



iPhone 8 Plus Taptic Engine Replacement

The Taptic Engine produces your iPhone's...

Written By: Jeff Suovanen



INTRODUCTION

The Taptic Engine produces your iPhone's vibration and haptic feedback functions. Use this guide to remove and/or replace the Taptic Engine in an iPhone 8 Plus.

This guide instructs you to fully detach and remove the display assembly; this is intended to make the phone easier to work with and to prevent accidental damage to the display cables. If you feel comfortable removing the Taptic Engine while keeping the display cables attached, you can skip the steps for disconnecting the display.

TOOLS:

[Anti-Clamp](#) (1)
[P2 Pentalobe Screwdriver iPhone](#) (1)
[iOpener](#) (1)
[Suction Handle](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Spudger](#) (1)
[Tweezers](#) (1)
[Phillips #000 Screwdriver](#) (1)
[Tri-point Y000 Screwdriver](#) (1)
[iFixit Opening Tool](#) (1)
[Standoff Screwdriver for iPhones](#) (1)

PARTS:

[iPhone 8 Plus Vibrator](#) (1)
[iPhone 8 Plus Display Assembly Adhesive](#) (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 3.5 mm pentalobe screws from 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 — Mark your opening picks



- ① If inserted too far, an opening pick can damage your device. Follow this step to mark your pick and prevent damage.
- Measure 3 mm from the tip and mark the opening pick with a permanent marker.
 - ① You can also mark the other corners of the pick with different measurements.
 - ① Alternatively, [tape a coin to a pick](#) 3 mm from the tip.

Step 3 — Tape over any cracks



- ① If your iPhone has a cracked screen, 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 screen until the whole face is covered.
- ⚠ Wear safety glasses to protect your eyes from any glass shaken free during the repair.
- If you can't get the suction cup to stick in the next few steps, fold a strong piece of tape (such as duct tape) into a handle and lift the screen with that instead.
- ① If all else fails, you can superglue the suction cup to the screen.

Step 4 — Anti-Clamp instructions



- ① The next three steps demonstrate the [Anti-Clamp](#), a tool we designed to make the opening procedure easier. **If you aren't using the Anti-Clamp, skip down three steps for an alternate method.**
- ① For complete instructions on how to use the Anti-Clamp, [check out this guide](#).
- Pull the blue handle backwards to unlock the Anti-Clamp's arms.
- Slide the arms over either the left or right edge of your iPhone.
- Position the suction cups near the bottom edge of the iPhone just above the home button—one on the front, and one on the back.
- Squeeze the cups together to apply suction to the desired area.
- ① If you find that the surface of your iPhone is too slippery for the Anti-Clamp to hold onto, you can [use tape](#) to create a grippier surface.

Step 5



- Pull the blue handle forwards to lock the arms.
- Turn the handle clockwise 360 degrees or until the cups start to stretch.
- Make sure the suction cups remain aligned with each other. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.

Step 6



- [Heat an iOpener](#) and thread it through the arms of the Anti-Clamp.
 - ① You can also use a [hair dryer](#), [heat gun](#), or hot plate—but extreme heat can damage the display and/or internal battery, so proceed with care.
- Fold the iOpener so it lays on the bottom edge of the iPhone.
- Wait one minute to give the adhesive a chance to release and present an opening gap.
- Insert an opening pick under the screen when the Anti-Clamp creates a large enough gap.
 - ① If the Anti-Clamp doesn't create a sufficient gap, apply more heat to the area and rotate the handle a quarter turn.
- ⚠ **Don't crank more than a quarter turn at a time, and wait one minute between turns. Let the Anti-Clamp and time do the work for you.**
- **Skip the next three steps.**

Step 7



- ① The next three steps show how to separate the screen using a suction cup.
- ① 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 90 seconds in order to soften up the adhesive underneath.

Step 8



- Apply a suction cup to the lower half of the front panel, just above the home button.
 - ① 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 9



- Pull up on the suction cup with firm, constant pressure to create a slight gap between the front panel and rear case.
- Insert an opening pick or other thin pry tool a few millimeters into the gap.
 - ⓘ The watertight adhesive holding the display in place is very strong; creating this initial gap takes a significant amount of force. If you're having a hard time opening a gap, apply more heat, and gently rock the screen up and down to weaken the adhesive until you create enough of a gap to insert your tool.

