Apple Watch Series 1 Force Touch Sensor Replacement

Unfortunately, opening up your Apple Watch may...

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INTRODUCTION

Unfortunately, opening up your Apple Watch may damage the Force Touch Sensor, which also serves as a gasketing seal. The sensor is made up of two layers, glued together. These layers may separate when you open your watch, compromising its seal after reassembly. If this happens, you'll need to repair or replace the sensor before reassembling your watch.

If your Force Touch gasket works correctly and you just need to replace the adhesive, follow our Apple Watch Adhesive Replacement guide instead.

TOOLS:

- Scissors (1)
- Tri-point Y000 Screwdriver (1)
- iOpener (1)
- iFixit Opening Tool (1)
- iFixit Opening Picks (Set of 6) (1)
- Curved Razor Blade (1)
- Tweezers (1)
- 1.0 mm Flathead Screwdriver (1)
- Tri-point Y000 Driver Bit (1)

PARTS:

- Apple Watch (38 mm, Original & Series 1) Battery (1)
- Apple Watch (42 mm, Original & Series 1) Battery (1)
- Apple Watch (Original & Series 1) LCD Connector Bracket (1)
- Apple Watch (38 mm, Original & Series 1) Screen (1)
- Apple Watch (42 mm, Original & Series 1) Screen (1)
- Apple Watch (38 mm, Original & Series 1) Force Touch Sensor Adhesive Gasket (1)
- Apple Watch (42 mm, Original & Series 1) Force Touch Sensor Adhesive Gasket (1)
- Apple Watch (38 mm) Adhesive Strip (1)
- Apple Watch (42 mm) Adhesive Strip (1)

Step 1 — Power off the Apple Watch

- Before starting repairs, take your watch off the charger and power it down.

ⓘ If your touchscreen is broken and prevents powering off the watch, use this alternate method to power it down.

Step 2 — Apply heat

- Prepare an iOpener (or grab a hair dryer or heat gun) and heat the face of the watch until it's slightly too hot to touch.
- Leave the iOpener on the watch for at least a minute to fully heat the screen and soften the adhesive holding it to the case.

ⓘ You may need to reheat the iOpener, or move it around on the screen as sections cool, to heat the screen enough to pry it off.

Step 3 — Observe all warnings

Because the gap between the screen and watch body is so thin, a sharp blade is required to separate the two. **Read the following warnings carefully before proceeding.**

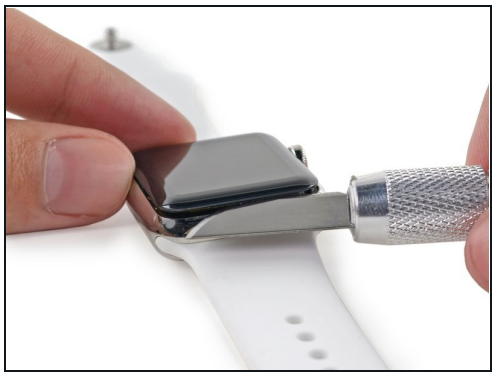
⚠ **Protect your fingers** by keeping them completely clear of the knife. If in doubt, protect your free hand with a heavy glove, such as a leather shop glove or gardening glove.

⚠ Be careful **not to apply too much pressure,** as this might cause the knife to slip and cut you, or damage the watch.

⚠ **Wear eye protection.** The knife or glass may break, sending pieces flying.

Step 4 — Pry up the screen





ⓘ Using a curved blade minimizes the chance of scratching the case or cracking the glass. Only pry with the curved section of the blade, and not the tip or flat section.

- Place the curved section of the blade in the gap between the glass and case on the lower edge of the watch face, and press firmly *straight down* into the gap.

⚠ Be very careful to maintain complete control over the knife—once the gap opens, if you're pressing too hard on the knife it may slip in and cut the battery.

ⓘ This should wedge the gap open and cause the glass to lift slightly up from the case.

- When the glass has lifted, gently rotate the knife down, opening the gap more by pushing the glass up.

Step 5

- Once you've opened the gap enough, insert the tip of an opening pick under the glass.
- Slide the pick along the bottom edge to separate adhesive holding the screen to the case.

⚠ Be careful not to insert the opening pick too far. Only about 1/8" (about 3 mm) is necessary, any deeper and you may damage cables.

Step 6

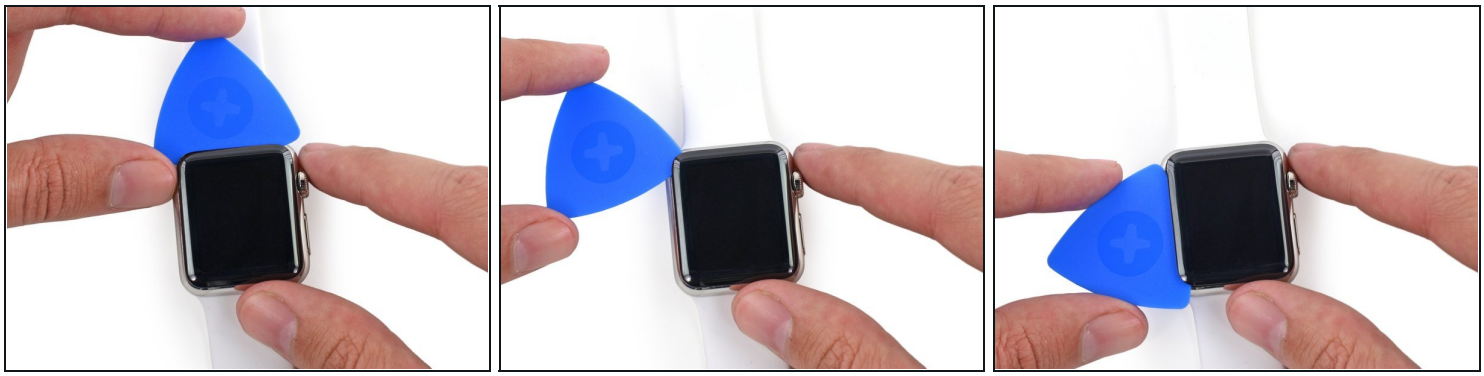
- Roll the opening pick up the side of the button side of the watch, gently pushing in to separate the adhesive and widening the gap as you go.

ⓘ Remember not to push the pick in too far—it's easier to avoid this by rolling the pick, rather than dragging a tip along.

Step 7

- Work the pick around the top right corner, and roll it along the top edge of the screen.

