



Pixel 8a

Repair manual

Version 1.2



Google recommends that you seek professional assistance for all device repairs.

Self service repair isn't recommended unless you are an adult with the technical expertise to safely repair electronic devices. If you choose to perform self repair, you agree to assume the risk associated with such repair.



Use caution if you engage in repair.

Opening or repairing your device could present electric shock, device damage, fire and personal injury risks, and other hazards. Before you service the product, read the full set of precautions in this document.

This manual is organized into sections for easy and intuitive navigation.

Welcome!

We are here to help.

At Google, we innovate, design, and build to create helpful and sustainable products. Product longevity is really important to us and repairability is part of that. Repair enables our products to stay in-use and out of landfills.

If you have any questions or want support, please reach out.

support.google.com



Precautions

Safety is a top priority for Google. Users should work in a safe environment and have the skills and training necessary to complete the repairs safely.



Repair flows

Here, we have a flow chart of the most efficient repair methods.



Disassembly

Each section contains a list, in the order of device disassembly, of prerequisite steps, tools, fixtures, and parts to complete the repair.



Assembly

For each disassembly, we provide a guide to reassemble. This may include rework steps for certain components.



Troubleshooting and software

Use the diagnostic steps and testing recommended in this section to identify the source of device problems and issues.



Glossary

All of the terms and acronyms you need to communicate with the same language.

Table of contents










<div>Precautions</div> <div><div>Electrical precautions</div><div>Battery conditions</div><div>Battery handling</div><div>Glass handling</div></div> <div><div>Tools and fixtures</div><div>Laser product</div><div>Safety equipment</div></div>	<div>Disassembly-BC</div> <div><div>Back cover</div><div>Inner housing</div><div>Top speaker</div><div>Logic board</div><div>Front camera</div><div>Rear camera</div><div>mmWave</div></div> <div><div>Bottom speaker</div><div>Mic 1 bracket</div><div>Vibrator</div><div>Battery</div><div>Enclosure</div><div>Kapton tape repair notice</div></div>	<div>Disassembly-CG</div> <div><div>Display</div></div>
<div>Introduction</div> <div><div>Expanded views</div><div>Screw map</div><div>Screen calibration</div><div>ESD protection</div><div>Glossary</div></div> <div><div>Liquid damage indicators</div><div>Turning Pixel on and off</div><div>Tools and fixtures</div><div>Replacement parts</div></div>		
<div>Repair flows</div> <div><div>Disassembly order</div><div>Assembly order</div></div>	<div>Assembly-BC</div> <div><div>Enclosure</div><div>Vibrator</div><div>Mic 1 bracket</div><div>Bottom speaker</div><div>mmWave</div><div>Front camera</div><div>Rear camera</div></div> <div><div>Logic board</div><div>Top speaker</div><div>Battery</div><div>Inner housing</div><div>Back cover</div></div>	<div>Assembly-CG</div> <div><div>Display</div></div>

Table of contents (cont.)



Troubleshooting

Connectors location	Touch panel
Power	RF (BT, WiFi, GPS, NFC)
Wireless charge	Battery
Mic 1	Sensor
Mic 2	FPS
Top speaker	Camera
Speaker	USB
Vibrator	mmWave
Display	



Useful link

Software tools

Version	Date	Change description
v1.0	March 2024	First release
v1.1	April 2024	<div><div></div><div><div><div>1.</div><div>2.</div><div>3.</div><div>4.</div><div>5.</div><div>6.</div><div>7.</div><div>8.</div><div>9.</div><div>10.</div><div>11.</div><div>12.</div><div>13.</div><div>14.</div></div><div><div>Modify G806-11335-01 picture @P.26,@P.63.</div><div>Add wording “Tears, holes, or breaks are not allowed. No damage through the black-sheet is allowed.” @P.123.</div><div>Modify universal holder assigned location @P.166,@P.198.</div><div>Add rework Display conductive fabric Instructions @P.185.</div><div>Modify Batt. FPC place kapton wording & picture @P.72.</div><div>Modify reused BC picture @P.162.</div><div>Modify suction cup separate BC wording @P.41.</div><div>Add picture & wording for insert BC @P.43.</div><div>Add picture & wording for connect slam FPC @P.147.</div><div>Modify batt. GPN @P.24, @P.51, @P.142, @P.144.</div><div>Modify vibrator GPN @P.25, @P.91, @P.107.</div><div>Removed P.44</div><div>Modify separate BC sequence @P.42.</div><div>Added Electric glue remover tool as an option @P.21, @P.103, @P.160, @P.187.</div></div></div></div>
v1.2	May 2024	<div><div></div><div><div><div>1.</div><div>2.</div><div>3.</div><div>4.</div><div>5.</div><div>6.</div><div>7.</div><div>8.</div><div>9.</div><div>10.</div><div>11.</div><div>12.</div><div>13.</div></div><div><div>Added more clear picture on how to apply the Primer on BC trim @P.162.</div><div>Add picture & wording for Ant1 slam FPC gasket @P.28, @P.64, @P.138.</div><div>Add picture & wording for apply AP111 on enclosure @P.104.</div><div>Remove ESD spudger use caution @P.43.</div><div>Added more clear warning to not reuse the metal shielding once removed @P.76.</div><div>Added wording and updated photo to encourage caution during inner housing removal to prevent bending @P.46.</div><div>Added wording about inspecting the RCAM holder for adhesive damage before reuse when replacing 1 or more cameras @P.80.</div><div>Added wording & photo to ensure the top speaker module is fully seated and that the coaxial cable on the MLB is not routed underneath @P.141.</div><div>Added wording to allow masking tape to be used during the battery installation steps to hold the graphite sheet out of the way of the process @P.143.</div><div>Condensed battery installation content to remove duplicate information, existing pages 144 & 145 were removed. Remaining content has moved up by 2 pages. @P.144, @P.145.</div><div>Added wording about latching the stamping plate into place. @P.151.</div><div>Emphasized the wording to open the display from the top side of the device @P.171.</div><div>Add warning wording for TSPK might will press coaxial cable @P.140.</div></div></div></div>



Pixel 8a repair manual

Precautions

Important: Before you begin



Be careful if you engage in repair

Opening or repairing a device could present electric shock, device damage, fire and personal injury risks, and other hazards.

Always perform repairs in a clean work space with good ventilation and no combustible materials.

Ensure that there're no additional screws or small parts left in the device after assembly.

Always ensure that screws are securely fastened.

Before you service the product, read the full set of precautions in this document.



Caution: Batteries should be carefully handled, and could be dangerous when damaged

- Fully discharge the device battery before you attempt repair.
- Never bend, dent, puncture, or use tools to pry the battery.
- To prevent damage, store batteries in the replacement part packaging after removal as soon as possible.
- If a battery begins to vent, cover it in sand or use gloves and tongs to place the battery in a fire safe as soon as possible.
- Take care to prevent shorting of battery terminals or damage to the battery, as it could result in fire or overheating.
- Dispose of the battery according to local regulations.



Caution: Pixel 8a contains a class 1 laser module

The design of the device incorporates optics and protective housing such that there's no access to a level of laser radiation above class 1 during normal use or approved servicing.

Laser modules in this product comply with 21 CFR 1040.10 and 1040.11, except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser module:

Made in Austria. ams AG, Tobelbader Str. 30, 8141 Oberpremstätten, Austria.

Important: Before you begin



Caution: Part handling – glass

- Wear protective gloves and safety glasses when you handle damaged parts.
- Use protective film when you remove damaged parts.
- After removal, store the damaged part in the replacement part packaging as soon as possible to prevent injury.



Tools and fixtures

The use of Google-authorized tools and fixtures is strongly recommended to repair a device in a safe and effective manner.

Caution:

- We *don't* recommend that you perform repairs without the specified tools and fixtures.
- Improper use of tools and fixtures may result in injury to yourself, the user of the device or others, as well as damage to the product, tools, fixtures, replacement parts, or other spare parts.



Important: Before you disassemble the device

- Disconnect the device from all power sources before any disassembly.
- Make sure that the battery is fully discharged before any disassembly.
- If the phone battery shows signs of swelling or damage, or if the phone feels hot or emits a strong odor, *don't* attempt disassembly. Please reach out to Google customer support.
- Take care not to expose the phone or its components to liquids after disassembly.

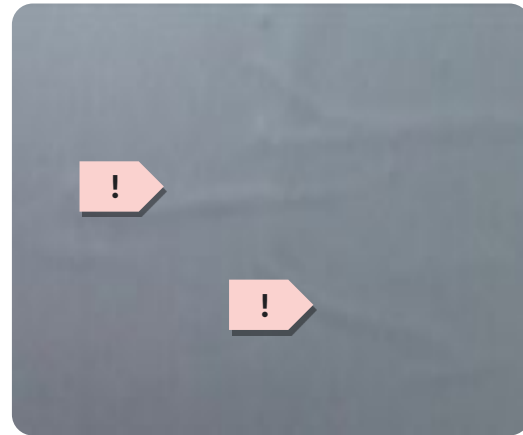
Caution



Examples of unacceptable battery conditions - Not suitable for repair*



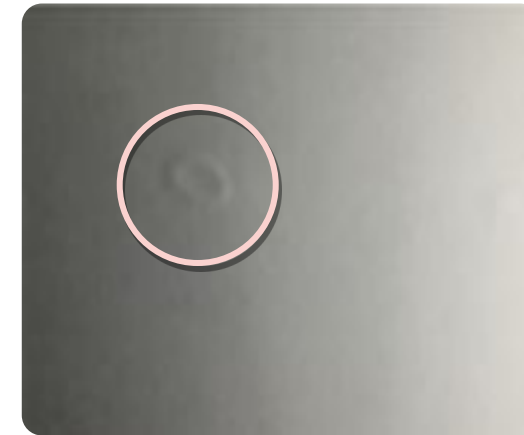
Pouch damage



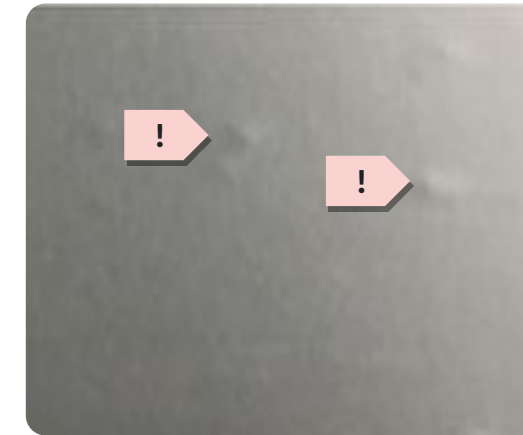
Line protrusion



Scratch



Contamination mark



Dot protrusion



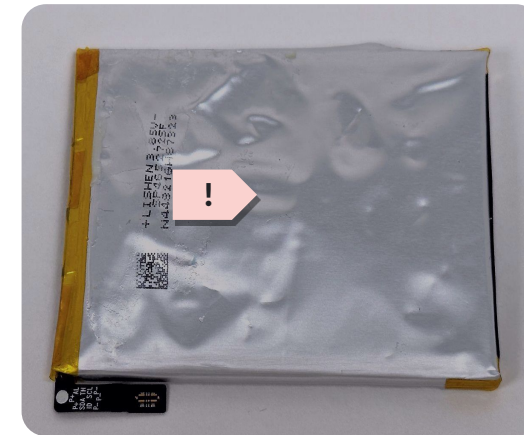
Dent



Bubbling



Imprinted line



Swelling or electrolyte leakage

*These are examples of potentially dangerous battery conditions but *don't* reflect all possible dangerous conditions. Please follow the general safety guidance outlined in this document.



Pixel 8a repair manual

Introduction

Expanded views

Turn Pixel on and off

Screw map

Tools and fixtures

Screen calibration

Replacement parts

ESD protection

Glossary

Liquid damage indicators

Pixel 8a: Expanded view

Reuse indications



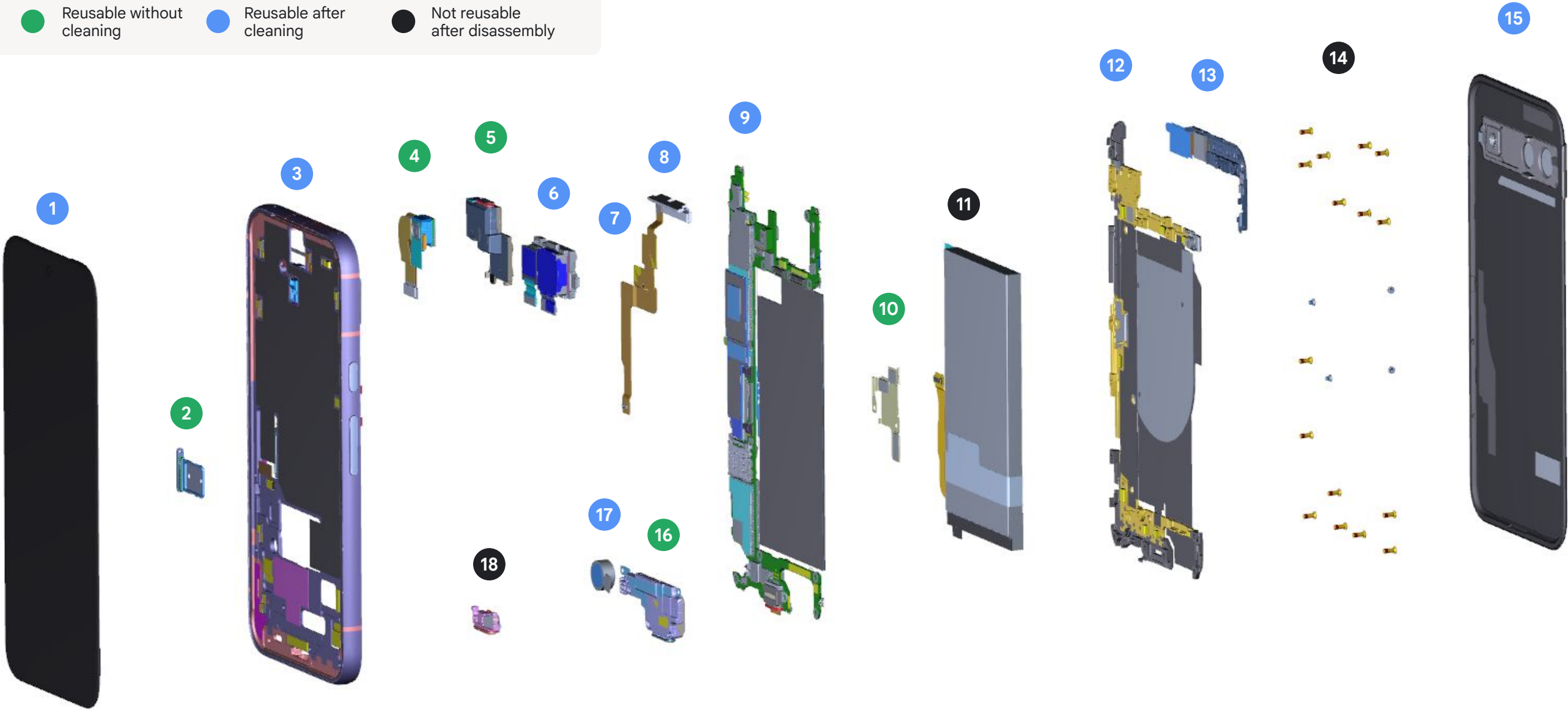
Reusable without cleaning



Reusable after cleaning



Not reusable after disassembly



Pixel 8a Part ID

1	● Display	8	● mmWave module	15	● Back cover
2	● SIM tray	9	● Logic board	16	● Bottom speaker
3	● Enclosure	10	● B2B stamping plate	17	● Vibrator
4	● Front camera	11	● Battery	18	● Mic 1
5	● Top speaker	12	● Inner housing		
6	● Rear camera and holder	13	● Antenna housing		
7	● mmWave FPC	14	● Screw		

Screw map

These are the screws used in the Pixel 8a:

Screw
G250-05370-00



Torque 1.2 kgf

Screw
G250-06929-01



Torque 0.7 kgf



Screws are a single use item

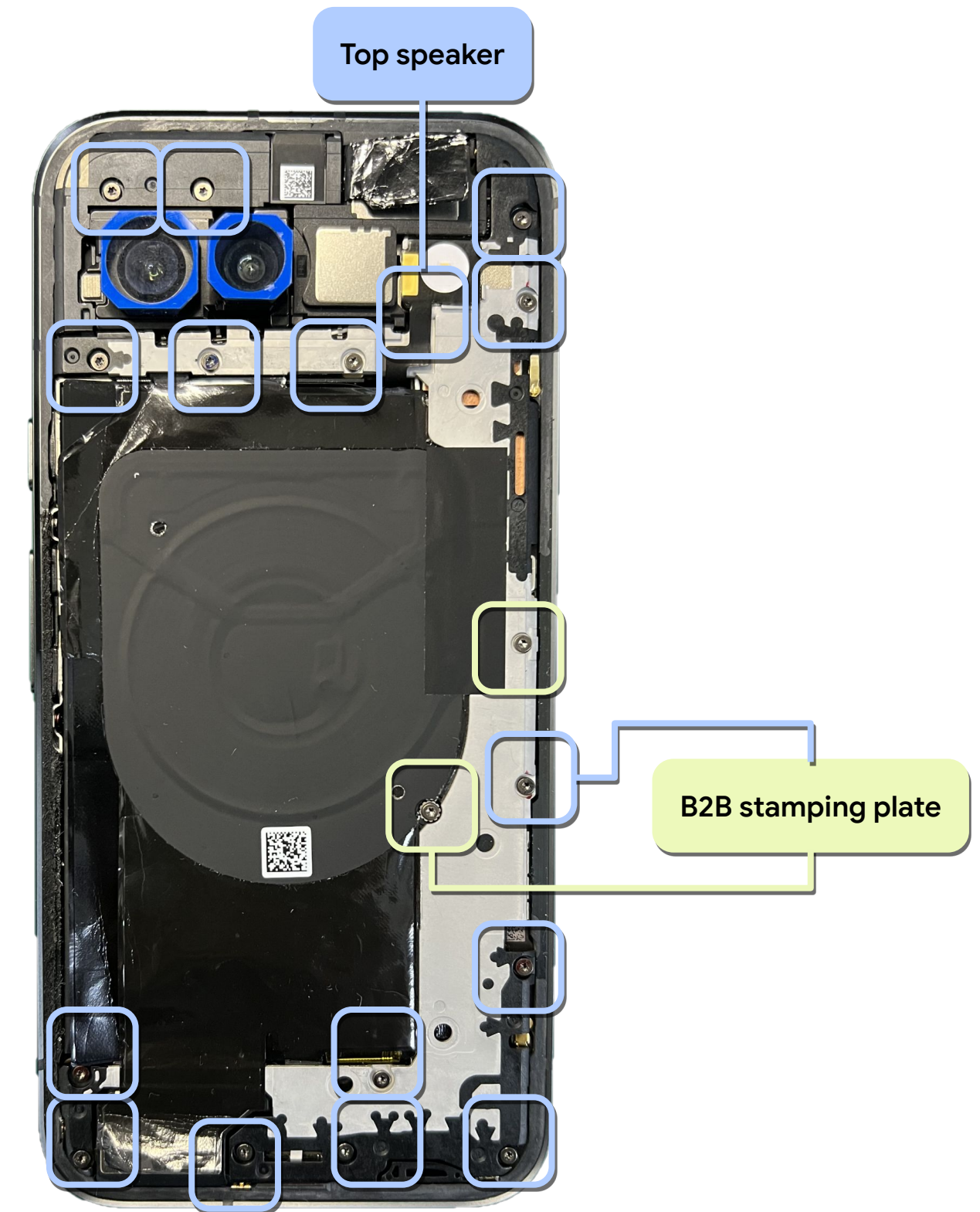
Screws are a single use item and if removed from the device, they should be replaced with a new screw.



After removal, replace with a new screw

Each screw is critical to the safe continued operation of the phone. Since thread locking adhesive can't be reactivated, replace each used screw with a new screw after removal.

Note: All torque values have a tolerance of +/- 10%



Pixel touch screen calibration process*

[*Required for all Pixel 1 - Pixel 8 Pro devices, which includes Pixel Fold]

**Complete the following
before you boot up the device:**

- Nothing should touch the display. This includes protective films, cases, fingers, tape, labels, scratch covers, adhesives and debris.
- Devices should be on a flat surface. *Don't* hold it in your hands.

After the above conditions are met, the device should be powered on by pressing the power button. *Don't* touch the device until it's fully booted into the user operating system.



Display touch calibration

After any repair that requires you to open the phone, complete the display touch calibration during first boot.



Touch function

If this process isn't followed, the touch function of the screen may not work as intended.

ESD protection

Electro static discharge (ESD) could damage components, so it's important to work in an ESD-safe environment during repair.

Follow these four steps to keep ESD safe:



Stay grounded

Carry out repairs on an ESD mat, when the person who repairs the device wears a grounded ESD strap.



Avoid static buildup

Don't wear synthetic fibers such as fleeces that could generate static.



Did you know?

ESD is the sudden flow of electricity through two electrically charged objects. For example, when you walk across a carpet, then touch a metal door handle and feel a shock. It's the ESD.



Protective bags

Pack all ESD-sensitive parts in metalized protective bags during shipping.



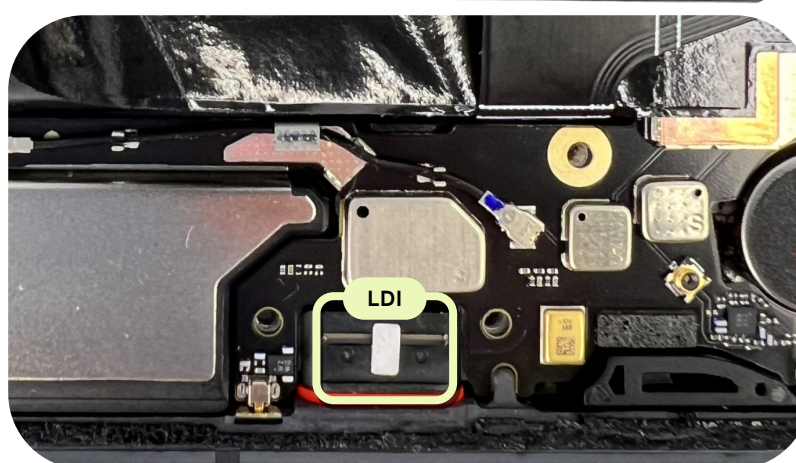
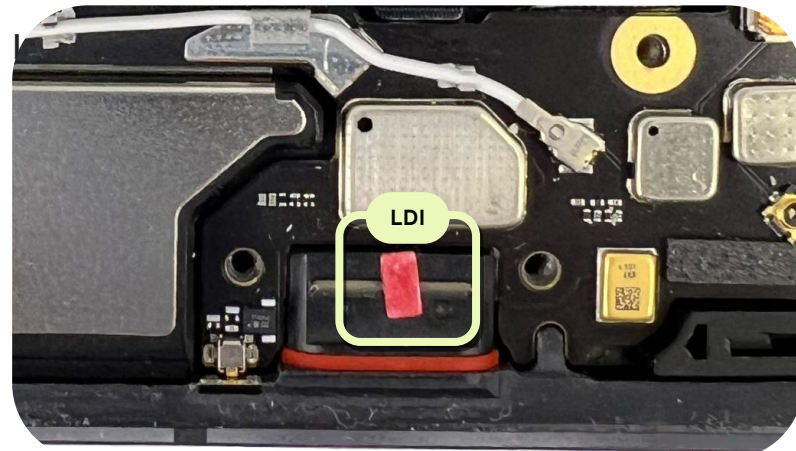
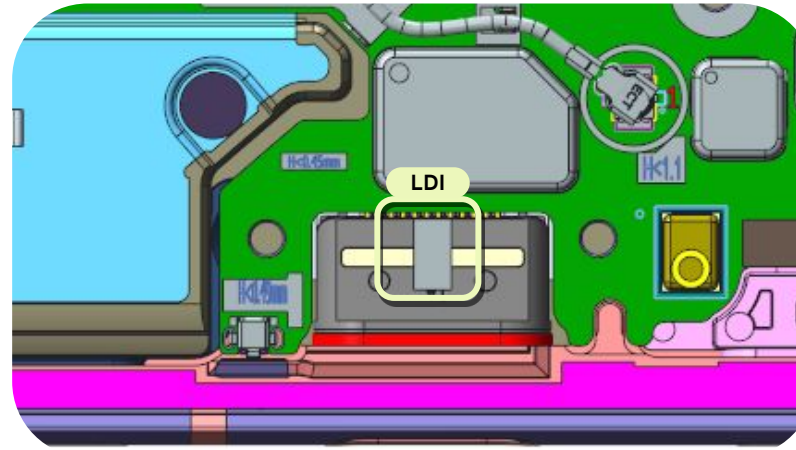
Avoid touching pins

Don't touch pins with use of ESD-safe tools to handle components.

