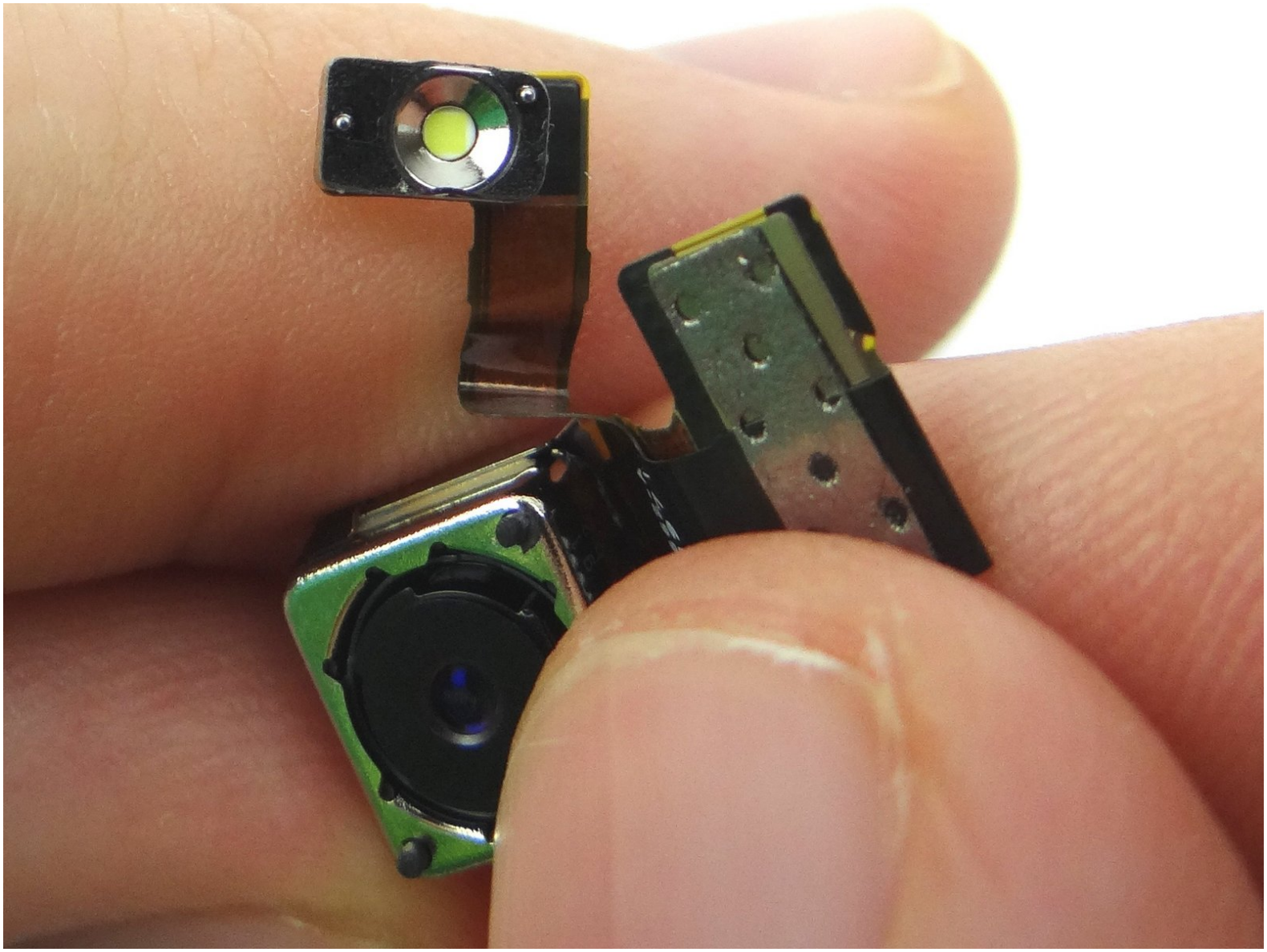
CELLPHONESANDBOX

Manual 08 - Rear Camera

Written By: Josh Patterson



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TOOLS:

- Technician Starter Package (1)

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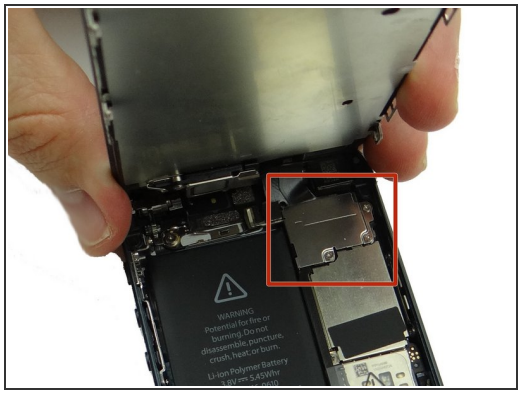
Step 1 — Removal 1.0: Front Panel Assembly

- Picture 1: Push down on SIM card ejector opening with a large paper clip to pop up the tray.
- Picture 2: Remove SIM card tray and SIM card. Place both in Sandbox COMPARTMENT A.
- Picture 3: Remove two 3.6 mm Pentalobe screws near charging port. Place screws in Sandbox SLOT 1.

Step 2



- Picture 1: The iPhone 5 opens like a book with the top edge acting as a hinge.
- Picture 2: The front panel is held shut tightly with clips on both sides of the display.
- Picture 3: There are three cables attached in the upper-right corner of the interior. Be careful not to put tension on these cables as you open the iPhone.

ⓘ We show you how to release the clips and safely open the phone over the next few steps.

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Step 3

- The iSclack tool (double suction cups) is best if you intend to reuse the screen. It also works on most cracked screens if you cover the screen with tape as shown in Step 1.
- The iSesamo is used when it's impossible to create suction.

ⓘ We demonstrate the iSesamo method over the next three steps. Skip to step 9 if you're able to use the iSlack tool.

Step 4

- Cut a thin strip of packing tape and fold it over the lower-right corner of the iPhone.
- Run your fingernail in the groove between the front panel and rear case.

ⓘ The tape protects the rear case from being scratched by the iSesamo tool in the next step. However, we removed the tape to improve picture clarity.

Step 5

- Pictures 1 & 2: Wedge the iSesamo between the display bezel and rear case at a 90° angle.
- Picture 3: Slowly rotate the iSesamo in one hand while pinching the screen with your opposite hand. Lift just enough to insert the blue pry tool in the lower-right corner.

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Step 6

- Picture 1: Insert the blue pry tool in the lower-right corner, then twist to pry the front panel up from the rear case.
- Picture 2: Repeat in the lower-left corner.
- Picture 3: Work your way up both sides of the iPhone, twisting to open the device from the bottom (as shown in the previous step)

Remove the thin strip of tape packing tape.

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Step 7

- Picture 1: Close the iSclack suction cups on either side of the iPhone.
  - Note the placement of the top suction cup centered above the home button.
- Picture 2: The iSclack tool opens the phone in one rapid motion: use your left hand to moderately squeeze the top of the iPhone while you open it with your right hand.

