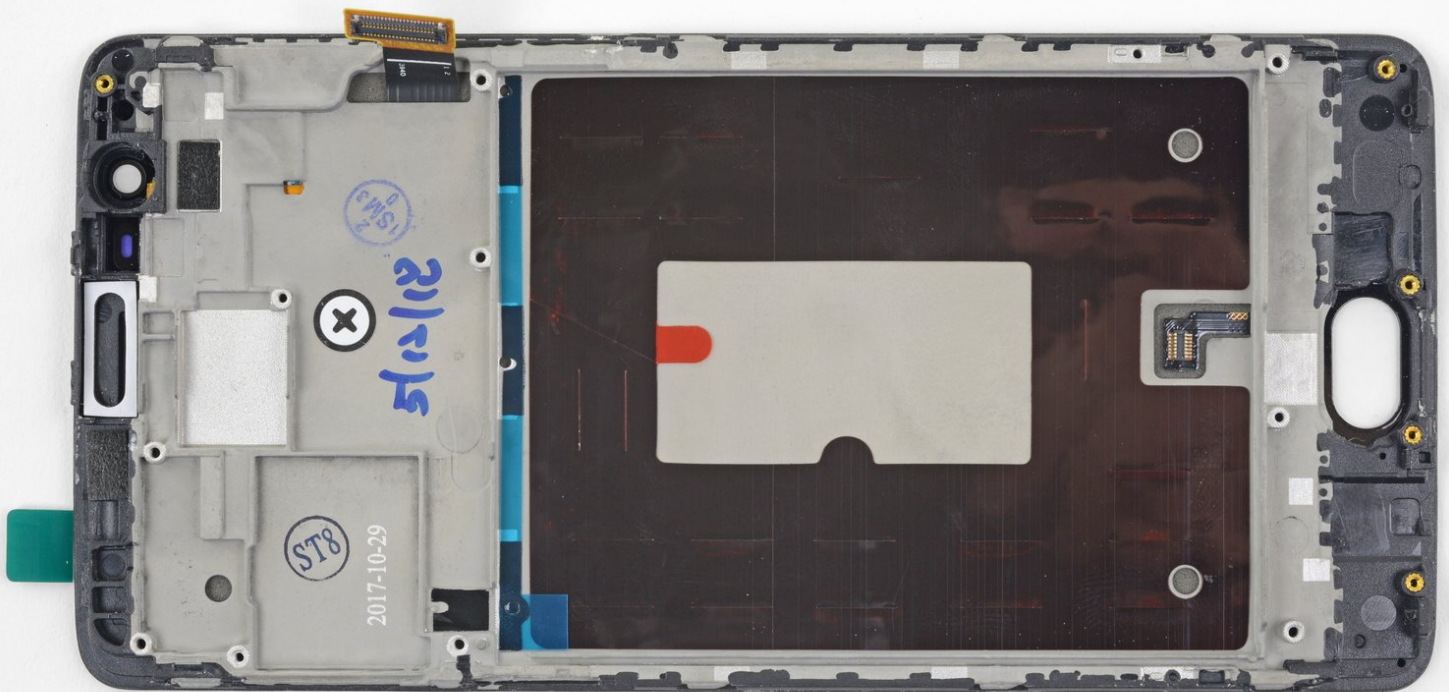




OnePlus 3 Screen and Digitizer Assembly Replacement

Follow this guide to replace the screen and digitizer assembly on the OnePlus 3. This replaces the screen as well as the frame it is attached to.

Written By: Arthur Shi



INTRODUCTION

Follow this guide to remove and replace the screen and digitizer assembly for the OnePlus 3. Use this guide for screens that come pre-mounted on a frame.

Do not use this guide if you are attempting to replace the screen only. If you start by trying to remove the screen itself, you will most likely tear the capacitive button flex cable. You must open the phone from the back and disconnect multiple cables before removing the screen.

This procedure requires significant disassembly, battery replacement, and parts transfer from the old part to the replacement part. The hardest part is getting the frame clips free.

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.



TOOLS:

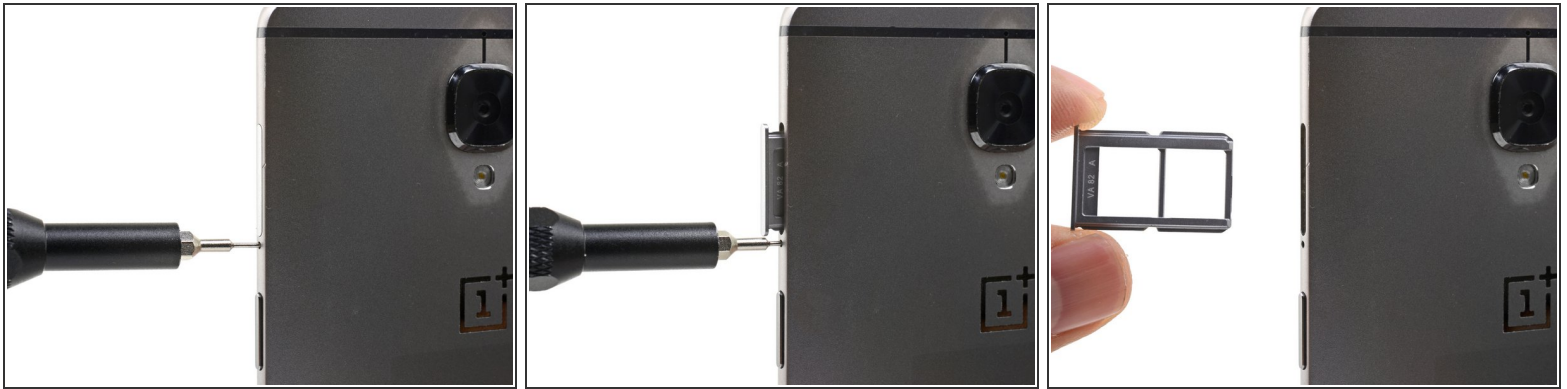
- [SIM Card Eject Tool](#) (1)
- [T2 Torx Screwdriver](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Tools](#) (1)
- [Spudger](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Tweezers](#) (1)



PARTS:

- [OnePlus 3 Screen](#) (1)
- [OnePlus 3 Replacement Battery](#) (1)

Step 1 — SIM Card Tray



- Insert a SIM eject tool, bit, or straightened paperclip into the hole located between the SIM card slot and the power button.
 - Press firmly to eject the SIM card tray.
- ☒ During reinstallation, make sure that the SIM card tray is properly oriented. It fits in only one direction.

Step 2 — Back Cover



- Remove the two 2.6 mm T2 screws from the bottom edge of the phone.

Step 3



⚠ There is a high risk of damaging the display panel if this opening procedure is improperly followed.

i The following three steps show how to pry the rear case from the plastic frame. Read through the steps first before attempting the procedure.

⚠ There are two different seams between the screen and the body of the phone:

- *Display panel seam*: This seam is part of the display assembly. **Do not pry** at this seam, or you will separate and damage the display panel.
- *Frame seam*: This is where the plastic frame meets the back cover. It is recessed into the back cover. **Only pry at this seam.**
- There are fourteen clips that hold the frame against the rear case. Be aware of their location as you pry the back cover off in the following steps.

Step 4



- ⓘ As you work, try not to accidentally power on the phone. If you do, turn the phone off before resuming disassembly.
- Place a suction cup near the bottom edge of the display.
- Pull on the suction cup with strong steady force.
- Press the edge of an opening tool straight into the frame seam near the suction cup until the edge wedges between the plastic frame and the back cover's lip.
- ⓘ Due to tight tolerances, this will take substantial force. Using a new opening tool with an unmarred edge will help with this step.
- ⚠ Do not use metal tools, as they will most likely crack the screen.

