



Motorola Moto Z2 Force Motherboard Replacement

If you are having issues with the Moto Z2...

Written By: Reesa John



INTRODUCTION

If you are having issues with the Moto Z2 Force's motherboard, use this guide to replace it.

Before you begin, download the [Rescue and Smart Assistant](#) app to backup your device and diagnose whether your problem is software or hardware related.

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. If your battery is swollen, [take appropriate precautions](#).

Warning: The screen assembly of this device is comprised of a rigid midframe and a flexible plastic display that can split apart during disassembly. Excessive heat on the display can also cause it to bubble up or warp, and this is very difficult to remedy. If you plan on reusing the screen assembly, heed all warnings carefully and **do not use any heat on the display**.



TOOLS:

[SIM Card Eject Tool](#) (1)
[Jimmy](#) (1)
[Isopropyl Alcohol](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Tweezers](#) (1)
[T4 Torx Screwdriver](#) (1)
[Spudger](#) (1)
[iFixit Opening Tool](#) (1)



PARTS:

[Moto Z2 Force Display Adhesive](#) (1)

Step 1 — SIM Card



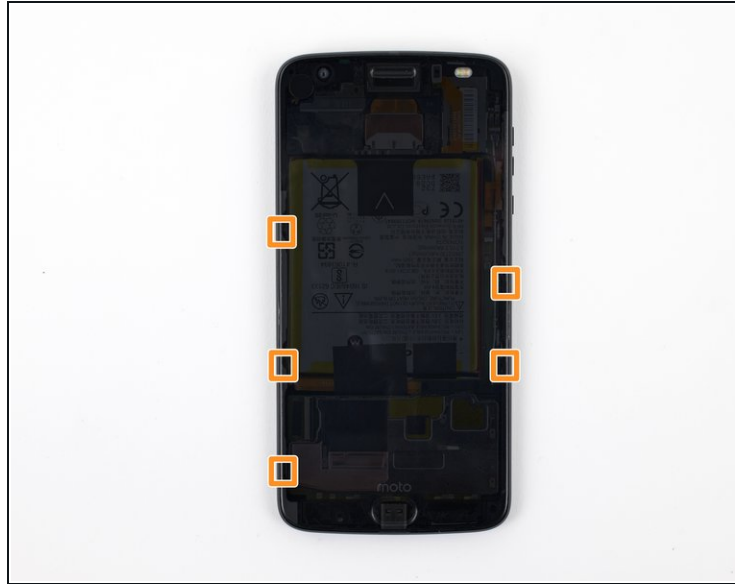
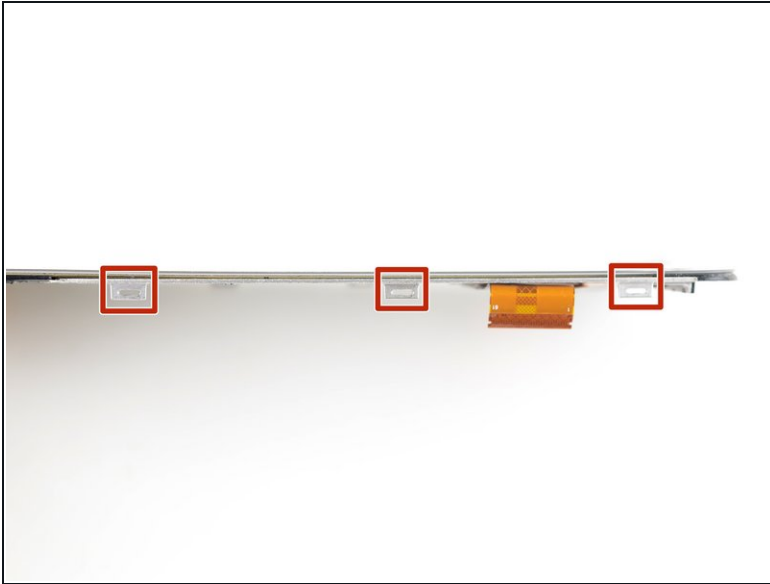
- Insert the point of the SIM card eject tool into the sim card lock at the top of the phone.
- Press down on the SIM card eject tool until the SIM card tray is slightly ejected from the device.

Step 2



- Remove the SIM card tray from the phone.