Step 10



- Slide your pick around the corner and up the left edge of the phone, moving towards the volume control buttons and silent switch, breaking up the adhesive holding the display in place.
- Stop near the top left corner of the display.

Step 11 — Screen information



⚠ There's a delicate cable along the right edge of your iPhone. **Don't insert your pick here**, as you may damage the cable.

Step 12



- Re-insert your tool at the lower right corner of the iPhone, and slide it around the corner and up the right side of the phone to separate the adhesive.

⚠ Don't insert your pick more than 3 mm, as you may damage the display cables.

Step 13



- Gently pull up on the suction cup to lift up the bottom edge of the display.

⚠ Do not raise the display more than 15° or you'll risk straining or tearing the ribbon cables connecting the display.

Step 14



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

Step 15



- Slide an opening pick underneath the display along the top edge of the phone to loosen the last of the adhesive.

Step 16



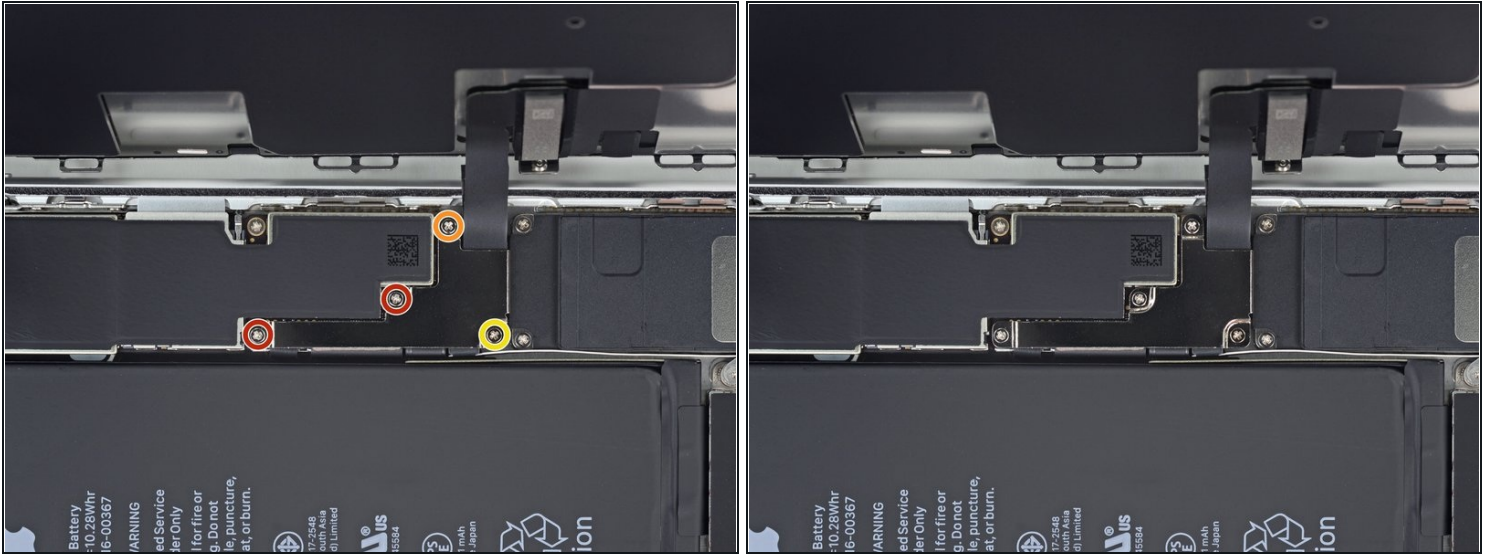
- Slide the display assembly slightly down (away from the top edge of the phone) to disengage the clips holding it to the rear case.