Step 5



- Once the opening tool's edge is wedged in position, carefully slide the tool along the bottom edge of the phone.
- Carefully guide the opening tool around the left corner of the phone while keeping the tool's edge within the seam.

Step 6



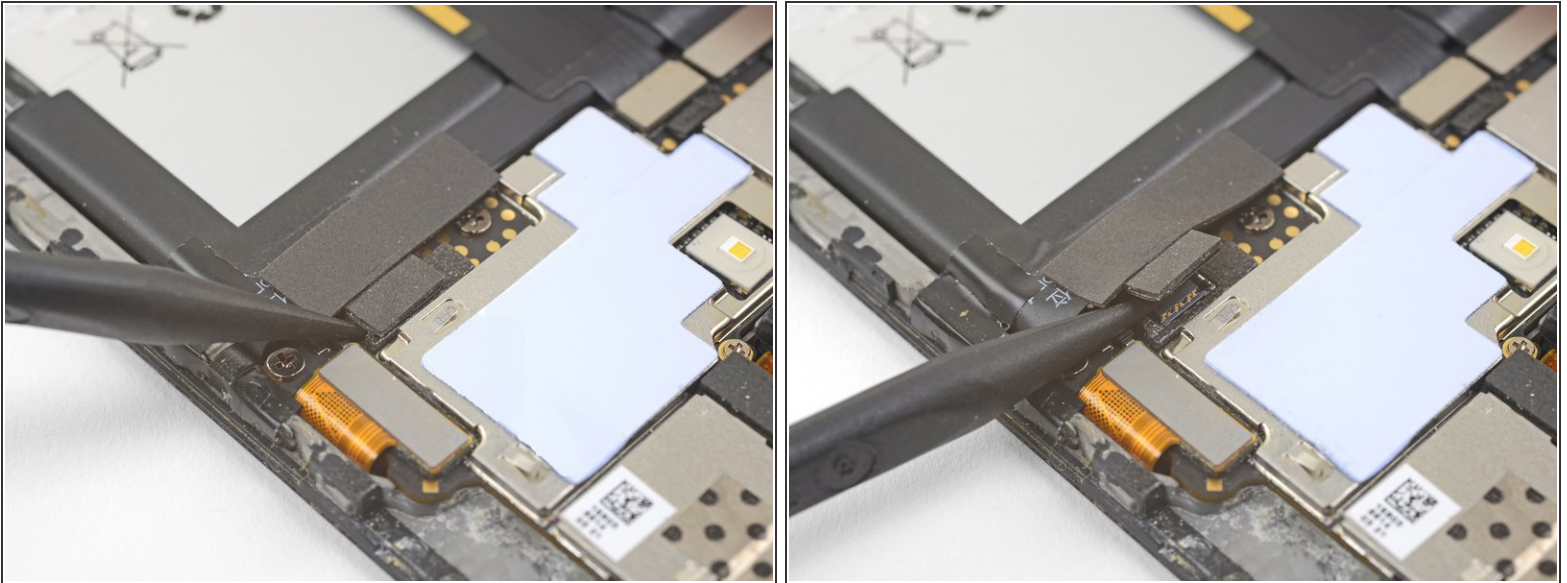
- Continue sliding the opening tool along the long edge, releasing the clips along the way.
- ⓘ The last clip in the top-left corner near the alert switch is recessed and can be difficult to release. Take your time and use the flat end of a spudger or an opening pick to help.

Step 7



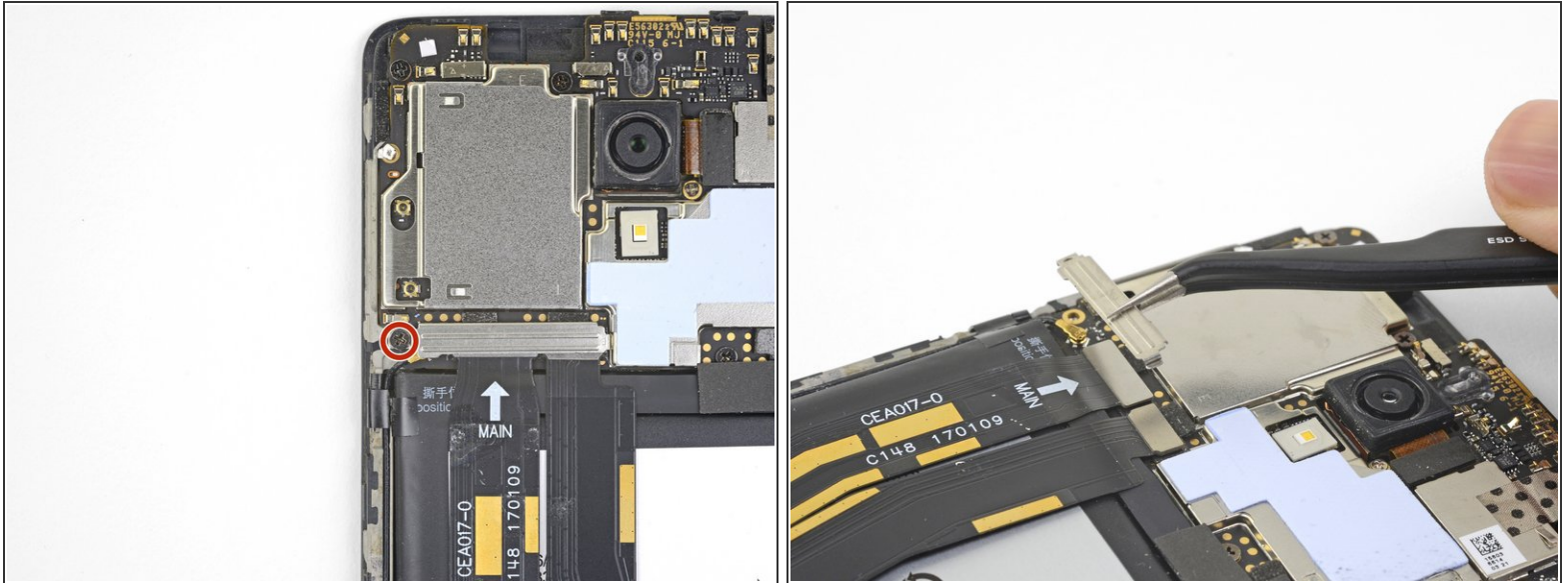
- With the bottom and left edge of the phone freed, gently wiggle the frame to release the top and right edge clips.
 - Lift the screen up and remove it.
- ✦ During reassembly, pause here to test your phone's functionality before securing the back cover.
- ✦ To reinstall the back cover:
- [Align the top edge of the frame](#) to the back cover and ensure that the top clips slip into place.
 - [Squeeze along the long edges of the phone](#) to snap the remaining clips into place.

