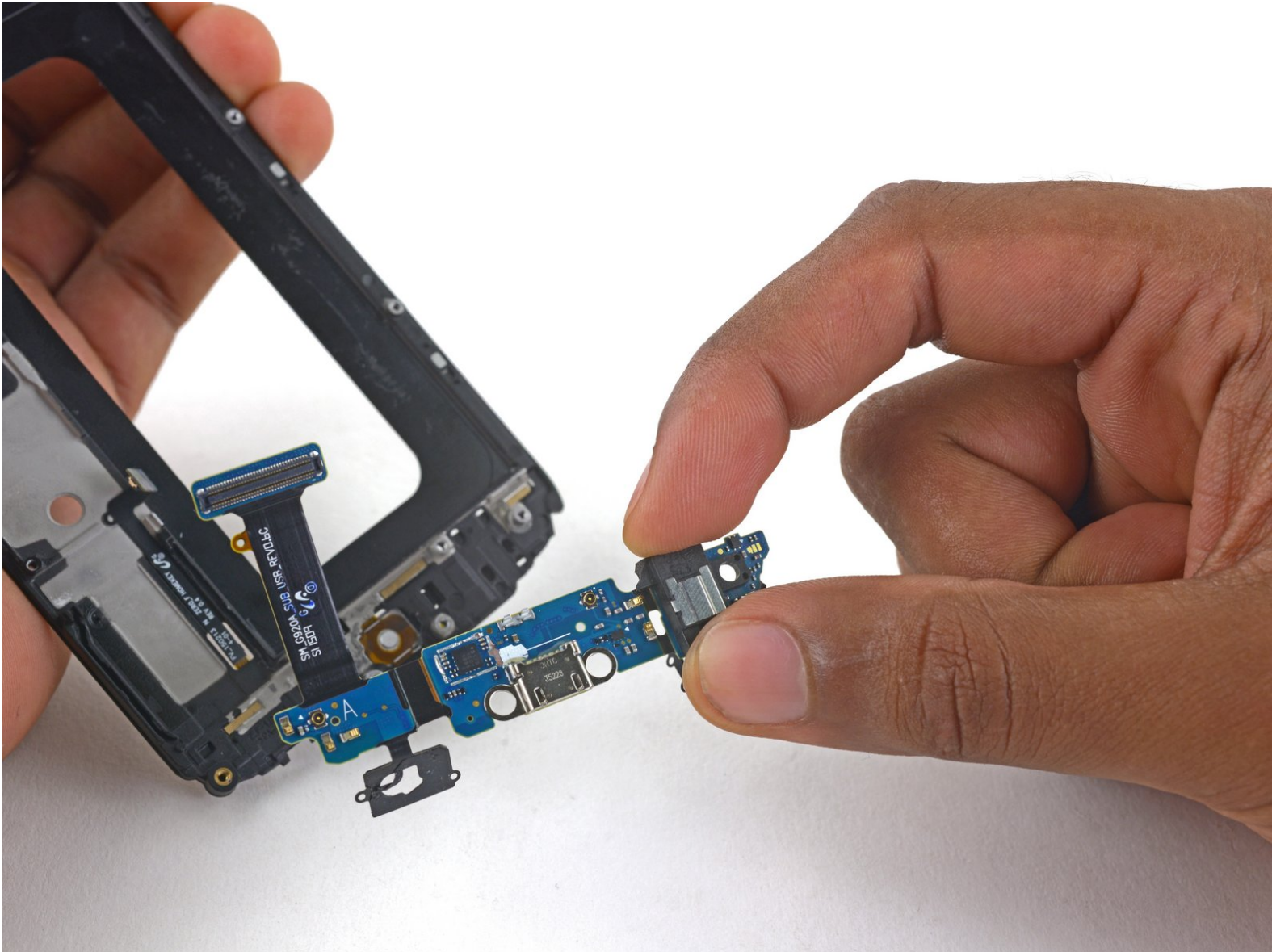




Samsung Galaxy S6 Display Frame Replacement

Replace the display frame on a Samsung Galaxy S6.

Written By: Dante Mazzanti



INTRODUCTION

Follow this guide to replace the display frame on your Samsung Galaxy S6. This involves separating the frame from the display assembly and removing the earpiece speaker, motherboard, daughterboard, and vibrator.

Removing the rear glass destroys the adhesive holding it in place. Follow [this guide](#) to reinstall the rear glass.



TOOLS:

- [Suction Handle](#) (1)
 - [SIM Card Eject Tool](#) (1)
 - [iFixit Opening Picks set of 6](#) (1)
 - [Tweezers](#) (1)
 - [iOpener](#) (1)
 - [Phillips #00 Screwdriver](#) (1)
 - [Spudger](#) (1)
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Step 1 — SIM Card



- Insert a paper clip or SIM eject tool into the hole in the SIM card slot on the power button side of the phone.
 - Press to eject the SIM card tray.
- ⚠ Don't press too hard or you may damage the SIM card tray.



Step 2



- Remove the SIM card tray from the phone.

Step 3 — iOpener Heating



-  We recommend that you clean your microwave before proceeding, as any nasty gunk on the bottom may end up stuck to the iOpener.
- Place the iOpener in the center of the microwave.
-  For carousel microwaves: Make sure the plate spins freely. If your iOpener gets stuck, it may overheat and burn.

Step 4



- Heat the iOpener for **thirty seconds**.
- Throughout the repair procedure, as the iOpener cools, reheat it in the microwave for an additional thirty seconds at a time.

- ⚠ Be careful not to overheat the iOpener during the repair. Overheating may cause the iOpener to burst.
- ⚠ Never touch the iOpener if it appears swollen.
- ⚠ If the iOpener is still too hot in the middle to touch, continue using it while waiting for it to cool down some more before reheating. A properly heated iOpener should stay warm for up to 10 minutes.

Step 5



- Remove the iOpener from the microwave, holding it by one of the two flat ends to avoid the hot center.
- ⚠ The iOpener will be very hot, so be careful when handling it. Use an oven mitt if necessary.

Step 6 — Rear Glass



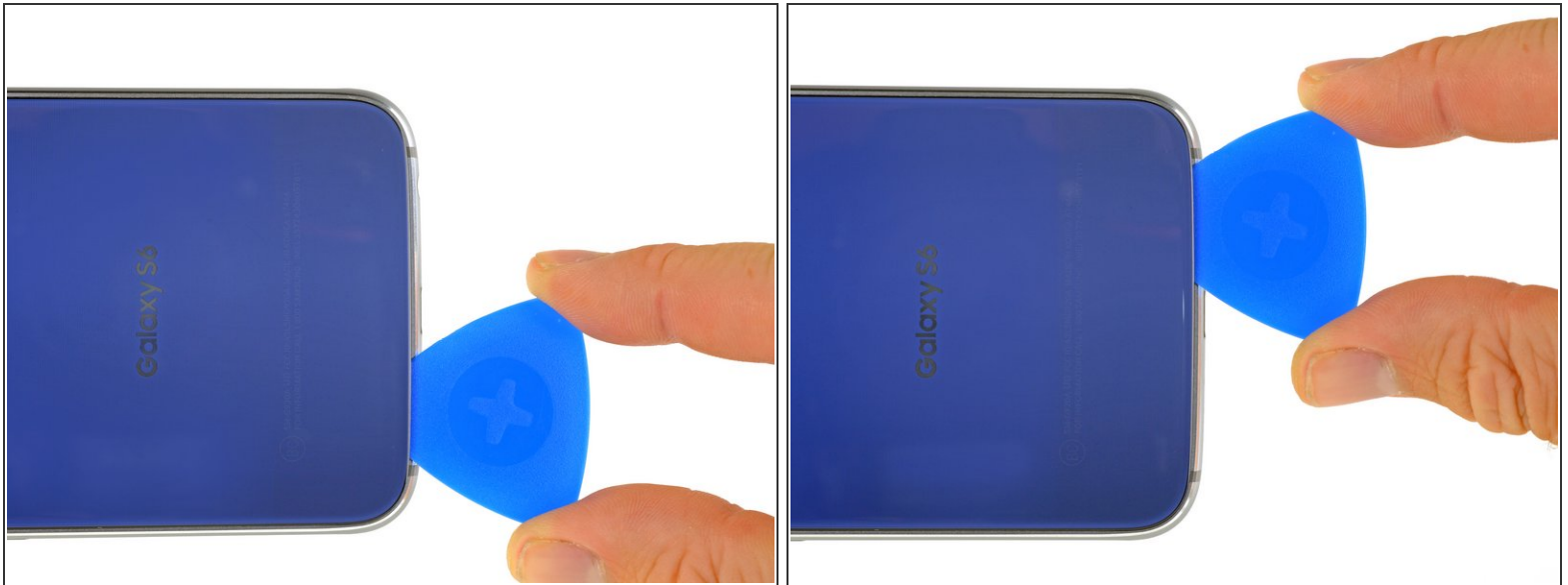
- ⓘ Opening your phone will compromise its waterproof seals. Have replacement adhesive ready before you proceed, or take care to avoid liquid exposure if you reassemble your phone without replacing the adhesive.
- ⓘ If your glass is shattered, put packing tape over the entire panel to hold it together during the removal process.
- Lay the heated iOpener over the rear panel for about two minutes to loosen the adhesive around the edge of the 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.
- Shift the iOpener to heat the remaining section of the panel for another two minutes.
- ⚠ A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the phone—the OLED display and internal battery are both susceptible to heat damage.