Liquid damage indicators

Liquid damage indicators (LDI) are strips that change colors when a phone has been exposed to water or other liquids.

- Exposure to liquids could lead to the device malfunction, such as overheating or a short circuit.
- There're two LDI on this device.
- If either indicator has turned red, the device is considered to have been exposed to liquid.



On the charging port.



On the enclosure (inside the SIM tray slot), visible without disassembly of the device.

Turn the Pixel on or off



Turn the power on or off

- To turn on a device when it's powered off, press and hold the power button for a few seconds. See where the power button is located.
- To power off the phone when it's turned on:
 - *To power off the phone, press and hold the power and volume up buttons for a few seconds. Then, tap Power off on screen.*
 - *For further information, see this [Google Help page link](#).*

Tip: Before you turn on phone, charge it. Learn how to charge.



Restart (reboot)

1. On most phones, press the phone's power button for about 30 seconds, or until the phone restarts.
2. On the screen, you might need to tap Restart.



Tools and fixtures

It's strongly recommended to use Google-authorized tools and fixtures to repair a device in a safe and effective manner.



Caution:

- We *don't* recommend that you perform repairs without the specified tools and fixtures.
- Improper use of tools and fixtures may result in injury to yourself, the user of the device or other third parties, as well as damage to the product, tools, fixtures, replacement parts, or other spare parts.



Google-approved fixtures: Pixel 8a

Google-approved fixtures are Google tested and are strongly encouraged to ensure high quality and safe repairs.

Universal Press

G940-00733-00



Universal disassembly fixture

G940-00873-00 (base) +
G940-00874-00 (clip)

Alternate part numbers:

G980-14551-00, G940-00734-00



Universal press plate 12 mm

G940-00736-00



Pixel 8a battery press rubber

G940-00826-00



Pixel 8a back cover press rubber

G940-00827-00



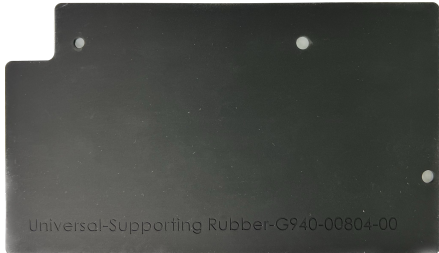
Pixel 8a screen press rubber

G940-00828-00



Universal supporting rubber

G940-00804-00



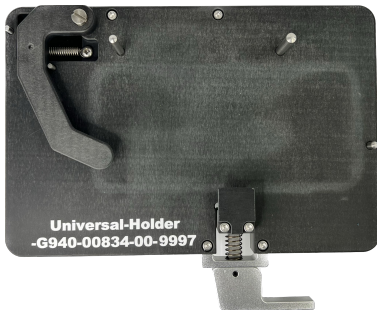
Universal base plate 12mm

G940-00833-01



Universal holder

G940-00834-00



Universal holder limiting block

G940-00835-00





Common tools

Common tools are suggested to ensure high quality and safe repairs. These items *don't* need to be purchased from a Google-recommended supplier.

ESD wristband



ESD mat



ESD spudger

Plastic



ESD tweezers

Plastic



ESD pick

Plastic



Large suction cup

Approximately 5 cm diameter



Screwdriver

Hex shank torx plus bit 3



Adjustable torque screwdriver

Hex shank torx plus bit 3



SIM card ejection pin



Heating plate



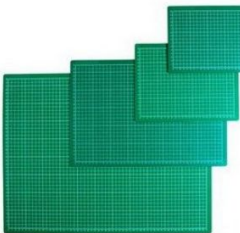
Tweezers

ESD-14 metal



Cutting mat

Non-conductive material





Common tools

Common tools are suggested to ensure high quality and safe repairs. These items *don't* need to be purchased from a Google-recommended supplier.

Electric glue remover tool



Consumables

Consumables are suggested to ensure high quality and safe repairs. These items *don't* need to be purchased from a Google-recommended supplier.

IPA



3M AP111 primer



Sankol lubricant
CFD 409Z_v2



Anti-static ESD gloves



ESD finger cots



Dust-free cotton swabs



Dust-free cloth



Kapton tape



Protective film

*Optional: May help with
damaged screens*



Masking tape

*Optional: May help with battery
replacement*



Safety items

Safety items are suggested to ensure high quality and safe repairs. These items *don't* need to be purchased from a Google-recommended supplier.

Safety glasses



Heat resistant protective gloves



Cut resistant protective gloves



Nitrile or lint-free gloves





Replacement parts

Important notice about replacement parts

- The use of Google-authorized replacement parts is strongly recommended.
- Performance within product specifications can't be assured if Google-authorized replacement parts aren't used.



Caution:

Use of replacement parts other than Google-authorized replacement parts, such as aftermarket batteries, may impact device safety, reliability, and performance.

Replacement parts

Reuse indications



Reusable without
cleaning



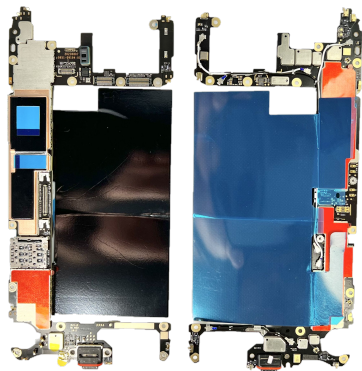
Reusable after
cleaning



Not reusable
after disassembly

Logic board

Multiple part numbers



Display module

G949-00767-00



Enclosure

Multiple part numbers



Back cover

Multiple part numbers



Inner housing

G949-00788-00



Front camera

G949-00791-00



Wide rear camera

G949-00792-00



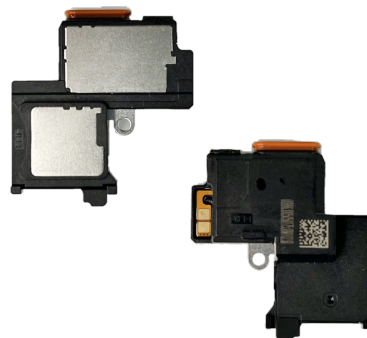
Ultra wide rear camera

G949-00793-00



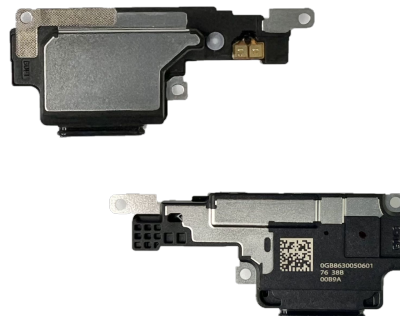
Top speaker

G863-00505-01



Bottom speaker

G863-00506-01



RCAM holder

G730-07382-01



Battery

G949-01097-00



Replacement parts

Reuse indications



Reusable without cleaning



Reusable after cleaning



Not reusable after disassembly

Screw

G250-06929-01



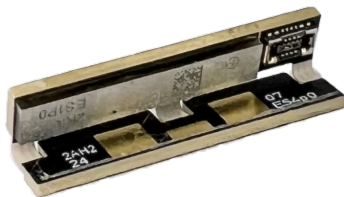
Screw

G250-05370-00



mmWave module

G345-01353-06



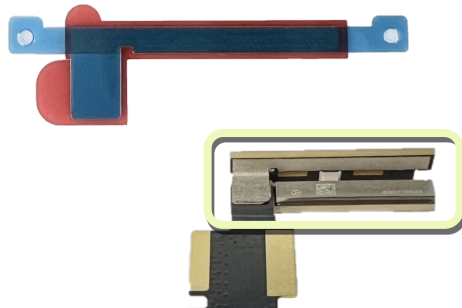
mmWave FPC

G652-10140-02



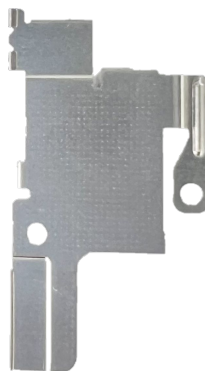
Conductive fabric
5G module

G806-08990-01



Stamping plate
5G/battery

G730-07372-01



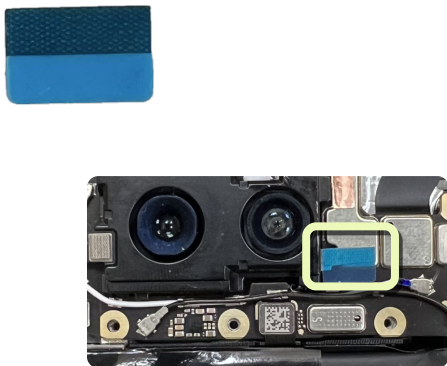
FCAM copper foil

G806-07803-01



Conductive fabric
RCAM holder

G806-08993-01



P-sensor rubber

G804-01110-01



Stamping plate
display BTB

G730-07370-01



Antenna housing

G730-07191-01



Vibrator

G710-02255-02
(Alternate: G710-02255-01)



Replacement parts

Reuse indications



Reusable without
cleaning



Reusable after
cleaning



Not reusable
after disassembly

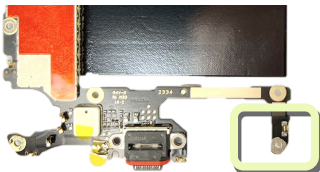
Main mic holder

G730-07145-01



Conductive fabric washer

G806-07457-01



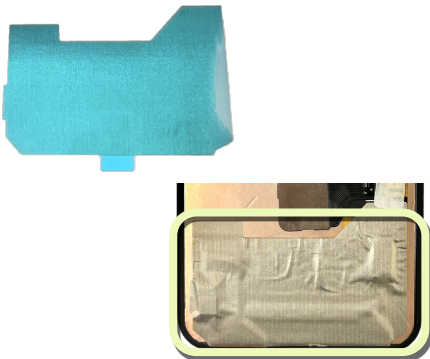
Sim tray

Multiple part numbers



Conductive fabric display

G806-08971-01



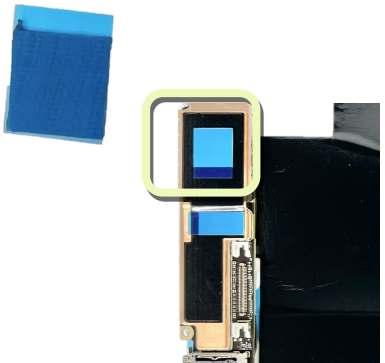
Adhesive enclosure to BC

G806-12578-01



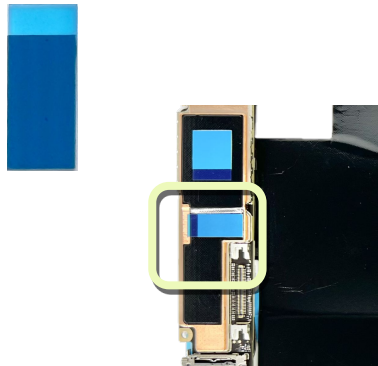
Thermal pad 1, MLB

G806-08995-01



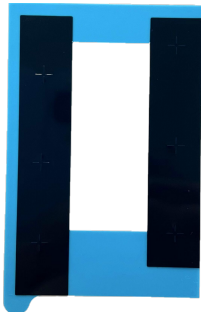
Thermal pad 2, MLB

G806-11335-01



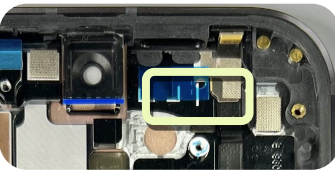
Battery adhesive L+R

G806-12579-01



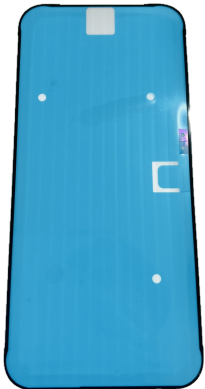
Adhesive FCAM prefix

G806-06785-01



Adhesive enclosure to CG

G806-12606-01



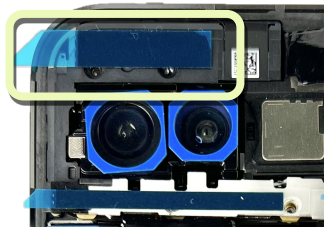
Adhesive (small) enclosure to display

G806-07293-01



Adhesive, BC-top

G806-09465-01



Replacement parts

Reuse indications



Reusable without
cleaning



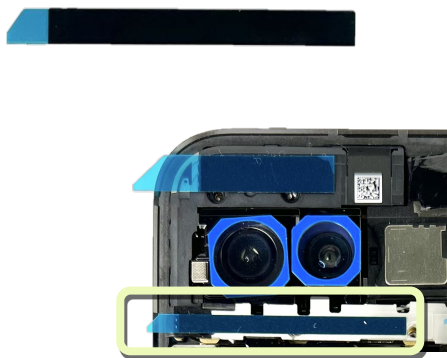
Reusable after
cleaning



Not reusable
after disassembly

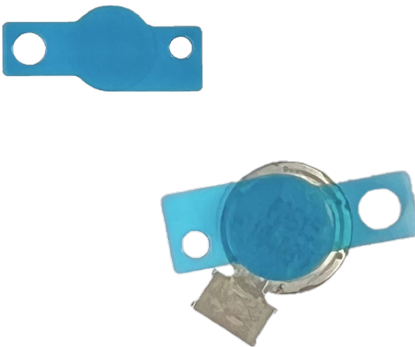
Adhesive, BC-bottom

G806-06932-01



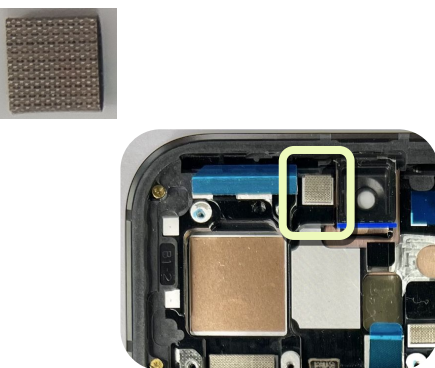
Adhesive vibrator

G806-03299-01



Diecut, conductive foam, 5G module

G806-06776-01



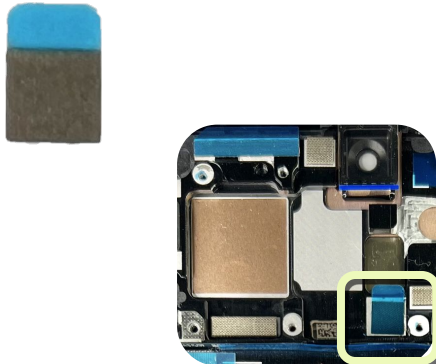
Adhesive, 5G CP5A, enclosure

G806-08918-02



Adhesive 5G FPC enclosure

G806-08968-01



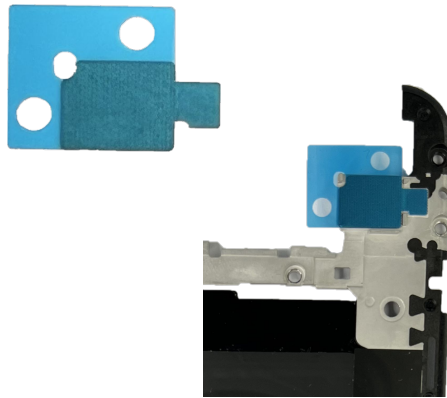
Diecut Cu foil flashlight

G806-08952-01



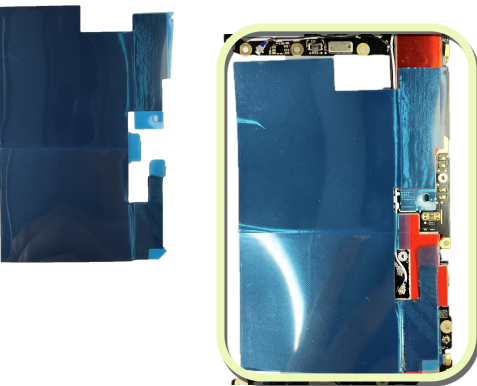
Diecut, conductive, inner housing

G806-08898-01



Diecut_thermal_ graphite_MLB

G806-09146-01



Diecut, KAPTON, battery, FPC

G806-12781-00



Diecut, gasket, ANT1, Slam FPC, GND

G806-08994-01





Glossary

Glossary

Acronym or term	Definition
ESD	Electro Static Discharge The sudden flow of electricity through two electrically charged objects.
IPA	IsoPropyl Alcohol Used to clean components and enclosures. It comes as pads or a solution.
FPC	Flexible Printed Circuit A type of low profile and flexible printed circuit.
OLED	Organic Light-Emitting Diode A type of flat panel display with an OLED to show images.
mmWave	millimeter Wave The radio waves used to build a 5G network, to provide fast, reliable mobile data.
Sub6	Sub-6 GHz Refers to mid- and low-frequency bands under 6 GHz.
NG	Not Good. Usually refers to a condition that isn’t acceptable.
SBOM	Service Bill Of Materials

Glossary

Acronym or term	Definition
Display module	<p>The OLED, glass cover, and sometimes other components such as the fingerprint sensor.</p> <p>Also known as: cover glass (CG) screen display</p>
Logic board	<p>The main electronic component in the device with the processor, memory, storage, and often Wi-Fi and bluetooth components all soldered on.</p> <p>Also known as: MLB main logic board main board PCBA</p>
Microphone	<p>The component used to capture audio to make a call, video, or dictate some notes.</p> <p>Also known as: mic mic 1 bracket</p>
Enclosure	<p>The housing that contains the buttons and provides protection for the logic board and other components.</p> <p>Also known as: housing (HSG) rear cover back cover bottom case back glass (BG)</p>
LDI	<p>Liquid Damage Indicator</p> <p>An indicator that turns from white into another color, typically red, after contact with water.</p> <p>Also known as: Liquid damage indicator LDI</p>

Glossary

Acronym or term	Definition
Camera	<p>Camera modules include the front camera and rear cameras.</p> <p>Also known as: CAM FCAM RCAM</p>
Pressure sensitive adhesive	<p>The adhesive that is used to bond the enclosure and display module, battery and enclosure, or other parts.</p> <p>Also known as: PSA</p>
UDFPS	<p>Under Display FingerPrint Sensor</p> <p>Also known as: Fingerprint sensor</p>
Release liner	<p>Used to transport sensitive parts, which includes adhesives. It needs to be removed during installation for the device to function as intended.</p>



Pixel 8a repair manual

Repair flows

Disassembly order

Assembly order

Pixel 8a-back cover side (BC) disassembly flowchart

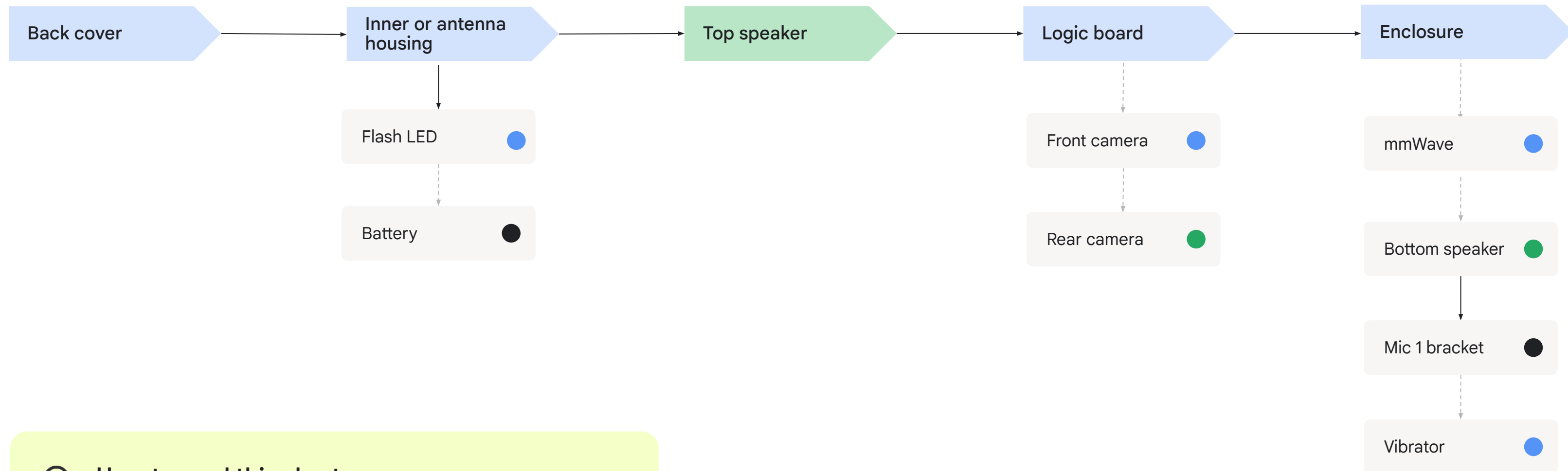
➡ To be removed before the next process

➡ Optional to remove

● Reusable without cleaning

● Reusable after cleaning

● Not reusable after disassembly



How to read this chart

To replace the battery:

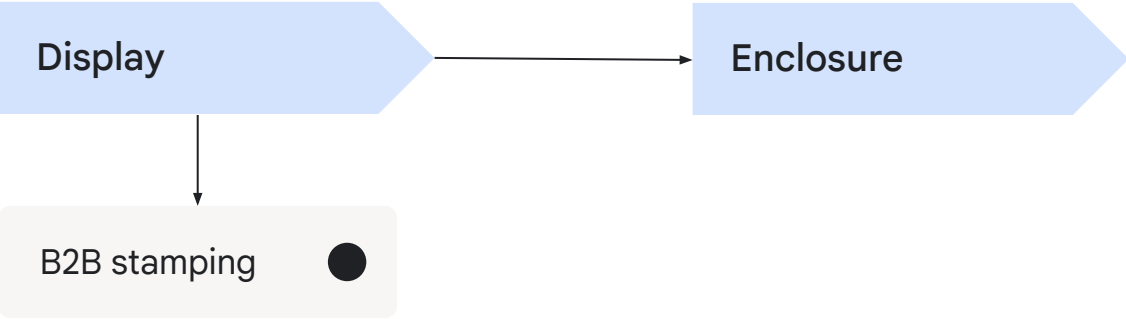
Remove the back cover, antenna housing, inner housing, then the battery.

*MLB and battery are in the same layer. They can be removed independently.

To remove the logic board:

Remove the back cover, inner housing, top speaker, then the logic board.

Pixel 8a-display side (CG) disassembly flowchart



⌄→

To be removed
before the next
process

⌄→

Optional
to remove

●

Reusable
without cleaning

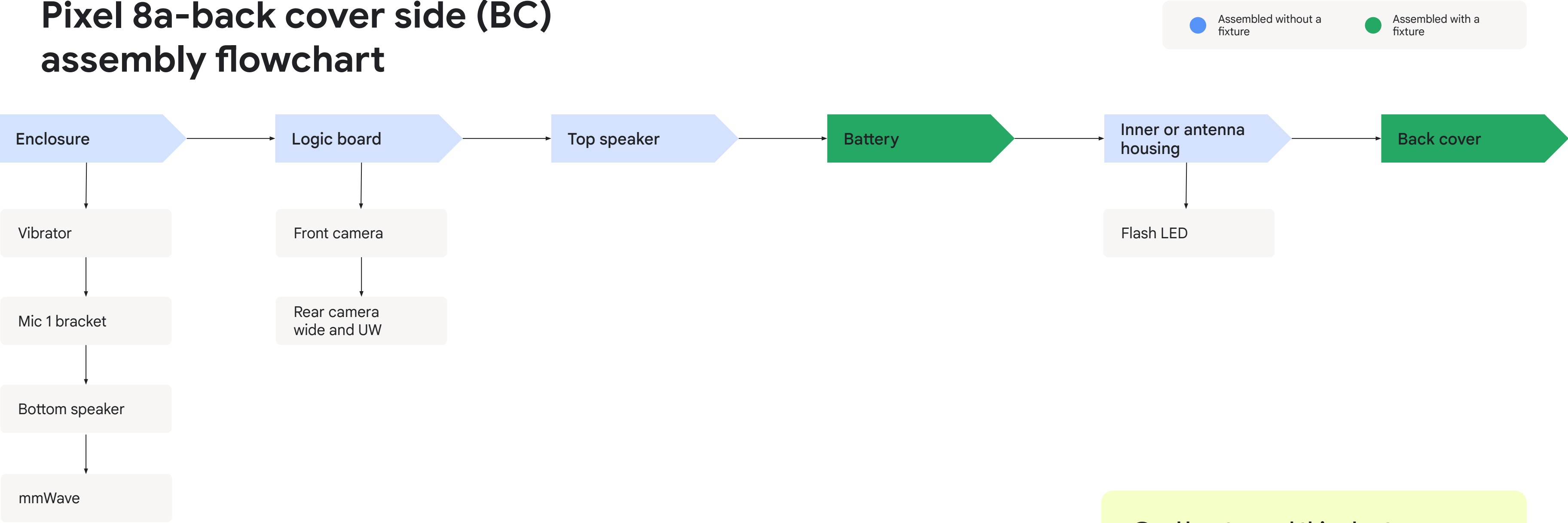
●

Reusable
after cleaning

●

Not reusable
after disassembly

Pixel 8a-back cover side (BC) assembly flowchart



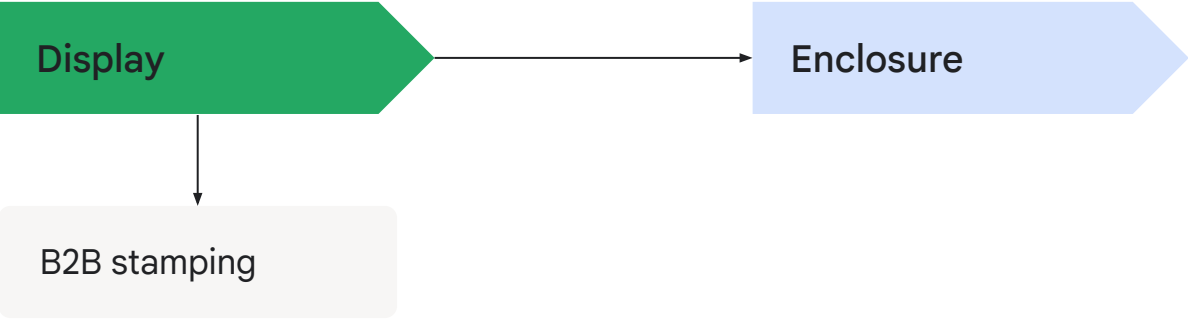
How to read this chart

To replace the battery:
Install battery, antenna housing, inner housing, flash LED, then back cover.