Step 8 — OnePlus 3 Battery Disconnect



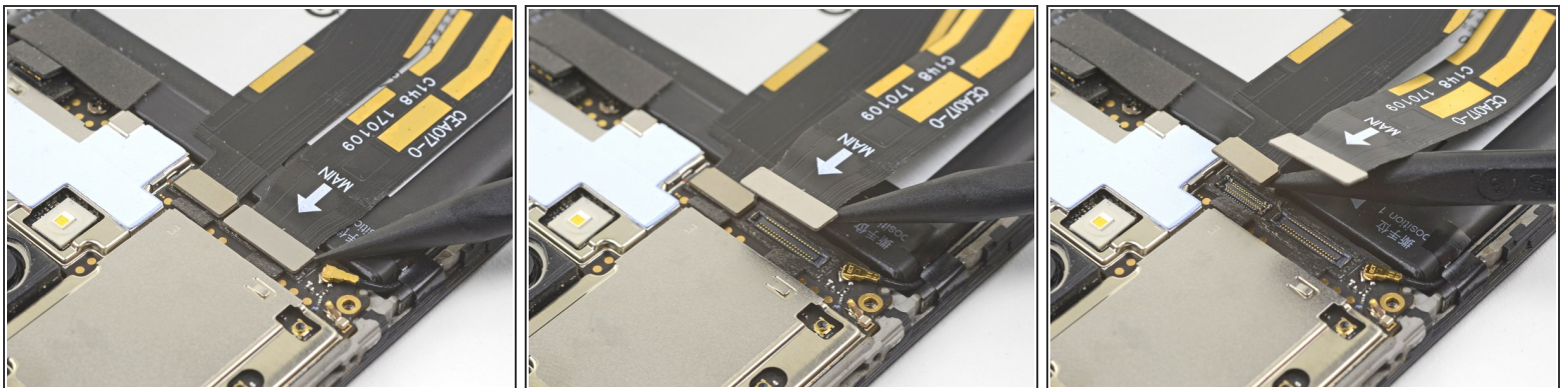
- Use the point of a spudger to pry up and disconnect the battery connector from its socket, located above the top right corner of the battery pack.
- Bend the connector away from the socket to prevent accidental contact.
- ⓘ To re-attach [press connectors](#) like this one, carefully align and press 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 9 — OnePlus 3 Interconnect Cable Disconnect



- Remove the 3 mm Phillips screw securing the cable bracket.
- Remove the cable bracket.

Step 10



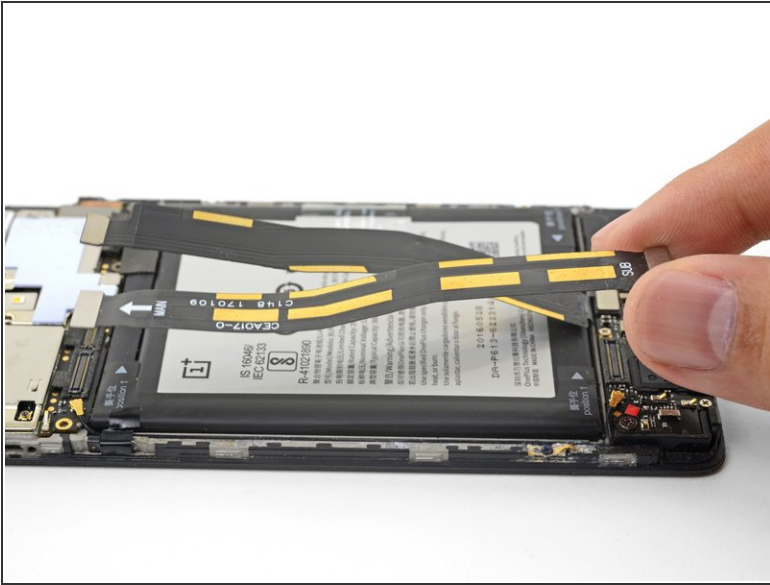
- Use the point of a spudger to pry up and disconnect the interconnect flex cable from the motherboard, which is located above the battery.
- Repeat the process to disconnect the daughterboard flex cable from the motherboard.

Step 11 — Battery



- Use the point of a spudger to pry up and disconnect the interconnect flex cable from the daughterboard, which is located below the battery.

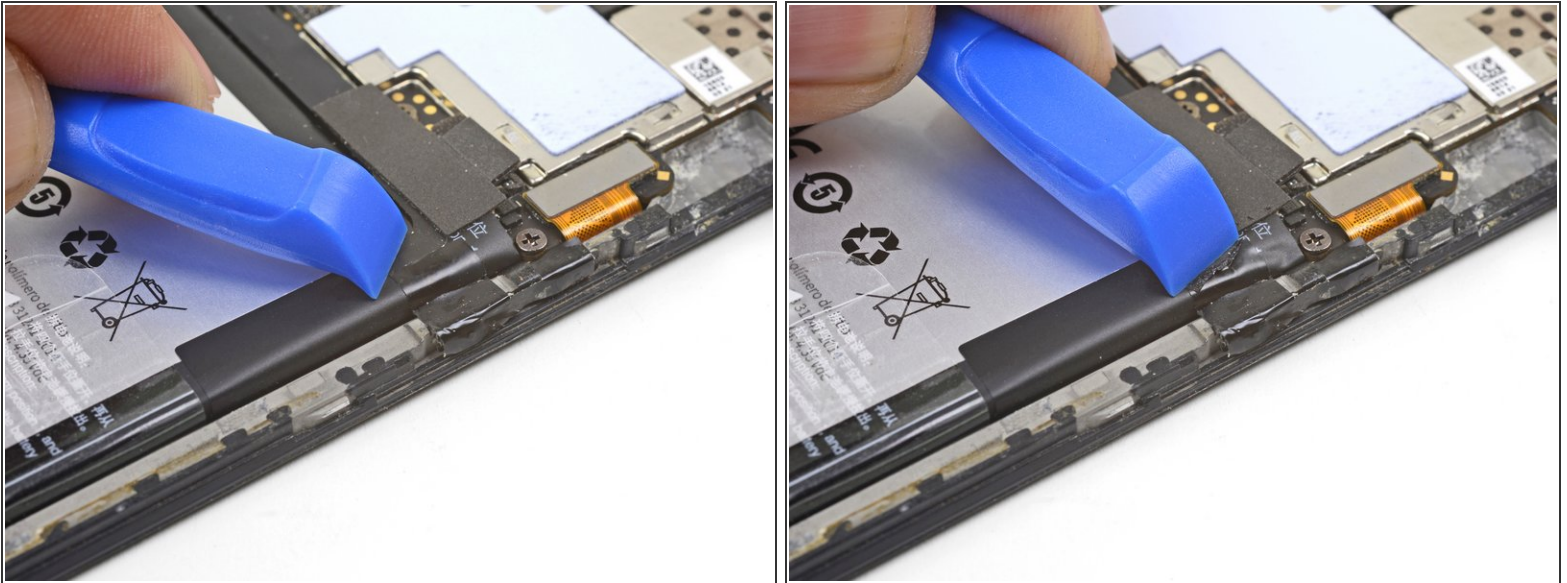
Step 12



- Remove the interconnect flex cable.
- Carefully bend the still-attached daughterboard flex cable away from the battery.

⚠ During reassembly, make sure that the **Main** labeled connector connects to the motherboard. The **Sub** connector will fit the motherboard socket but it will cause your phone to malfunction.

Step 13



- Use the opening tool to push any adhesive tape holding the battery to the edge of the plastic frame. There should be at least one on each battery side.
- ⓘ Be careful not to puncture the battery pack with the tool.

Step 14



- Peel the clear pull tab up from the battery.

Step 15



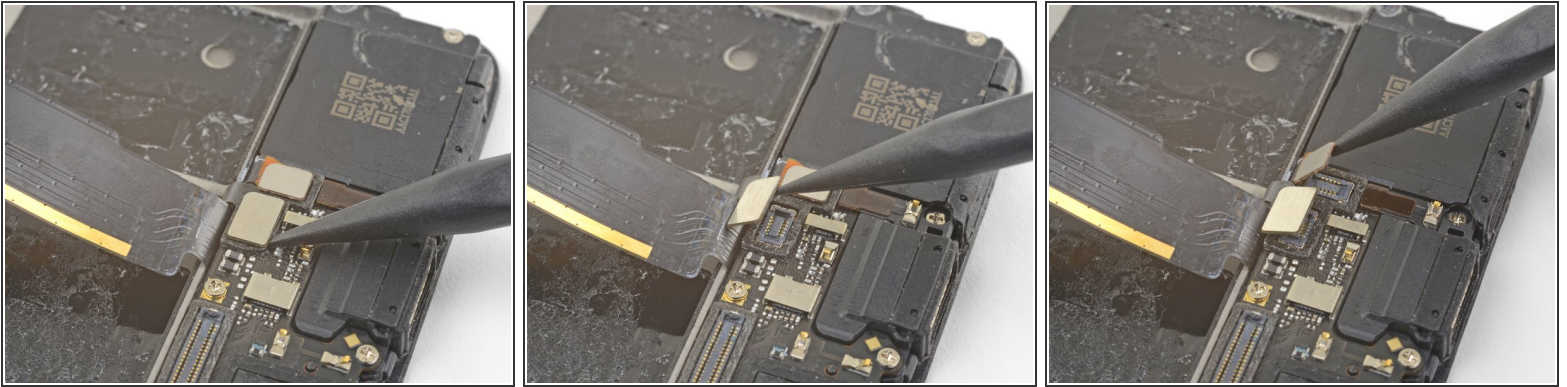
- Brace the phone frame against the table.
- Using a strong, steady force, pull the clear pull tab upwards until the battery loosens from its recess.
- ⓘ If you are having a hard time, apply some high concentration (over 90%) isopropyl alcohol along the battery seam to help weaken the adhesive.
- Swing the battery completely out of its recess and pull off of any remaining adhesive.

