

## **Moto G6 Play Screen Assembly Replacement**

Use this guide to replace the screen on your...

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## INTRODUCTION

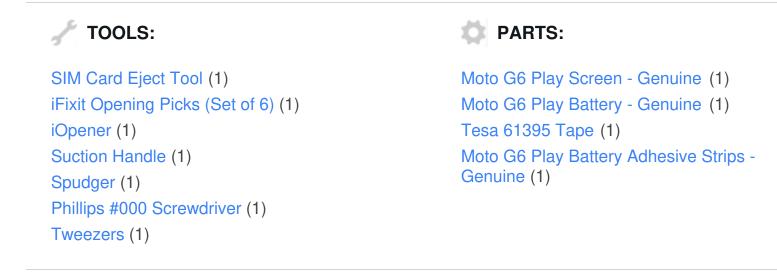
Use this guide to replace the screen on your Moto G6 Play, including the midframe which is glued to the display.

Before you begin, download the <u>Rescue and Smart Assistant</u> app to backup your device and diagnose whether your problem is software or hardware related.

Make sure your replacement part includes both the display and the midframe—this guide does not cover separating the display from the midframe.

If your battery is swollen, take appropriate precautions.

This procedure involves removing the battery, which may be damaged during the removal process. **We strongly advise you do not reuse the battery** as doing so may pose a safety hazard. Replace it with a new battery.



#### Step 1 — Remove the SIM Card Tray



- Insert a paperclip or SIM card eject tool into the small hole in the SIM card tray on the upper right edge of the phone.
- Press the tool into the hole to eject the tray.
- *i* This may require a significant amount of force.
- (i) The ejection mechanism is deeper in this phone than others and may require a longer SIM card eject tool. If your tool isn't long enough to reach the mechanism, try using an unfolded paperclip instead.



- Remove the SIM card tray.
- When reinserting the SIM card, ensure that it is in the proper orientation relative to the tray.

#### Step 3 — Separate the Rear Glass Adhesive



# Power your phone off before you begin.

- If possible, drain the battery before disassembly. When the battery is charged, there's an increased risk of a dangerous thermal event if the battery is overheated or damaged during repairs.
- If the rear glass is cracked, completely <u>cover it with packing</u> <u>tape</u> to contain the glass shards and avoid injury.
  - Prepare an iOpener and heat the back of the phone along its bottom edge for about two minutes, or until it's slightly too hot to touch. This will help soften the adhesive securing the rear glass.
    - You may need to reheat and reapply the iOpener several times to get the phone warm enough.
       Follow the iOpener instructions to avoid overheating.
    - 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.



- Apply a suction cup to the bottom edge of the rear glass.
- Pull up on the suction cup with firm, constant pressure to create a slight gap between the rear glass and the frame.
  - *i* If the glass is cracked, the suction cup may not stick. <u>Try lifting it with strong tape</u>, or superglue the suction cup in place and allow it to cure so you can proceed.
  - *i* This may require a significant amount of force, but you only need to open a very slight gap with the suction cup to insert your tool.
  - If you have trouble, apply more heat to further soften the adhesive, and try again. The adhesive cools quickly, so you may need to heat it repeatedly.
- Insert an opening pick into the gap you created under the rear glass.



- Slide the pick all along the bottom edge of the phone to slice through the adhesive securing the rear glass.
- Slow down and slice very carefully as you get to the corners. The curved part of the glass along the left and right edges can crack very easily if the pick pushes up against the curved glass.
- (i) After being cut, the adhesive will sometimes stick back together as it cools. To prevent this, leave the pick under this edge after cutting, and continue the next steps with new pick.

#### Step 6



 Heat the right edge of the back of the phone to soften the adhesive underneath.



- Slide the pick along the right edge of the rear glass to separate the adhesive underneath.
  Take care to not insert the pick more than ~1 cm past the edge of the rear glass to avoid damaging the fingerprint sensor cable.
- Leave the pick under the top right corner of the glass to prevent the adhesive from re-adhering. Continue with a new pick.



#### Step 8

 Heat the top edge of the back of the phone to soften the rear glass adhesive.