To reinstall the logic board:
Install logic board, front camera, rear cameras, mmWave, top speaker, inner housing, flash LED, and back cover.

Pixel 8a-display side (CG) assembly flowchart

● Assembled without a fixture ● Assembled with a fixture





Pixel 8a repair manual

Disassembly back cover

Back cover

Rear camera

Vibrator

Inner housing

mmWave

Enclosure

Battery

Bottom speaker

Top speaker

Mic 1 bracket

Logic board

Front camera



Disassembly instructions

Back cover

The display module is connected to the logic board, so be careful with the flex when you open up the device.



Use caution

Use safety gloves when you handle damaged displays as splinters during removal could cause injury.

Apply protective film to broken glass before removal.

Review all **safety precautions** before you begin work.



Prerequisites

Before you begin a repair, be sure to **power off** the device and disconnect any charging cables.



Tools

Heating plate

Universal disassembly fixture

Universal press

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

Pixel 8a screen press rubber

Pixel 8a back cover press rubber

Universal press plate 12 mm

ESD tweezers

ESD spudger

ESD pick

Large suction cup

Dust-free cotton swabs

3M AP111 primer

IPA

✂ Parts

Back cover replacement


Here's the list of parts for the back cover disassembly.

Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly


Back cover

Multiple part numbers




Adhesive enclosure to BC

G806-12578-01




Adhesive, BC-Top

G806-09465-01



Adhesive, BC-Btm

G806-06932-01



Attach the suction cup

- Put the suction cup on the bottom half of the phone.
- Pull the suction cup handle up so that the suction cup holds the back cover.



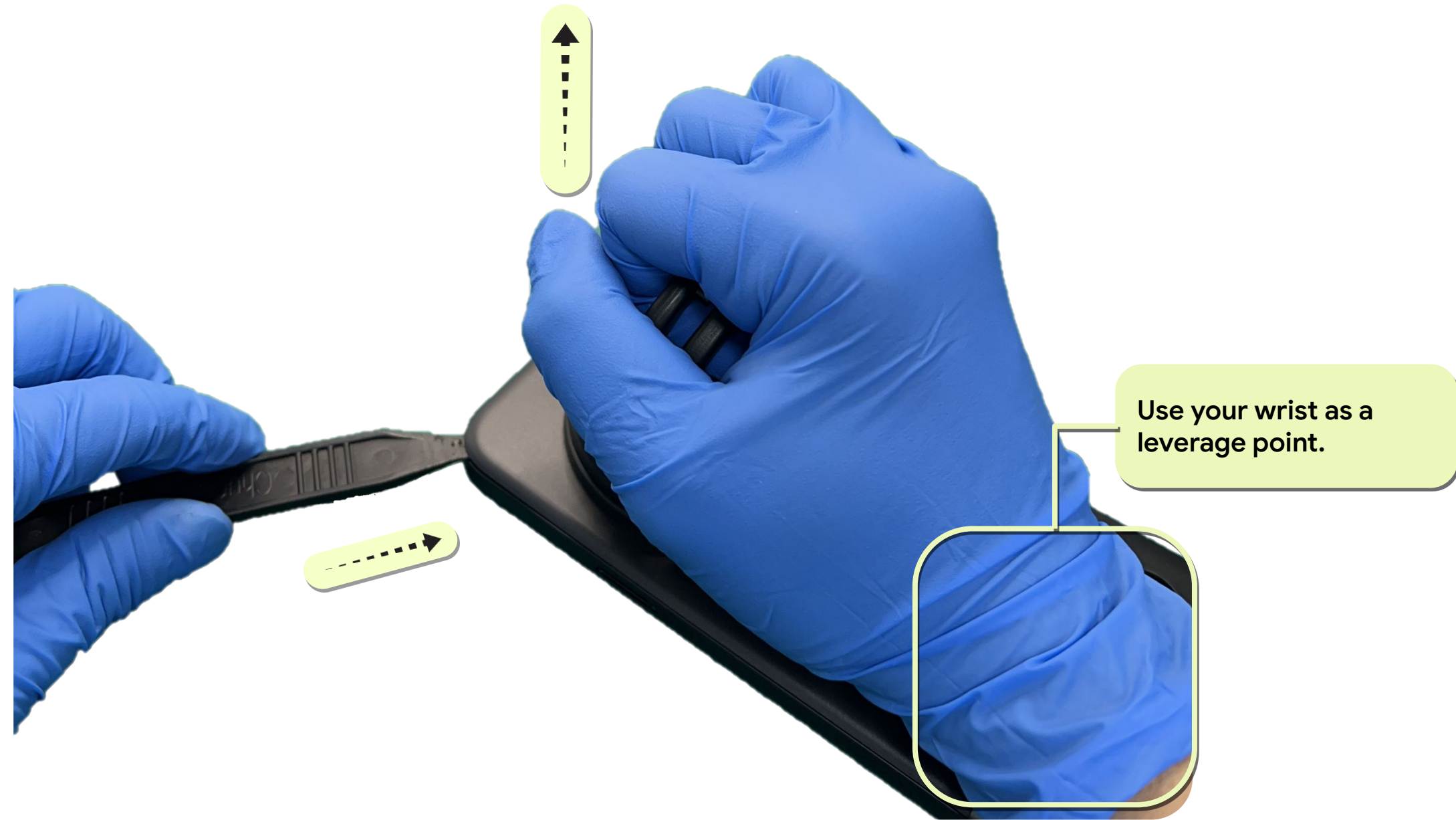
Use the suction cup

- Pull the back cover up, **until the back cover separates from the enclosure 0.1~0.2mm.**
- Insert the ESD spudger or the ESD pick into the device to separate the back cover from the enclosure.



Use caution

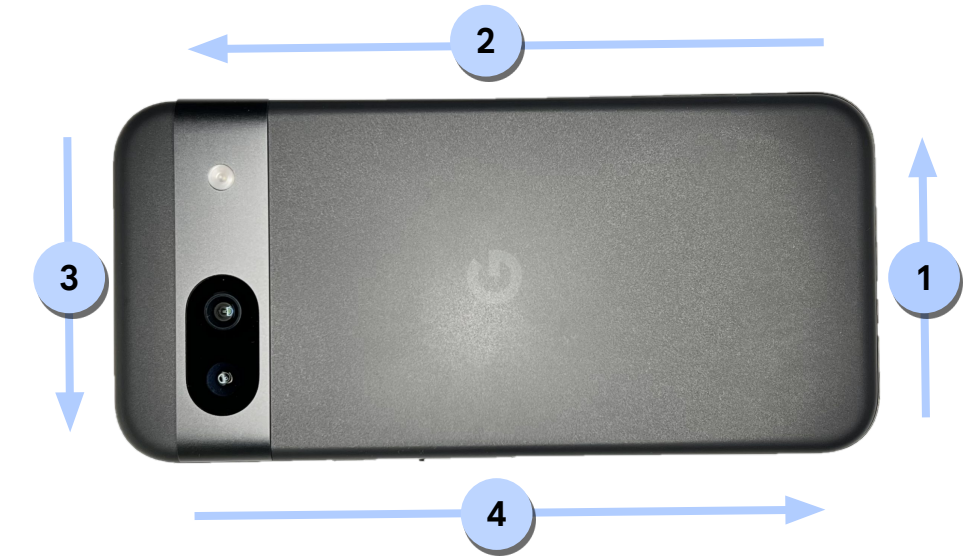
Insert the ESD spudger or ESD pick no more than **2 mm**, as any deeper could damage the device.



Separate the back cover - 1

Follow the sequence:

1 → 2 → 3 → 4 around the right side → top side → left side (counterclockwise) with the **ESD pick**.



Disassemble sequence:

1 → 2 → 3 → 4

Separate the back cover - 2

- Insert the ESD spudger approximately 30 mm deep above the top of visor to separate the BC top adhesive.
- Insert the ESD spudger approximately 45 mm deep below the bottom of visor to separate the BC BTM adhesive.

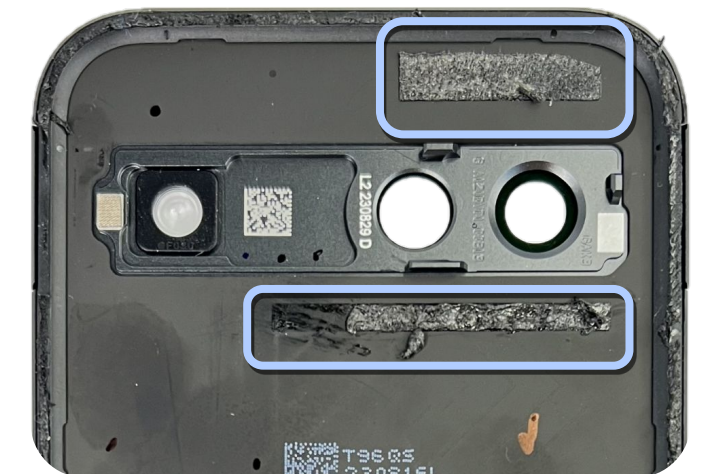
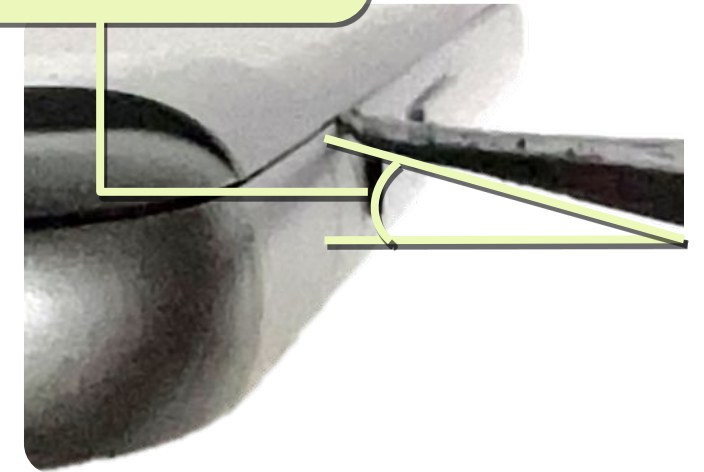


Use caution

Be careful. *Don't* insert the spudger too deep. This could damage the graphite sheets, battery, rear cameras, or internal components.



Insert ESD spudger below visor @ 15 degree





Disassembly
instructions

Inner and antenna housing



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

Back cover



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

Screwdriver

Adjustable torque screwdriver

ESD tweezers

ESD spudger

Cotton swabs

IPA

✂️ Parts

Reuse indications







Reusable without cleaning

Reusable after cleaning

Not reusable after disassembly

Inner and antenna housing replacement

Here's the list of parts for the inner and antenna housing disassembly.

<div>Inner housing</div> <div>G949-00788-00</div> <div></div>	<div>Antenna housing</div> <div>G730-07191-01</div> <div></div>	<div>Diecut, conductive, inner housing</div> <div>G806-08898-01</div> <div></div>	<div>Diecut Cu foil flashlight</div> <div>G806-08952-01</div> <div></div>	<div>Screw*15</div> <div>G250-05370-00</div> <div></div>	<div>Screw*2</div> <div>G250-06929-01</div> <div></div>
---	---	--	--	---	--

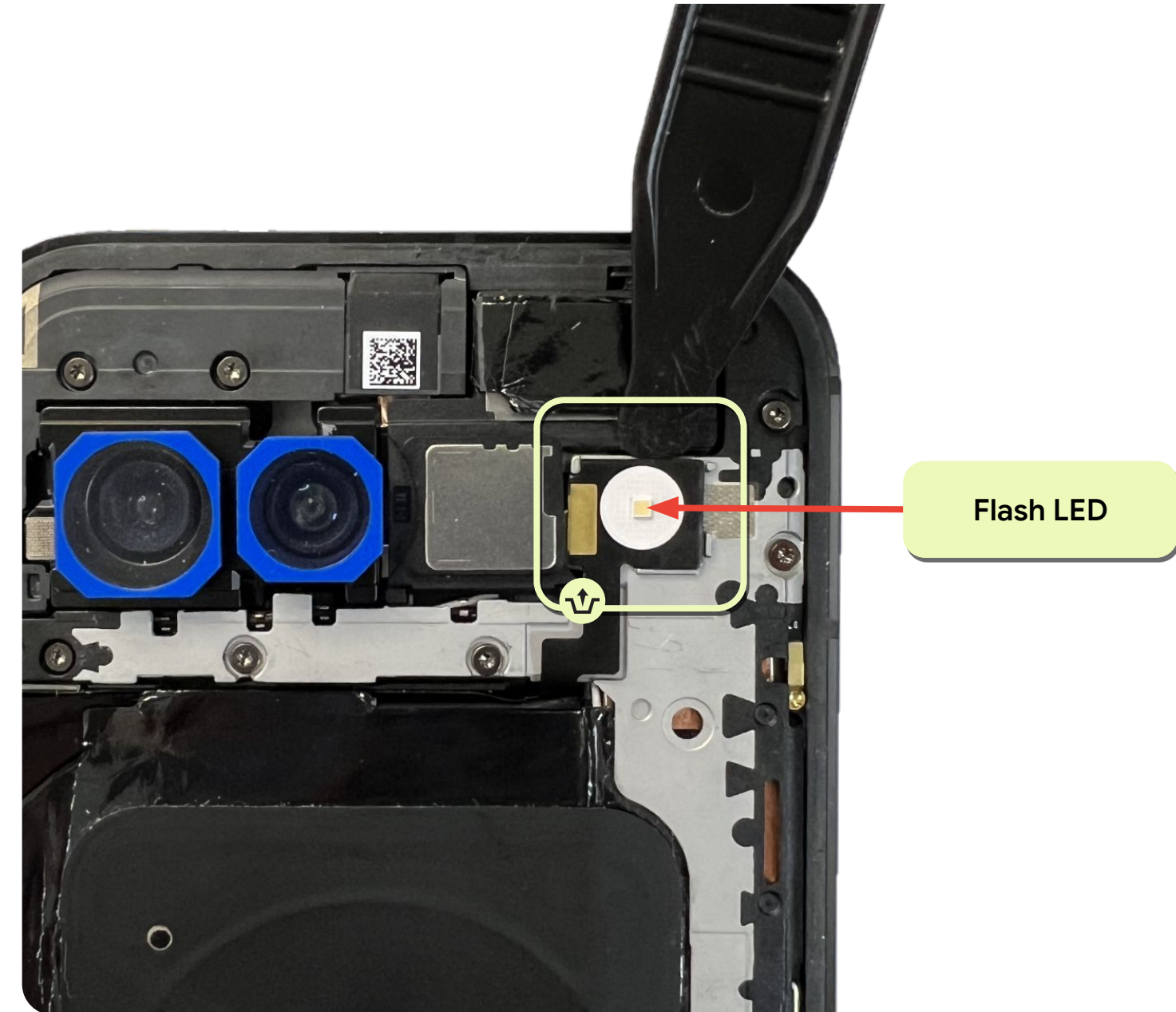
Detach the flash LED FPC

Use the ESD spudger to detach the flash LED FPC from the inner housing.



Use caution

Avoid damage to the flash LED.

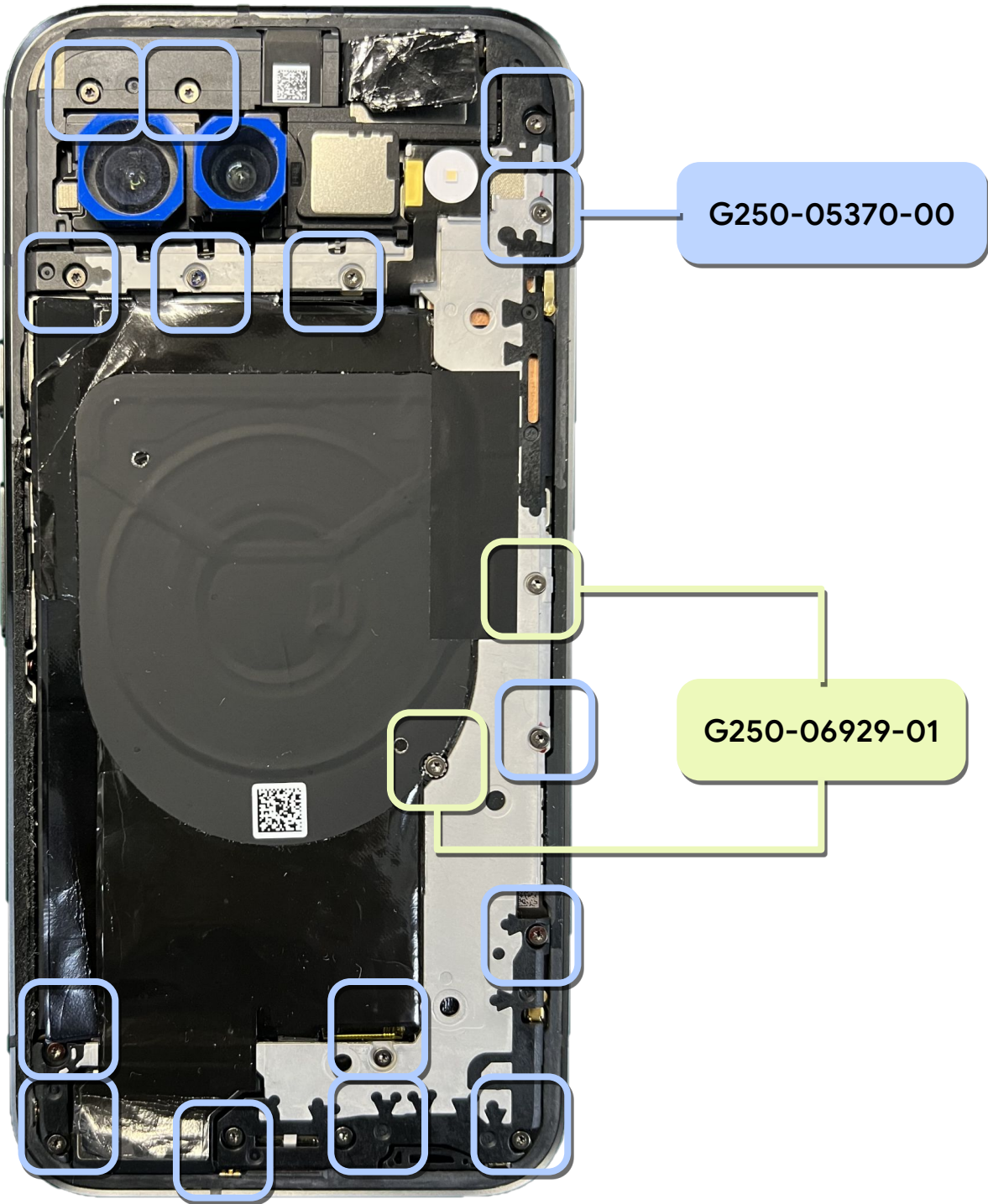


Remove the screws

Use a screwdriver to remove the 17 screws that secure the inner and antenna housing to the logic board.

Part: G250-05370-00*15 (Screw)

Part: G250-06929-01*2 (Screw)



Remove the inner housing

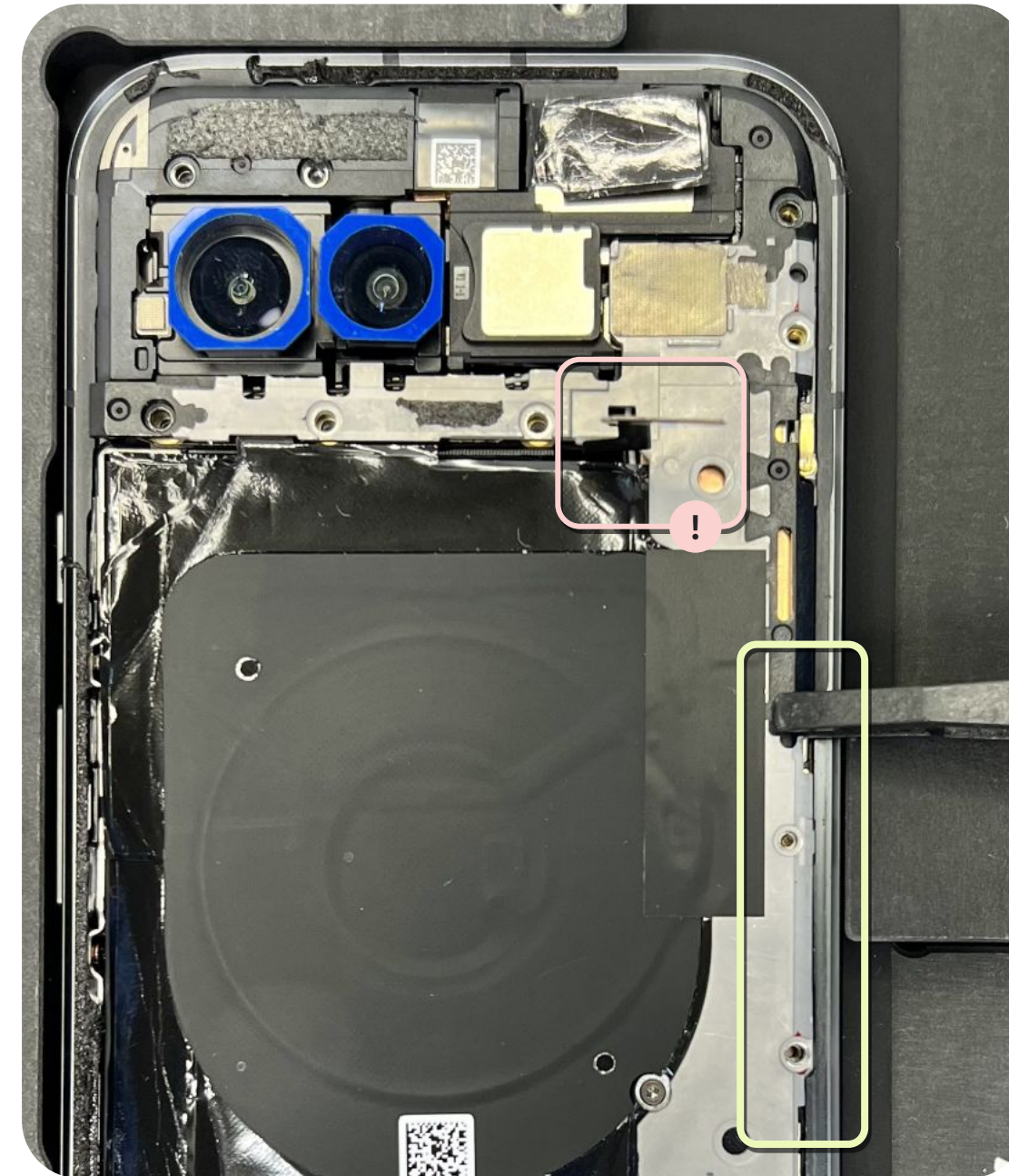
Use ESD tweezers to gently lift up the inner housing.

There are clips near the bottom of the inner housing to hold it into place, gently pull upward along the edge of the inner housing to prevent bending the part during removal.



Use caution

Slide the flash LED through the opening on the inner housing carefully.



