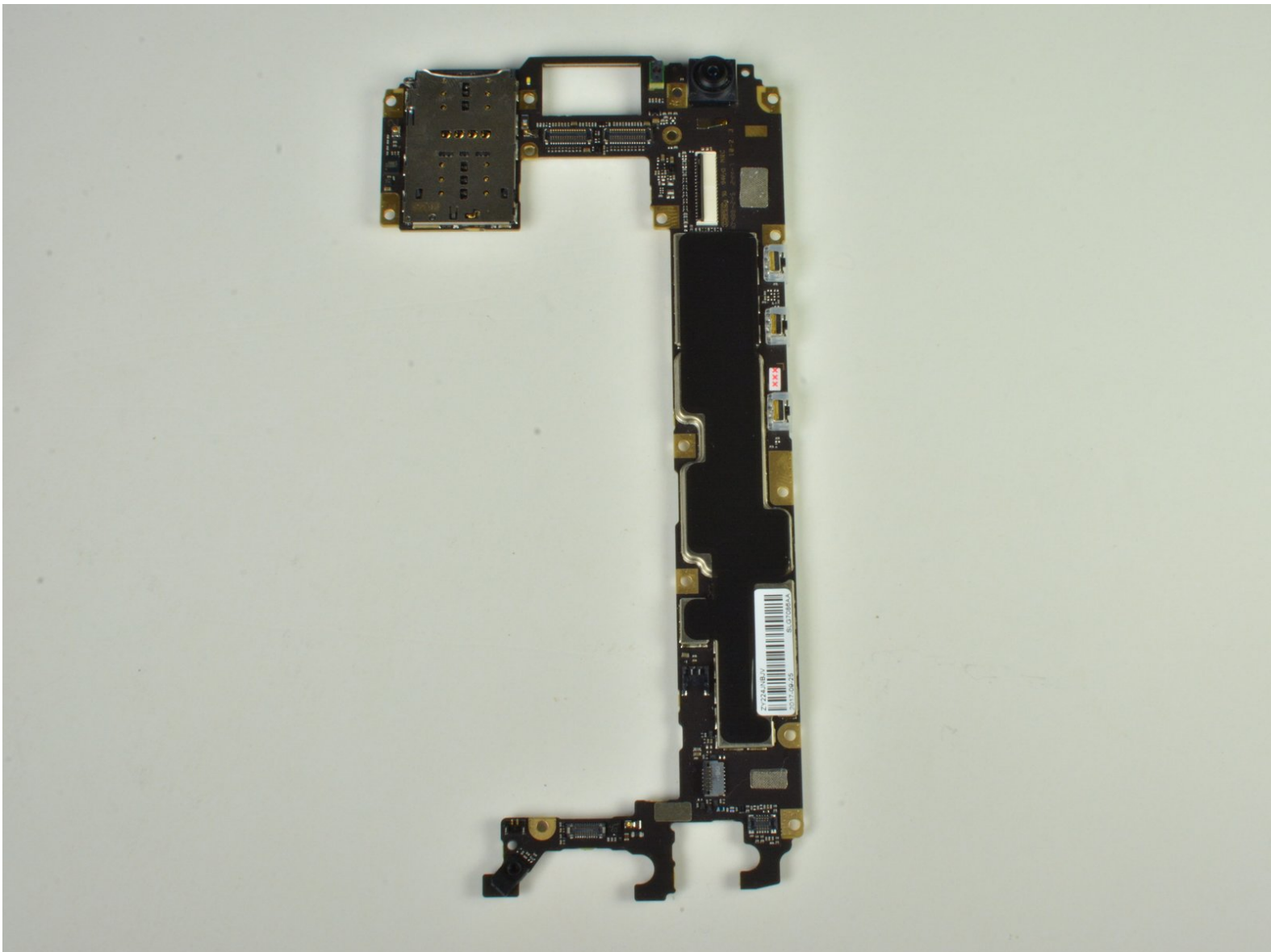




Motorola Moto X4 Motherboard Replacement

Removing or replacing the motherboard of the Moto X4.

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INTRODUCTION

Follow this guide to remove the motherboard on the Motorola Moto X4.



TOOLS:

- [Suction Handle](#) (1)
- [iFixit Opening Tools](#) (1)
- [iFixit Opening Picks set of 6](#) (1)
- [iOpener](#) (1)
- [Spudger](#) (1)
- [T3 Torx Screwdriver](#) (1)
- [T4 Torx Screwdriver](#) (1)
- [Tweezers](#) (1)



PARTS:

- [Moto X4 Display Adhesive](#) (1)

Step 1 — SIM Card Tray



- Insert a SIM card eject tool, bit, or a straightened paperclip into the small hole in the SIM card tray, located at the top left edge of the phone.
- Press to eject the tray.
- Remove the tray from the phone.

Step 2 — Heat the screen



i Before you begin, turn off your phone.

- [Heat an iOpener](#) and apply it to the left edge of the phone for two minutes.

