



Product Installation Best Practices

iPhone 6 Plus

Screen Assembly Replacement Guide

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ESD SAFETY!

iCracked likes to stay on the safe side of repairs, and by using ESD (Electrostatic Discharge) safe tools and equipment, you can be sure to avoid static damage to your mobile device.

ESD damage is difficult to diagnose as its effect isn't usually immediately apparent, but sensitive sections of the logic board can, nevertheless, get weakened by static, and in turn become non-functional over time. While installing an iCracked touch screen digitizer or an LCD screen, doing a repair with ESD safety in mind can save the long-term circuitry and functionality of the device.

RECOMMENDED TOOLS AND PARTS

Tools Required:

ESD safe nylon spudger
ESD safe #00 Phillips screwdriver
iPhone Pentalobe screwdriver
iSesamo opening tool
Suction cup
ESD safe tweezers
Hair dryer or heat gun

Parts Needed:

Replacement display assembly

Optional:

iSlack opening tool

WARNING!

TAKE every possible care to NOT damage the home button/biometric scanner cable. The Biometric scanner is locked to its original iPhone, meaning this CANNOT be replaced.

Changing the Home button flex cable WILL result in an Error-53 which rendered the phone irreparable. Should you damage the Home button you will be required to replace the customers device.

If the Home Button extension cable is damaged you CAN replace that without affecting the home button/biometric scanner.

MODEL NUMBERS

	CARRIER	CAPACITY	GRAY	GOLD	SILVER
A1522 / EMC2817	AT&T (GSM)	16 GB	MGAL2LL/A	MGAN2LL/A	MGAM2LL/A
	AT&T (GSM)	64 GB	MGAU2LL/A	MGAW2LL/A	MGAV2LL/A
	AT&T (GSM)	128 GB	MGAP2LL/A	MGAR2LL/A	MGAQ2LL/A
A1522 / EMC2817	T-Mobile/Unlocked (GSM)	16 GB	MGAX2LL/A	MGC12LL/A	MGC02LL/A
	T-Mobile/Unlocked (GSM)	64 GB	MGC52LL/A	MGC72LL/A	MGC62LL/A
	T-Mobile/Unlocked (GSM)	128 GB	MGC22LL/A	MGC42LL/A	MC382LL/A

MODEL NUMBERS

	CARRIER	CAPACITY	GRAY	GOLD	SILVER
A1522 / EMC2817	Verizon (CDMA)	16 GB	MG5W2LL/A	MG5Y2LL/A	MG5X2LL/A
	Verizon (CDMA)	64 GB	MGCR2LL/A	MGCU2LL/A	MGCT2LL/A
	Verizon (CDMA)	128 GB	MGCN2LL/A	MGCQ2LL/A	MGCP2LL/A
A1586 / EMC2816	Sprint (CDMA)	16 GB	MGCV2LL/A	MGCC2L/A	MGCW2LL/A
	Sprint (CDMA)	64 GB	MGD22LL/A	MGD32LL/A	MGD42LL/A
	Sprint (CDMA)	128 GB	MGCY2LL/A	MGD12LL/A	M6D02LL/A

IMPORTANT!

- Before working on any iOS device, we recommend testing all of the functions that are described in the iTech app.
- Power off the device before performing any repairs!
- If you have any questions regarding the use of the product before starting a repair, reference the iTech Help Center, or use the Product Support Hotline button in the iTech app for support.

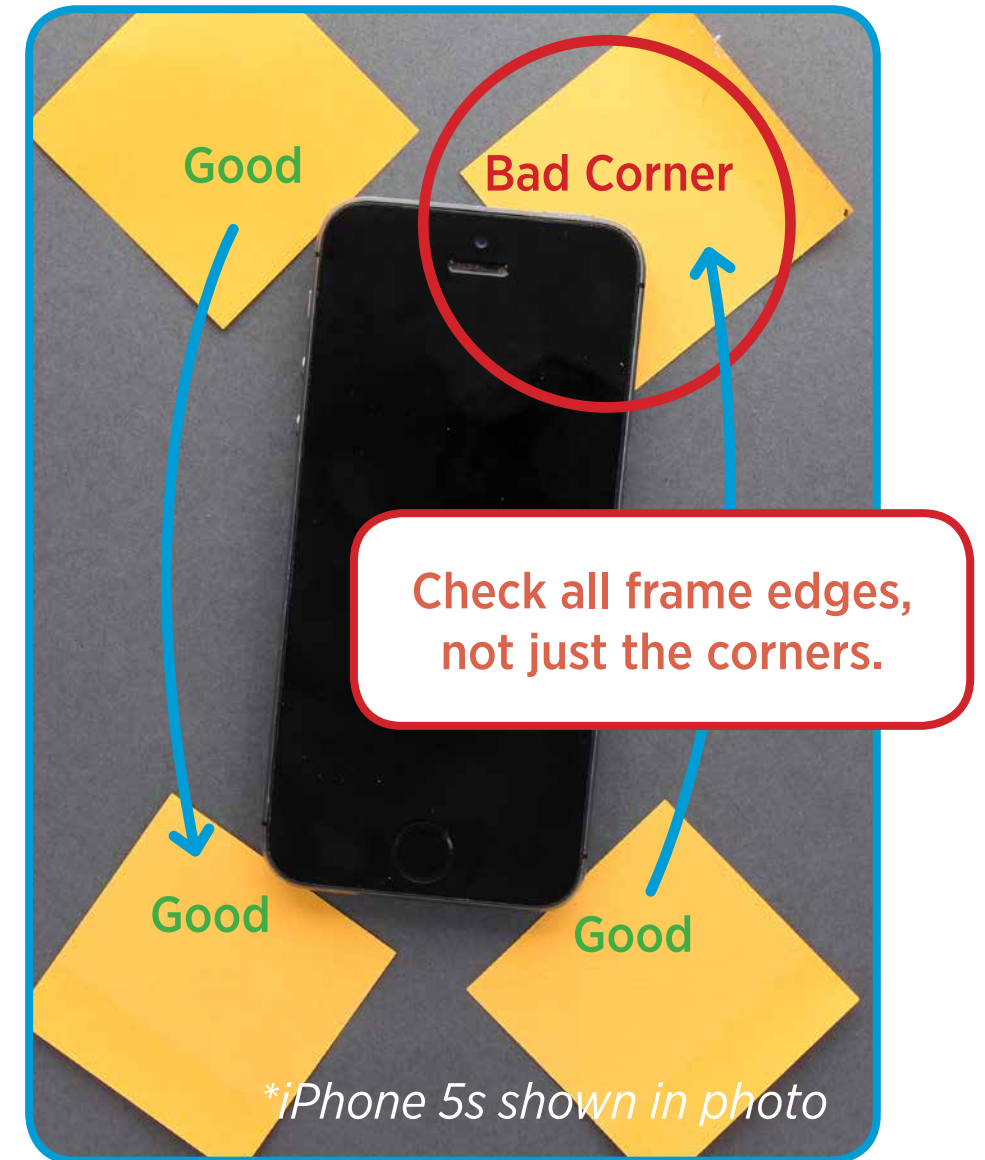
REPAIR PREP

Place the iPhone 6+ face up near the edge of a smooth surface, with the rear camera off the edge, not resting on the surface.

Using a piece of paper (preferably a Post-it® note) slid under each corner and down the left and right sides. If the paper slides under the corner, that area is damaged. This cannot be checked on the corner with the camera because it protrudes from the phone past the frame.

It is highly recommended you decline this repair. If you proceed with this repair, the customer must understand we will offer no warranty on the part used as it will become an issue in the future.

Note: The most common area to be bent is at the Volume down button and the SIM card tray.

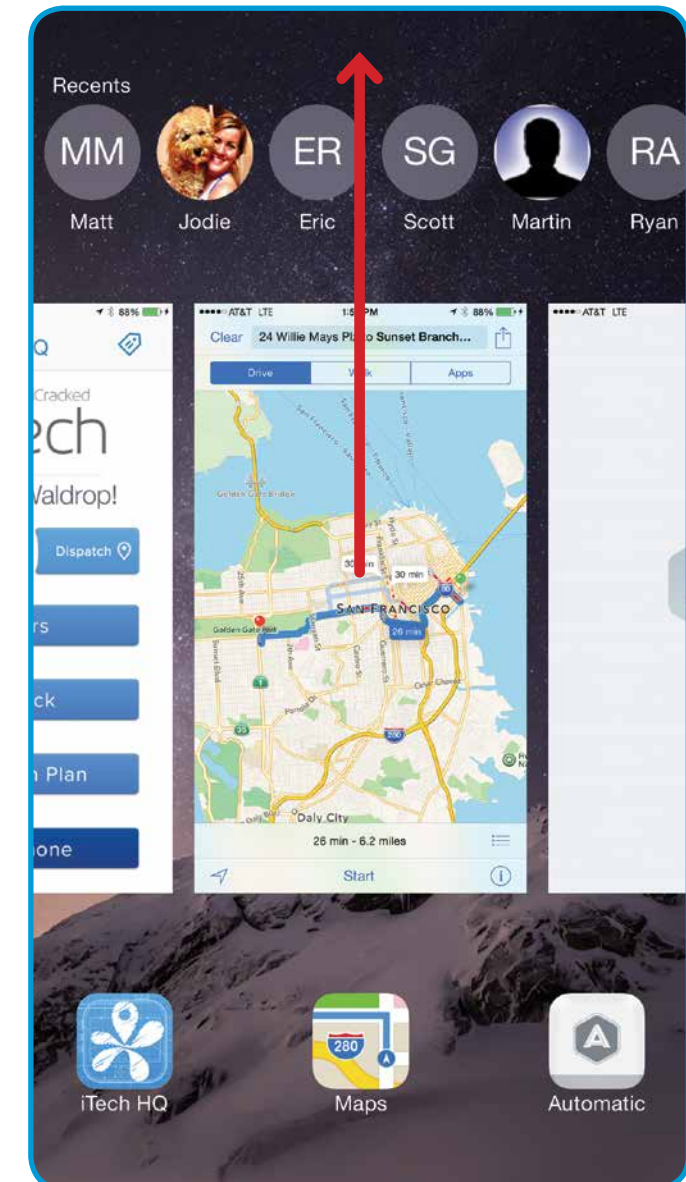


PARTS DIAGRAM



REPAIR PREP

Ensure ALL open applications are closed by double tapping the home button, grabbing each app and sliding upward to close.

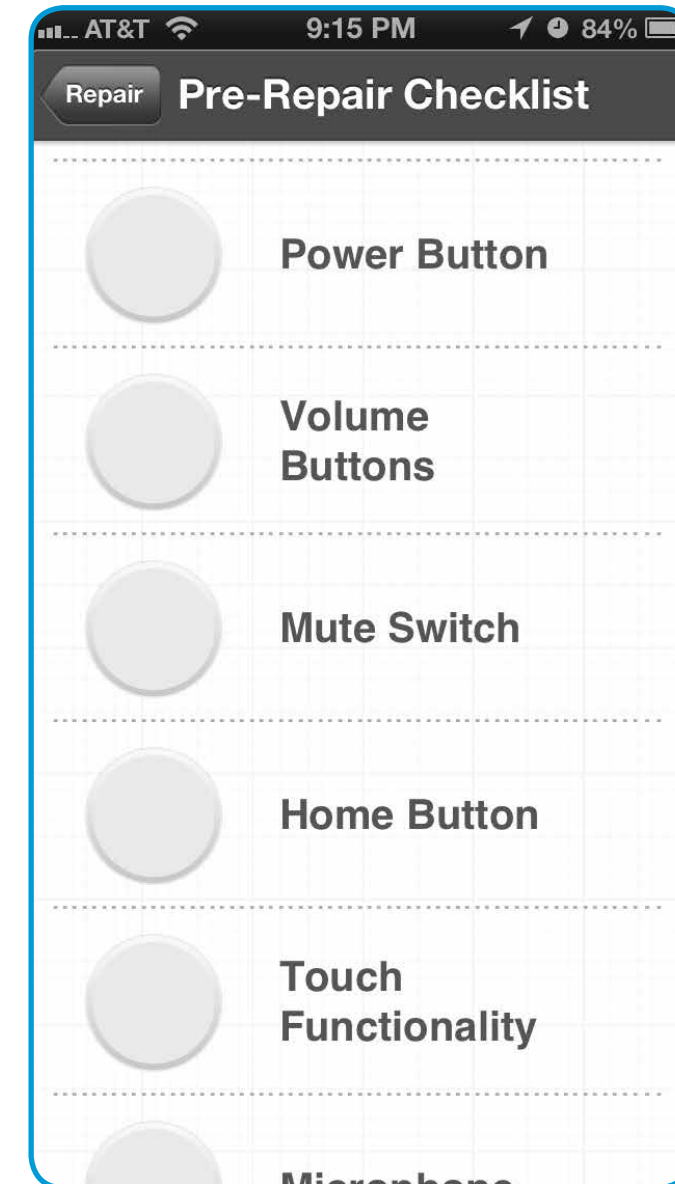


REPAIR PREP

Use the iTech application to complete the Pre-Repair checklist (also known as the 'Warranty Eligibility Checklist'). This checklist must be completed and verified by the customer prior to starting the repair in order to qualify for the iCracked warranty.

The pre-repair checklist is your way of providing proof of what did or did not function prior to repair for warranty purposes, which is why it's so important to use the app and have the customer verify and sign.

NOTE: An easy way to test the proximity sensor is to activate voice control and start talking. If you place a finger over the ambient light sensor hole just above ear speaker grill, the screen should go dim.



POWER DOWN TO BEGIN

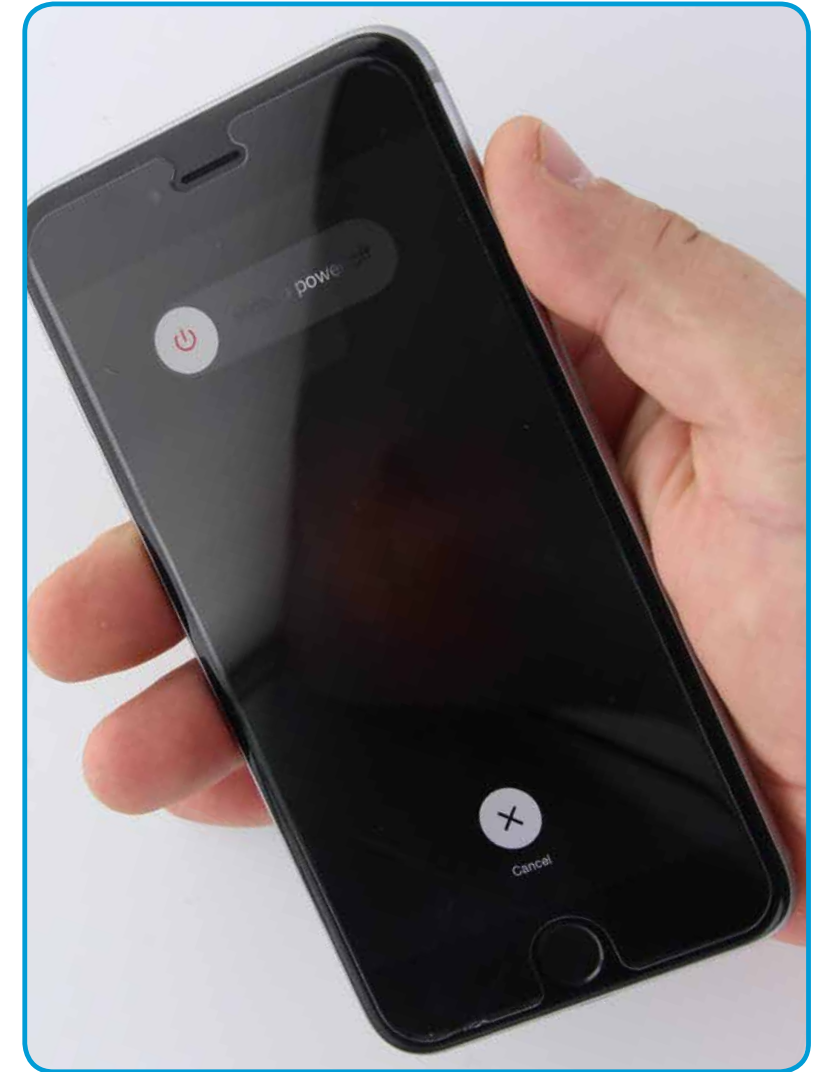
Hold the power/sleep button down until “slide to power off” shows up on the screen. Slide the arrow from left to right.

If the digitizer is not functioning:

Power off the iPhone by holding down both the power/sleep button and the home button. Continue holding down as the Apple™ logo appears until the screen goes black.

If the power button does not function:

Using assistive touch, tap the white bubble > Device > press and hold “Lock Screen” until the “slide to power off” drops down, and then slide the arrow from left to right.



step
1

Display Removal

Remove the two 3.75 mm Pentalobe screws next to the lightning port connector using a Pentalobe screwdriver.

QTY	MATERIAL
2	3.75 mm Pentalobe screw

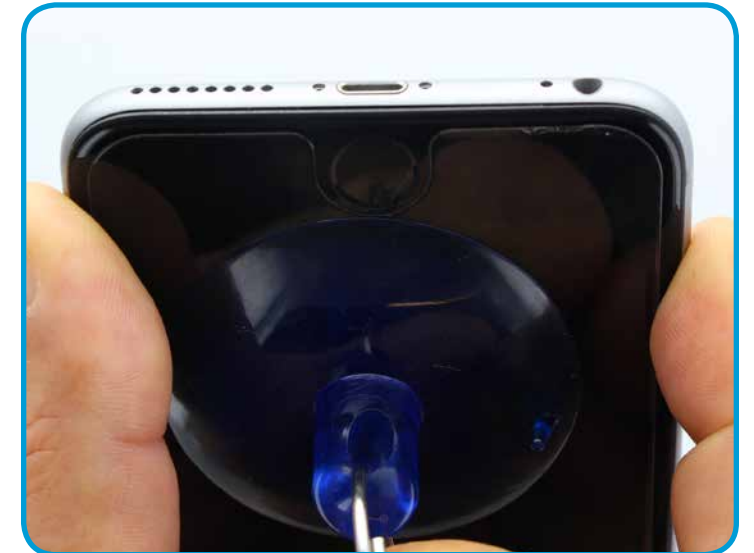


step
2

Opening Tool

Place the iPhone into the iSclack opening tool or use a suction cup on the screen just above the home button.

NOTE: If the screen is shattered, place 2 to 3 pieces of packing tape over the shattered glass to form a flat suction surface.



step
3

Lift Screen

Squeeze the handles of the iSclack tool to open.

If using the suction cup, firmly lift up on the metal ring until a gap is created at the bottom edge of the device. You may need to use a spudger to gently increase the gap.

Remove the iSclack or suction cup from the device.



IMPORTANT!

Do not try to completely remove the display assembly from the frame!
There are four flex cables still attached to the top of the iPhone, and removing the display assembly at this stage can destroy them.

Lift the bottom of the display assembly away from the rear case until it forms a 90-degree angle.



step
4

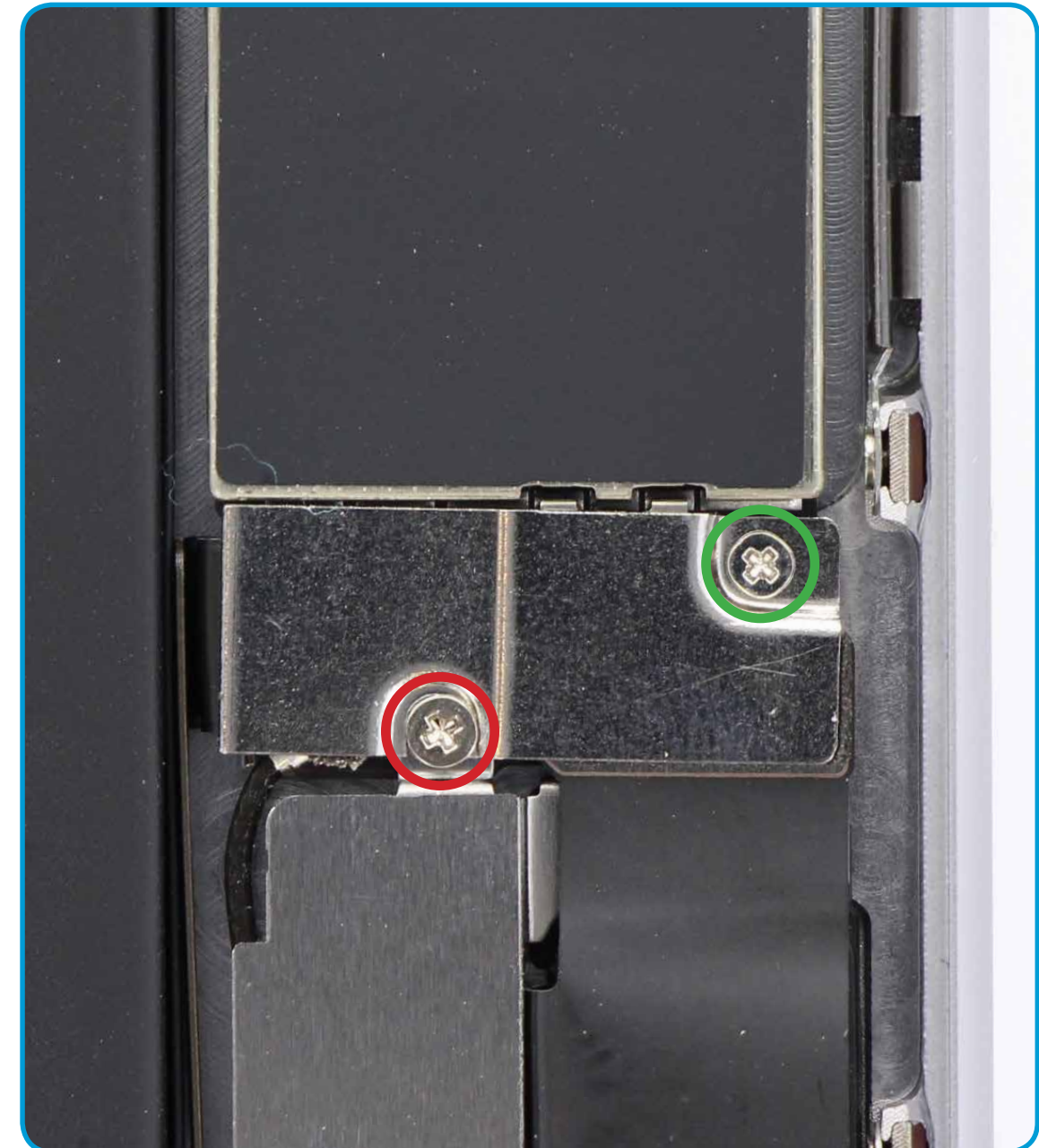
Remove Battery Plate

Continue holding the display assembly upward with one hand.

Locate the battery retaining plate and remove the two Phillips screws that hold the lower plate in place using a #00 Phillips screwdriver.

Remove the battery connector plate and set aside.

QTY	MATERIAL
1	3.1 mm Phillips screw
1	2.3 mm Phillips screw



step
5

Disconnect Battery

Using the flat end of the nylon spudger to lift and disconnect the battery flex cable from the connector.

CAUTION: Be careful to only pry up the battery connector and not to pry up the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.