- Slide the pick all along the top edge of the phone to slice through the adhesive securing the rear glass.
  - Take care to not insert the pick more than ~1 cm past the edge of the glass to avoid damaging the thermal dissipation pad surrounding the camera bump.
  - ▲ Slow down and slice very carefully as you get to the corners. The curved part of the glass along the left and right edges can crack very easily if the pick pushes up against the curved glass.
- Leave the pick under the top left corner of the glass to prevent the adhesive from re-adhering. Continue with a new pick.



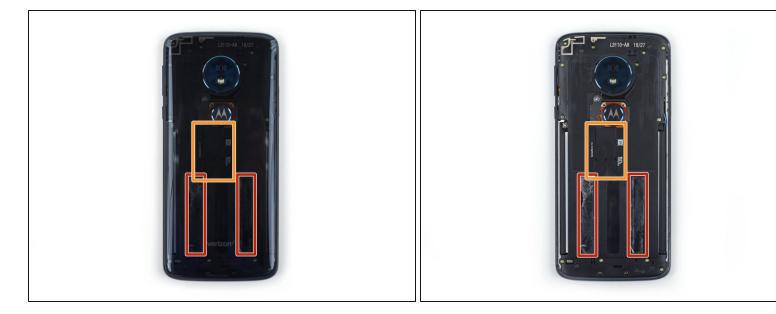
 Heat the left edge of the back of the phone to soften the adhesive underneath.

## Step 11



• Slide a pick along the left edge of the phone to slice through the rear glass adhesive.

Take care to not insert the pick more than ~1 cm past the edge of the rear glass to avoid damaging the fingerprint sensor cable.



- There are two strips of adhesive on either side of the lower half of the phone that must be separated to remove the rear glass panel.
- You will need to release these adhesive strips without damaging the fingerprint sensor cable located in the center of the phone.

#### Step 13



 Insert the flat end of a spudger into the lower half of the right side of the phone about 2 cm and slide it down the right edge to release the right strip of adhesive.

▲ Do not insert the spudger too deep, and pry slowly to prevent damaging the fingerprint sensor cable or cracking the rear glass panel.



• Insert a spudger into the lower half of the left side of the phone about 2 cm and slide it down the left edge to release the left strip of adhesive.

⚠️ Do not insert the spudger too deep, and pry slowly to prevent damaging the fingerprint sensor cable or cracking the rear glass panel.



- If the glass remains stuck, re-heat and slice any remaining adhesive repeatedly as needed.
- Lift the rear glass carefully, making sure it's fully separated from any adhesive.
- Open the rear glass.
  - ▲ Do not completely remove the rear glass panel, as the fingerprint sensor is still connected to the phone via a fragile ribbon cable.
- During reassembly, pause here to <u>replace the adhesive on the rear glass</u> using a precut adhesive card or high-strength double-sided adhesive tape, such as <u>Tesa 61395</u>.
- After closing your device back up during reassembly, stack something heavy, like a textbook or two, on top of the device for 30-60 minutes. This ensures a strong adhesive bond.

## Step 16 — Disconnect the Fingerprint Sensor

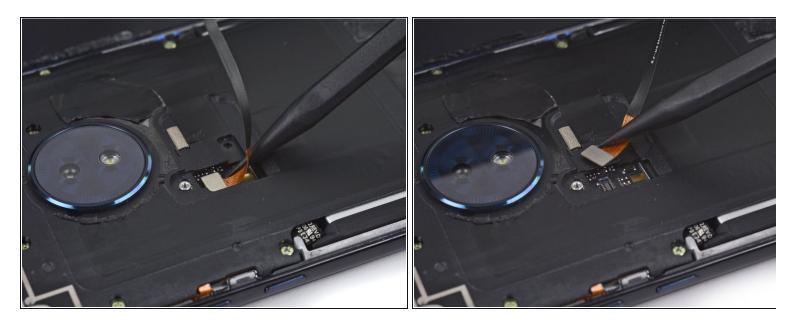


- Use a Phillips screwdriver to remove the two screws securing the fingerprint sensor cable retention bracket:
  - One silver 1.5 mm screw
  - One gold 3.5 mm screw

## Step 17



• Use a pair of tweezers to remove the fingerprint sensor cable retention bracket.



• Use the pointed edge of a spudger to disconnect the fingerprint sensor cable.