Step 7



- Once the rear glass is hot to the touch, apply a suction cup near the bottom edge of the glass.
- Lift on the suction cup to create a small gap underneath the rear glass, and insert an opening pick into the gap.
- ⓘ Optionally, once the pick is inserted, you can add a few drops of isopropyl alcohol into the gap to help weaken the adhesive in the following steps.

Step 8



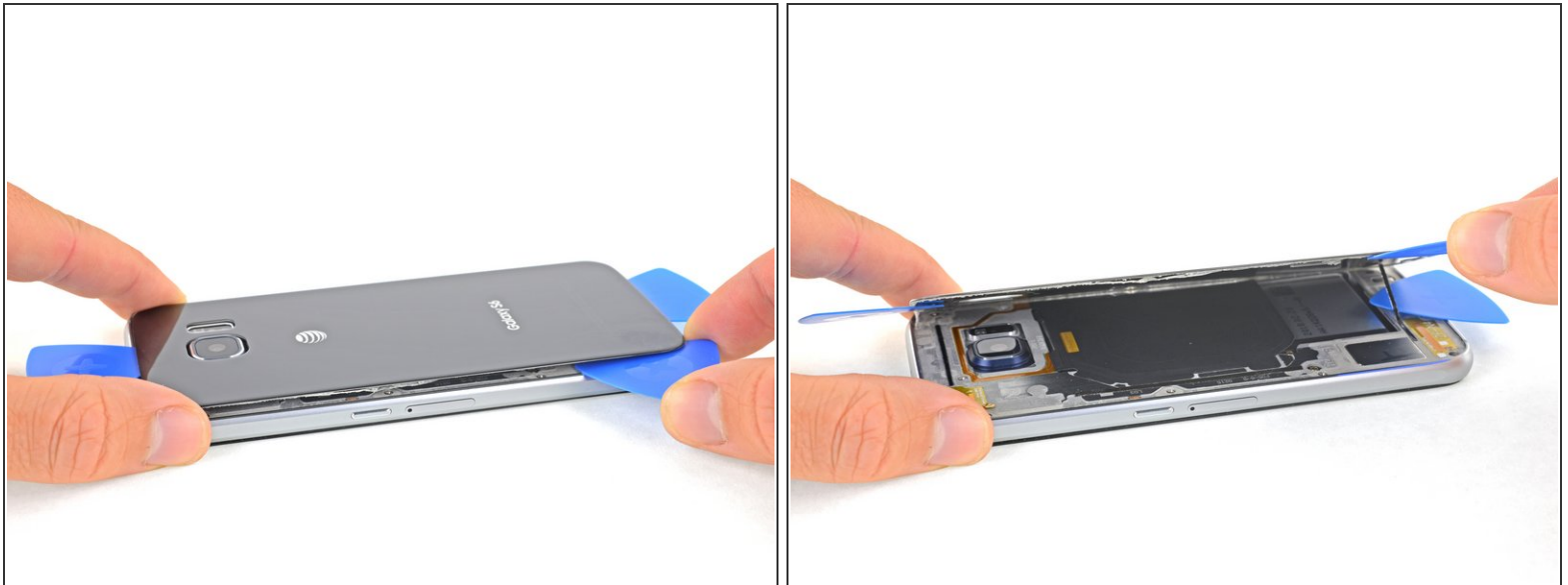
- Slide the pick along the bottom edge of the phone to slice through the adhesive securing the rear glass.
- ⓘ Afterward, it may help to leave the pick in place and grab a second pick as you proceed to the next step. Leaving the pick inserted can help prevent the glue you just separated from re-adhering.
- ⓘ Re-heat the rear glass as needed to prevent the glue from cooling and hardening.

Step 9



- Repeat the heating and cutting procedure for the remaining three sides of the phone.
- Leave an opening pick under each edge to prevent the adhesive from resealing.

Step 10



- Use an opening pick to slice through any remaining adhesive.
- Remove the rear glass.

Step 11



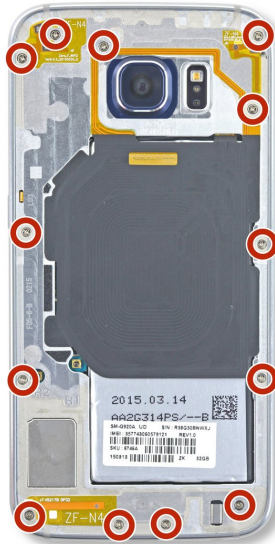
To install new rear glass:

- Use tweezers to peel away any remaining adhesive from the phone's chassis.
- Clean the adhesion areas with high concentration isopropyl alcohol (at least 90%) and a lint-free cloth. Swipe in one direction only, not back and forth. This will help prep the surface for the new adhesive.
- Peel the adhesive backing off of the new rear glass, carefully line up one edge of the glass against the phone chassis, and firmly press the glass onto the phone.



If you're reinstalling the old rear glass, or using rear glass without adhesive pre-installed, follow [this guide](#).

Step 12 — Midframe Assembly



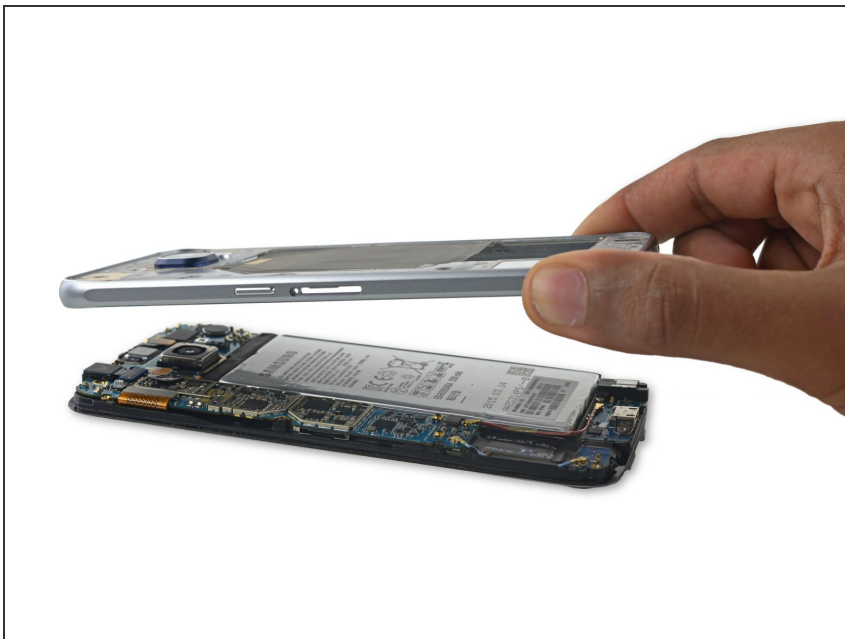
- Remove the thirteen 3.5mm Phillips #00 screws securing the midframe to the phone.