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Step 8

⚠ There are three ribbon cables still attached at the top of the iPhone: do not lift the front panel past an 80° angle:

- Pinch the front panel with your thumbs, then:
- Open front panel until it reaches an 80° angle. Continue holding the front panel as pictured.

Step 9

- Picture 1: Remove the non-magnetic 1.6 mm #00 Phillips screw and place in SLOT 2.
- Picture 2: Remove two 1.2 mm #00 Phillips screws and place in SLOT 3.
- Picture 3: Remove cable shield held down by the screws. Place in COMPARTMENT B.

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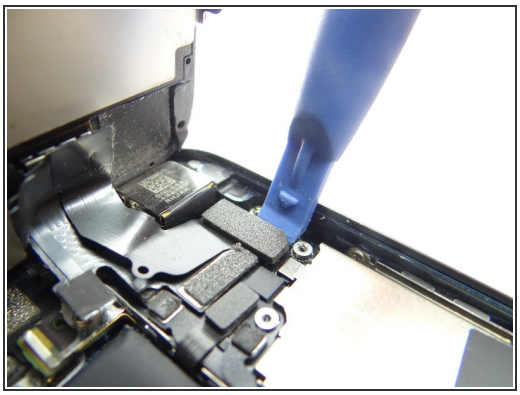
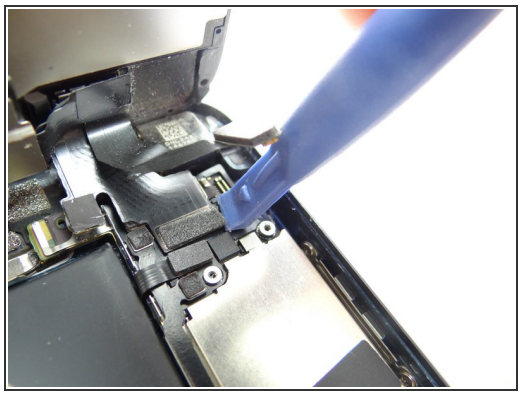
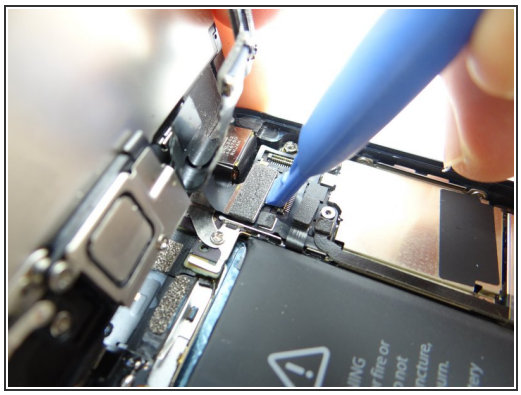
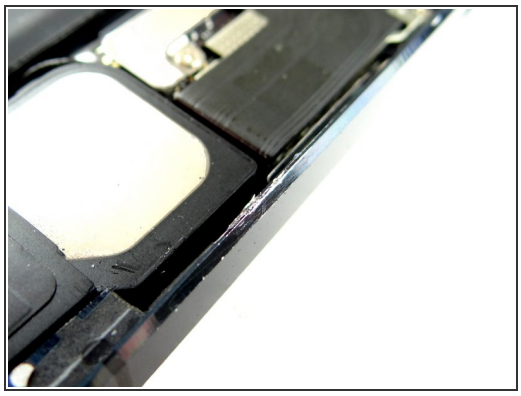
Step 10 — Use the blue pry tool to disconnect the three front panel assembly cables:

- Picture 1: Release front-facing camera and sensor cable.
- Picture 2: Release digitizer cable.
- Picture 3: Release LCD cable.

Step 11



- Picture 1: Separate front panel from rear case.
- Picture 2: Check if the iSesamo scratched the rear case bezel.
- Picture 3: If you're repairing a black iPhone, use a black sharpie to color any scratches caused by the iSesamo tool. Be careful to only color over the scratched area.

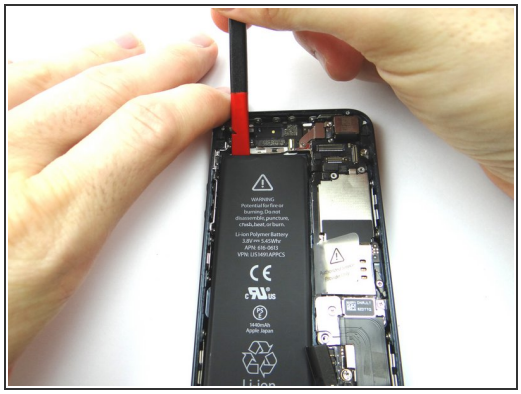
⚠ Don't color over scratches on a white iPhone!

- Place the rear case Sandbox ZONE I.

Step 12 — Removal 2.0: Battery

- Picture 1: Remove 1.8 mm Phillips screw and place in SLOT 4.
- Picture 2: Remove 1.6 mm Phillips screw and place in SLOT 5. Remove the shield held in place by the screws and place in SLOT 5 with the 1.6 mm Phillips screw.
- Picture 3: Use Black Spudger to gently pry up the battery connector.

Step 13



- Apply low-level heat (100* Celcius or less) to edges of battery for 60 seconds to loosen the adhesive securing the battery to the iPhone.
- Work your way along the right and top of the battery, gently prying up with the Black Spudger to free the battery from the adhesive securing it to the rear case.
- Remove the battery and place it in ZONE II.