## Step 19 — Remove the Rear Glass Panel



• Remove the rear glass panel.

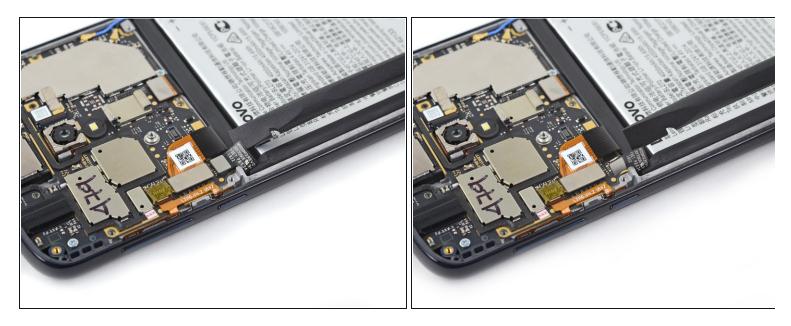


- Use a Phillips screwdriver to remove the fifteen gold 3.5 mm screws securing the plastic midframe.
  - (i) Some of these screws are covered with stickers. Others are in deep wells and need to be removed with tweezers or pushed out from the other side of the midframe.

#### Step 21 — Remove the Plastic Midframe



- Insert a spudger into the notch on the upper right edge of the midframe.
- Pry the midframe up to release the clips securing it to the device's aluminum frame.
- Remove the plastic midframe.



• Use a spudger to pry up and disconnect the battery cable.

#### Step 23 — Separate the Battery Adhesive



- Prepare an iOpener and apply it to the middle of the screen, directly behind the battery, for at least two minutes, in order to soften the battery adhesive underneath. Reheat and reapply the iOpener as needed.
- Be careful not to overheat the battery or display with the iOpener. If you notice the battery swelling at all, immediately remove any heat and let the battery cool down.
- (i) Alternatively, <u>apply some isopropyl</u> <u>alcohol</u> under each corner of the battery and allow it to penetrate for several minutes to help weaken the adhesive.



- Carefully insert an opening pick under the bottom of the battery.
- *i* You may need to reheat and reapply the iOpener repeatedly to further soften the adhesive. The adhesive is tough and it may take a few tries to get the pick started under the battery. If the battery begins bend out of shape, apply more heat or isopropyl alcohol and pry slower.
- Try your best not to deform the battery during this process. 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.
- Gradually push the pick further under the battery to pry up the bottom edge.
  - ▲ Do not insert the pick more that ~1.5 cm past the edge of the battery to avoid damaging the daughterboard and display ribbon cables.
- Slide the pick all along the bottom edge to release the bottom of the battery.



- Move the pick to the bottom left corner of the battery and begin prying the left edge.
  - *i* If prying becomes difficult, or the battery begins to deform, the adhesive may have cooled down. Reapply a hot iOpener or more isopropyl alcohol to re-soften it.
- Slide the pick all along the left edge to release the adhesive strip under the left side of the battery.



- Move the pick to the bottom right corner of the battery and begin prying the right edge.
  - *i* If prying becomes difficult, or the battery begins to deform, the adhesive may have cooled down. Reapply a hot iOpener or more isopropyl alcohol to re-soften it.
- Slide the pick all along the right edge to release the adhesive strip under the right side of the battery.

#### Step 27 — Remove the Battery



- Use the pick to steadily pry the battery up.
- Remove the battery.

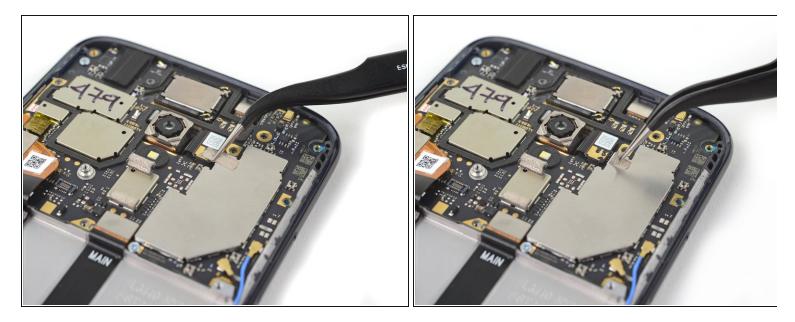
Reinstalling a damaged or deformed battery is a safety hazard. Replace it with a new battery.



