



iPhone 7 LCD and Digitizer Replacement

Fix a broken screen on an iPhone 7 by replacing just the bare front panel, a.k.a. LCD and digitizer assembly.

Written By: Evan Noronha



INTRODUCTION

For an easier repair, use our [fix kit](#) and follow [this shorter guide](#) to replace your iPhone's entire screen.

For more advanced fixers, this guide will help you replace *only* the iPhone 7 LCD and digitizer assembly (a.k.a. the bare “front panel”). This requires you to transfer several components from your original screen to the new one before installing it—including the [front camera assembly](#), [earpiece speaker](#), [LCD shield plate](#), and [home/Touch ID sensor](#).

For all screen/display repairs, **it's important to carefully transfer the original home/Touch ID sensor onto the new display in order for it to function.** The solid state home button is paired to its original logic board by Apple, so replacing it will render it unusable.



TOOLS:

- [P2 Pentalobe Screwdriver iPhone](#) (1)
- [iOpener](#) (1)
- [Suction Handle](#) (1)
- [Spudger](#) (1)
- [iFixit Opening Picks set of 6](#) (1)
- [Tri-point Y000 Screwdriver Bit](#) (1)
- [Tweezers](#) (1)
- [Phillips #000 Screwdriver](#) (1)



PARTS:

- [iPhone 7 LCD and Digitizer](#) (1)
- [iPhone 7 Display Assembly Adhesive](#) (1)
- [iPhone 7 Front Panel Assembly Cable Bracket](#) (1)
- [iPhone 7 Earpiece Speaker Bracket](#) (1)

Step 1 — Pentalobe Screws



- ⚠ Before you begin, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.
- Power off your iPhone before beginning disassembly.
- Remove the two 3.4 mm pentalobe screws on the bottom edge of the iPhone.
- ⓘ Opening the iPhone's display will compromise its waterproof seals. Have [replacement seals](#) ready before you proceed past this step, or take care to avoid liquid exposure if you reassemble your iPhone without replacing the seals.

Step 2 — Taping Over The Display



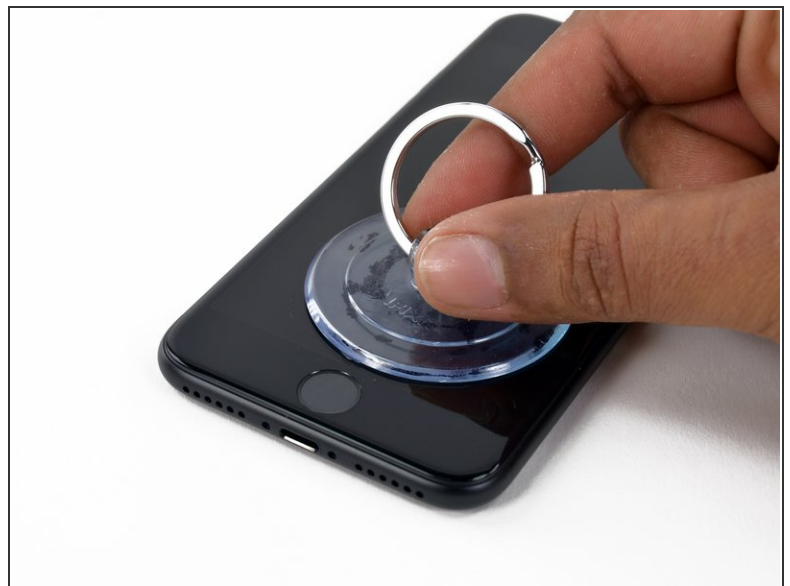
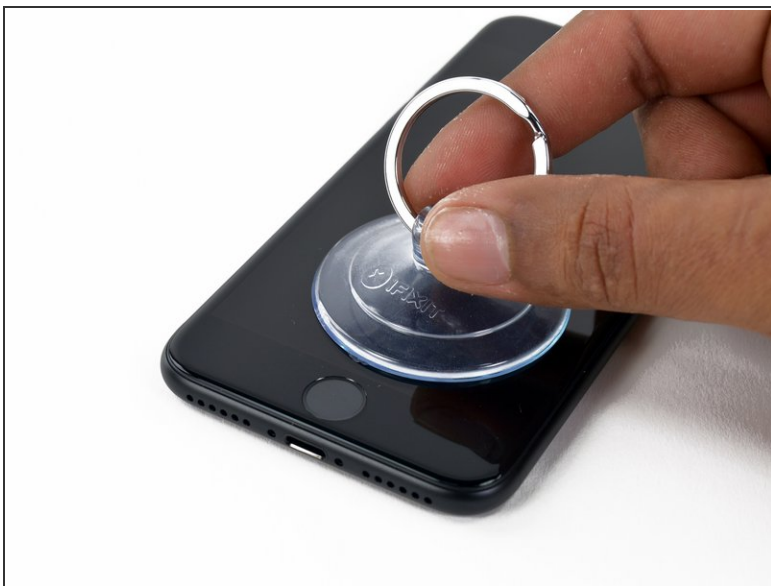
- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping over the glass.
 - Lay overlapping strips of clear packing tape over the iPhone's display until the whole face is covered.
 - ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.
- ⚠ Wear safety glasses to protect your eyes from any glass shaken free during the repair.
- If the broken glass makes it difficult to get a suction cup to stick in the next few steps, try folding a strong piece of tape (such as duct tape) into a handle and lifting the display with that instead.

