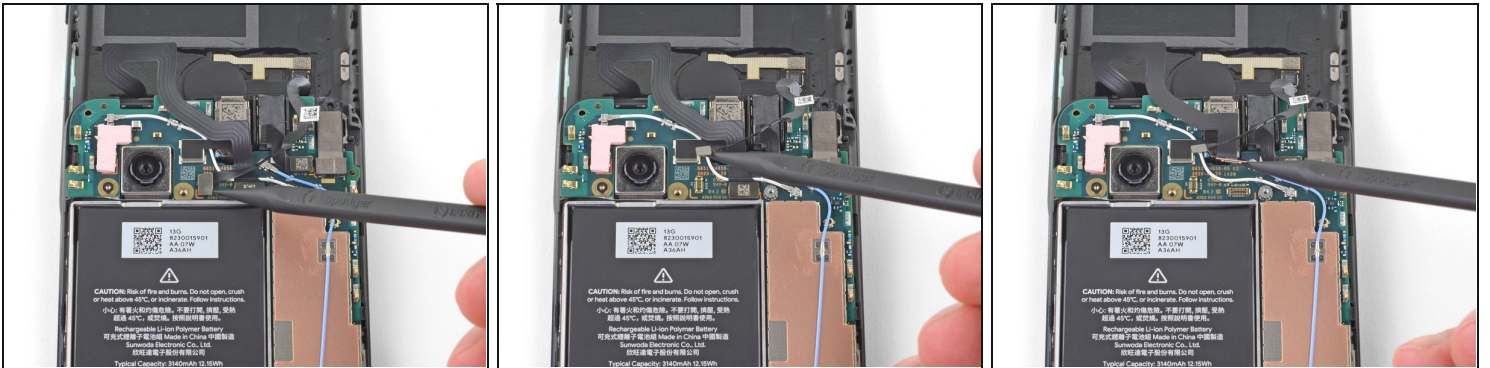
- Use a pair of tweezers to remove the motherboard bracket.

## Step 25 — Disconnect the battery



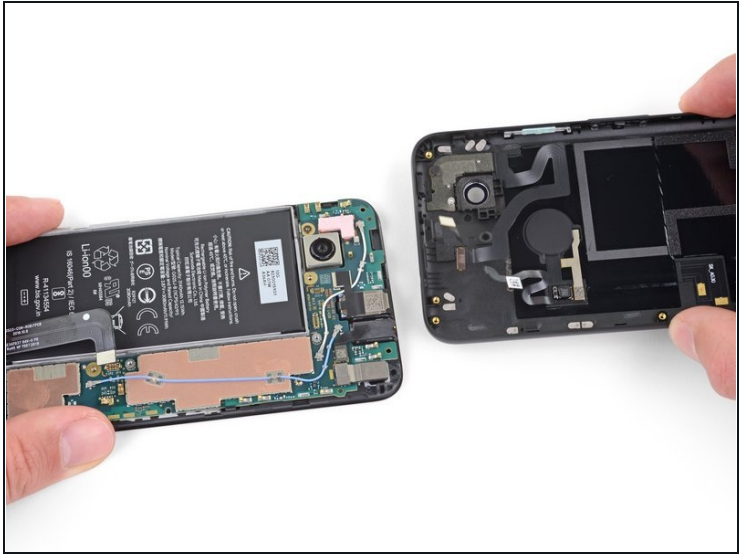
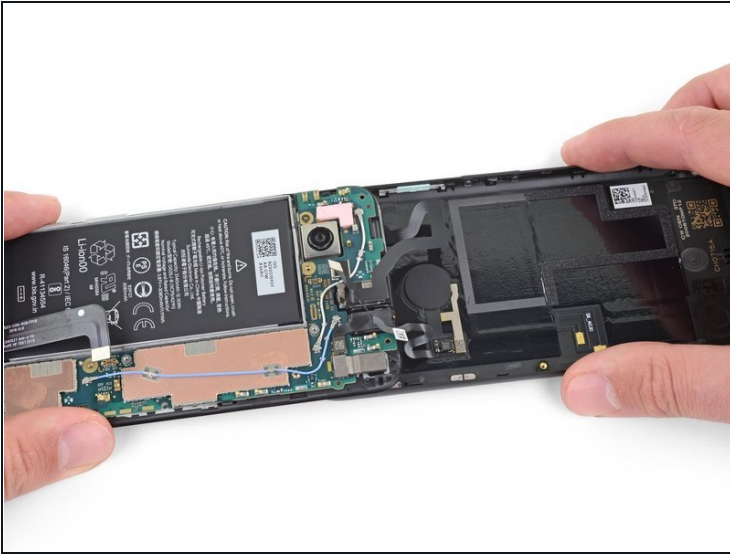
- Use the flat end of a spudger to pry up and disconnect the battery cable.