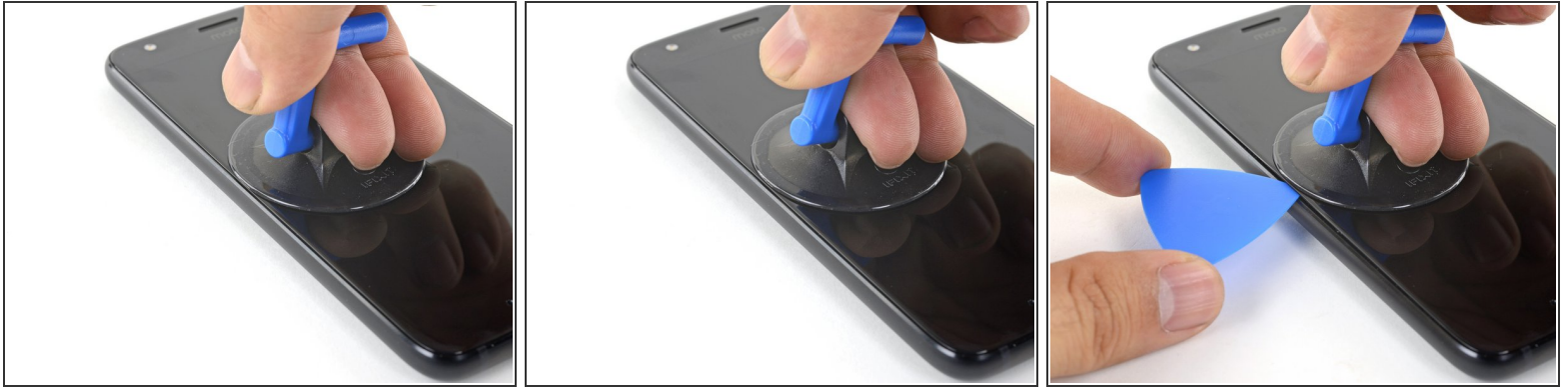
i You may need to reheat and reapply the iOpener several times to get the phone warm enough. Follow the iOpener instructions to avoid overheating.

i 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.

- As you wait, take note of the the following areas:

- Display cable—be careful not to slice too deeply near the edge here, or you may damage the display cable.
- Fingerprint sensor cable—be careful not to slice too deeply near the edge here, or you may damage the fingerprint sensor cable.

Step 3 — Create a gap



- Apply a suction cup to the screen, as close to the heated edge as possible.
 - Pull on the suction cup with strong, steady force to create a gap in the seam.
 - Insert the point of an opening pick into the gap.
- i** Depending on the age of your phone, this may be difficult. If you are having trouble, apply heat to the edge and try again.

Step 4 — Slice the screen adhesive



- Slide the opening pick along the edge to slice through the adhesive.
- Leave an opening pick in the seam to prevent the adhesive from re-sealing.

Step 5



- Heat the top edge of the phone with an iOpener.
- Carefully slice around the corner and through the top edge to separate the adhesive.

Step 6



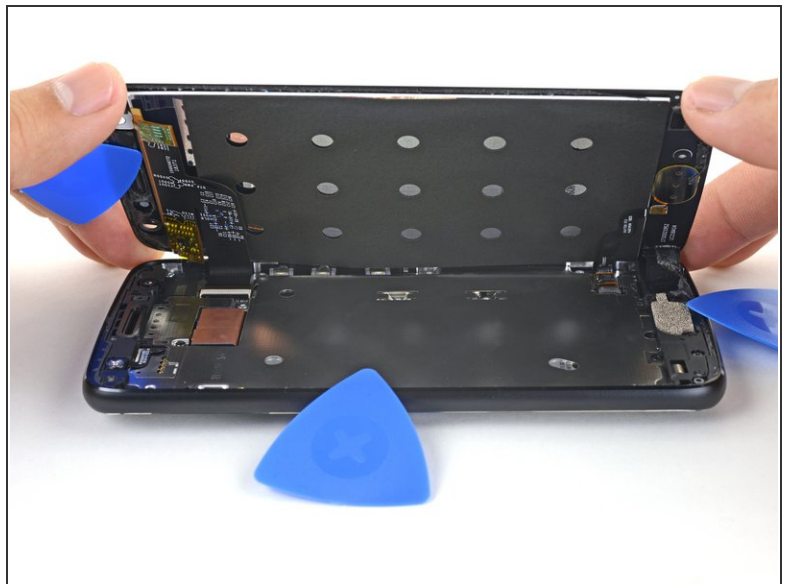
- Heat the screen's right edge with an iOpener.
- Be careful not to slice too deeply near the cables to avoid damaging them.
- Use an opening pick to slice along the right edge to separate the adhesive.

Step 7



- Repeat the previous steps to heat and slice the bottom edge of the phone.