Step 16



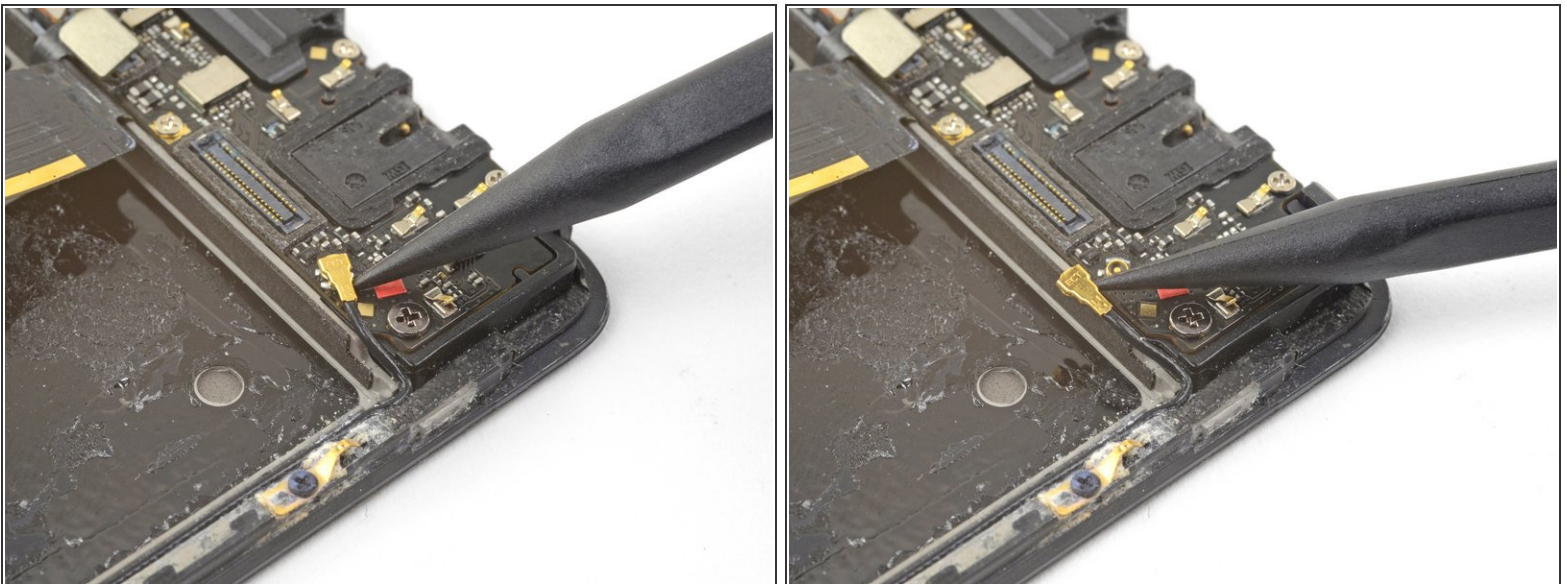
- Remove the battery and any remaining adhesive residue on the frame.
- ⚠ Do not reuse the battery after it has been removed. Reusing a battery that is bent or otherwise stressed is a potential safety hazard.
- ℹ If your replacement battery did not come with a pull tab, you can transfer the old tab to the new battery to help with subsequent replacements.
- ✦ While installing a new battery, *temporarily* connect the battery to the phone to ensure proper battery alignment.
- ✦ To install a new battery onto an existing frame, remove some adhesive strips from a pre-cut adhesive card, or cut some strips from a roll of [Tesa tape](#), and stick them [in the highlighted area](#).
- ✦ If you are installing a battery onto a new screen and digitizer assembly, be sure to [peel off the orange adhesive liner](#) to expose the battery adhesive for the new battery.

Step 17 — Daughterboard



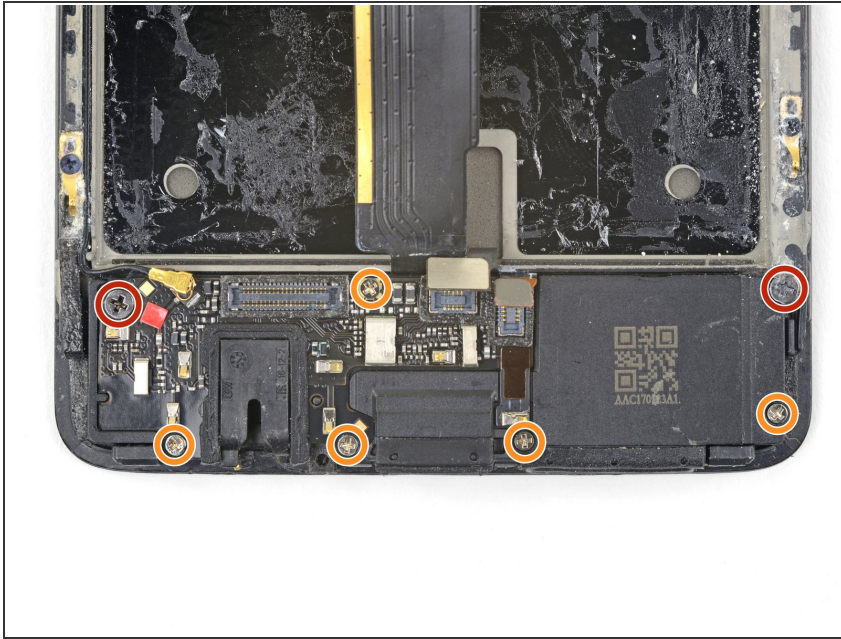
- Use the point of a spudger to pry up and disconnect the capacitive buttons connector from its socket on the daughterboard, which is located below the battery.
- Repeat the process to disconnect the fingerprint scanner connector from its socket on the daughterboard.