## Step 26 — Remove the back cover



- Use the tip of a spudger to disconnect the two flex cables connecting the fingerprint sensor and buttons to the motherboard.

## Step 27



- Remove the back cover.

## Step 28 — Remove the headphone jack



- Use the tip of a spudger to disconnect the headphone jack cable from the motherboard.

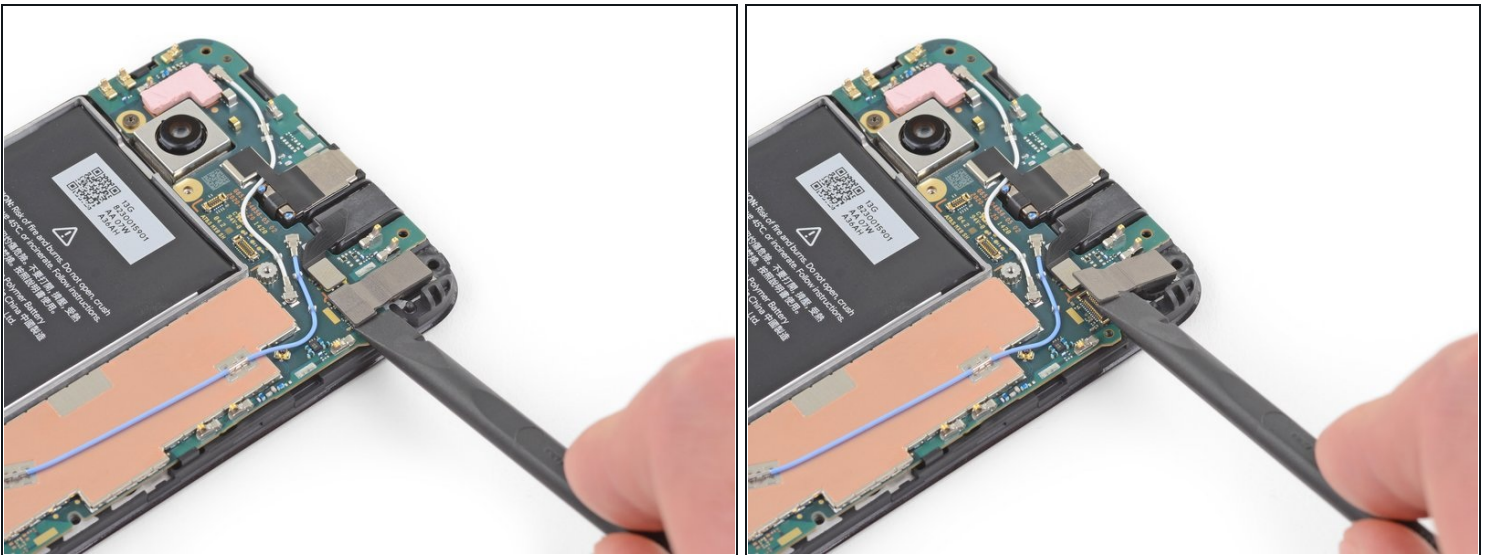


## Step 29



- Insert an opening pick under the headphone jack and twist to release it from the adhesive securing it to the midframe.
- Remove the headphone jack.

## Step 30 — Remove the front-facing camera



- Pry up with the flat end of a spudger to disconnect the front-facing camera from the motherboard.

## Step 31



- Use a pair of tweezers to remove the front-facing camera.

## Step 32 — Remove the loudspeaker



- Use a T3 Torx driver to remove the two 4.1 mm screws securing the loudspeaker assembly.



## Step 33

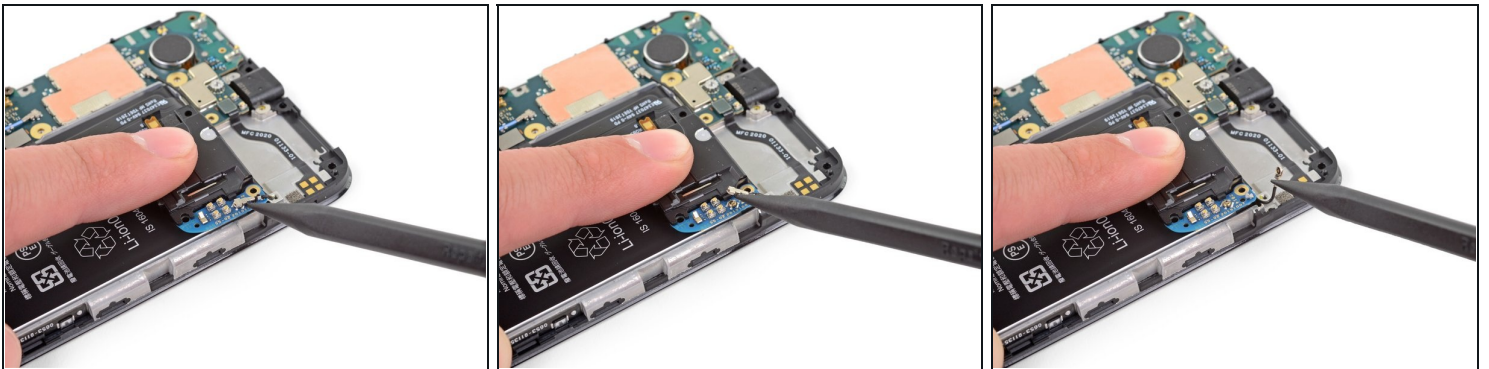


- Insert the tip of a spudger underneath the loudspeaker assembly.