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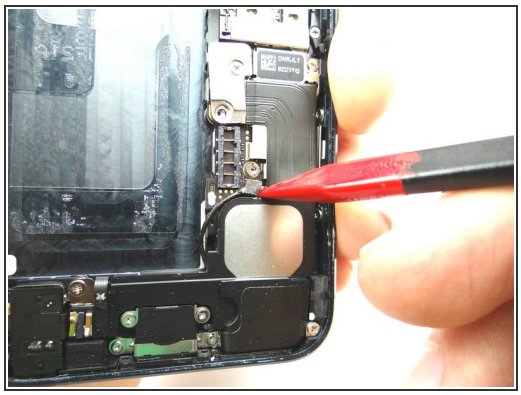
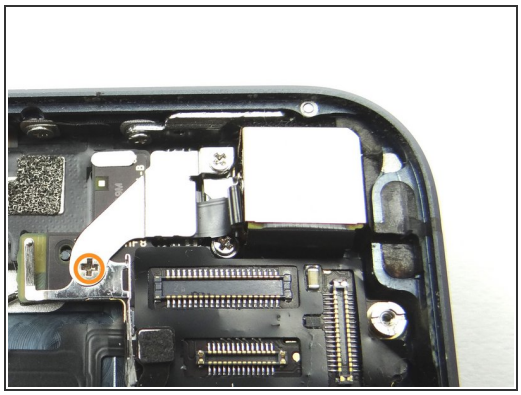
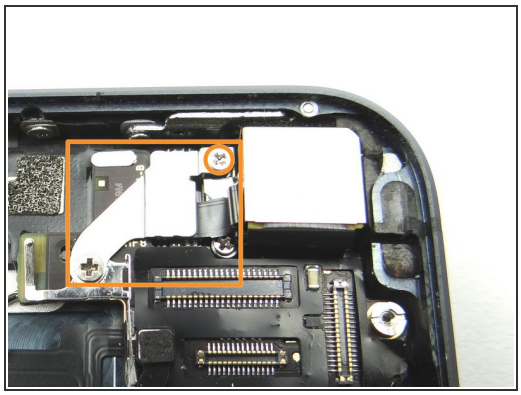
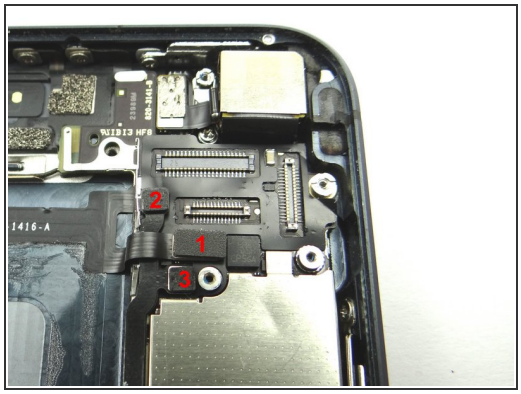
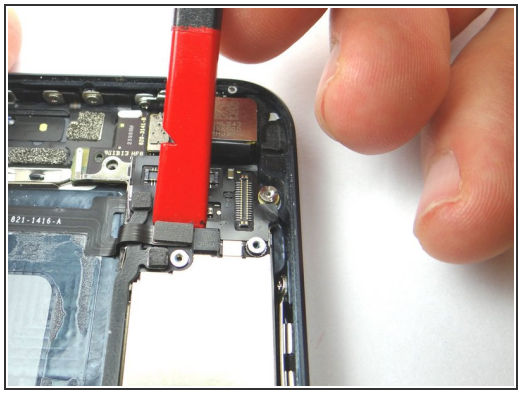
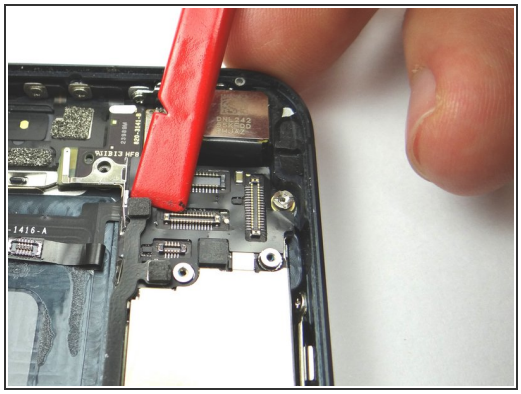
Step 14 — Removal 3.0: Logic Board

- Picture 1: Use the pointed tip of the Black Spudger to pry the cellular antenna connector from its socket.
- Picture 2: Remove one 2.3 mm Phillips screw and place in SLOT 9.
- Picture 3: Remove one 1.5 mm Phillips screw and place in SLOT 10. Next, remove the shield and place in SLOT 10 with the Phillips screw.

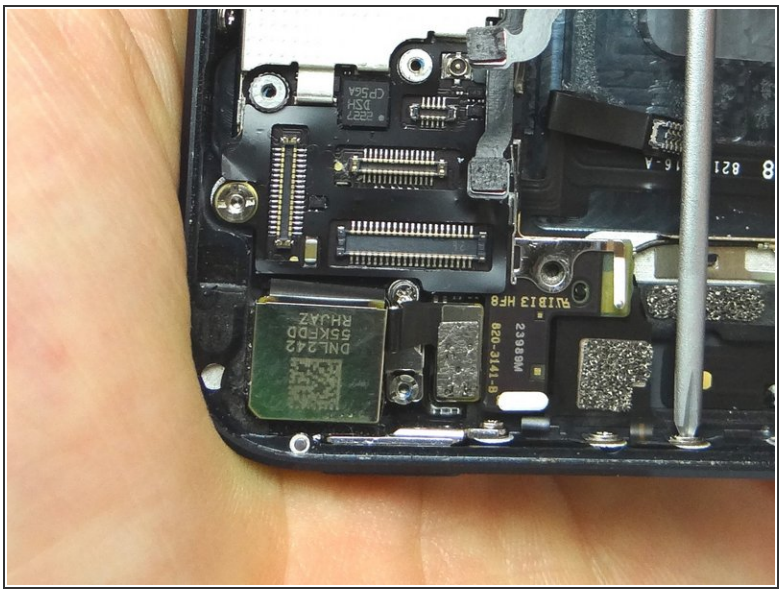
Step 15



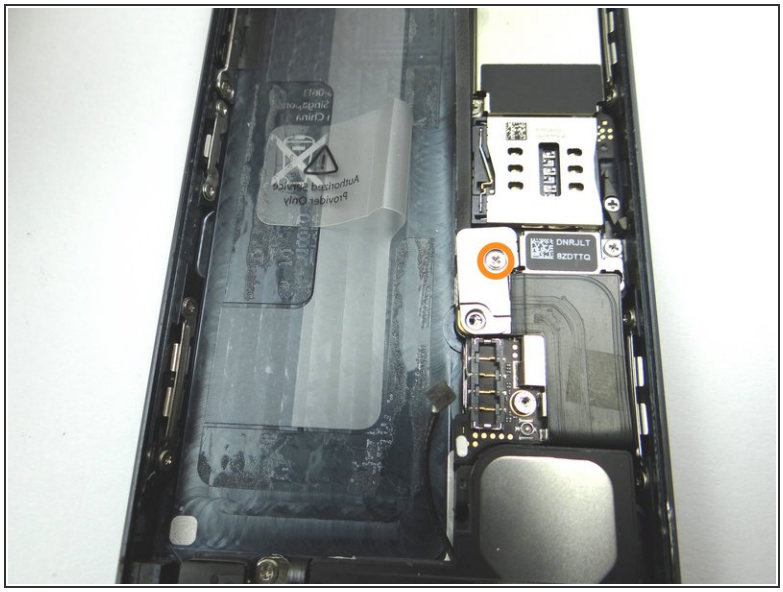
- Disconnect the ribbon cables in order: 1, then 2, then 3.

