



iPhone 7 Taptic Engine Replacement

Replace the Taptic Engine in an iPhone 7.

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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 your iPhone 7.

This guide instructs you to remove the display assembly; this is intended to prevent damage to the display cables. If you feel comfortable removing the Taptic Engine without putting undue strain on the display cables, you can skip the display removal steps.



TOOLS:

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



PARTS:

- [iPhone 7 Vibrator](#) (1)
- [iPhone 7 Display Assembly Adhesive](#) (1)

Step 1 — Pentalobe Screws



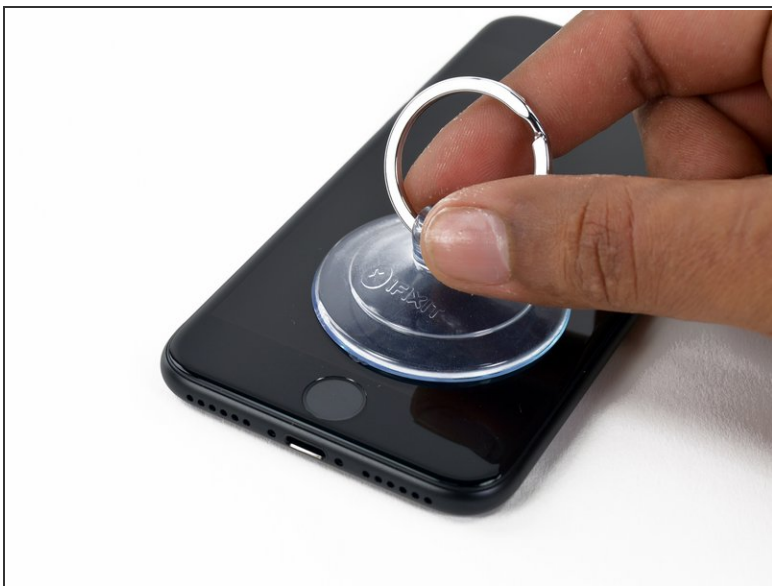
-  Before you begin, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.
- Power off your iPhone before beginning disassembly.
- Remove the two 3.4 mm pentalobe screws on the bottom edge of the iPhone.
-  Opening the iPhone's 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 — 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 3



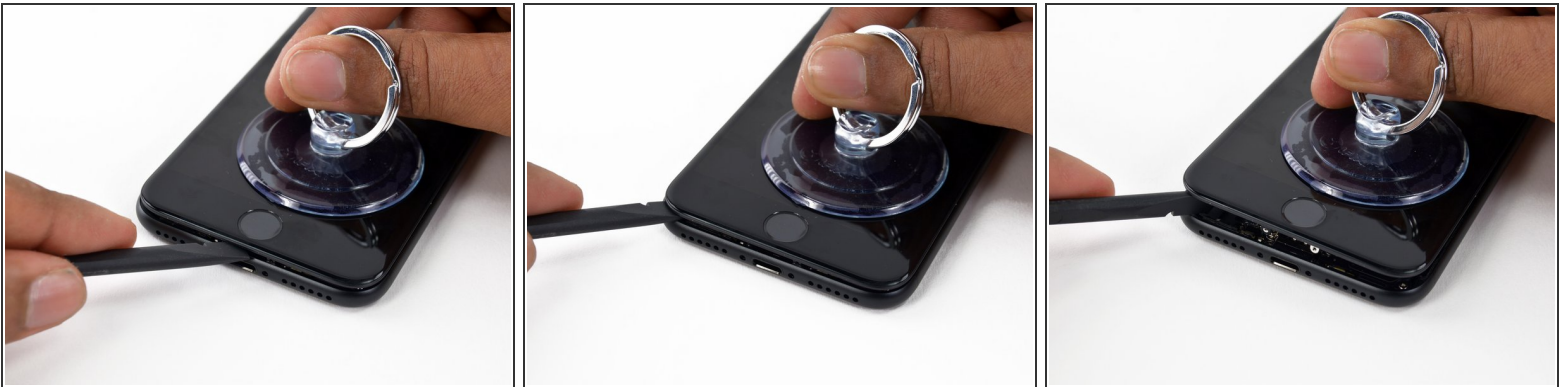
- Attach a suction cup to the lower half of the display assembly, just above the home button.
- ⓘ Be sure the suction cup does not overlap with the home button, as this will prevent a seal from forming between the suction cup and front glass.