Step 3 — Screen Assembly



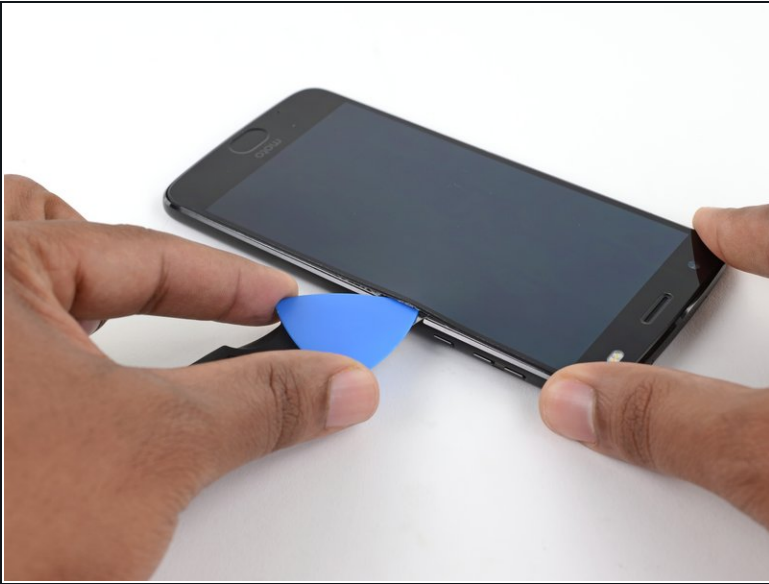
- When separating the sides of the screen assembly from the device's frame, you will need to release five metal clips securing it in place.
- Three of these clips are located on the left side of the device, and two are located on the right side.
- You will need to work around these clips with your opening pick in order to fully release them.
- You can either carefully slide an opening pick around these clips, or leave a pick on one side of the clip while prying the other side with another pick.

Step 4 — Release the Screen Assembly



- Insert a Jimmy or other metal tool between the right side of the plastic display and the metal frame, near the phone's side buttons.
 - ⓘ This may require a considerable amount of force. Push the tool as far down into the gap as you can, taking care to not scratch the chassis of your device in the process.
- Tilt the Jimmy downward while continuing to push it deeper into the gap to pry up the right side of the screen assembly.
 - ⚠ Since the display on top of the screen assembly is flexible and only attached with a slight amount of adhesive, you may end up prying up only the display instead of lifting the entire assembly. If this occurs, remove the tool and try again, this time using more downward force to get underneath the entire assembly.
- ⓘ Ensure your tool is behind the entire screen assembly and not just the display. If done correctly, you should notice the thin silver metal midframe come up with the plastic display (as pictured).

Step 5



- With the Jimmy still inserted, insert an opening pick under the silver midframe, on top of the Jimmy in the same location
- Remove the Jimmy.

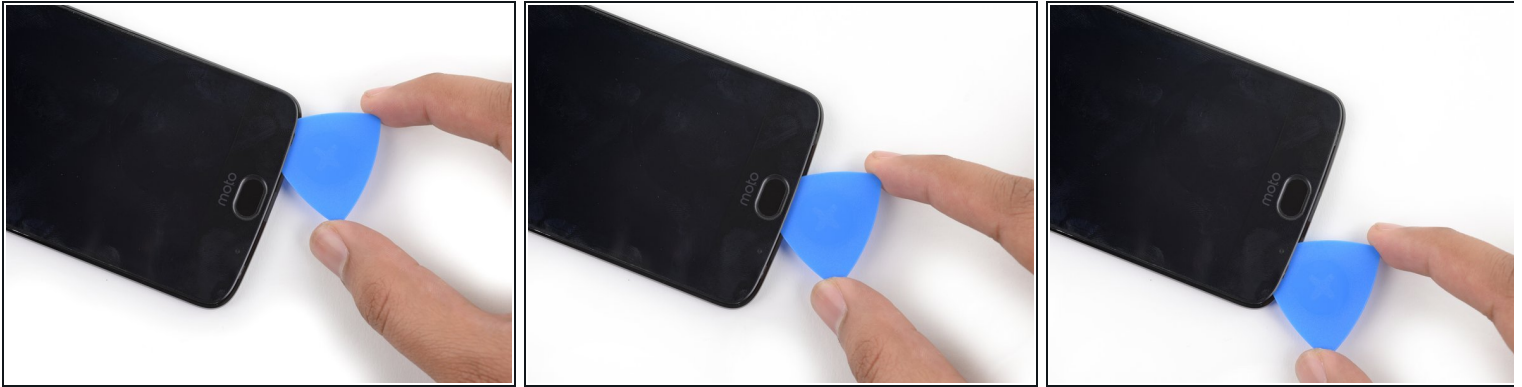
Step 6



- Slide your opening pick all along the right side of the device to release the clips and adhesive securing the screen assembly.