⚠ Be careful not to puncture the white membrane on either side of the speaker if you are intending to reuse it.

- Flip the loudspeaker assembly over so it lightly rests on top of the battery.

## Step 34



- Use the tip of a spudger to disconnect the antenna flex cable from the loudspeaker assembly.

## Step 35



- Carefully peel the loudspeaker assembly up off of the tape underneath it.

⚠ Be careful not to puncture the white membrane on either side of the speaker if you are intending to reuse it.

- Remove the loudspeaker assembly.

## Step 36 — Disconnect the loudspeaker cable



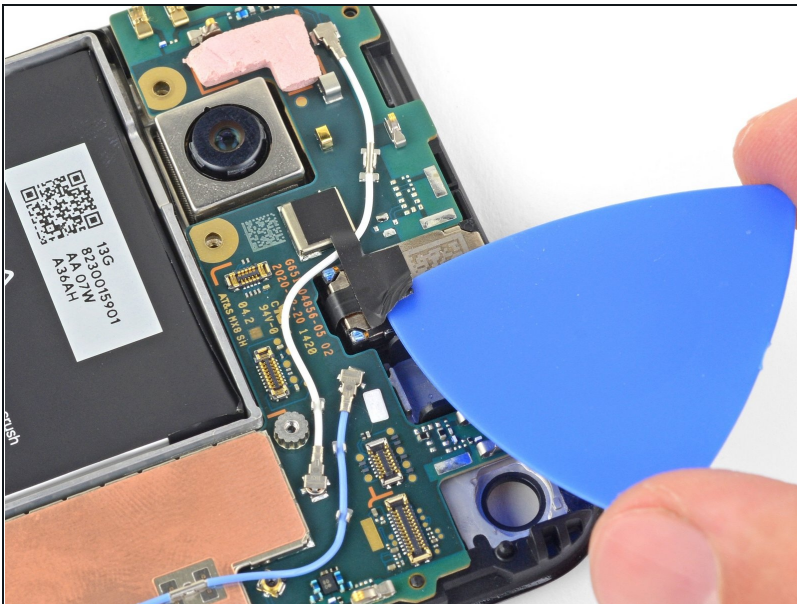
- Use the tip of a spudger to disconnect the loudspeaker cable from the motherboard.

## Step 37 — Remove the motherboard screws



- Use a T3 Torx driver to remove the three screws securing the motherboard:
  - Two 2.9 mm-long black screws
  - One 2.1 mm-long screw

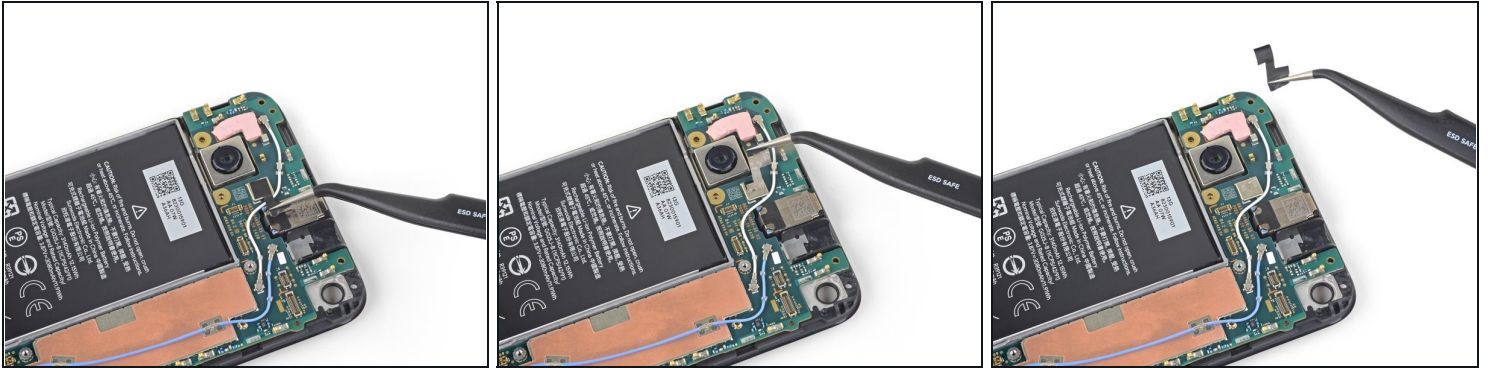
## Step 38 — Remove the earpiece speaker tape



- Use the corner of an opening pick to peel up the tape covering the earpiece speaker.