Step 3 — iPhone 7 Opening Procedure



- ⓘ Heating the lower edge of the iPhone will help soften the adhesive securing the display, making it easier to open.
- Use a hairdryer or [prepare an iOpener](#) and apply it to the lower edge of the iPhone for about a minute in order to soften up the adhesive underneath.

Step 4



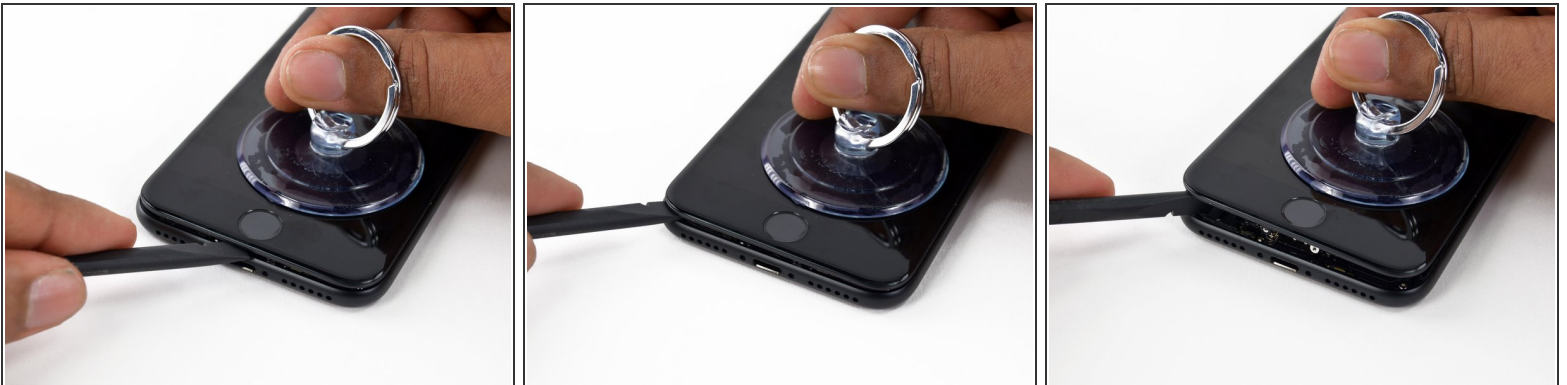
- Attach a suction cup to the lower half of the display assembly, just above the home button.
- ⓘ Be sure the suction cup does not overlap with the home button, as this will prevent a seal from forming between the suction cup and front glass.

Step 5



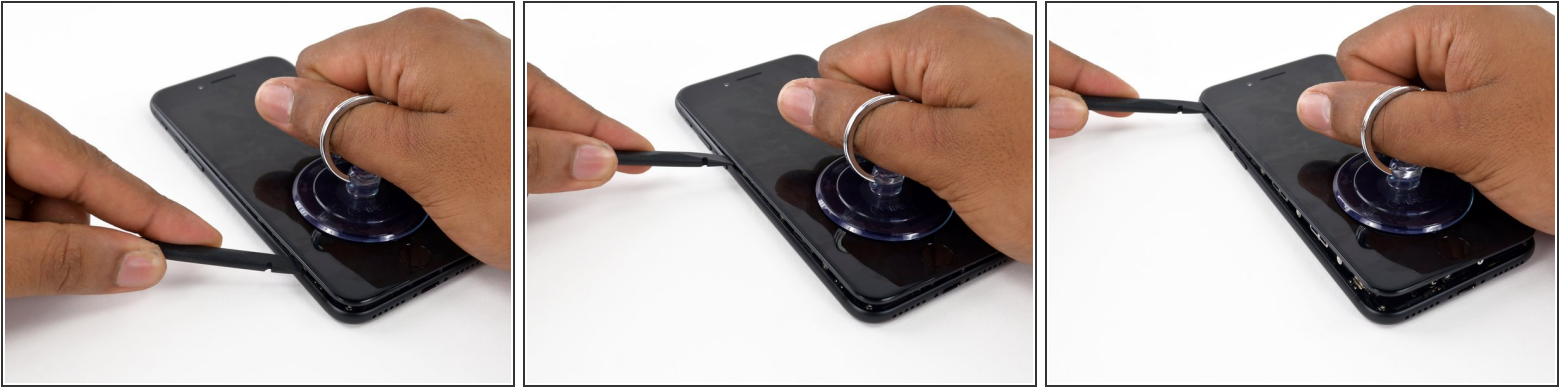
- Pull up on the suction cup to create a small gap between the display assembly and the rear case.
- Insert the flat end of a spudger into the gap.
- ⓘ The watertight adhesive holding the display in place is very strong, and creating this initial gap takes a significant amount of force. If you're having a hard time opening a gap, rock the screen up and down to weaken the adhesive until you can fit a spudger inside.

Step 6




- Slide the spudger to the left along the lower edge of the iPhone.
- Twist the spudger to widen the gap between the display and rear case.