Step 17



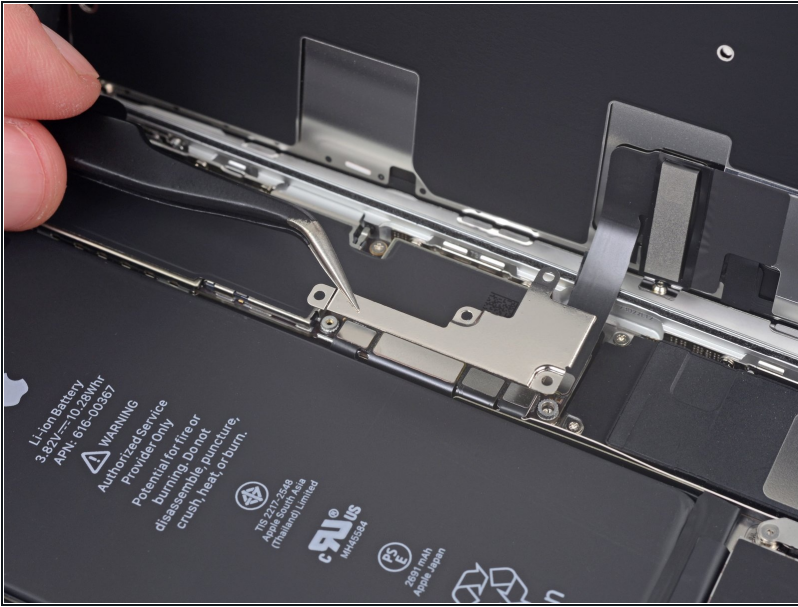
- Open the iPhone by swinging the display up from the left side, like the back cover of a book.
⚠ Don't try to fully separate the display yet, as several fragile ribbon cables still connect it to the iPhone's logic board.
- Lean the display against something to keep it propped up while you're working on the phone.

Step 18 — Battery Disconnection



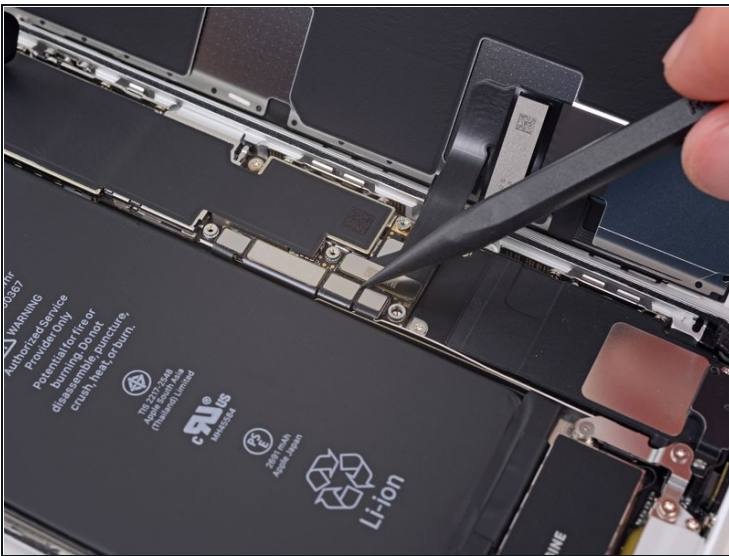
- Remove four Phillips (JIS) screws securing the lower display cable bracket to the logic board, of the following lengths:
 - Two 1.3 mm screws
 - One 1.4 mm screw
 - One 2.7 mm screw
- ☑ Throughout this guide, [keep careful track of your screws](#) so that each one goes back where it came from during reassembly. Installing a screw in the wrong place can cause permanent damage.

