



iPhone 5 LCD and Digitizer Replacement

Replace the LCD and digitizer on your iPhone 5.

Written By: Andrew Optimus Goldheart



INTRODUCTION

For an easier repair, use our [fix kit](#) and follow this [shorter guide](#) to replace your iPhone 5's entire screen.

For more advanced fixers, this guide will help you replace *only* the iPhone's LCD + 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-facing camera, earpiece speaker, LCD shield plate, and home button assembly.

You can also use this guide to replace the [front panel assembly cable bracket](#).

Need a guide for the [iPhone 5s LCD and digitizer](#) instead? We got you covered!

[video: http://youtu.be/-lfP-3z_9Zg]



TOOLS:

- [Phillips #000 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [Suction Handle](#) (1)
- [P2 Pentalobe Screwdriver iPhone](#) (1)
- [Anti-Static Project Tray](#) (1)



PARTS:

- [iPhone 5 LCD and Digitizer](#) (1)
- [iPhone 5 Front Panel Assembly Cable Bracket](#) (1)

Step 1 — Taping the display glass



- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping 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.

Step 2 — Remove the Pentalobe screws



⚠ Before you proceed, 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 3.6 mm Pentalobe screws next to the Lightning connector.

Step 3 — How to prevent display separation



- i** In the following steps you will be pulling the display up out of the phone body. The display is composed of a glass screen and a plastic bezel with metal clips.
- Regardless of the tool you use, you need to be sure you pull up the entire display.
 - If the glass begins to separate from the plastic, as shown in the first image, slide a plastic opening tool between the plastic frame and the metal phone body to pry the metal clips out of the case.
- ★** If you are reassembling a phone with a separated display bezel, you may want to place a thin strip of adhesive between the plastic bezel and the glass to keep the phone closed.

Step 4 — Starting the iSclack Opening Procedure



i The next two steps demonstrate using the [iSclack](#), a great tool for safely opening the iPhone 5 that we recommend for anyone doing more than one repair. **If you aren't using the iSclack, skip to [Step 6](#).**

- Close the handle on the iSclack, opening the suction-cup jaws.
- Place the bottom of your iPhone in between the suction cups, against the plastic depth gauge.
 - The top suction cup should rest just above the home button.
- Open the handles to close the jaws of the iSclack. Center the suction cups and press them firmly onto the top and bottom of the iPhone.

Step 5 — Finishing the iSclack Opening Procedure



- Hold onto your iPhone securely and close the handle of the iSclack to separate the suction cups, pulling the front panel up from the rear case.
- The iSclack is designed to safely open your iPhone just enough to separate the pieces, but not enough to damage any cables.
- Peel the two suction cups off your iPhone.
- **Skip the next three steps and continue on [Step 9](#).**

Step 6 — Manual Opening Procedure



- Press a suction cup onto the screen, just above the home button.
- ⓘ Be sure the cup is completely on the screen to get a tight seal.
- ⓘ If you're opening an iPhone with cracked glass, neatly lay a couple strips of packing tape across the front and squeeze out as many bubbles as you can. This will give the suction cup a surface to grab, and minimize the spread of broken glass.

Step 7 — Start lifting the front panel assembly



- ① Make sure the suction cup is firmly attached to the front panel assembly.
- While holding the iPhone down with one hand, pull up on the suction cup to slightly separate the front panel assembly from the rear case.
- ① Take your time and apply firm, constant force. The screen is a much tighter fit than most devices.
- With a plastic opening tool, begin to gently pry the rear case down, away from the screen, while you pull up with the suction cup.
- ① There are several clips attaching the front panel assembly to the rear case, so you may need to use a combination of the suction cup and plastic opening tool to free the front panel assembly.


Step 8 — Detaching the front panel side clips



- Continue to pry up around the sides of the front panel assembly, detaching the clips along the left and right side.

Step 9 — Opening up the phone



 Do not try to completely remove the front panel assembly from the rear case, as there are several ribbon cables still attached at the top of the iPhone.