Step 7




- Slide the spudger up the left side of the iPhone, starting at the lower edge and moving towards the volume control buttons and silent switch.

 Do not pry along the top edge of the phone, you risk damaging the plastic clips securing the display.

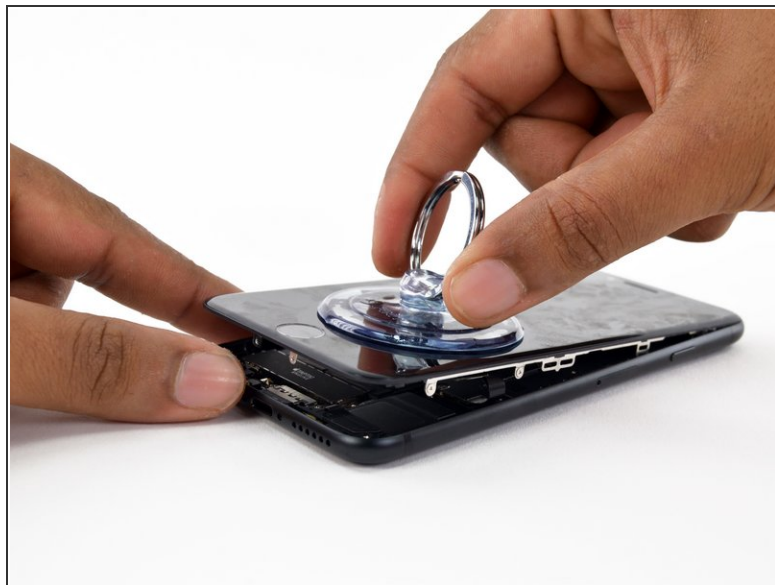
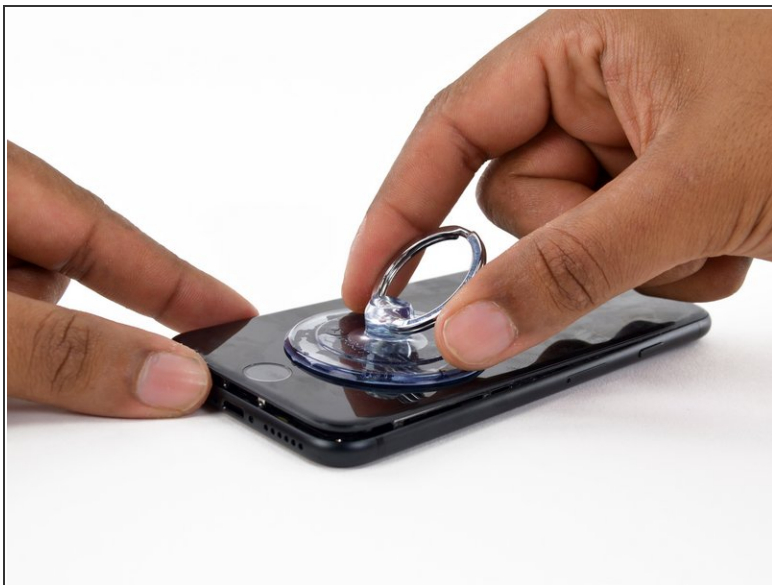
Step 8




- Insert the flat edge of a spudger into the bottom right corner of the device.
- Twist the spudger to widen the gap between the display assembly and the rear case.
- Slide the flat end of the spudger up the right side of the phone to break up the adhesive holding the display in place.

 Do not insert the spudger further than the adhesive to avoid damaging delicate ribbon cables along the right edge.

Step 9



- Pull up on the suction cup to lift up the display and open the iPhone.

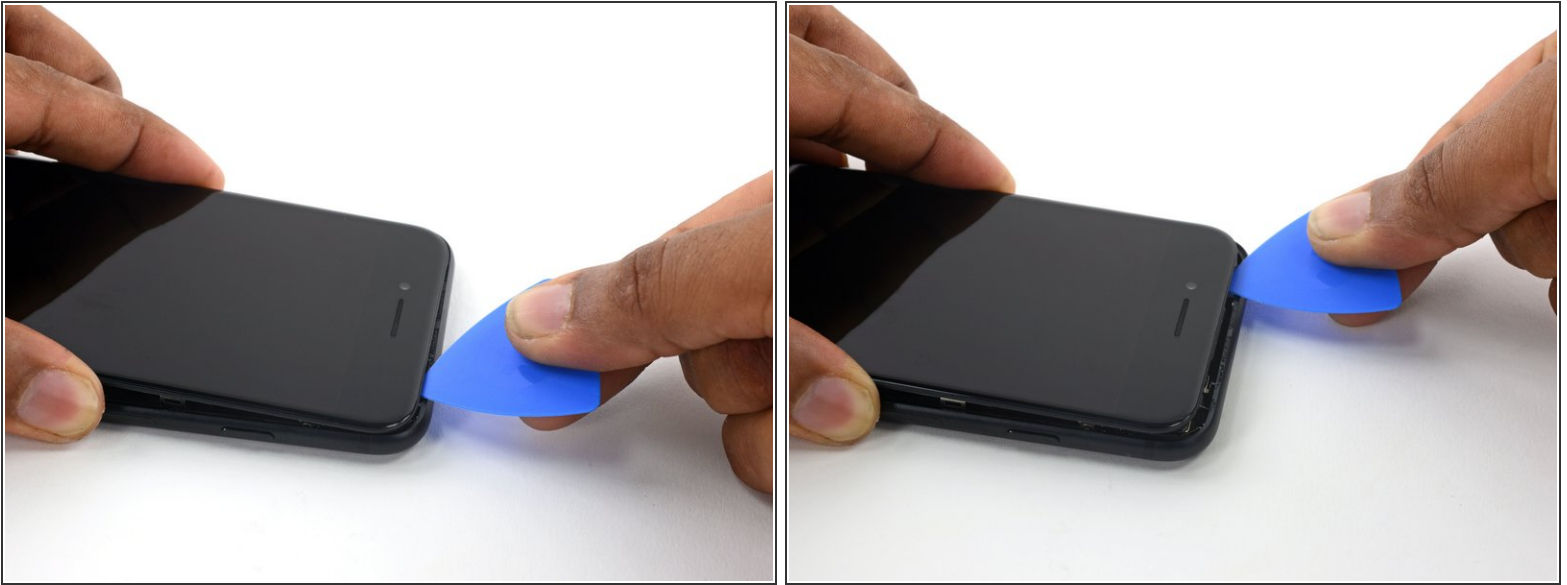
 **Do not raise the display more than 10°** as there are ribbon cables along the right edge of the device connecting the display to the logic board.