Step 8



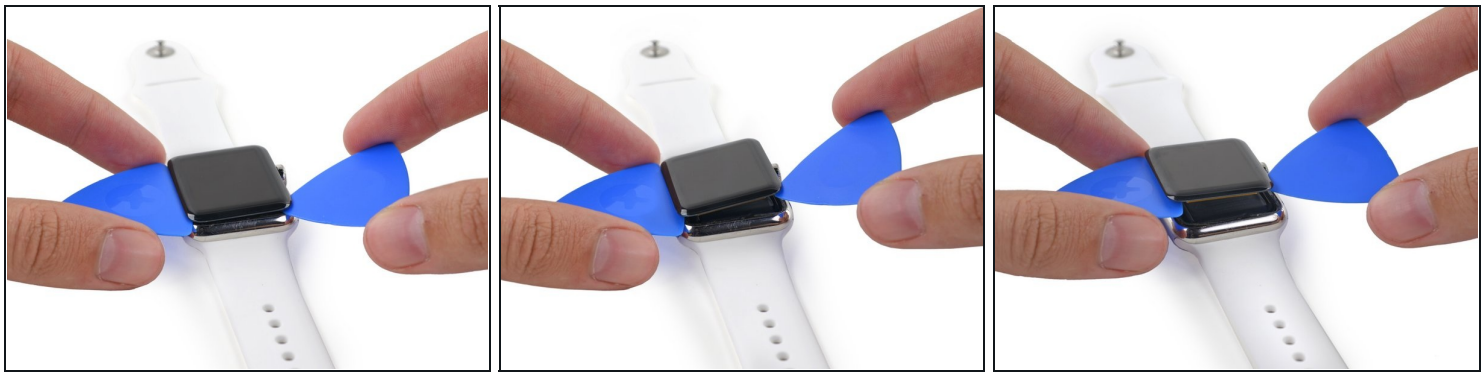
- Continue working the pick around the perimeter of the screen, rolling down along the left side to cut the last of the adhesive.

ⓘ Leave the pick in place to keep the adhesive from resealing the screen in place.

Step 9

- While holding the first pick in place, use a second to check that all of the adhesive is separated around the entire perimeter of the screen.

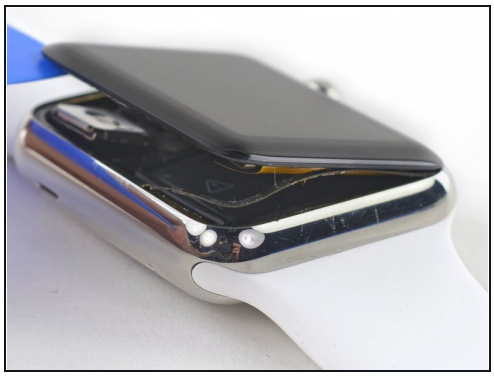
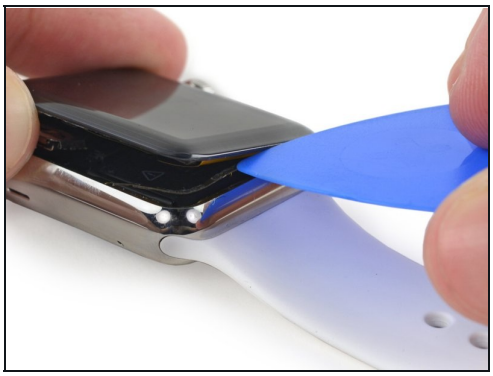
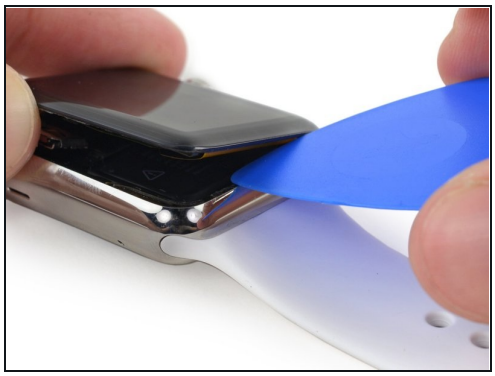
Step 10



⚠ There are two cables connecting the screen to the inside of the watch, near the top left corner. Be careful when prying or you may damage these cables.

- Pry slightly up on the right side of the screen, to free it from any remaining adhesive.
- Pry up on the left to free it as well—but **do not attempt to remove the screen** as it is still held in place by two cables.

Step 11

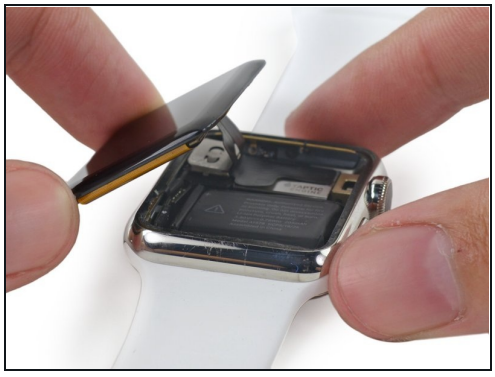
ⓘ If you can see the top layer of your Force Touch sensor among the display adhesive, it means the two layers of the sensor separated and you're going to need to replace or repair it.

ⓘ iFixit screen and battery repair kits come with a replacement Force Touch sensor, so if you got one of those, don't fret.

- The top layer of the sensor may be adhered to the back of the screen—if so, push it back down and separate it.

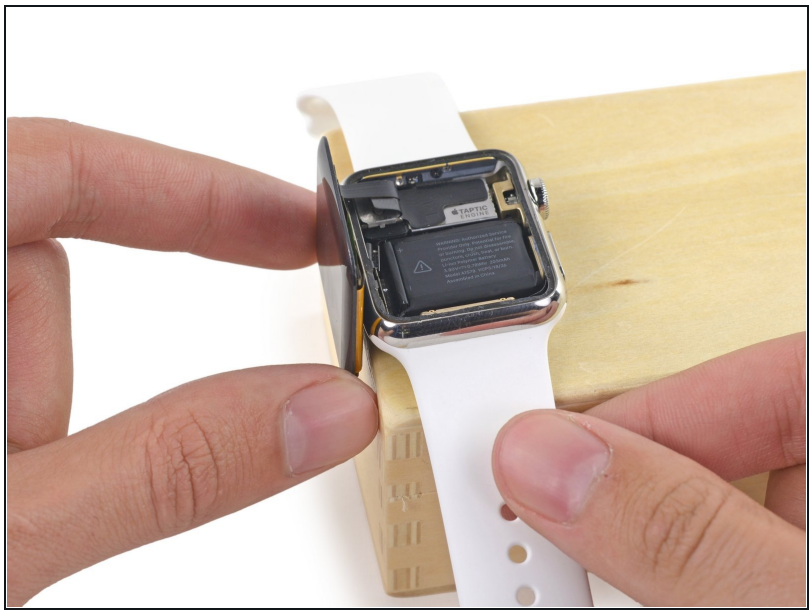
Step 12





- Lift the screen up and shift it to the left, minding the display data and digitizer cables.