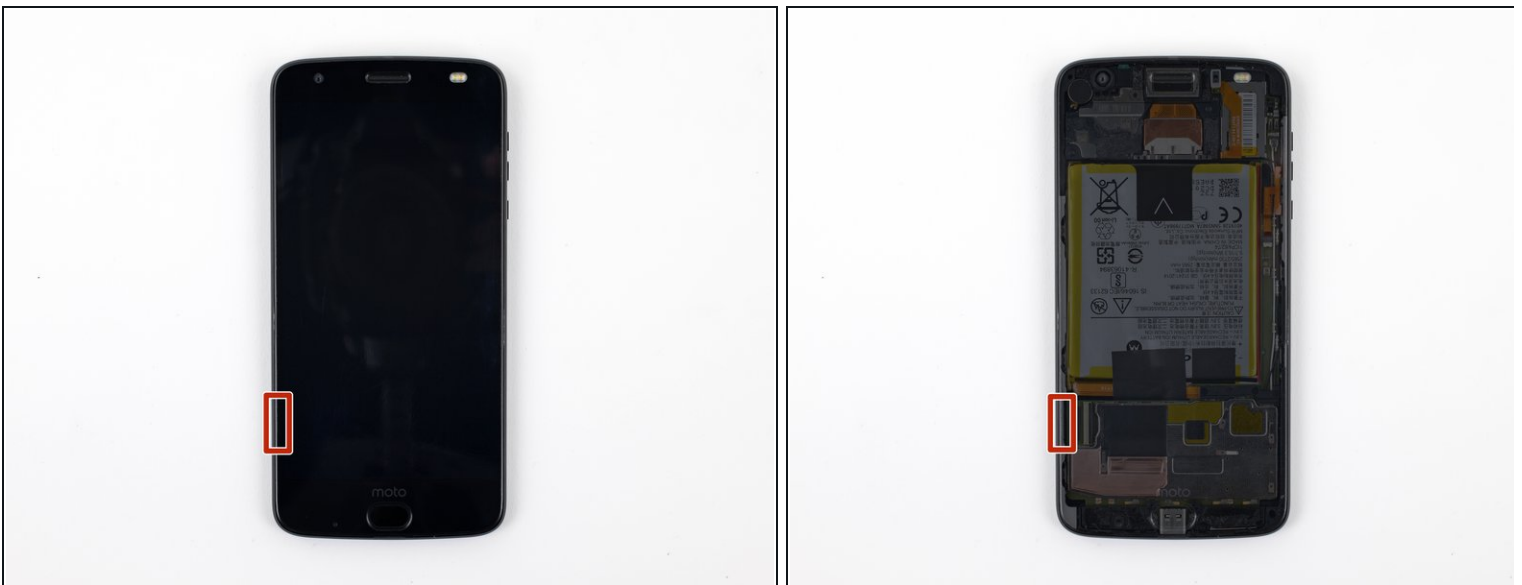
⚠ As you separate the lower part of the right edge, you should encounter the two metal clips mentioned previously. If you do not see or feel these clips, you are only separating the top half of the assembly! If so, press the screen back down into place and start again from the beginning of the screen removal process.

Step 7



- Once the screen assembly's right edge is separated, slide your pick around the bottom right corner of the device so it is underneath the bottom edge of the assembly.
- Slide the tool all along the bottom edge of the phone to slice through the adhesive securing the screen assembly and release the plastic clips.
- ❗ These plastic clips should snap free much easier than the metal ones you released earlier.
- Leave your tool underneath the bottom edge of the screen assembly to prevent it from re-adhering to the frame. Continue to the next step with a new tool.

Step 8



- When separating the left side of the screen assembly, take care to not snag the display cable located on the left edge near the bottom of the display.

Step 9



- Insert another opening pick underneath the bottom edge of the screen assembly and slide it around the bottom left corner of the device so it is underneath the assembly's left edge.
- Slide your tool all along the left edge of the phone to separate the metal clips and adhesive securing the screen assembly.

⚠ Like before, ensure you are separating the entire assembly by identifying the three metal clips on the right edge of the device.

Step 10



- Slide your tool around the top edge of the screen assembly and slice all along it to slice through its adhesive.

⚠ Take care to not insert your tool more than ~4 mm past the edge of the display to prevent damaging the front facing sensor array.

Step 11



- There are two large pads of adhesive securing the screen assembly near the top edge but further past the 4 mm that have already been sliced through.
- The front facing sensor array and cable surround the right patch of adhesive from the top and right, so prying or slicing from the top or right edge may damage the cable. The following steps will describe how to separate the adhesive from the left edge.