Step 18



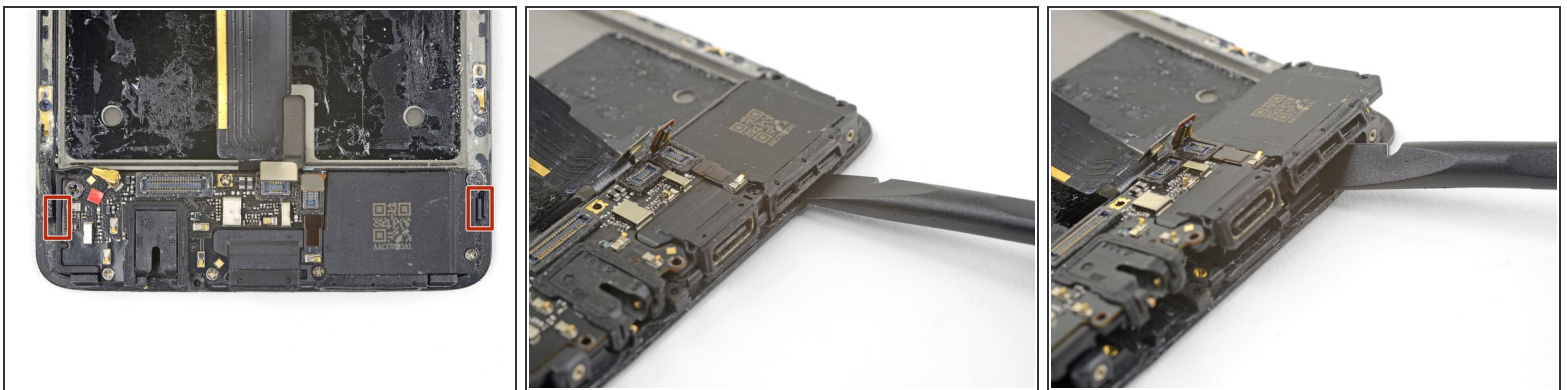
- Slide the point of a spudger underneath the antenna interconnect cable and pry up, disconnecting it from the daughterboard.

Step 19



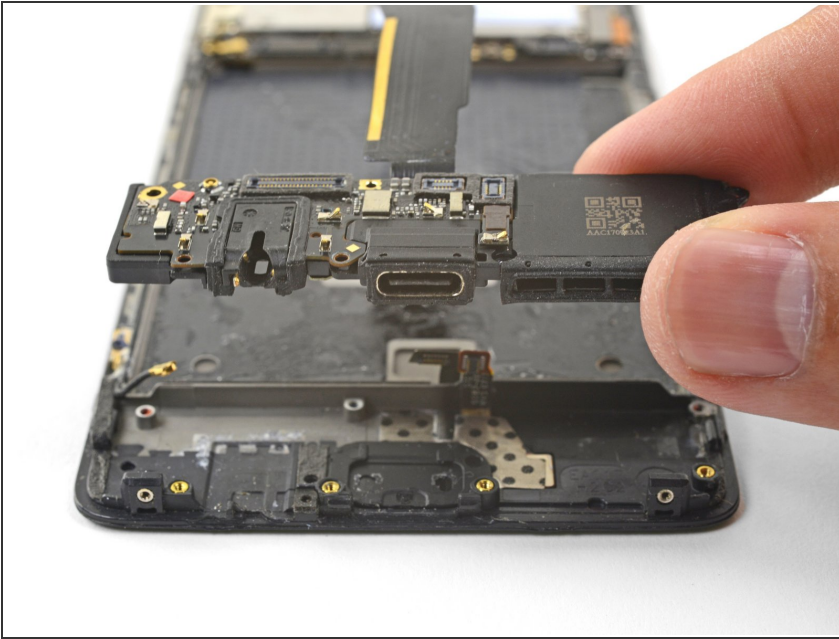
- Remove the seven Phillips screws securing the daughterboard to the frame:
 - Two 3 mm black screws
 - Five 2.9 mm silver screws

Step 20



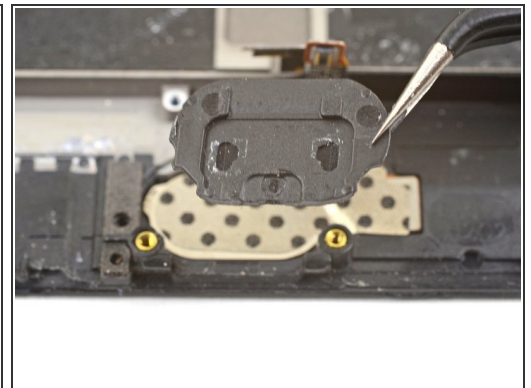
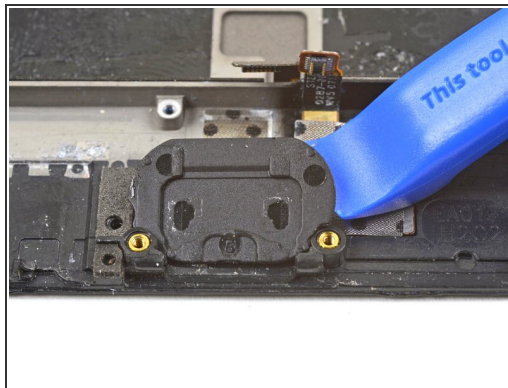
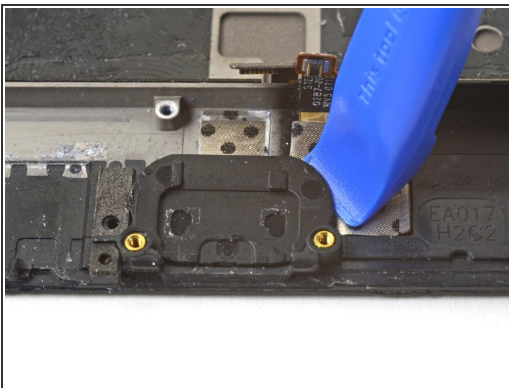
- The daughterboard is still held in place by two plastic clips.
- Slide the flat end of a spudger underneath the loudspeaker vent and gently twist the spudger until the daughterboard is freed from its clips.

Step 21



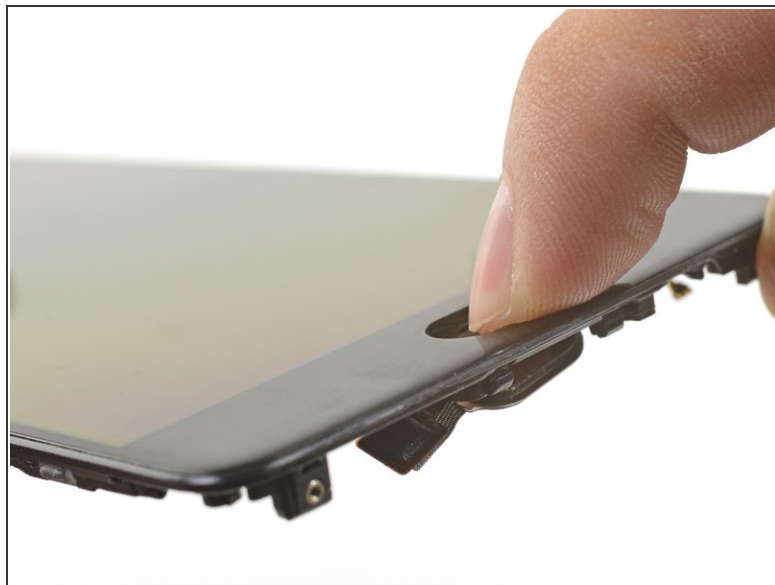
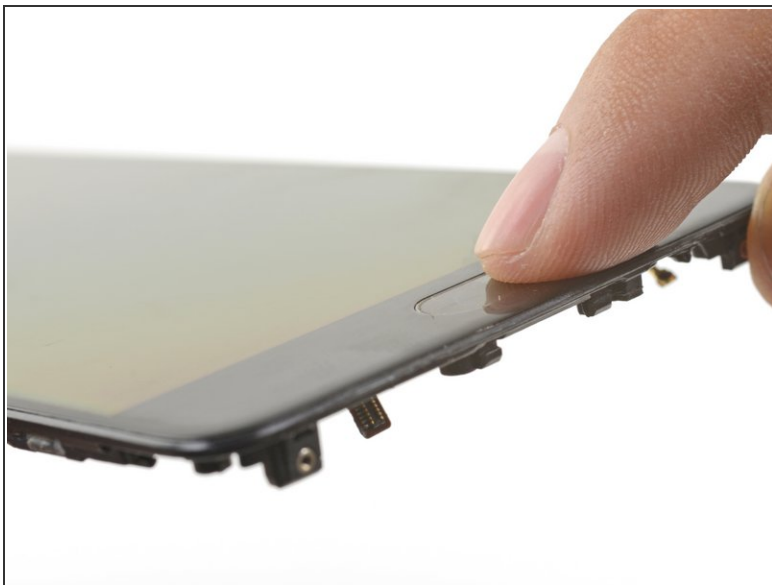
- Remove the daughterboard.
- ★ To reinstall the daughterboard, place one of the side edges to the phone, then press the other side down until the daughterboard clicks into place.
- i If the daughterboard does not easily click into place, make sure there are no flex cables or antenna cables trapped underneath it.