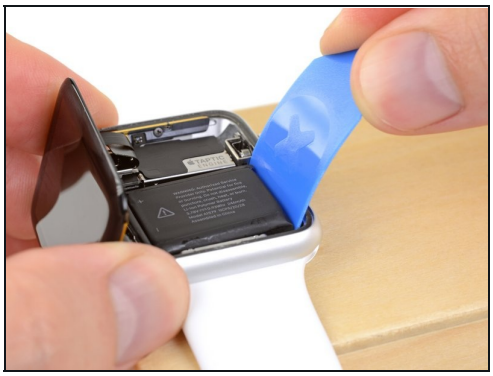
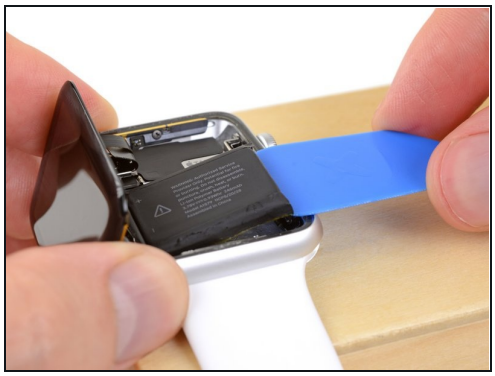
Step 13



- Place the watch on an elevated surface, at least 1/2" or 1 cm tall—a small box or the edge of a book will work great. This will allow the screen to hang down vertically and give better access to the battery.

⚠ Be careful not to bump the screen or strain the cables while you work.

Step 14

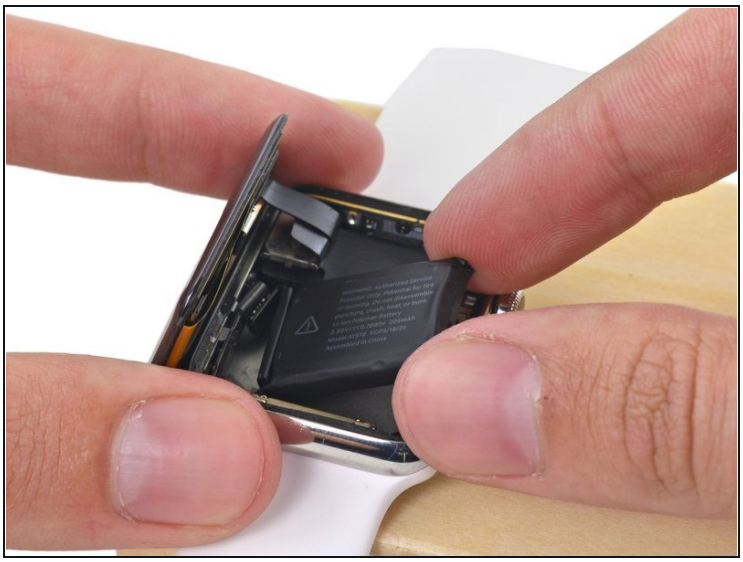
- Use scissors to cut one of your opening picks to about the width of the battery. Try not to leave any sharp corners.
- Insert the modified pick between the right side of the battery and the case.
- Use constant, steady pressure to *slowly* pry the battery up, separating it from the adhesive securing it to the system board.

⚠ Be careful not to deform or puncture the battery.

  - On the larger (42 mm) models, it's possible to accidentally pry at the system board underneath the battery. Insert the pick only far enough to get underneath the battery, not the system board.
  - If needed, apply a little high concentration isopropyl alcohol (90% or greater) around and under the battery to help weaken the adhesive.

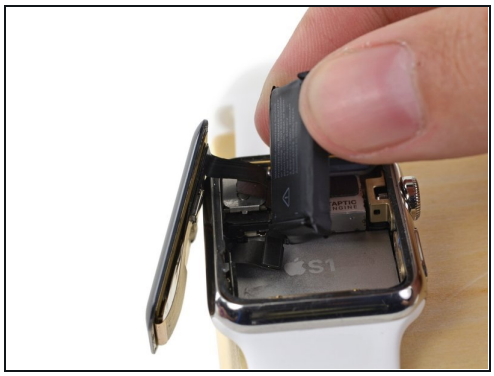
⚠ **Do not** attempt to remove the battery as it is still connected.

Step 15




- Rotate the battery counterclockwise to expose its connector.

Step 16



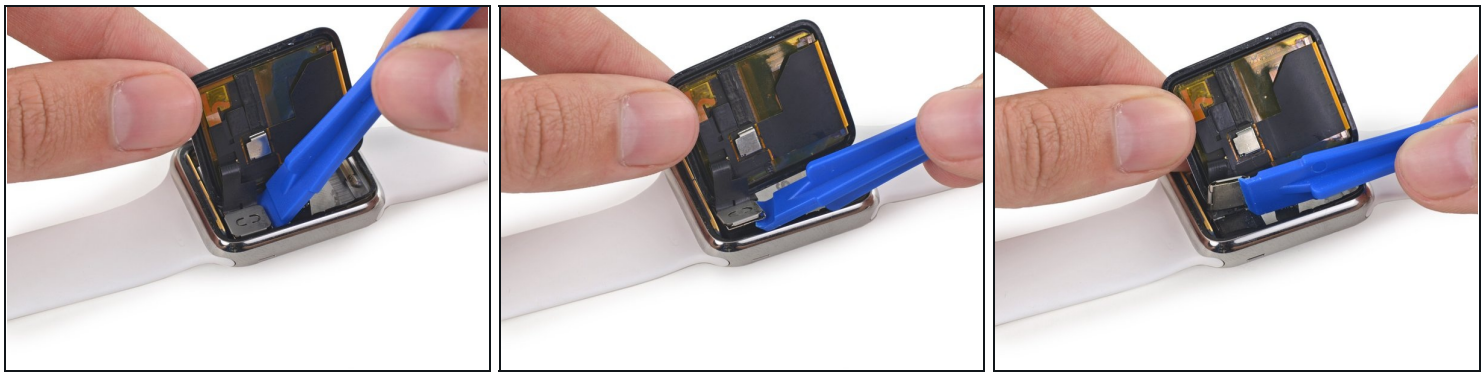
- Hold the battery up and out of the way, to expose the battery cable connector.
- Use a plastic opening tool, prying against the bottom of the case to separate the battery cable connector from the watch's battery cable.
- Remove the battery from the watch.