- Once the clips have been released on the bottom and sides of the front panel assembly, pull the bottom of the assembly away from the rear case.
- Open the display to about a 90° angle, and lean it against something to keep it propped up while you're working on the phone.
 - Add a rubber band to keep the display securely in place while you work. This prevents undue strain on the display cables.

Step 10 — Removing the battery connector bracket screws



- Remove the following two screws securing the metal battery connector bracket to the logic board:
 - One 1.8 mm Phillips screw
 - One 1.6 mm Phillips screw

Step 11 — Removing the battery connector bracket



- Remove the metal battery connector bracket from the iPhone.

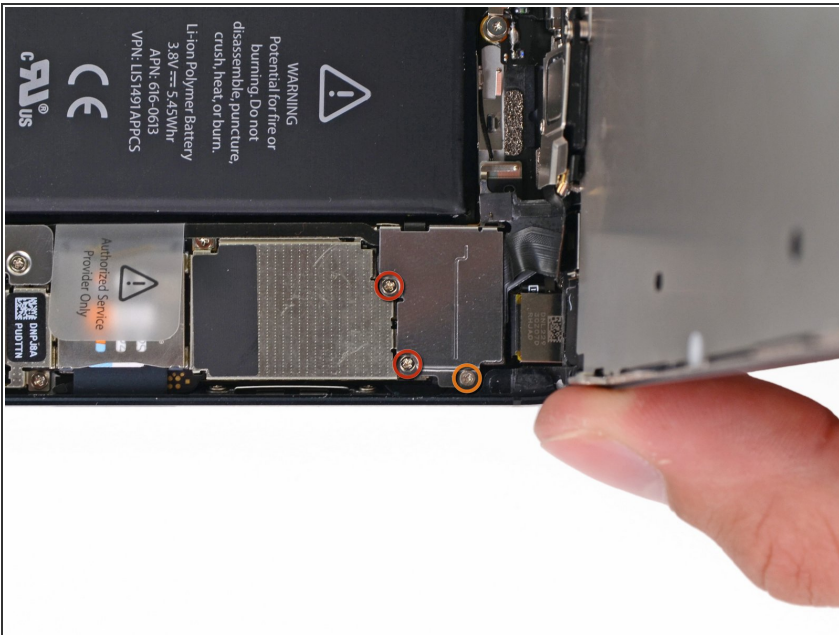
Step 12 — Disconnecting the battery connector



- Use a plastic opening tool to gently pry the battery connector up from its socket on the logic board.