Step 10



- Pull up on the small nub on the suction cup to remove it from the front panel.

Step 11



- Slide an opening pick along the top edge of the iPhone, between the rear case and front panel, to break up the remaining adhesive holding the screen in place.

⚠ Be careful not to damage the plastic clips on the top edge of the phone.

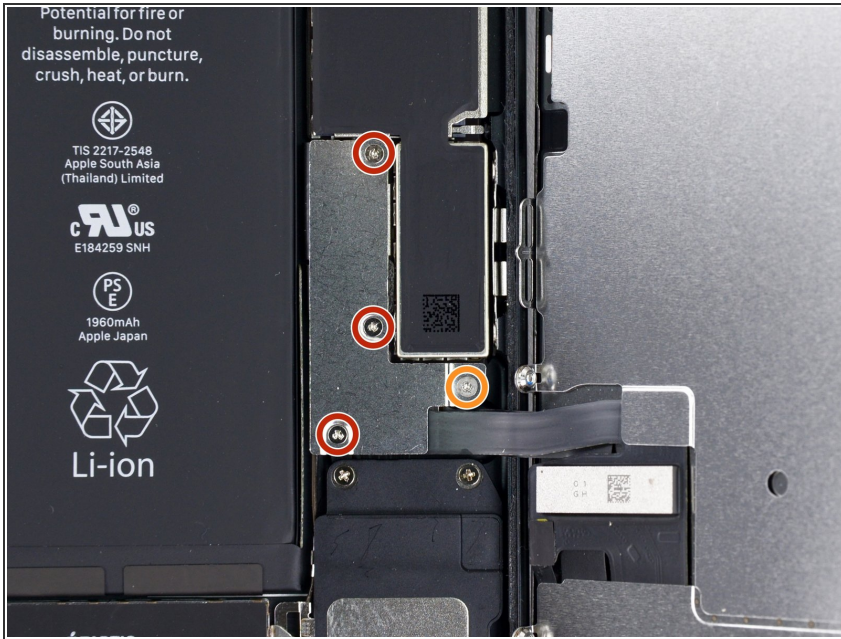
Step 12



- Pull the display assembly slightly away from the top edge of the phone to disengage the clips holding it to the rear case.
- Open the iPhone by swinging the display up from the left side, like the back cover of a book.

⚠ Don't try to fully separate the display yet, as several fragile ribbon cables still connect it to the iPhone's logic board.

Step 13 — Battery Disconnection



- Remove four tri-point Y000 screws securing the lower connector bracket, of the following lengths:
 - Three 1.2 mm screws
 - One 2.4 mm screw
- ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your iPhone.

Step 14



- Remove the lower connector bracket.


Step 15





- Use the point of a spudger to lift the battery connector out of its socket on the logic board.
- ⓘ Bend the connector cable up slightly to prevent it from making contact with the socket and providing power to the phone.

Step 16 — Display Assembly



 Make sure the battery is disconnected before you disconnect or reconnect the cables in this step.