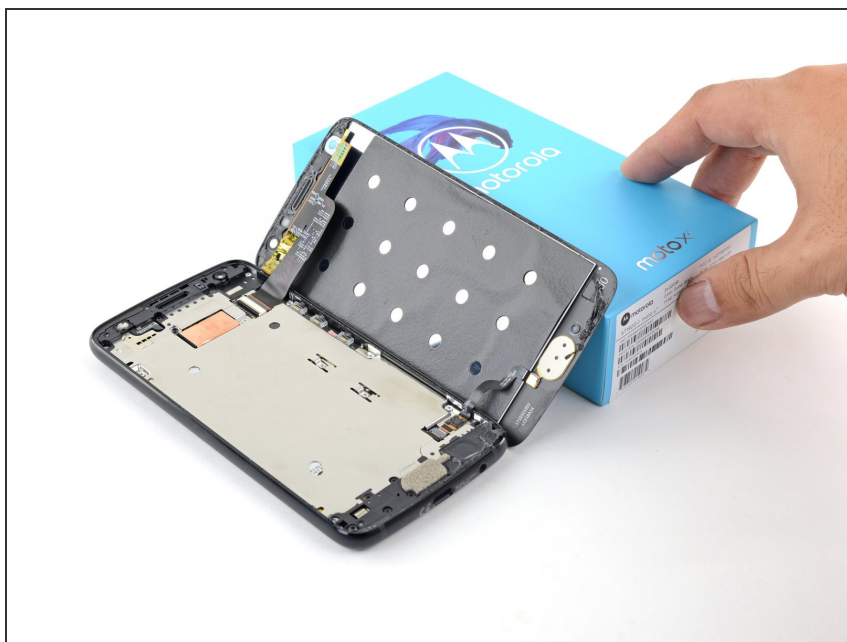
Step 8



⚠ Do not try to remove the screen yet—it is still attached to the phone by delicate flex cables.

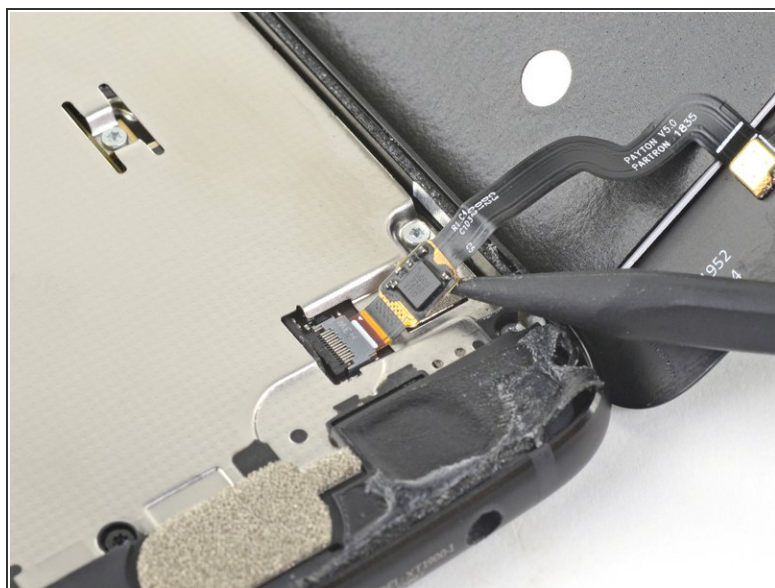
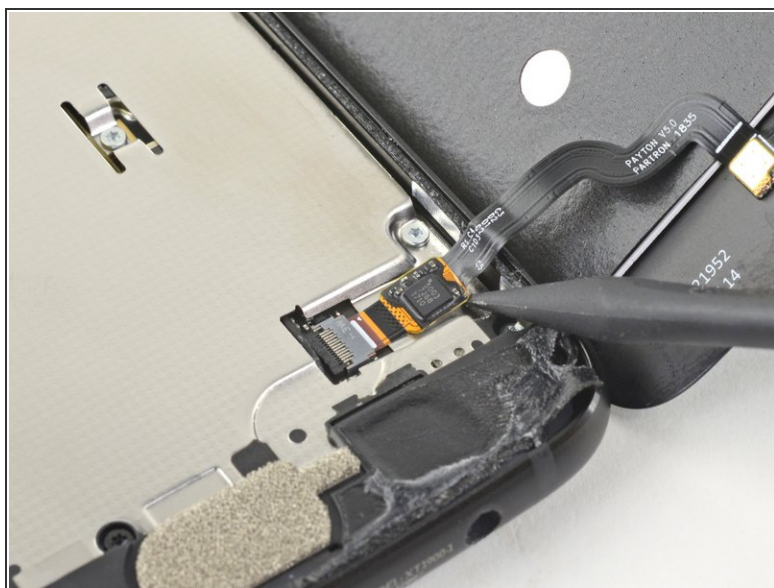
- Carefully lift up the left edge of the screen and cut away remaining adhesives with an opening pick.

Step 9



- Swing open the screen and prop it up with a small box as you work on disconnecting the flex cables.
- ★ During reassembly, this is a good time to power on your phone and test all functions before sealing it up. Be sure to power your phone back down completely before you continue working.