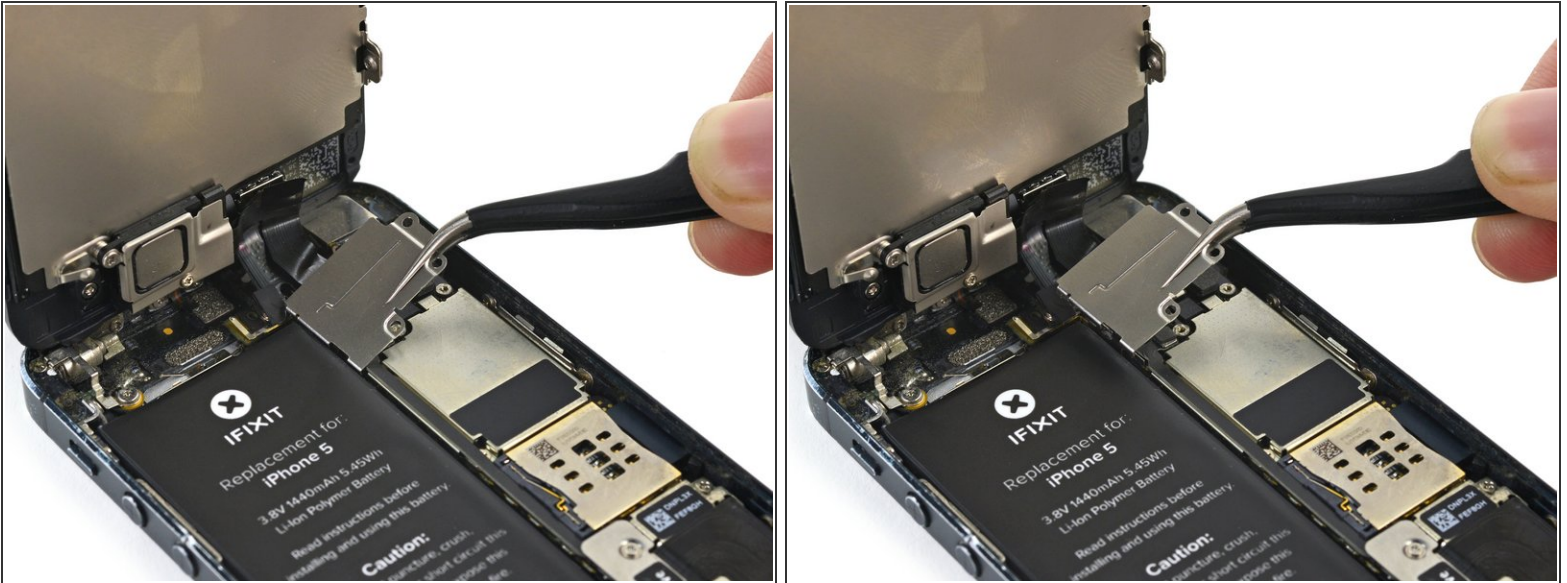
- ⚠ Be careful not to dislodge the small surface-mounted components surrounding the socket.
- ⚠ Be very careful to only pry up on the battery connector itself and **not** the socket on the logic board. If you pry up on the logic board socket or the board itself, you may destroy the socket or damage nearby components on the board.

Step 13 — Removing the front panel assembly cable bracket screws



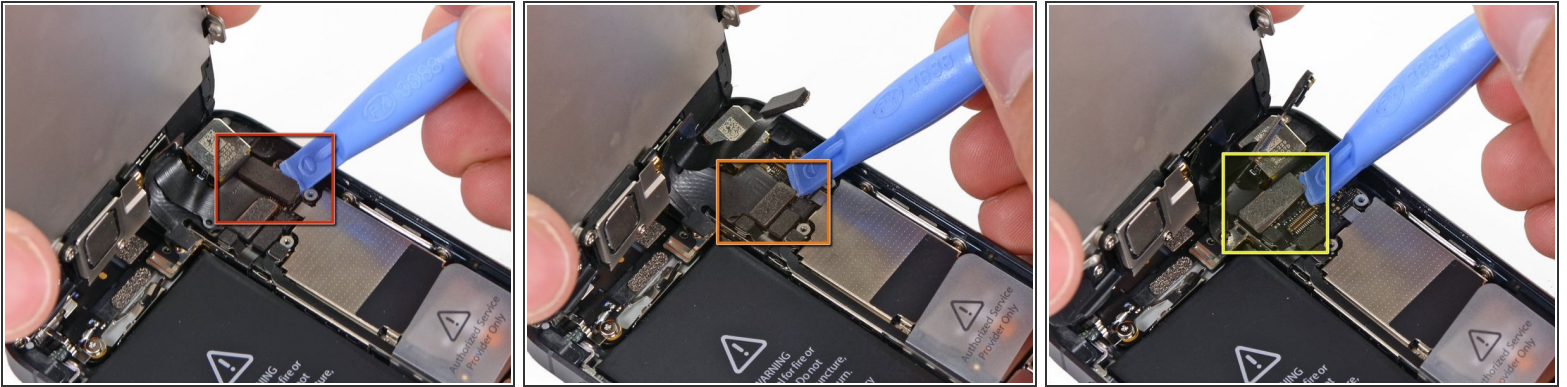
- Remove the following screws securing the front panel assembly cable bracket to the logic board:
 - Two 1.2 mm Phillips screws
 - One 1.6 mm Phillips screw
- ⓘ This screw tends to not be attracted to a magnetized screwdriver. Take care not to lose it when removing, and make sure it gets back into the right place—a magnetized screw may interfere with the compass.