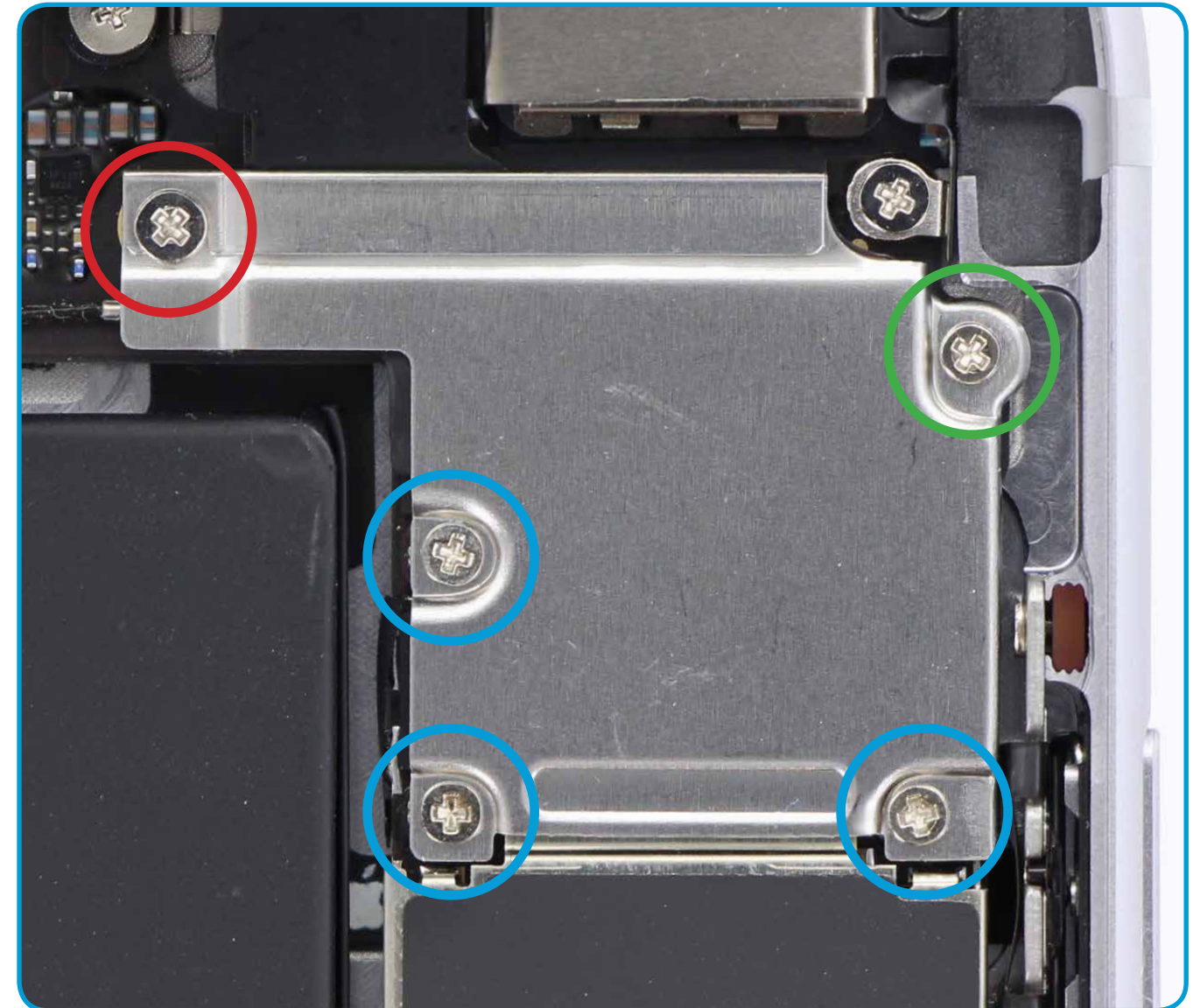


step
6

Remove EMI Screws

Remove the five Phillips screws securing the EMI shield to the logic board using a #00 Phillips screwdriver.

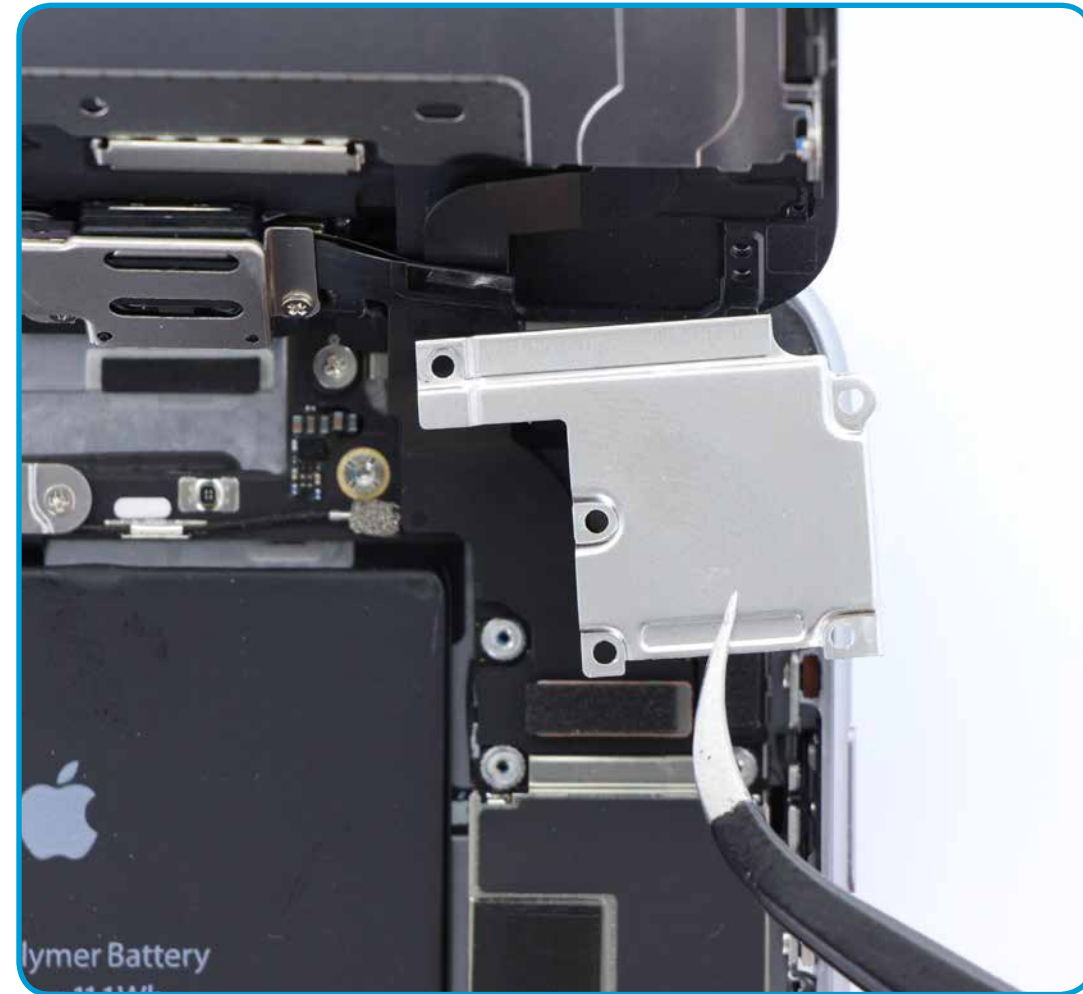
QTY	MATERIAL
1	1.6 mm Phillips screw
1	3.0 mm Phillips screw
3	1.26 mm Phillips screws



step
7

Remove EMI Shield

Remove the EMI shield using tweezers.

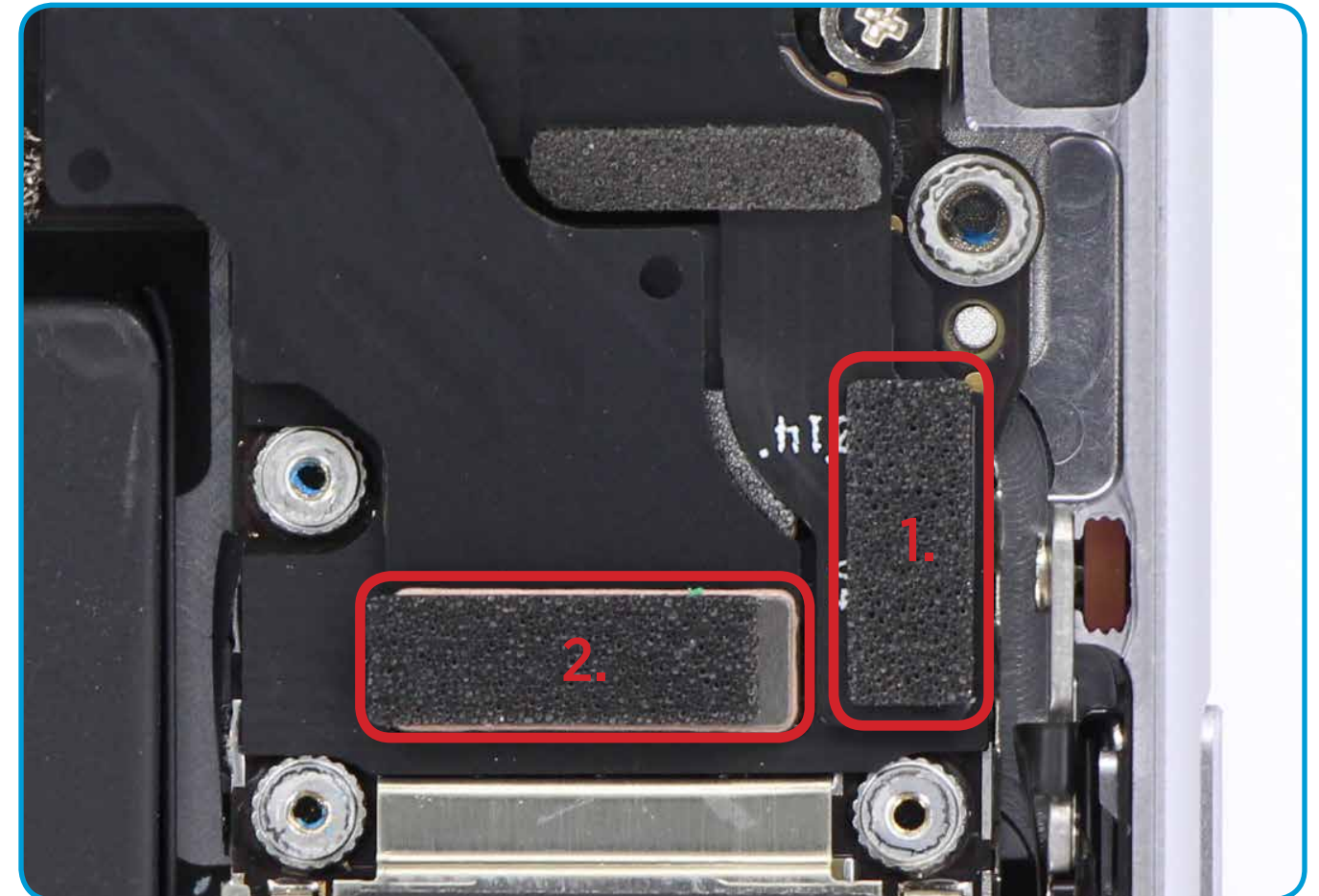


step
8

Disconnect Flex Cables

Using the pointed end of the nylon spudger, disconnect:

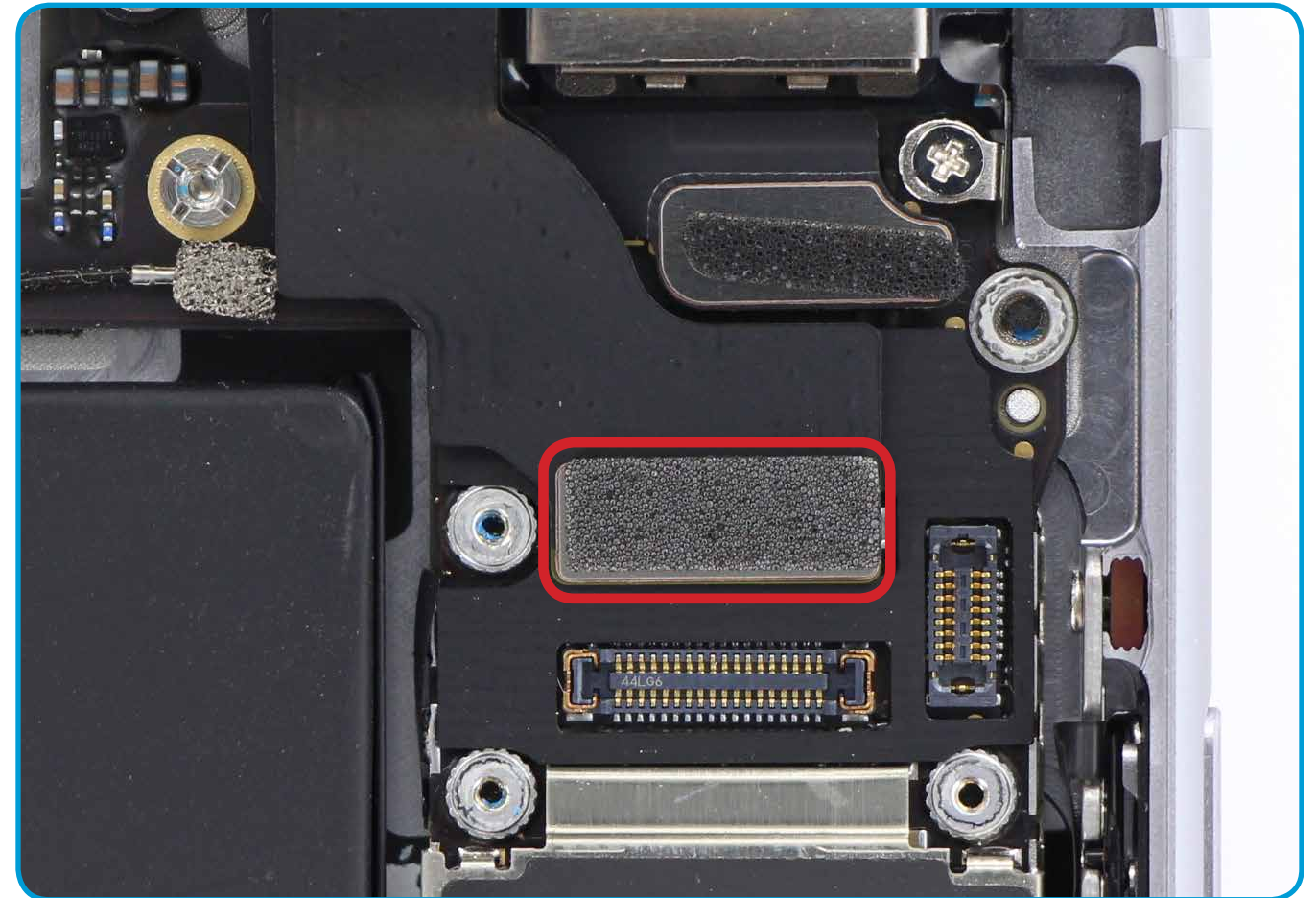
1. Home button extension flex cable
2. Front-facing camera cable



step
9

Disconnect LCD Flex Cable

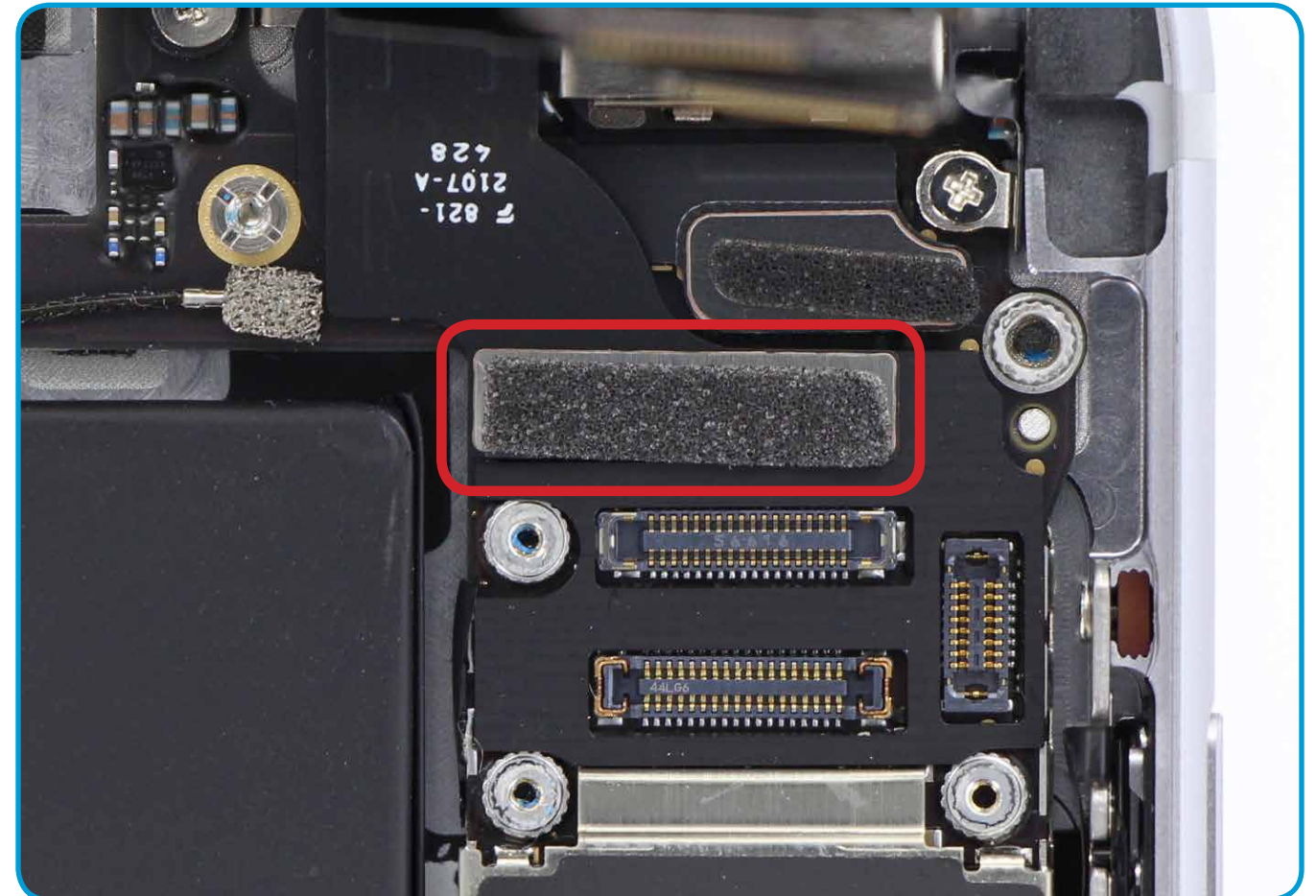
Using the pointed end of the nylon spudger, disconnect the LCD flex cable.



step
10

Disconnect Digitizer Flex Cable

Using the pointed end of the nylon spudger, disconnect the digitizer flex cable.



step
11

Remove Display Assembly

Remove the display assembly from the iPhone and lay face down. Do not discard.

There are several items that will be transferred from the old display assembly to the new display assembly.

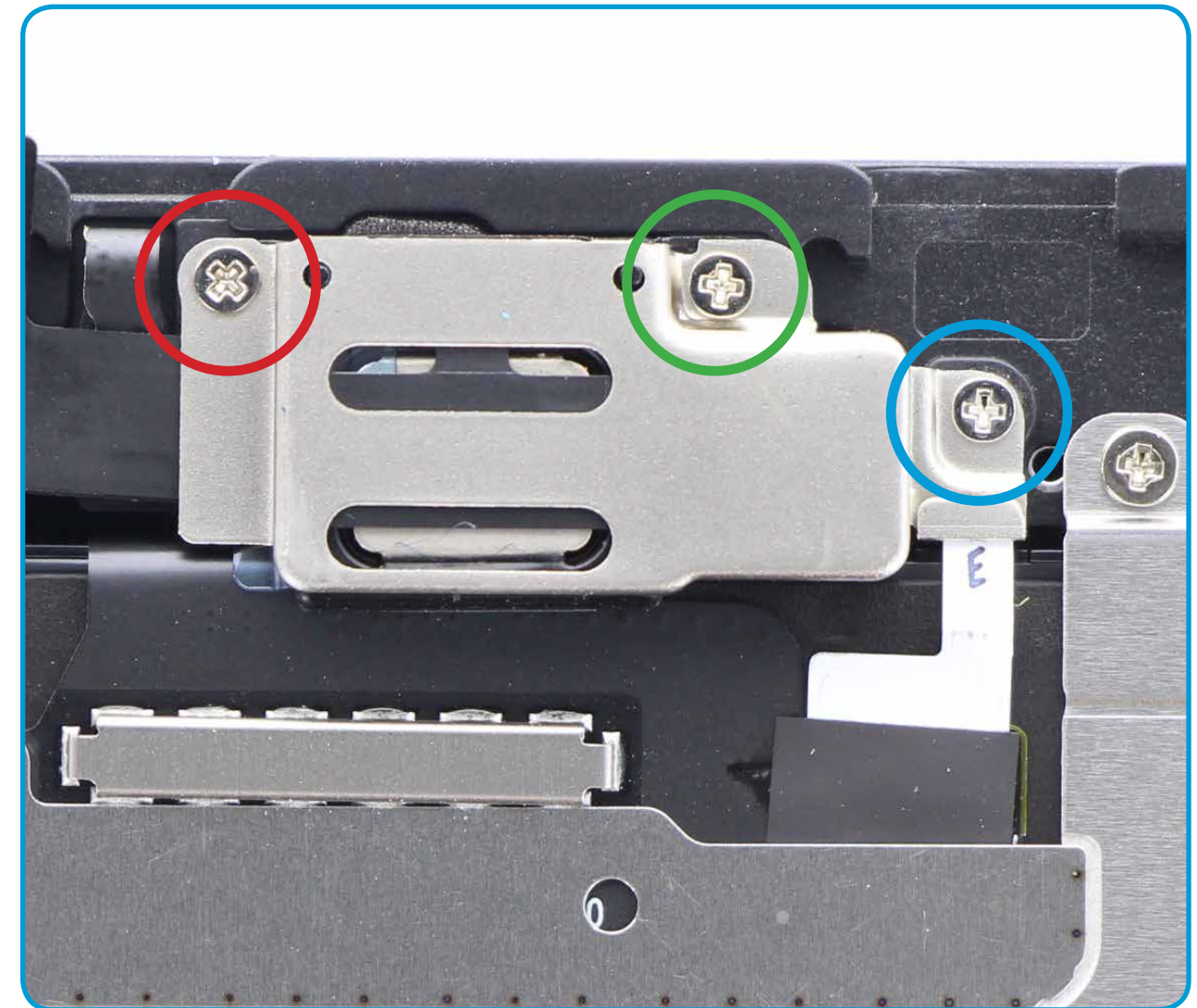


step
12

Remove Bracket Screws

Remove the three Phillips screws securing the ear speaker retaining bracket to the display assembly using a #00 Phillips screwdriver.