Step 16



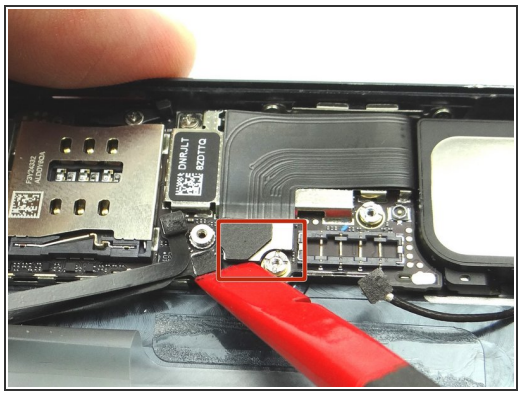
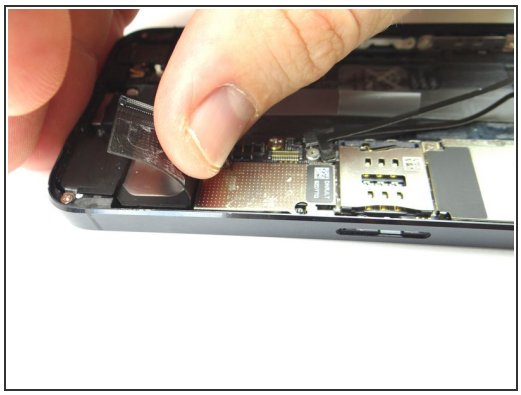
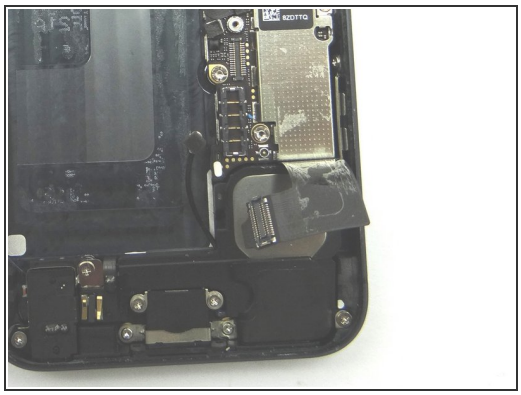
- Picture 1: Remove two 1.3 mm Phillips screws and place in SLOT 11.
- Stabilize the phone while you're removing the screws by holding it as in Picture 2.

Step 17



- Picture 1: Remove one 1.2 mm Phillips screw and place in SLOT 12.
- Picture 2: Remove the charging port assembly ribbon shield and place in SLOT 12.

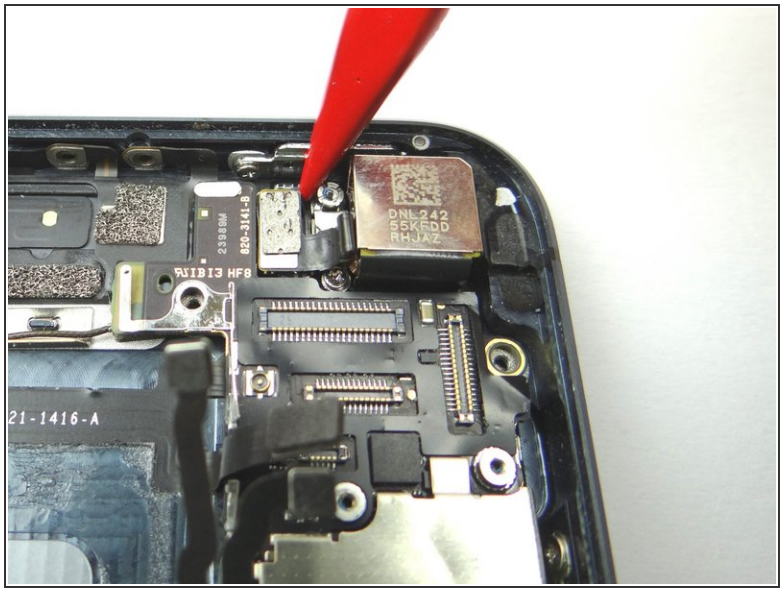
Step 18

- Picture 1: Place flat end of spudger under left side of charging port assembly cable. Gently twist your hand clockwise releasing the cable from its socket on the logic board.

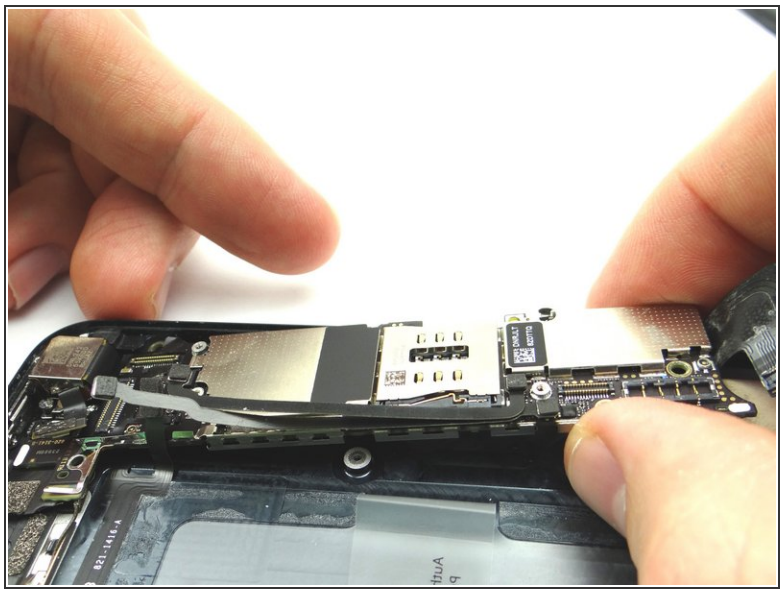
⚠ Picture 2 & 3: The charging port assembly cable is adhered to the logic board – gently peel it free from the logic board, working top to bottom until cable is free of logic board. Be cautious as this cable is very fragile.

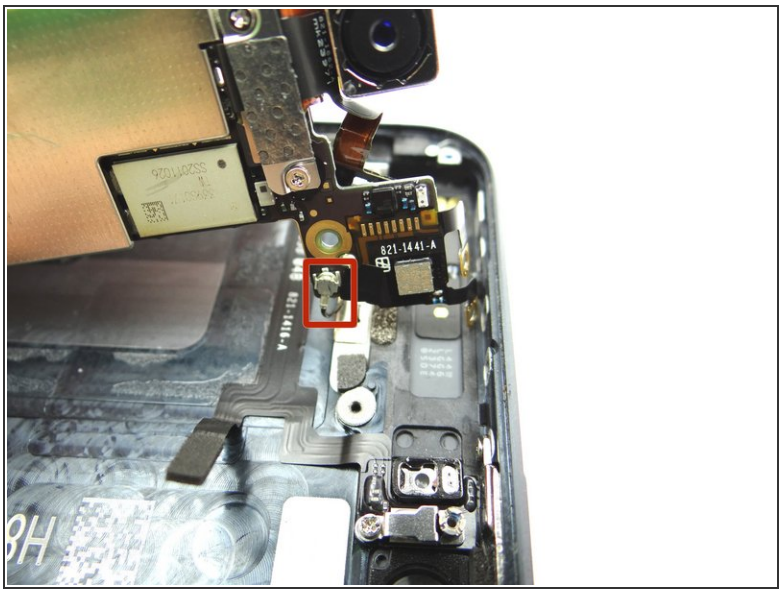
Step 19



- Picture 1: Use the tip of the Black Spudger to dislodge the camera flash from its insert.
- Picture 2: Remove the three 2.7 mm standoff screws (marked 1, 2 and 3) and place into SLOT 13.
- Picture 2: Next, remove two 2.3 mm Phillips screws (marked 4 and 5) and place into SLOT 14.