Step 19



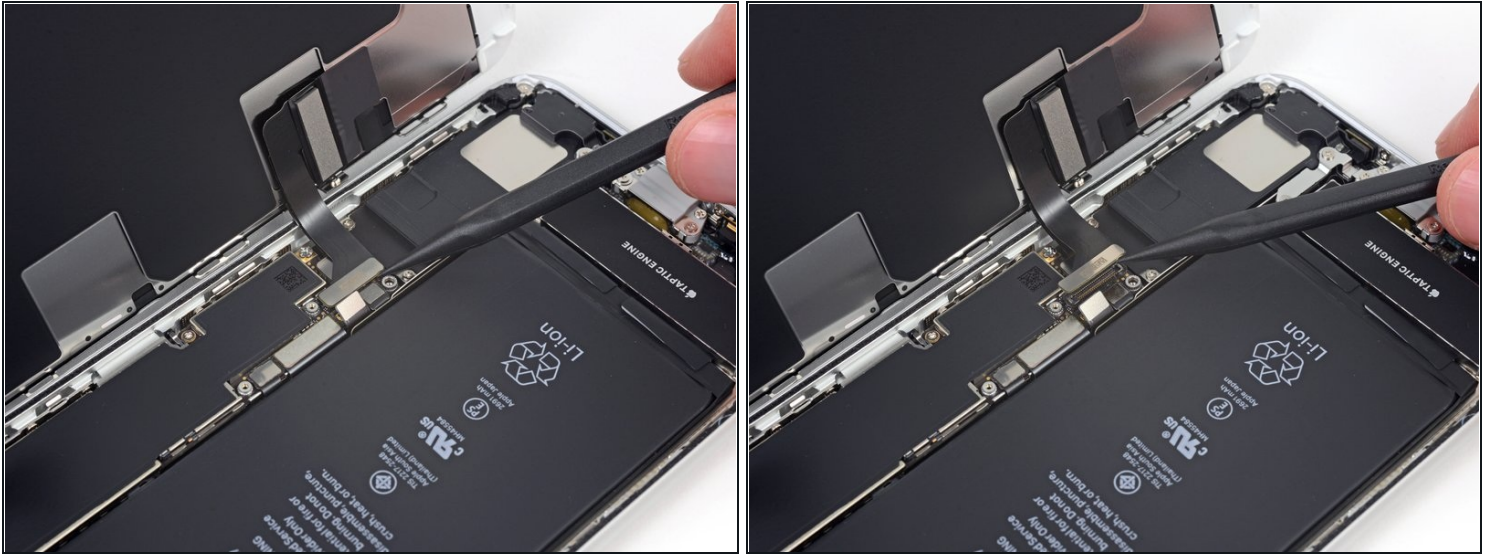
- Remove the lower display cable bracket.

Step 20



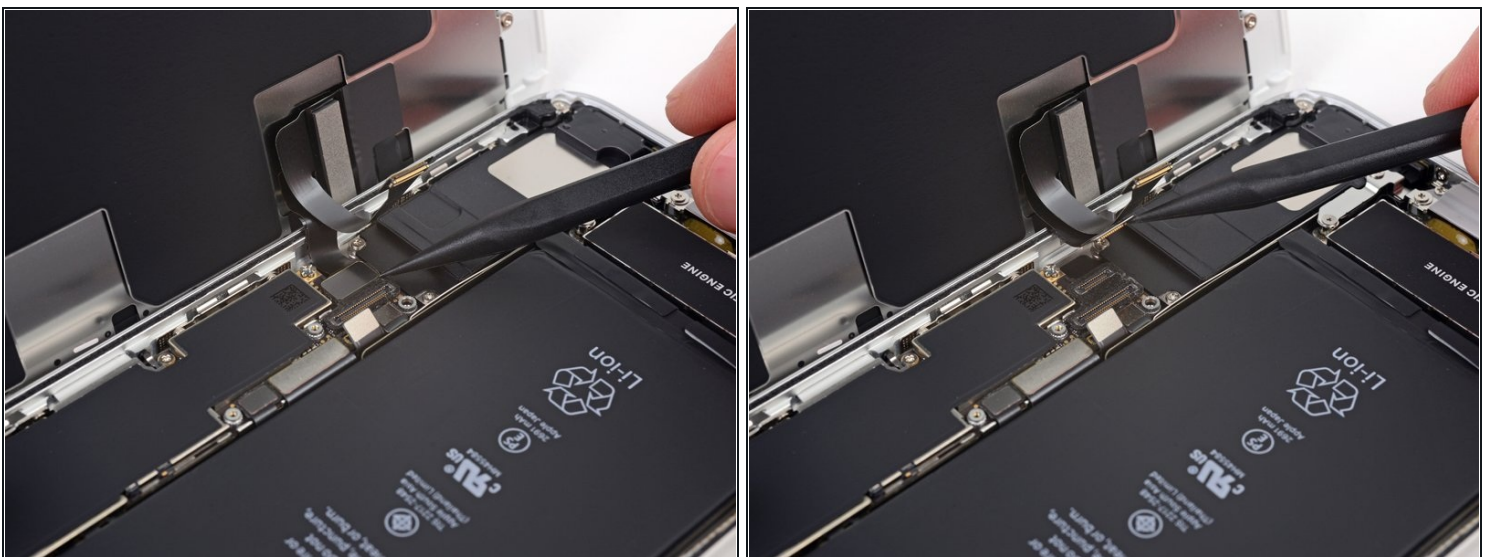
- Use the point of a spudger to pry the battery connector up from its socket on the logic board.
- Bend the connector cable up slightly to prevent it from accidentally making contact with the socket and providing power to the phone during your repair.