#### Step 28 — Remove Remaining Battery Adhesive

- Remove the two adhesive strips on either side of the battery well.
- If you are reusing the screen, during reassembly, clean any residual adhesive in the battery well with isopropyl alcohol. Apply new battery adhesive strips, adhesive from a precut adhesive sheet, or highstrength double-sided tape into the well before pressing the new battery into place.

#### Step 29 — Remove the Camera Module



- Use a pair of tweezers to carefully remove the tape covering the camera module connector.
  (i) It is not necessary to completely remove the tape, just the part covering the connector.
  - *i* Try to not damage the tape so it can be reused during reassembly.



- Use the flat end of a spudger to pry up the camera module connector and disconnect it.
- Remove the camera module.

## Step 31 — Remove the Earpiece Speaker

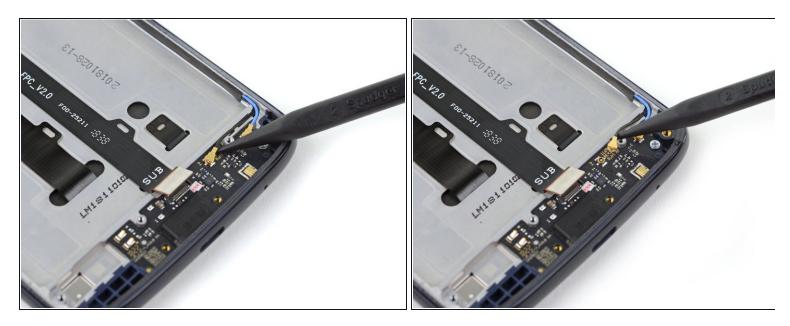


- Insert the pointed end of a spudger underneath the bottom left corner of the earpiece speaker and pry it up.
- Remove the earpiece speaker.

## Step 32 — Disconnect the Daughterboard

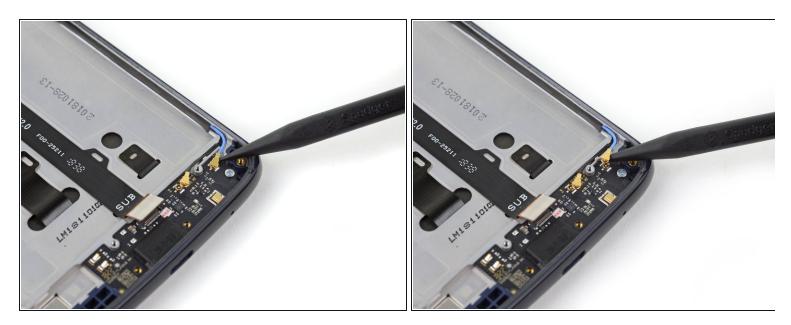


• Use a spudger to pry up and disconnect the daughterboard flex cable.



Use the pointed end of a spudger to pry up and disconnect the black antenna cable.
 These UFL connectors are fragile. Take care to not damage them when disconnecting or reconnecting.

## Step 34



• Use the pointed end of a spudger to pry up and disconnect the blue antenna cable.

#### Step 35 — Remove the Daughterboard



 Use a Phillips screwdriver to remove the single silver 2 mm screw securing the daughterboard.

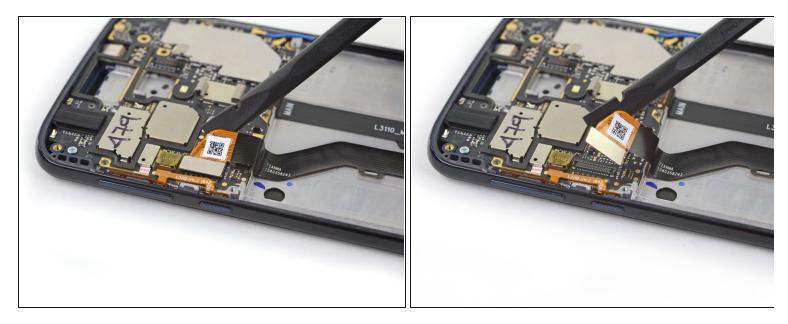


- Use the pointed end of a spudger to pry up the top left corner of the daughterboard.
- Remove the daughterboard.
- During reassembly, ensure the <u>Micro-USB port gasket</u> is properly seated on to the Micro-USB port. Then, insert the daughterboard gasket-side first, ensuring there are no cables stuck underneath it, and set it into place.