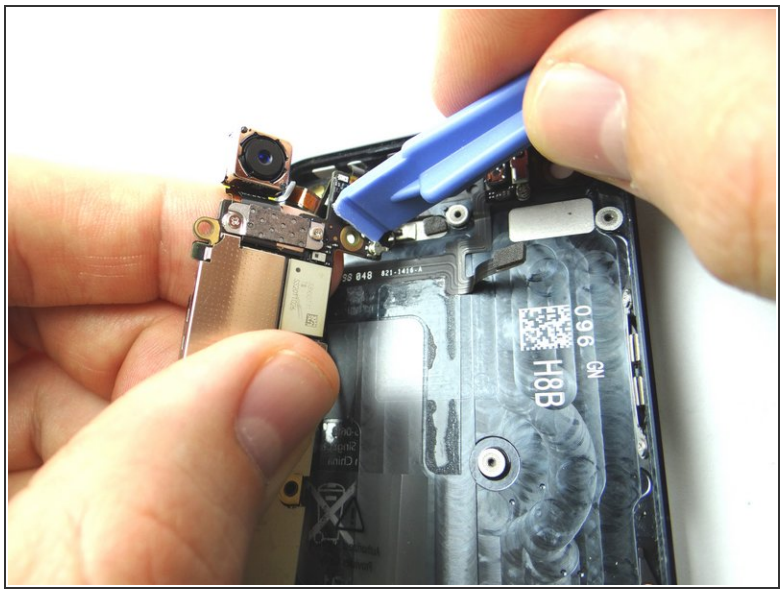
Step 20

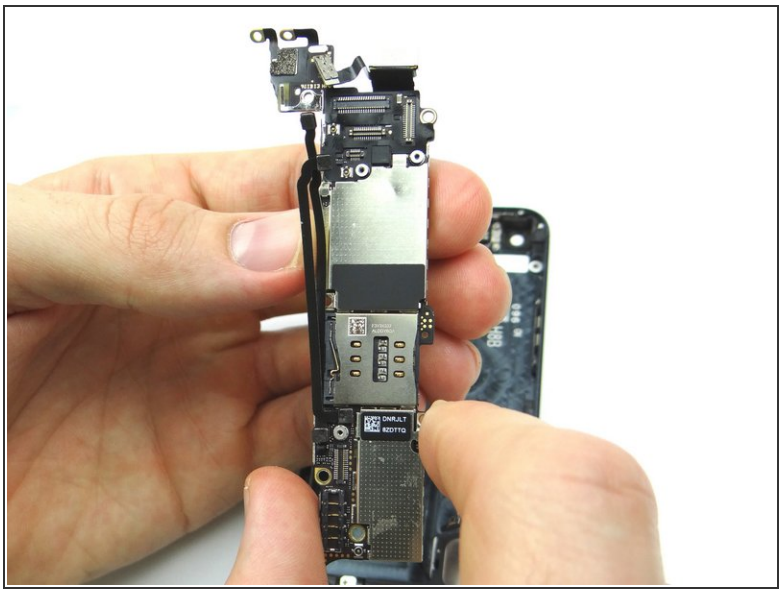




- Picture 1: Carefully lift the logic board just high enough to pinch it with your left thumb and index finger.
- Picture 2: Turn the logic board counter clockwise to reveal the wifi antenna connector.
- Use caution when turning the logic board to ensure you do not rip the wifi antenna cable.

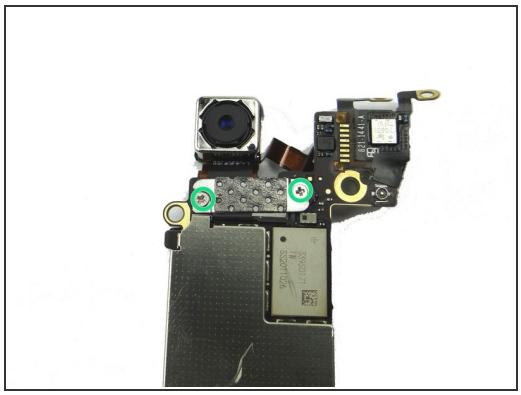
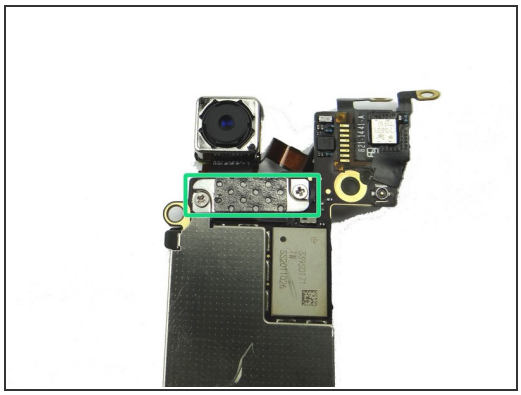
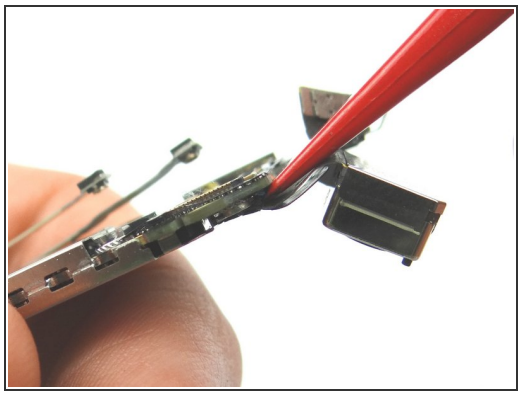
Step 21





- Picture 1: While holding the logic board in your left hand, use a Blue Pry Tool with your right hand to disconnect the wifi antenna connector.
- Picture 2: Place logic board in ZONE III.

Step 22 — Removal 3.1: Rear Camera

- Remove the Rear Camera from the underside of the logic board:
- Picture 1: Remove two 1.1 mm Phillips screws and place in COMPARTMENT B.
- Picture 2: Remove the shield and place in COMPARTMENT B.
- Picture 3: Use the Black Spudger to disconnect the rear camera ribbon cable by placing it near the top of the logic board behind the camera itself and gently prying up. Place rear camera in COMPARTMENT C.

