

Motorola Moto Z2 Force Battery Replacement

Use this guide to remove and replace a degraded...

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INTRODUCTION

Use this guide to remove and replace a degraded or damaged battery in a Motorola Moto Z2 Force.

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.

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, which 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:

Jimmy (1)

Isopropyl Alcohol (1)

iFixit Opening Picks (Set of 6) (1)

Tweezers (1)

Spudger (1)

iOpener (1)

PARTS:

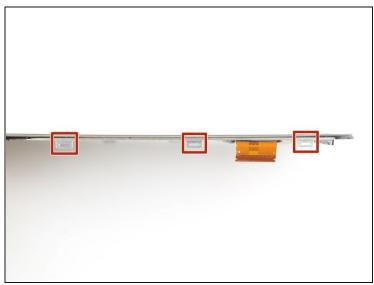
Moto Z2 Force Battery - Genuine (1)

Moto Z2 Force Display Adhesive (1)

Tesa 61395 Tape (1)

Stretch Release Battery Adhesive (1)

Step 1 — 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 2 — 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.
 - (i) 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.
 - A 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.
- ② 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).





- 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 4

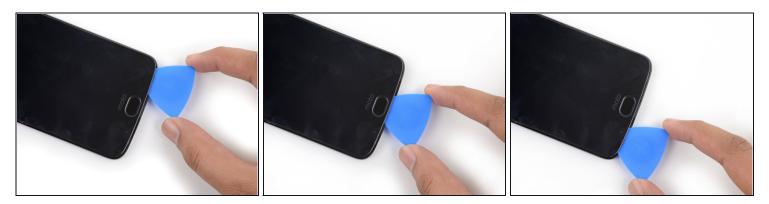






• Slide your opening pick all along the right side of the device to release the clips and adhesive securing the screen assembly.

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.



- 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.
 - (i) 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 6



 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.







- 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 8

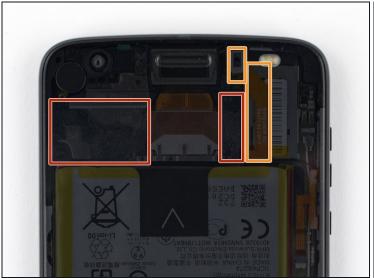






• Slide your tool around the top edge of the screen assembly and slice all along it to slice through its adhesive.

⚠ 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.





- 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 10



- 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.



 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 12 — 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.
 - (i) 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.

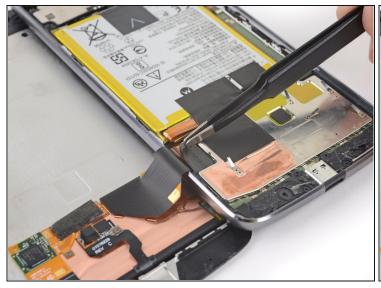
Step 13 — Open the Screen Assembly





- 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 14 — Disconnect the Display Cable



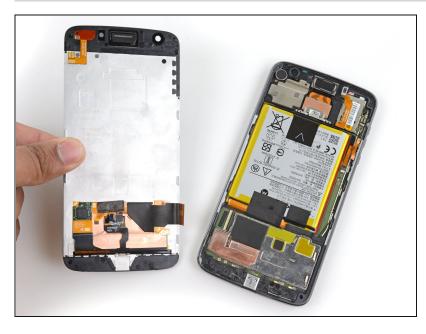


- Use a pair of tweezers to remove the black piece of tape covering the battery connector.
 - i Try your best to keep this piece of tape intact and retain it for reassembly.



- Use a spudger to pry up the locking tab on the display cable's <u>ZIF connector</u>.
- Use a pair of tweezers to slide the display ribbon cable out of the connector.

Step 16 — 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 17 — Remove the Battery Tape



- Use a pair of tweezers to remove the two black pieces of tape securing the battery.
- i 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 18 — 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 19 — **Disconnect the Battery Connector**



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

Step 20 — Heat the Battery Adhesive



- Apply a freshly heated iOpener to the back of the phone directly behind the battery for two minutes to help soften the adhesive. Re-heat and reapply the iOpener as necessary.
- Alternatively, apply highconcentration (>90%) isopropyl alcohol under the edge of the battery to weaken the adhesive underneath.
- (i) Let the phone sit for several minutes to allow the alcohol to penetrate and weaken the adhesive.

Step 21 — Remove the Battery



- Insert a flexible plastic tool on the left edge of the battery. We use an opening pick here, but a playing card is a safer (albeit slower) option.
- Gently pry up the battery with constant steady force.
 - Try to slowly release the battery's adhesive without deforming the battery. If the battery begins to bend out of shape, pry slower or apply more heat/isopropyl alcohol. Several rounds of heating or alcohol may be necessary.

Do not use excessive force or pry the battery with metal tools.

• Slowly work your tool underneath the battery and continue prying until it is completely released from its adhesive.



- Remove the battery from the device.
- A Reusing a deformed or bent battery after it has forcefully been removed is a safety hazard. Replace it with a new battery.
- Before installing your new battery, peel up all the old adhesive and remove it from the phone.
- For best results, clean the area underneath the battery with isopropyl alcohol and a lint-free cloth or coffee filter. This helps prep the surface so the new battery can adhere more strongly. Replace old adhesive with stretch release adhesive strips, double-sided tape, or pre-cut adhesive strips.

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.

For optimal performance, <u>calibrate your newly installed battery</u>: Charge it to 100%, and keep charging it for at least two more hours. Then, use it 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 <u>Answers Community</u> for troubleshooting help.