Step 4



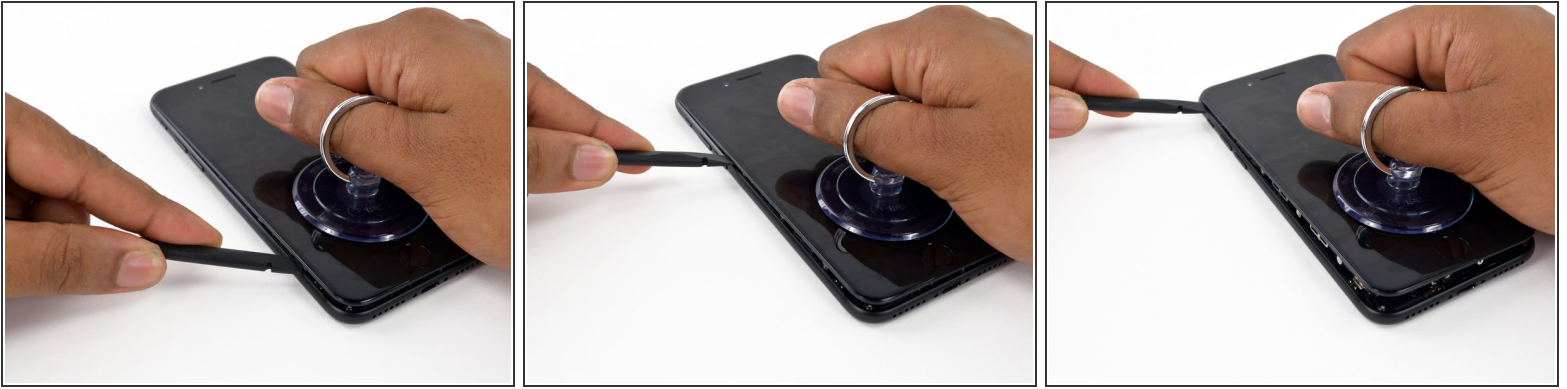
- Pull up on the suction cup to create a small gap between the display assembly and the rear case.
- Insert the flat end of a spudger into the gap.
- ⓘ The watertight adhesive holding the display in place is very strong, and creating this initial gap takes a significant amount of force. If you're having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

Step 5



- 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 6



- 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 7



- 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 8



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

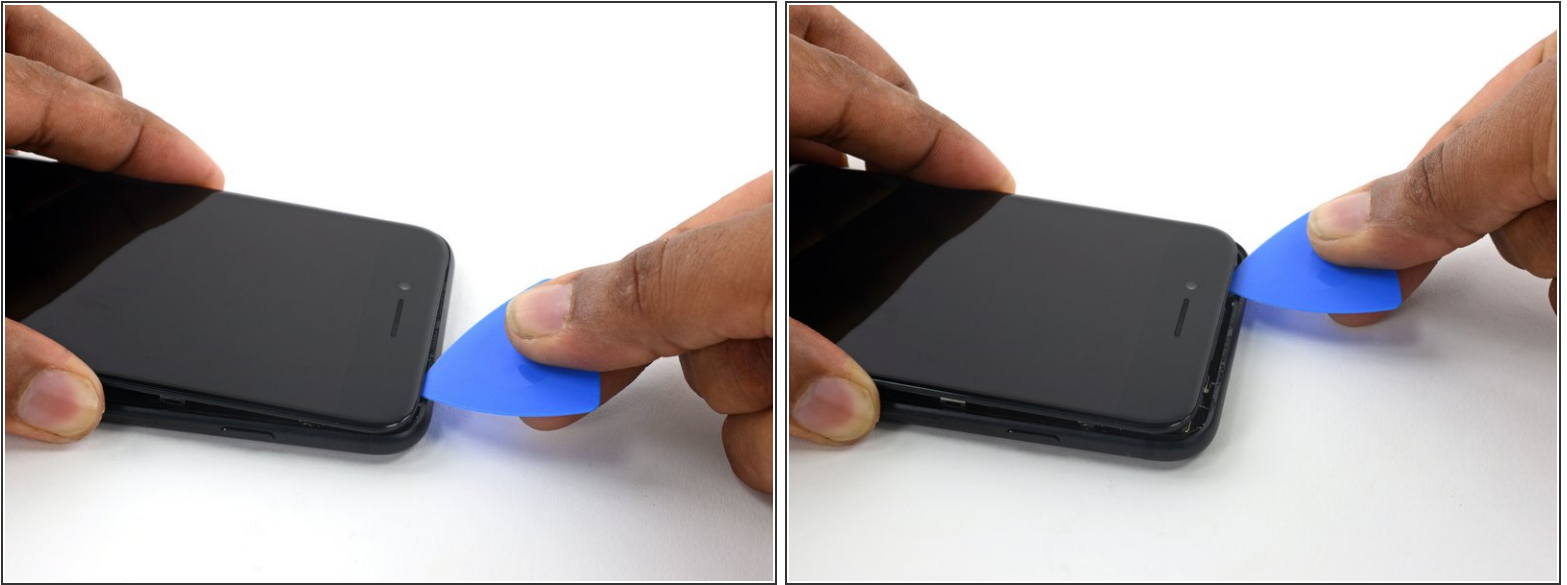
 **Do not raise the display more than 10°** as there are ribbon cables along the right edge of the device connecting the display to the logic board.

Step 9



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

Step 10



- 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 11



- 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 12 — 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 13



- Remove the lower connector bracket.