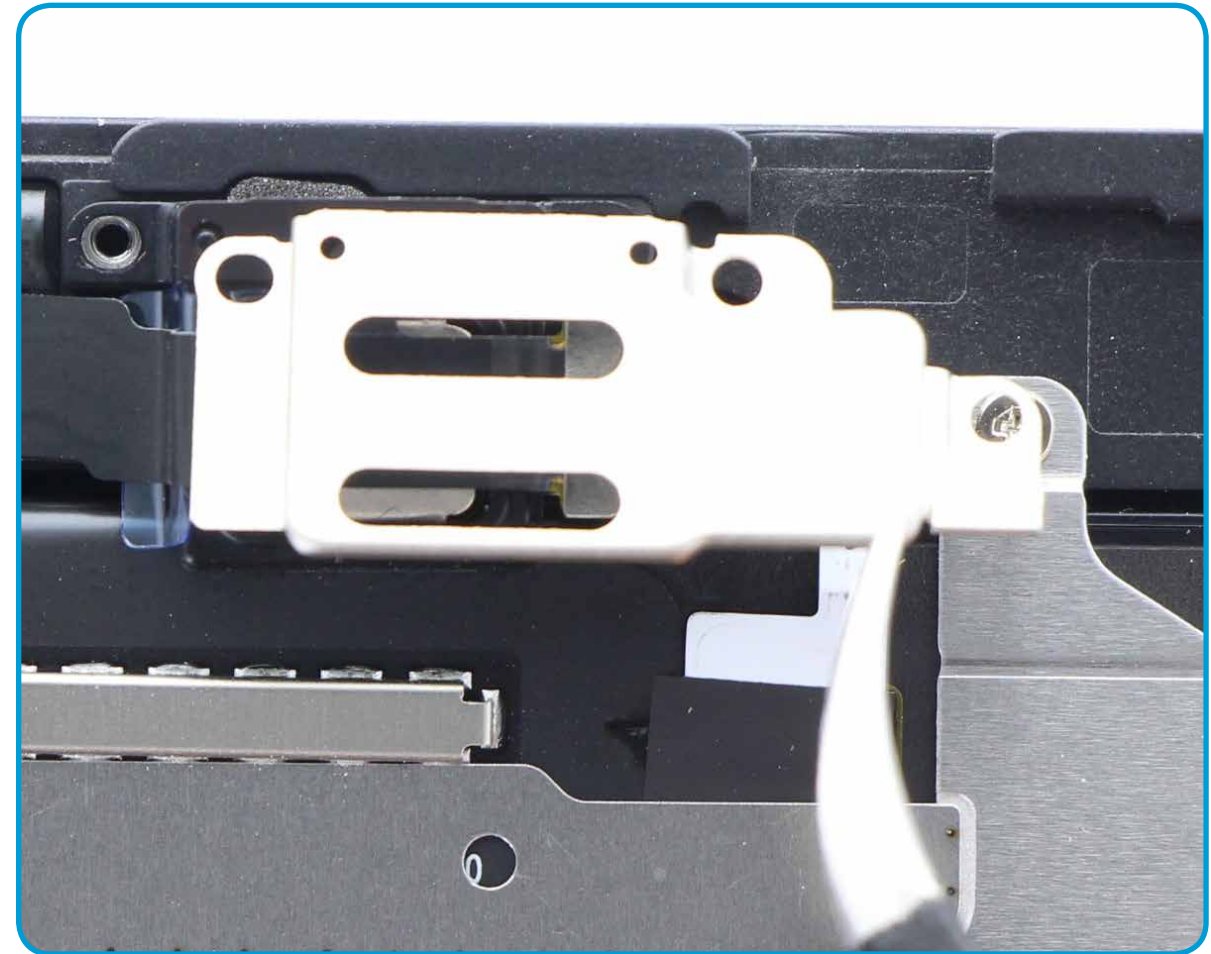
QTY	MATERIAL
1	2.28 mm Phillips screw
1	2.32 mm Phillips screw
1	1.46 mm Phillips screws



step
13

Remove Speaker Bracket

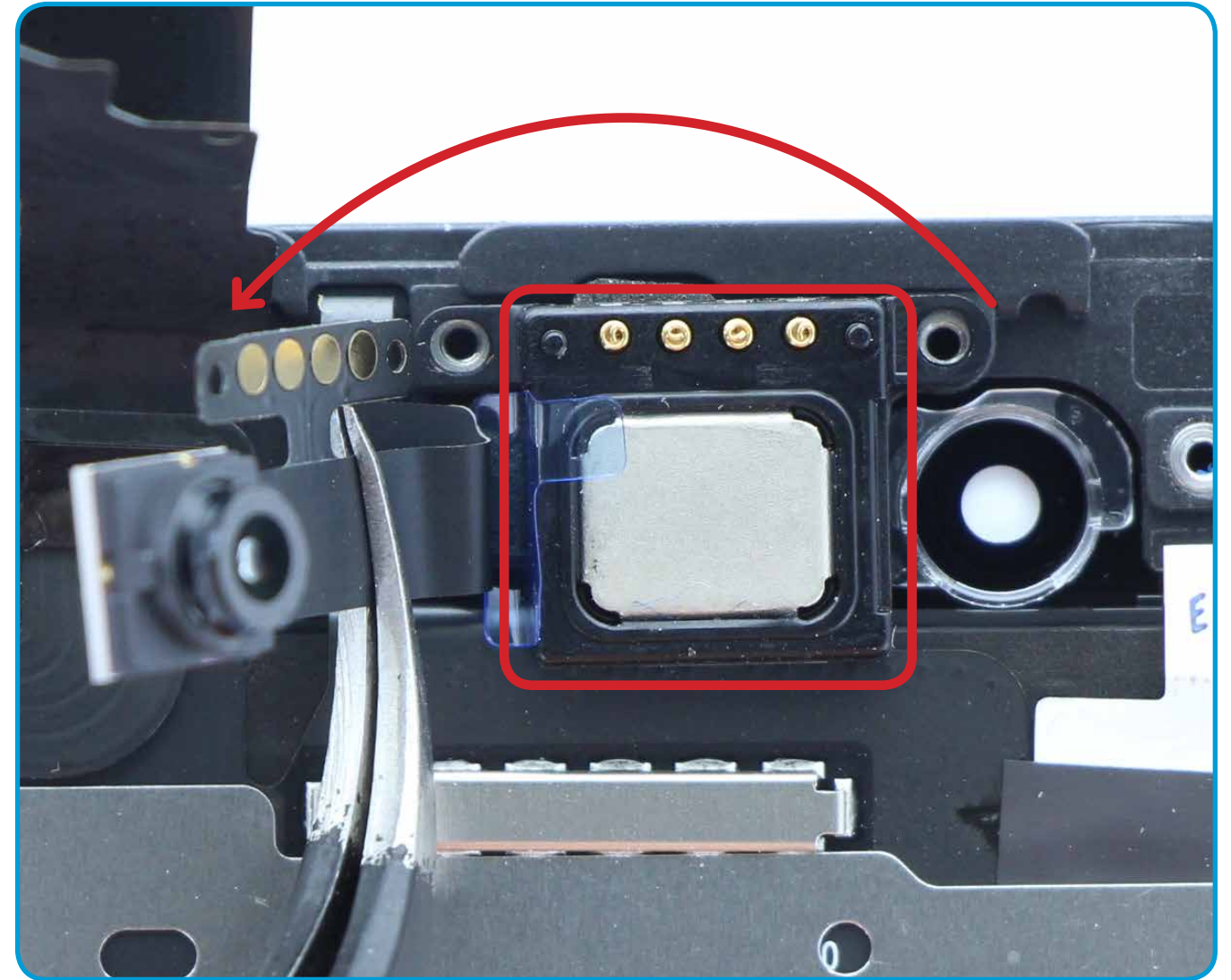
Remove the ear speaker bracket and set aside.



step
14

Fold Camera Cable Left

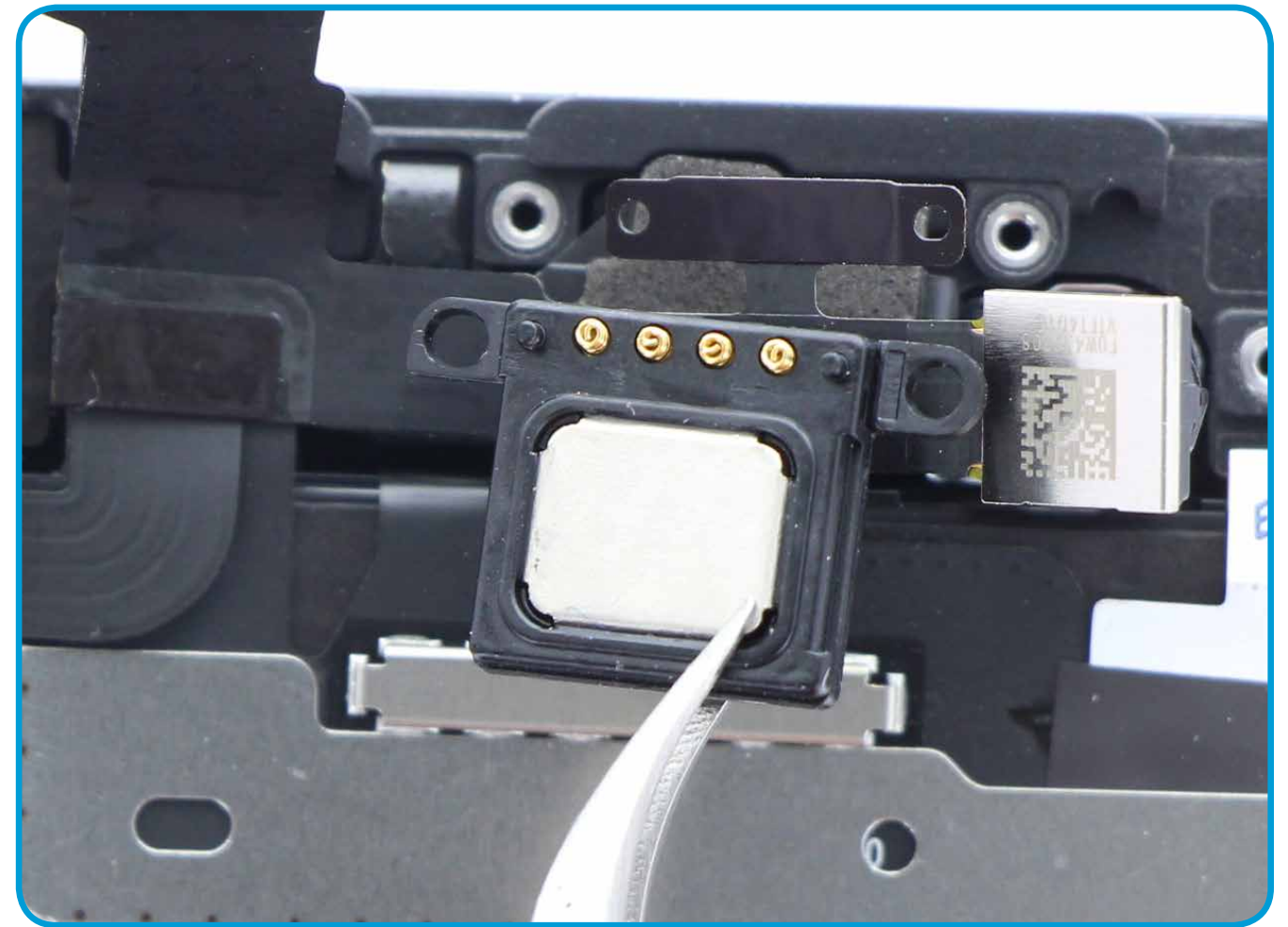
Gently lift the front-facing camera up and fold over to the left to expose the ear speaker.



step
15

Remove Ear Speaker

Remove the ear speaker and set aside.

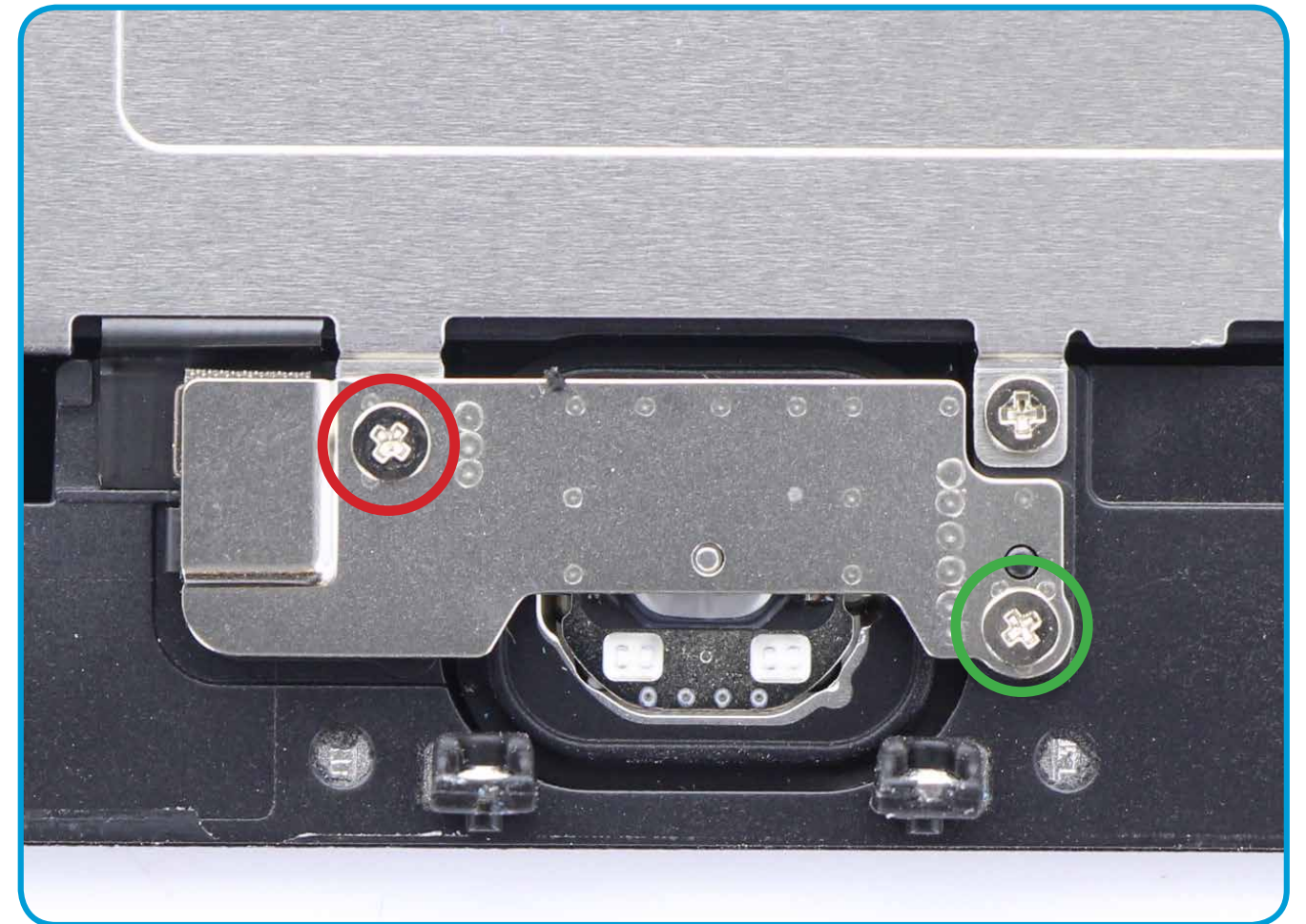


step
16

Home Button Bracket Screws

Remove the two Phillips screws holding the home button bracket in place.

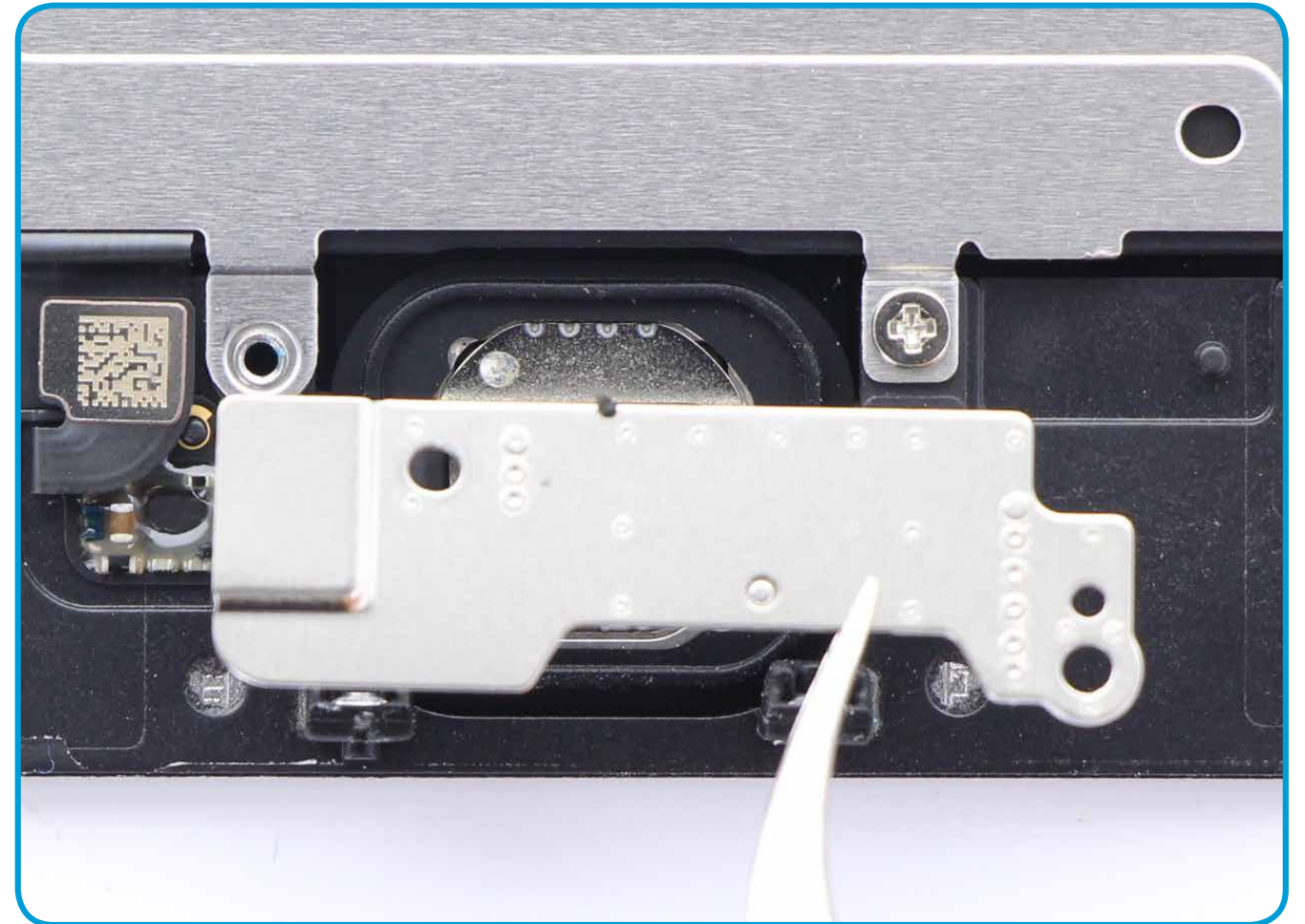
QTY	MATERIAL
1	1.8 mm Phillips screw
1	1.85 mm Phillips screw



step
17

Remove Home Button Bracket

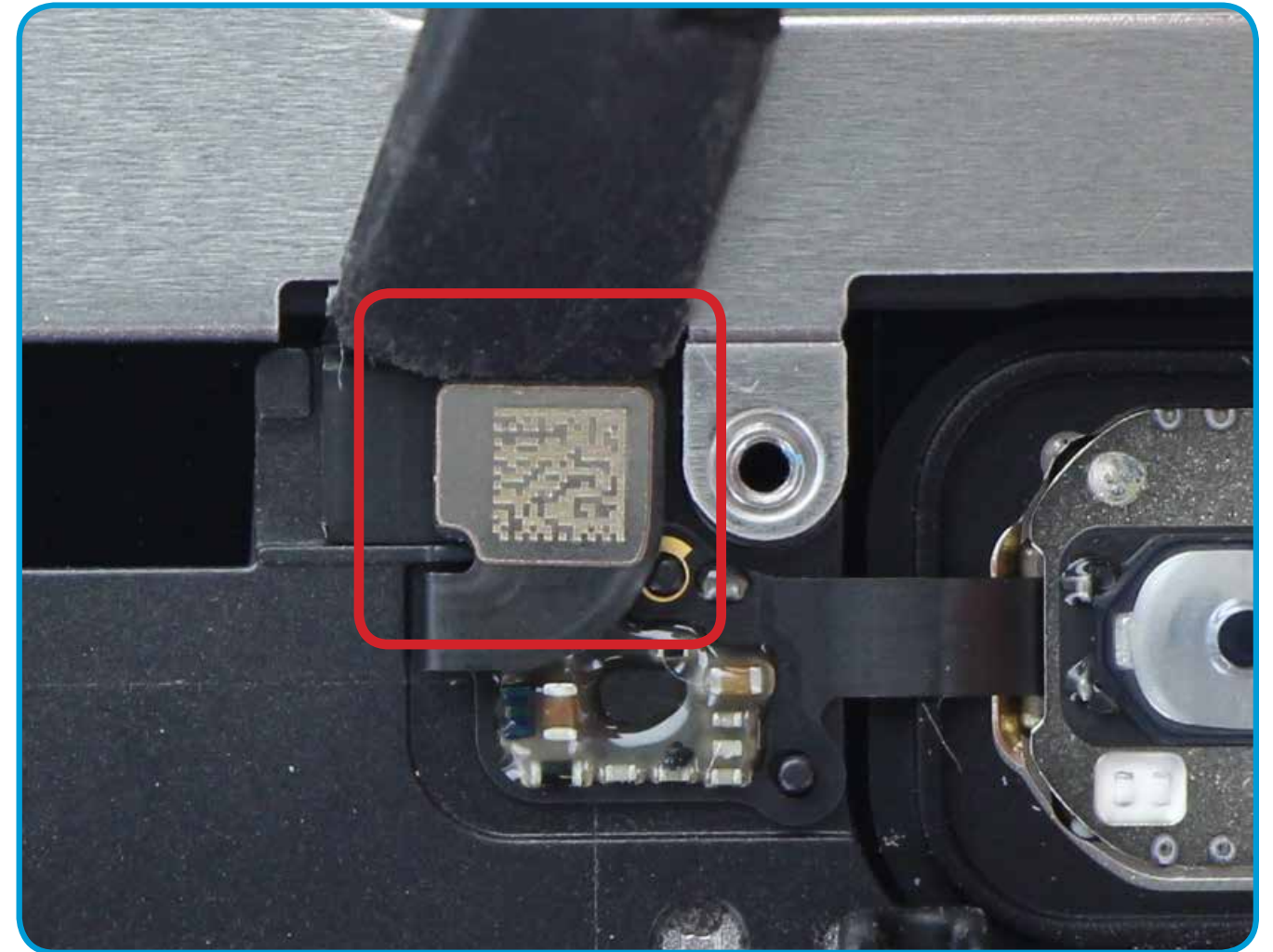
Remove the home button retaining bracket and set aside.



step
18

Disconnect Home Button

Using the flat end of the nylon spudger, disconnect the home button flex cable from the home button extension cable located to the left of the home button.



step
19

Remove Thermal Plate Screws

Remove the seven Phillips screws holding the thermal plate in place.