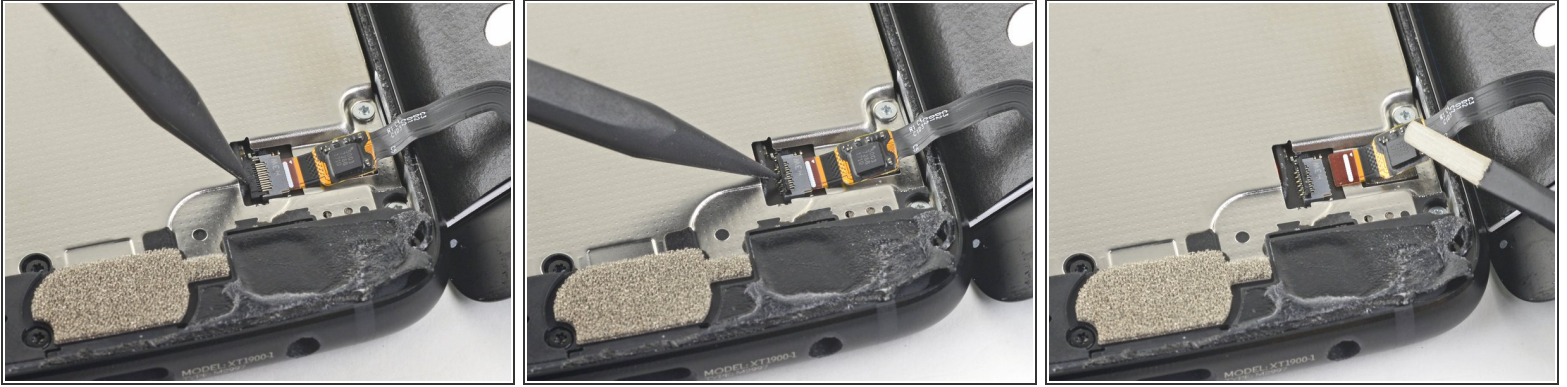
Step 10 — Detach the fingerprint sensor cable



- Slide the point of a spudger underneath the fingerprint sensor cable and gently pry up to loosen the cable from the phone.

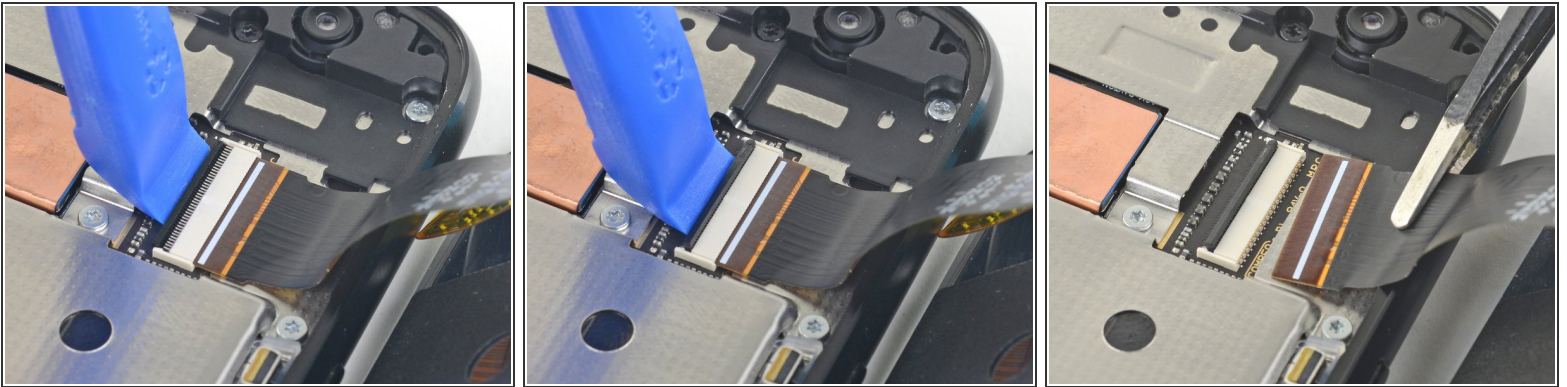
⚠ Do not pull on the cable. It is still attached to the phone by a delicate ZIF socket.

Step 11 — Disconnect the fingerprint sensor



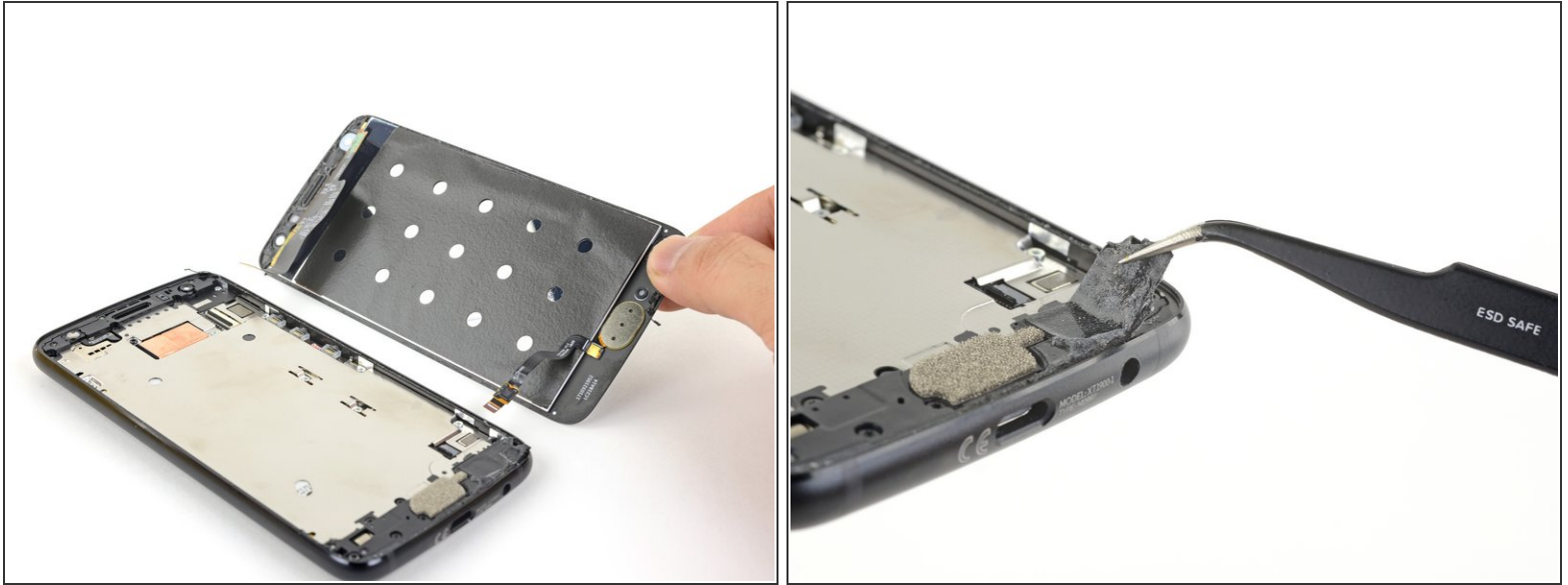
- Use the point of a spudger to flip up the lock bar on the fingerprint sensor's ZIF socket, near the bottom right of the phone.
- Use tweezers to carefully slide the fingerprint sensor cable out of the socket.