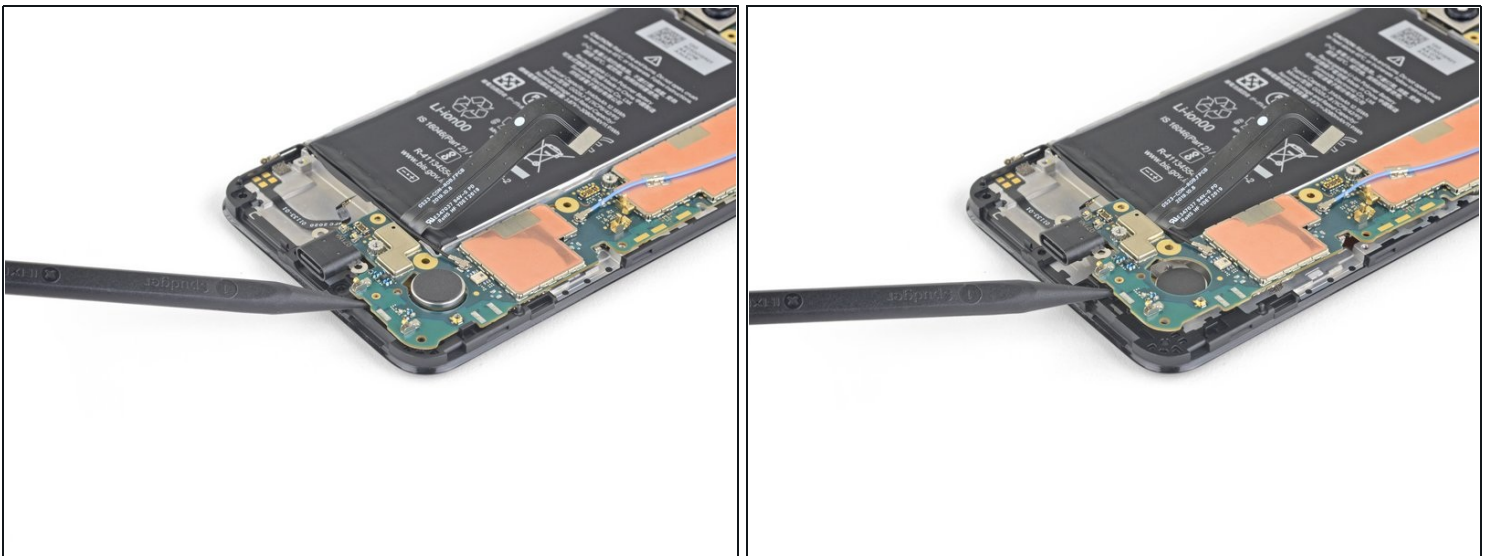


## Step 39



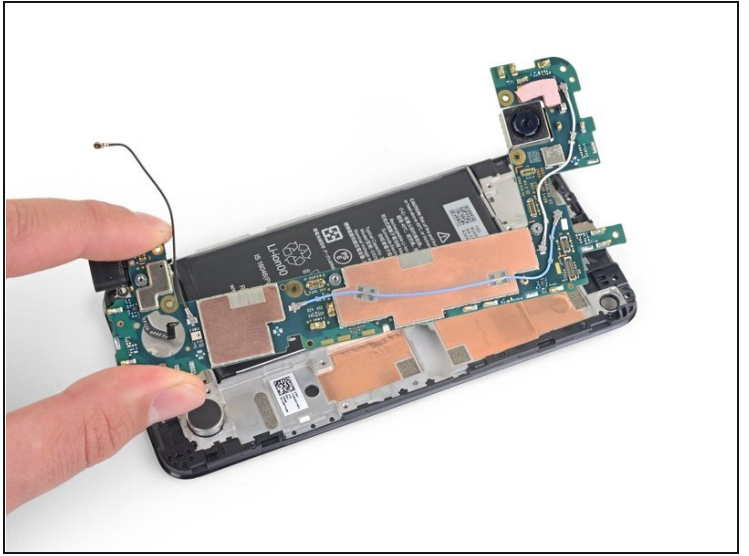
- Use a pair of tweezers to completely remove the tape covering the earpiece speaker.
- ☒ It is not required to reinstall this tape during reassembly.

## Step 40 — Remove the motherboard



- Insert the tip of a spudger underneath the bottom edge of the motherboard and pry it up enough to grip it with your fingers.

## Step 41



- Remove the motherboard.

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.