QTY	MATERIAL
1	1.73 mm Phillips screw
6	1.28 mm Phillips screw
1	1.75 mm Phillips screws



step
20

Heat Glass

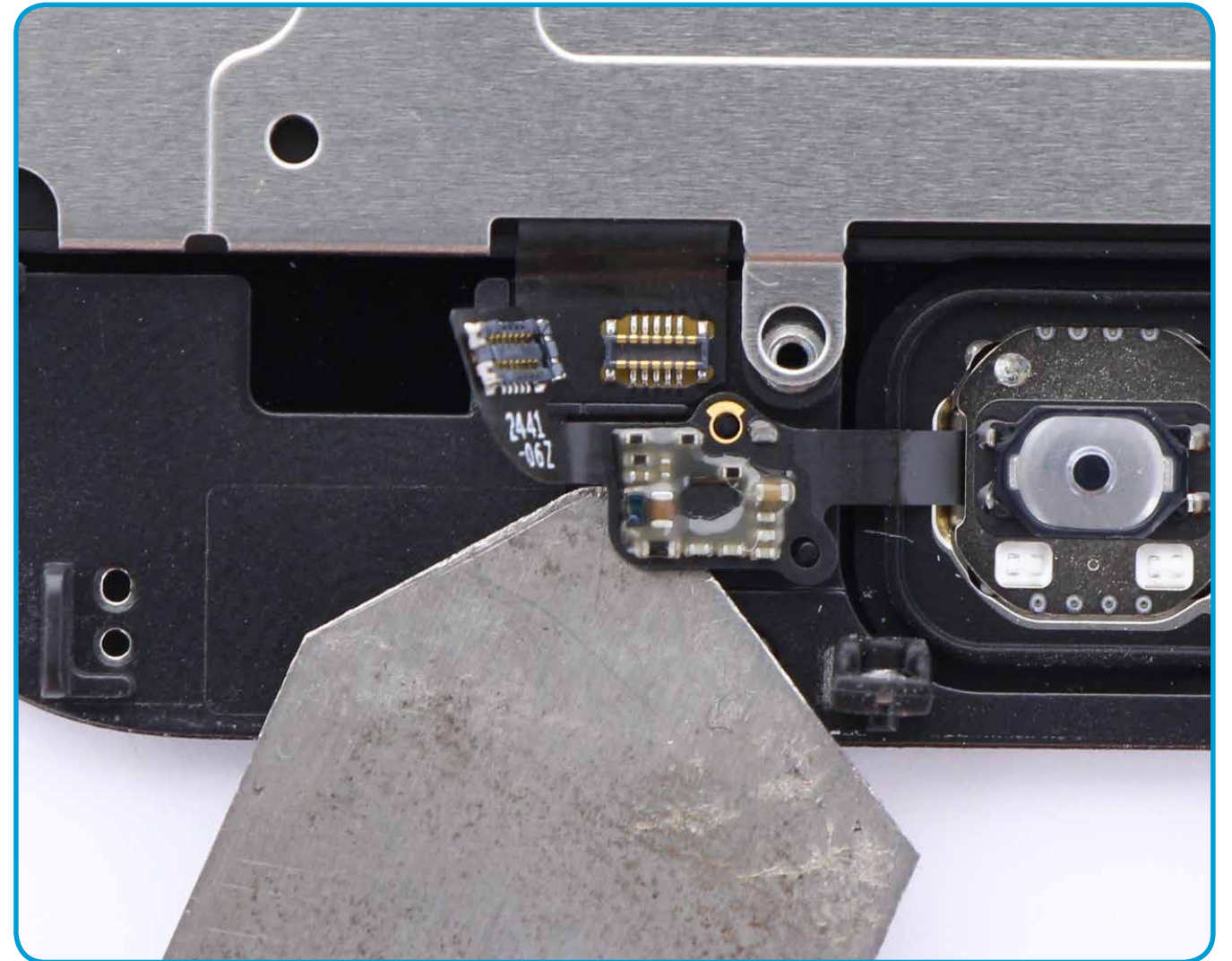
Turn the display face-up, and gently heat the glass to the right of the home button with a hair dryer or heat gun.



step
21

Peel Home Button Flex Cable

Using the iSesamo, carefully peel the home button flex cable away from the bezel on the underside of the display.



step
22

Dislodge Home Button

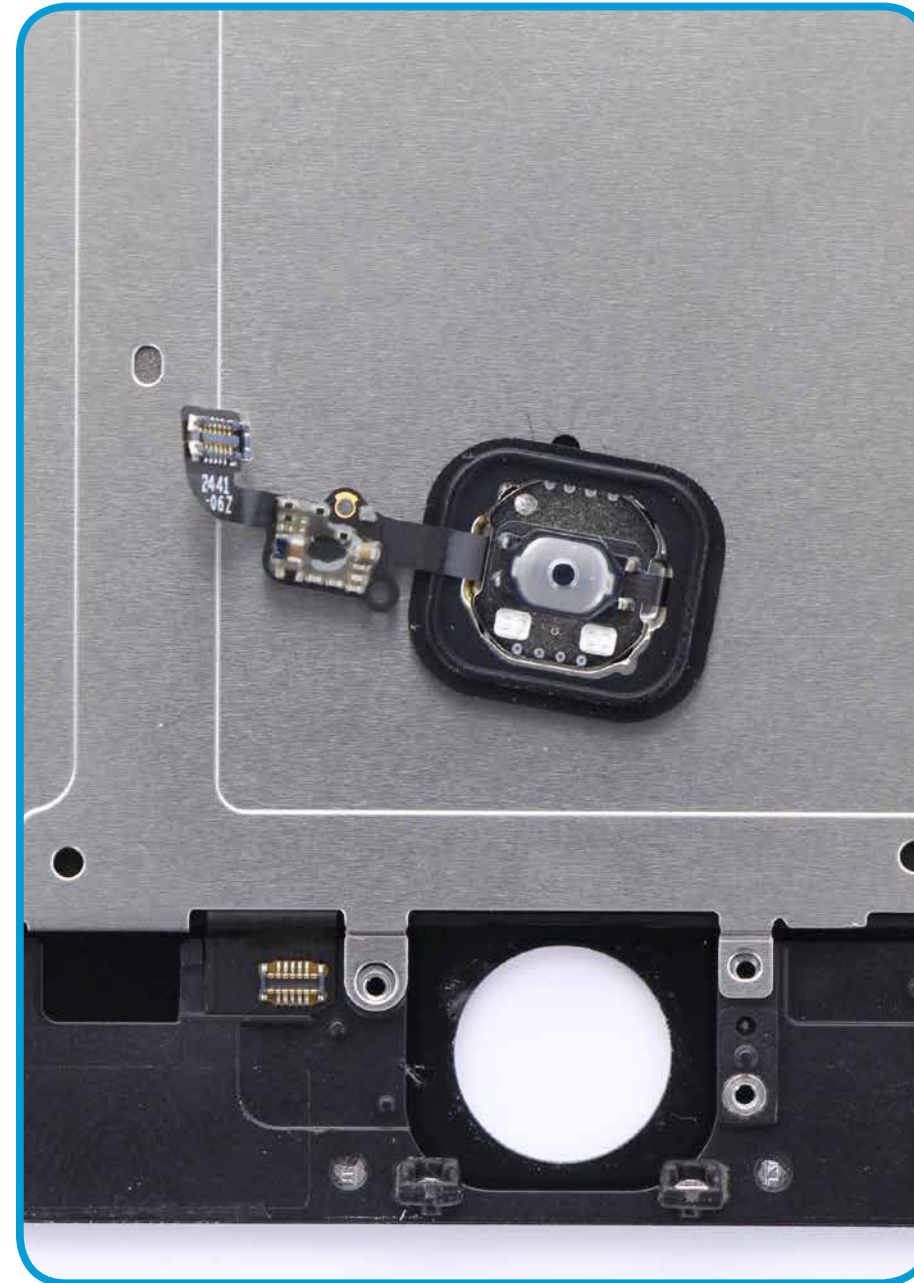
Using the flat end of the nylon spudger push the home button upward through it's opening to separate the gasket from the bezel.



step
23

Remove Home Button Assembly

Remove the home button with flex cable and set aside to be installed in the new display assembly.



step
24

Reheat Front of Display

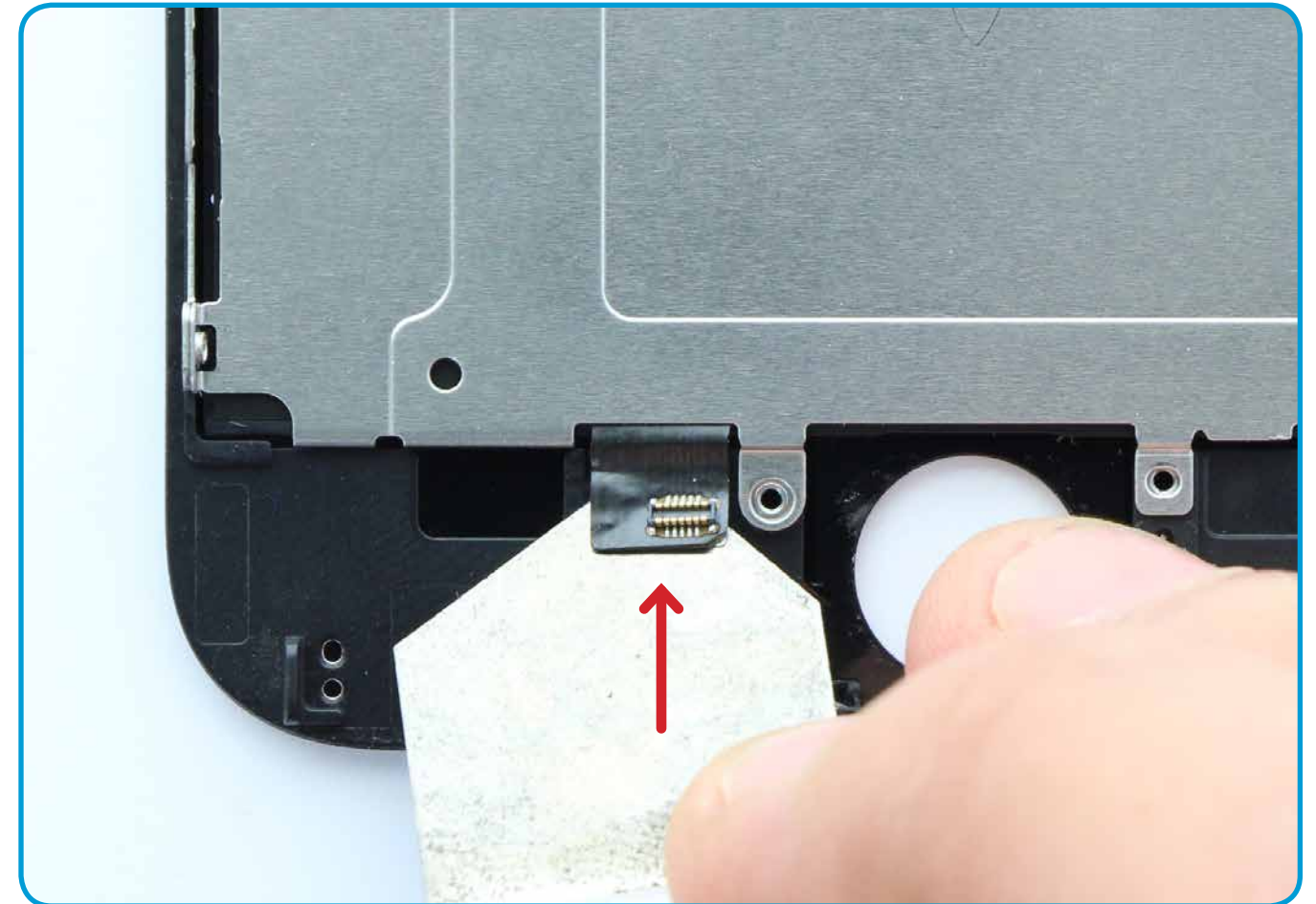
Again turn the display assembly over and heat the indicated area with a hair dryer or heat gun to loosen the adhesive for the home button flex extension cable.



step
25

Peel Extension Cable

Using the iSesamo tool, very carefully lift the home button extension flex cable from the bezel.



step
26

Remove Thermal Plate

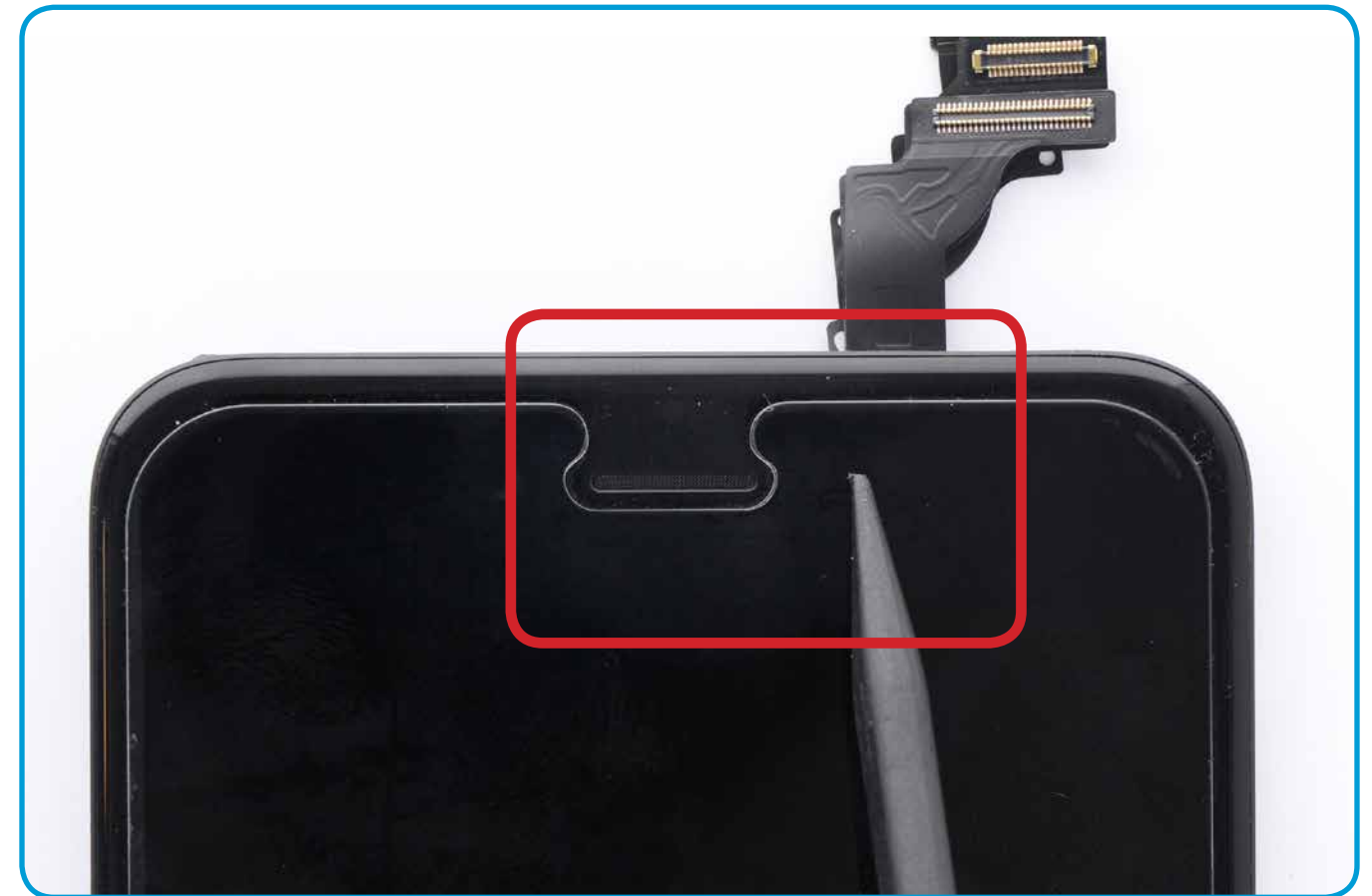
Lift and remove the thermal plate.



step
27

Heat Top of Display

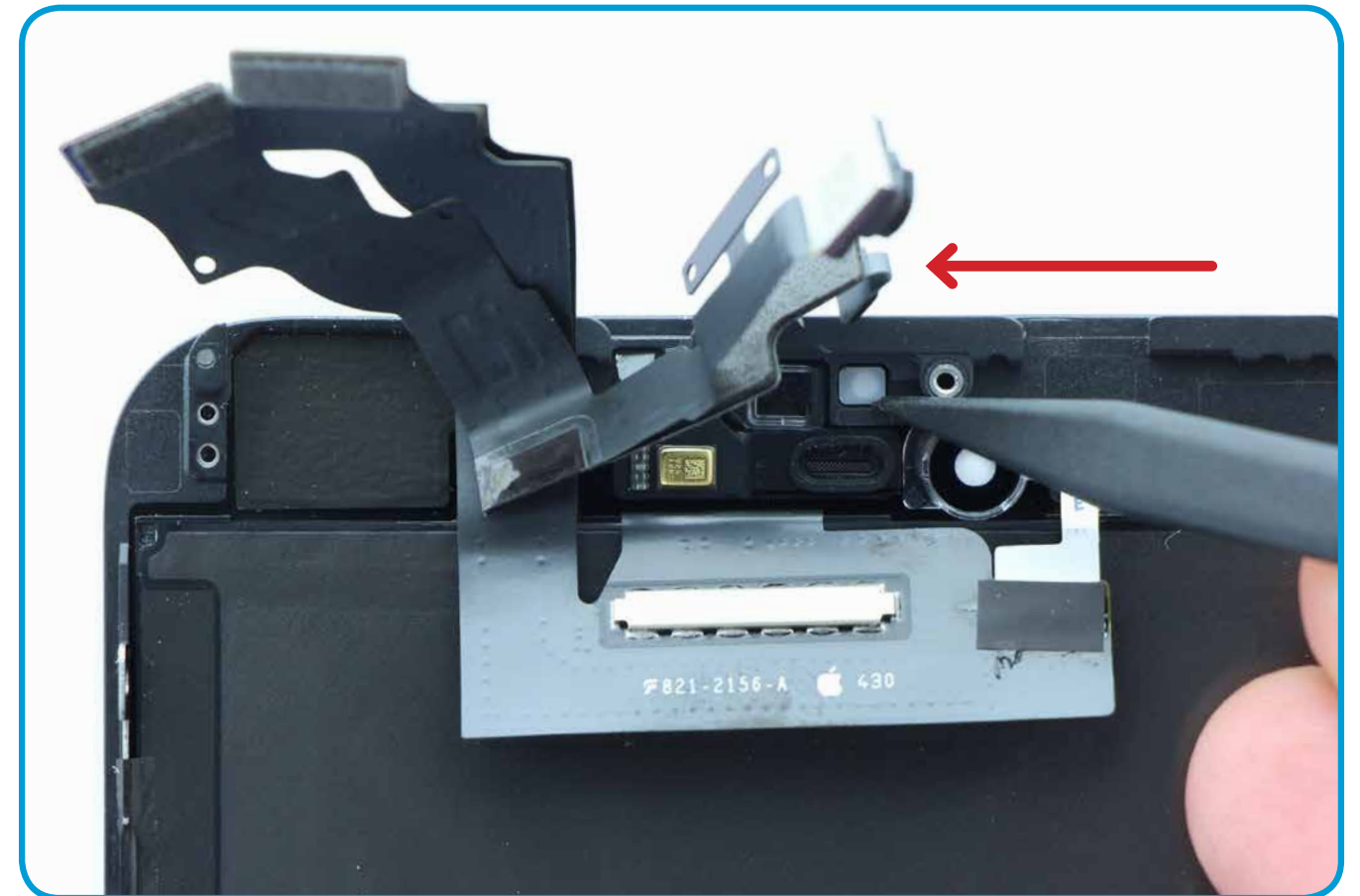
Turn the display assembly over face up and heat the glass surrounding the front-facing camera lens with a hair dryer or heat gun.



step
28

Peel Camera Cable Assembly

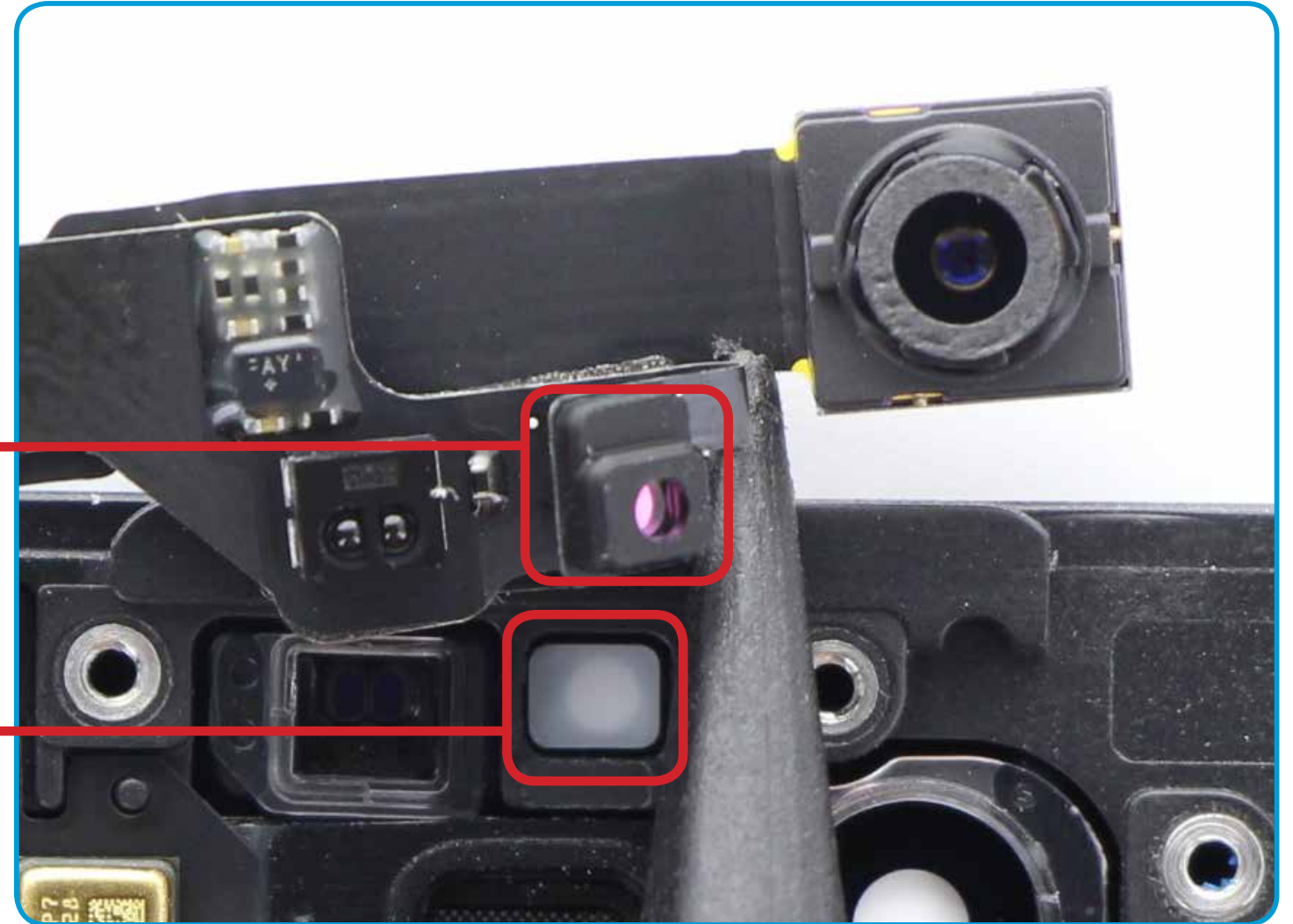
Carefully peel up the front-facing camera/accessory cable from the right side toward the left using the pointed end of the nylon spudger to unseat the proximity and ambient light sensor.



IMPORTANT!

Do not lose the rubber gasket for the ambient light sensor, shown here still attached to the sensor.