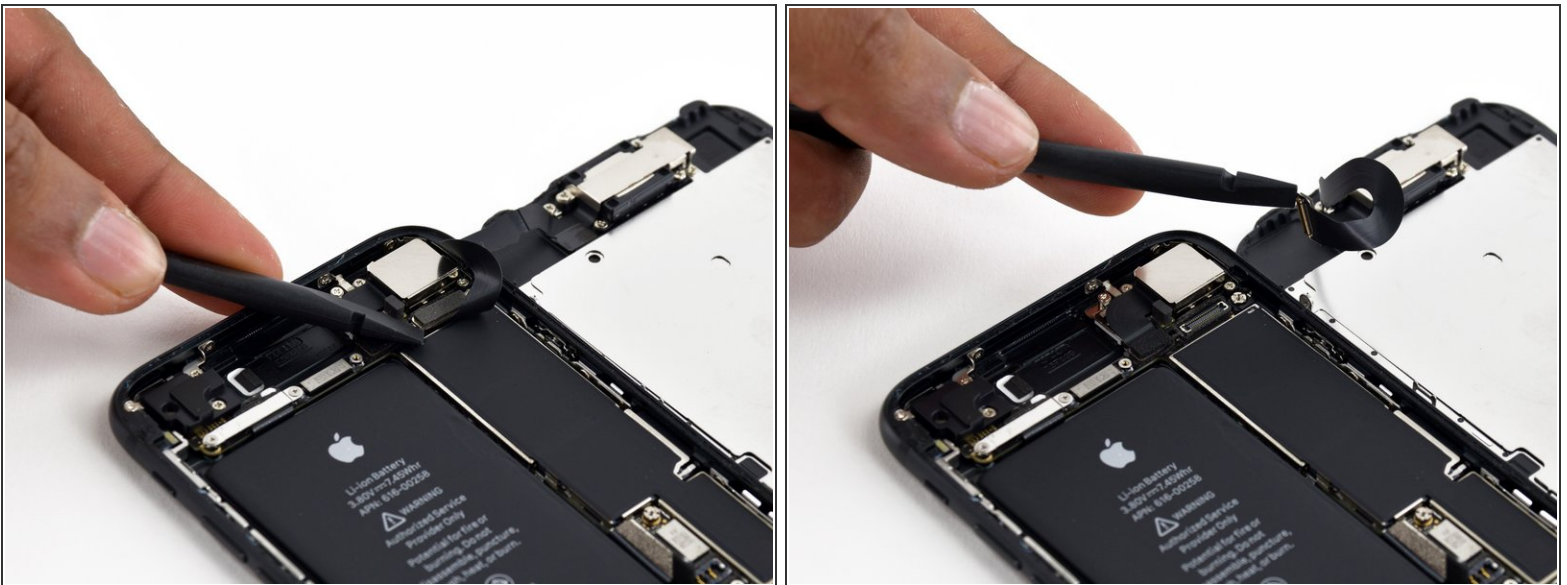
- Use a spudger or a fingernail to disconnect the two lower display connectors by prying them straight up from their sockets on the logic board.
-  To reconnect these cables, press down on one end until it clicks into place, then repeat on the opposite end. **Do not** press down on the middle. If the connector is even slightly misaligned, the connector can bend, causing permanent damage.
-  If you have a blank screen, white lines on the display, or partial or complete lack of touch response after reassembling your phone, try disconnecting and carefully reconnecting both of these cables and make sure they are fully seated.

Step 17



- Remove the two 1.3 mm Phillips screws securing the bracket over the front panel sensor assembly connector.
- Remove the bracket.

Step 18



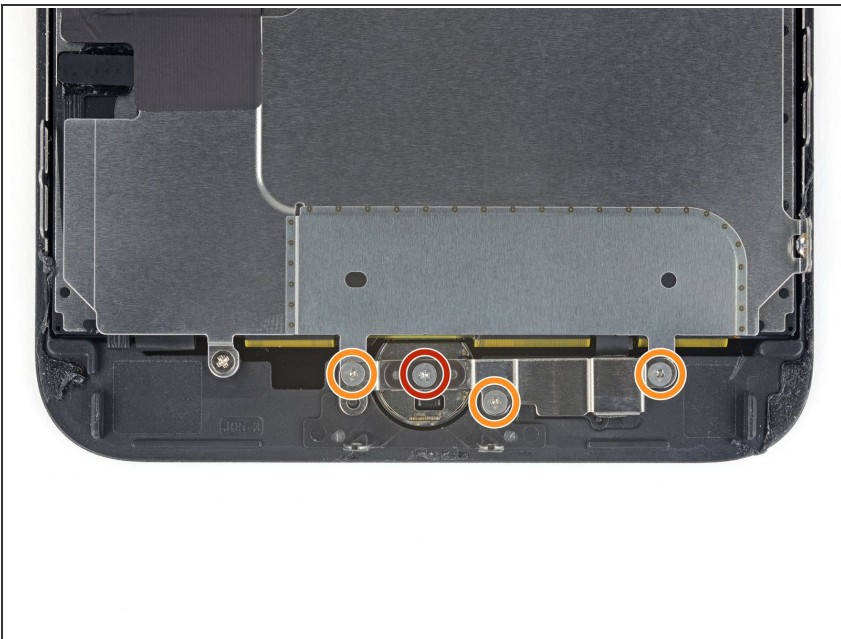
- Disconnect the front panel sensor assembly connector from its socket on the logic board.
- ☒ This press connector should also be reconnected one end at a time to minimize the risk of bending.

Step 19



- Remove the display assembly.
- ☑ During reassembly, pause here if you wish to [replace the adhesive around the edges of the display](#).

Step 20 — Home/Touch ID Sensor



- Remove the four Y000 screws securing the bracket over the home/Touch ID sensor:
 - One 1.1 mm screw
 - Three 1.3 mm screws
- ☑ During reassembly, be careful not to overtighten these screws, or your home button may not work.