Finished! Need assembly instructions? →

Remove the antenna housing

Use ESD tweezers to remove the antenna housing from the logic board.





Battery



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner and antenna housing**



Tools

Heat plate	Universal press plate 12 mm
Universal press	Screwdriver
Universal disassembly fixture	Adjustable torque screwdriver
Universal base plate 12mm	ESD tweezers
Universal holder	ESD spudger
Universal holder limiting block	Cotton swabs
Universal supporting rubber	IPA
Pixel 8a battery press rubber	

✂ Parts

Reuse indications

Reusable without cleaning

Reusable after cleaning


Not reusable after disassembly

Battery

Here's the list of parts for the battery disassembly.

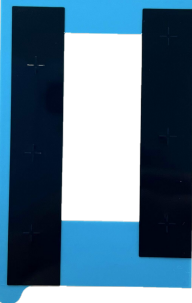
Replacement battery

G949-01097-00



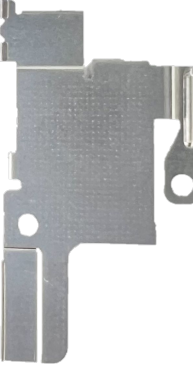
Battery adhesive L+R

G806-12579-01




Stamping plate
5G/battery

G730-07372-01



Screw*1

G250-06929-01

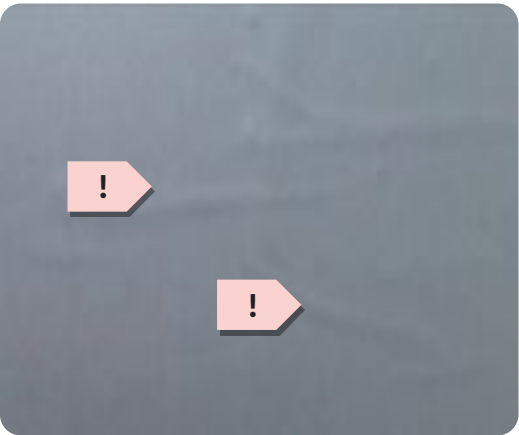


Caution

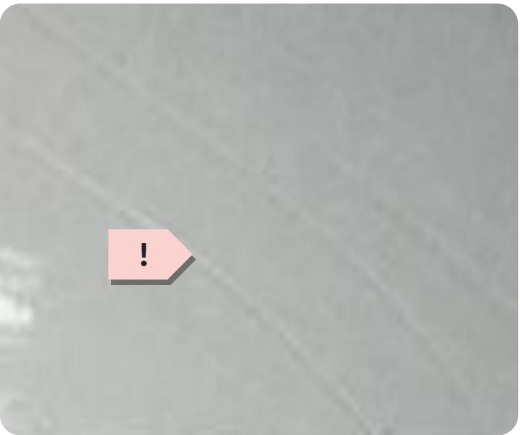
Examples of unacceptable battery conditions - Not suitable for repair*



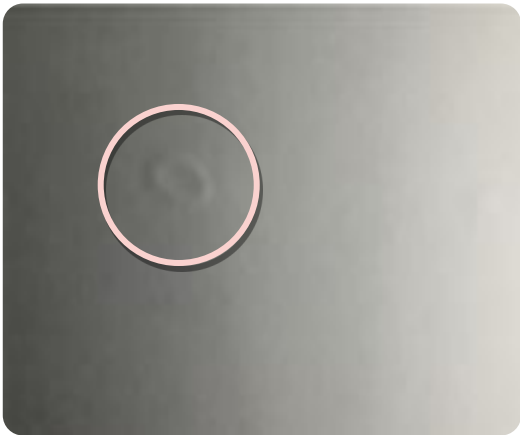
Pouch damage



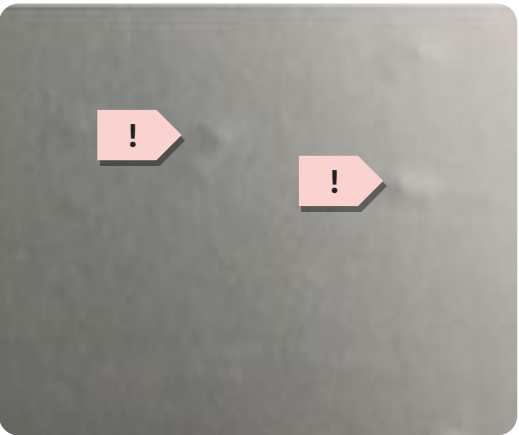
Line protrusion



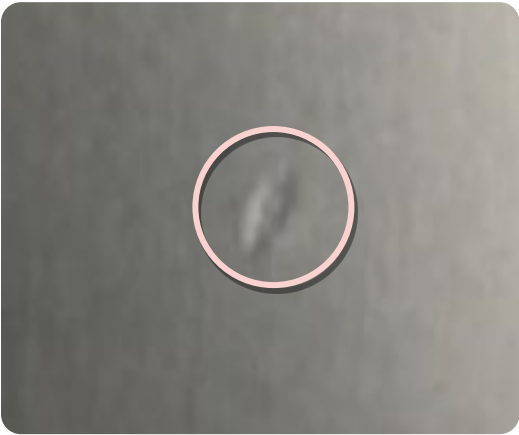
Scratch



Contamination mark



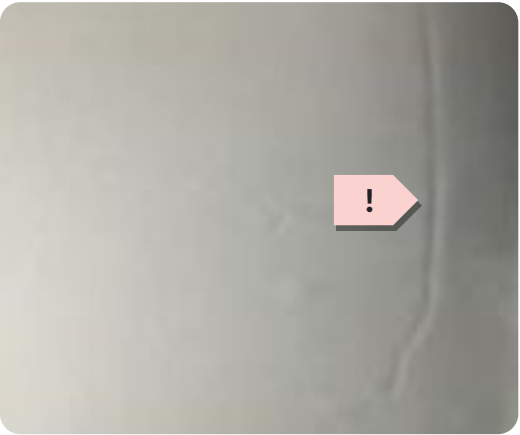
Dot protrusion



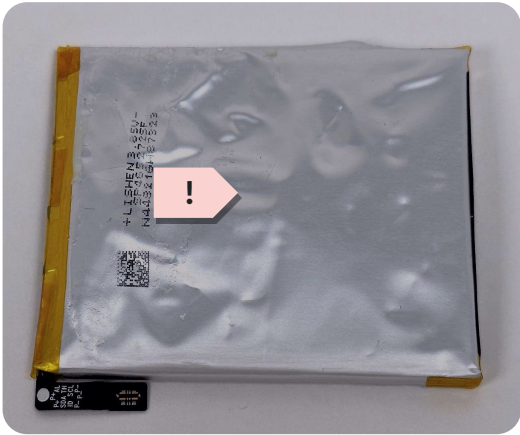
Dent



Bubbling



Imprinted line

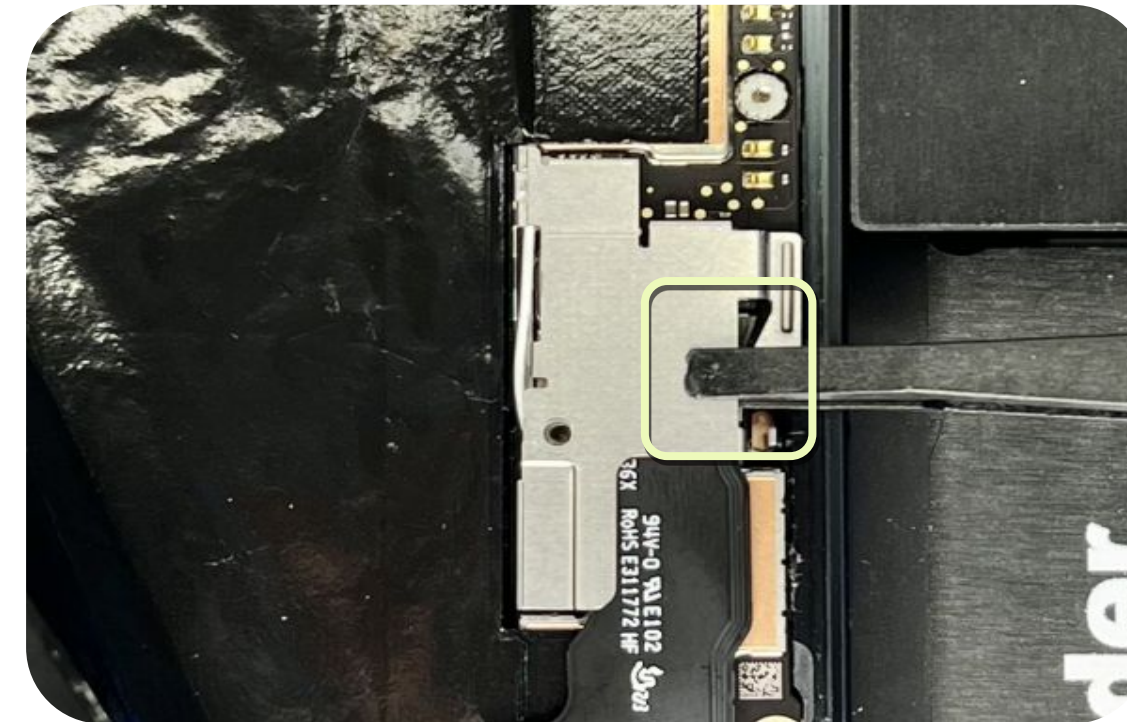


Swelling or electrolyte leakage

*These are examples of potentially dangerous battery conditions but *don't* reflect all possible dangerous conditions. Please follow the general safety guidance outlined in this document.

Remove the BTB stamping plate

Use ESD tweezers to remove the BTB metal plate from the logic board.



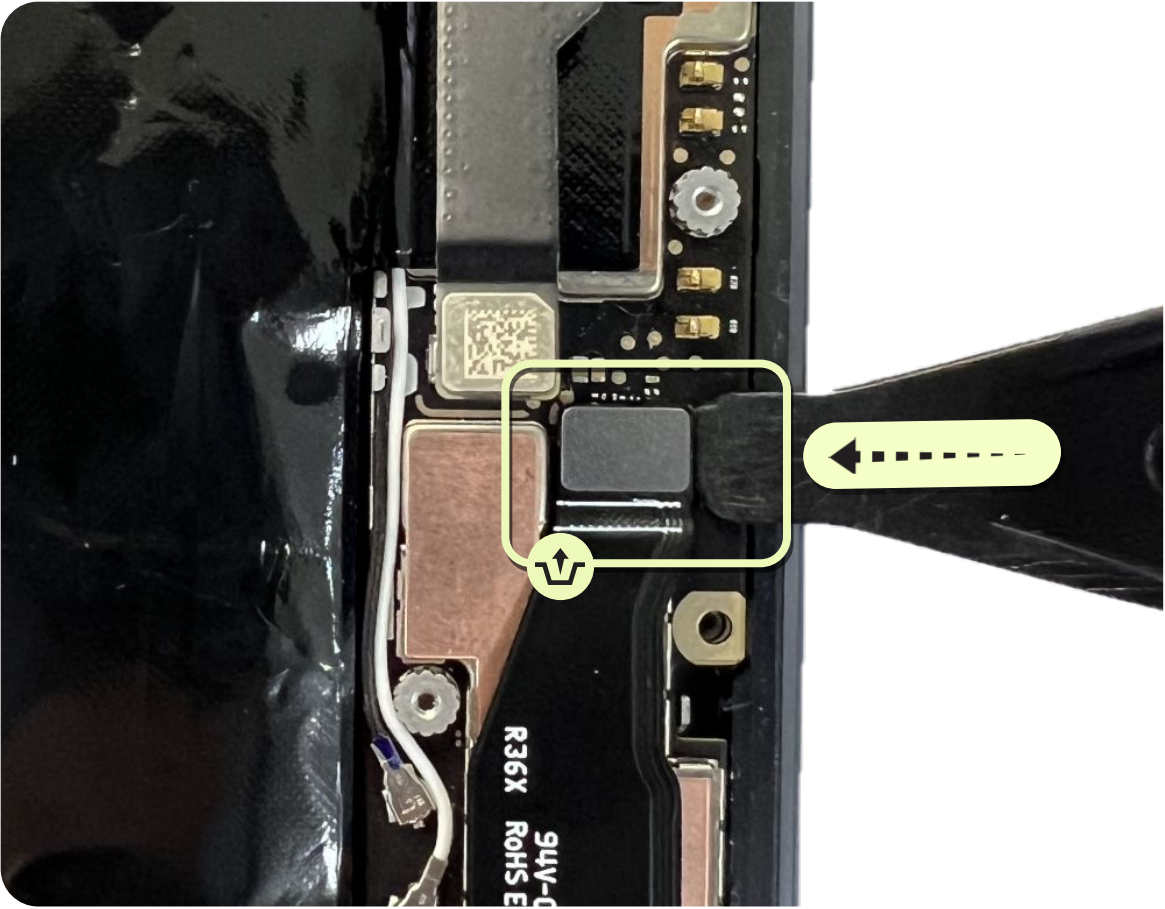
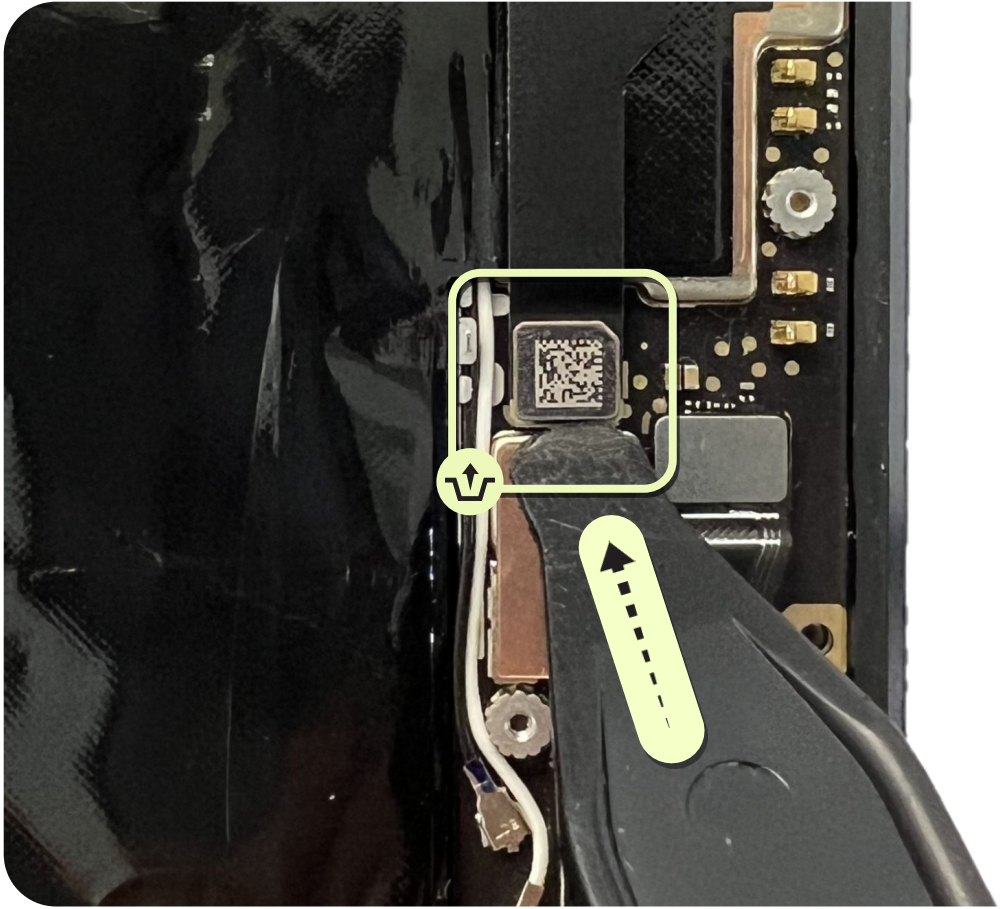
Disconnect the mmWave and battery FPC

Use the ESD spudger to disconnect the mmWave and battery FPC from the logic board.



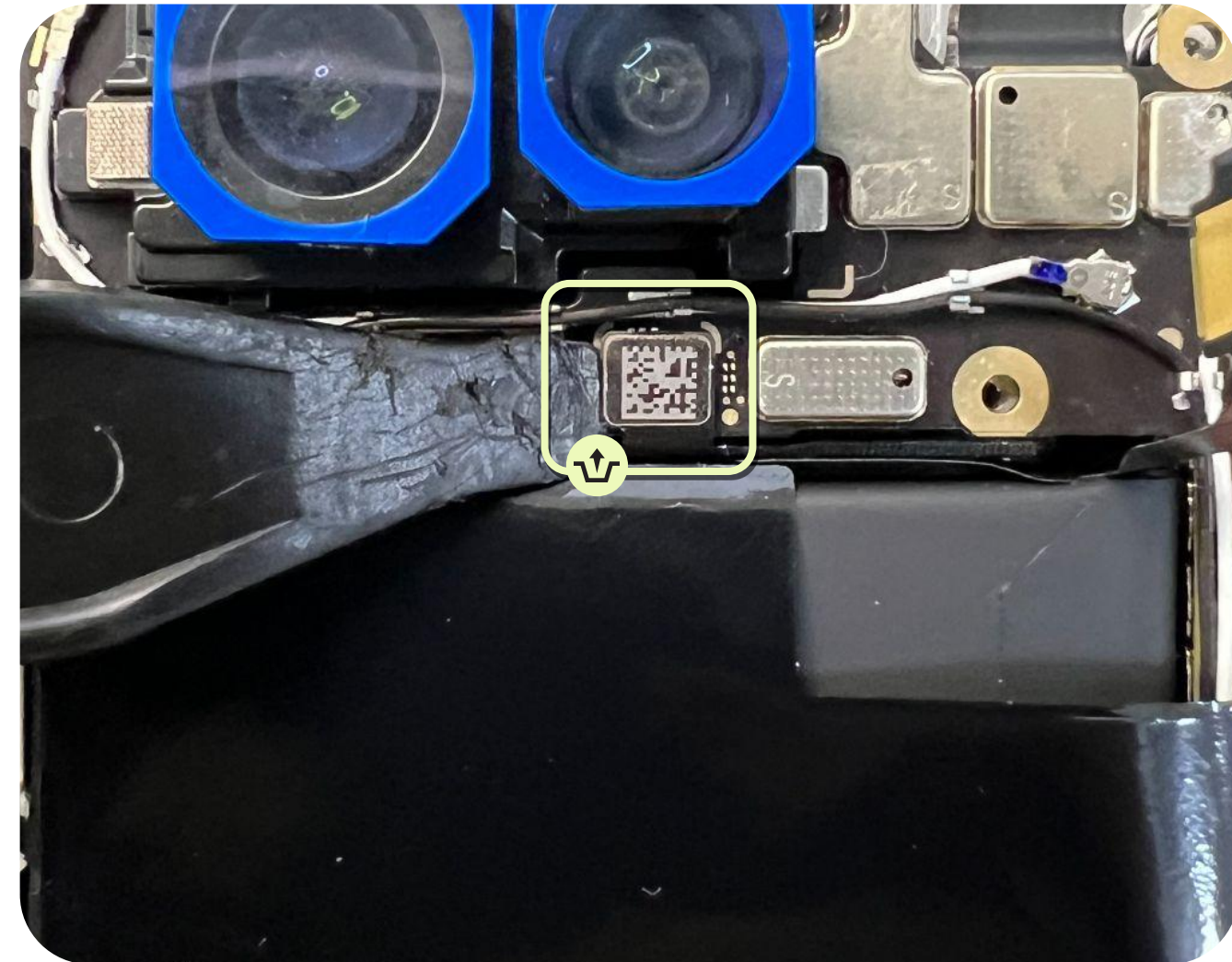
Use caution

Be careful. *Don't* touch any capacitors, resistors, and other parts during disassembly.



Disconnect the SLAM FPC

- Use the ESD spudger to disconnect the SLAM FPC from the logic board.



Soften the adhesive

Place the device flat on the heat plate and set to **158°F (70 °C)** for **10 minutes** to soften the battery adhesive.



Use caution

The heating plate is a hot surface.
Use caution as it could cause burns.



Remove the battery

Use your hand to remove the pull jacket.



Note

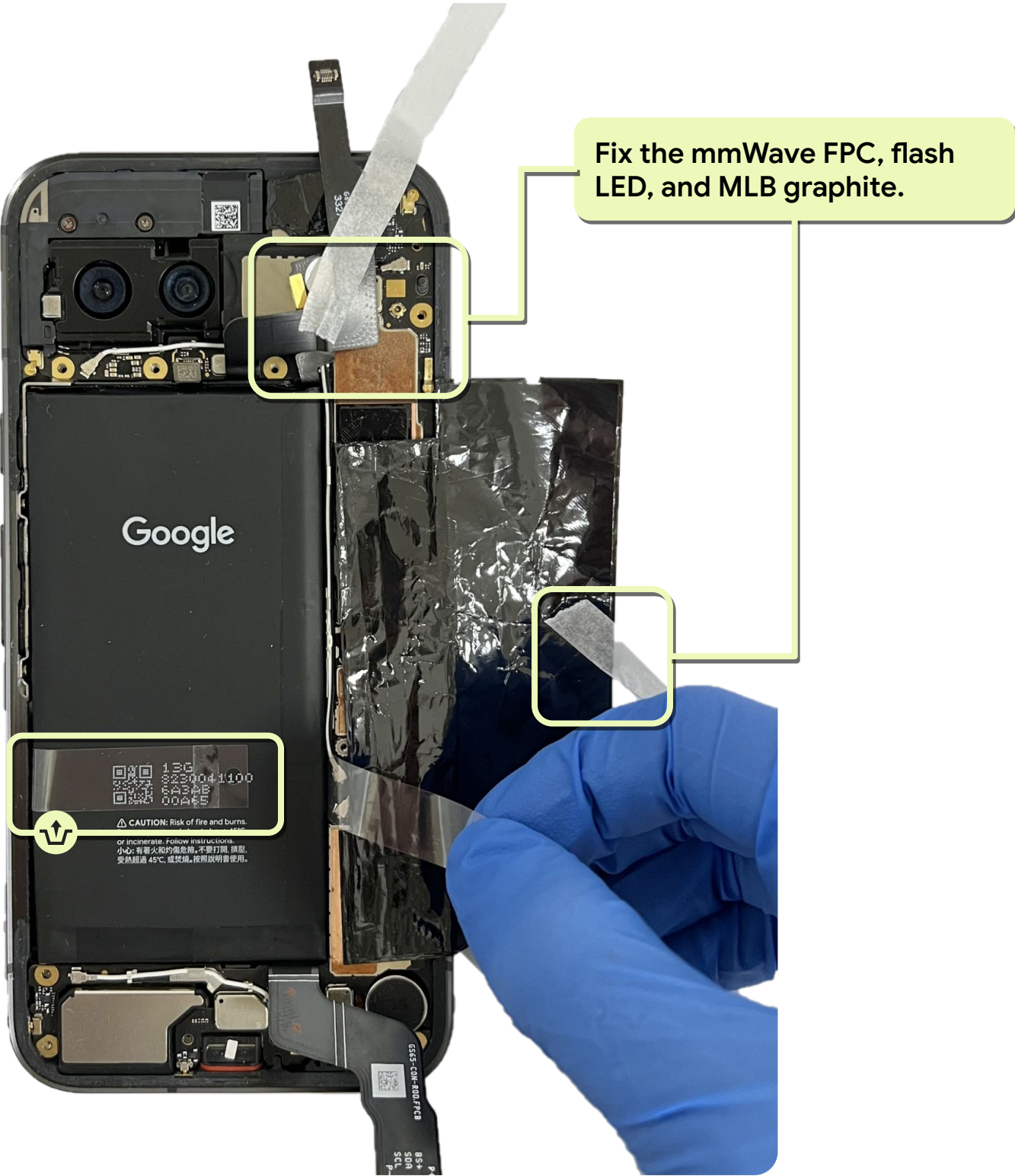
For a smoother battery replacement process, use the masking tape to fix the mmWave FPC, flash LED, and MLB graphite.



Use caution

Keep small screws and sharp objects away from the battery.

Don't reuse the part.



Finished! Need assembly instructions? →

Remove the battery

- Move the battery pull jacket toward the top of the phone until it comes into contact with the adhesive.
- Pull upward on both sides of the pull jacket tabs with equal force to lift the battery.



Use caution

Keep small screws and sharp objects away from the battery.

Don't reuse the part.





Disassembly
instructions

Top speaker



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner and antenna housing**



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

Adjustable torque screwdriver

ESD tweezers



✕ Parts

Top speaker

Here's the list of parts for the top speaker disassembly.