Step 14



- 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 15 — Display Assembly



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

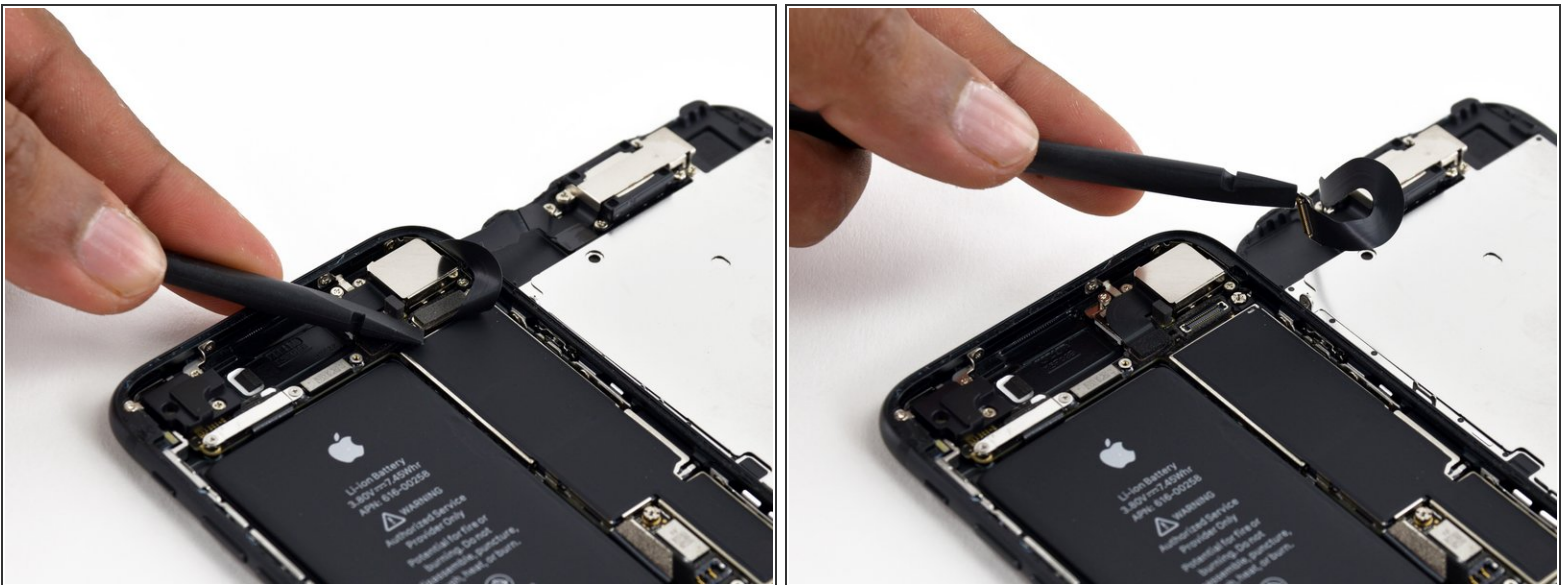
- Use a spudger or a fingernail to disconnect the two lower display connectors by prying them straight up from their sockets on the logic board.
-  To reconnect these cables, press down on one end until it clicks into place, then repeat on the opposite end. **Do not** press down on the middle. If the 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 16



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

Step 17



- 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 18



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

Step 19 — Barometric Vent



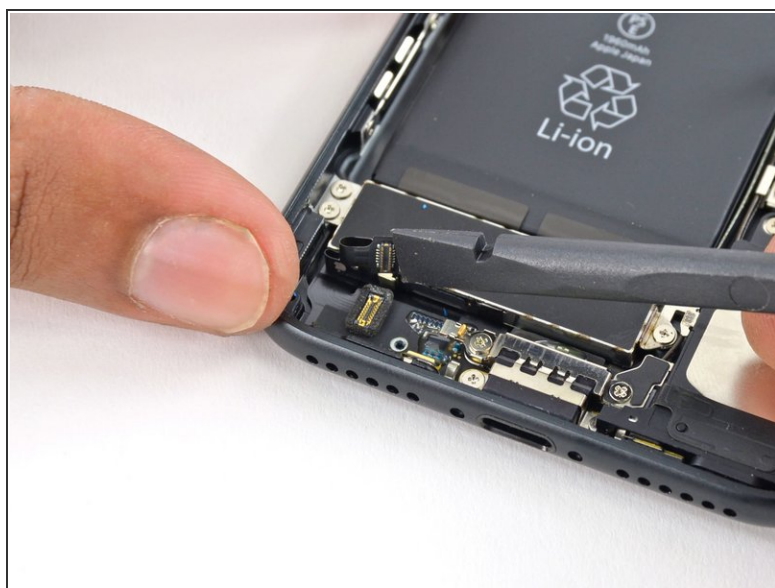
- Remove the two 1.9 mm Phillips screws securing the barometric vent to the rear case.

Step 20



- Remove the vent.

Step 21 — Taptic Engine



- Use the flat end of a spudger to disconnect the Taptic Engine connector from its socket on the logic board.

Step 22



- Remove the three 1.6 mm Phillips screws securing the Taptic Engine to the rear case.

Step 23



- Remove the Taptic Engine.

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