ONLY the black display assembly has an ambient light filter which must be transferred to the replacement display assembly. It rests underneath the ambient light sensor.

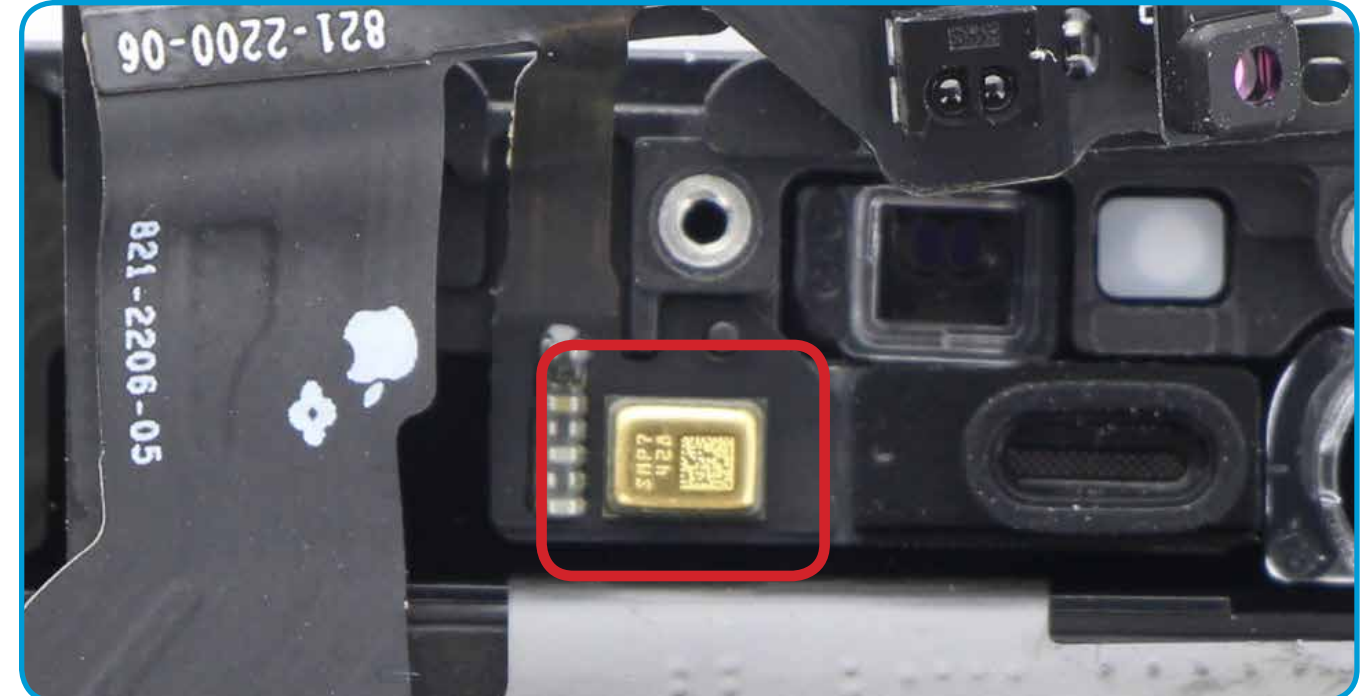
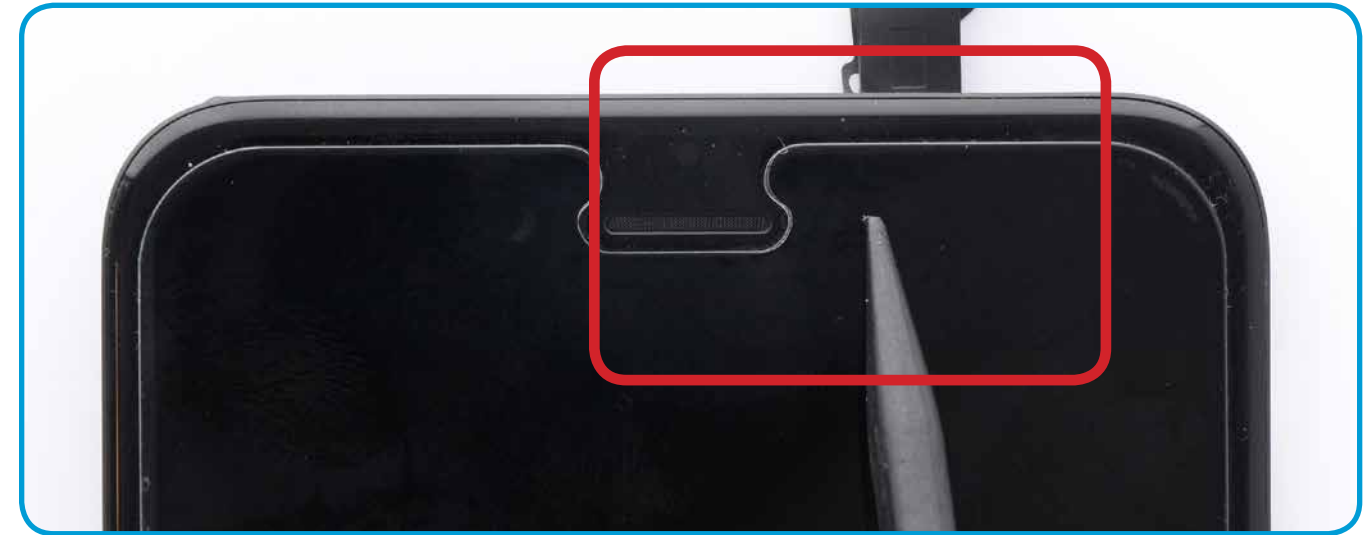


step
29

Reheat Top of Screen

Turn the display assembly over again face up and apply more heat to the glass surrounding the front-facing camera with a hair dryer or heat gun.

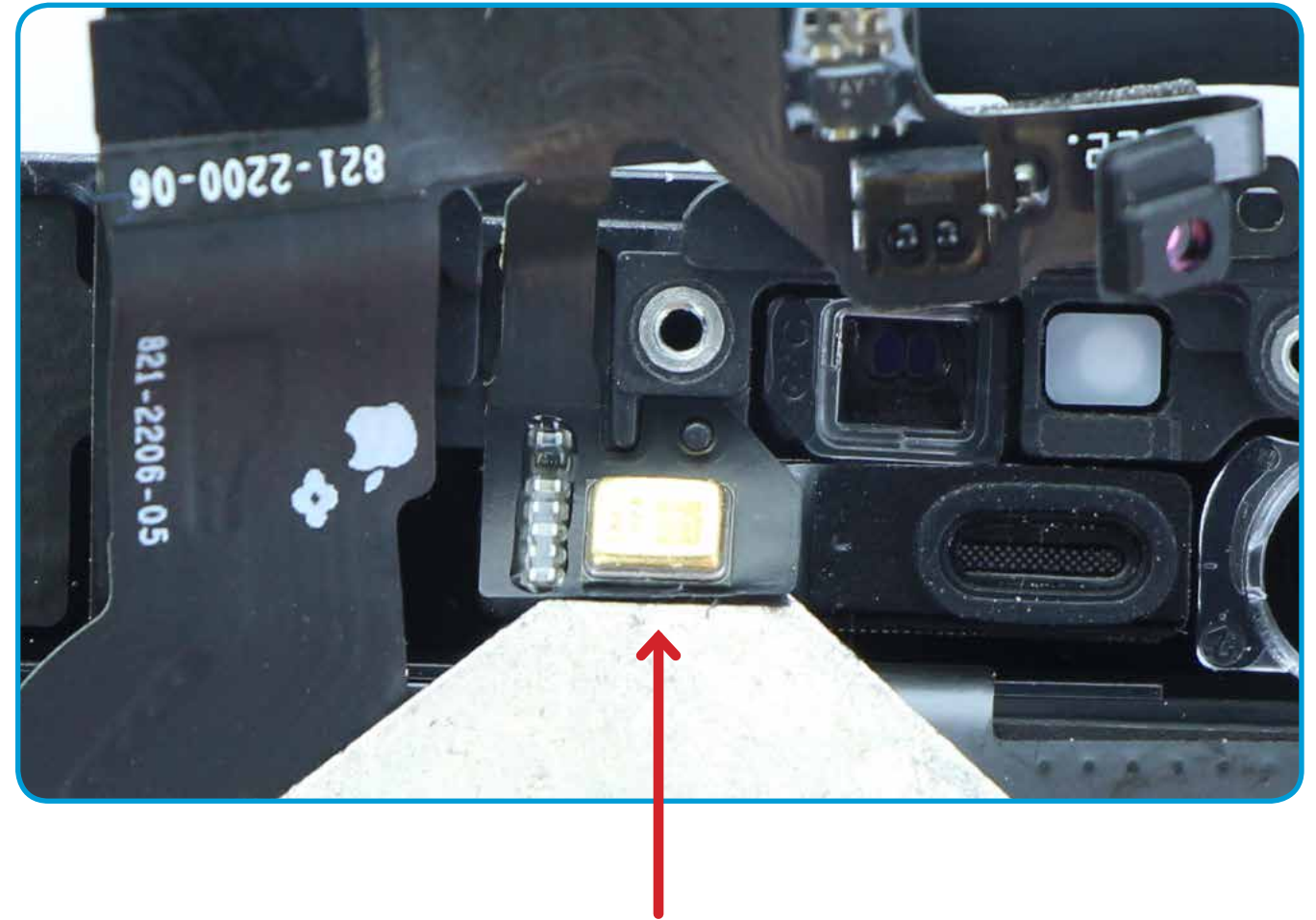
The upper microphone beneath this area is attached to the bezel with a strong adhesive. Make sure you heat this area well before attempting to peel the microphone from the bezel.



step
30

Disconnect Microphone

Turn the display over face down. Very carefully peel up the upper microphone using the iSesamo along the bottom edge.



step
31

Remove Camera Assembly

Set the front-facing camera flex cable aside to install onto new display assembly.

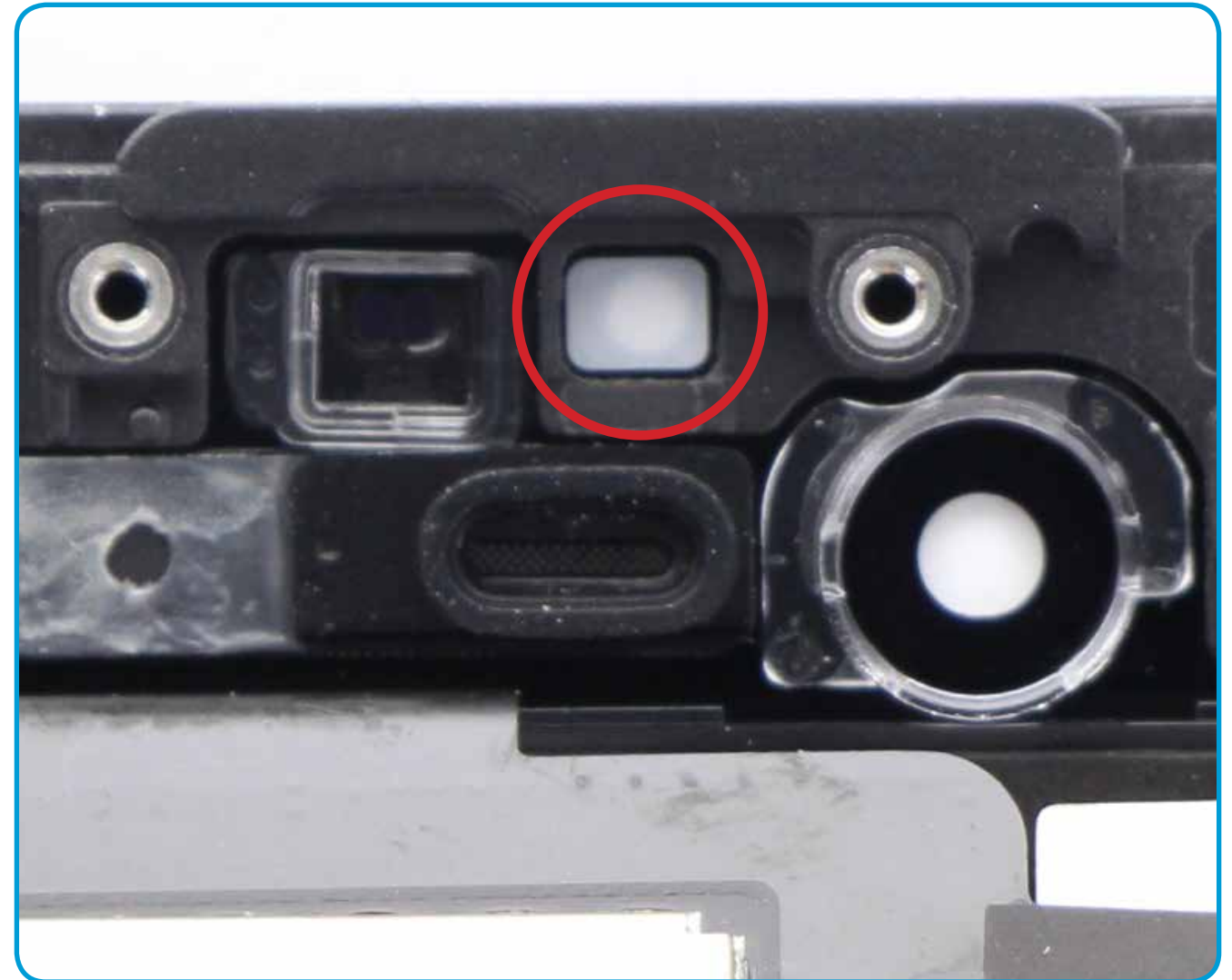


step
32

Remove Sensor Filter

Remove the ambient light sensor filter (white sticker) located in the sensor bracket built into the bezel and transfer it to the new display assembly.

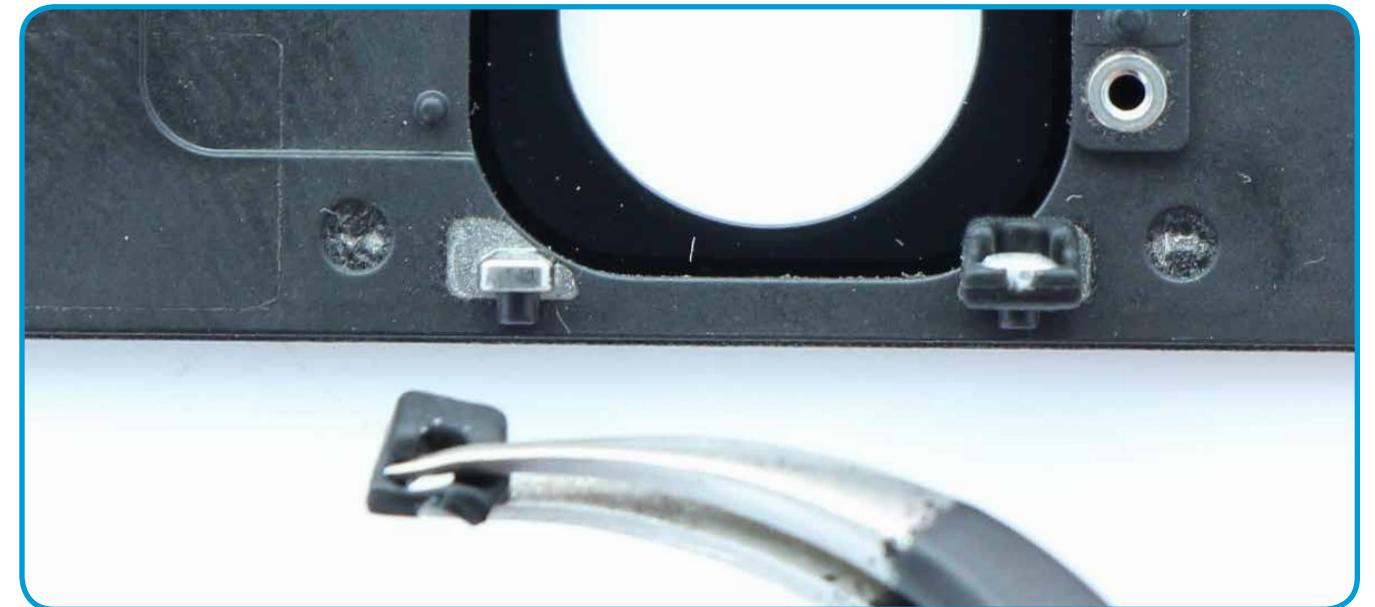
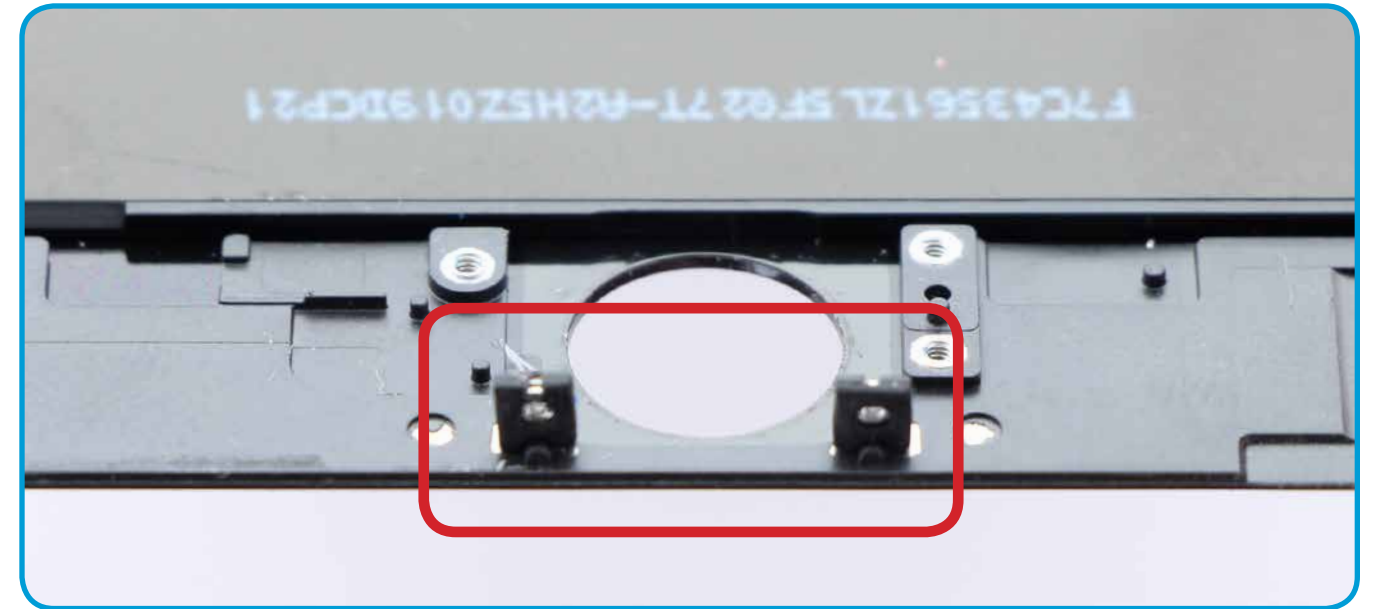
Note: This applies to black assemblies, not white.



step
33

Remove Rubber Spacers

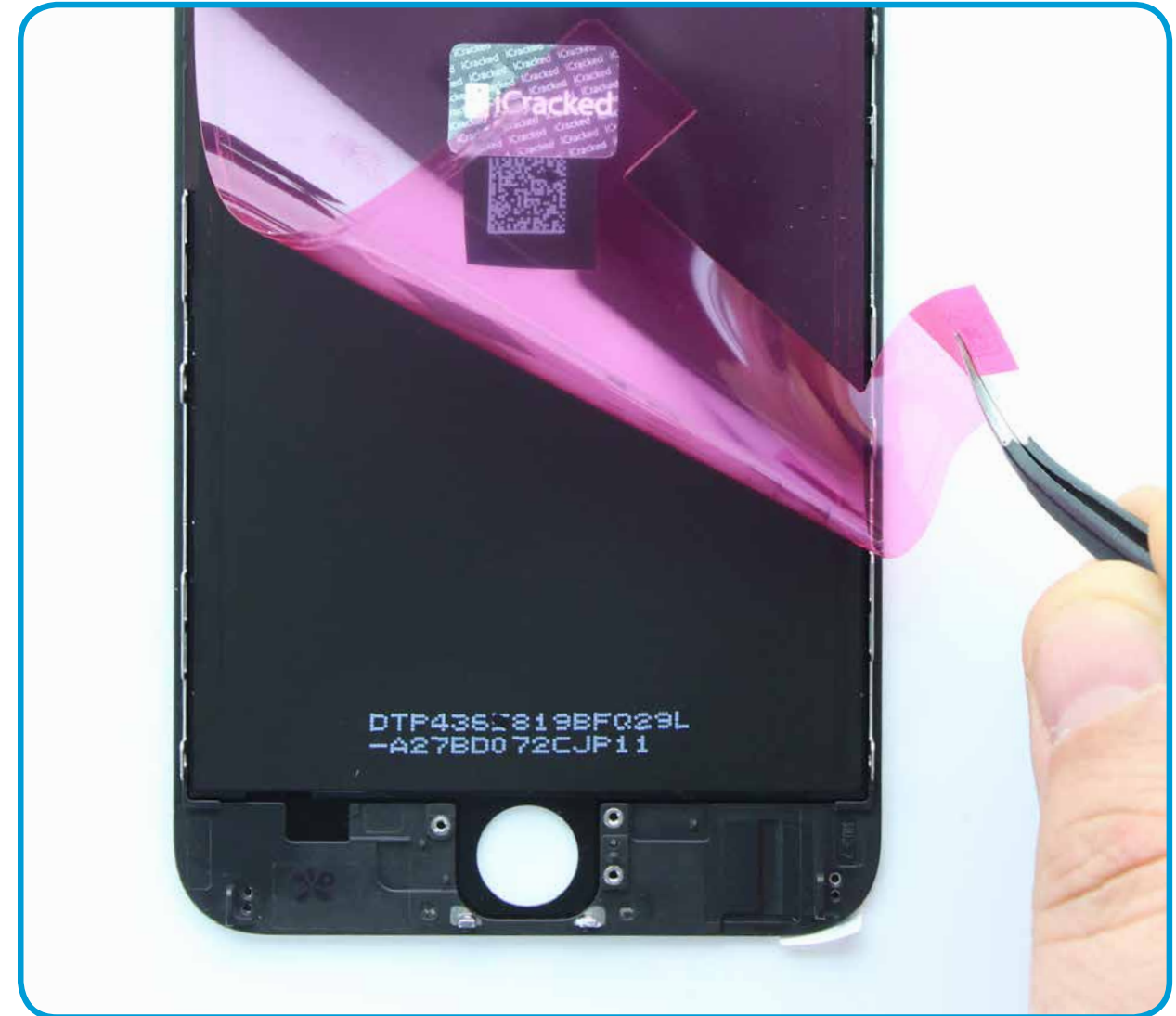
Remove the rubber spacers from the bottom of the original display assembly by lifting upward. Transfer to the new display assembly.



REASSEMBLY PREP

If your new assembly has an anti-static protective film covering the back side of the LCD, remove it before you begin reassembly.