Reuse indications

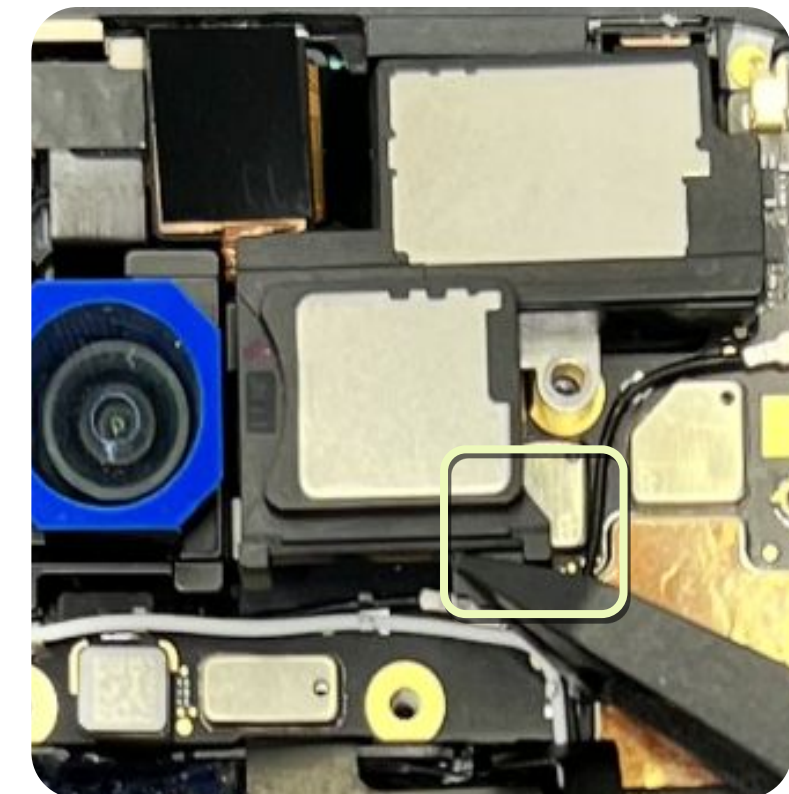
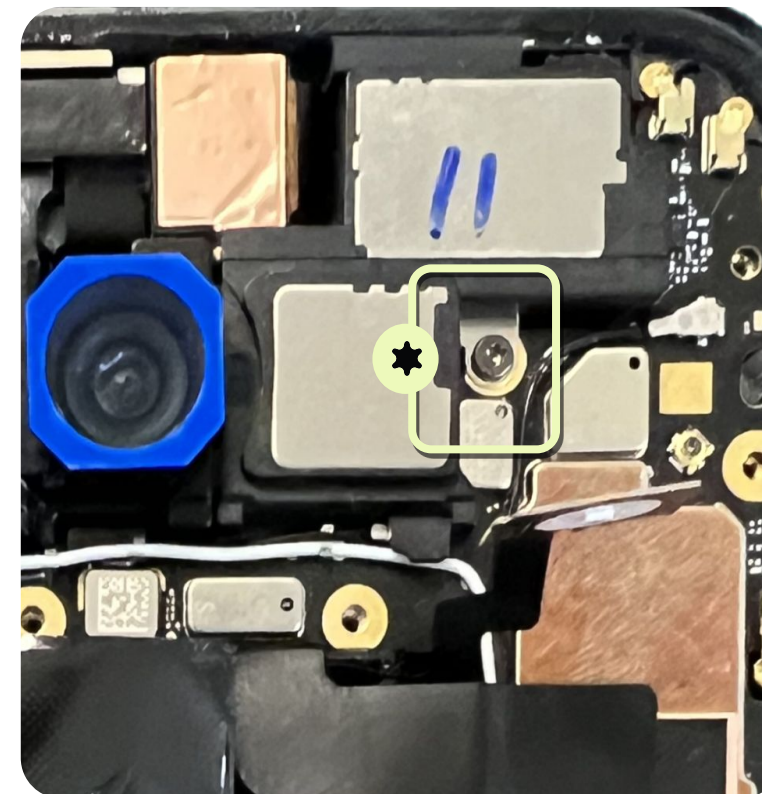
- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

<div>Top speaker</div> <div>G863-00505-01</div> <div></div>	<div>Screw*1</div> <div>G250-05370-00</div> <div></div>
---	--

Finished! Need assembly instructions? →

Remove the top speaker

- Use an adjustable torque screwdriver to remove the one screw that secures the top speaker to the logic board.
- Use an ESD spudger to lift up the top speaker.





Disassembly
instructions

Logic board



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner and antenna housing**
- **Top speaker**



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

Adjustable torque screwdriver

ESD spudger

ESD tweezers

Large suction cup

SIM card ejection pin



Parts

Logic board

Here's the list of parts for the logic board disassembly.

Reuse indications



Reusable without
cleaning



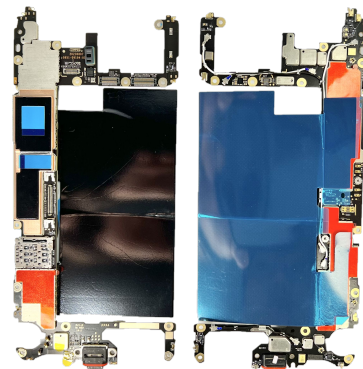
Reusable after
cleaning



Not reusable
after disassembly

Logic board

Multiple part numbers



FCAM copper foil

G806-07803-01



P-sensor rubber

G804-01110-01



Stamping plate display BTB

G730-07370-01



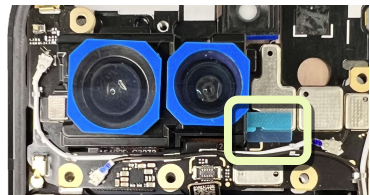
Conductive fabric washer

G806-07457-01



Conductive fabric RCAM holder

G806-08993-01



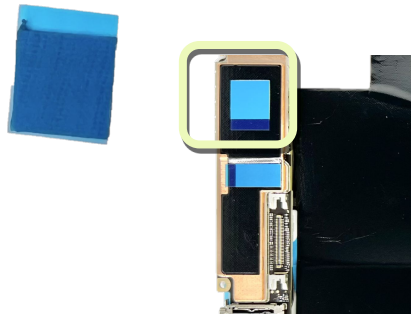
Diecut thermal graphite MLB

G806-09146-01
(Change if damaged)



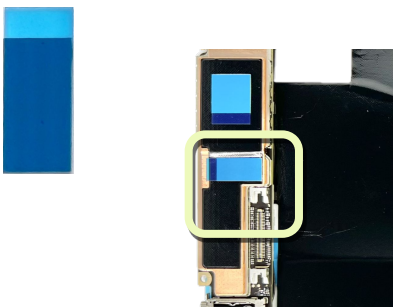
Thermal pad 1, MLB

G806-08995-01



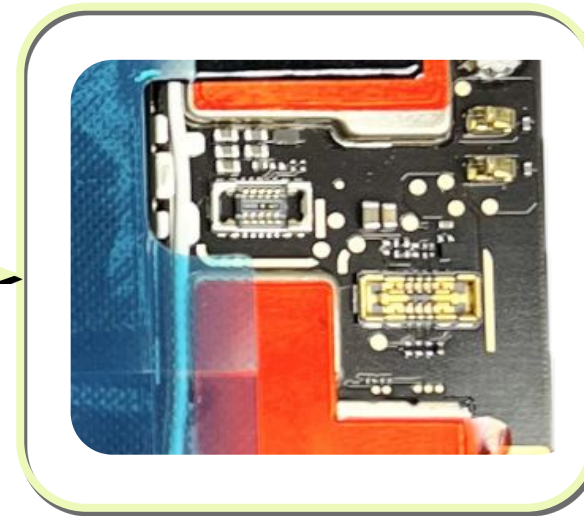
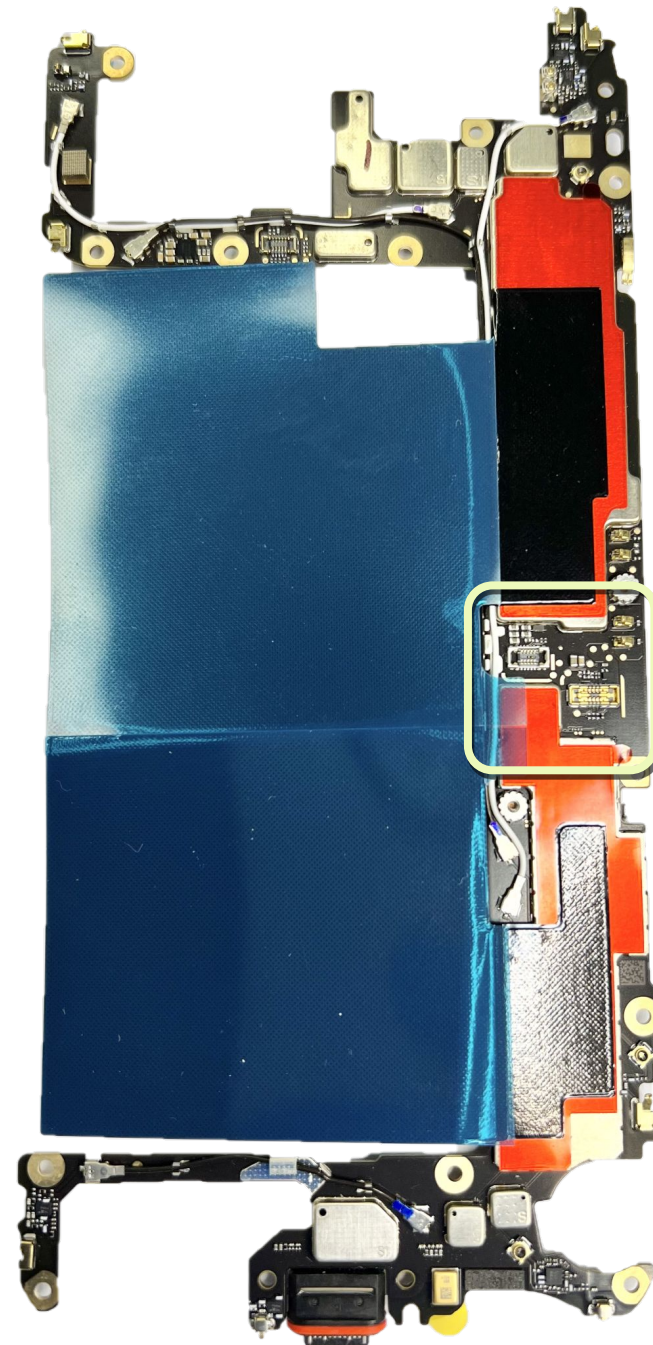
Thermal pad 2, MLB

G806-11335-01

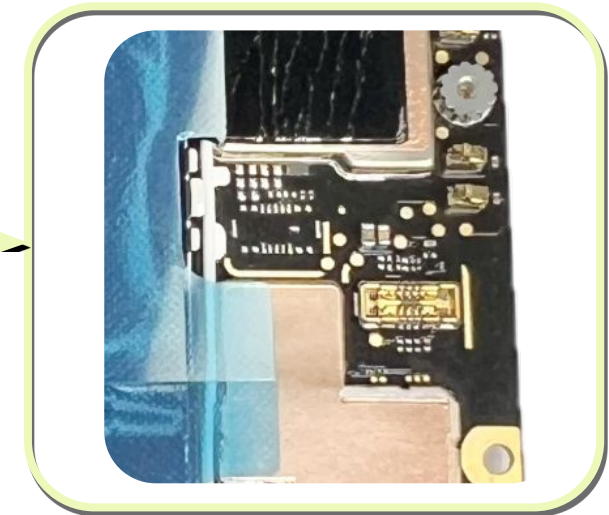
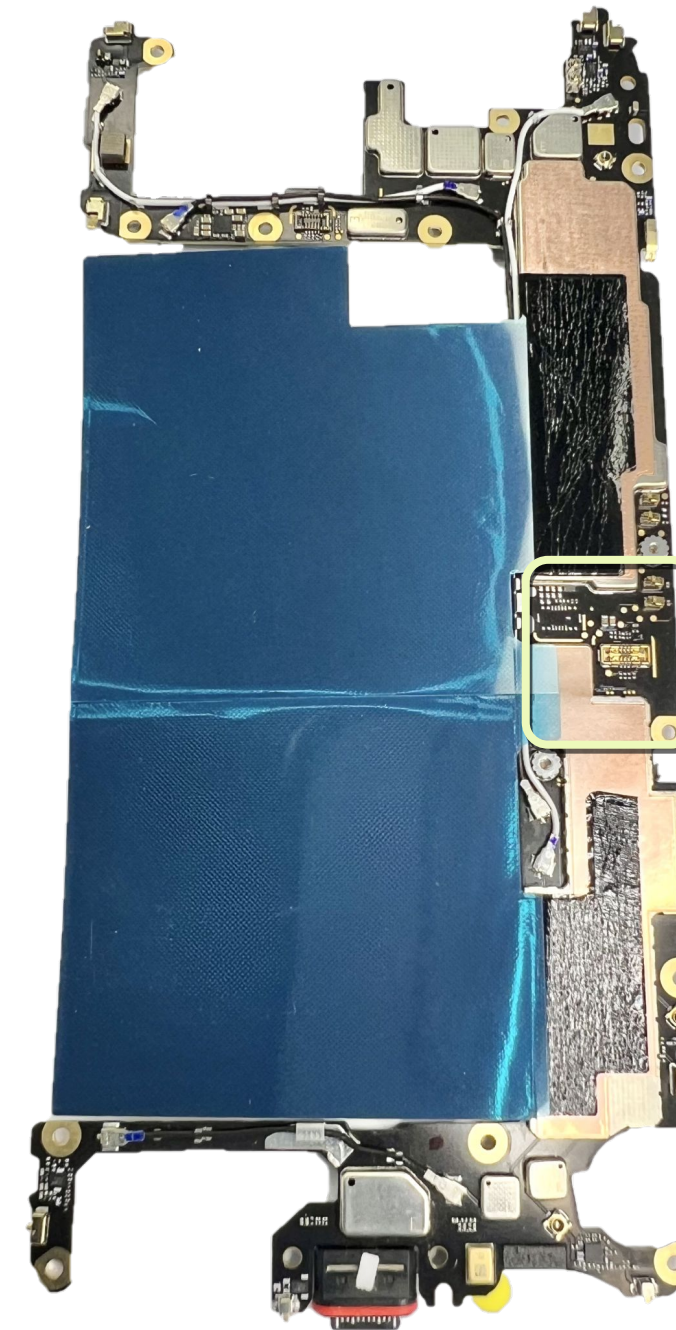


Logic board difference

mmWave



Sub6 - without 5G connector



Remove sim tray

- Make sure that device is turned off before disassembly.
- Use the SIM card ejection pin to remove the SIM tray from the device.



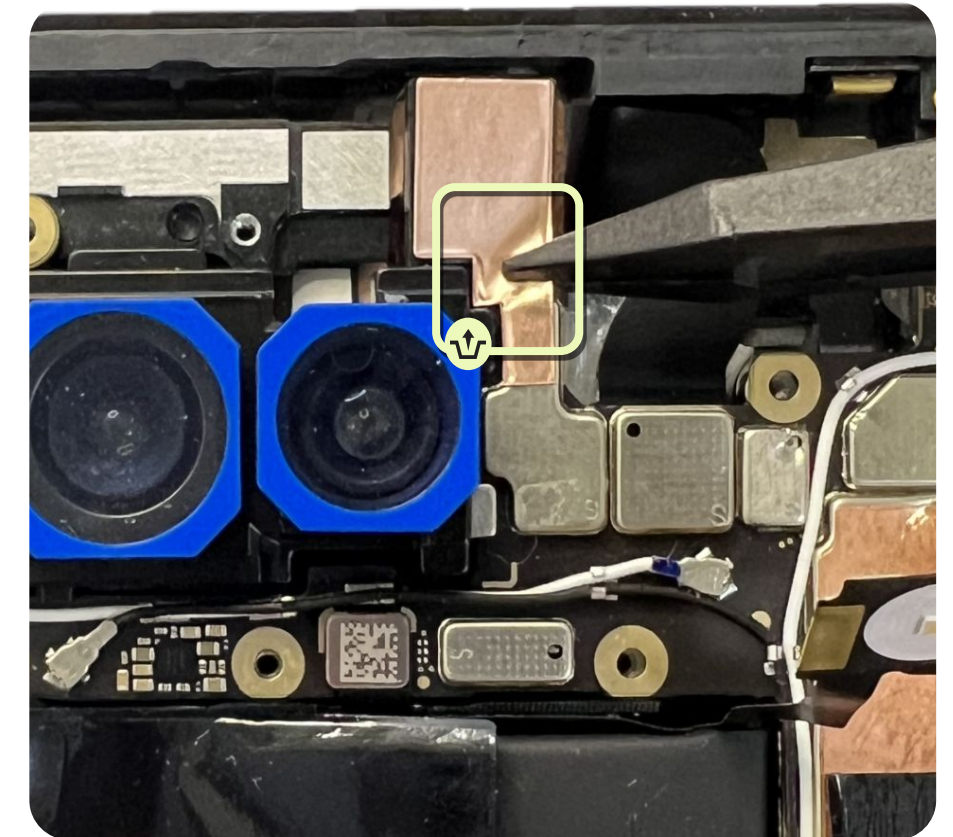
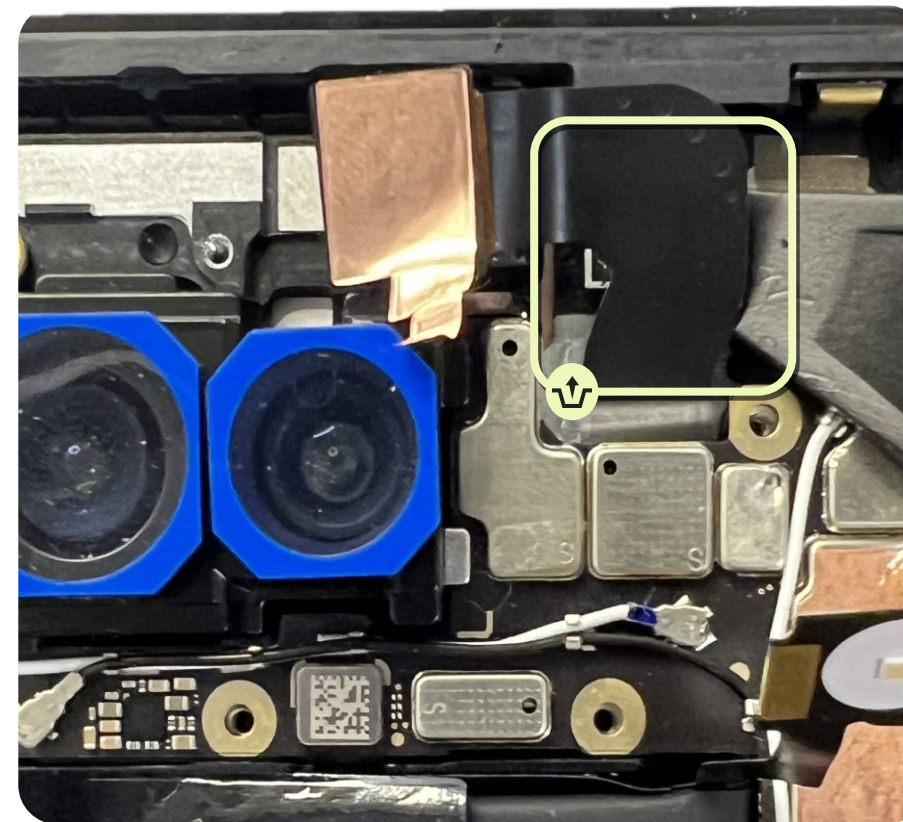
Detach the FCAM FPC and copper foil*

1. Use an ESD spudger to slowly lift the FPC up to 45°.
2. Use ESD tweezers to remove the foil shielding from the middle.

*Note



This step only applies if the FCAM or MLB needs to be replaced.



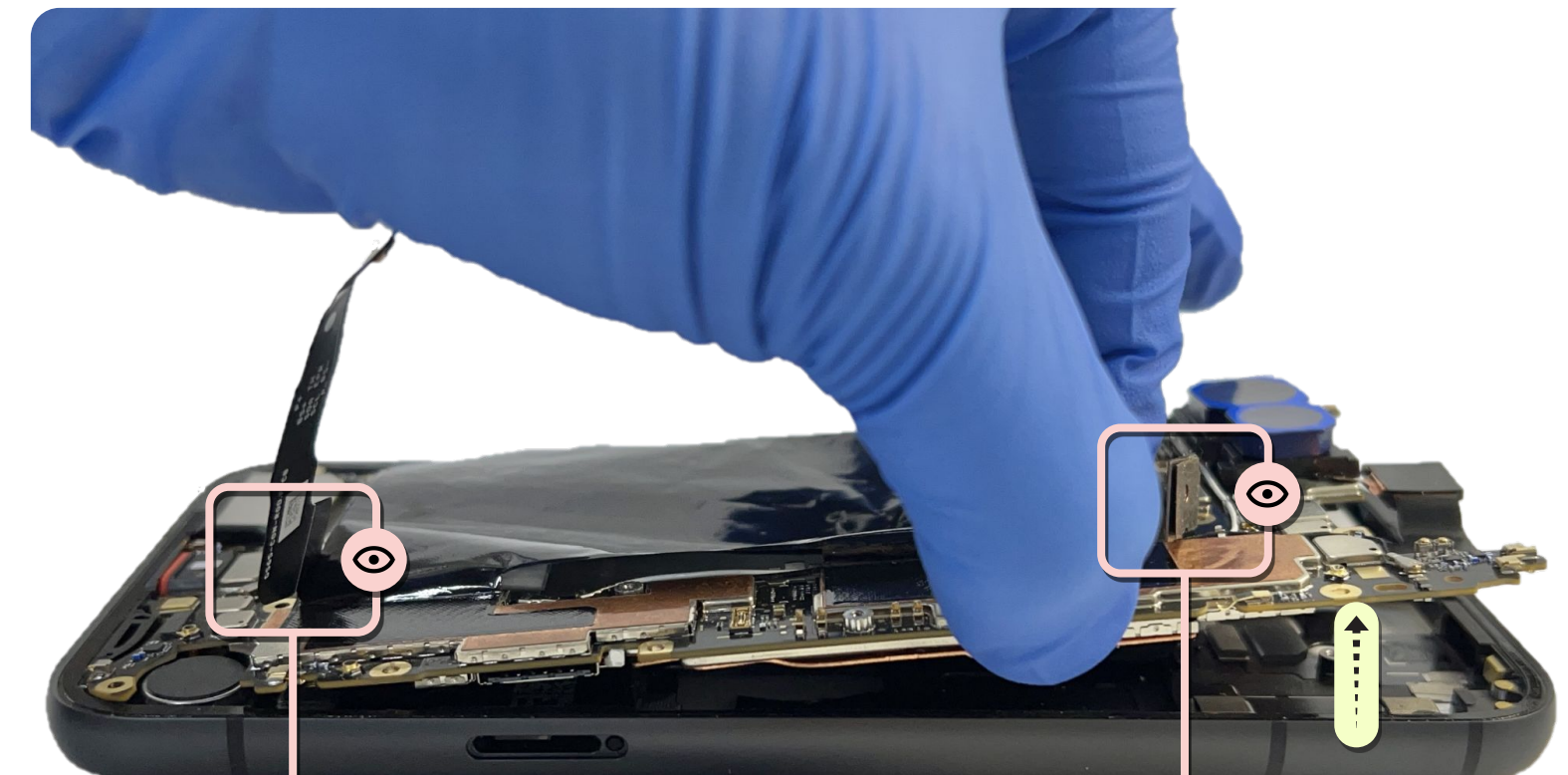
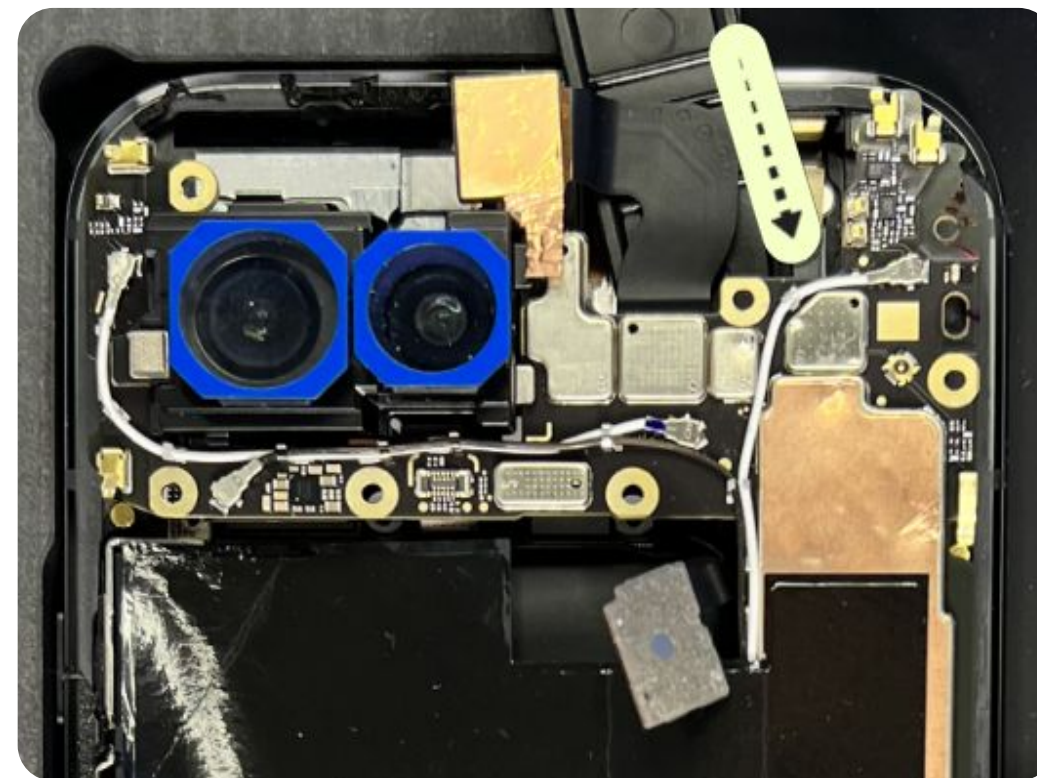
Remove the logic board

- Insert an ESD spudger underneath the logic board FCAM FPC to raise it up.