Step 21 — Display Assembly



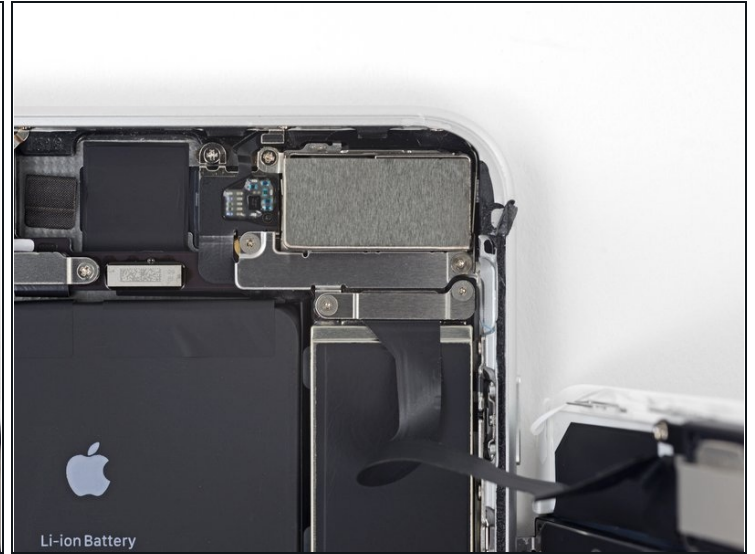
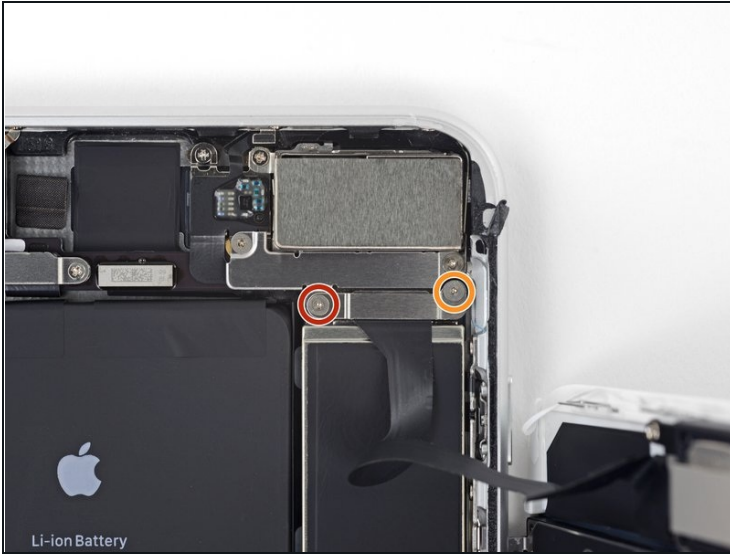
- Use the tip of a spudger or a fingernail to disconnect the large lower display connector by prying it straight up from its socket.
- ☑ To re-attach press connectors like this one, press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is even slightly misaligned, the connector can bend, causing permanent damage.

Step 22



- Disconnect the second lower display cable connector, directly behind the one you disconnected in the previous step.

Step 23



- Remove the two tri-point Y000 screws securing the bracket over the front panel sensor assembly connector:
 - One 1.0 mm screw
 - One 1.2 mm screw

Step 24



- Remove the bracket covering the front panel sensor assembly connector.

Step 25



- Use the tip of a spudger or a fingernail to disconnect the front panel sensor assembly connector from its socket.