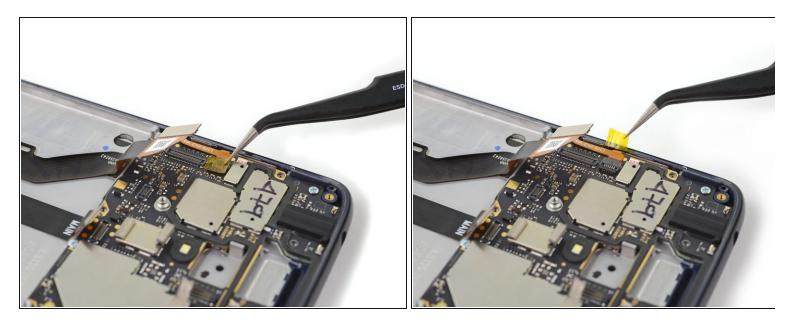


• Use a spudger to pry up and disconnect the daughterboard flex cable from the motherboard.

## Step 38

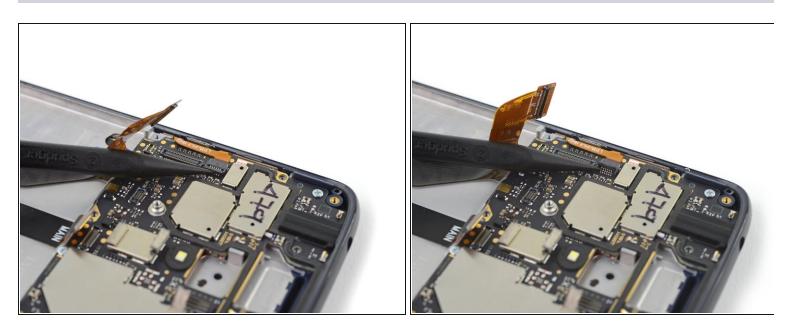


• Use a spudger to pry up and disconnect the display flex cable.

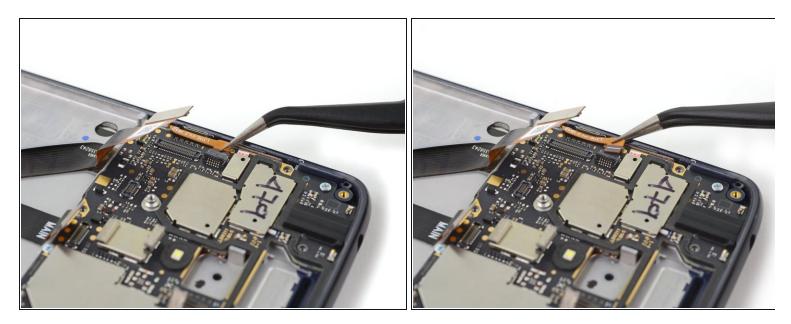


- Use a pair of tweezers to remove the piece of tape covering the side button flex cable connector.
  - Retain this piece of tape for reassembly.

## Step 40

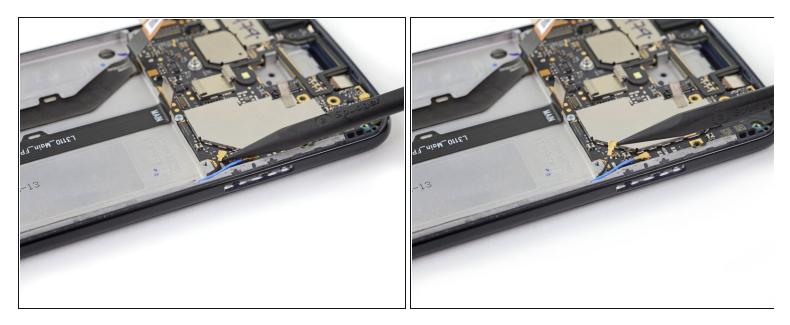


• Use the pointed end of a spudger to flip up the locking flap on the side button <u>ZIF connector</u>.