Step 12



- Apply a small amount of high concentration (>90%) isopropyl alcohol underneath the screen assembly's left edge, near the top of the device.
- Allow the device to sit upright on its right edge for ~5 minutes to allow the alcohol to penetrate and weaken the adhesive.

Step 13



- Insert an opening pick as deep as possible under the top left corner of the screen assembly to slice through the left patch of adhesive.

Step 14 — Pry Up the Screen Assembly



- Slowly and carefully slide the flat end of a spudger under the left edge of the screen assembly. Gradually insert it deeper to pry up the top edge of the assembly and release the right patch of adhesive.
- ⓘ Add more isopropyl alcohol as needed, but take care to not use too much, as this may dissolve other adhesives in the device that would preferably remain sticky. Give any additional alcohol some time to penetrate the adhesive before continuing.

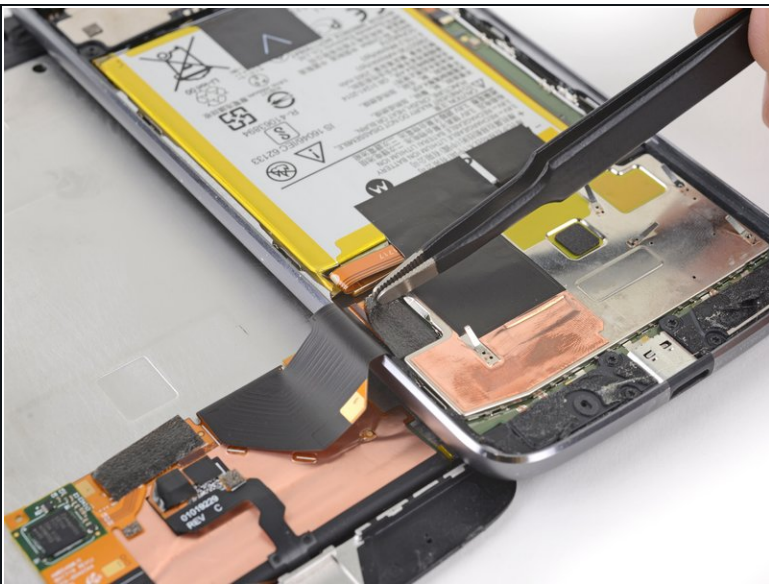
⚠ Only pry up the assembly enough to slide the spudger underneath and release the adhesive. The assembly is still attached via the display cable, and prying the left side too far upward may damage it.

Step 15 — Open the Screen Assembly



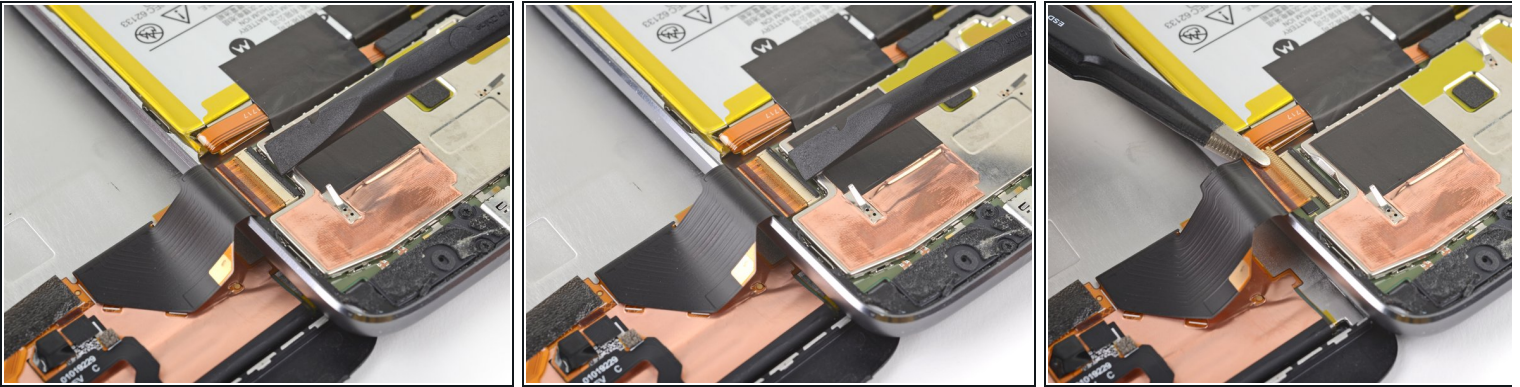
- Lift the screen assembly from the right edge and swing it open. It is still attached to the phone chassis at the lower left edge, so do not fully remove it yet.
- If the screen assembly remains stuck, slice the adhesive repeatedly as needed.