Step 26



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

Step 27 — Wi-Fi Diversity Antenna



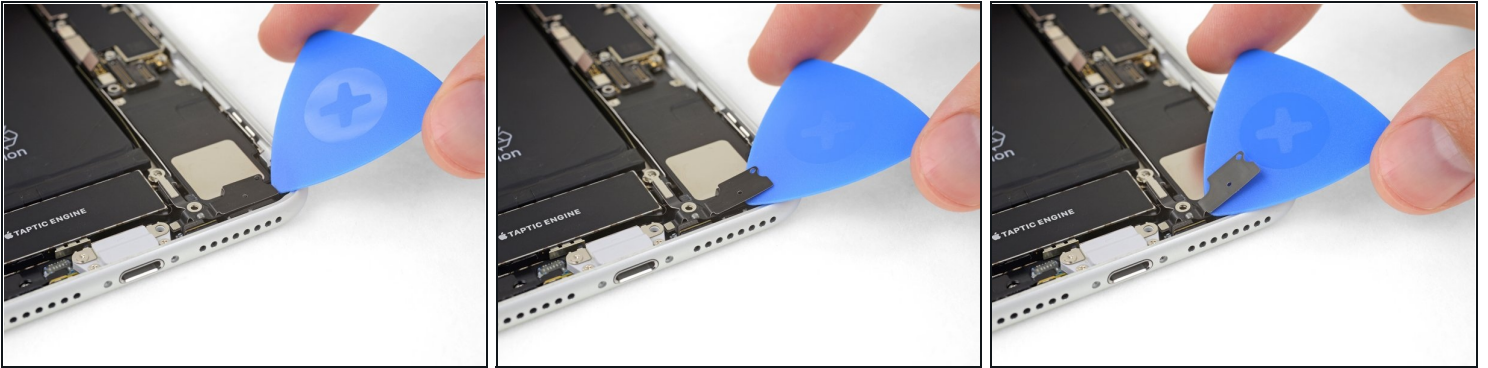
- Remove the three screws securing the L-shaped bracket next to the Taptic Engine:
 - One 1.3 mm Y000 screw
 - One 2.6 mm Phillips screw
 - One 3.5 mm Phillips screw

Step 28



- Remove the bracket.

Step 29



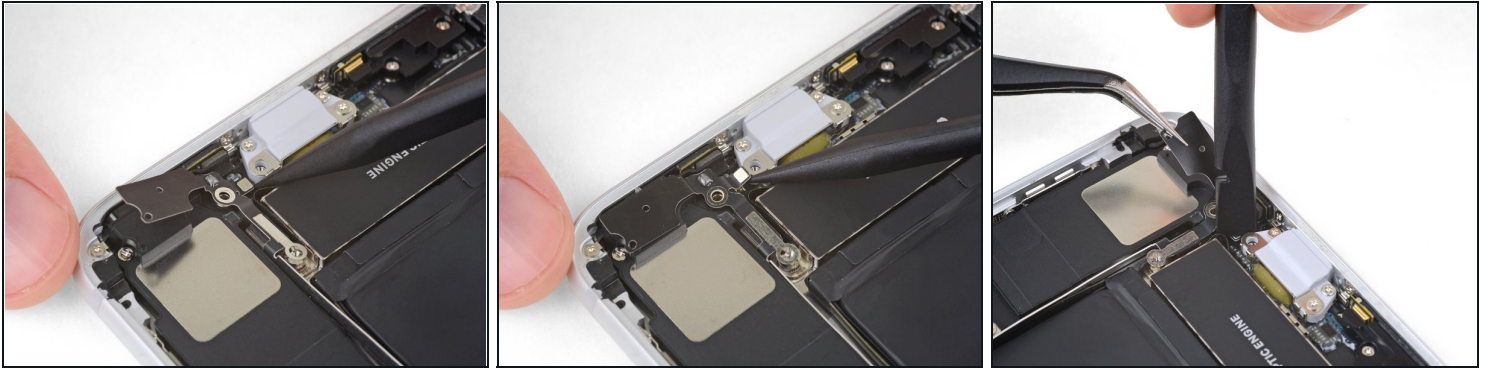
- Use an opening pick to gently separate the adhered portion of the antenna flex cable from the top surface of the speaker.
- ① This portion of the flex cable is lightly adhered in place. If necessary, apply a little heat from an iOpener or hair dryer to soften the adhesive. This makes it easier to separate (and re-adhere) the flex cable safely.