Step 12 — Disconnect the display cable



- Use an opening tool to flip up the wide lock bar on the display cable's ZIF socket, near the top right of the phone.
- Use tweezers to carefully slide the display cable out of the ZIF socket.

Step 13 — Remove the screen



- Remove the screen.
- ✦ During reassembly, [follow this guide](#) to install custom-cut adhesives for your phone.


Step 14 — Unscrew the midframe



- Remove the following twenty screws securing the midframe:
 - Eleven silver 2.7 mm-long T3 screws
 - Nine black 3.6 mm-long T4 screws
- The midframe is still held in place by clips.

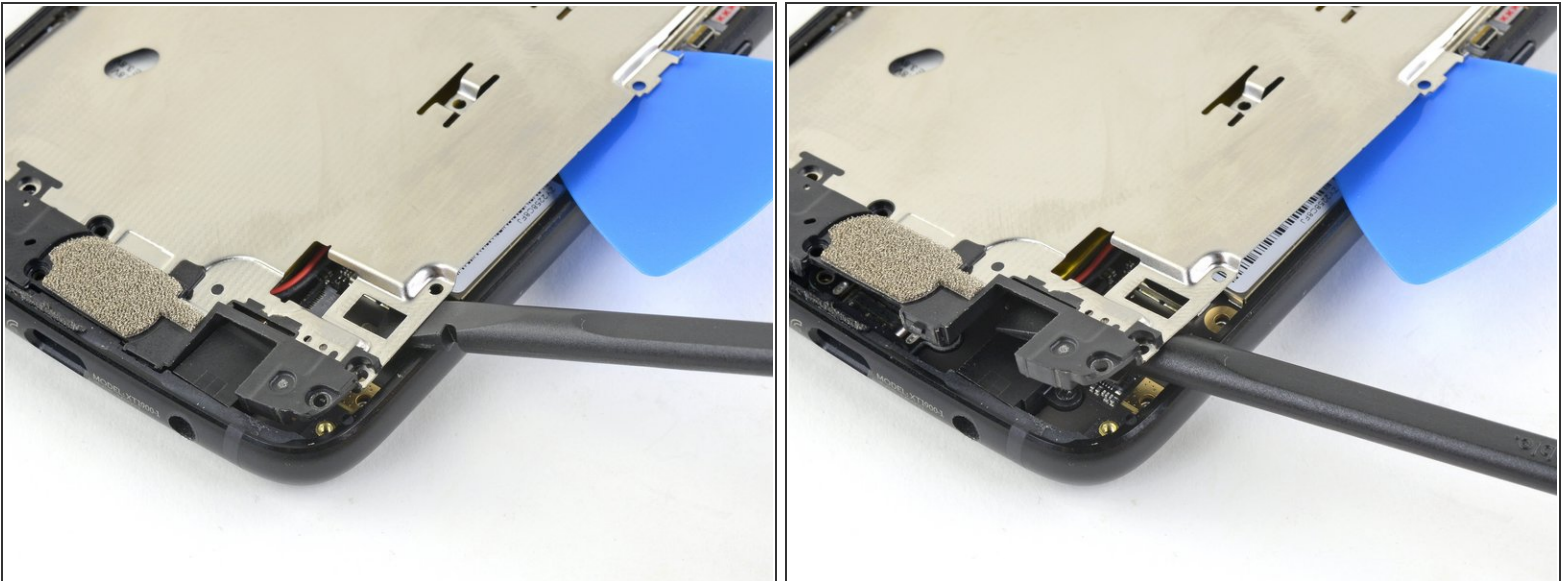
Step 15 — Loosen the midframe



 The next few steps show how to loosen the midframe clips.

- Insert the flat end of a spudger under the right edge of the metal midframe and pry up to loosen the midframe.
- Insert an opening pick in the edge to hold the midframe in place.