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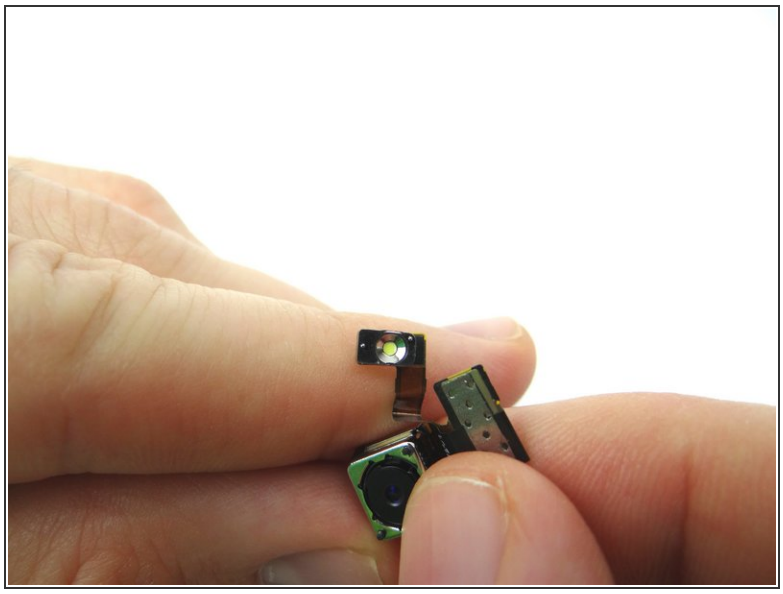
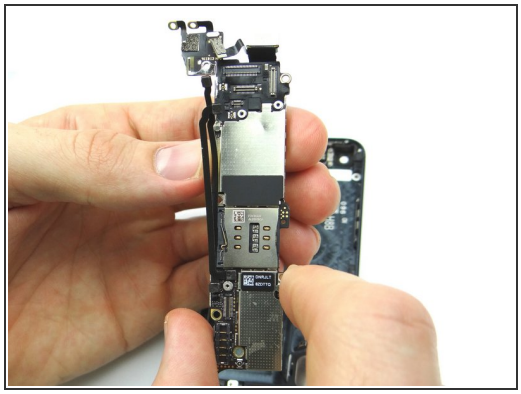
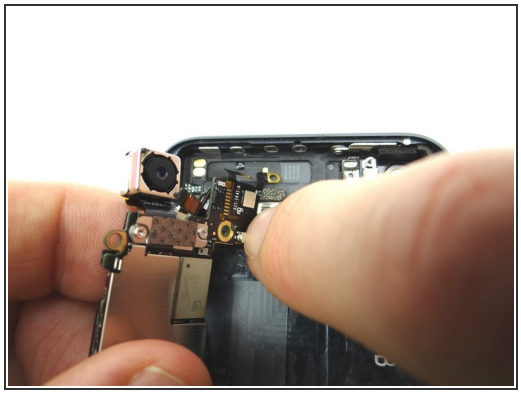
Step 23 — Replacement 3.1: Rear Camera

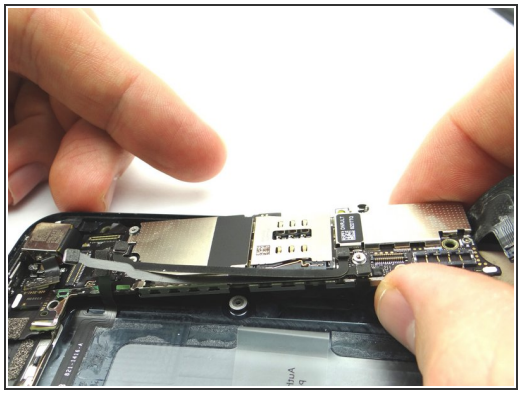


- Reconnect the rear camera ribbon cable to the underside of the logic board.
- Replace the shield from COMPARTMENT B and secure it to the logic board using the two 1.1 mm Phillips screws, also in COMPARTMENT B.

Step 24 — Replacement 3.0: Logic Board







- Picture 1: Replace logic board from ZONE III.
- Picture 2: Reconnect wifi antenna to the logic board.
- Picture 3: Push the logic board down into its position on the mid-frame.

⚠ Make sure no cables get trapped under the logic board while re-installing it.

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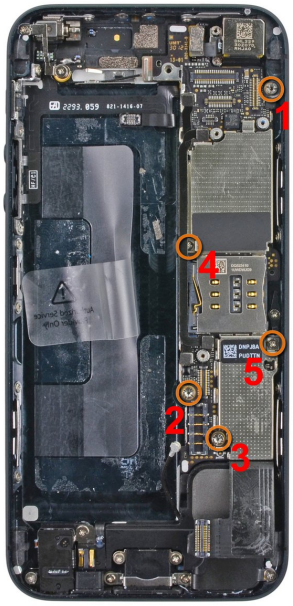
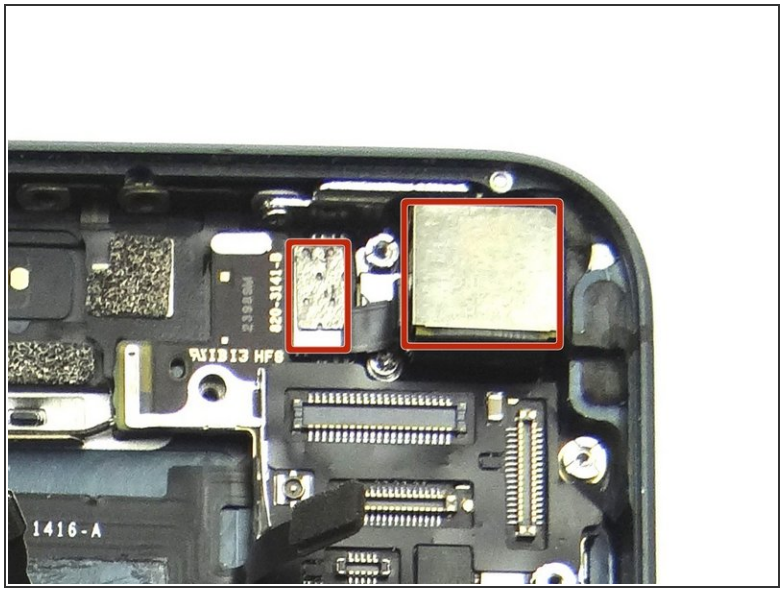
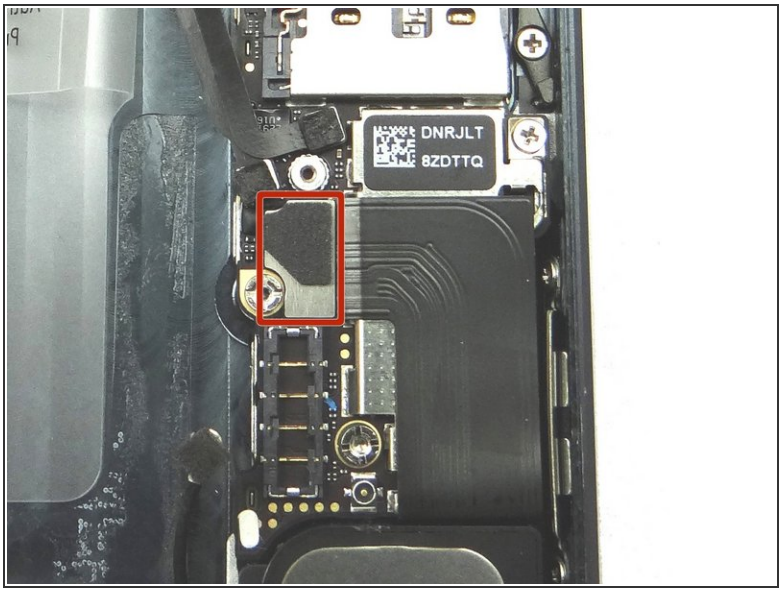
Step 25



- Replace two 2.3 mm Phillips screws (marked 4 and 5) from SLOT 14.
- Replace the three 2.7 mm standoff screws (marked 1, 2 and 3) from SLOT 13.