Step 14 — Removing the front panel assembly cable bracket




- Lift the display cable bracket toward the battery to unhook it, and remove it from the iPhone.
- ✦ During reassembly, clip the left-hand hooks under the logic board and lower the bracket towards the outside of the phone.

Step 15 — Disconnecting the front panel assembly cables



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

- Use a plastic opening tool or a fingernail to disconnect the three front panel assembly cables:
 - Front-facing camera and sensor cable
 - LCD cable
 - Digitizer cable

 When reassembling your phone, the LCD cable may pop off the connector. This can cause white lines, or nothing at all to appear when powering your phone back on. If that happens, simply reconnect the cable and power cycle your phone. The best way to power cycle your phone is to [disconnect and reconnect the battery](#).

Step 16 — Separating front panel assembly and rear case



- Remove the front panel assembly from the rear case.

Step 17 — Earpiece Speaker



- Remove two screws securing the front-facing camera bracket to the display assembly.
 - One 4.1 mm Phillips screw
 - One 2.2 mm Phillips screw

Step 18



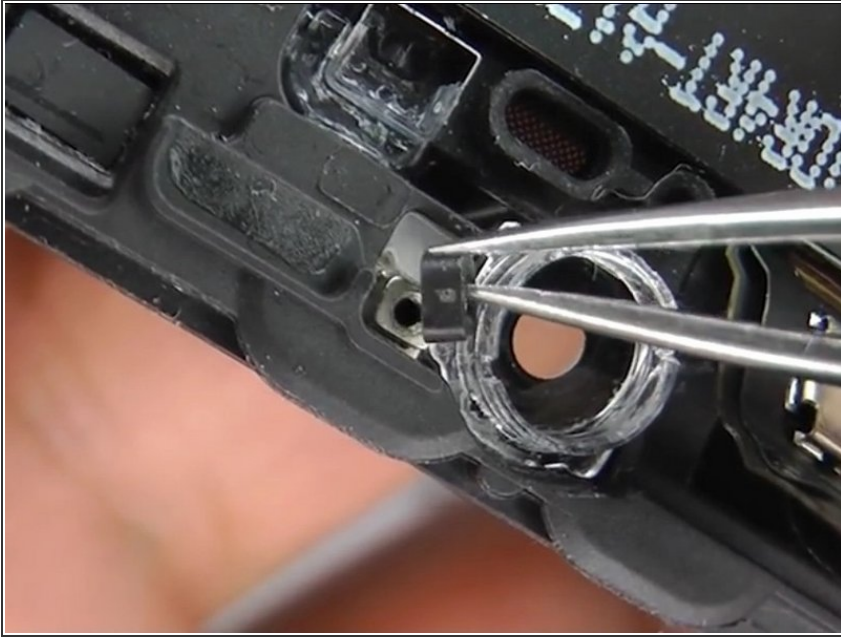
- Remove the earpiece speaker bracket from the display assembly.