Use caution

Don't attempt to separate the logic board by force. It's still attached to the front display by a fragile FPC.



Be careful of the position of the LED or batt FPC when you disassemble the motherboard to avoid damage to the graphite sheet.

Extract the logic board

- Hold the enclosure and flip the logic board to the right.
- Use large suction cups to hold the enclosure in place.

Part: G852-02360-01 (Front camera cap)



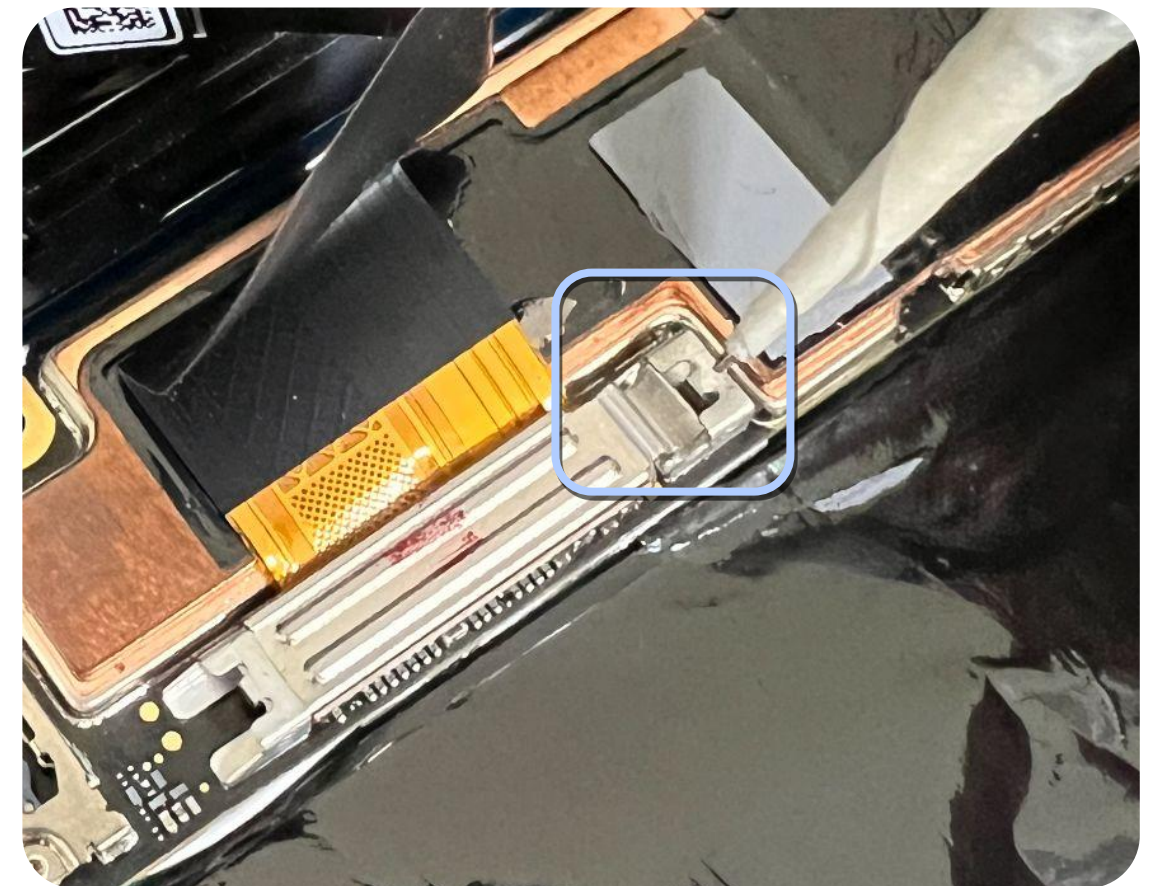
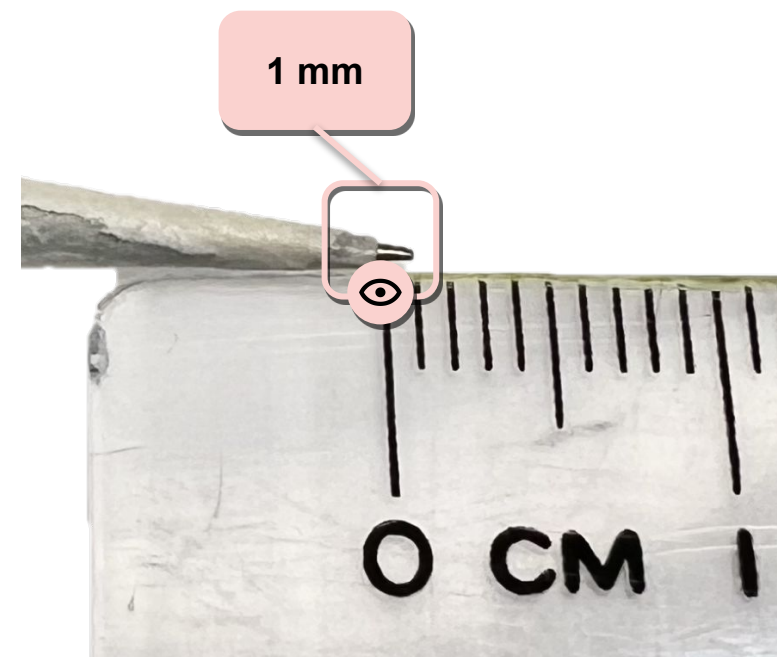
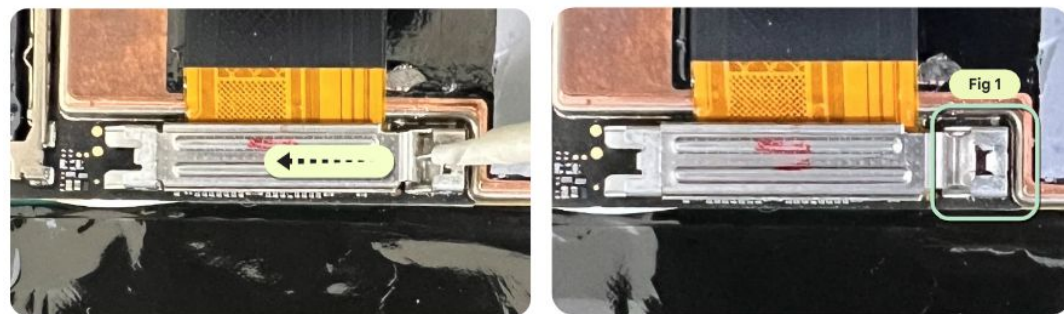
Use caution

Don't attempt to separate the logic board by force. It's still attached to the front display by a fragile FPC.



Remove the display metal stamping plate

1. Place the phone so that the clip side of the stamping plate is accessible.
2. Use tape to limit the length of the ESD-14 metal tweezers to **1 mm**. This helps to avoid damage to the logic board during disassembly.
3. Insert ESD-14 metal tweezers into the hole between the stamping plate and bracket and apply pressure upwards.



Remove the display metal stamping plate

- Use the ESD-14 metal tweezers to lift up the stamping plate and remove it from the logic board.



Use caution

Don't reuse the stamping plate.



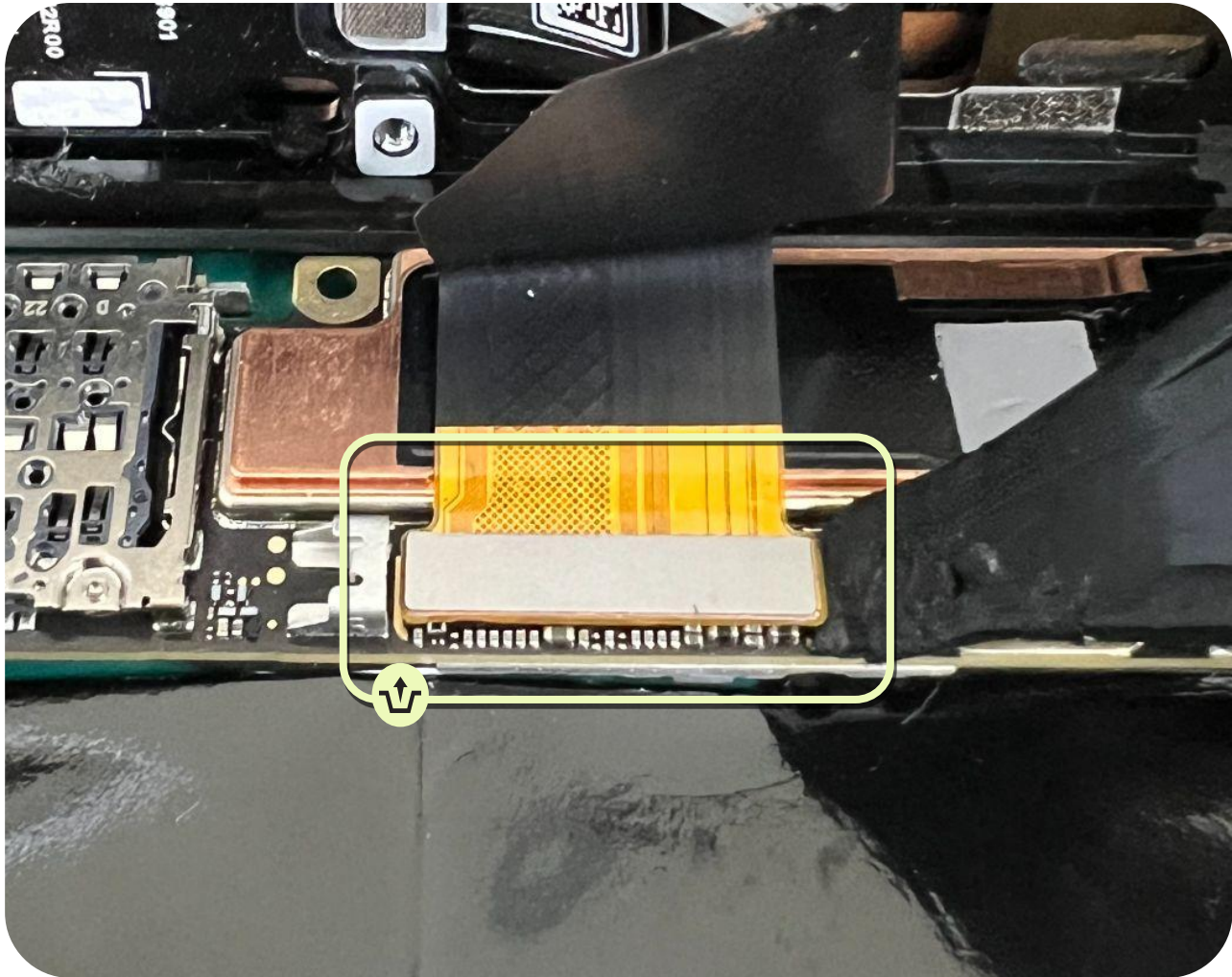
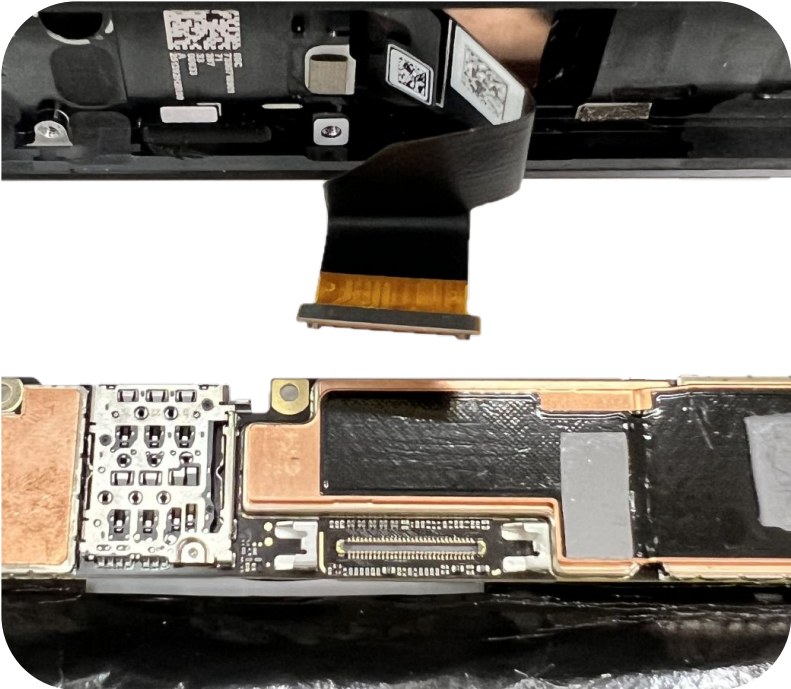
Disconnect the display FPC

Use an ESD spudger to disconnect the display connector from the logic board.



Use caution

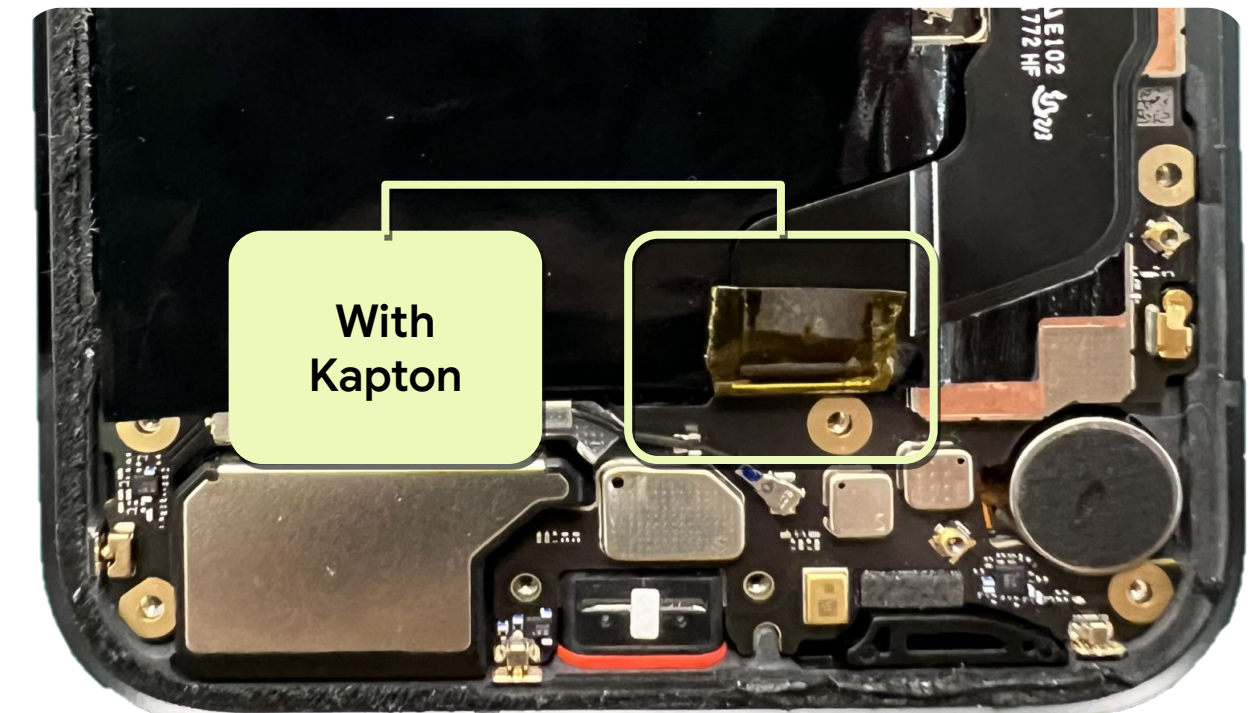
Be careful of capacitors, resistors, and other parts. *Don't* touch them during disassembly.

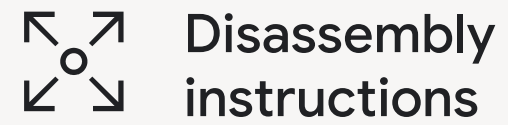


Attach the Kapton tape, if necessary

1. Check the battery FPC to see if there's Kapton tape already attached.
2. If there's tape attached, continue to the next step.
3. If there's not, follow the given steps to add it:
 - a. Remove the logic board for full access to the battery FPC.
 - b. Use the middle frame as the alignment point to place the Kapton tape on to the battery FPC.
 - c. Use an ESD spudger to gently press and adhere the Kapton tape to the FPC.

Part: G806-12781-00 (Diecut, Kapton, battery, FPC)





Disassembly
instructions

Front camera



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner and antenna housing**
- **Top speaker**
- **Logic board**



Tools

ESD tweezers

ESD spudger

✕ Parts


Front camera

Here's the list of parts for the front camera disassembly.


Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

Front camera
G949-00791-00



P-sensor rubber
G804-01110-01



Finished! Need assembly instructions? →

Remove the front camera

- Use ESD tweezers to remove the foil shielding from the middle, as shown in Fig 1.
- Use an ESD spudger to disconnect the front camera from the logic board, as shown in Fig 2.



Use caution

Don't reuse the foil shielding once removed.

Fig 1

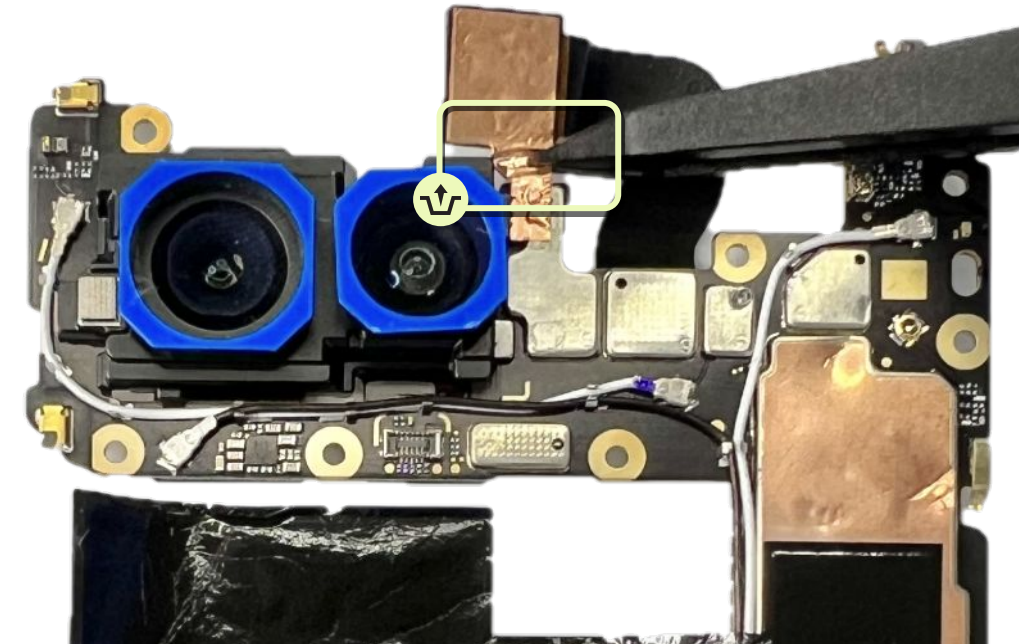
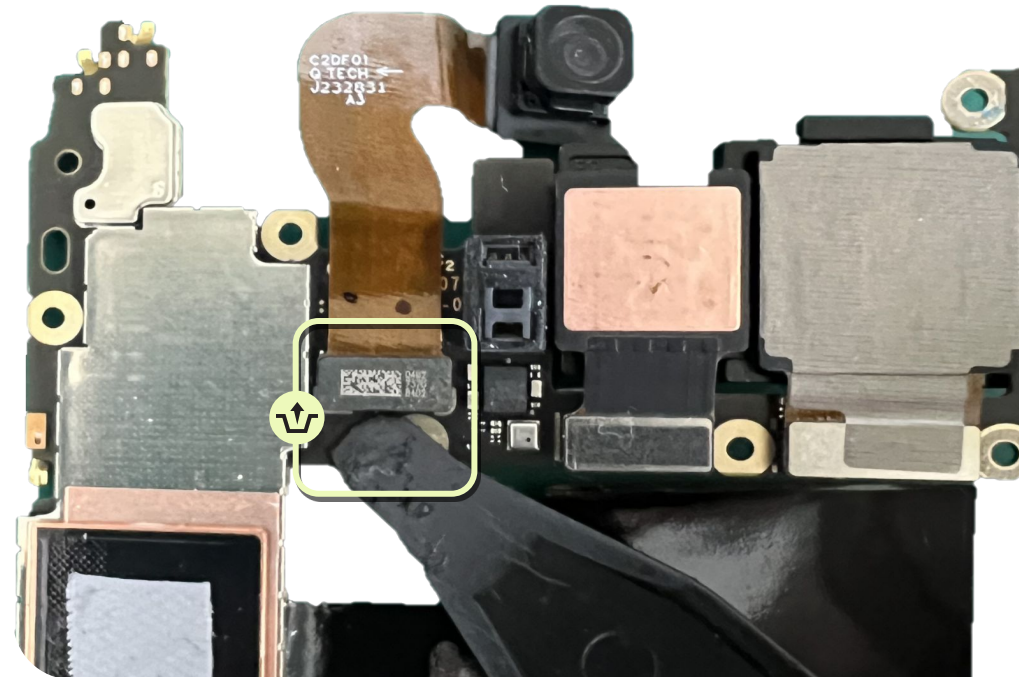
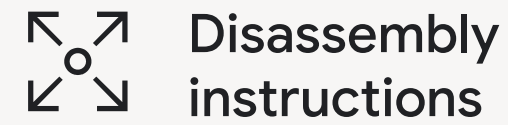


Fig 2





Disassembly
instructions

Rear camera



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner and antenna housing**
- **Top speaker**
- **Logic board**



Tools

ESD tweezers

ESD spudger



Parts

Rear camera

Here's the list of parts for the rear camera disassembly.

Reuse indications



Reusable without
cleaning



Reusable after
cleaning



Not reusable
after disassembly

Wide rear camera

G949-00792-00



Ultra wide rear camera

G949-00793-00



RCAM holder

G730-07382-01



Remove the conductive fabric

- Use ESD tweezers to remove the conductive fabric that connects the rear camera holder and the logic board.



Use caution

Don't reuse the conductive fabric.