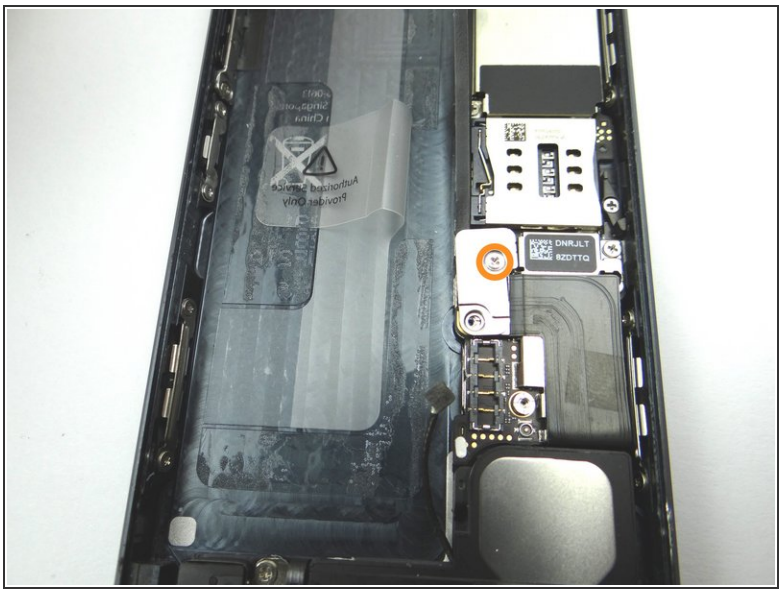
Step 26





- Picture 1: Reseat rear facing camera and the camera flash into their slots.
- Picture 2: Reseat the charging port assembly cable.

Step 27



- Picture 1: Replace the charging port assembly ribbon shield from SLOT 12.
- Picture 2: Replace one 1.2 mm Phillips screw from SLOT 12.

Step 28

- Picture 1: Replace two 1.3 mm Phillips screws from SLOT 11.
- Stabilize the phone while you're replacing the screws by holding it as in Picture 2.

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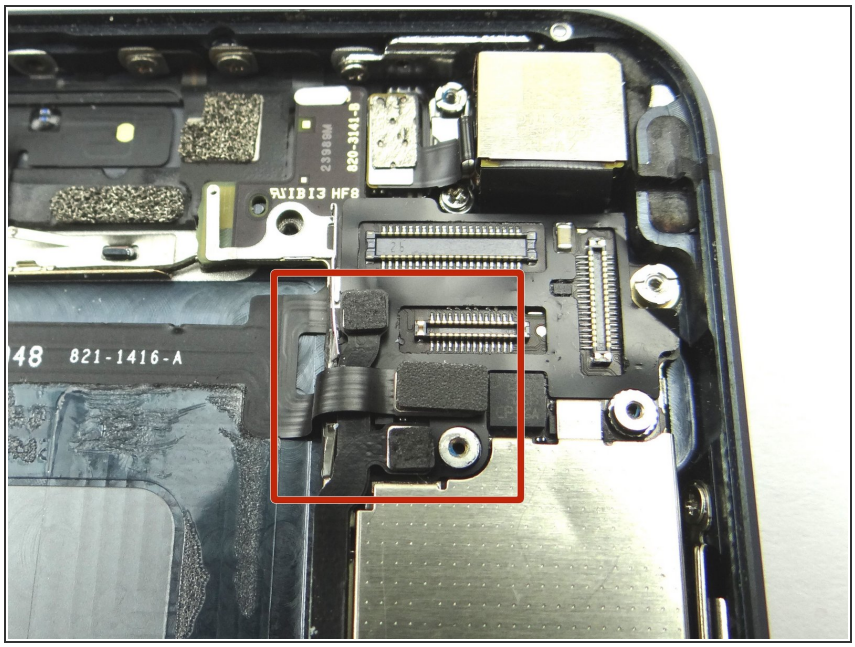
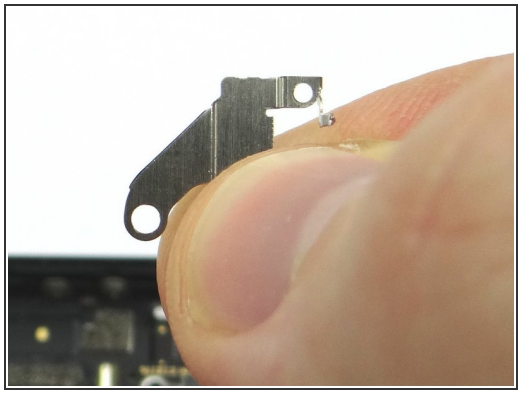
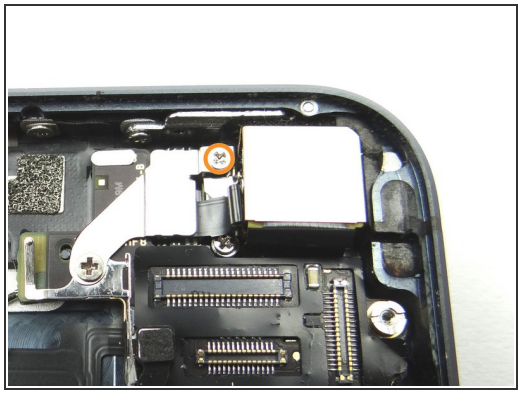
Step 29

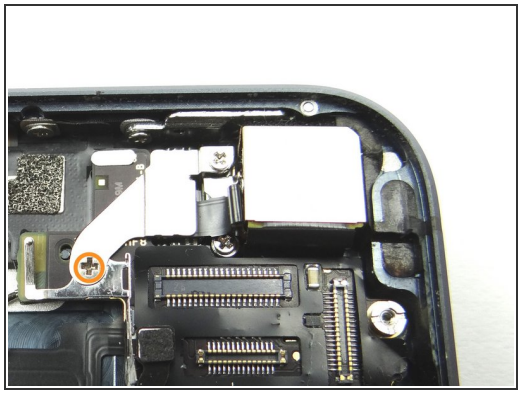


- Reseat the bottom cable first, middle cable second and top cable third.

Step 30







- Picture 1: Replace the shield from SLOT 10.
- Picture 2: Replace one 1.5 mm Phillips screw from SLOT 10.
- Picture 3: Replace one 2.3 mm Phillips screw and place in SLOT 9.