Step 22 — Fingerprint Scanner



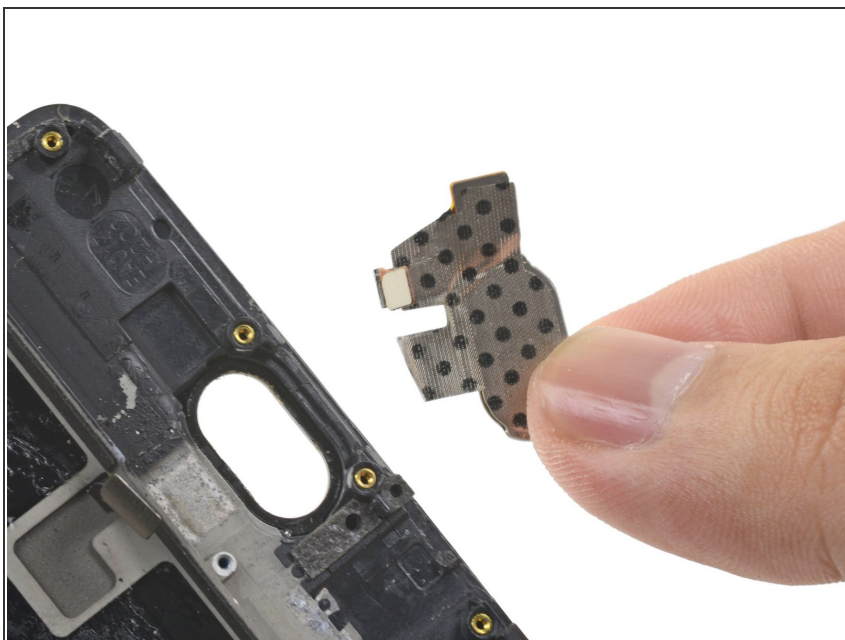
- Slide the edge of an opening tool underneath the fingerprint scanner cover near the bottom edge of the frame and pry up.
- Remove the fingerprint scanner cover.

Step 23



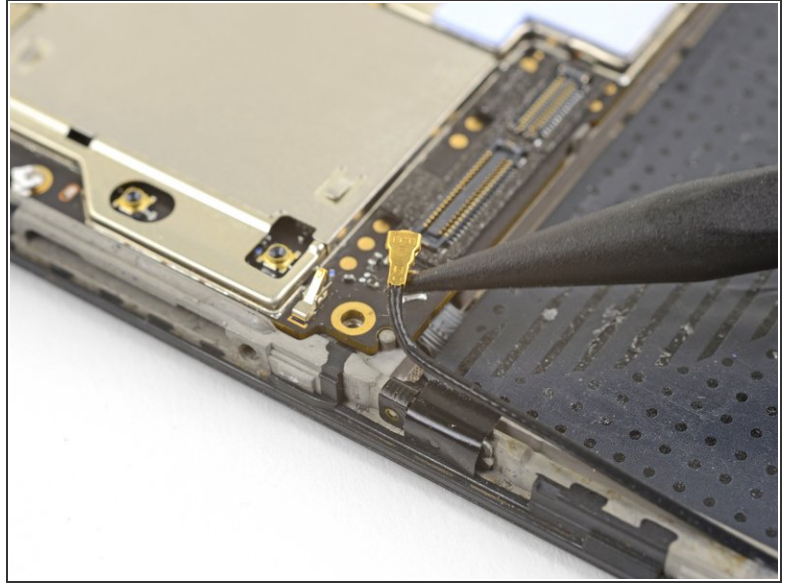
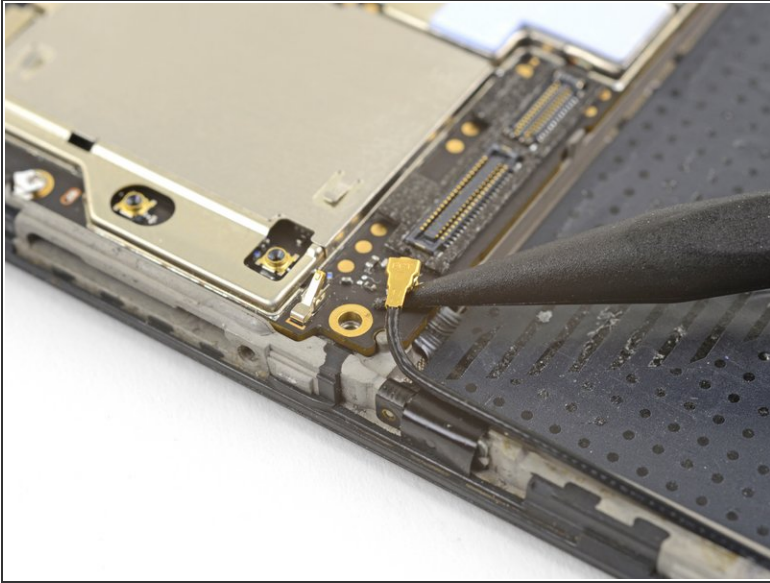
- Use a finger and firmly push on the fingerprint scanner from the front of the display until the fingerprint scanner dislodges from its recess.

Step 24



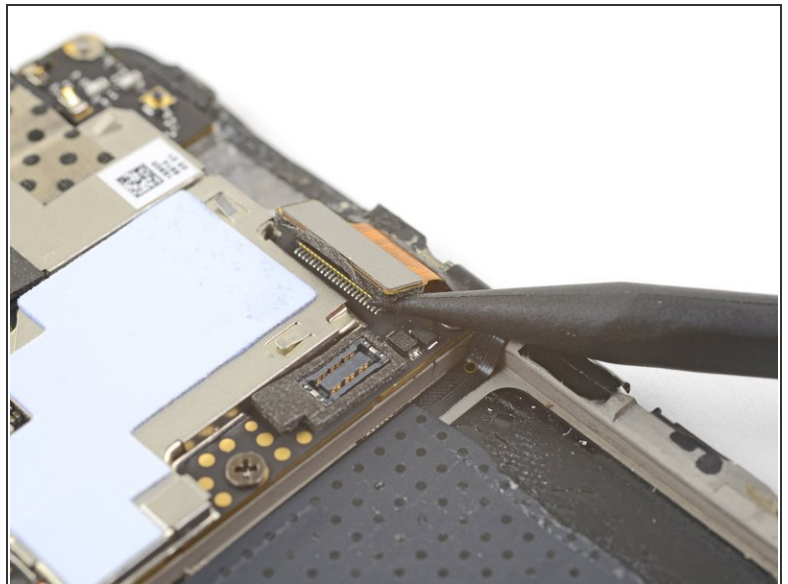
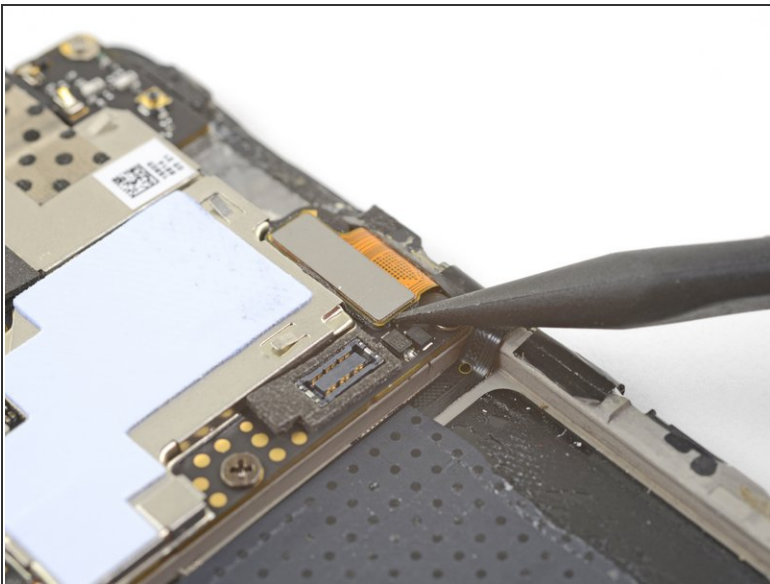
- Peel the fingerprint scanner along with its tape from the frame.
- Remove the fingerprint scanner.