Step 19



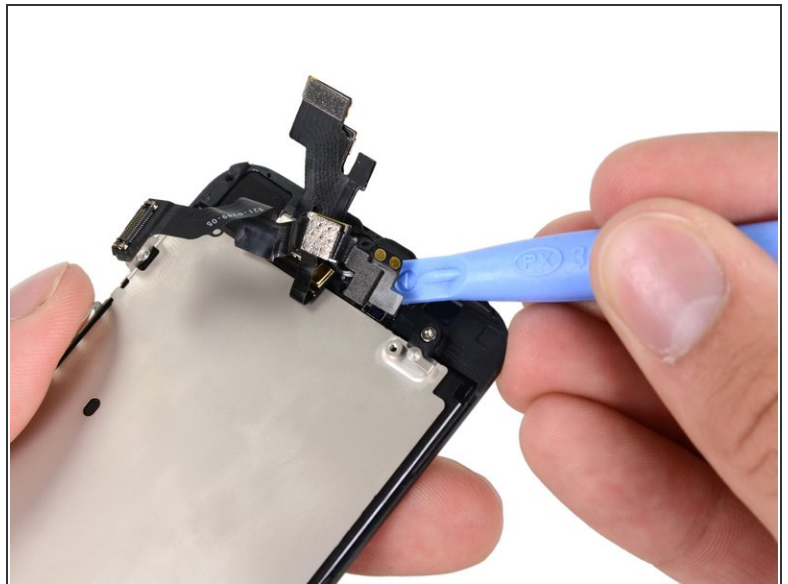
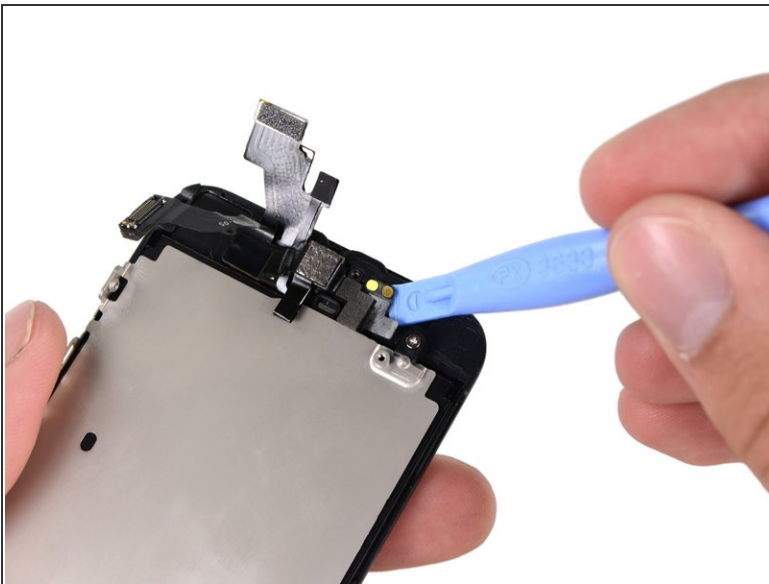
- Remove the earpiece speaker from the iPhone.

Step 20



- There is a small, black plastic spacer underneath the metal bracket at the upper screw. The upper screw goes through the metal bracket then through this plastic spacer.

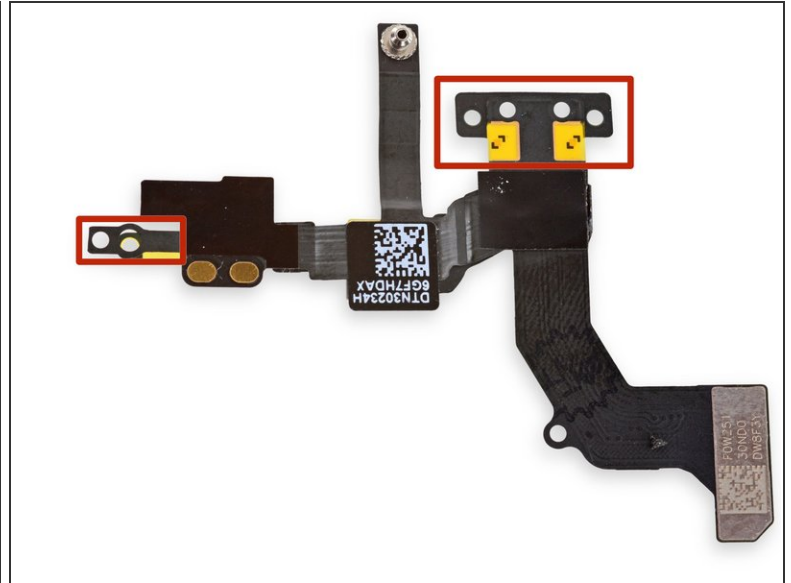
Step 21 — Front-Facing Camera and Sensor Cable



- Starting under the earpiece speaker contacts, use a plastic opening tool or the tip of a spudger to pry the front facing camera cable out of the display assembly.