Step 30



- Use the point of a spudger to pry up and disconnect the antenna flex cable from the logic board.

Step 31



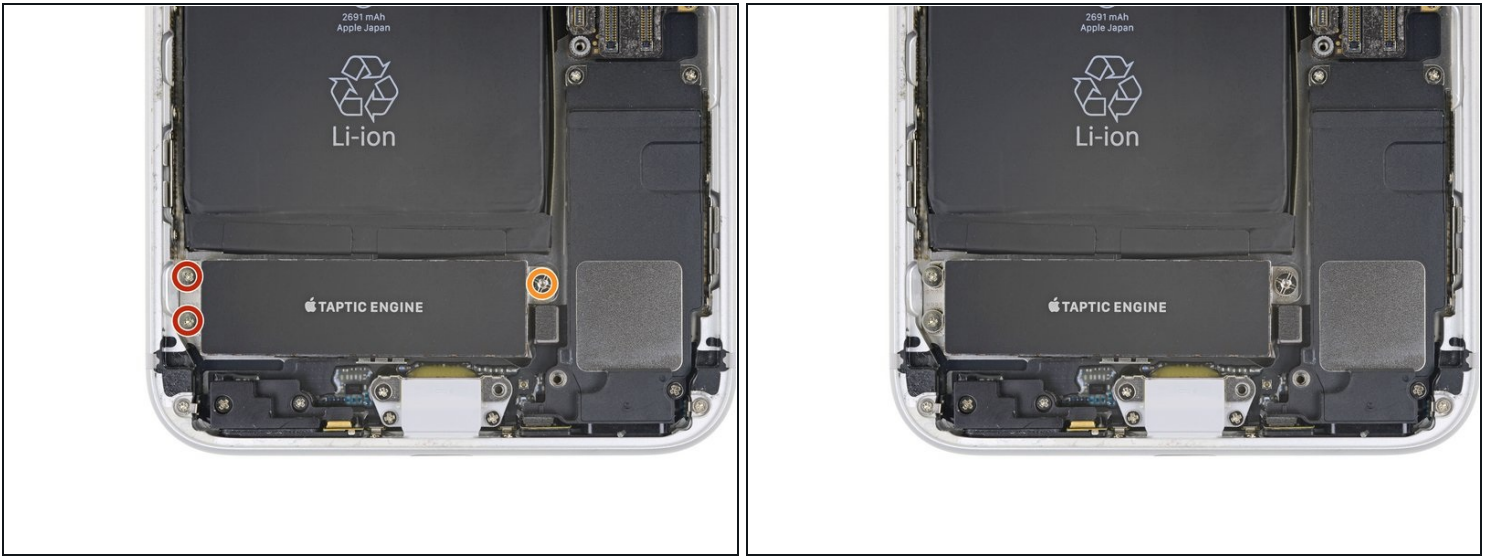
- Use the point of your spudger to pry up and disconnect the other end of the antenna flex cable from its socket, next to the Lightning Port.
- ✦ Reconnecting this cable can be tricky. Make it easier by using your [tweezers](#) to hold the flex cable so the connector aligns with its socket. Then, gently press down on the connector with the flat of your spudger until it clicks into place.