Step 16



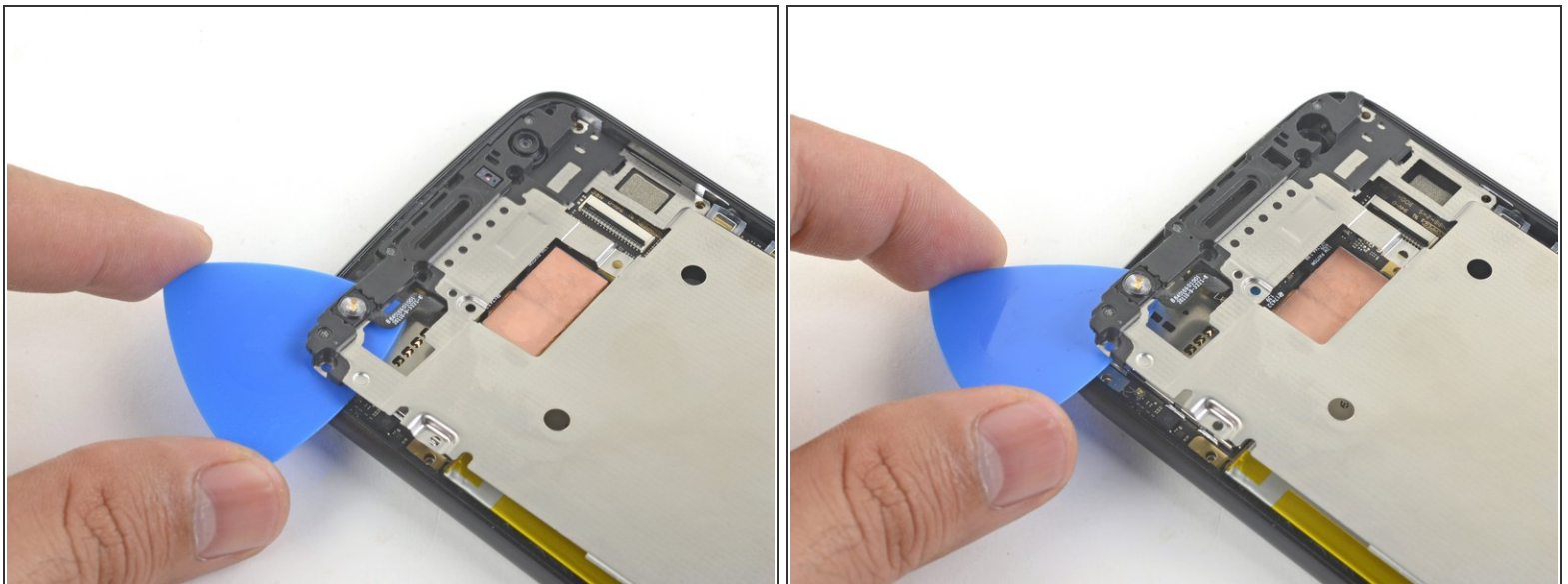
- Insert the flat end of a spudger under the lower right edge of the midframe and pry up to release the midframe clip.

Step 17



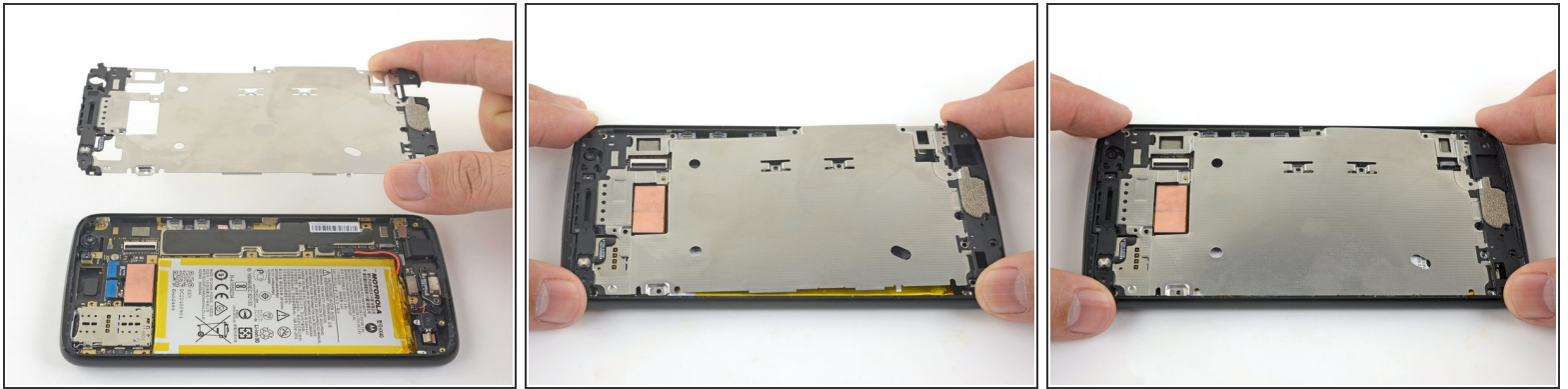
- Grasp the lower edge of the midframe and pull the edge slightly to the right, to clear the metal midframe clip.

Step 18



- Insert the point of an opening pick under the top left corner of the midframe and twist slightly to release the top clip.