Step 21



- Remove the bracket that secures the home/Touch ID sensor.

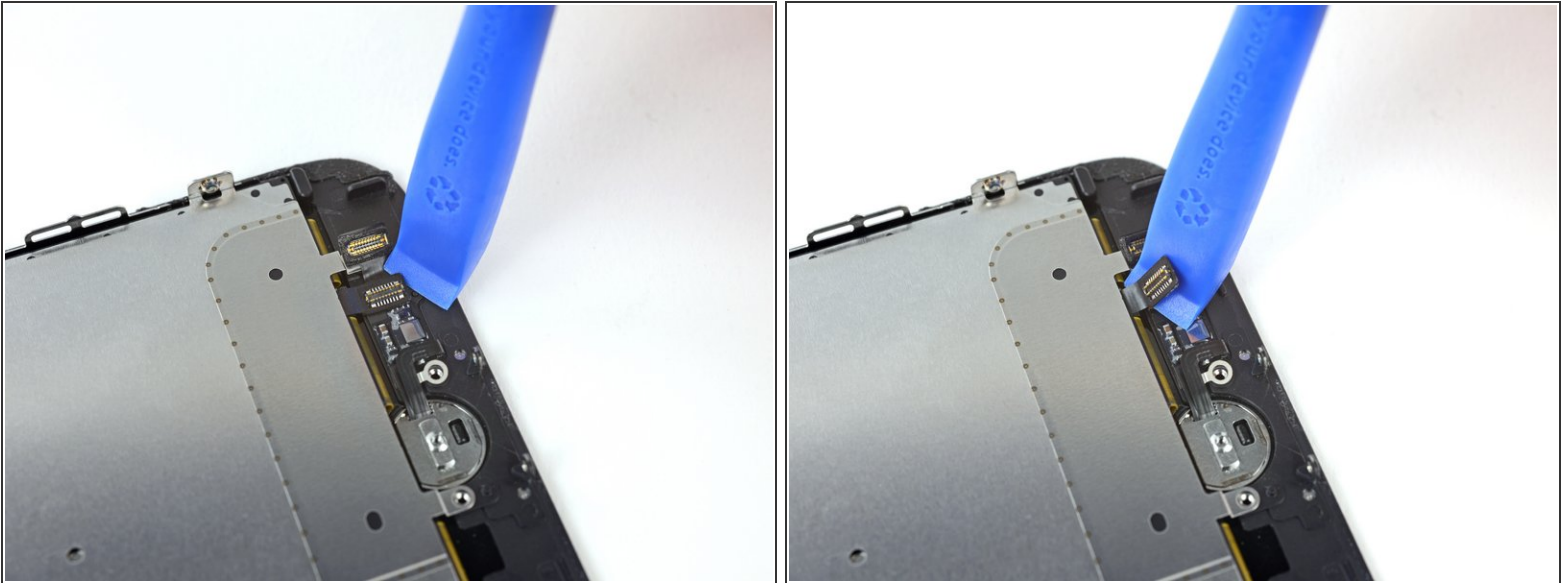
Step 22



- Pry under the left edge of the home button cable connector to disconnect it from its socket.

⚠ If the entire connector begins to flip up without separating, [press down on the cable at the top edge of the connector with the flat of your spudger](#), while simultaneously prying up the left edge of the connector. Be very careful not to damage the cable or connector, or you will permanently disable the sensor.

Step 23



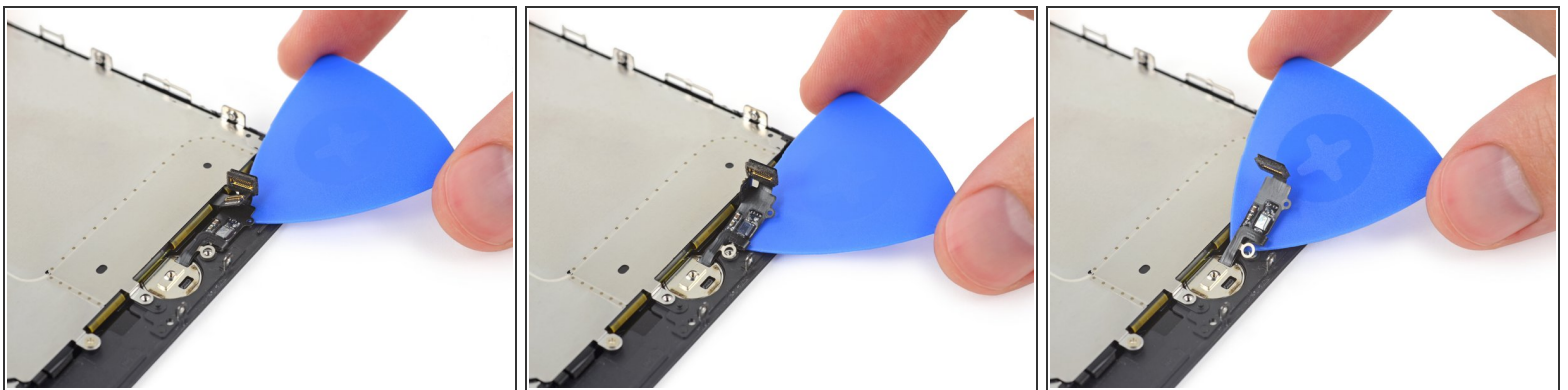
- Carefully pry up the underlying connector and move it out of the way of the home/Touch ID cable.
 - ⚠ It's very easy to damage your iPhone during this step. Work slowly and take care where you pry with your tool. If you damage the Touch ID hardware, it can only be replaced by Apple.
- If the connector doesn't pry up easily, use a hair dryer or iOpener to heat and soften the adhesive securing the connector, and then try again.
- ⚠ Don't try to detach the connector completely—simply flip it up slightly so that the underlying home/Touch ID sensor cable can be removed.