⚠ If the battery is visibly dented or deformed, it should be replaced. For best results, replace with a new battery whenever it is removed.

Step 17 — Screen

- Fold the screen up and over to the right, to expose the cables underneath.

Step 18



ⓘ The display and digitizer cable connectors are secured beneath a small metal bracket that is adhered to the speaker.

- Use a plastic opening tool to flip the bracket toward the display and up from the speaker.

⚠ If you simply pry toward the watch band you may tear the cables.

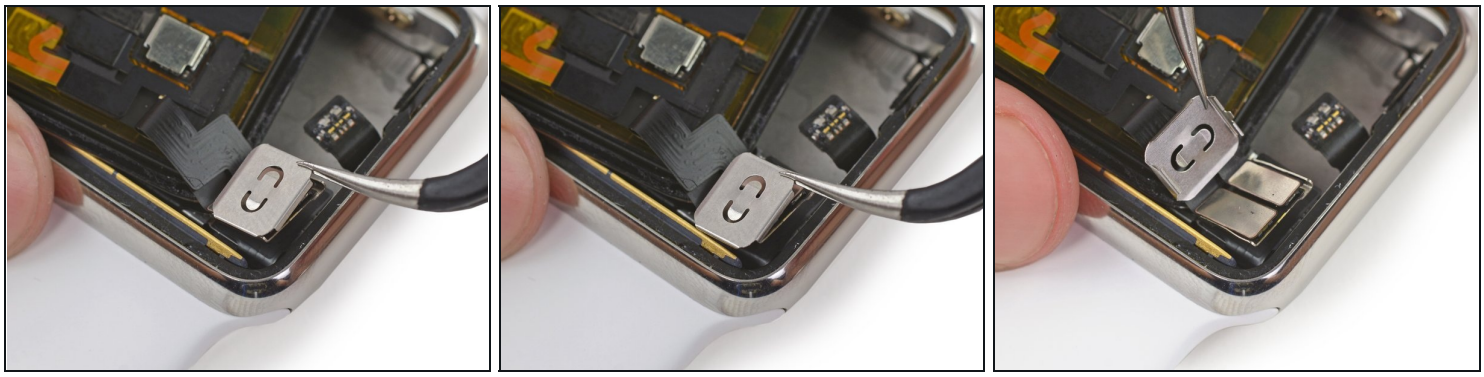
Step 19

- Steady the bracket from the left side using your fingers or tweezers.
- At the same time, insert a small (1 mm) flathead screwdriver under the tiny tab on the right.
- Finally, place one finger behind the tab, and pinch the bracket *hard* between your finger and the screwdriver to detach the cover.

ⓘ This releases two slotted tabs that hold the cover to the bracket, and should free the cover.

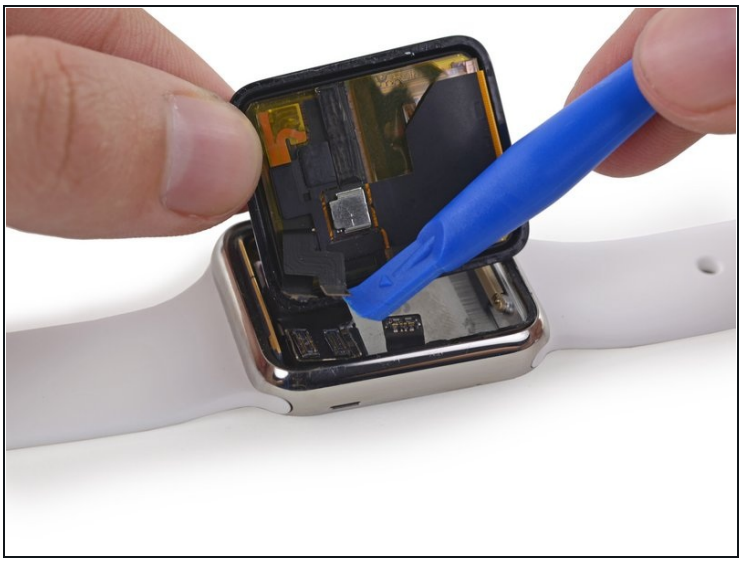
⚠ Prying the cover off can be challenging and may take more than one attempt. Be patient, and take care not to pull on the bracket or tear the attached cables.

Step 20



- Grab the cover with your tweezers and slide it toward the top of the watch to free the final slotted tab, and remove the cover.