Step 19 — Remove the midframe

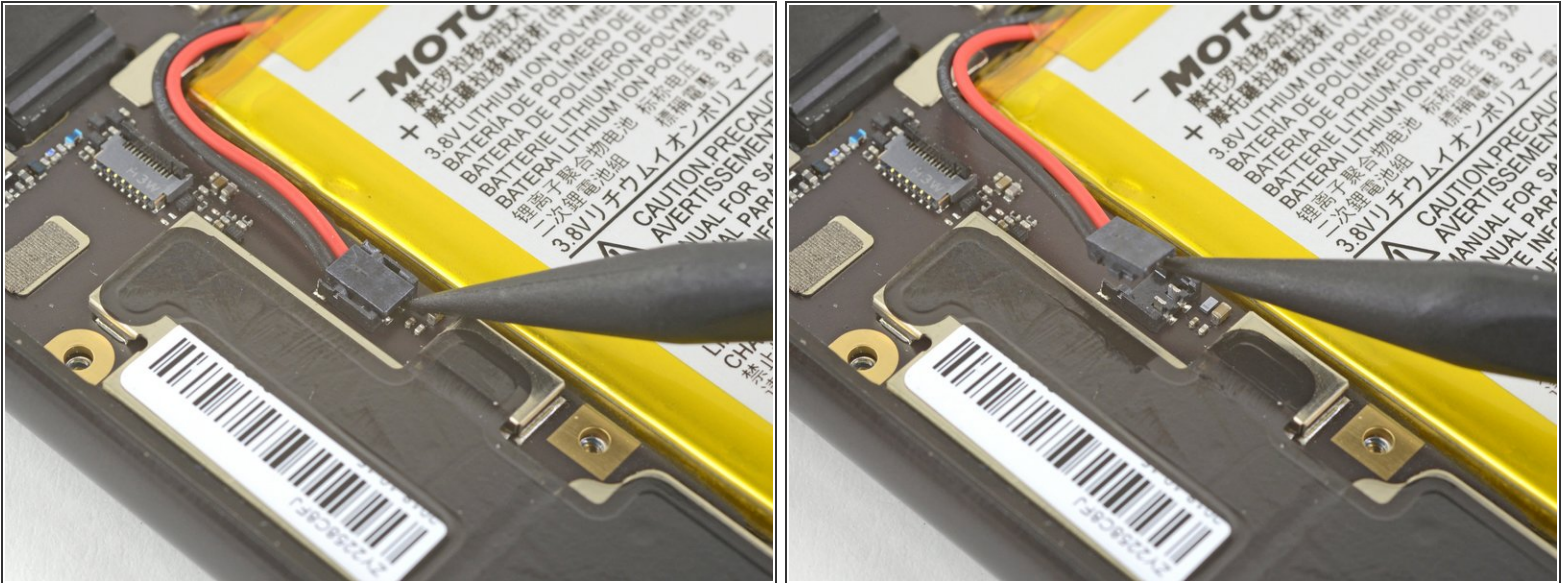


- Remove the midframe.

✦ To reinstall the midframe:

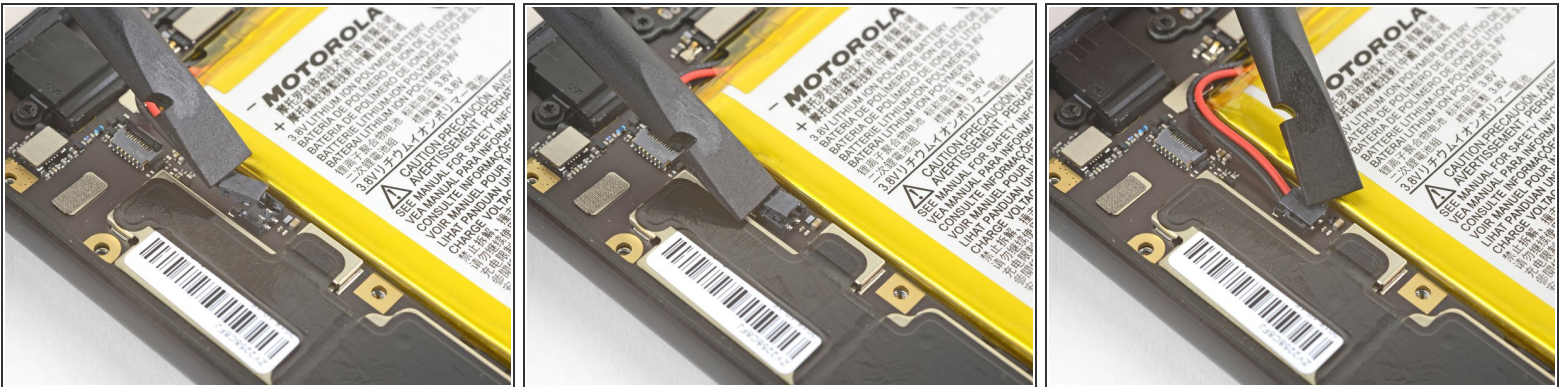
- Align the the midframe's top edge to the phone and press it into position.
- Shift the bottom edge slightly to the left, to maneuver the [left metal midframe clip](#) underneath the phone edge.
- Press the midframe's bottom edge into position.