Step 16 — Disconnect the Display Cable



- Use a pair of tweezers to remove the black piece of tape covering the battery connector.
 - ❗ Try your best to keep this piece of tape intact and retain it for reassembly.

Step 17



- Use a spudger to pry up the locking tab on the display cable's [ZIF connector](#).
- Use a pair of tweezers to slide the display ribbon cable out of the connector.

Step 18 — Remove the Screen Assembly



- Remove the screen assembly.
- ✦ When putting your device back together, be sure to reconnect the display, turn the device on, and test all functionality before closing your device and sealing it back up.
- ✦ During reassembly, pause here and [replace the adhesive around the edges of the display](#) if you are reusing your screen assembly.
- ✦ After closing your device back up, stack something heavy, like a textbook or two, on top of the device for 30-60 minutes. This ensures a strong adhesive bond.

Step 19 — Remove the Battery Tape



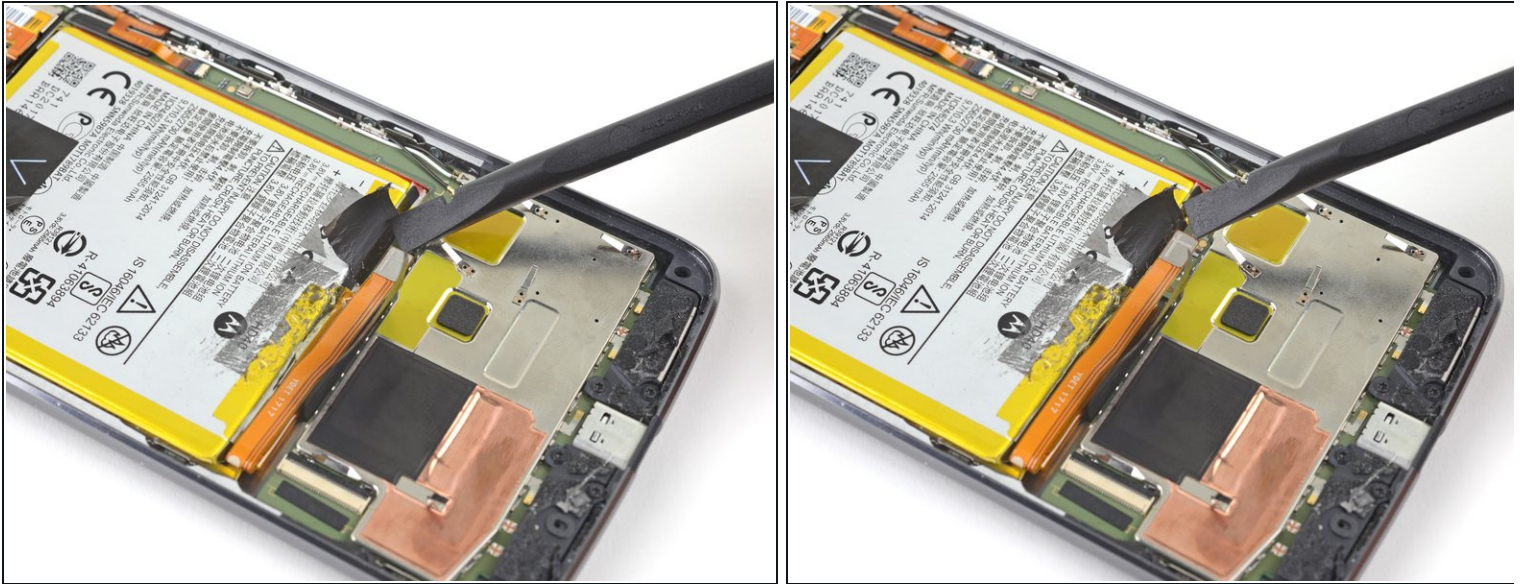
- Use a pair of tweezers to remove the two black pieces of tape securing the battery.
- ❗ Take care to keep these tape pieces intact so they can be reused.
- ☑ While not crucial, this tape helps dissipate heat from the battery. They won't stick back down by themselves, but if the tape pieces are still mostly intact, re-attach them with [some adhesive](#) during reassembly.