⚠ Caution: Removing the earpiece speaker contacts can cause them to tear. Use extreme caution when peeling the contacts up.

Step 22



- Remove the front-facing camera and rear microphone assembly.
- ⓘ If you are installing a new part, your new part may have two tabs with holes in it used for manufacturing purposes. These tabs can be cut off with scissors.
- ⓘ There is a small, square plastic and metal holder for the proximity sensor. This holder is essential for the proximity sensor to function correctly.
- ⓘ If replacing the proximity sensor or camera make sure that the holder remains adhered to the back of the display. If it comes off with the old proximity sensor, remove it from the old sensor and use a tiny bit of adhesive to re-attach it to the back of the display.

Step 23 — Home Button Ribbon Cable



- Remove the two 1.3 mm Phillips #000 screws securing the home button bracket to the display assembly.
- NOTE: When reinstalling the two 1.3 mm Phillips #000 screws, take care not to over tighten them as they can penetrate the other side of the display.

Step 24



- Use a plastic opening tool to pry the edge of the home button ribbon cable up from the display assembly.
- Start on the right, at the area of the ribbon cable between the gold contact points, and work to the left.
 - ⚠ Going left to right may rip your ribbon cable as the contacts are well adhered to the front panel.
 - ⚠ Prying directly at one gold contact point or the other may break its soldering and pop it off the ribbon cable.
- ⓘ If you have trouble sliding the plastic opening tool under the contact points, flip the tool over and gently push against the right side of the contacts to loosen the adhesive, then try again.

Step 25 — LCD and Digitizer



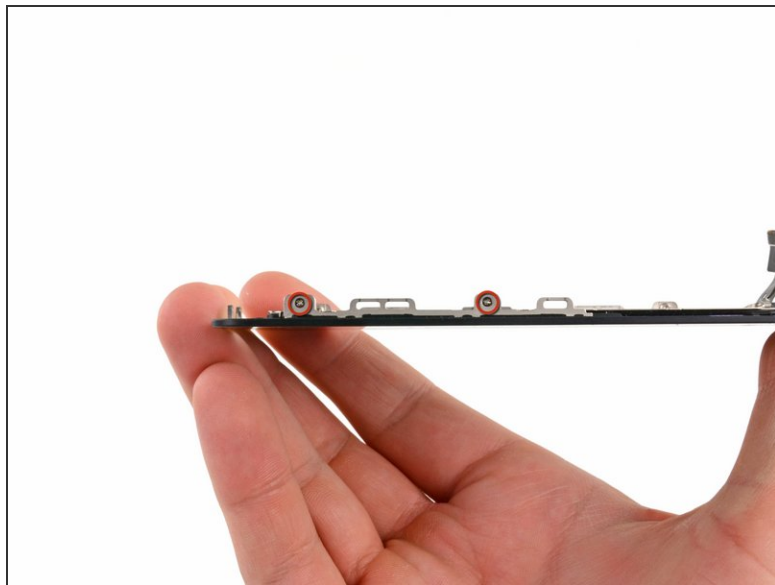
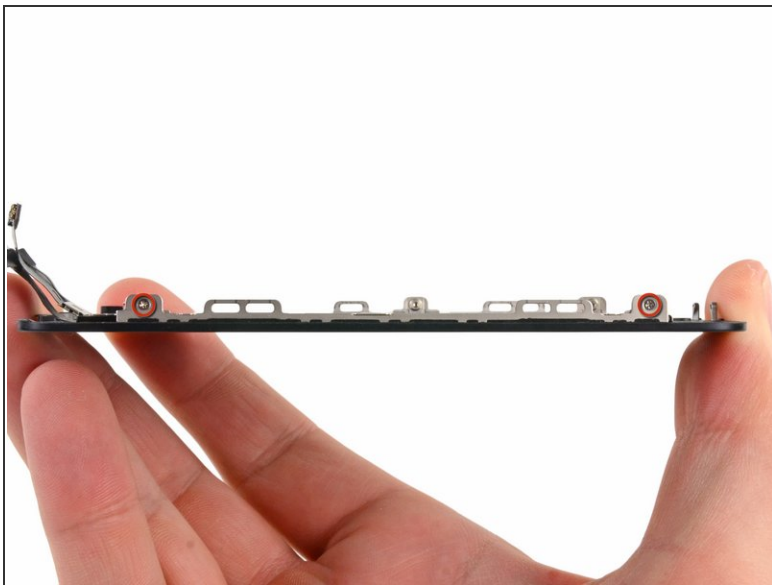
- Use a plastic opening tool to pry the home button up from the display assembly.