Step 21

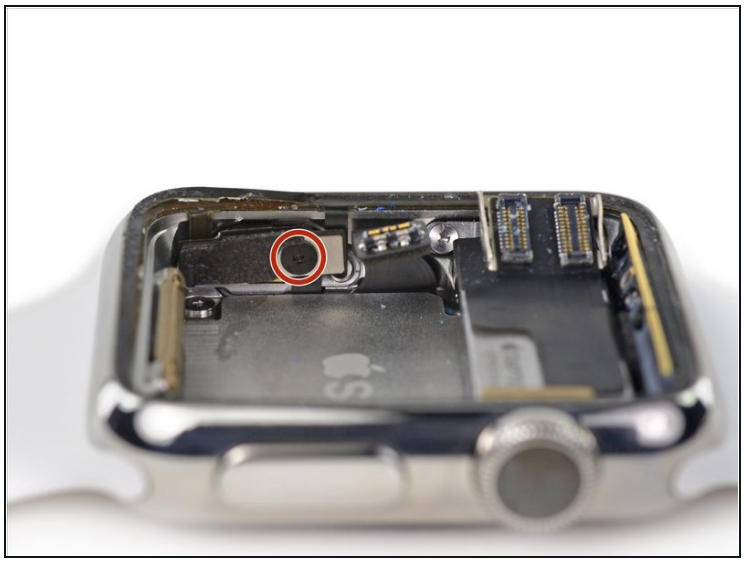


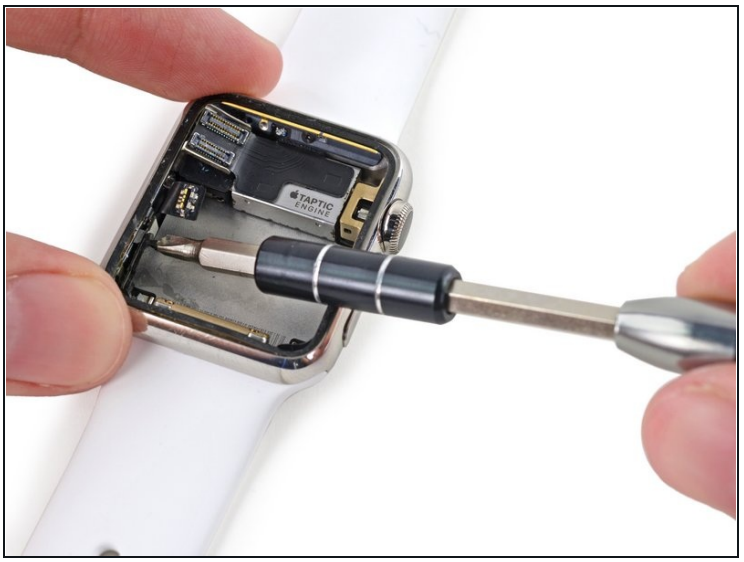
- Carefully pry up to disconnect the display data and digitizer cables.

  ⚠ Be careful not to touch any of the exposed pins directly, as your finger oils may impede connectivity.

- Remove the display.

Step 22 — Force Touch Sensor

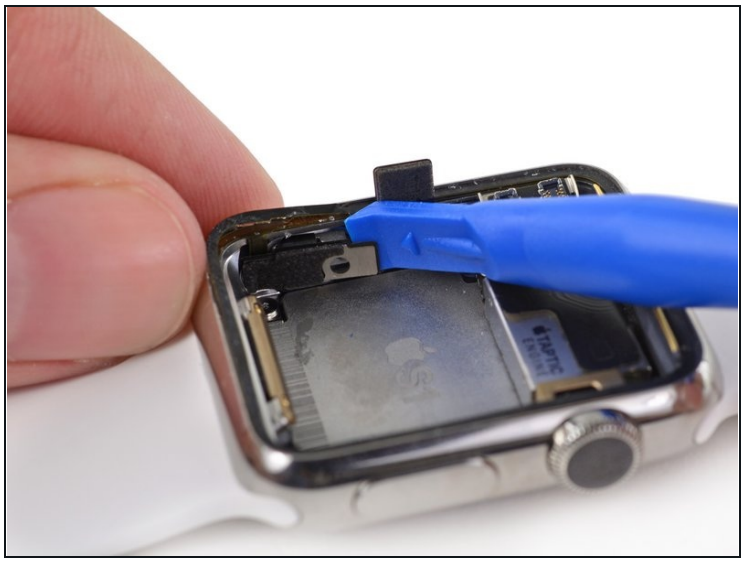




- Use a Y000 driver to remove the single tri-point screw securing the Force Touch sensor connector cable.

⚠ This screw is very small and strips easily. Keep your driver at the correct angle and *push* to apply pressure to the screw as you turn.

Step 23

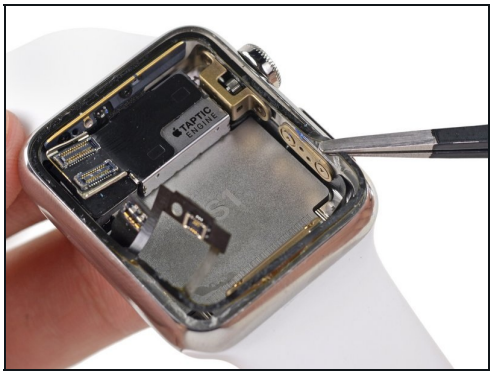


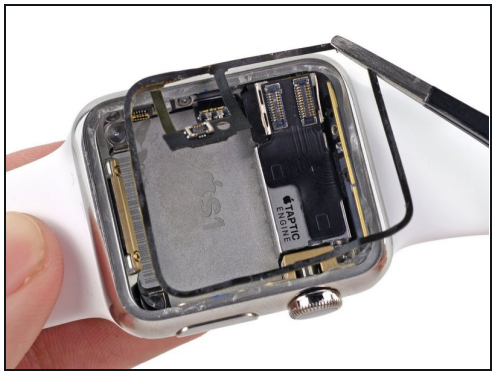
- Use a plastic opening tool to flip the Force Touch sensor cable connector straight down, disconnecting it.

Step 24

- Microwave your iOpener for another 30 seconds, and apply it to the front of the watch case to soften the adhesive securing the Force Touch sensor.