Step 20 — Remove the Battery Connector Bracket



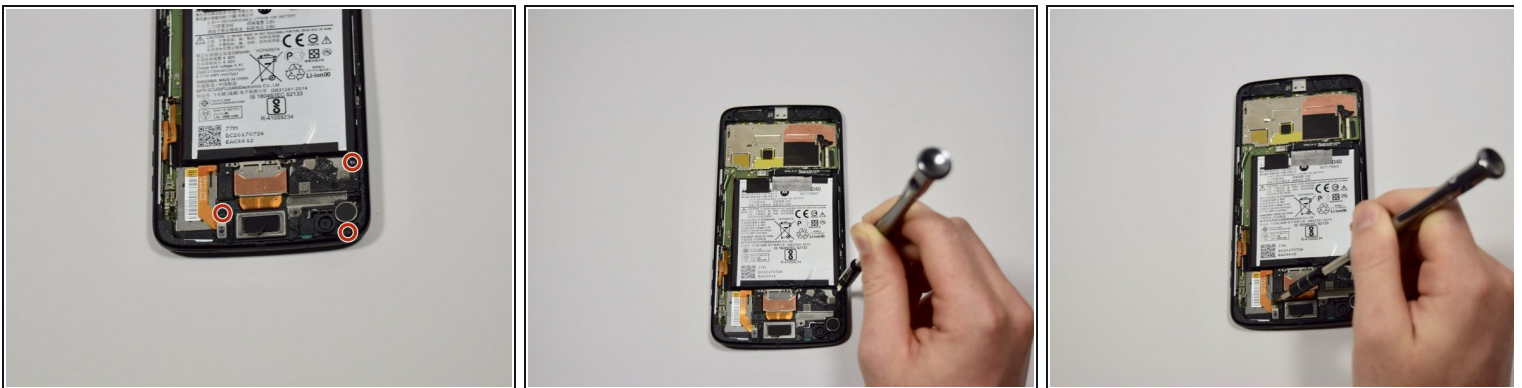
- Use an opening pick to pry up the small black bracket covering the battery connector. It is secured with a small bit of adhesive.
- Use a pair of tweezers or your fingers to remove the bracket.

Step 21 — Disconnect the Battery Connector



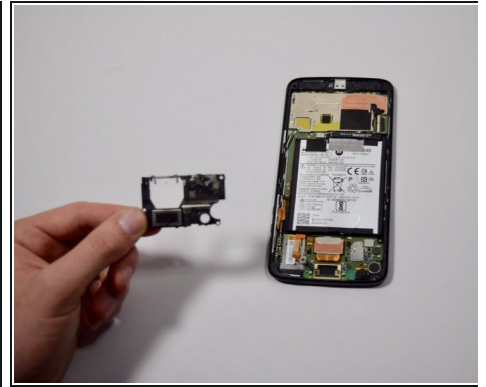
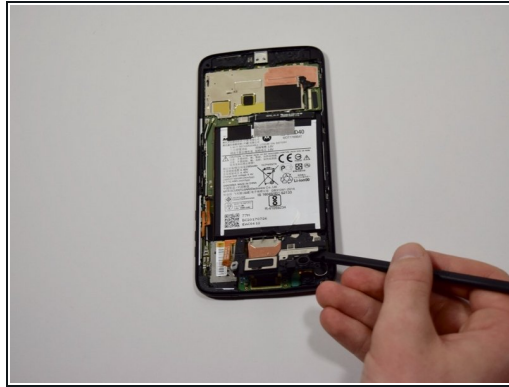
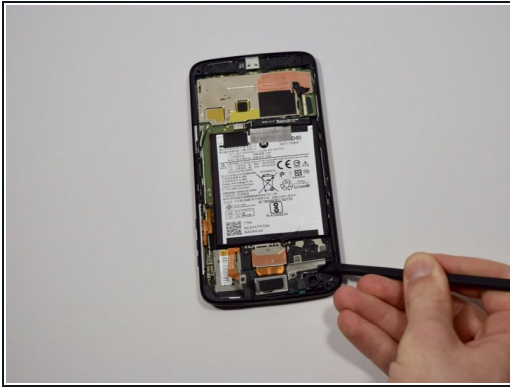
- Use a spudger to pry up and disconnect the battery connector.