• Use a pair of tweezers to slide the side button cable out of its socket.

## Step 42



Use the pointed end of a spudger to pry up and disconnect the black antenna cable.
 These UFL connectors are fragile. Take care to not damage them when disconnecting or reconnecting.

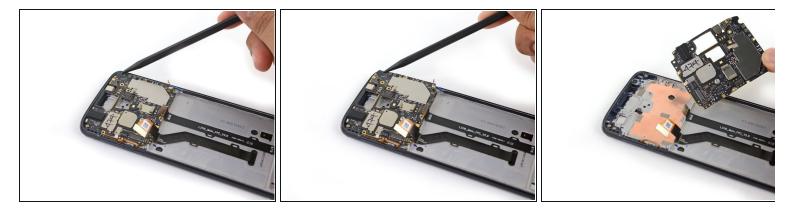


• Use the pointed end of a spudger to pry up and disconnect the blue antenna cable.



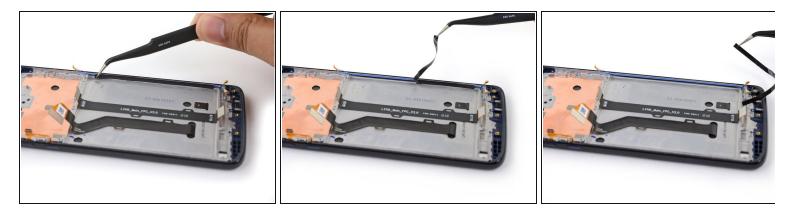
## Step 44 — Remove the Motherboard

• Use a Phillips screwdriver to remove the two silver 2 mm screws securing the motherboard.

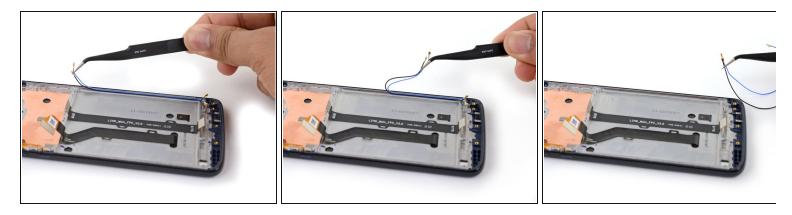


- Use the pointed edge of a spudger to pry up the top right corner of the motherboard.
- Remove the motherboard.
- During reassembly, ensure the <u>headphone jack gasket</u> is properly seated on to the headphone connector. Then, insert the motherboard gasket-side first, ensuring there are no cables stuck underneath it, and set it into place. Ensure the front facing camera is properly seated as well.

#### Step 46 — Remove the Antenna Cables

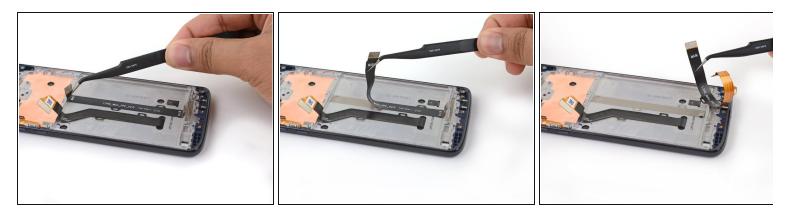


- Use a pair of tweezers to remove the black strip of tape covering the antenna cables.
  - Retain this piece of tape for reassembly.



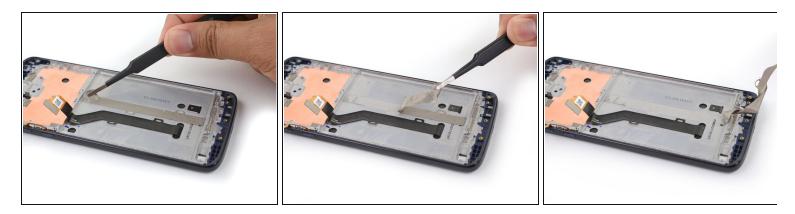
- Remove the two antenna cables from their channel in the side of the battery well.
  - The coaxial cables are fragile and can be damaged if not removed with care, especially if with metal tools.
- During reassembly, insert the black antenna cable on the bottom of this channel to promote clean cable management.