Step 13



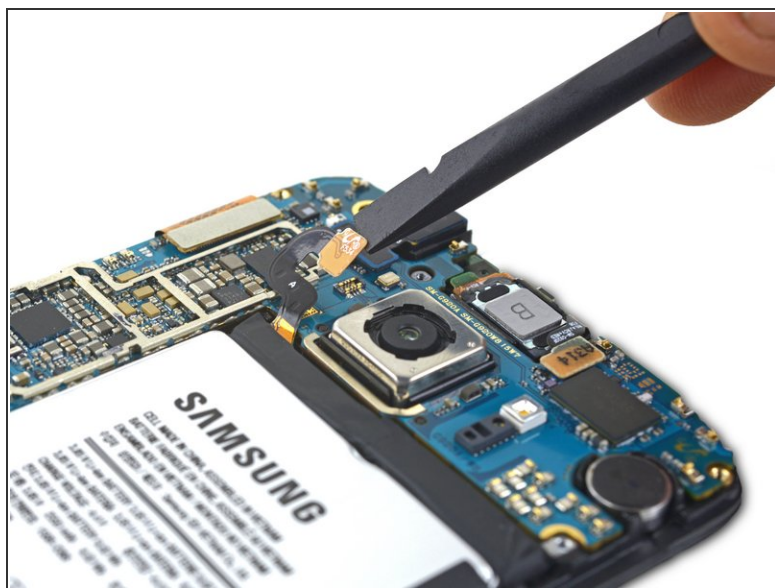
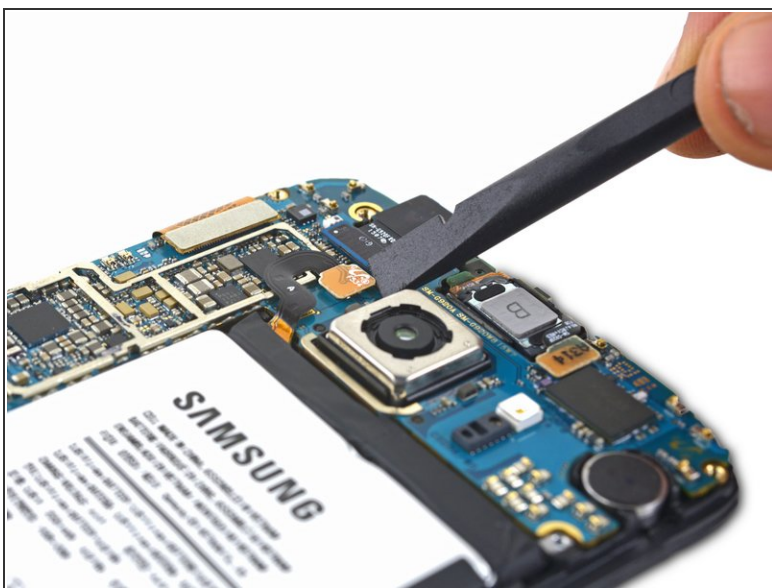
- Firmly grasp the edge of the midframe assembly.
- Lift up on the midframe assembly while pushing down on the battery to separate the midframe assembly from the rest of the phone.
 - While lifting the midframe, be careful to avoid snagging it on the audio jack or charging port.
 - Once the midframe is partially separated, carefully run an opening pick around the edges of the rest of the phone to separate the top of the midframe.
 - To avoid damage to the headphone jack, remove the top of the midframe first, then push the midframe downwards to disengage it from the headphone jack.
- You may need to [heat](#) and apply an iOpener to the edges of the display to soften the display adhesive if midframe separation is difficult.

Step 14



- Lift the midframe assembly up to separate it from the rest of the phone.

Step 15 — Disassembling Samsung Galaxy S6 Battery Connector



- Use the flat end of the spudger to disconnect the battery connector from its socket on the motherboard.

Step 16 — Battery



- Insert a plastic opening pick between the case and the battery.
 - ⚠ Be careful to keep the pick as flat as possible to avoid bending the battery, which may damage it and cause it to release dangerous chemicals.
- Push the pick further in to separate the battery from the phone.
 - If the battery is too strongly adhered for the opening pick, place a [warm iOpener](#) over the battery to loosen the adhesive.
 - Alternatively, apply some isopropyl alcohol under each corner of the battery and allow it to penetrate for several minutes to help weaken the adhesive.
- ⚠ Do not pry against the motherboard or you may damage the phone.

Step 17



- Remove the battery from the phone.

⚠ Do not reuse the battery after it has been removed, as doing so is a potential safety hazard. Replace it with a new battery.

🔧 To install a new battery:

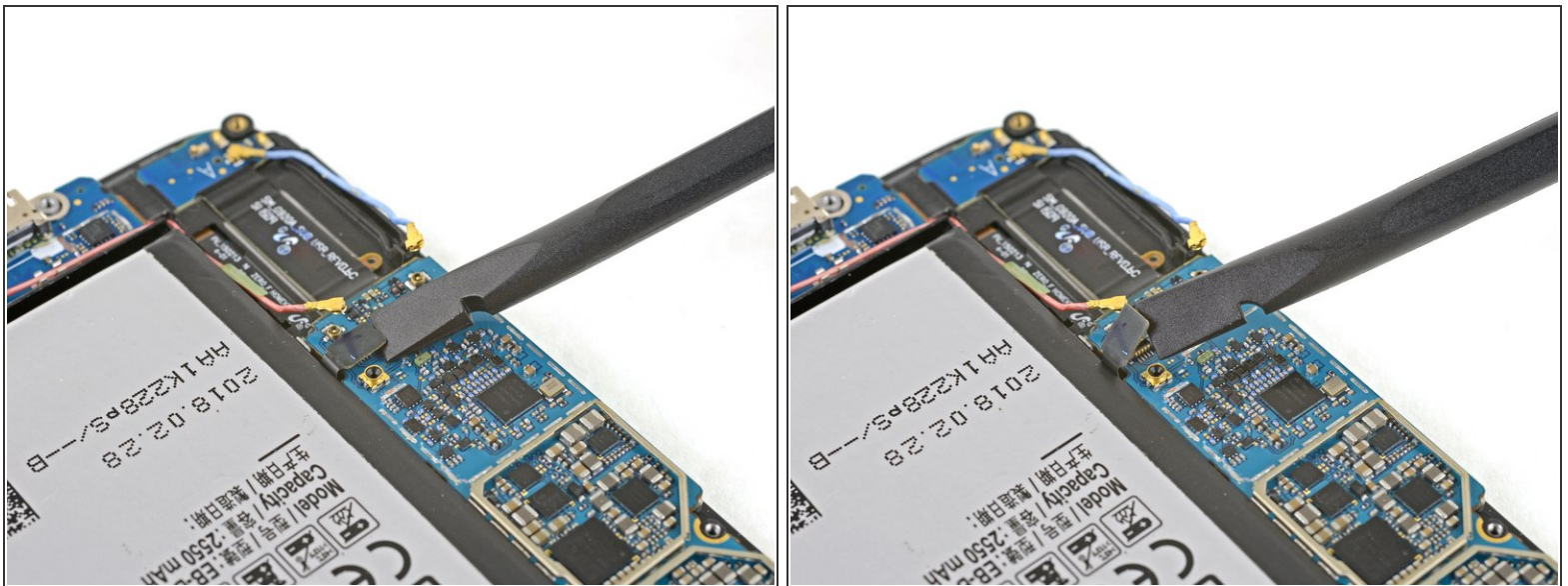
- Remove any remaining adhesive from the phone, and clean the glued areas with isopropyl alcohol and a lint-free cloth.
- Secure the new battery with pre-cut adhesive or double-sided adhesive tape. In order to position it correctly, apply the new adhesive into the phone, not directly onto the battery. The adhesive should go around the perimeter of the battery compartment, but not in the rectangular cutout in the center (which is actually the back side of the display).
- Press the battery firmly into place for 5-10 seconds.

Step 18 — Motherboard Assembly



- Use the pointed edge of a spudger to disconnect the Bluetooth and Wi-Fi antenna cable connectors from their sockets on the motherboard.

Step 19



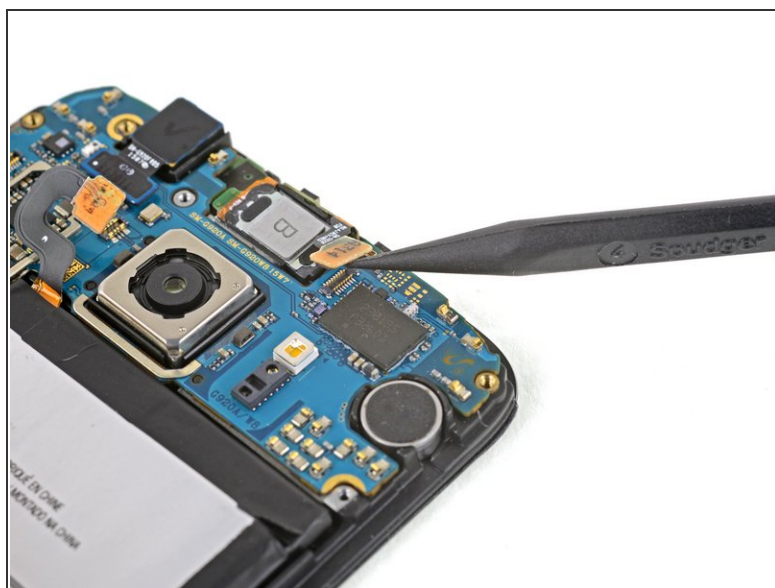
- Use the flat end of the spudger to disconnect the home button connector.