Step 24



- ⓘ Heating the area around the home/Touch ID sensor will help soften the adhesive holding its delicate cable in place, making it easier to remove safely.
- Flip the display assembly over. Use a hairdryer or [prepare an iOpener](#) and apply it to the lower edge of the display for about 90 seconds in order to soften up the adhesive underneath.

Step 25



- Use an opening pick to gently separate the adhesive holding the home/Touch ID sensor cable to the back side of the display panel.

Step 26



- Remove the home/Touch ID sensor assembly by lifting it through the front side of the display.
- ★ To reinstall, first feed the cable through the hole in the front of the display.
- ★ Your replacement part may come with an [extra Y000 screw](#) already installed right of the Home Button. Remove the unnecessary screw so that you can reinstall the home button bracket.
- ★ [Follow this guide](#) to install replacement display adhesive on your screen.

Step 27 — Earpiece Speaker



- Remove the three Phillips screws securing the earpiece bracket to the front panel:
 - Two 2.6 mm screws
 - One 1.7 mm screw

Step 28



- Remove the earpiece speaker bracket.

Step 29



- Lift the front facing camera out of the way to access the earpiece speaker.

Step 30



- Remove the following two Phillips screws securing the earpiece speaker to the front panel:
 - One 1.9 mm screw
 - One 2.5 mm screw

Step 31



- Remove the earpiece speaker.

Step 32 — Front Camera and Sensor Cable



- [Reheat your iOpener](#) and apply it to the upper edge of the display assembly to soften the adhesive holding the front camera and sensor assembly in place.
- ⓘ Wait about two minutes before moving on to the next step to adequately soften the adhesive.

Step 33



- Use a spudger to gently pry the ambient light sensor out of its recess on the front panel.
- ⚠ Try to get your tool all the way under the sensor to pry it away from the clear plastic beneath. If you pry only against the cable, the sensor may separate from the cable assembly and will need replacement. If you're replacing the sensor/cable assembly anyway, then it doesn't matter.

Step 34



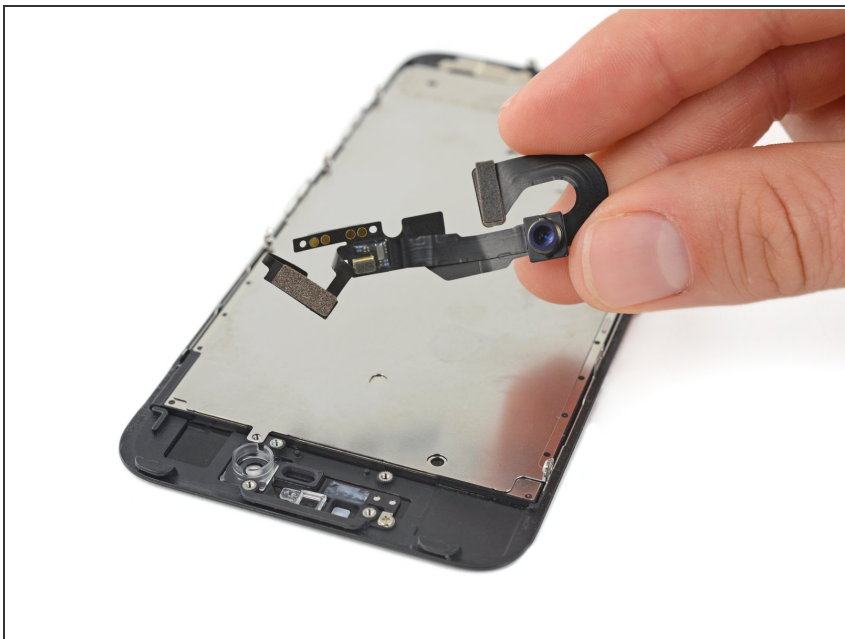
- Slide the pick towards the front facing camera housing, separating the adhesive holding the cable to the front panel. Stop just before the screw posts.