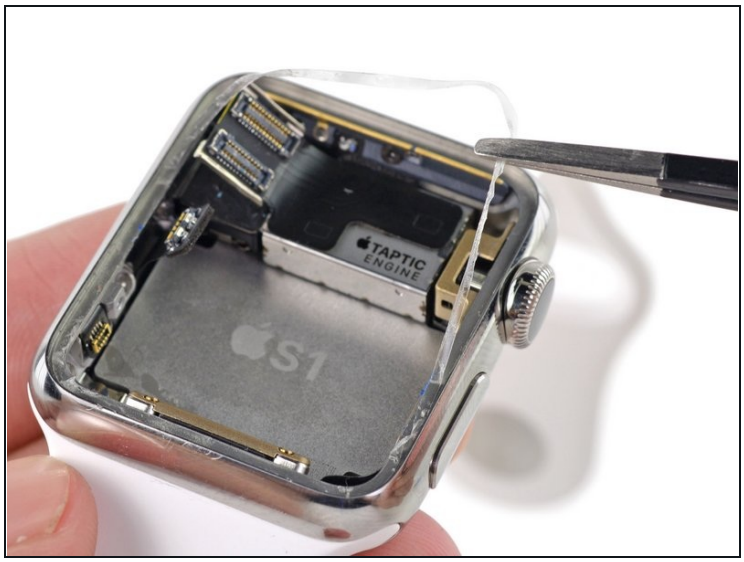
Step 25

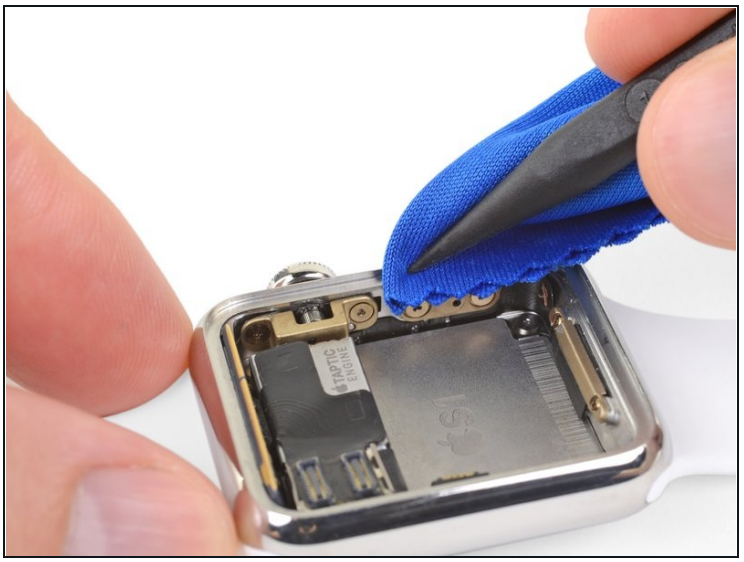




- Use a plastic opening pick and tweezers to remove the Force Touch sensor from the case.

Step 26



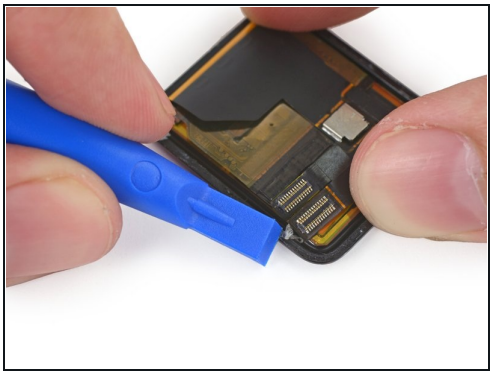
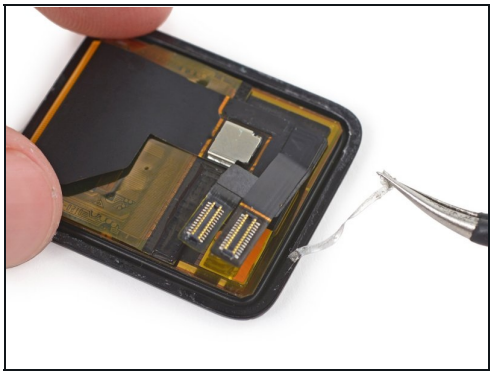
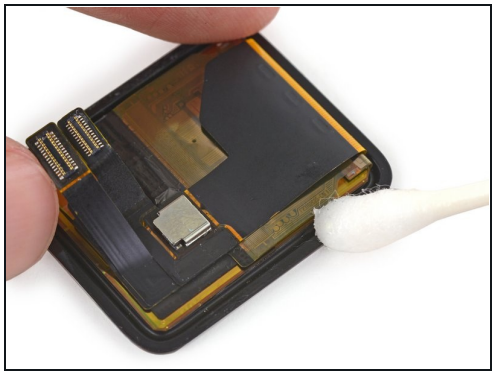


- Use tweezers to peel up any adhesive left behind on the lower case.

- Clean all traces of adhesive (and broken glass, if any) thoroughly from the case before re-sealing your watch. Scour the case using the tip of an opening tool or spudger wrapped in a lint-free cloth or coffee filter, along with a little isopropyl alcohol (90% concentration or greater).

⚠ Don't rush this step. Even a small amount of residue can prevent your display from bonding to the case, causing it to come loose over time.

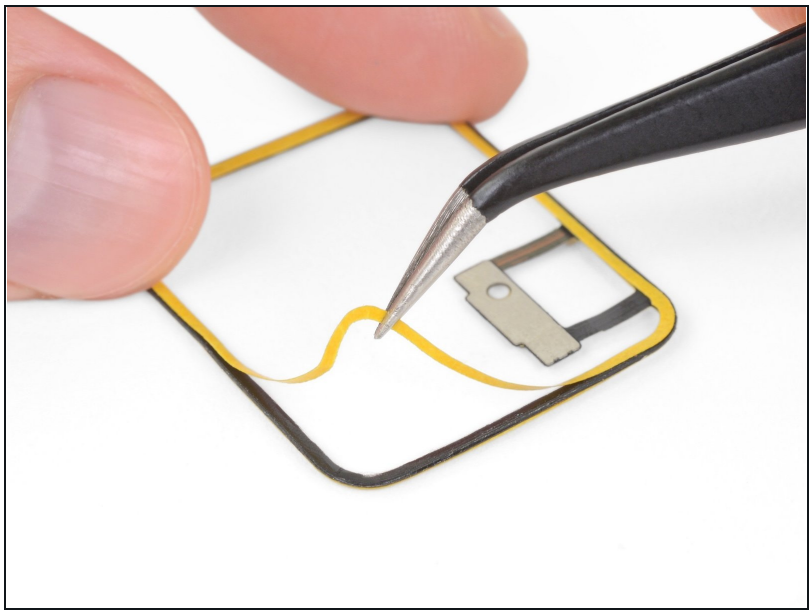
Step 27

If you're re-using your existing screen, this is a good time to remove the old adhesive from there as well. (If you're installing a new screen, ignore this step.)

- Use a plastic opening tool to scrape off the old adhesive around the edge of the screen. If possible, peel off larger pieces using tweezers.
- Thoroughly clean the area under the adhesive with isopropyl alcohol.

Step 28

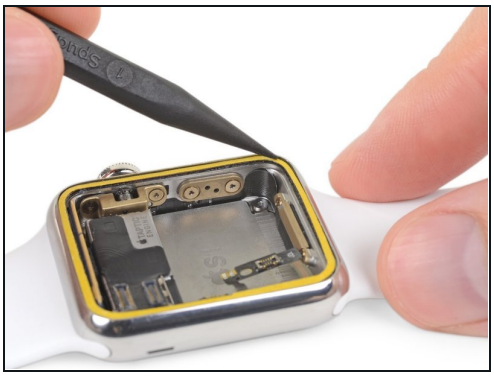


- Set your new Force Touch sensor face-down (with the connector pins facing away from you).
- Peel off and discard the first protective liner, exposing the adhesive underneath.