Step 25 — Motherboard



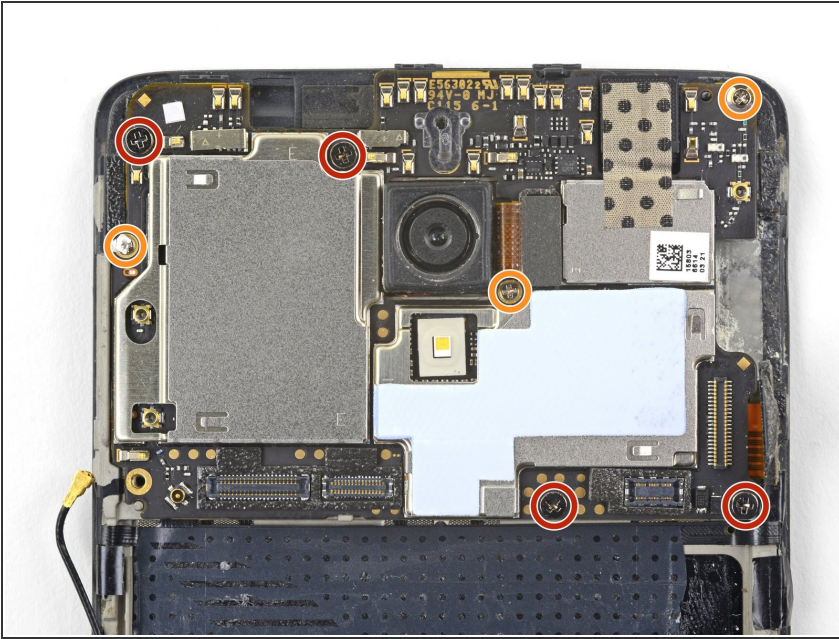
- Slide the point of a spudger underneath the antenna interconnect cable located at the bottom left corner of the motherboard.
- Pry up and disconnect the antenna interconnect cable.

Step 26



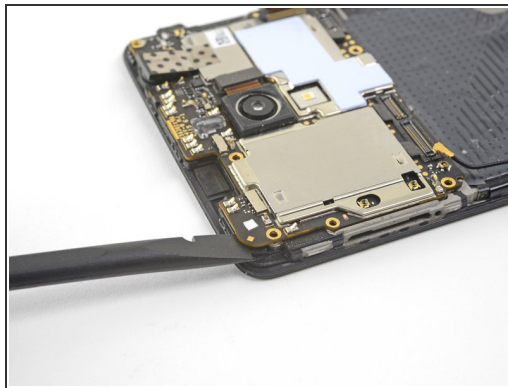
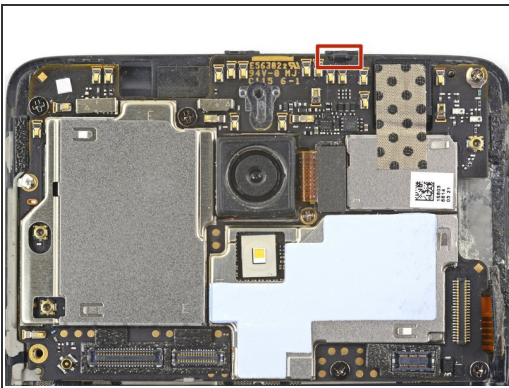
- Use the point of a spudger to pry up and disconnect the display connector from its socket on the motherboard.

Step 27



- Remove the seven Phillips screws securing the motherboard to the frame:
 - Four 3 mm black screws
 - Three 2.9 mm silver screws
- ⓘ Some of these screws may be covered by stickers. Remove the stickers to access the screws.

Step 28



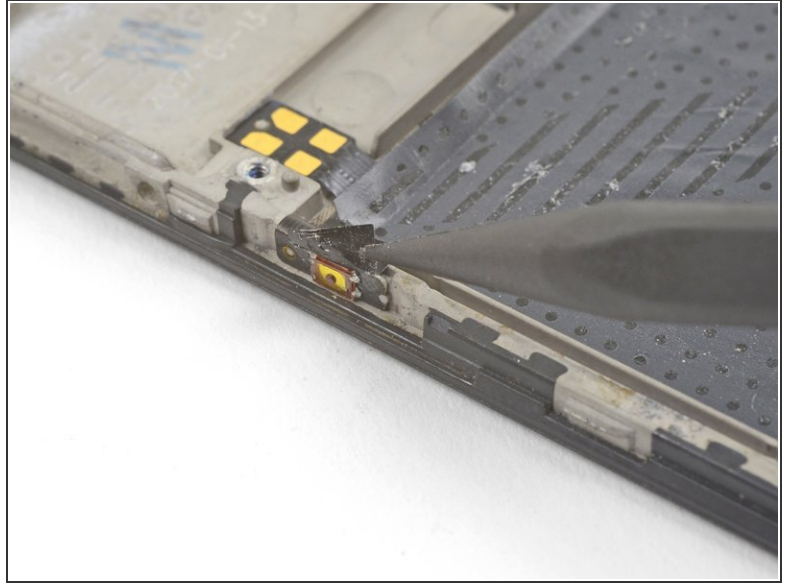
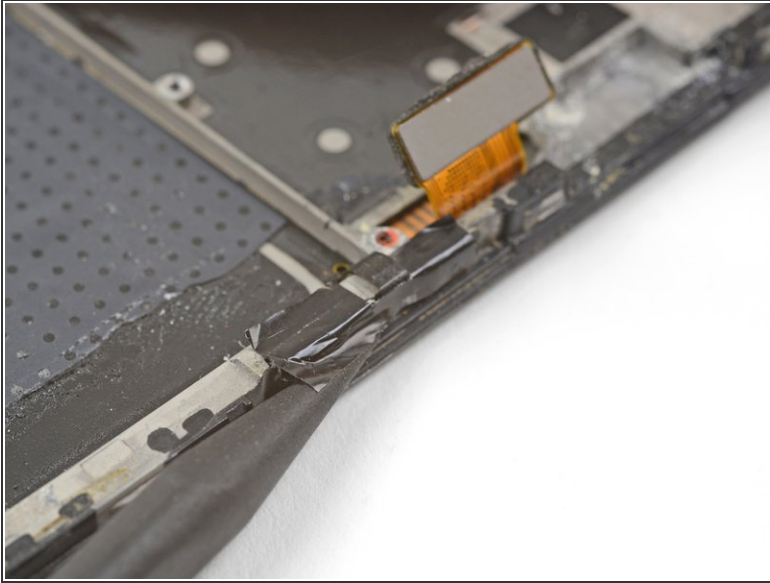
- ⓘ Make sure you have ejected the SIM tray before performing this step.
 - The motherboard is still held in place near the top by clips.
 - Slide the flat end of a spudger underneath the top left corner of the motherboard.
 - Twist the spudger and pry up to release the motherboard from its recess.