Step 22 — Speaker



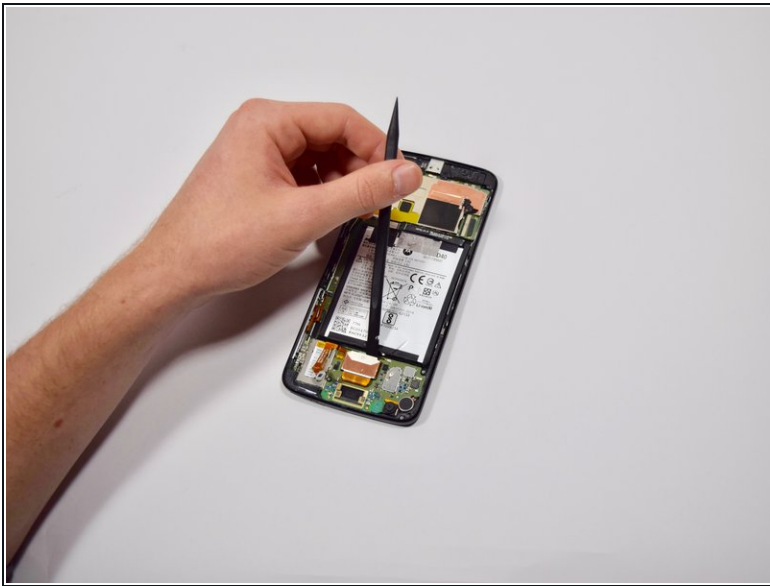
- Unscrew the three 1.7mm T4 screws from the speaker.

Step 23



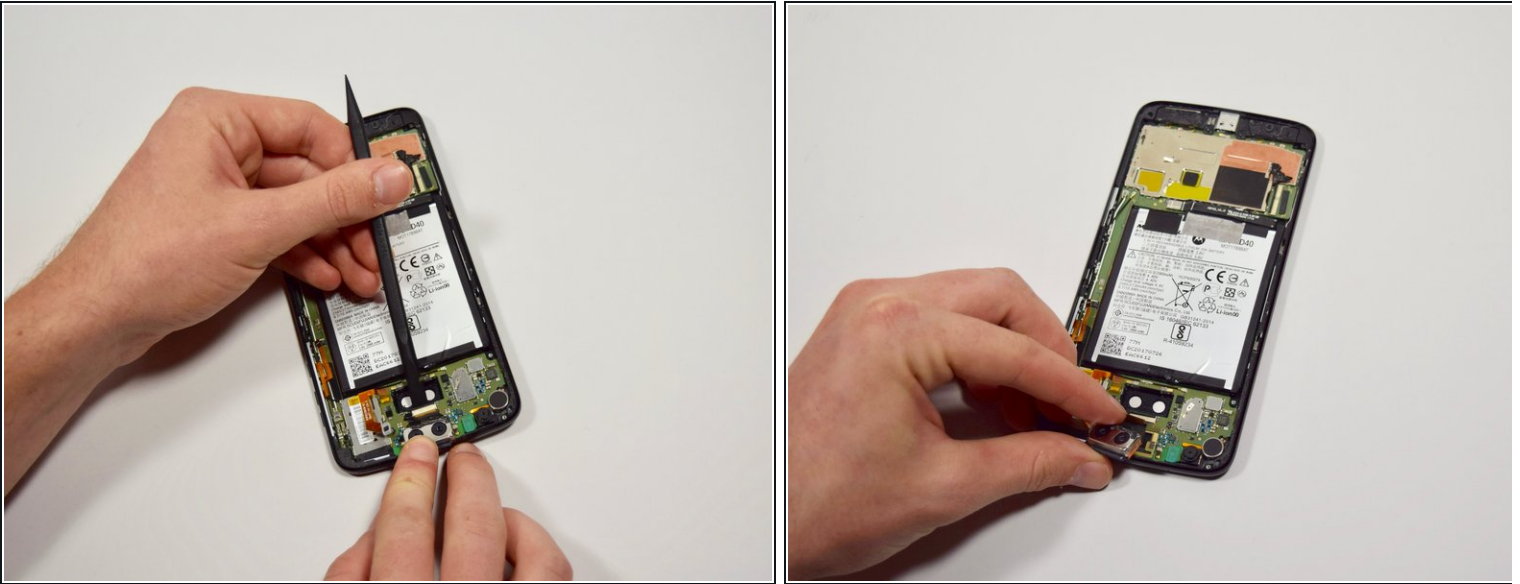
- Use the nylon spudger to lift and remove the speaker from the phone chassis.

Step 24 — Rear Facing Camera



- Insert the flat end of the nylon spudger on the side of the rear facing camera closest to the battery.
- Pry up the camera by pushing down on the spudger until the camera pops up.