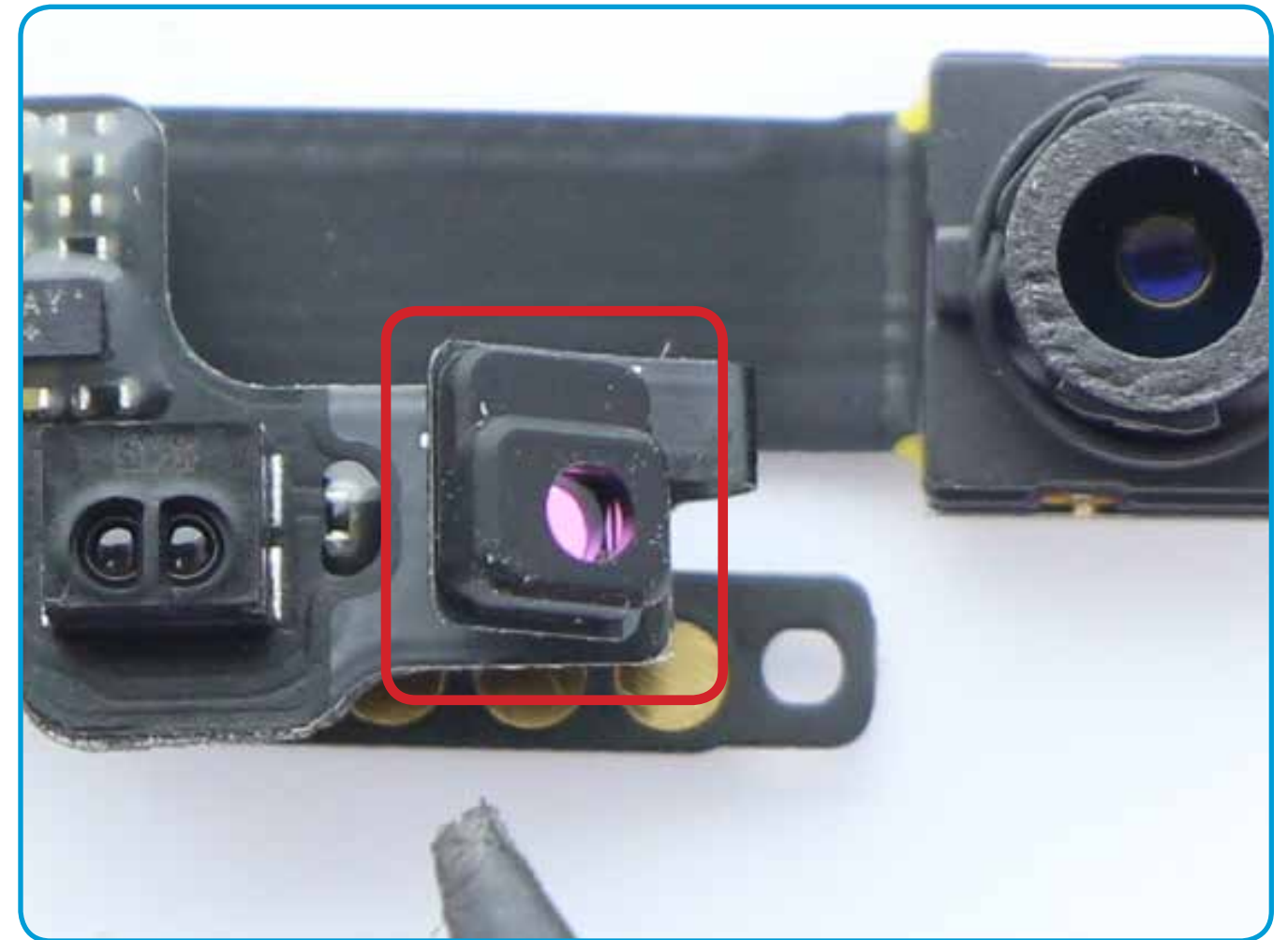
Not all display units will have this film.



step
34

Check Gasket Placement

Make sure the rubber ambient light sensor gasket is in place over the ambient light sensor as shown.



step
35

Peel Adhesive

Peel the adhesive from the ear speaker rubber gasket for the upper microphone.

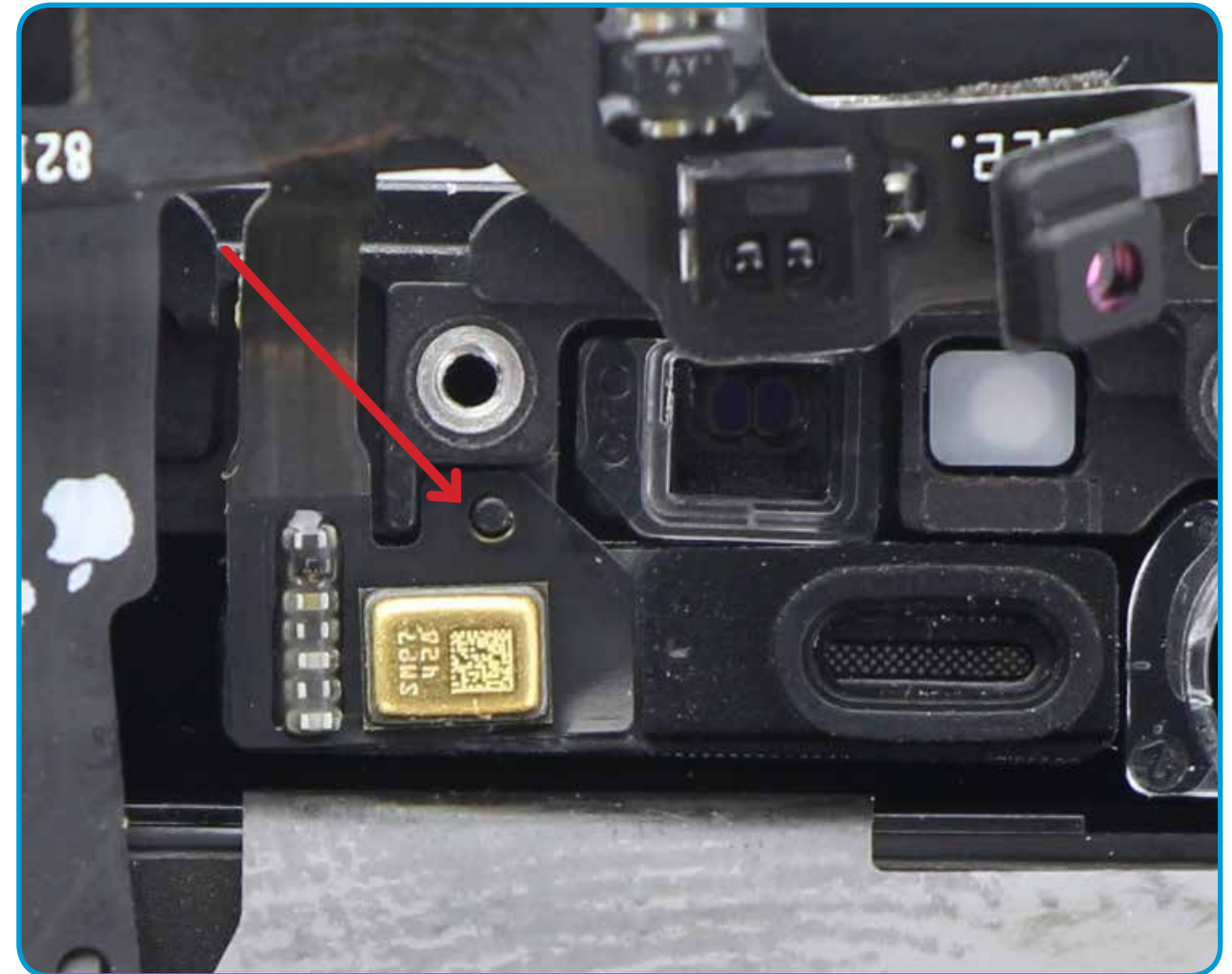


step
36

Align Microphone

Align the microphone onto the bezel, make sure the flex cable is placed over the alignment pin.

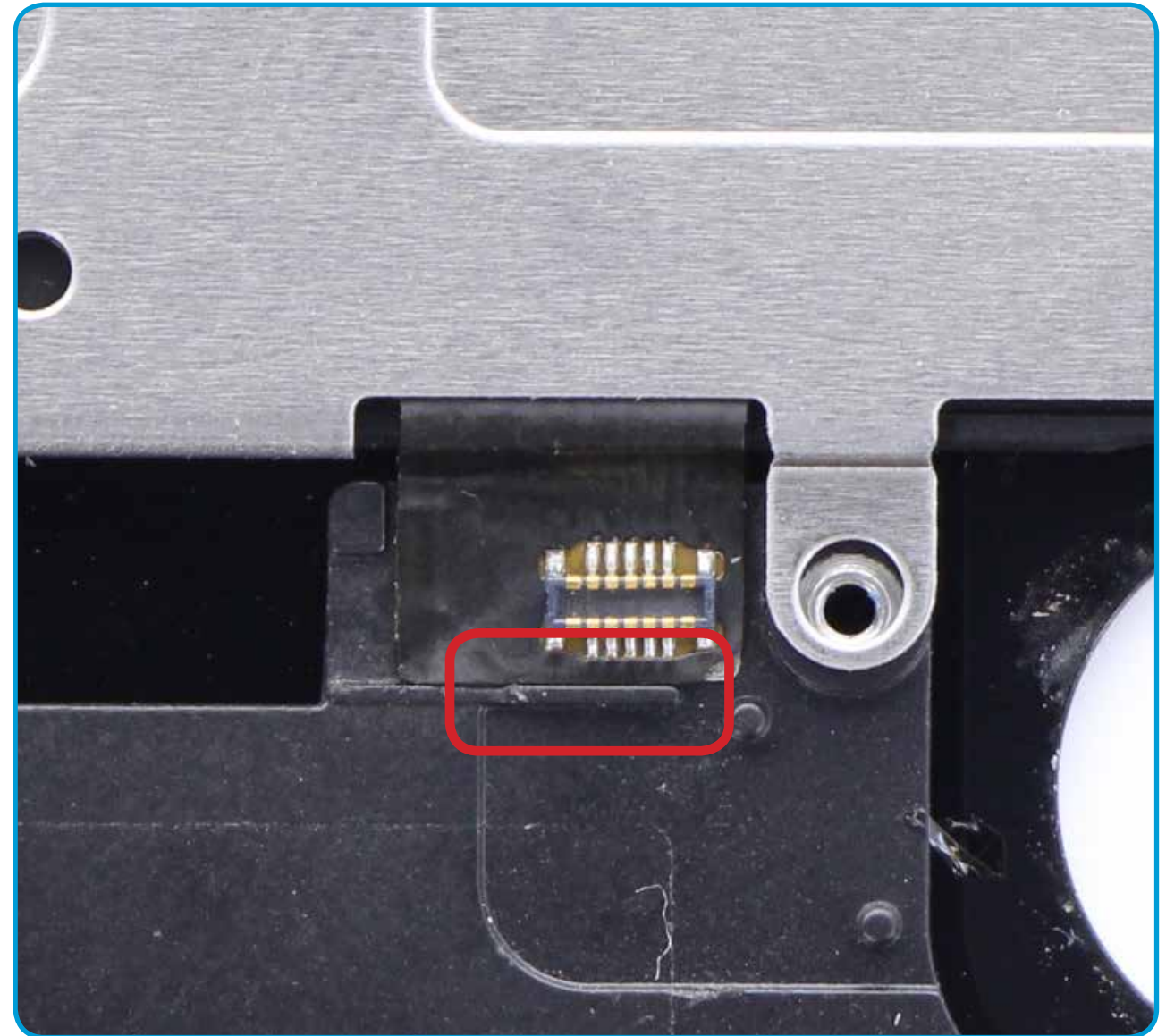
Note: The orientation of the cable shown is intentionally improper in order to illustrate the microphone clearly. It will need to be turned around.



step
37

Align Thermal Plate

Align the thermal plate. Make sure the home button flex extension cable sits in front of the ledge of the bezel.



step
38

Install Thermal Plate

Lay the thermal plate on the new assembly and screw in the eight Phillips screws holding the thermal plate in place.

QTY	MATERIAL
1	1.73 mm Phillips screw
6	1.28 mm Phillips screw
1	1.75 mm Phillips screws

Note: Make sure the LCD flap is on top of the thermal plate.

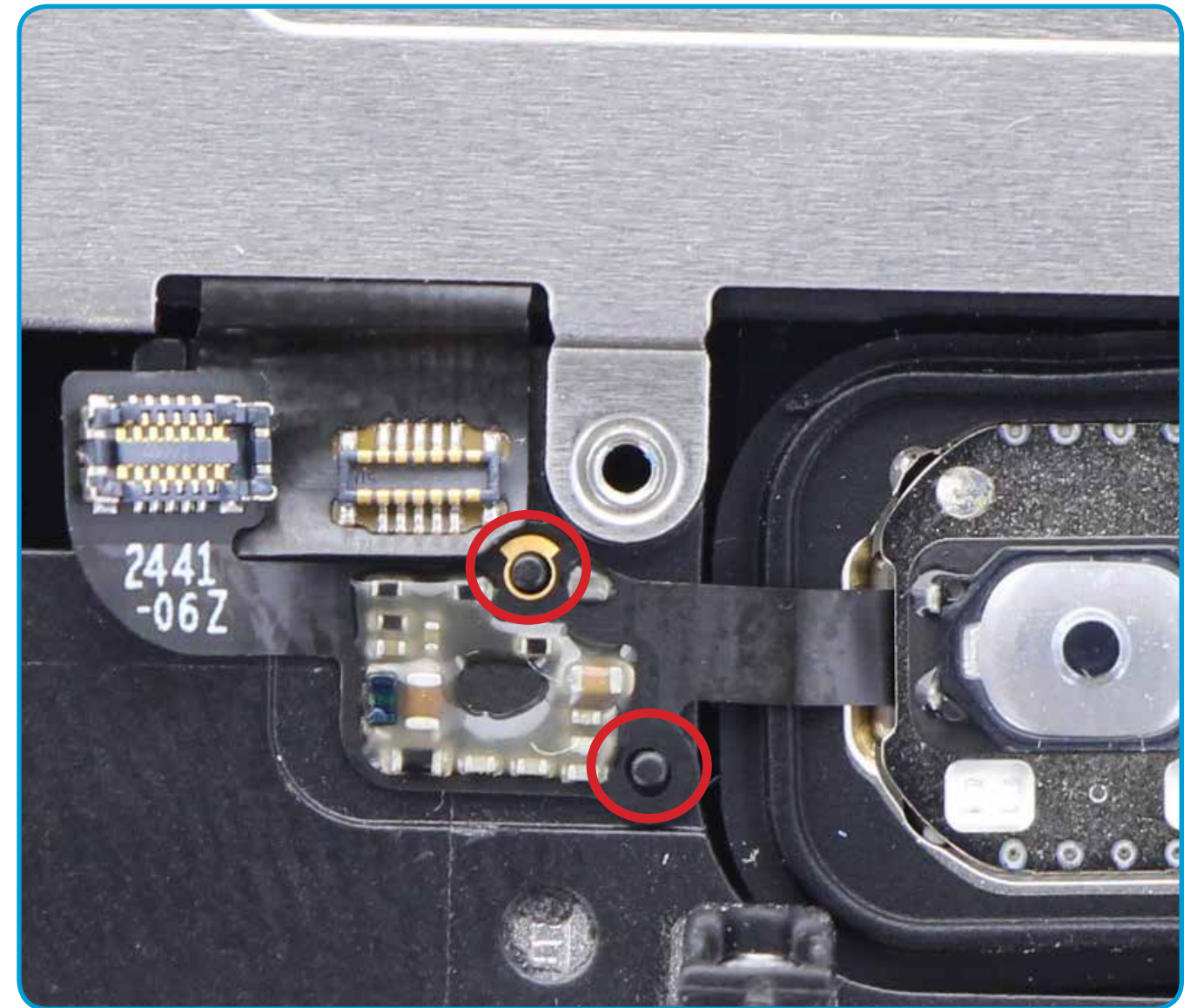


step
39

Align Home Button

Align the home button onto the new display assembly and press into place.

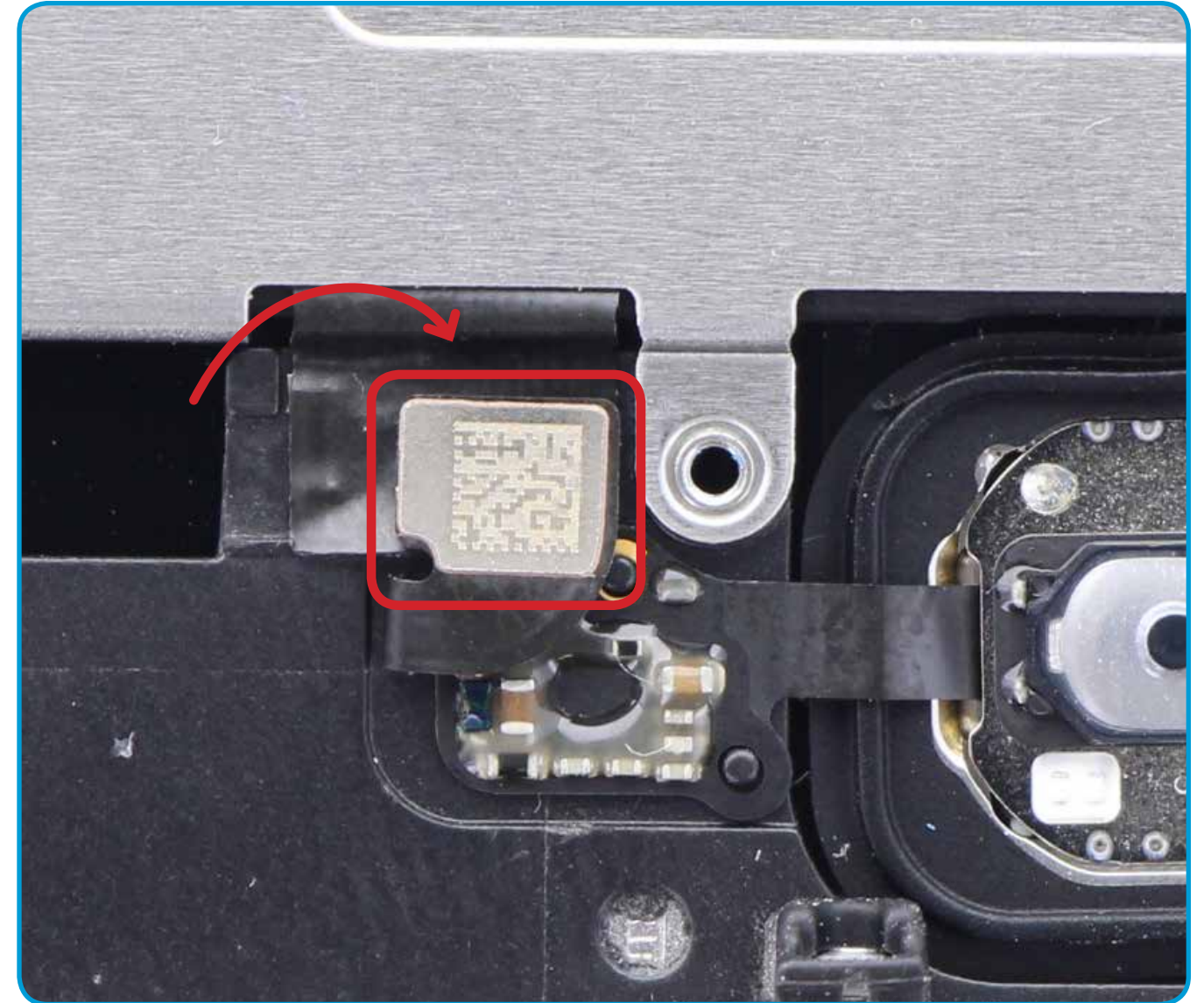
Rest the flex button onto the two alignment pins indicated in red.



step
40

Connect Home Button

Connect the home button flex cable onto the home button extension flex cable. Note the before (top) and after (bottom) images for reference.



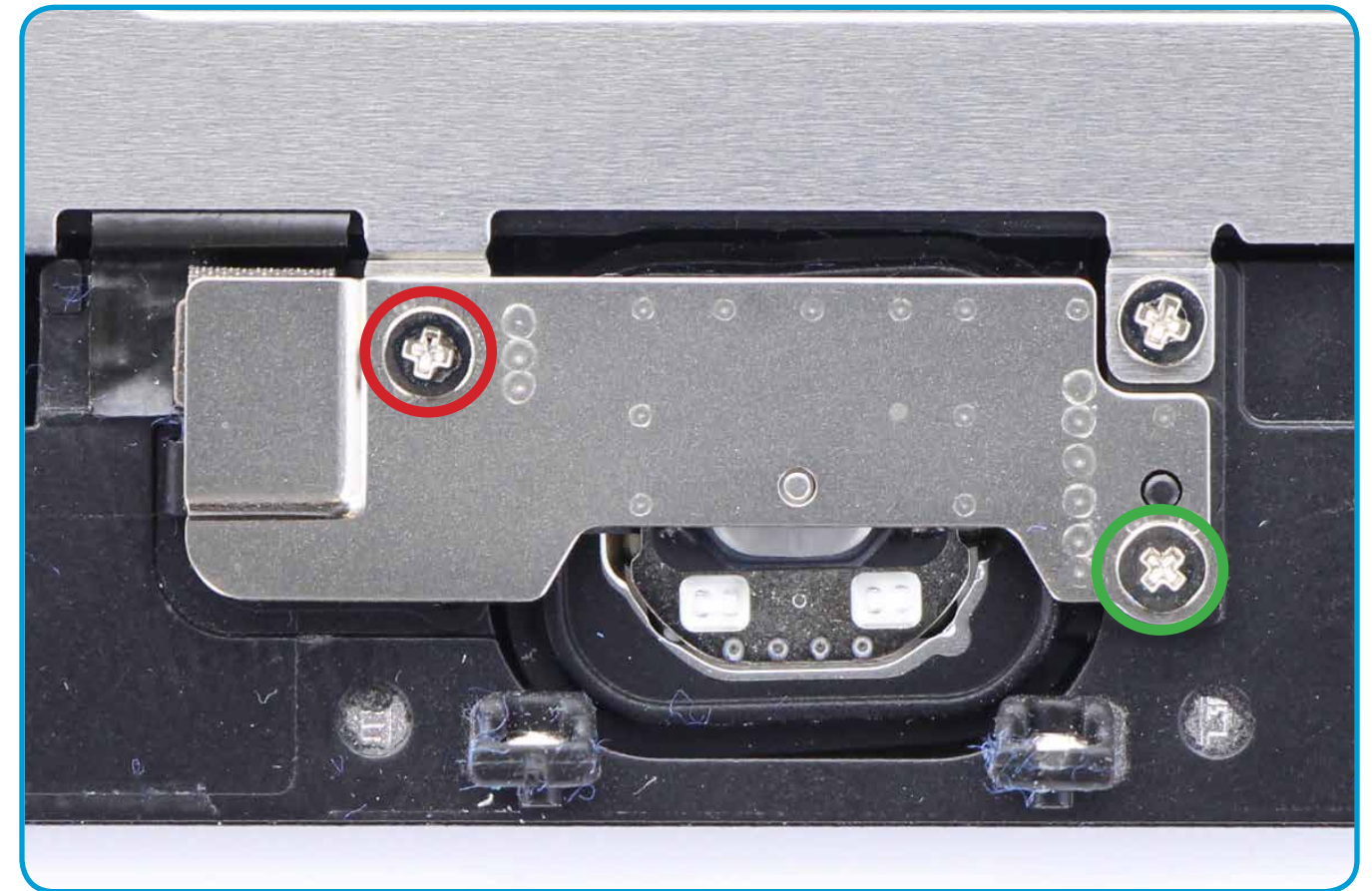
step
41

Install Home Button Bracket

Align the home button retaining bracket over the alignment pin, shown in green.