Step 20



- Use the flat end of a spudger to disconnect the display assembly cable from the motherboard.

Step 21



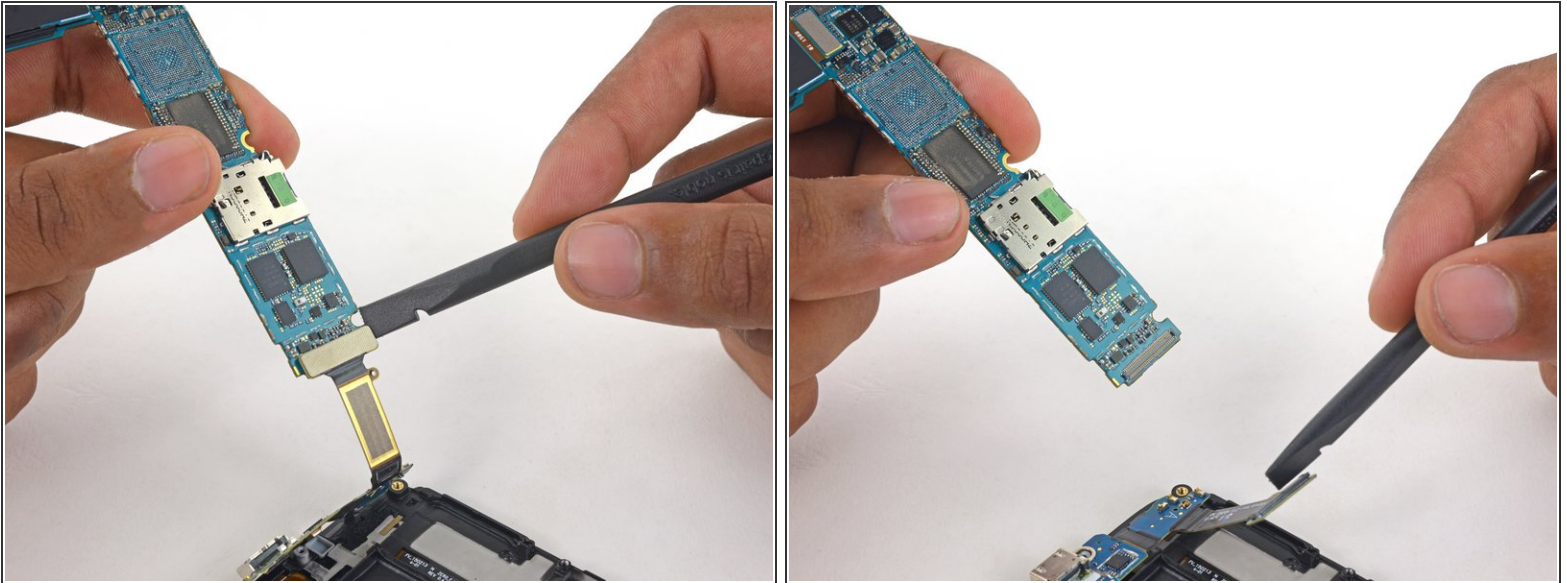
- Disconnect the earpiece speaker assembly cable connector from the motherboard.

Step 22



- Lift the camera-side end of the motherboard to separate it from the display frame.
 - ⓘ You may need to move some of the ribbon cables out of the way while you lift the motherboard. If the board is hard to lift, check that it is fully disconnected and not caught on any ribbon cables.
- ⚠ Do **not** fully remove the motherboard yet—it is still attached to the daughterboard via a ribbon cable on the underside of the motherboard.

Step 23



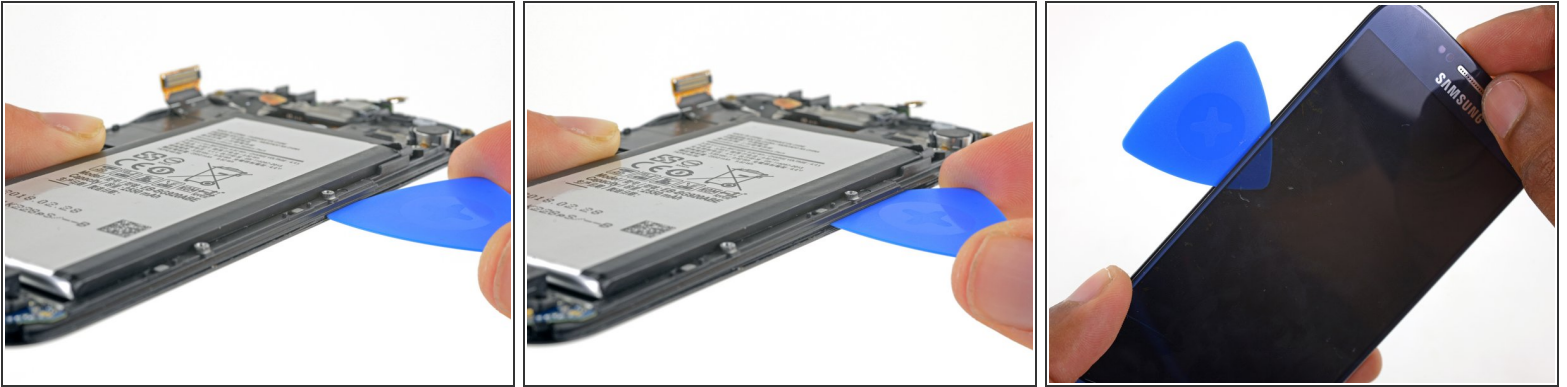
- Use the flat end of a spudger to disconnect the daughterboard ribbon cable connector from its socket on the underside of the motherboard.

Step 24 — Screen



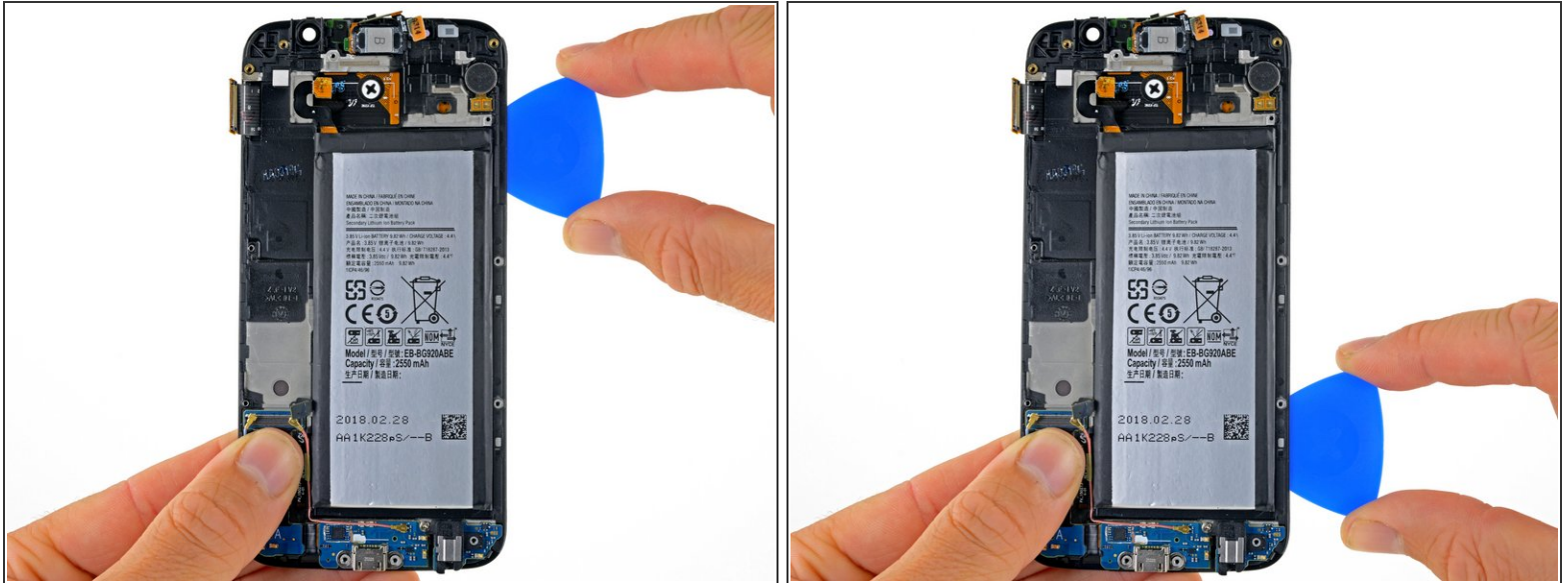
- If your display glass is badly cracked, [tape over the glass](#) to contain stray glass and make prying easier.
 - [Reheat](#) the iOpener.
 - Lay the iOpener across the S6 display. After two minutes, shift the iOpener to the other half of the screen.
- ⓘ You may need to reheat and reapply the iOpener several times to get the phone warm enough. Follow the iOpener instructions to avoid overheating.