Step 20 — Disconnect the battery



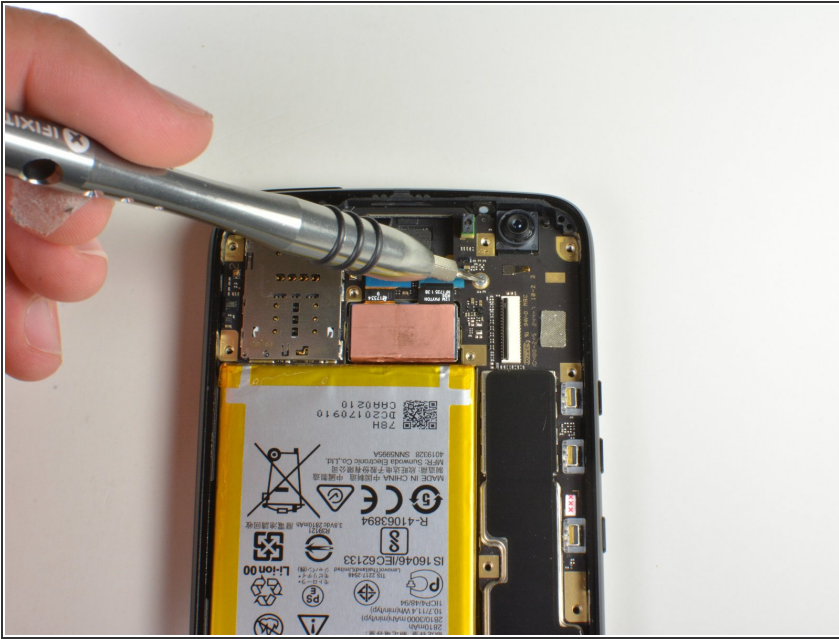
- Insert the point of a spudger underneath the top edge of the battery connector.
 - ⚠ Be careful not to dislodge the small surface-mounted components surrounding the socket.
- Gently pry up the connector to disconnect the battery.

Step 21



- ☑ To re-connect the battery, align the connector on top of the socket, and press it down with your finger or a spudger.

Step 22 — Motherboard



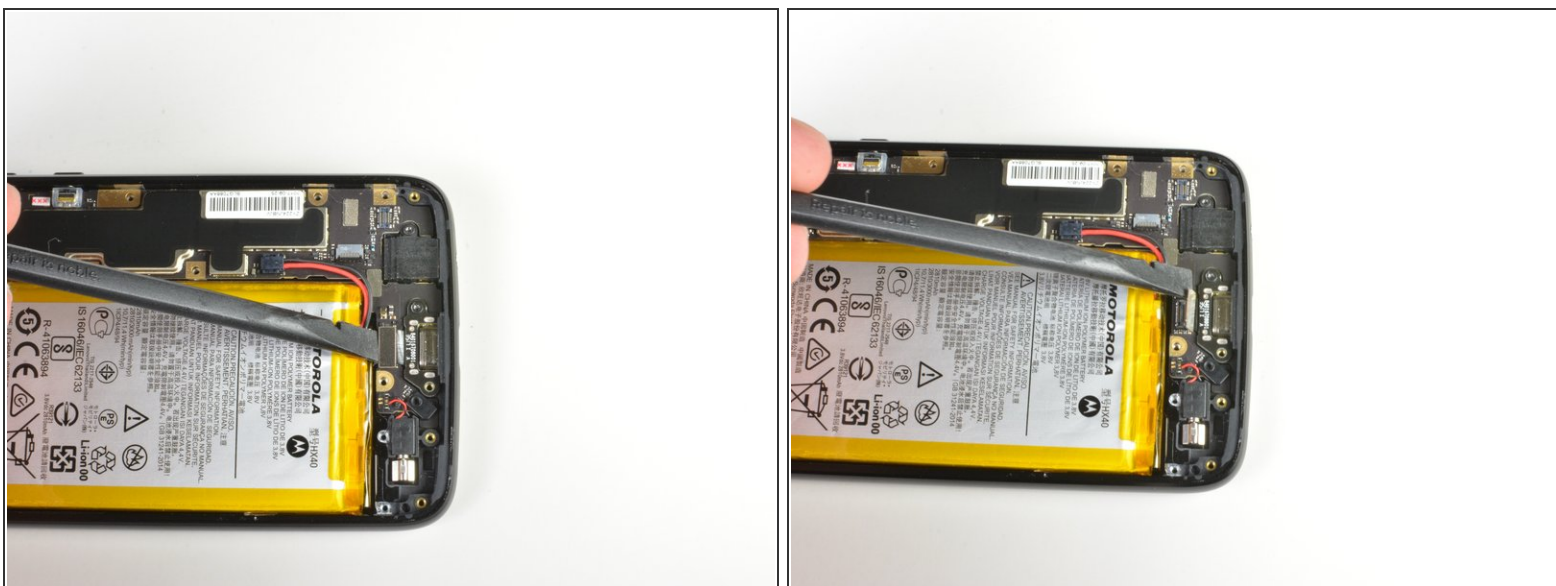
- Remove the T3 screw that is holding in the motherboard.

Step 23



- Use flat edge of the spudger to pry up the two blue connectors near the top of the device.

Step 24



- Use flat side of spudger to pry up connector near the bottom of the device.

Step 25



- Using a pair of tweezers disconnect the vibrating motors connector near the bottom of the device.

Step 26



- Carefully pry up the motherboard using the spudger.
- i** The previously disconnected wires may have to be held back in order to easily remove the motherboard.

To reassemble your device, follow these instructions 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 [Motorola Moto X4 Answers community](#) for help.