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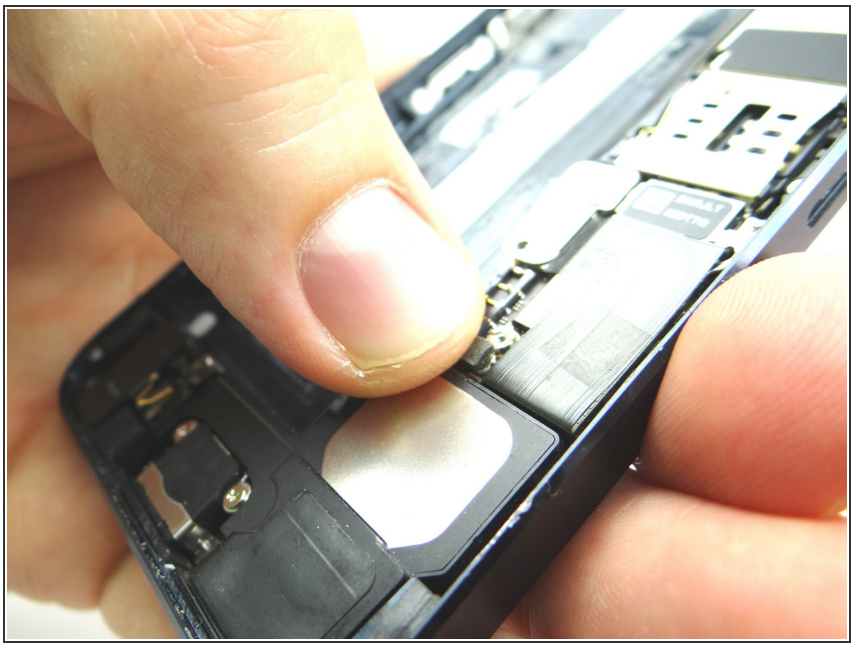
Step 31



- Reattach the cellular antenna cable.

Step 32 — Replacement 2.0: Battery

- Picture 1: Replace the battery from ZONE II and reseat the battery connector to its socket on the logic board.
- Picture 2: From SLOT 5, reseat the shield that goes over the top of the battery connector. Replace the 1.6 mm Phillips screw, also in SLOT 5, that goes into the bottom of the shield.
- Picture 3: Secure the top of the shield with the 1.8 mm Phillips screw from SLOT 4.

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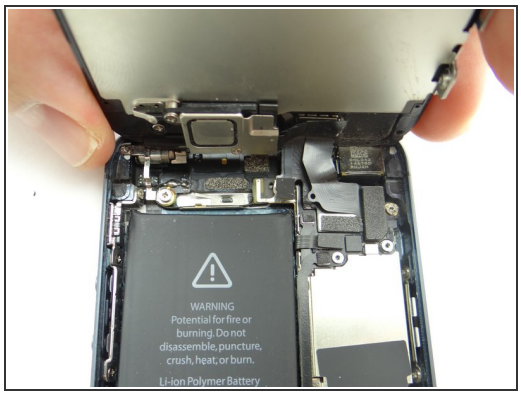
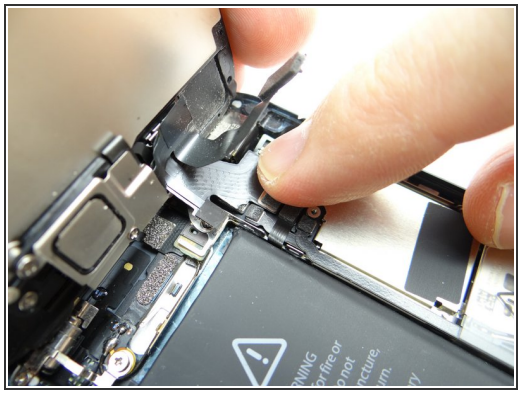
Step 33 — Replacement 1.0: Front Panel Assembly



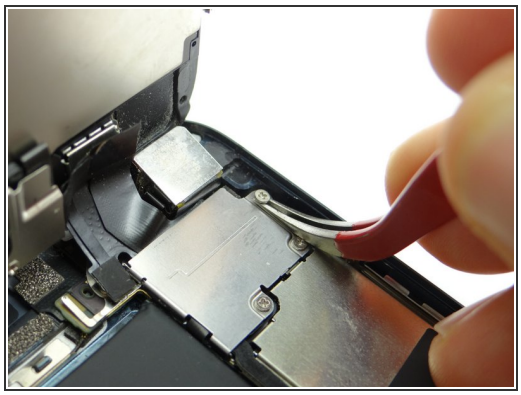
- Pictures 1 & 2: Line up the replacement front panel with the rear case. In the next step, you'll connect three front panel cables to the logic board.
- Picture 3: This is what the cables will look like when you're finished.

Step 34



- Picture 1: Seat LCD cable.
- Picture 2: Seat digitizer cable.
- Picture 3: Seat front-facing camera and sensor cable.

Step 35



- Picture 1: Replace cable shield from COMPARTMENT B.
- Picture 2: Replace two 1.2 mm #00 Phillips screws from SLOT 3.
- Picture 3: Use curved-tip tweezers to seat the non-magnetic 1.6 mm #00 Phillips screw from SLOT 2. Tighten the screw.

Step 36

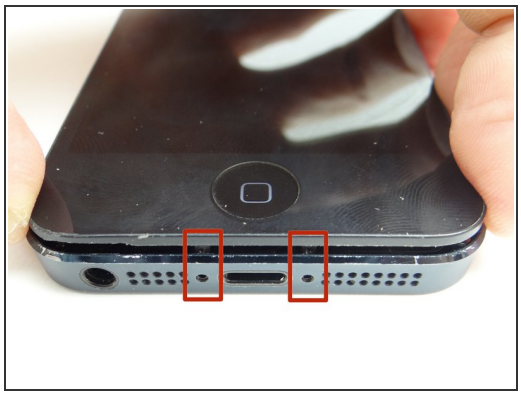
- Pictures 1 & 2: Angle the clips on the front panel into their sockets on the rear case.

⚠ Check the LCD and Digitizer before continuing:

- Picture 3: Power up the phone and don't close the front panel. If the LCD or digitizer aren't working perfectly (white lines are the most common issue), jump back to Step 11.

ⓘ If the issue remains after reseating the cables, you'll likely need another display.

Step 37 — Close the front panel on the rear case:

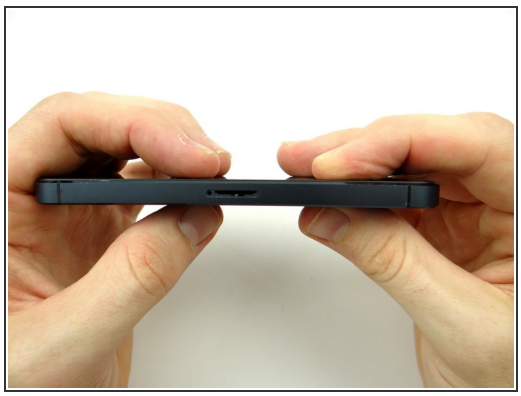


- Picture 1: With the phone on the worktable, push the Pentalobe screw tabs in first.

⚠ This should take minimal pressure. Check for errant screws or other obstructions if the device is difficult to close.

- Pictures 2 & 3: Then, push in with your thumbs just below the middle of the display and work your way up.

Step 38



- Pictures 1 & 2: Check around the perimeter of the device to ensure the display is fully seated.
- Picture 3: Replace two 3.6 mm Pentalobe screws near charging port from SLOT 1.

Step 39

- Replace SIM card tray and SIM card from COMPARTMENT A.
- Power up and perform full post-repair checklist.

Remember to use a chamois cloth to wipe off the screen before returning it to the customer!

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