Step 25



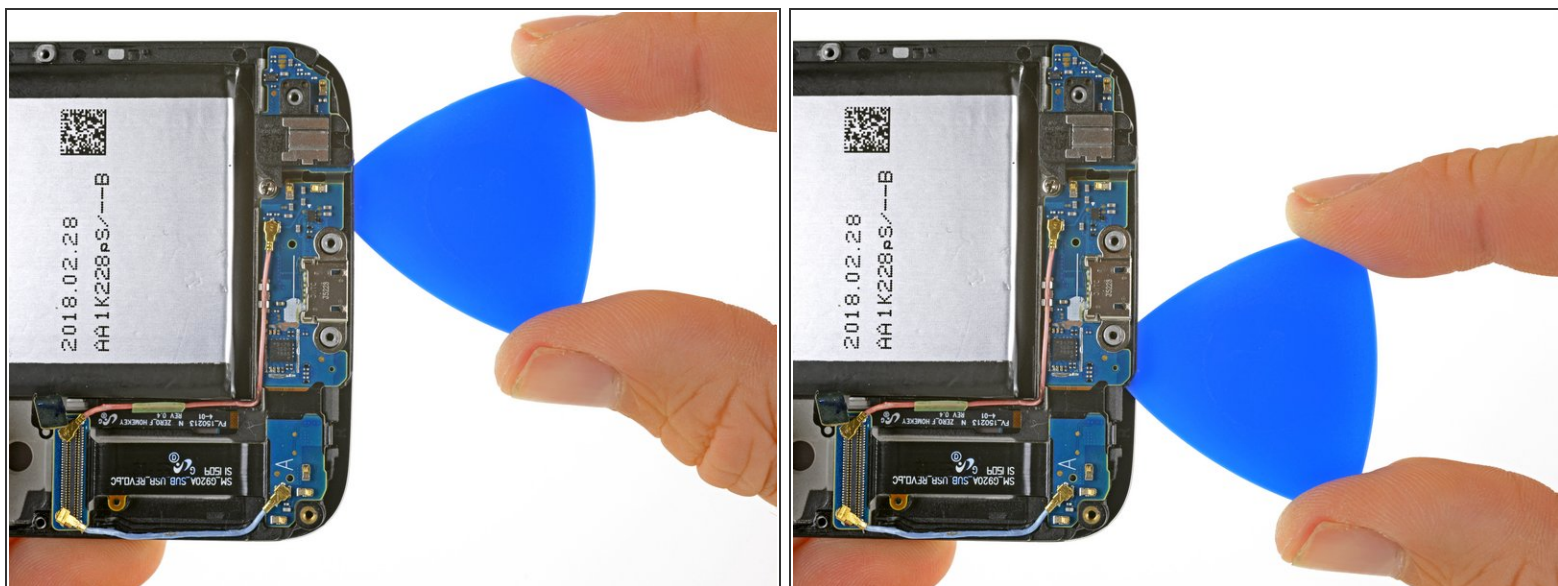
- Insert the opening pick in the battery-side edge of the phone, between the frame and display, at an upward angle.
 - ❗ When done correctly, you will see a gap between the display frame and the display assembly.
 - ⚠ When done incorrectly, the pick will be visible through the glass. If this happens simply remove the pick and start again.

Step 26



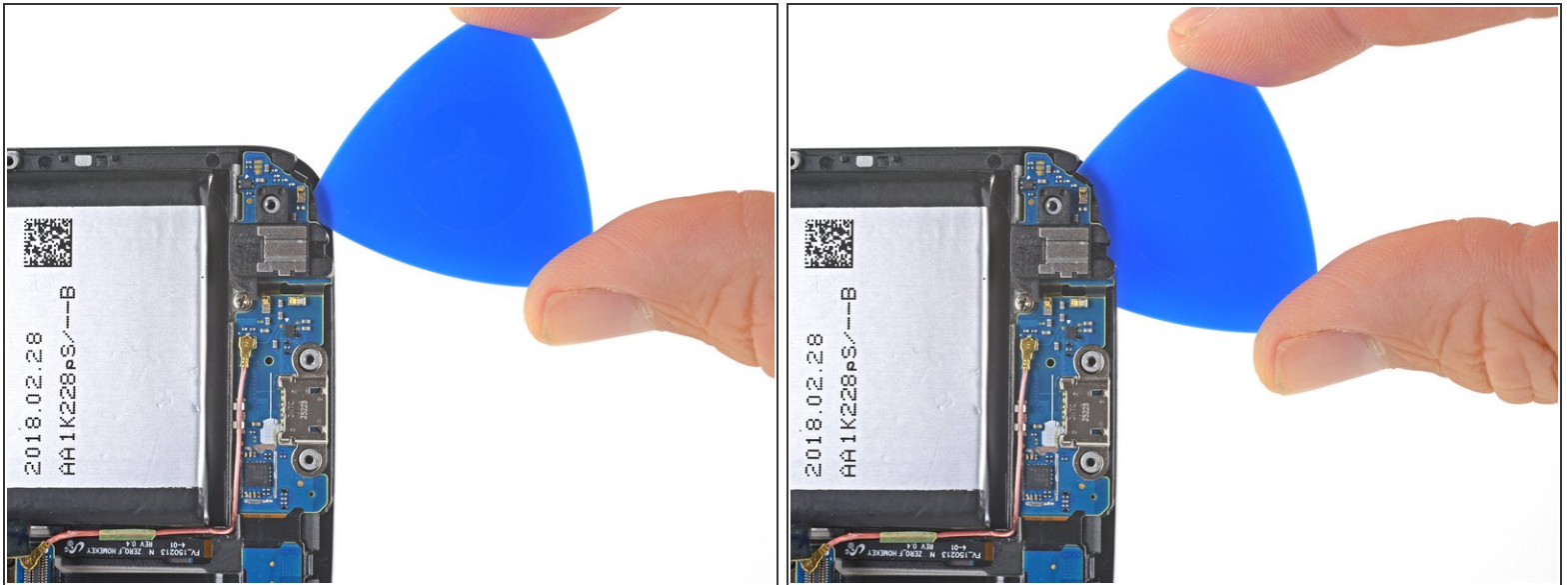
- Slide the pick down the edge of the display to separate the adhesive underneath.
 - Stop cutting when you get to the daughterboard to avoid the delicate capacitive button under the display.
- i** If cutting becomes difficult at any point, reheat and reapply the iOpener.
- After cutting the adhesive, leave the pick in the side of the display to prevent the display from re-adhering to the frame.

Step 27



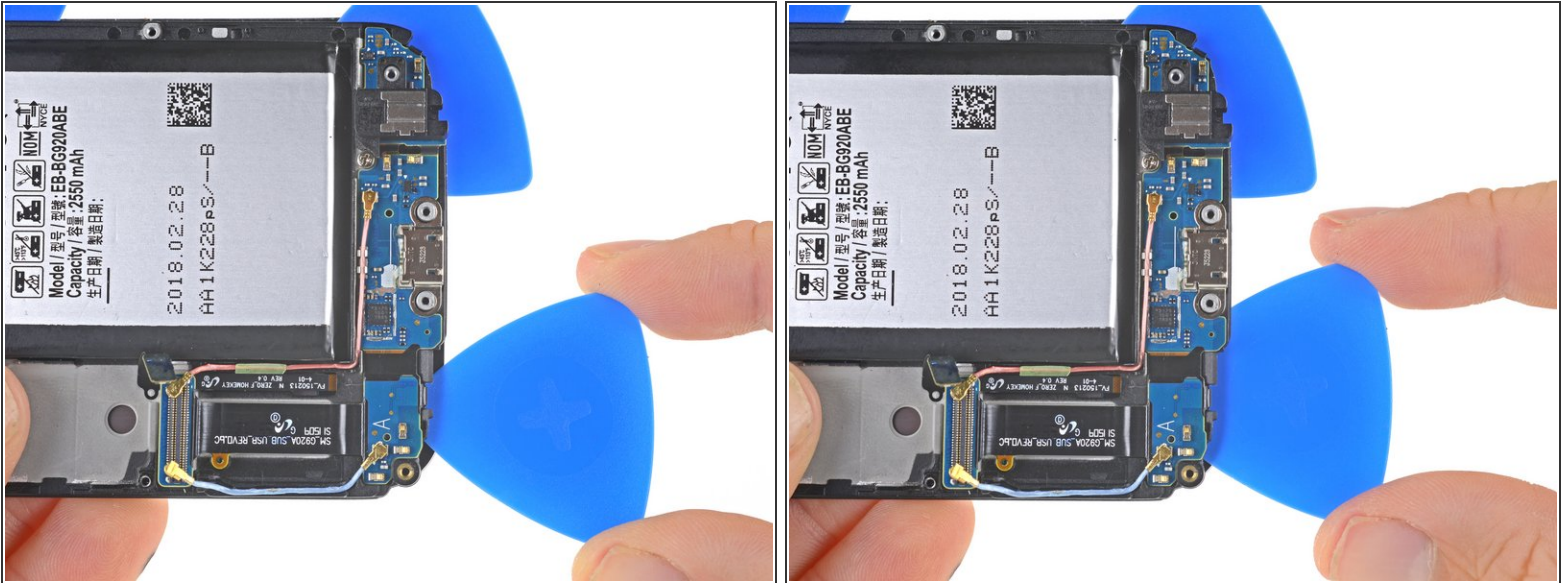
- Slide the pick along the bottom edge of the phone, from the headphone jack to just past the charging port.
- Do not insert the opening pick more than 0.25 inches (~6mm) to avoid damaging the home button.