Step 35



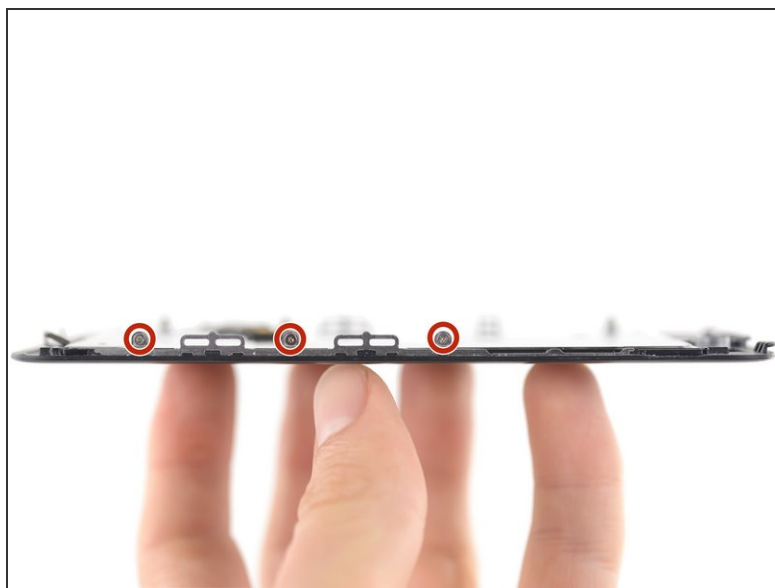
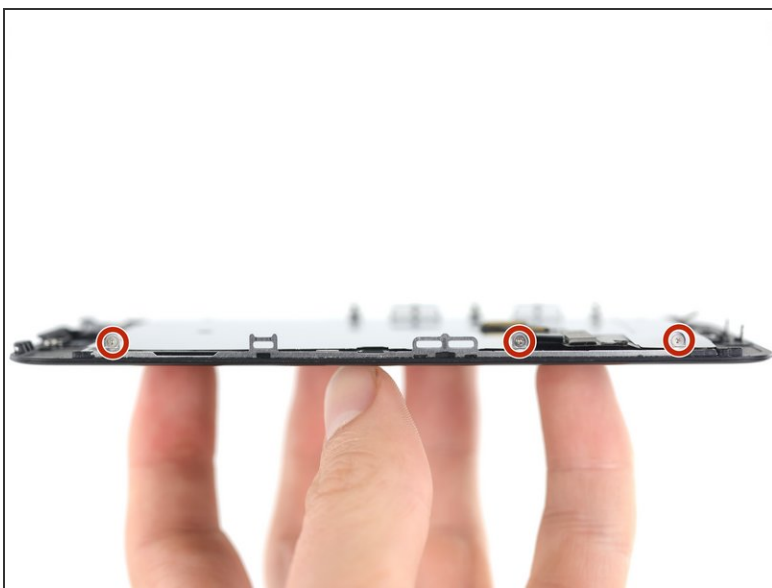
- Use the pick to lift the camera cable up off of the two plastic posts on the front panel and separate it from the last of the adhesive.

Step 36



- Remove the front camera and sensor cable.

Step 37 — LCD Shield Plate



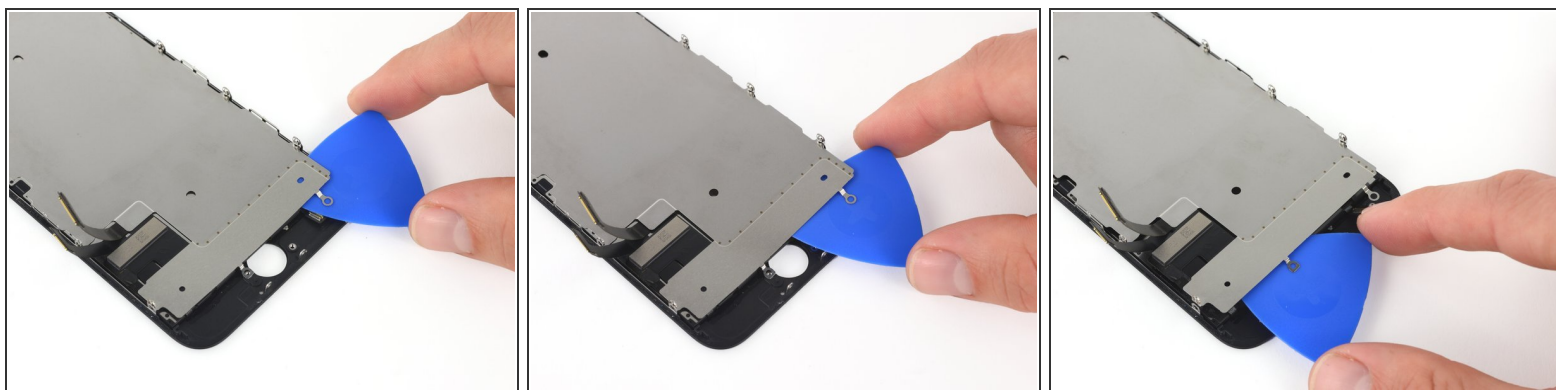
- Remove the three 1.2mm tri-point Y000 screws from either side of the display assembly for a total of six screws.

Step 38



- [Heat an iOpener](#) and lay it over the edge of the shield closest to the home button to soften the adhesive holding it in place.

Step 39



- Use an opening pick to break up the adhesive near the home button that holds the LCD shield plate to the display assembly.

Step 40



- Gently lift the LCD shield plate from the display assembly.
- ⚠ Be careful not to snag the display data cables when removing the LCD shield plate.

Step 41 — LCD and Digitizer



- Only the LCD and digitizer remain.

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

This document was generated on 2020-04-11 11:26:28 AM (MST).