Step 29



- Remove the motherboard.
- ★ During reinstallation, be careful not to trap any flex cables or antenna cables underneath the motherboard.

Step 30 — Power and Volume Button Assembly



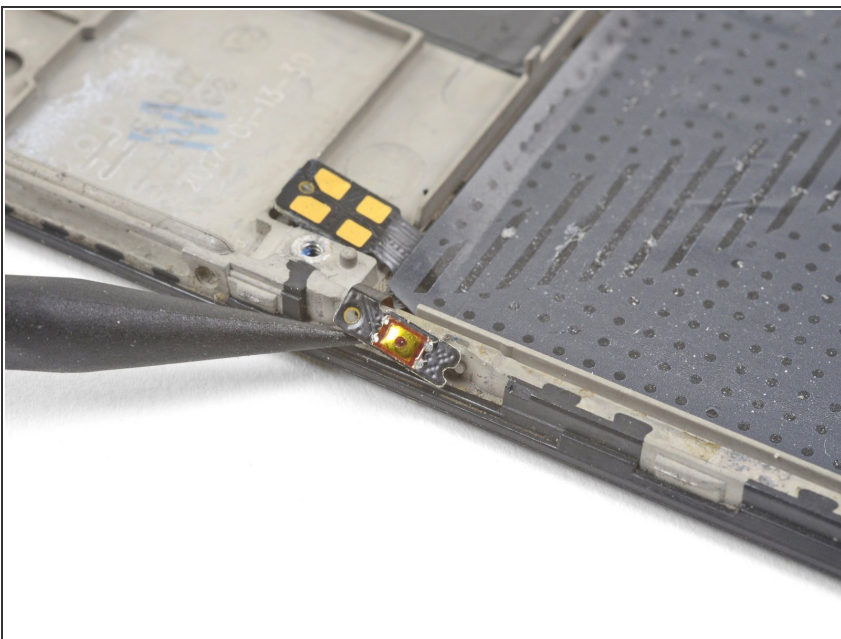
- ⓘ Try not to tear the black tape pieces so that you can reuse them during re-assembly. If you do tear the tape, replace them with pieces of [electrical tape](#).
- Use the point of a spudger to pry up and remove the black tape covering the volume buttons on the right edge of the phone.
- Repeat the process with the black tape covering the power button on the left edge of the phone.

Step 31



- Use the flat end of a spudger to gently push the volume button board away from the frame.
 - ❗ If the volume button board begins to bend significantly, **stop** and pry from a different angle.
 - Continue prying until you loosen the volume button board from the frame.
- ✦ To reinstall the volume button board, cut a small piece of adhesive from the pre-cut adhesive card or [a roll of Tesa tape](#), and use it to stick the board back onto the frame.

Step 32



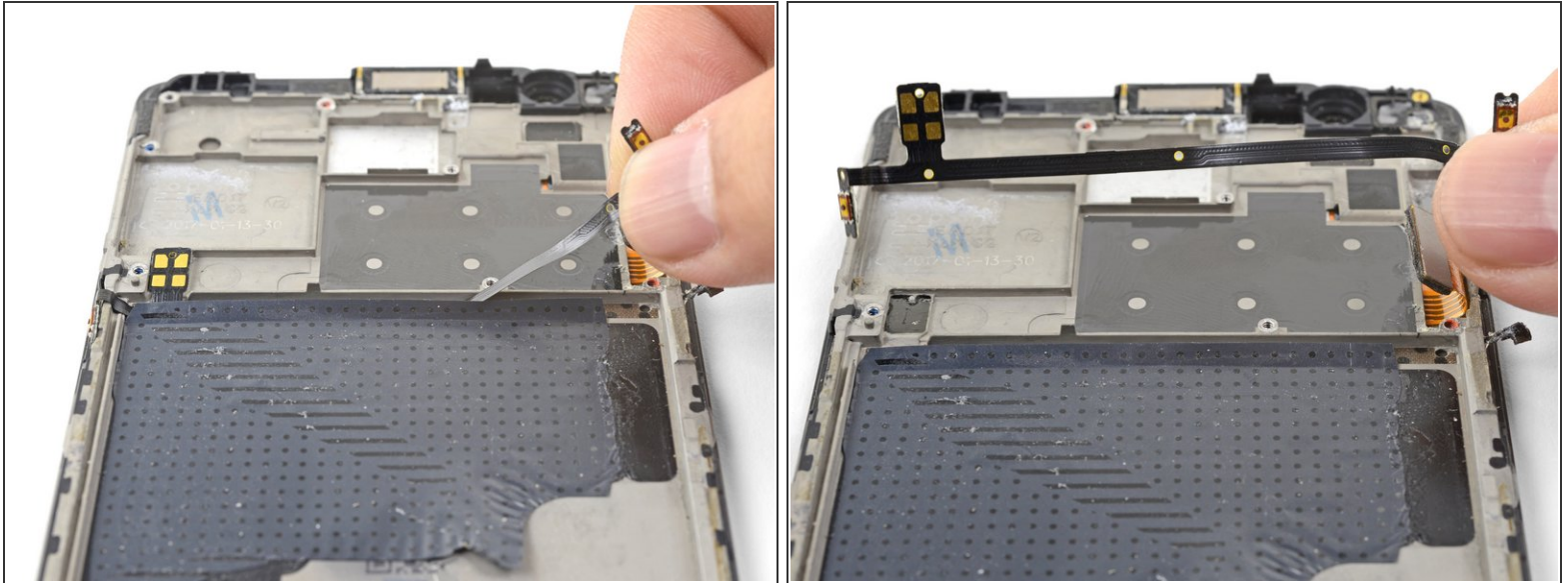
- Use the point of a spudger to pry and loosen the power button from the left edge of the frame.
- To reinstall the power button, cut a small piece of adhesive from the pre-cut adhesive card or [a roll of Tesa tape](#), and use it to stick the button back onto the frame.

Step 33



- Squeeze the tweezer tips together and insert the point underneath the rectangular contact pad near the top left edge of the frame.
- Pry upwards to loosen the contact pad from the frame.

Step 34



- Lift the volume flex cable upwards from its position, removing it from its groove.
 - Remove the volume and power button assembly.
- ☑ If you are transferring the assembly to a new screen and digitizer, [remove the blue adhesive liner](#) on the replacement frame and press the cable onto the exposed adhesive.

Step 35 — Earpiece Speaker



- Squeeze the tweezer tips together and insert the point under one of the earpiece speaker clips.
 - Pull the tweezer point up slowly to pry the earpiece speaker out of its recess.
- i** If the earpiece speaker clip begins to bend upwards, **stop**, remove the tweezers, and try the other clip.

Step 36



- Remove the earpiece speaker.
- To reinstall the earpiece speaker:
 - ★ Be sure that the earpiece speaker is [correctly oriented](#) in its recess such that the gold contacts point upward.
 - Place the earpiece speaker into its recess and firmly press it into place with your finger.
- ⓘ If you are transferring the earpiece speaker onto a replacement frame, be sure to remove the [earpiece speaker adhesive liner](#) on the replacement frame to expose the adhesive.

Step 37 — Screen and Digitizer Assembly



- Remove the two 1.9 mm Phillips screws holding the frame grounding clips.

Step 38



- Remove the two frame grounding clips and transfer them to the replacement assembly.
- ⓘ Note that the clips are directional. Install them in the proper orientation.

Step 39



- Remove the antenna interconnect cable from its groove and transfer it to the replacement assembly.

Step 40



- The bare screen and digitizer assembly remains.
- Transfer all of the parts you removed in the previous steps from the old assembly to the new one.
- Carefully inspect your new part and compare it with your original. Transfer any missing pieces, such as the LED bracket, to the new part.

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 [OnePlus 3 Answers community](#) for troubleshooting help.