Step 28



- Insert an opening pick about 0.5 inches (~12mm) under the bottom corner of the display, near the headphone jack.
 - ⚠ Keep a close eye on the button's ribbon cable as you insert the pick. The cable is fragile and very easy to tear. If the pick is hard to insert or the cable starts to stretch, apply more heat.
- Leave the pick under the display to prevent the button from re-adhering to the display.
- ⓘ If you do break either of the capacitive buttons or ribbon cables, you can replace the [daughterboard assembly](#), which includes new capacitive buttons.

Step 29



- Insert an opening pick about 0.5 inches (~12mm) under the opposite bottom corner of the display.
 - ⚠ Keep a close eye on the button's ribbon cable as you insert the pick. The cable is fragile and very easy to tear. If the pick is hard to insert or the cable starts to stretch, apply more heat.
- Leave the pick under the display to prevent the button from re-adhering to the display.

Step 30



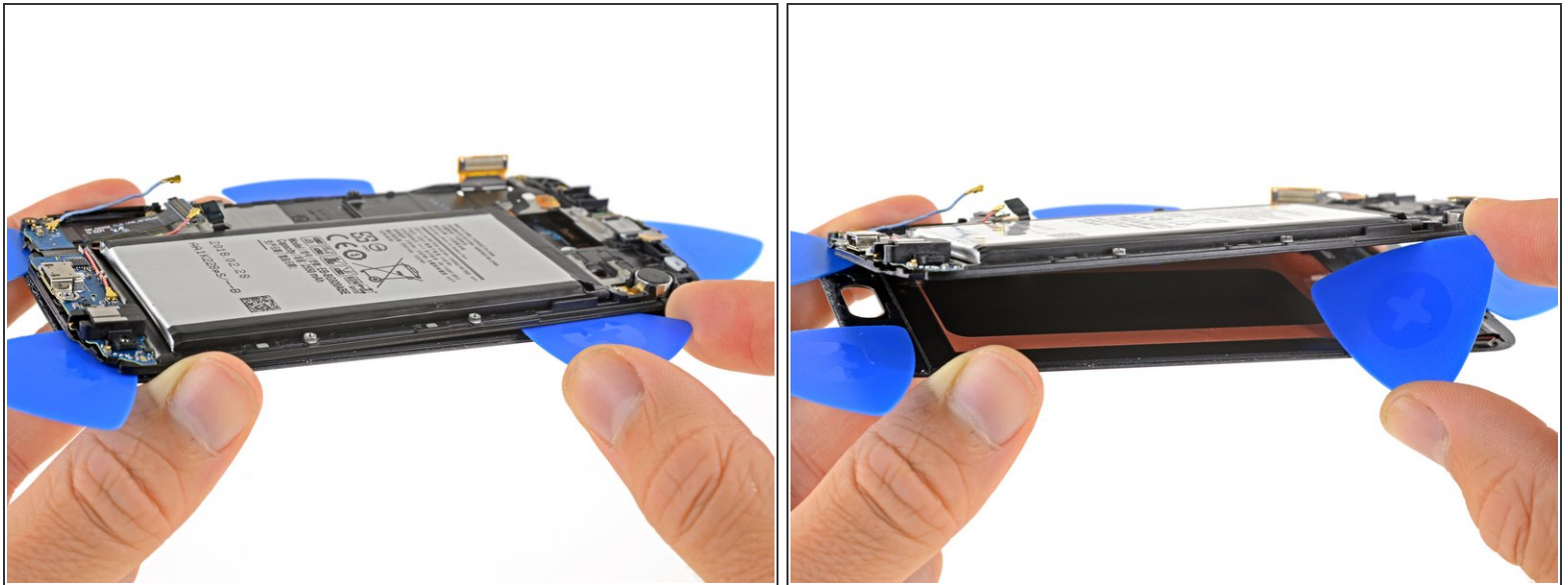
- Slide an opening pick along the side of the phone opposite the battery to separate the adhesive underneath.
- After cutting the adhesive, leave the pick in the side of the display to prevent the display from re-adhering to the frame.

Step 31



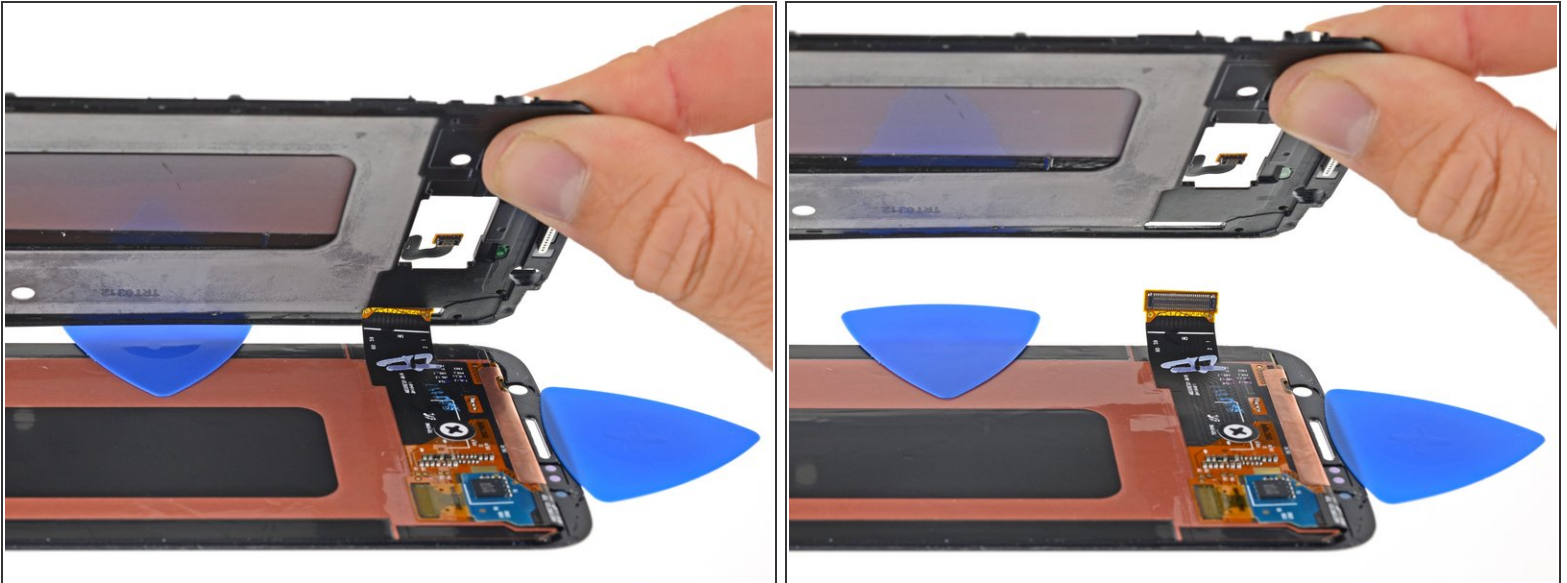
- Slide a pick along the top of the phone towards the vibrator.
- ⚠ Pull the pick out slightly to avoid the earpiece speaker grille.