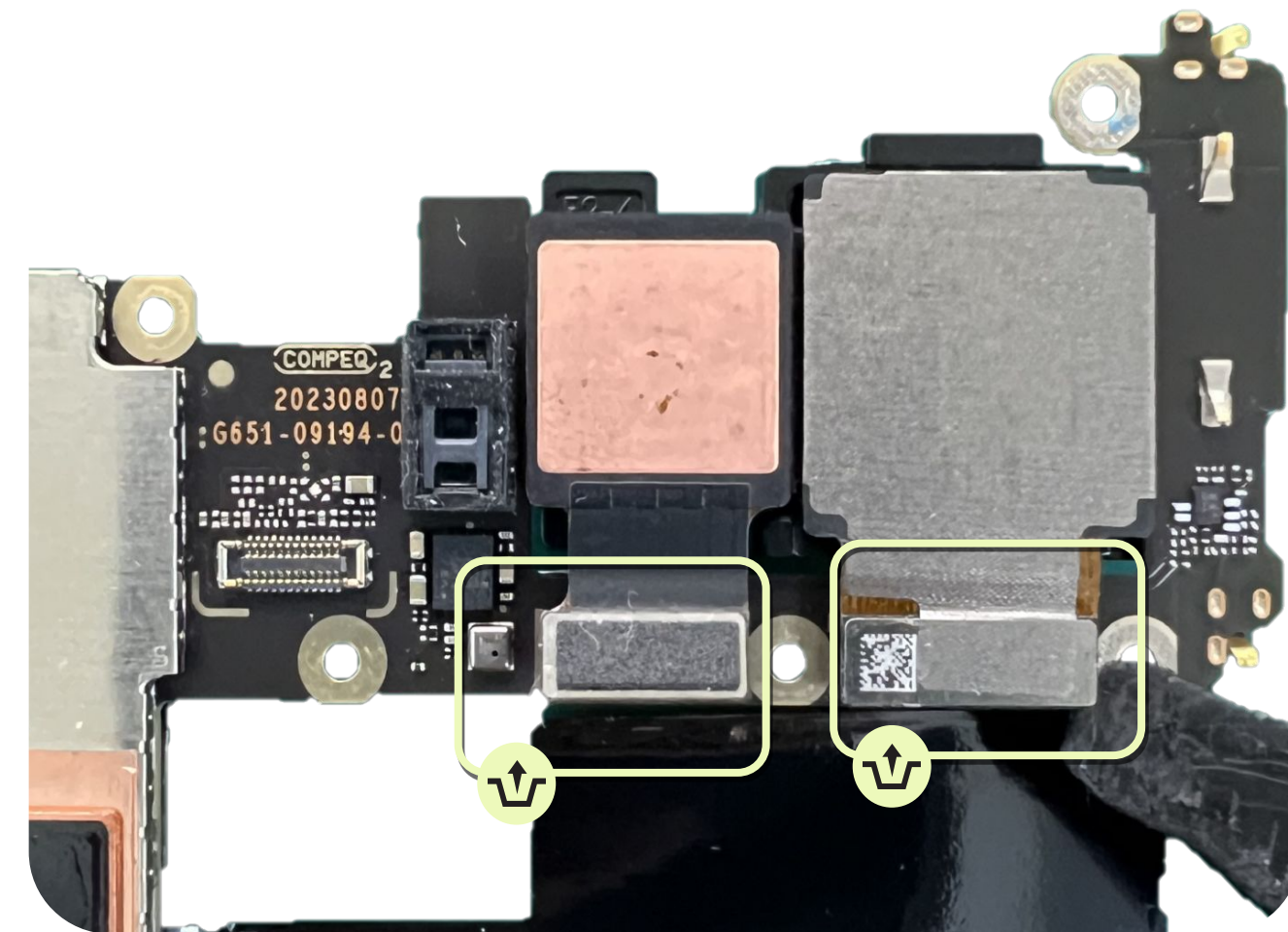
Detach the WCAM and UWCAM

- Use an ESD spudger to disconnect the UW and wide camera from the logic board.
- Hold the rear camera modules by the metal holder and take them out from the logic board by lifting upwards.
- If replacing one or both of the camera modules, inspect the RCAM holder for wrinkles or damage to the adhesive. If the adhesive is wrinkled or damaged, use a new RCAM holder.



Use caution

Inspect RCAM holder for adhesive damage when replacing one or more cameras. Do not reuse the RCAM holder if the adhesive is damaged.





Disassembly
instructions

mmWave



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner or antenna housing**
- **Top speaker**
- **Logic board**



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

ESD spudger

ESD tweezers





Parts

mmWave

Here's the list of parts for the mmWave disassembly.

Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

<div><div>mmWave module</div><div>G345-01353-06</div><div></div></div>	<div><div>mmWave FPC</div><div>G652-10140-02</div><div></div></div>	<div><div>Conductive fabric 5G module</div><div>G806-08990-01</div><div></div></div>	<div><div>Diecut, conductive foam, 5G module</div><div>G806-06776-01</div><div></div></div>
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Remove the mmWave

Use an ESD spudger to remove the mmWave module.



Finished! Need assembly instructions? →

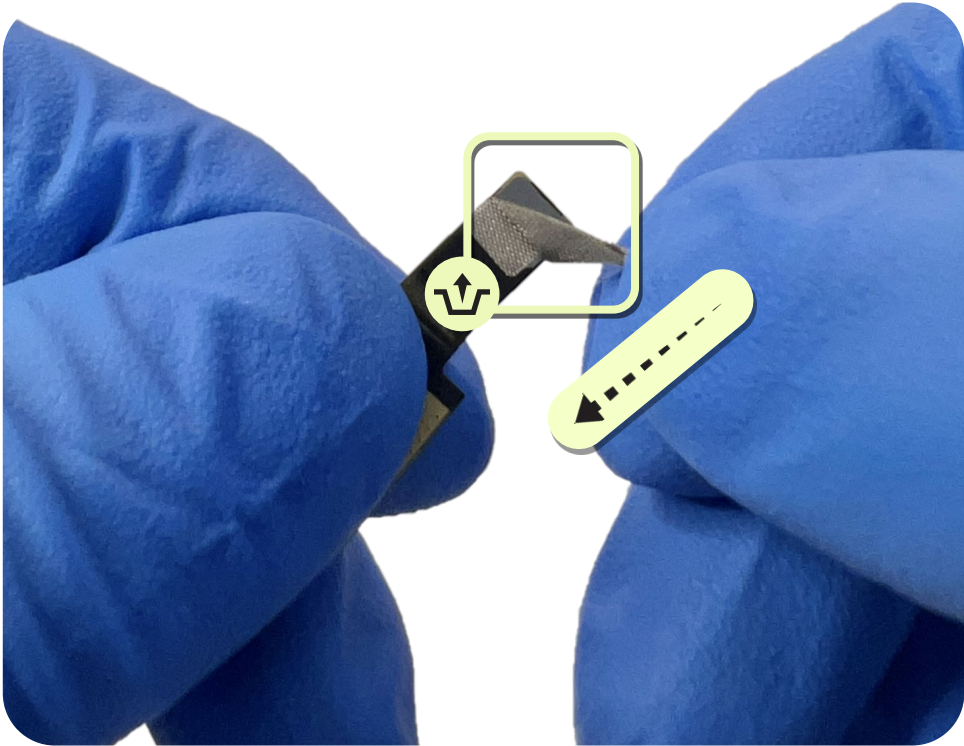
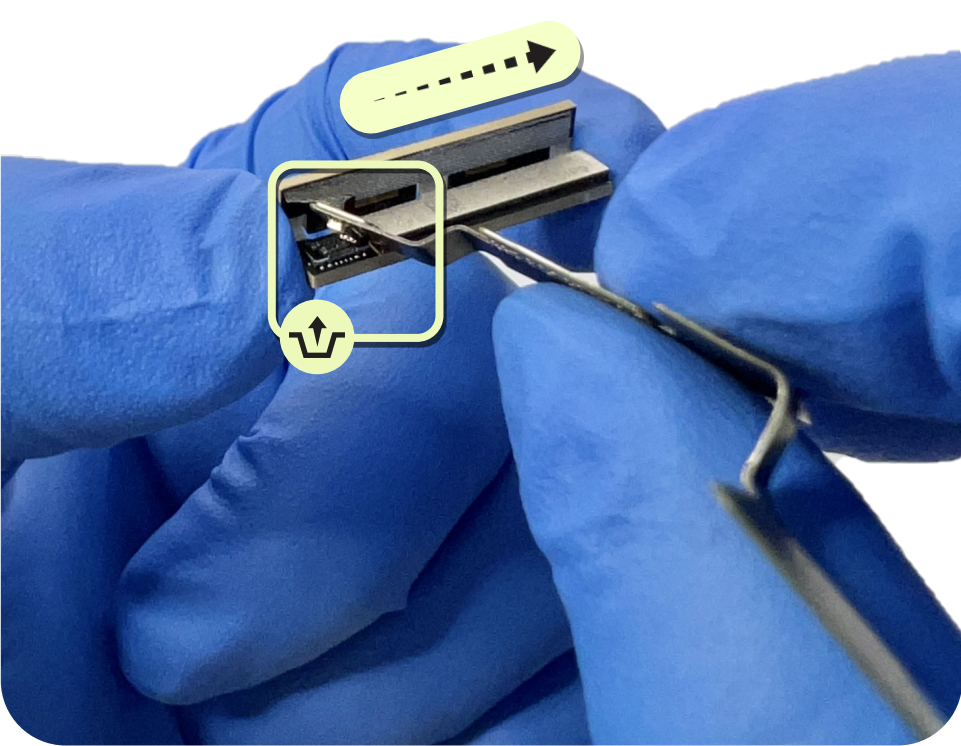
Separate the FPC and module

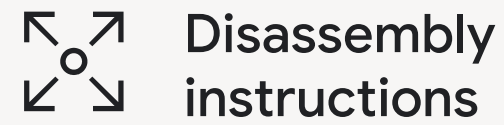
Separate FPC from 5G module and detach conductive fabric.



Use caution

Don't reuse the conductive fabric after removal.





Disassembly
instructions

Bottom speaker



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner or antenna housing**
- **Top speaker**
- **Logic board**



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

ESD spudger

ESD tweezers

✕ Parts

Bottom speaker

Here's the list of parts for the bottom speaker disassembly.

Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

Bottom speaker
G863-00506-01



Finished! Need assembly instructions? →

Remove the bottom speaker

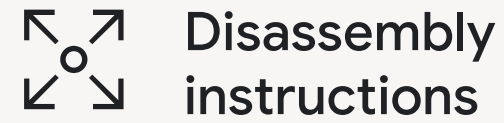
Use an ESD spudger to remove bottom speaker from the enclosure.



Use caution

Be careful. *Don't* damage the battery during the bottom speaker removal process.





Disassembly
instructions

Mic 1 bracket



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that should be removed first:

- **Back cover**
- **Inner or antenna housing**
- **Top speaker**
- **Logic board**



Tools

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

ESD spudger

ESD tweezers

✂ Parts

Mic 1 bracket

Here's the list of parts for the mic 1 bracket disassembly.

Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

Main mic holder

G730-07145-01



Finished! Need assembly instructions? →

Remove the mic 1 bracket

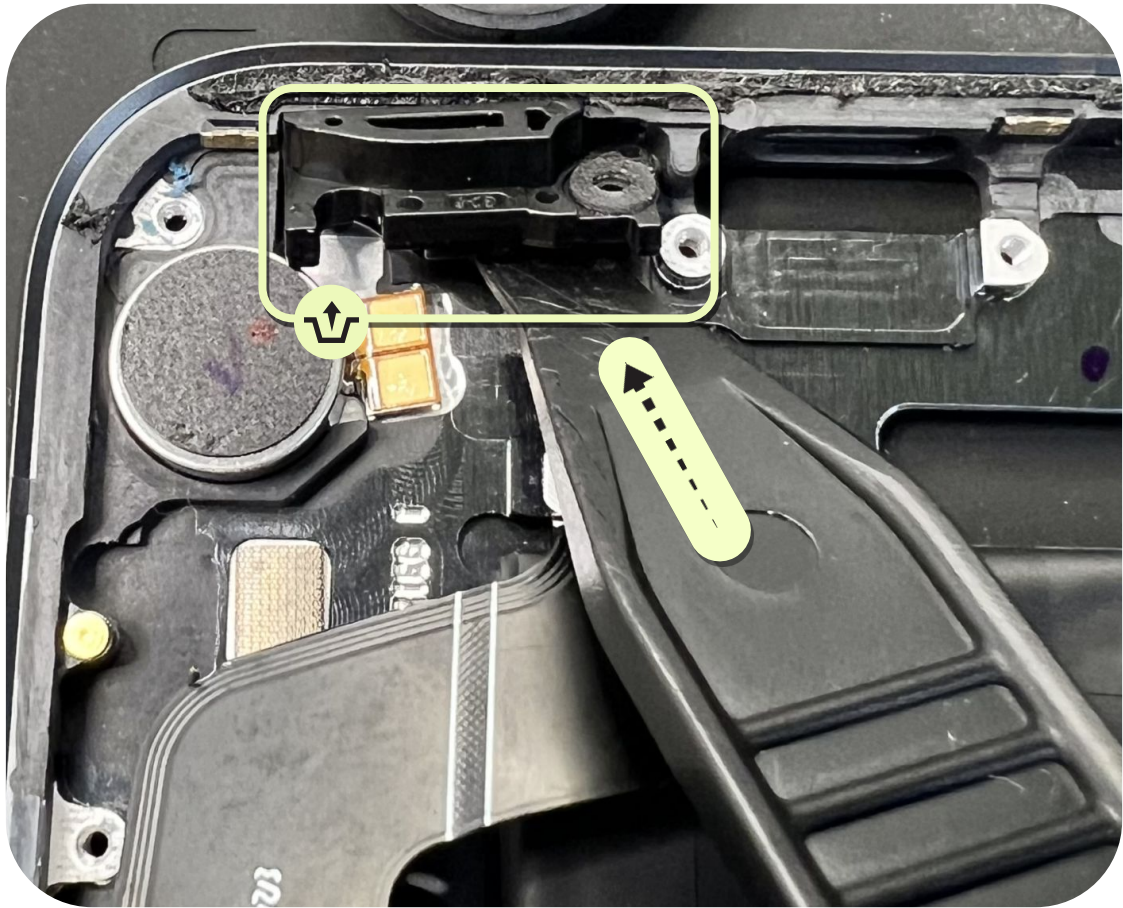
Insert the ESD spudger at the designated location shown in the figure to lift the mic 1 bracket.

Then remove the mic 1 bracket with the opening tool.



Use caution

Don't reuse the mic 1 bracket.





Disassembly
instructions

Vibrator



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner or antenna housing**
- **Top speaker**
- **Logic board**



Tools

Universal base plate 12mm	IPA
Universal holder	Cotton swabs
Universal holder limiting block	
Universal supporting rubber	
ESD spudger	
ESD tweezers	

✕ Parts

Vibrator


Here's the list of parts for the vibrator disassembly.

Reuse indications

- Reusable without cleaning
- Reusable after cleaning
- Not reusable after disassembly

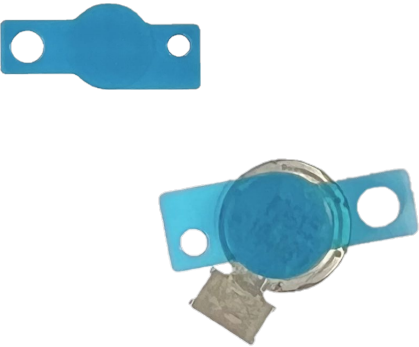
Vibrator

G710-02255-01/-02



Adhesive vibrator

G806-03299-01



Finished! Need assembly instructions? →

Remove the vibrator

Insert the ESD spudger below the vibrator in order to remove it from the enclosure.





Enclosure



Use caution

Review all **safety precautions** before you begin work.



Prerequisites

Here's the list of components that you should remove first:

- **Back cover**
- **Inner housing**
- **Top speaker**
- **Logic board**
- **mmWave**
(only for VZW device)
- **Bottom speaker**
- **Mic 1 bracket**
- **Vibrator**
- **Battery**



Tools

Universal base plate 12mm	IPA
Universal holder	Cotton swabs
Universal holder limiting block	
Universal supporting rubber	
ESD spudger	
ESD tweezers	

[Parts](#)[Finished! Need assembly instructions? →](#)**Reuse indications**Reusable without
cleaningReusable after
cleaningNot reusable
after disassembly

Enclosure

Here's the list of parts for the enclosure disassembly.

Enclosure

Multiple part numbers

**Battery adhesive L+R**

G806-12579-01

**Adhesive
FCAM pre-fix**

G806-06785-01

**Adhesive
enclosure to BC**

G806-12578-01

**Adhesive (small)
enclosure to display**

G806-07293-01

**Diecut, conductive
foam, 5G module**

G806-06776-01

**Adhesive, 5G FPC,
enclosure**

G806-08918-02

**Adhesive
5G FPC enclosure**

G806-08968-01

**Adhesive
enclosure to CG**

G806-12606-01

[Back Cover](#)[Inner Housing](#)[Battery](#)[Top Speaker](#)[Logic Board](#)[Front Camera](#)[Rear Camera](#)[mmWave](#)[Bottom Speaker](#)[Mic 1 Bracket](#)[Vibrator](#)[Enclosure](#)



Pixel 8a repair manual

Assembly-BC

Enclosure

Front camera

Battery

Vibrator

Rear camera

Inner housing

Mic 1 bracket

Logic board

Back cover

Bottom speaker

Top speaker

mmWave



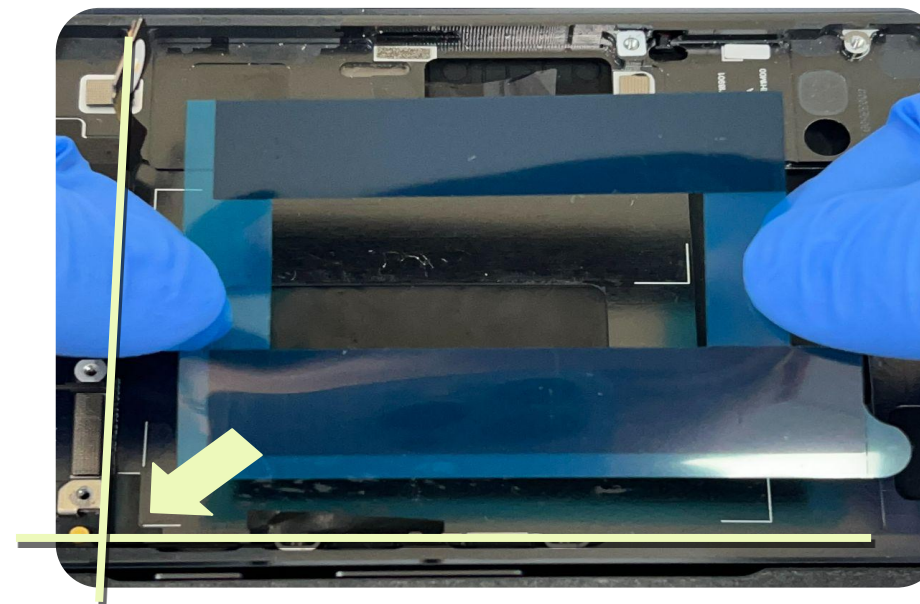
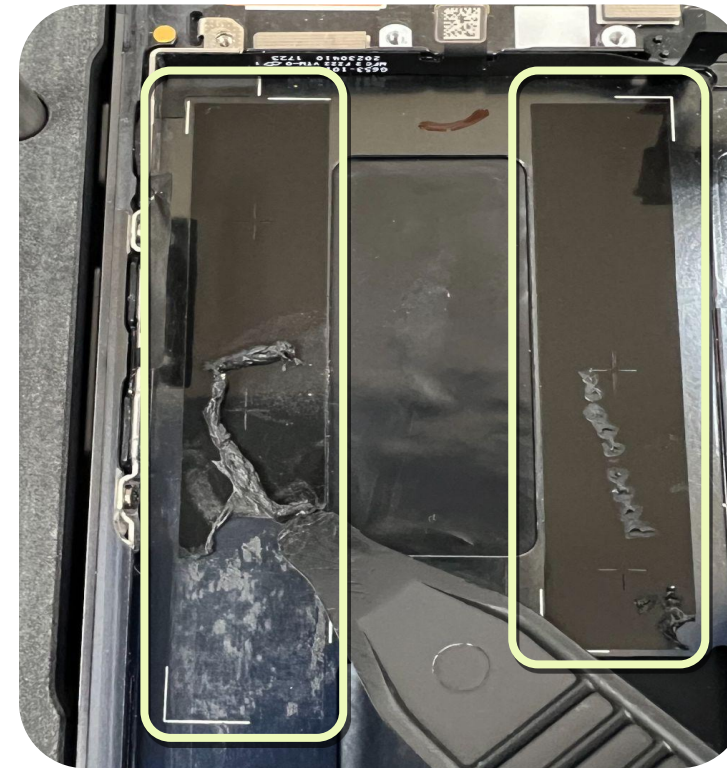
Assembly
instructions

Enclosure

Rework the battery area

- Use an ESD spudger to remove the battery adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste new battery adhesive on the enclosure.
- Use the white corners marked on the enclosure, along with the SLAM FPC and side key wall, as alignment points.

Part: G806-12579-01 (Battery adhesive L+R)



Rework the FCAM FPC area

- Use an ESD spudger to clean the front camera FPC adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste a new front camera FPC adhesives on the enclosure.

Part: G806-06785-01 (Adhesive FCAM prefix)

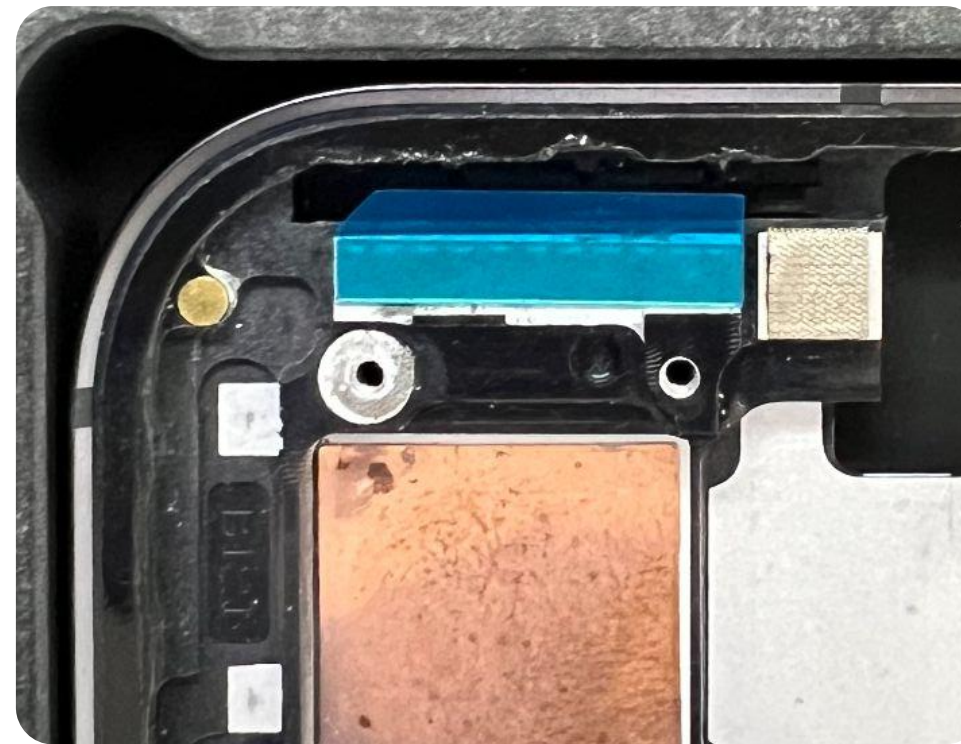
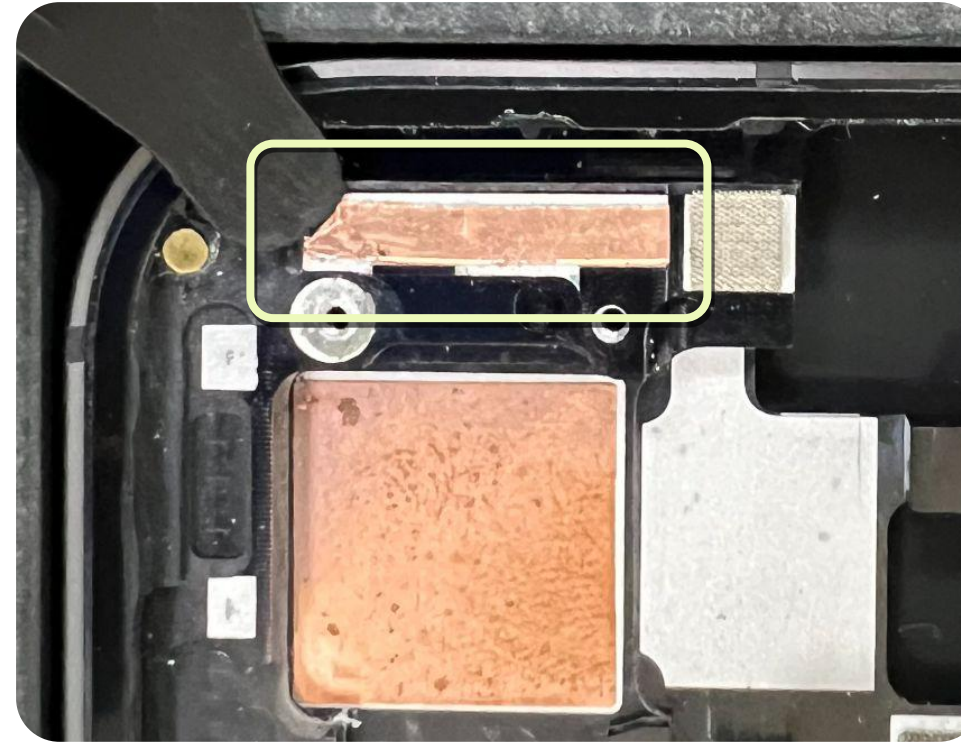


Rework 5G module area

(mmWave only)

- Use an ESD spudger to clean the 5G module adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste a new 5G module adhesive on the enclosure.