#### Step 48 — Remove the Daughterboard Flex Cable



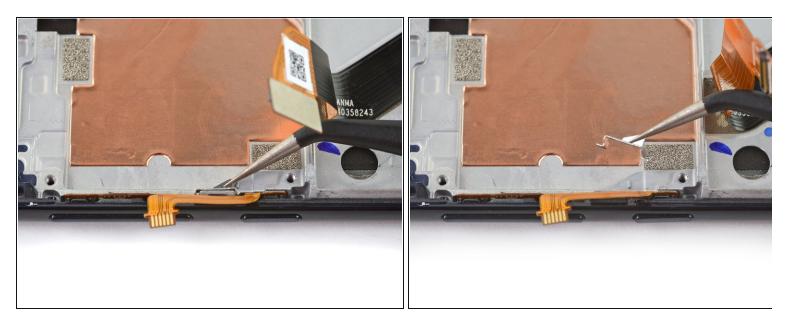
• Peel up the daughterboard flex cable and remove it.

This ribbon cable is fragile; take care to not damage it if removing with metal tools.



- Use a pair of tweezers to remove the daughterboard cable adhesive.
  - Try to keep this piece of tape as intact as possible for reassembly.

## Step 50 — Remove the Side Buttons



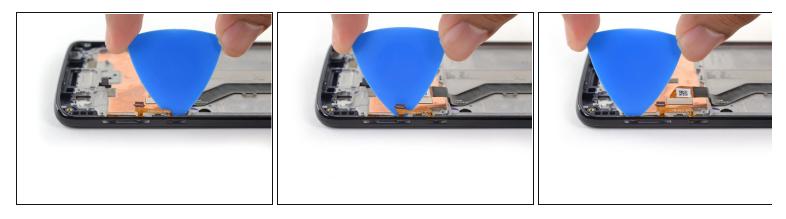
• Use a pair of tweezers to remove the small silver side button retention bracket from the left side of the device.



- Use the point of a spudger to push against the back of the volume button, behind its lower end, so that the lower end of the button slides out of the phone first.
- Use tweezers to gently remove the volume button, by pulling it from its lower end.
- When reinstalling the volume button, insert the upper end first, then the rest of the button.

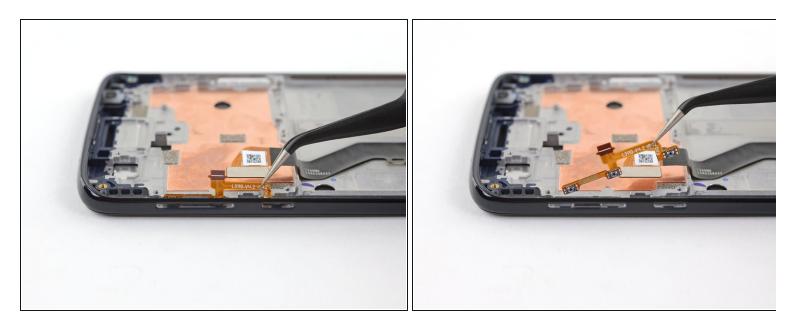


- Use the point of a spudger to push against the back of the power button, behind its upper end, so that the upper end of the button slides out of the phone first.
- Use tweezers to gently remove the power button, by pulling it from its upper end.
- When reinstalling the power button, insert the lower end first, then the rest of the button.



- Insert an opening pick between the power and volume button circuit board and the frame.
- Slide the pick behind the circuit board, across the whole board, to separate it from the adhesive securing it to the frame.
  - (i) If it's difficult to slide the pick behind the circuit board, try heating the circuit board to soften its adhesive.

#### Step 54



• Use tweezers to carefully pull the volume and power button circuit board out of its slot. If it's difficult to remove, make sure you've sliced through all its adhesive.



- Only the screen assembly remains.
- Compare your new replacement part to the original part—you may need to transfer additional 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.

For optimal performance, after completing this guide, <u>calibrate</u> your newly installed battery.

Repair didn't go as planned? Try some <u>basic troubleshooting</u>, or ask our <u>Moto G6 Play Answers</u> <u>Community</u> for help.