Step 32



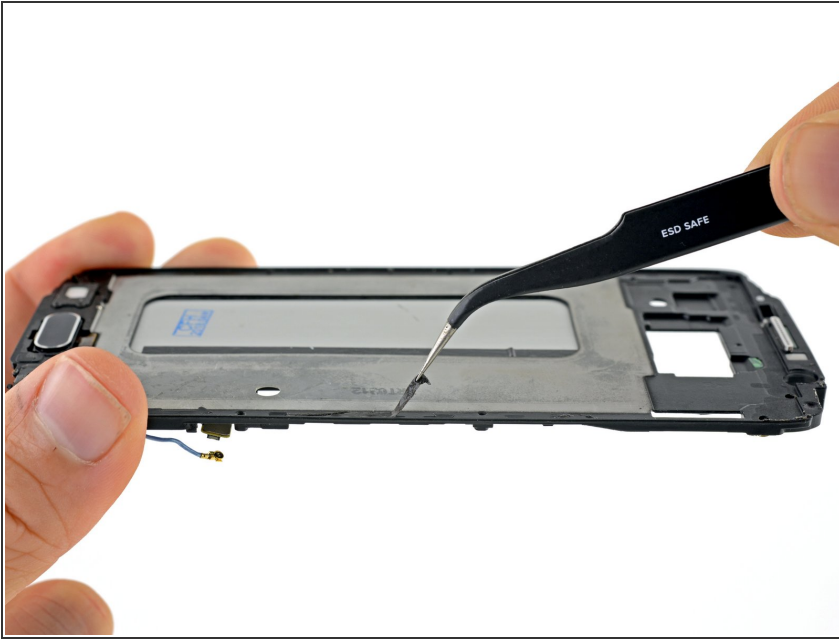
- Use an opening pick to gently pry the battery side of the frame away from the display.
 - If the display and frame do not separate easily, use an opening pick to cut any remaining adhesive. If cutting is difficult, reheat and reapply an iOpener.
- ⚠ Do not completely remove the display yet. The display cable is still threaded through the frame.

Step 33



- Route the display's flex cable through its hole in the frame in order to fully separate the right edge of the display.

Step 34



- ✦ Before installing a new display, it's very important to remove all traces of the old adhesive from the frame, while taking special care to remove any small glass fragments.
- After removing all traces of glue and glass from the frame, clean the adhesion areas with 90% (or higher) isopropyl alcohol and a lint-free cloth or coffee filter. Swipe in one direction only, not back and forth.
- ⚠ If the frame is bent, or if any glue or glass remnants are left behind, the new display will not mount correctly and may be damaged. If necessary, [replace the frame](#).
- ✦ The best way to secure the new screen is with a sheet of custom-cut double-sided tape. Apply the tape to the back of the screen, then carefully feed the display cable through the frame. Align the screen and press it into place.

Step 35 — Earpiece Speaker Assembly



- Use the pointed edge of the spudger to lift the earpiece speaker assembly from the display frame.

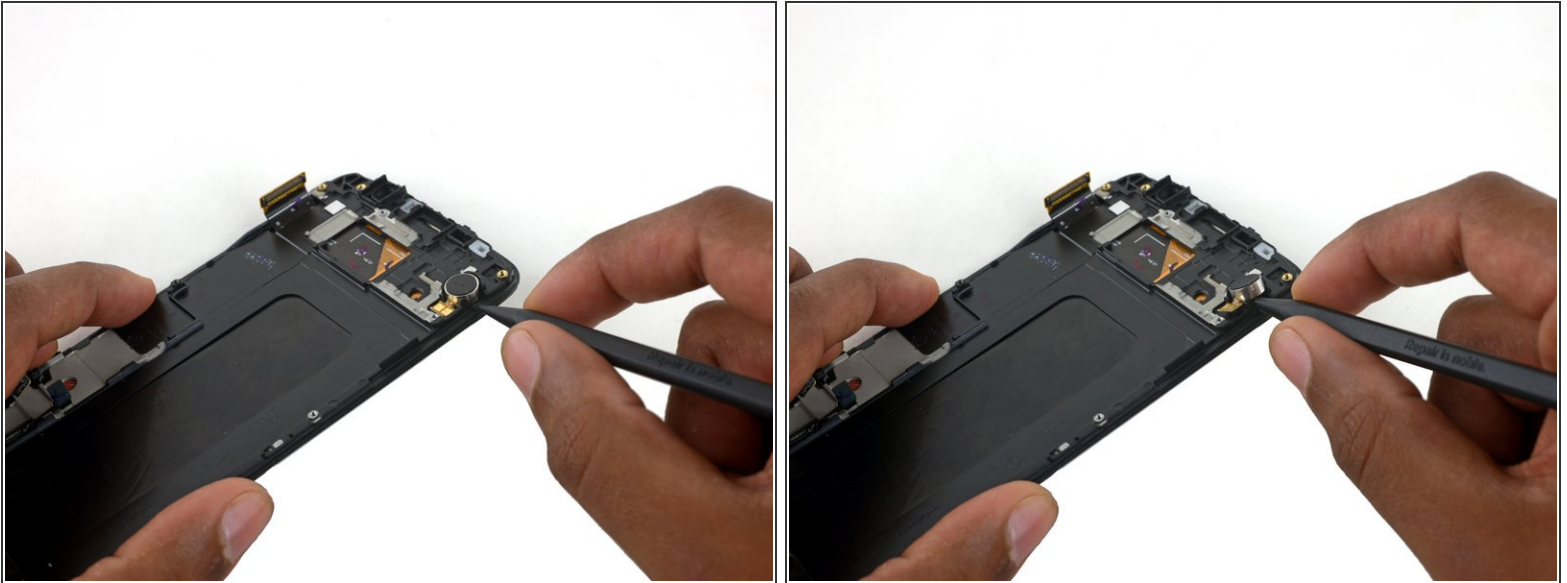
Step 36



- Use tweezers to lift the assembly out once it's been pried loose.

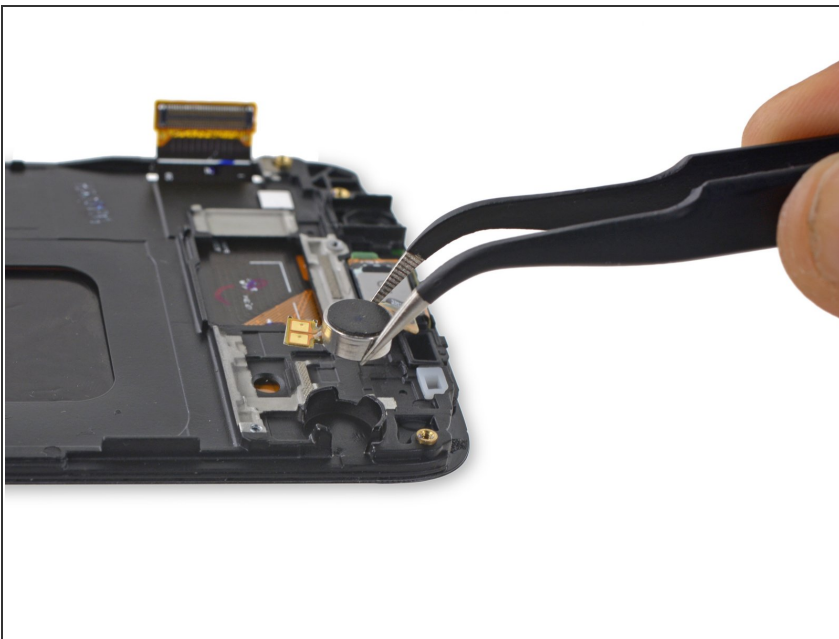
⚠ This assembly contains a speaker, microphone, IR blaster, and ambient light sensor—each on a different PCB. Be sure each component is loose before lifting out the whole assembly.

Step 37 — Vibrator



- Pry the vibrator up from the display assembly with the point of a spudger.
- Push to pry up the vibrator and its spring-contact connector.

Step 38



- Remove the vibrator.

Step 39 — Daughterboard



- Remove the single 3.0mm Phillips #00 screw securing the daughterboard to the display frame.