Step 29

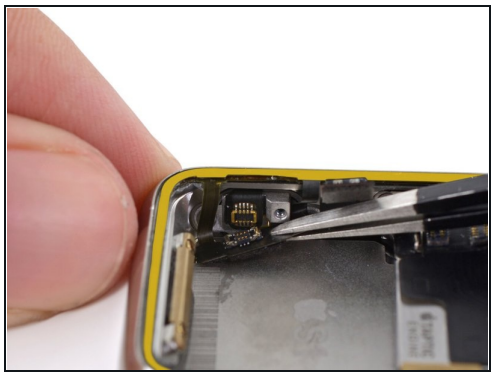
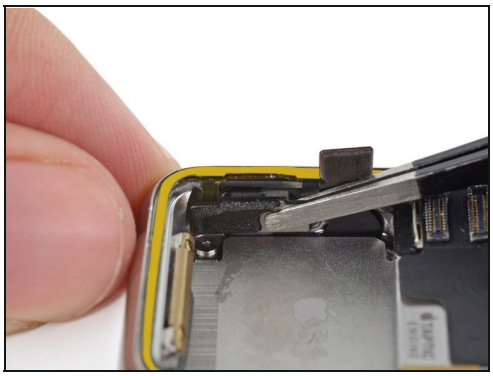
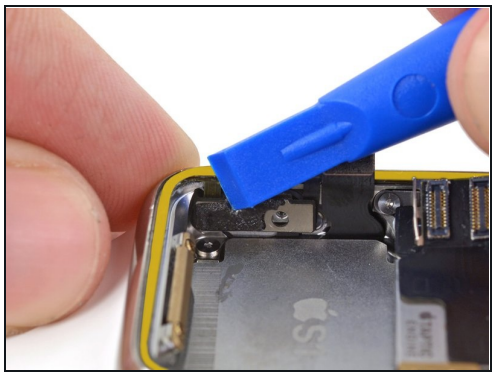
- With the exposed adhesive facing down, carefully align the Force Touch sensor and place it into the watch case.
  - Be sure to properly orient it, with the connector in the lower left corner, facing up.

Step 30



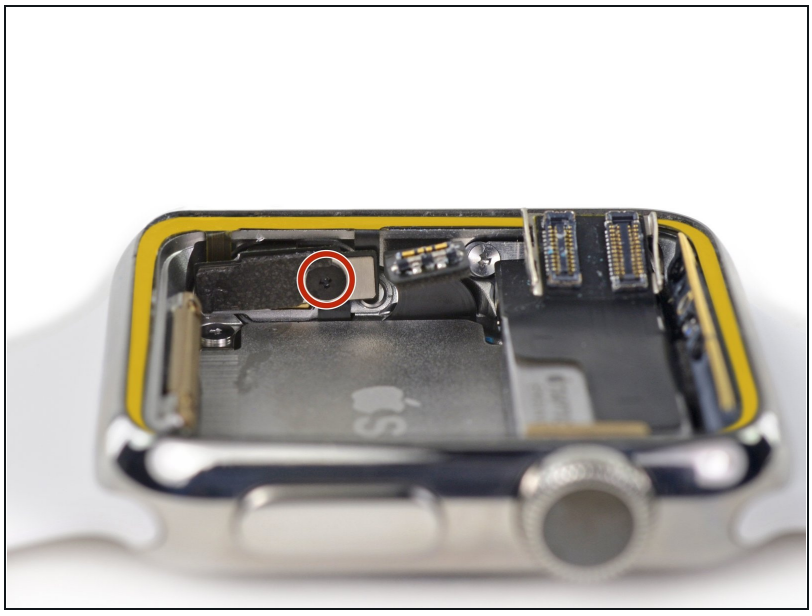
- Gently but firmly press the Force Touch sensor into place all around the perimeter of the watch case.

Step 31

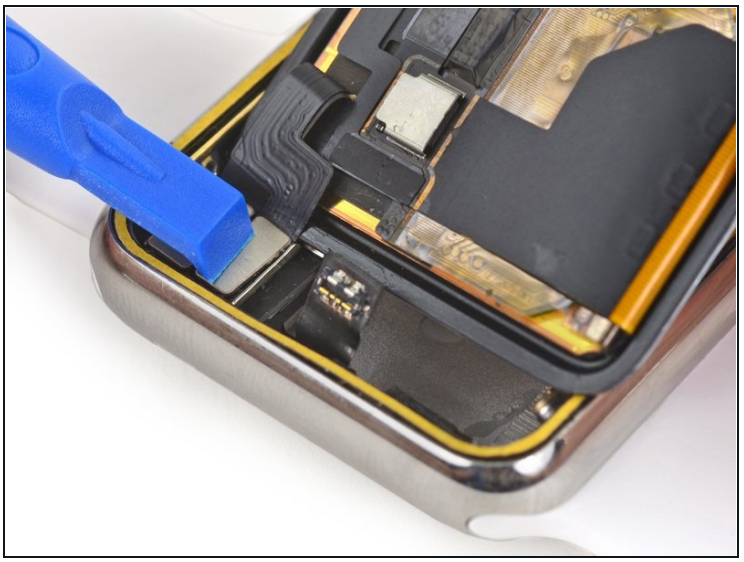
- Use tweezers to fold the Force Touch sensor cable connector back up onto its socket.
- Then use a plastic opening tool to press the cable connector into the socket.

Step 32



- Replace the Y000 tri-point screw securing the Force Touch sensor connector cable.

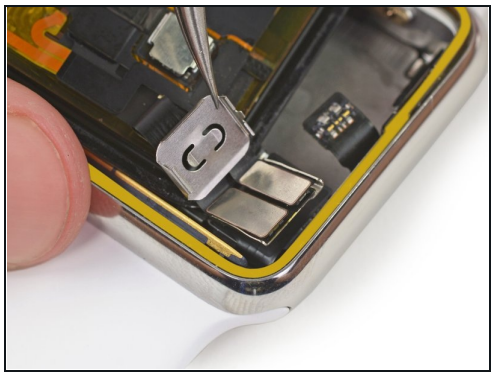
Step 33

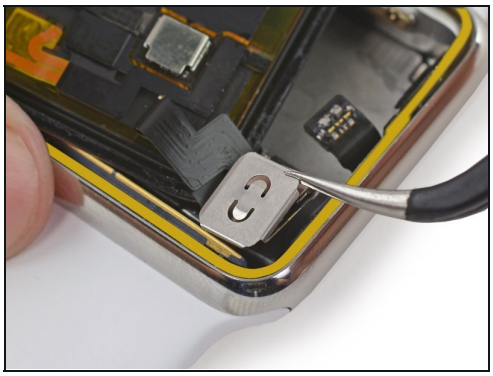


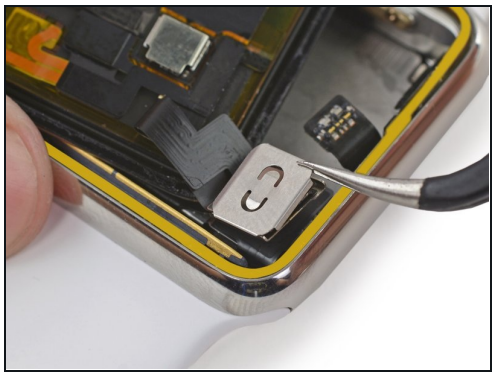
- Use a plastic opening tool to reconnect the display data and digitizer cable connectors.