Insert and tighten the two Phillips screws.

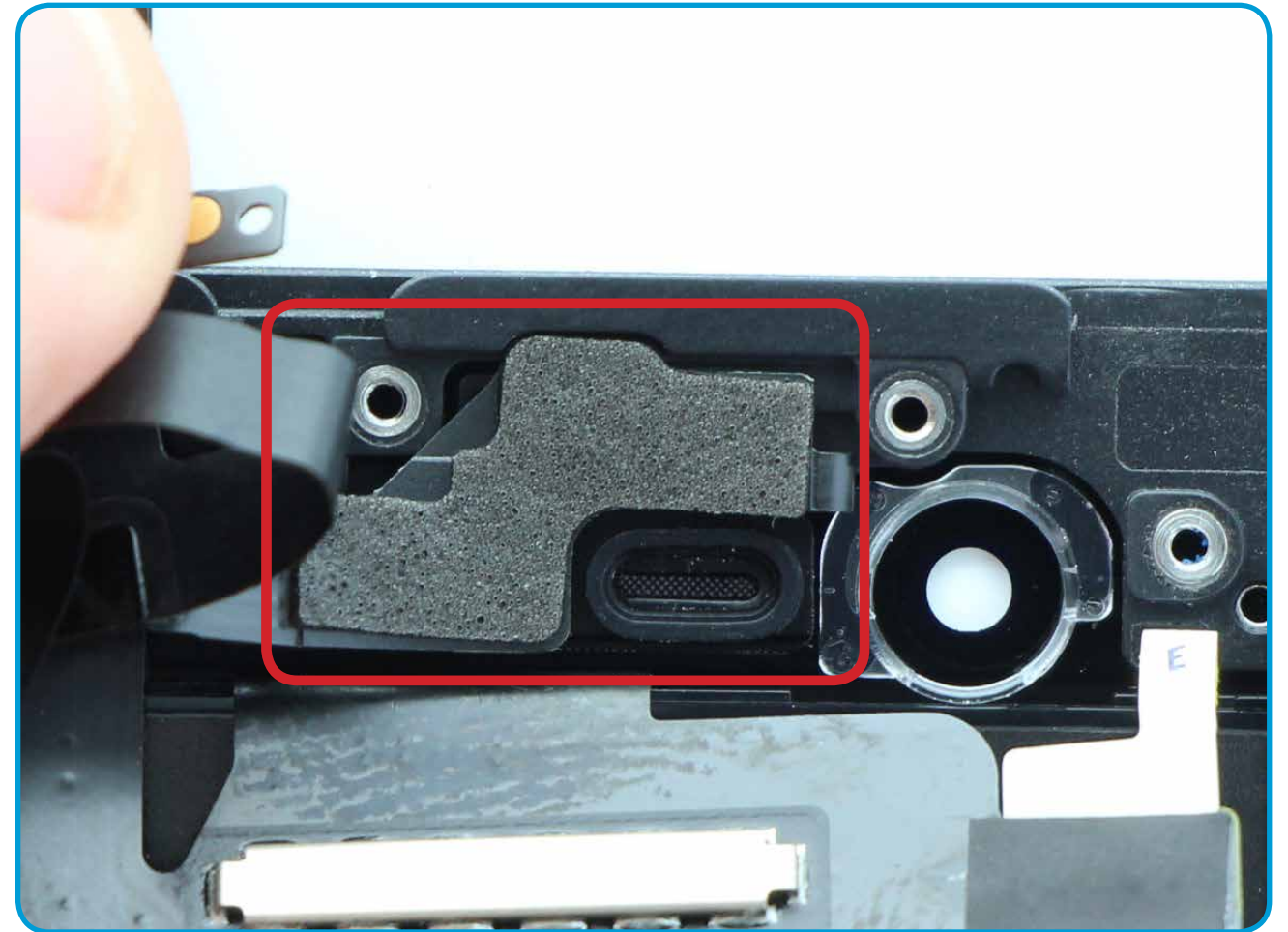
QTY	MATERIAL
1	1.8 mm Phillips screw
1	1.85 mm Phillips screw



step
42

Set Proximity and Light Sensor

Lay the proximity and ambient light sensor into their brackets within the display assembly.

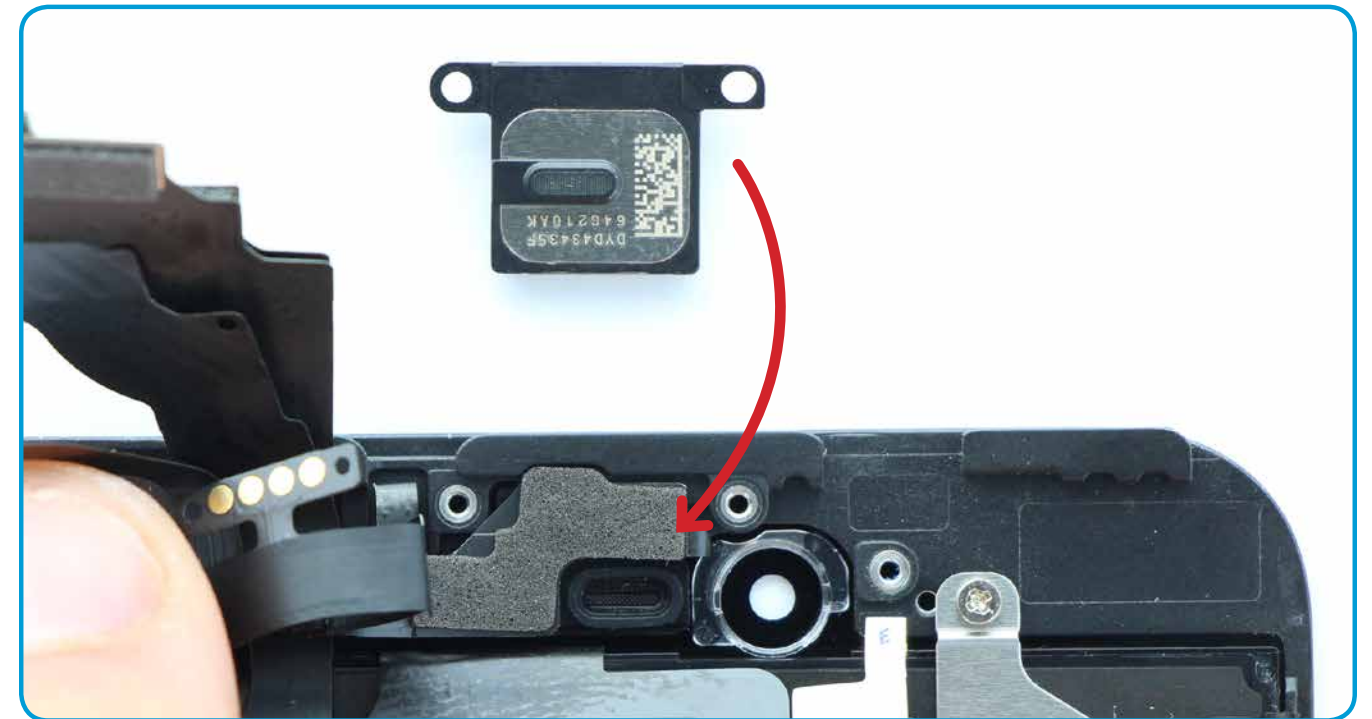


step
43

Install Ear Speaker

Insert the ear speaker into its rubber boot housing to the left of the front facing camera housing. Make sure that the oval opening on the back of the speaker drops into the ear speaker grill on the assembly.

See before (top) and after (bottom) images for reference.



step
44

Install Front Facing Camera

Lay the front-facing camera into the centering bracket.

Double check that the ear speaker contacts, indicated in green, on the end of the front-facing camera/accessory flex cable are not damaged, torn or folded underneath the cable.



step
45

Align Speaker Bracket

Place the ear speaker retaining bracket over the ear speaker. Make sure the flex cable and bracket align over the two pins. The two alignment pins should have passed through the ear speaker retaining bracket.

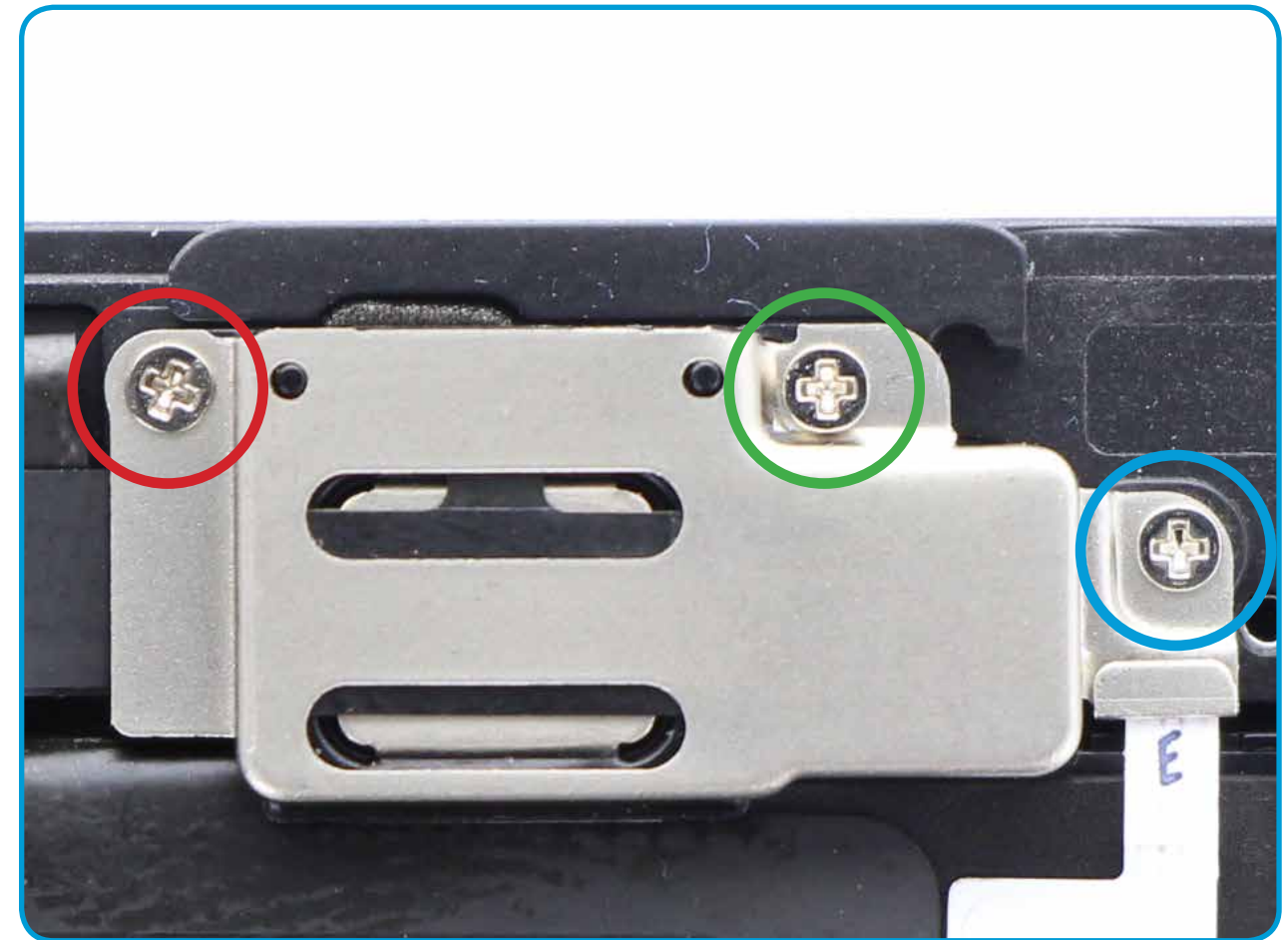


step
46

Install Ear Speaker Screws

Insert and tighten the three Phillips screws that hold the ear speaker retaining bracket in place.

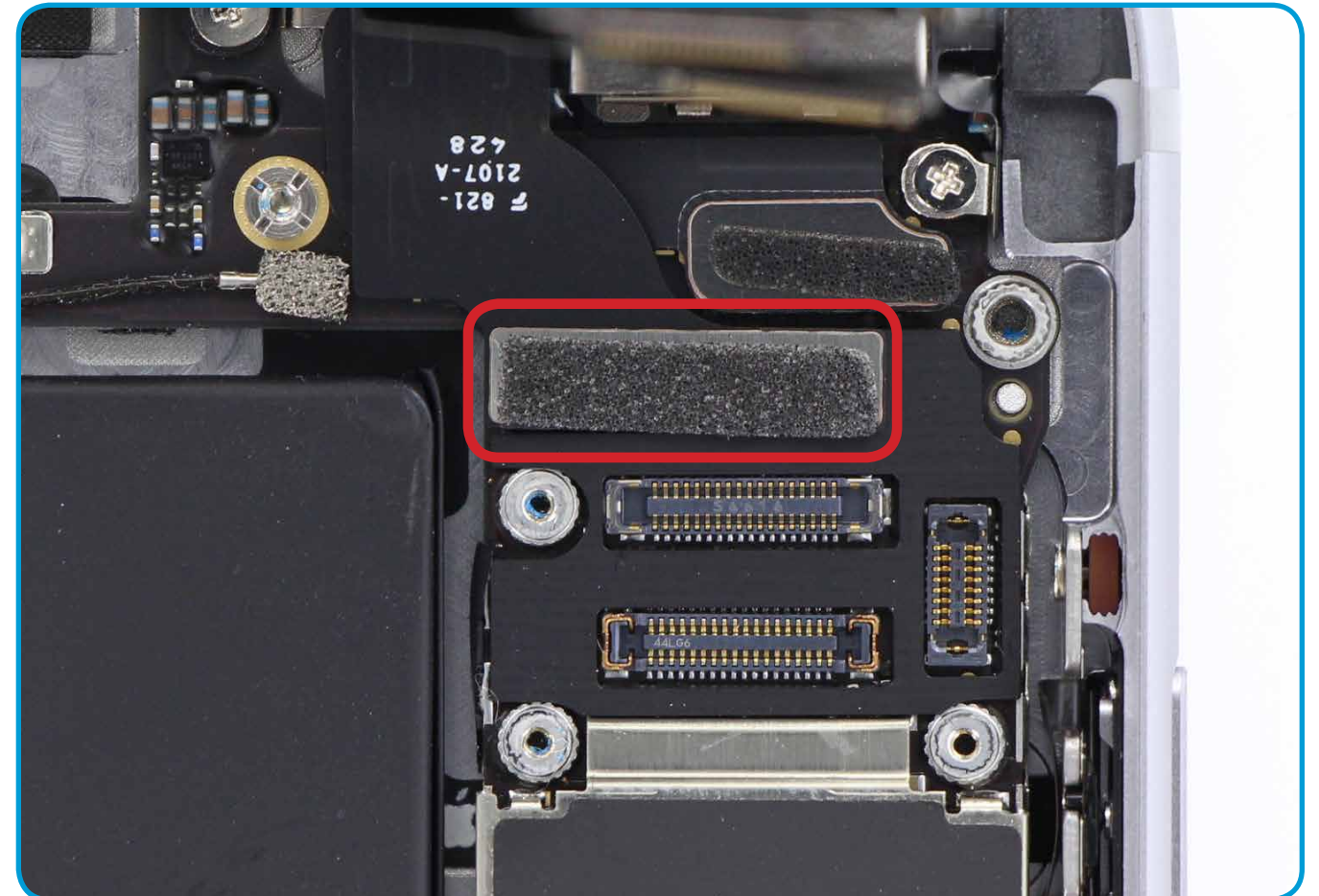
QTY	MATERIAL
1	2.28 mm Phillips screw
1	2.32 mm Phillips screw
1	1.46 mm Phillips screws



step
47

Connect Digitizer

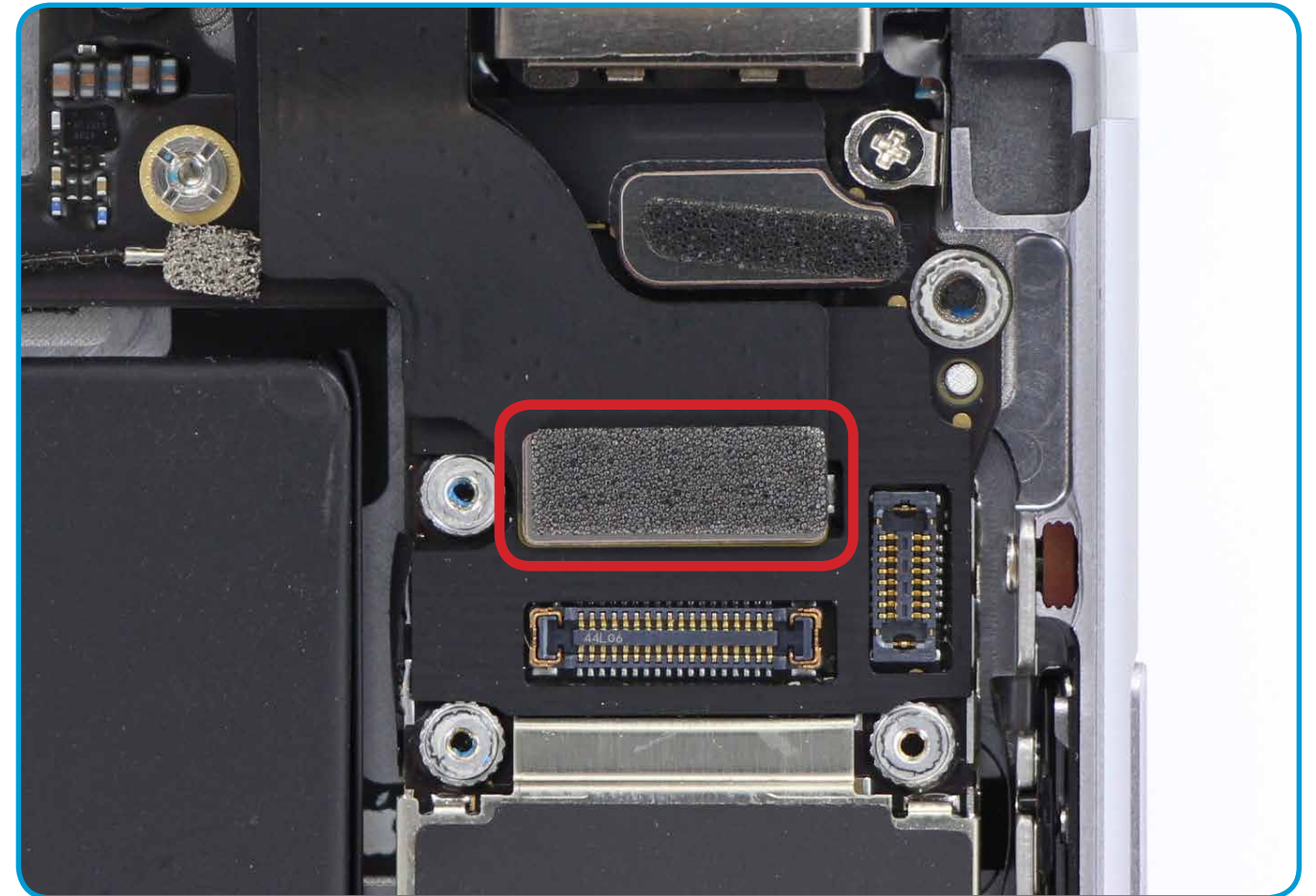
Connect the digitizer flex cable to the logic board.



step
48

Connect LCD

Connect the LCD flex cable to the logic board.

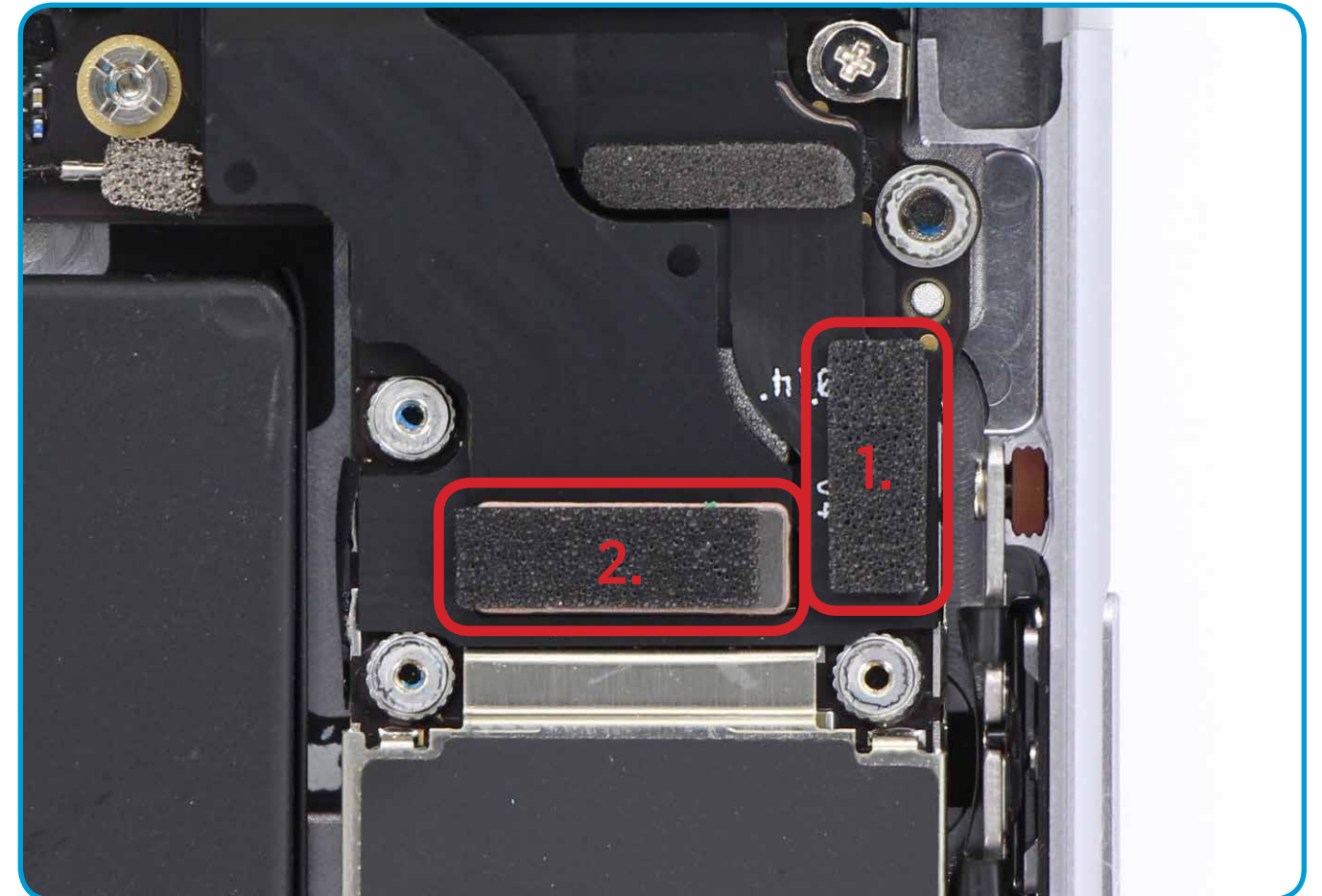


step
49

Connect Flex Cables

Connect in this order:

1. Home button extension flex cable
2. Front-facing camera cable

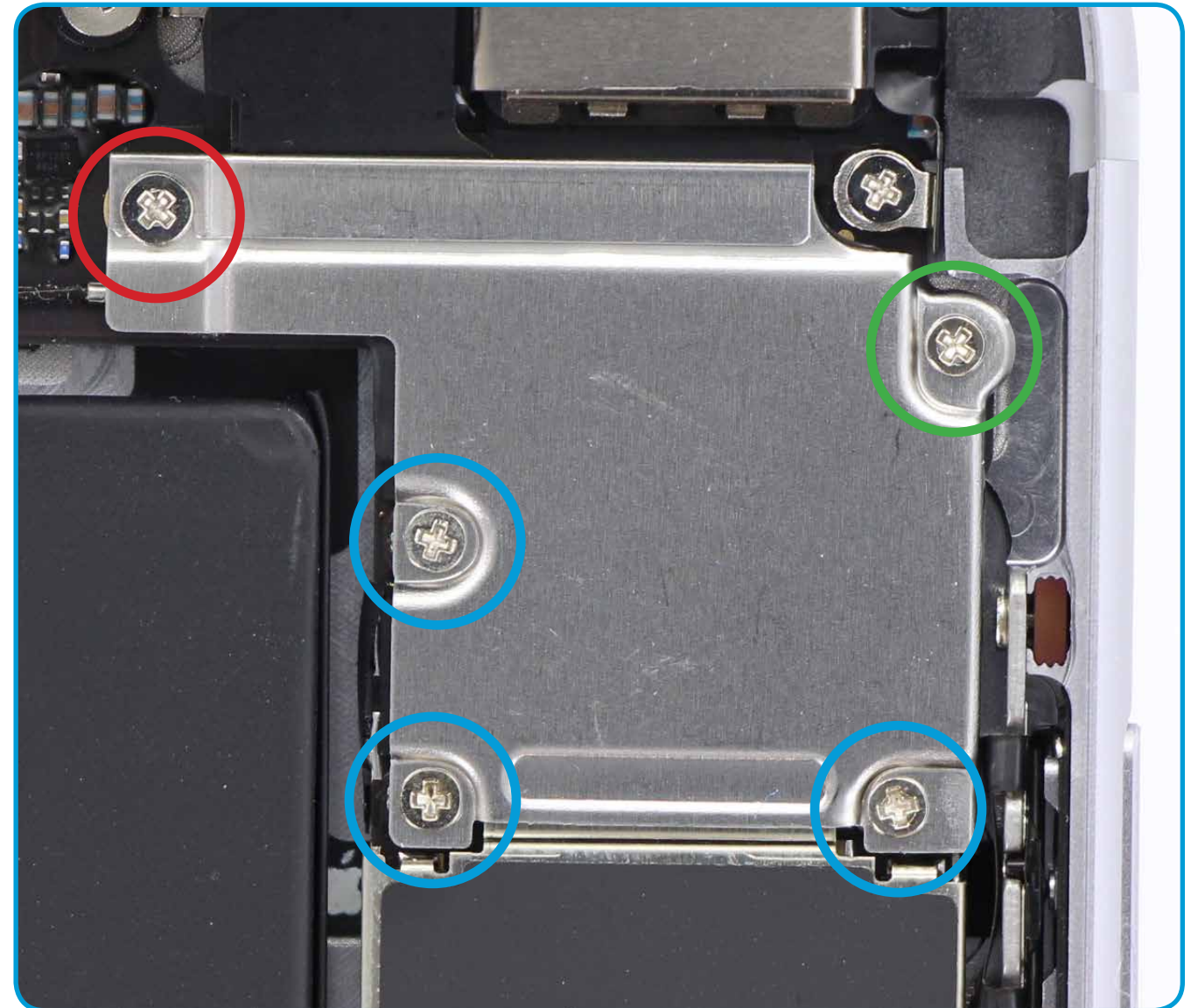


step
50

Install EMI Shield

Place the EMI shield over the four connected flex cables. Insert and install the five Phillips screws.

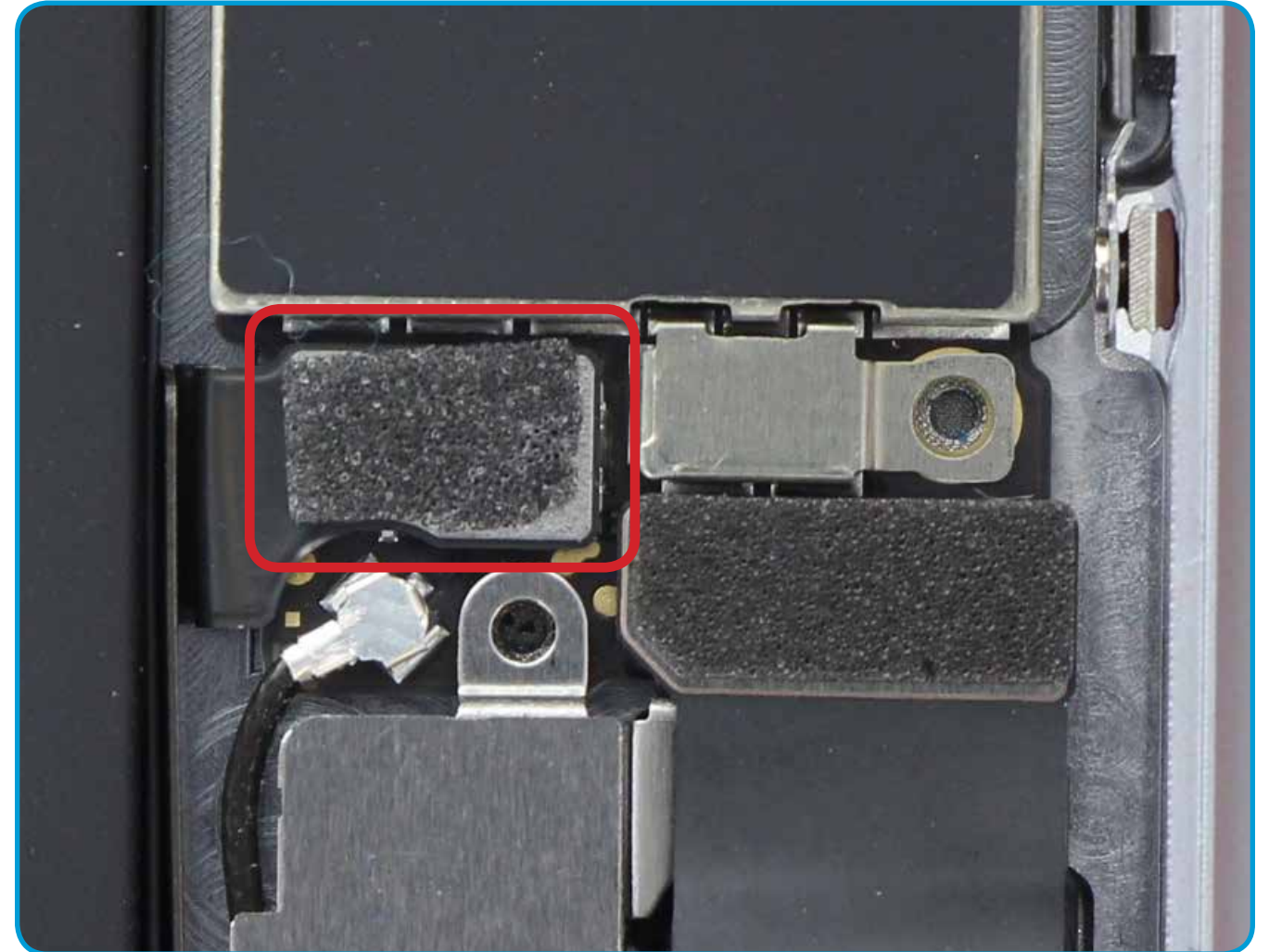
QTY	MATERIAL
1	1.6 mm Phillips screw
1	3.0 mm Phillips screw
3	1.26 mm Phillips screws



step
51

Connect Battery

Connect the battery to the logic board.



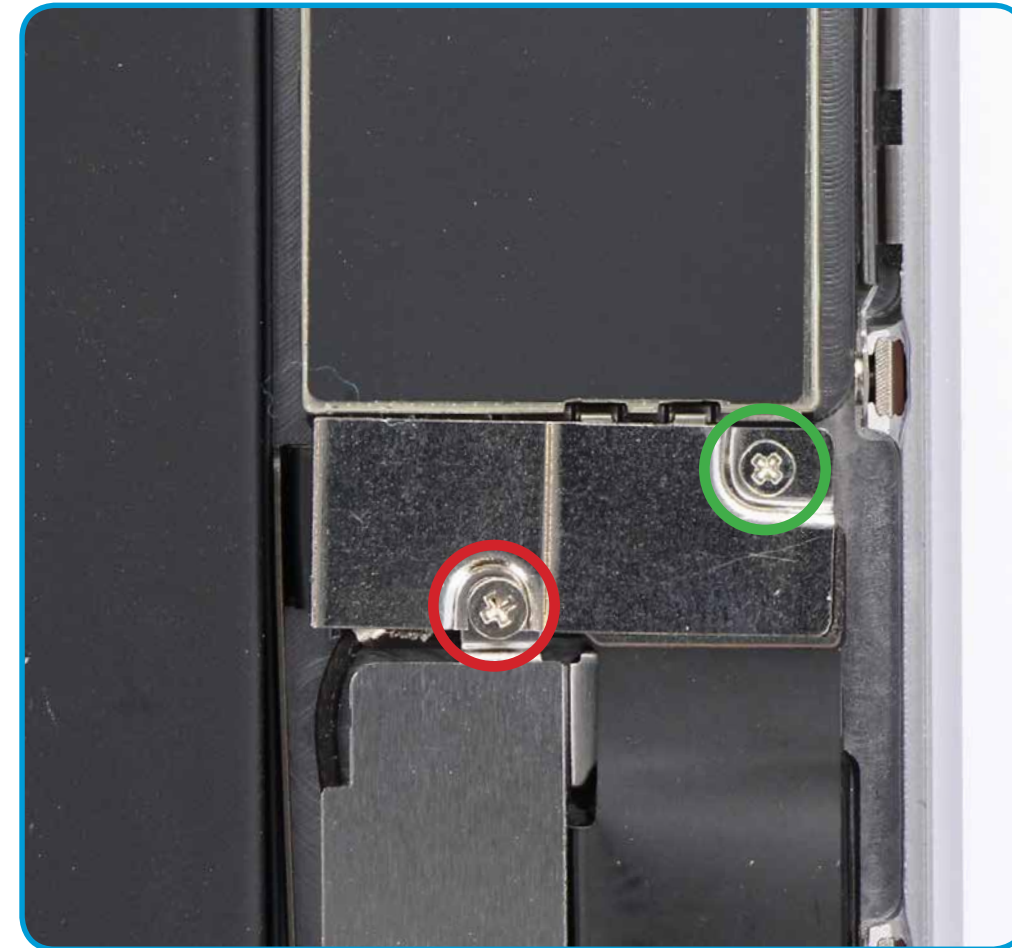
step
52

Connect Battery

Place the battery/dock connector flex cable retaining plate in place.

Insert and tighten the two Phillips screws.

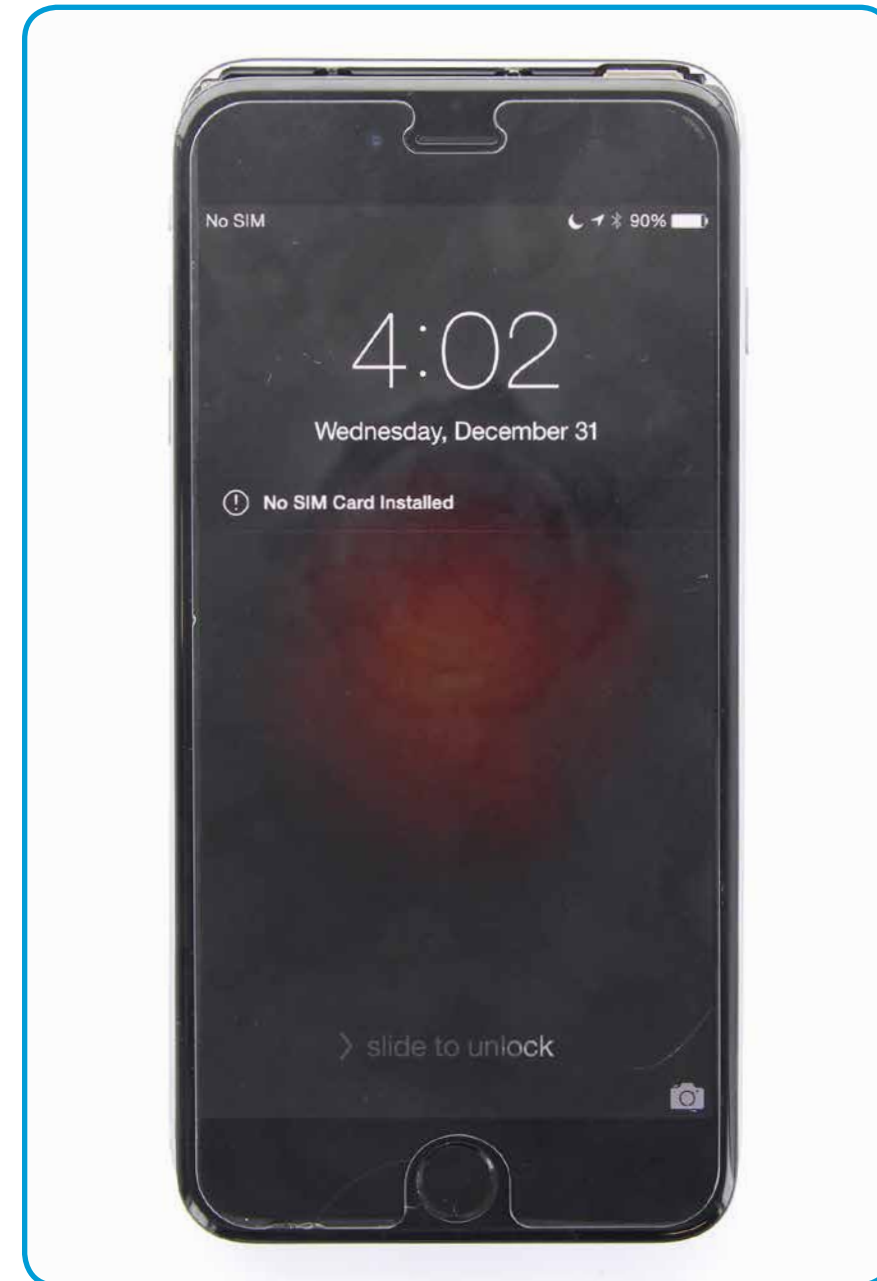
QTY	MATERIAL
1	2.82 mm Phillips screw
1	2.6 mm Phillips screw



step
53

Do Not Close iPhone Yet

Lay the display assembly down onto the frame of the iPhone. Power on the iPhone, and test the display, touch screen, home button, front camera, upper microphone, and the proximity sensor.



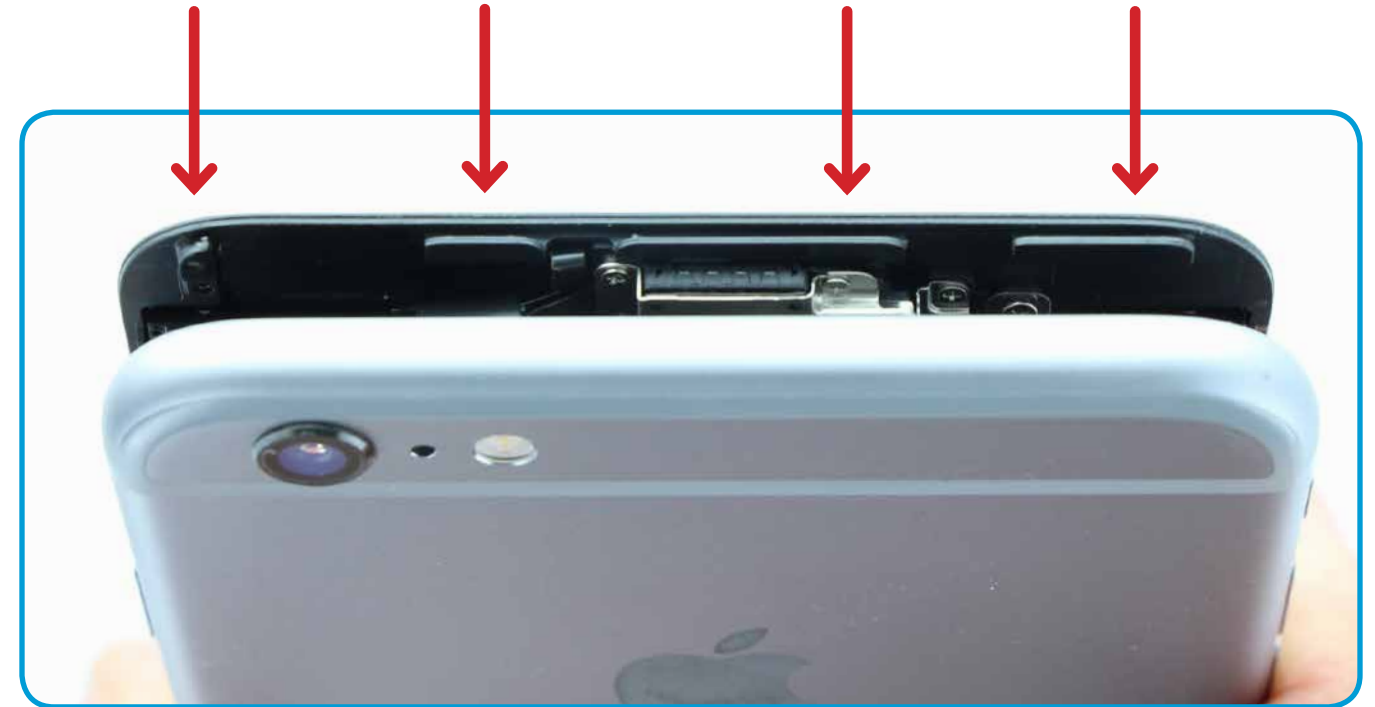
step
54

Align Tabs

If all tests are satisfactory, close the iPhone.

The top of the display assembly has four tabs that must be aligned and inserted into the frame as shown.

Lower the top of the display assembly at about a 20-degree angle into the slots cut into the frame.



step
55

Set Bottom of Display

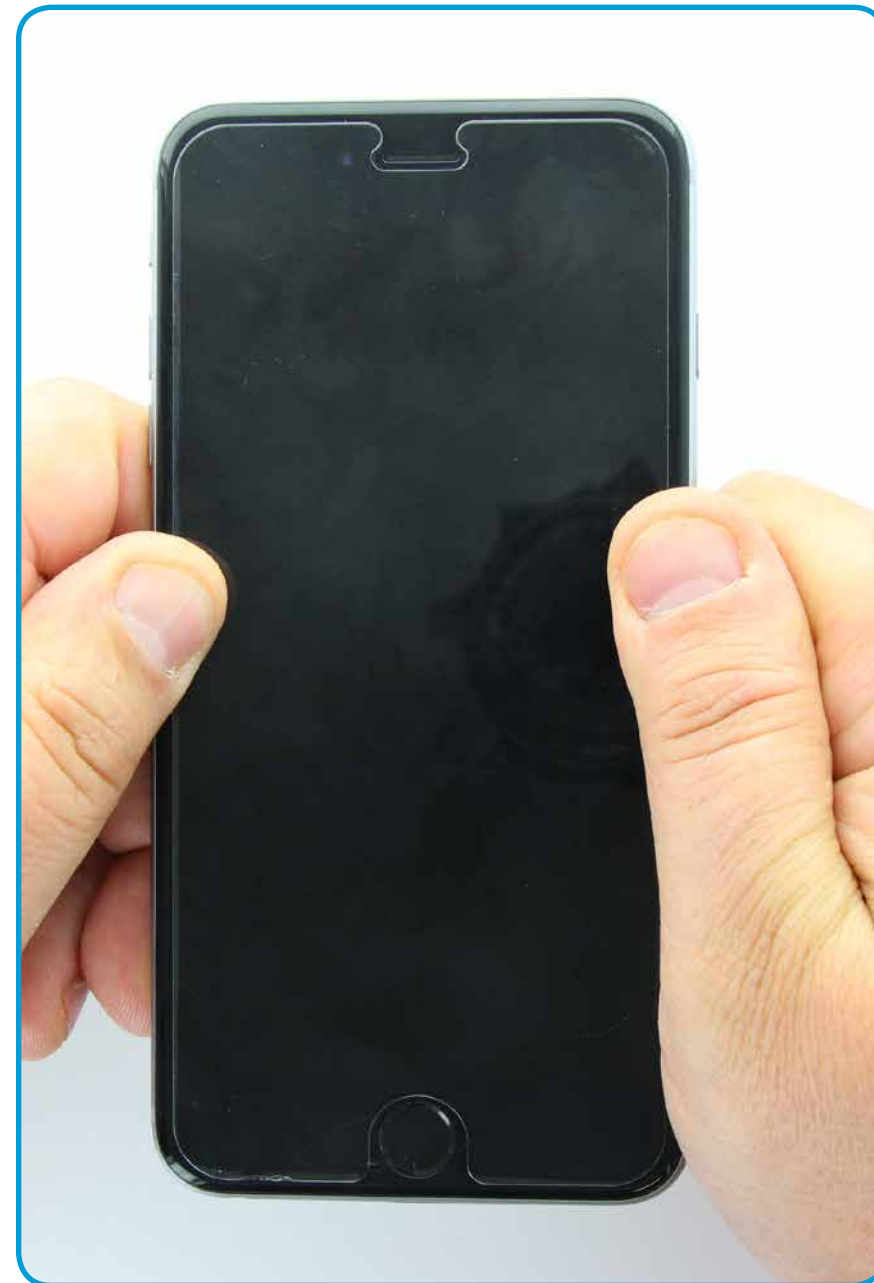
Press the bottom of the display assembly into the frame.



step
56

Set Sides of Display

Press the left and right side into the frame.



step
57

Pentalobe Screws

Install the two Pentalobe screws next to the lightning port plug using a Pentalobe screwdriver.

QTY	MATERIAL
2	3.75 mm Pentalobe screw



WARRANTY ELIGIBILITY CHECKLIST

Power on the iPhone and test all functions using the post-repair checklist.

Function	Status
Power Button	✓
Volume Buttons	✓
Mute Switch	✓
Home Button	✓
Touch Functionality	✓

Troubleshooting

Ear Speaker Not Working:

- Check alignment of ear speaker.
- Check ear speaker contacts; make sure the flex is not damaged or tucked under the cable.
- Check the front-facing flex cable for damage.

Front-Facing Camera Not Working (Shutter Not Opening)

- Ensure the flex cable is properly seated.
- Check the flex cable for damage.
- Replace the front-facing camera/ accessory flex cable.

Proximity Sensor Not Dimming Screen During A Call:

- Make sure the rubber ambient light sensor is in place.
- Black Assembly – Make sure sensor filter is in place.
- Check the flex cable for damage.

Ambient Light Sensor Won't Dim Between Light Intensities:

- Ensure the front-facing camera/ accessory flex cable is seated.
- Check the front-facing camera/ accessory flex cable for damage.
- Replace the front-facing camera/ accessory flex cable

LCD Won't Light Up:

- If you forgot to disconnect the battery and accidentally powered on the iPhone during the repair the iOS can get stuck thinking the display is powered on, disconnect the battery and reconnect and the display should return.
- Recheck that the LCD flex cable is fully seated.
- Check to ensure the EMI shield is properly locked onto the logic board.
- Inspect for a rip or tear in the LCD flex cable.