Step 40

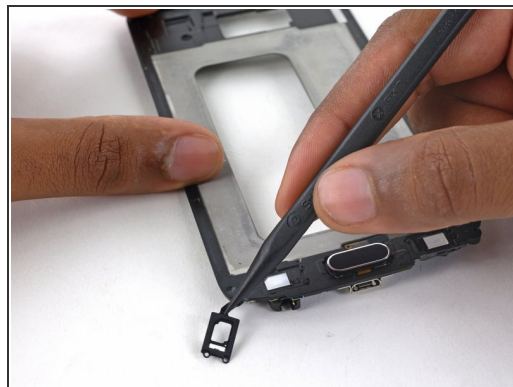
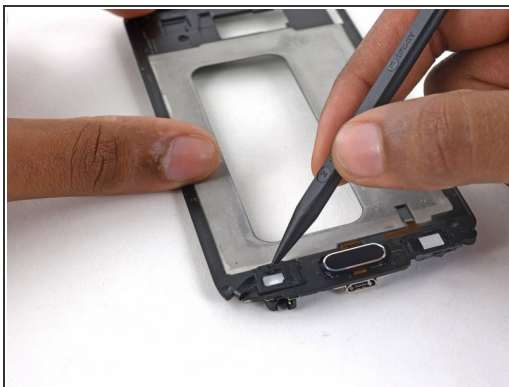


i Flip the display frame over so the home button is facing you.

- Insert the pointed edge of the spudger into the groove next to the right soft button LED cable.
- Gently lift the LED cable off the display frame.

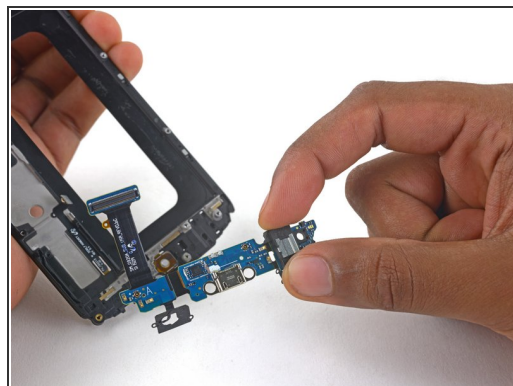
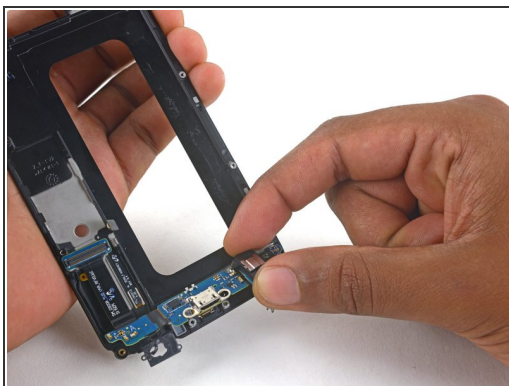
⚠ Be careful to not rip these delicate cables when peeling them off the plastic frame.

Step 41



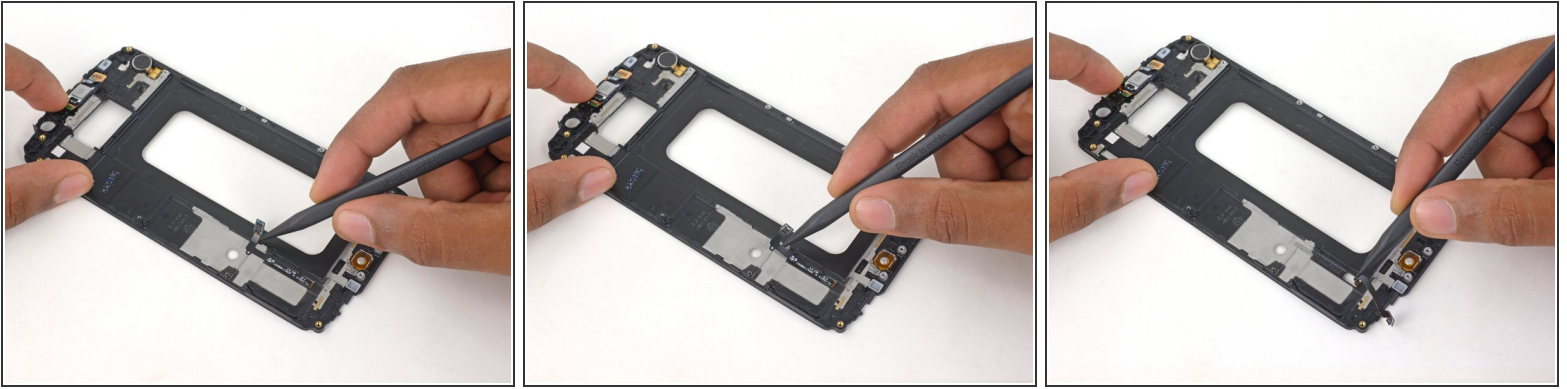
- Insert the pointed edge of the spudger into the groove above the left soft button LED cable.
- Lift the left soft button LED cable off the plastic frame.


Step 42




- ⓘ Flip the frame over again and lift up the daughterboard to peel it off the display frame.

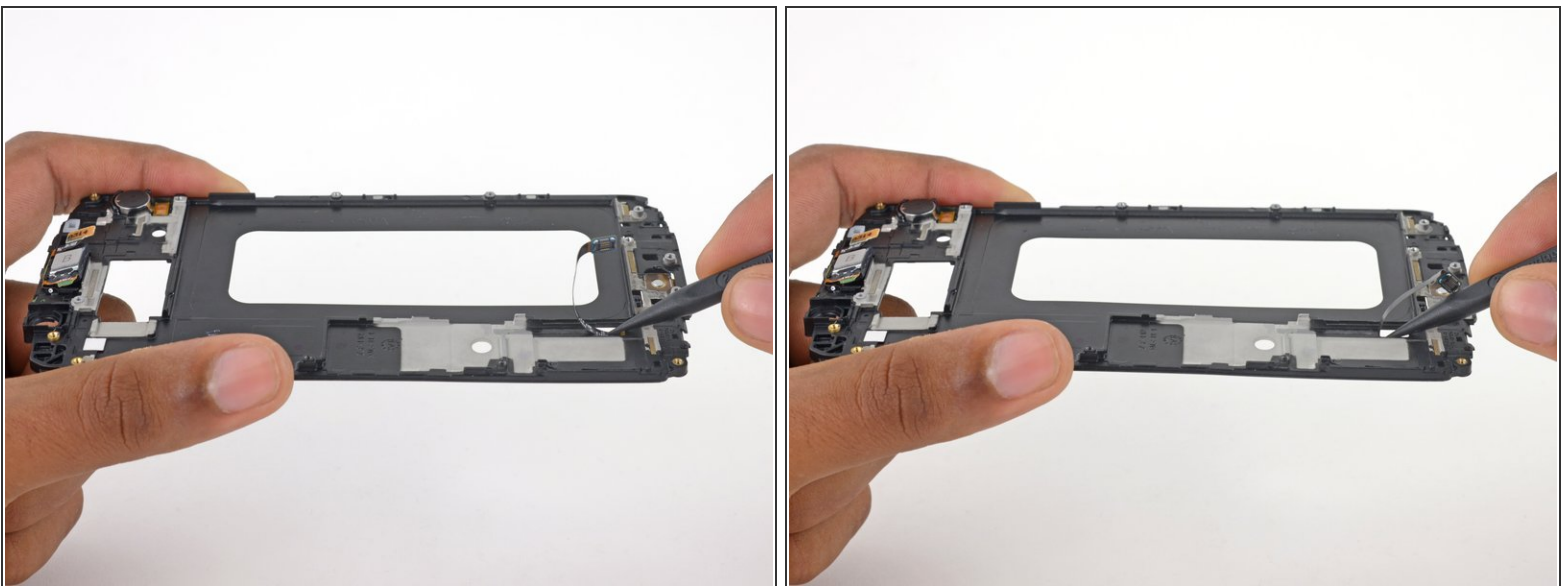
Step 43 — Home Button



 Orient the display frame so the home button connector faces you.

- Use the pointed edge of the spudger to separate the home button ribbon cable from the display frame.
-  Be careful when removing the home button ribbon cable. It is delicate and can tear easily.

Step 44



- Use the pointed end of a spudger to push the home button cable through the display frame.

Step 45



- Flip the display frame over and use the pointed end of a spudger to pull the home button cable completely through the hole.

Step 46



- Slide the spudger under the cable to continue separating it from the frame.

Step 47



- i** The button is held in place by a tab on each side. To remove the button, it needs to move far enough over to clear the edge of the bracket.
- Once the cable is entirely separated from the frame, use a spudger to push the home button to the far left of its bracket.
 - Use a spudger to push the home button up and out of its bracket.

Step 48



- Remove the home button.

To reassemble your device, follow these instructions in reverse order. When reinstalling the rear glass, refer to the [rear glass adhesive replacement guide](#).