⚠ Be careful not to touch any of the exposed pins directly, as your finger oils may impede connectivity.

Step 34



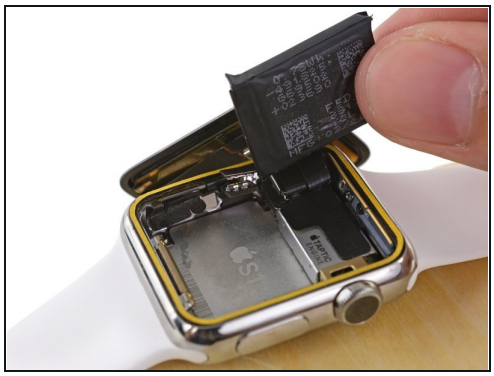
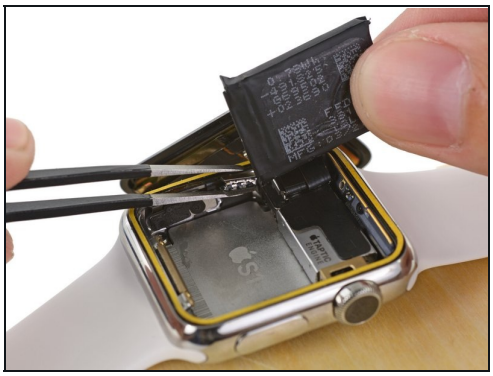
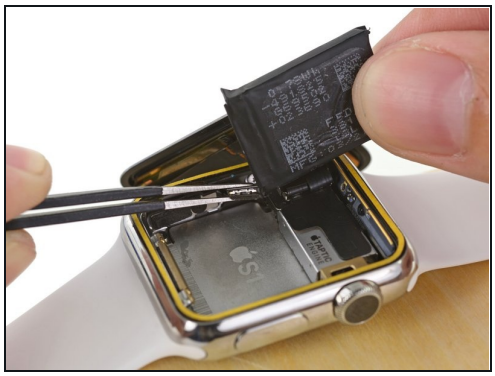




- Set the display connector bracket cover in place and slide it lengthwise to secure the large slotted tab at one end.

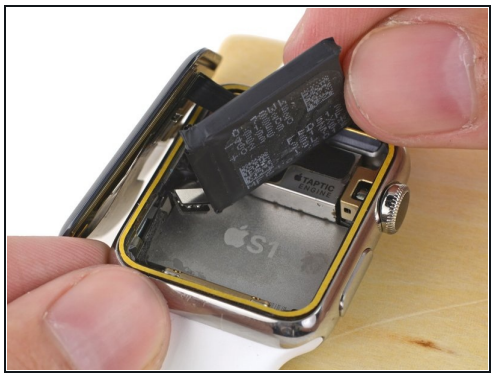
- Press down on the cover to click the two smaller tabs at the other end into place.

Step 35

- Line the battery connector up with its mate on the cable inside the watch body.
- Use tweezers to press the two connectors together.

Step 36



If you're using a replacement battery that came with pre-installed adhesive, peel off the protective tab now, exposing the adhesive.

- If needed, try re-using the existing adhesive to secure the battery. Alternatively, try a small piece of double-sided tape such as Tesa 61395, or a dab of liquid adhesive such as E6000.

- Rotate the battery down into its slot, and press it into position.
- Press the battery down against the system board to re-adhere it in place.

Now is the best time to test powering on your watch and test the force touch function—if it doesn't turn on, double check all three connectors and try again.

Step 37



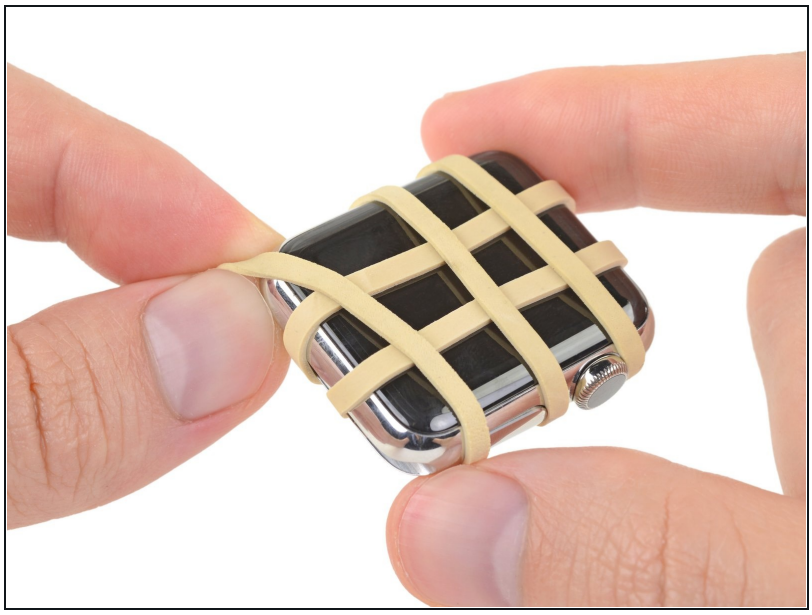
- Use tweezers to peel up the adhesive liner.
  - Peel the liner up halfway, then snip it with scissors so you can peel the rest off without it snagging on the display.

Step 38



- Move the screen back to the right, folding the display data and digitizer cables neatly.
- Center the screen over the case and press it down firmly onto the adhesive.

Step 39



- For best results, detach the watch band and wrap a couple rubber bands around the Apple Watch's case to help the adhesive bond correctly.

Take your e-waste to an R2 or e-Stewards certified recycler.

Repair didn’t go as planned? Try some basic troubleshooting, or search our Answers forum for help.