Step 26



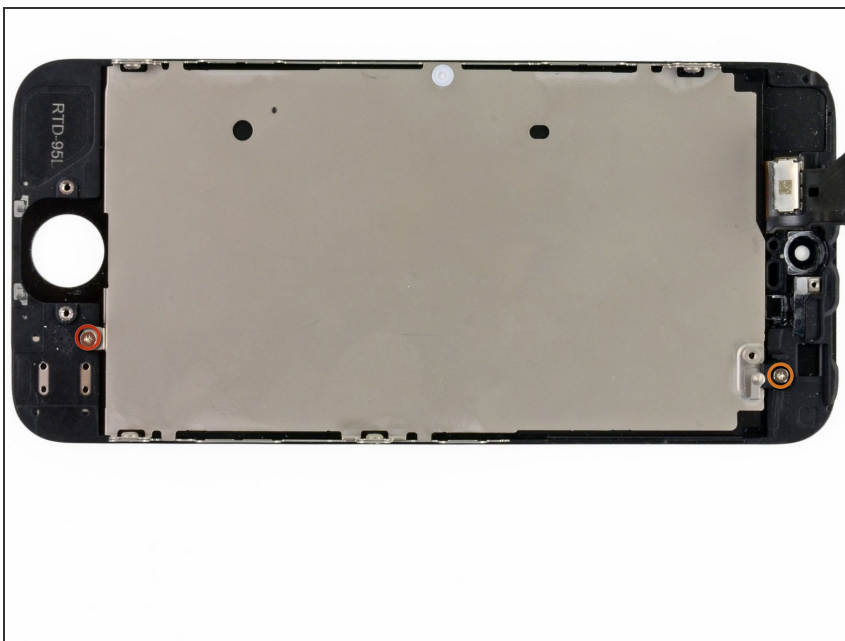
- Remove the home button from the display assembly.

Step 27



- Remove two 1.2 mm Phillips screws from each side of the LCD frame (four total).

Step 28



- Remove the two screws securing the LCD shield plate to the display assembly:
 - One 1.4 mm Phillips screw
 - One 2.6 mm Phillips screw

Step 29



- Remove the LCD shield plate from the display assembly.

Step 30



- The bare display assembly remains.
 - ① For reassembly, make sure to transfer over the LCD shield, home button, front facing camera assembly, front facing camera lens bezel and earpiece speaker to your new part.
 - ⚠ If the replacement screen seems to not fit in the original frame, do not put too much force on the screen, or the glass might crack. Instead, try inserting the screen at a 30° angle, starting at the top. The aim here is to get the three plastic brackets under the metal frame of the phone and move with slight pressure from the sides to the bottom.
- Make sure to remove the protective cover from your new display assembly as well as the protective cover on the back of the LCD.
- Note: When reassembled, the screen may not turn on. Try fixing this by plugging your phone in, and holding down the power and home buttons at the same time for 20 seconds.

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