Step 32



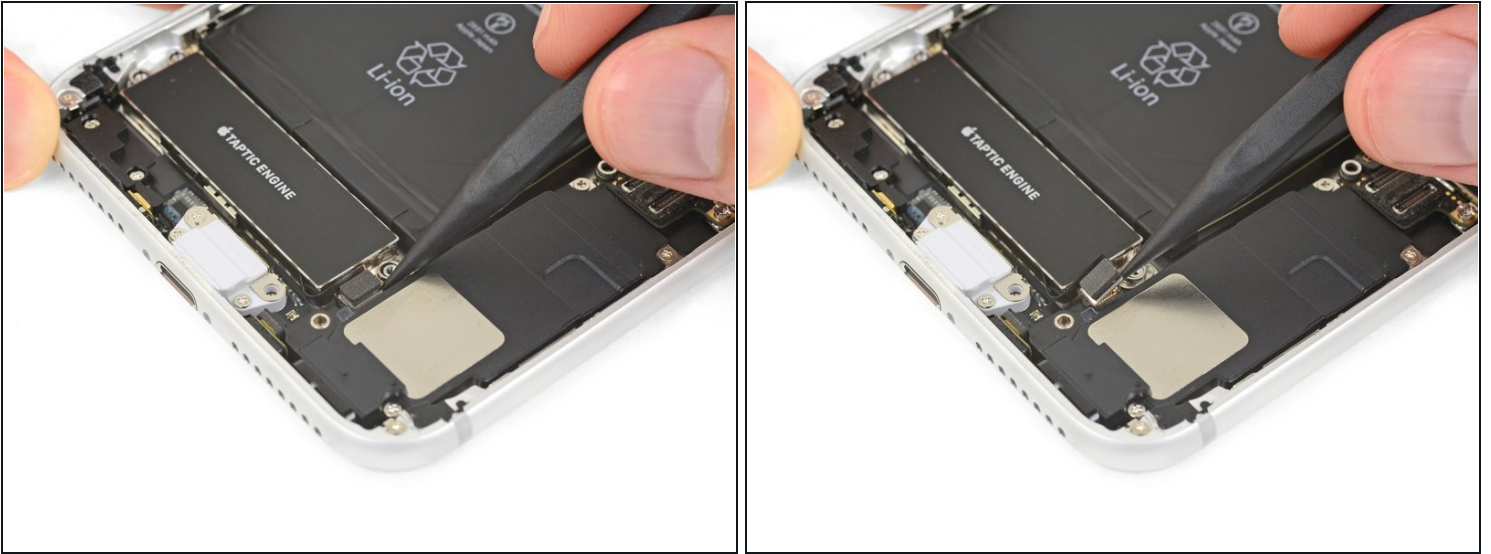
- Remove the Wi-Fi diversity antenna.

Step 33 — Taptic Engine



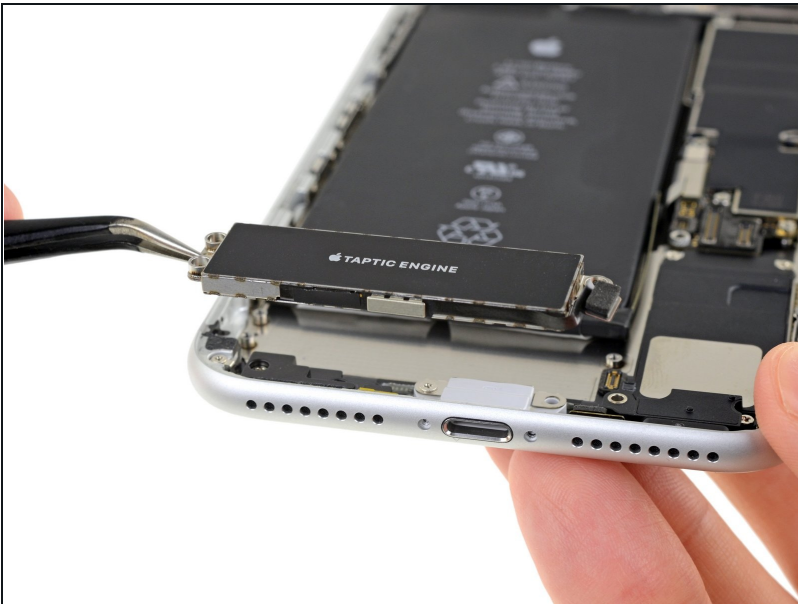
- Remove the three screws securing the Taptic Engine:
 - Two 1.5 mm Phillips screws
 - One 2.4 mm standoff screw
 - ⓘ Standoff screws are best removed using a [standoff screwdriver](#) or bit.
- ⚠ In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.

Step 34



- Use the point of your spudger to pry up and disconnect the Taptic Engine flex cable.

Step 35



- Remove the Taptic Engine.

Compare your new replacement part to the original part—you may need to transfer remaining components or remove adhesive backings from the new part before installing.

To reassemble your device, follow the above steps in reverse order.

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Check out our [Answers community](#) for troubleshooting help.