Step 25



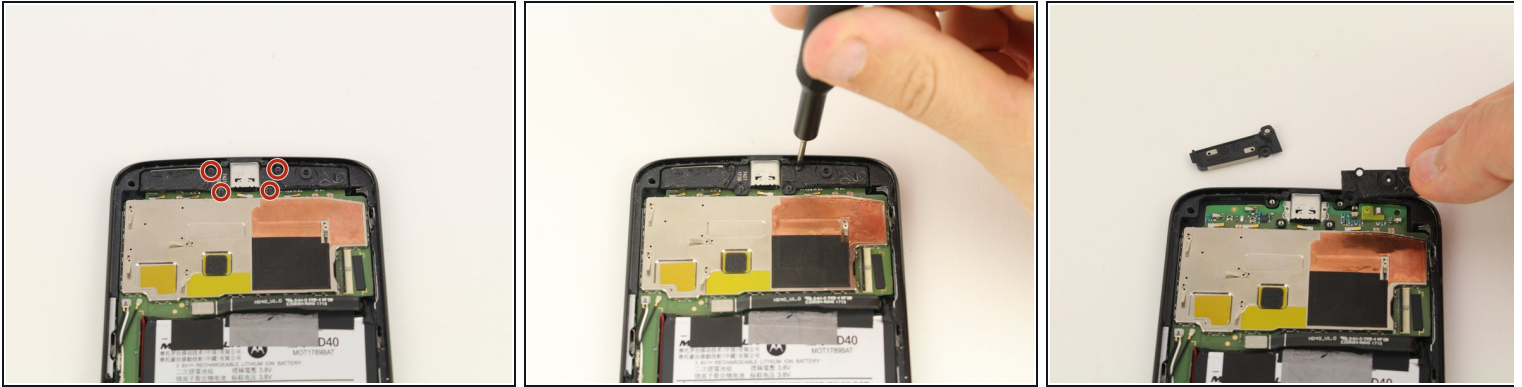
- Insert the flat end of the nylon spudger underneath the black lock.
- Unlock the ribbon cable by pulling up on the lock with the nylon spudger.
- Separate the rear facing camera from the board by pulling gently towards the bottom of the phone.

Step 26 — Motherboard



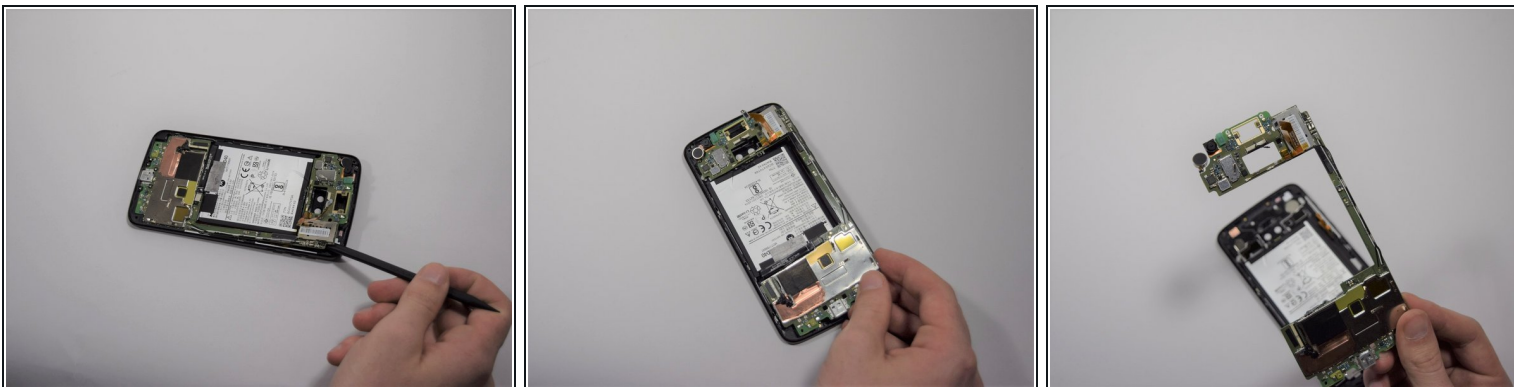
- Using the spudger, lift up the bar on the ZIF connector that joins the ribbon cable to the control buttons.

Step 27



- Unscrew four 1.8mm T4 screws from the speakers and remove from the motherboard.

Step 28



- Insert the flat end of the nylon spudger underneath the edge of the phone near the camera.
 - Gently pry the motherboard from the phone until it is raised enough to put a finger between it and the phone.
 - With your fingers, gently pry the rest of the motherboard up from the phone.
- i** When using your fingers to remove the motherboard completely, be extremely careful, as you can easily break the motherboard.

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