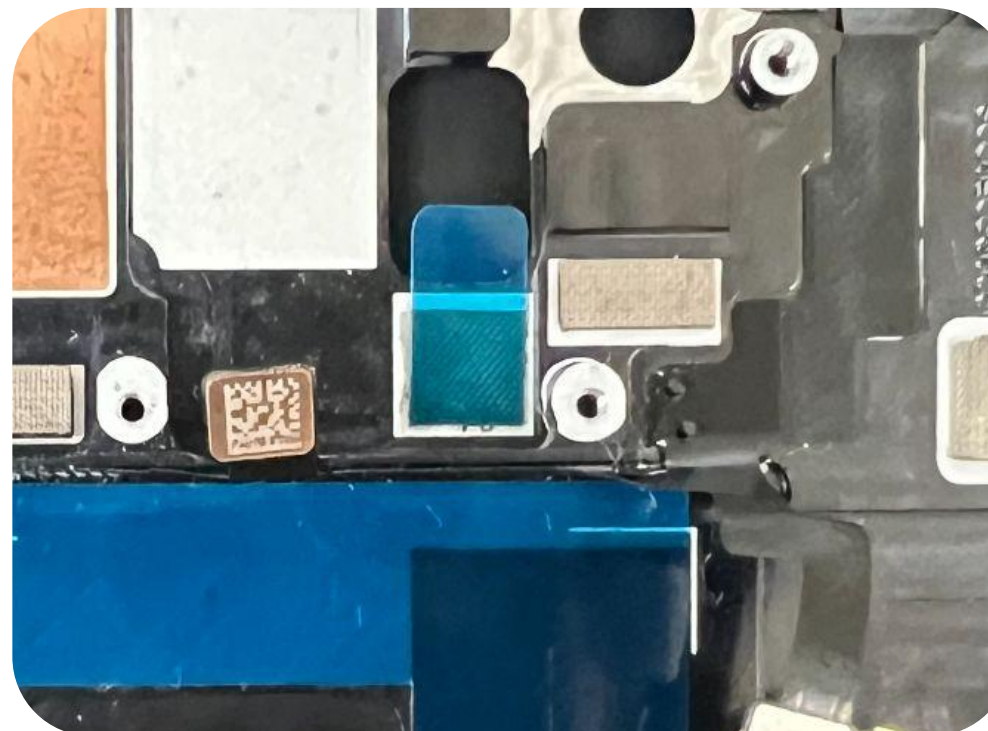
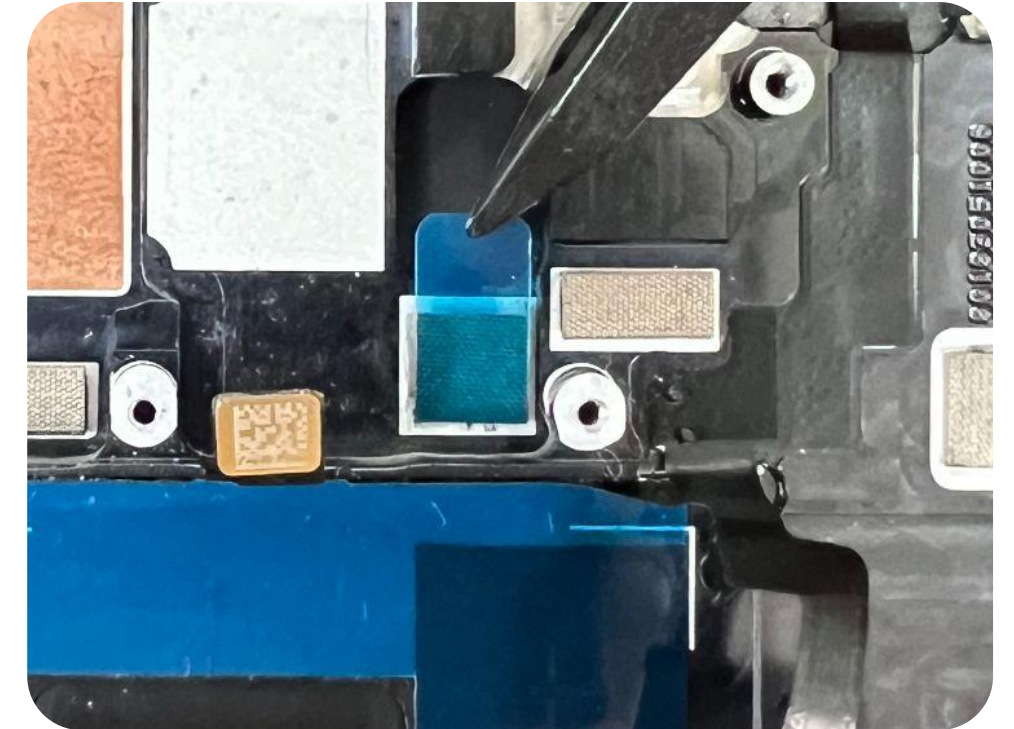
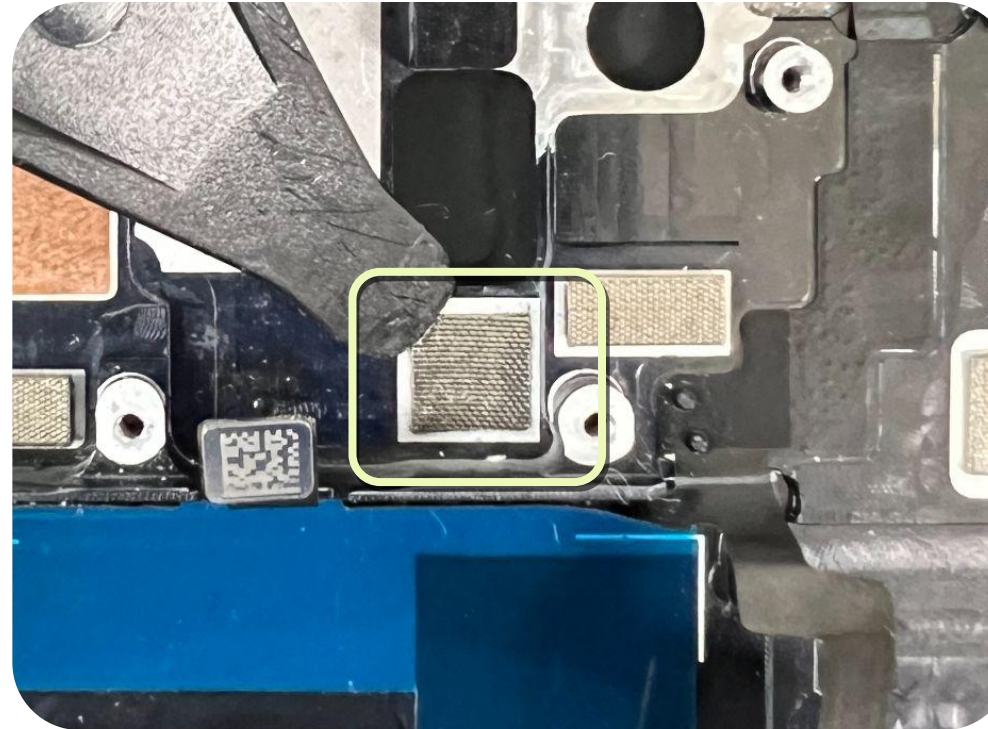
Part: G806-08918-02 (Adhesive, 5G CP5A, enclosure)



Rework the 5G FPC area (mmWave only)

- Use an ESD spudger to clean the 5G module adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste a new 5G module adhesive on the enclosure.

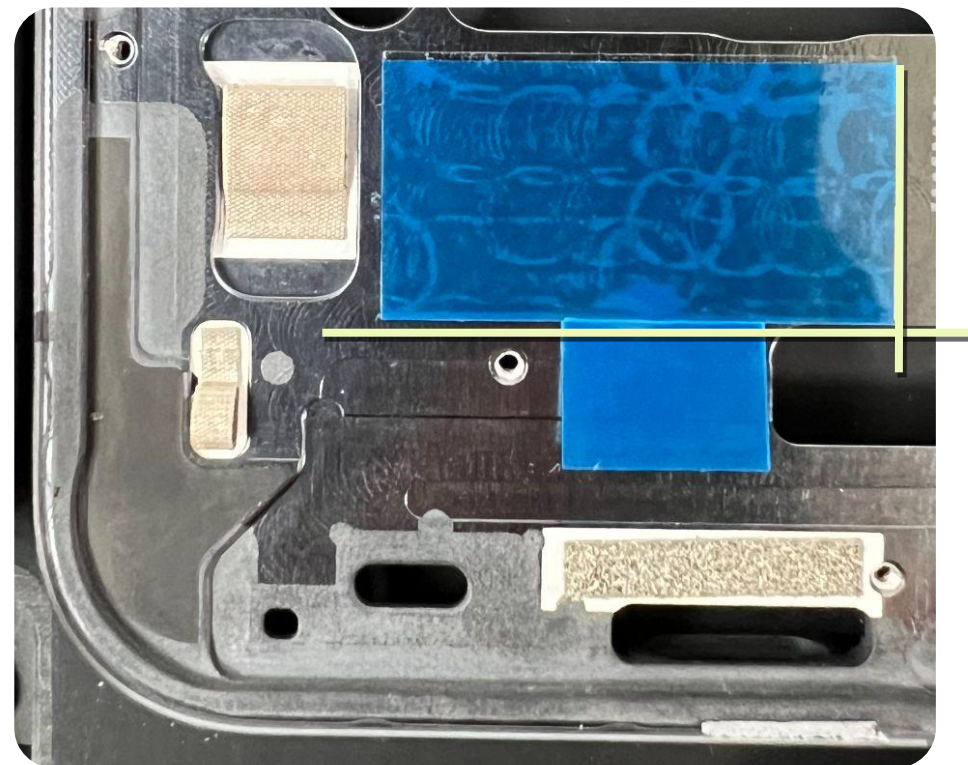
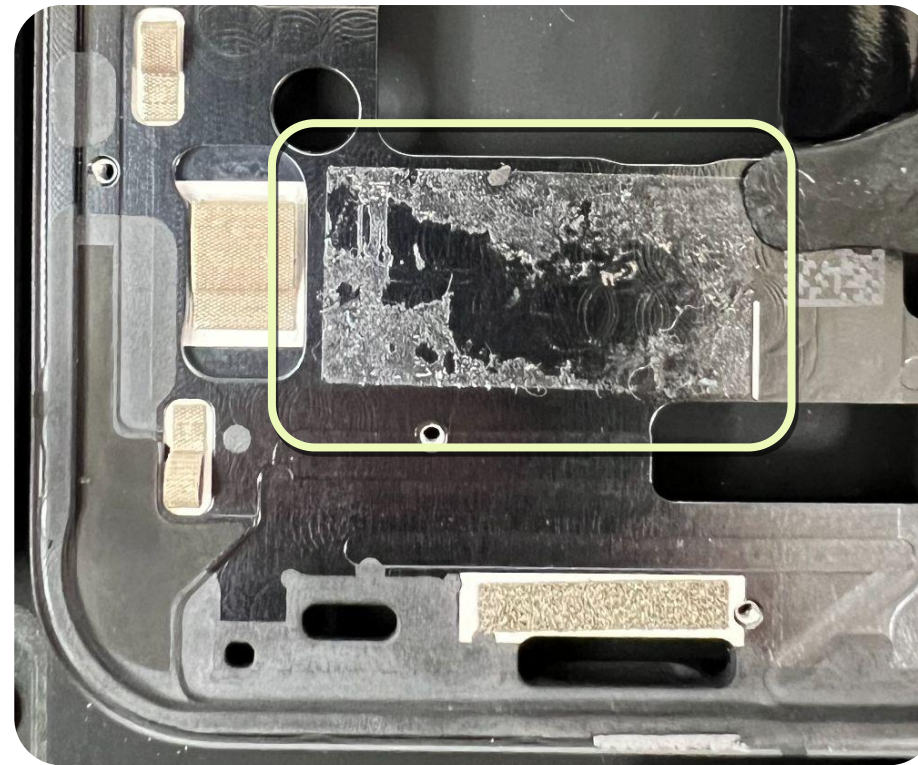
Part: G806-08968-01 (Adhesive, 5G FPC, enclosure)



Rework the display side enclosure

- Use an ESD spudger to clean the enclosure adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste a new display adhesive on the enclosure.

Part: G806-07293-01 (Adhesive enclosure to display)



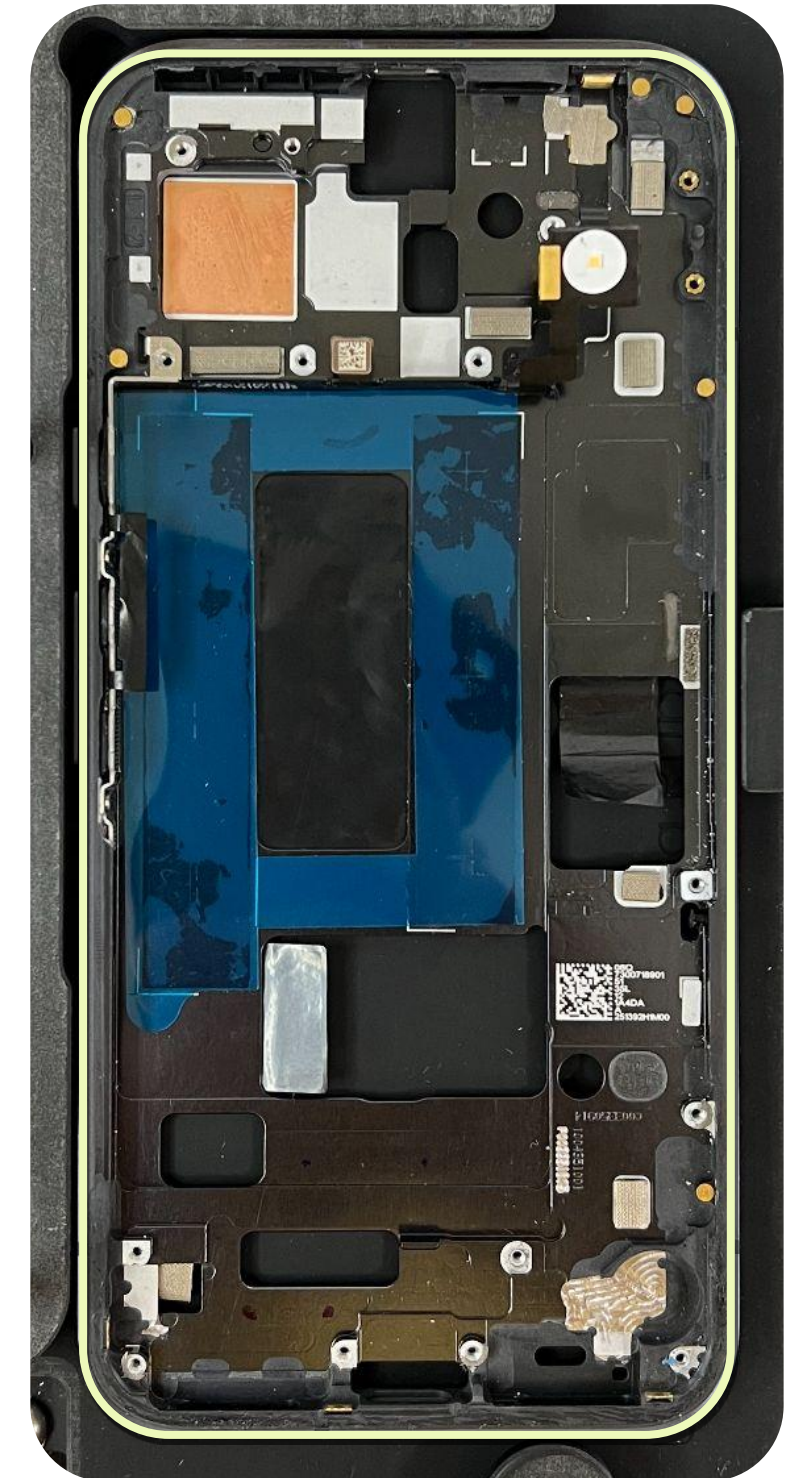
Rework the enclosure PSA area

- Use an ESD spudger or Electric glue remover tool to carefully clean the adhesive around the outer edge of the enclosure.
- Use cotton swabs with IPA to wipe the surface and remove any residue.

Display side



Back cover side



Apply AP111 on the enclosure

- Apply AP111 around the entire enclosure twice and follow the same steps as above.

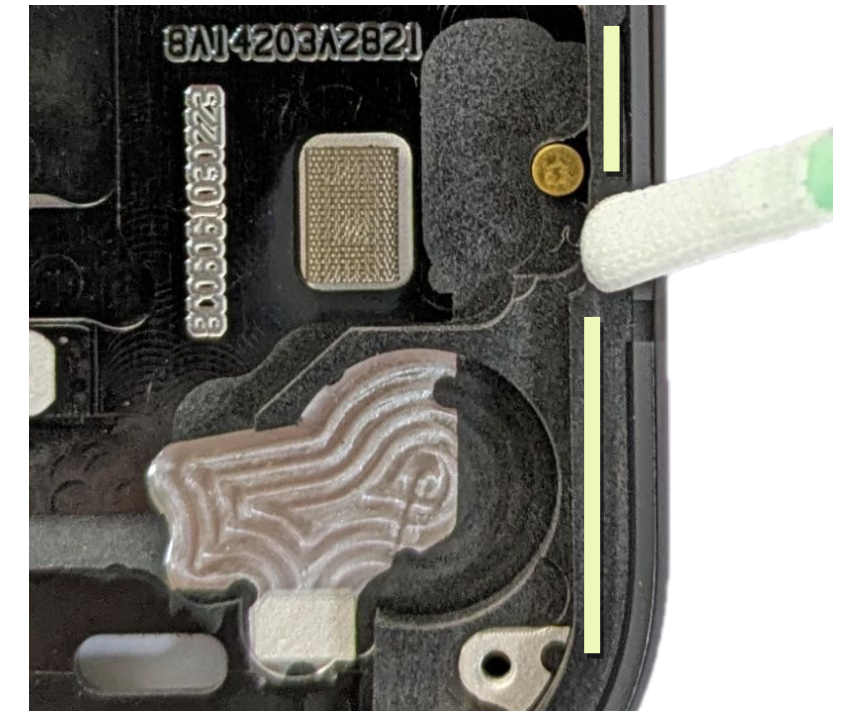


Use caution

1. Don't apply excessive primer. It could overflow.
2. Apply primer in one direction. Don't rub back and forth.



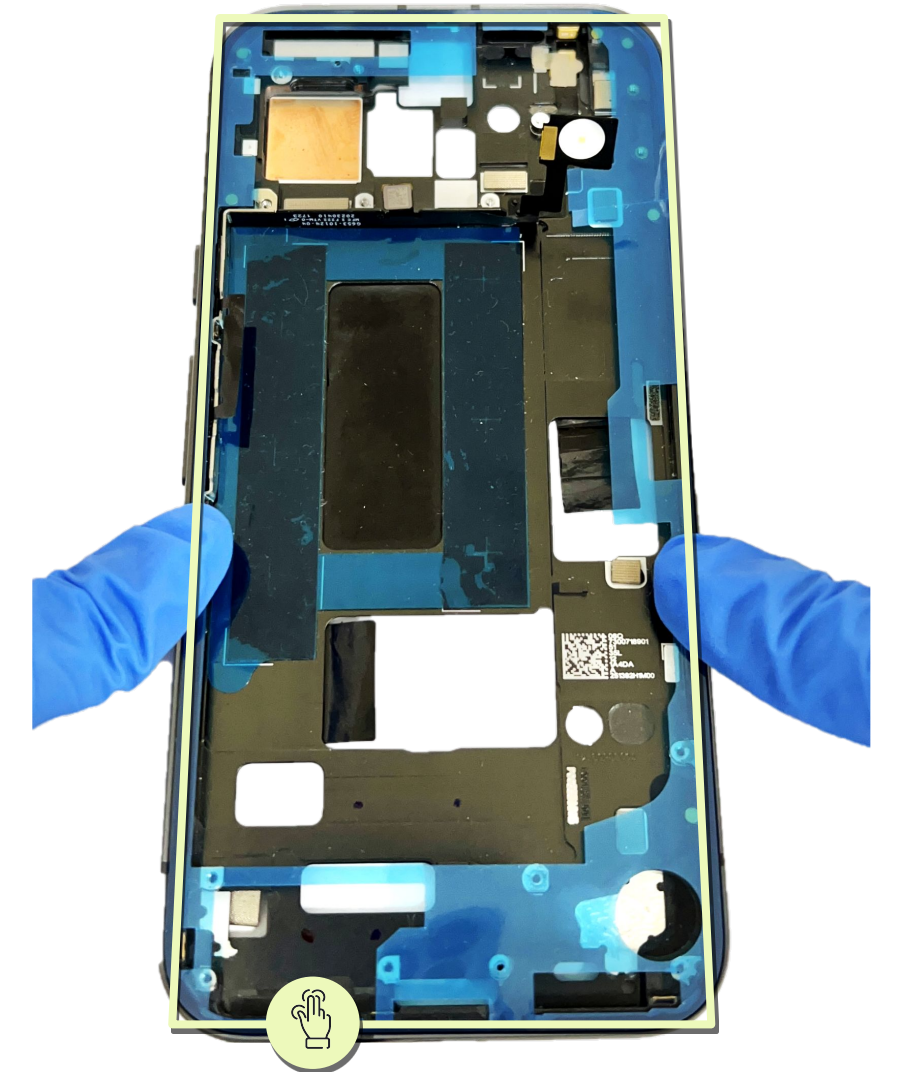
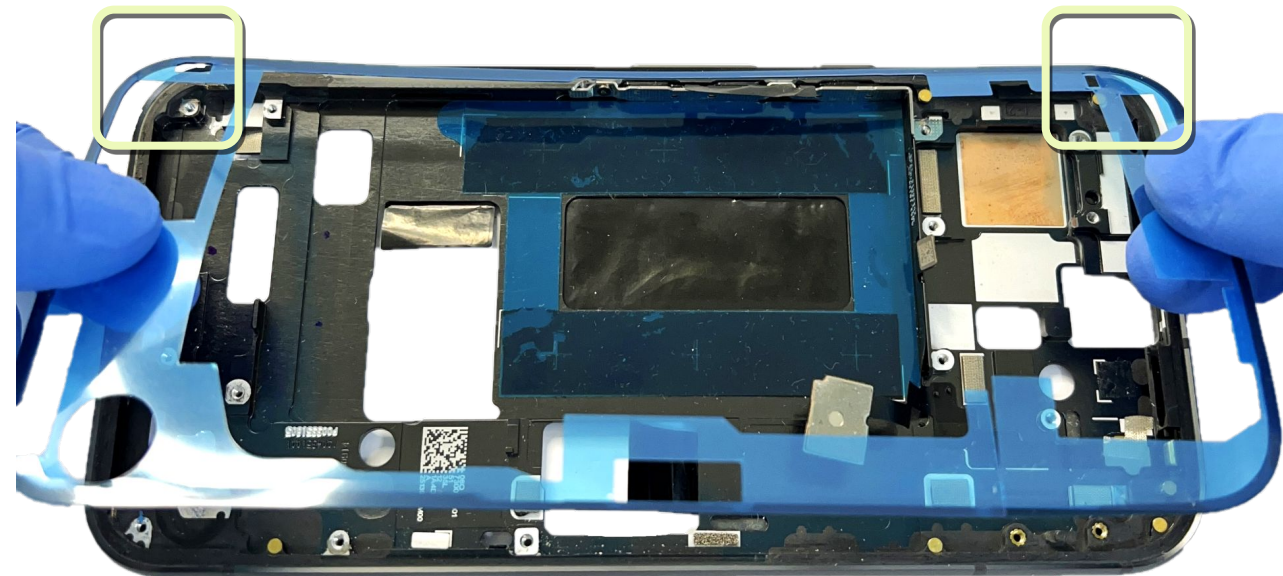
x2



Enclosure to adhesive

- Hold the enclosure PSA above the enclosure and align it with the upper-left and upper-right corners first.
- After the alignment is confirmed, slowly lower the enclosure PSA onto the enclosure.
- Firmly apply pressure to attach PSA.
- Slowly remove the large release liner from enclosure with ESD tweezers.

Part: G806-12578-01 (Adhesive enclosure to BC)





Assembly
instructions

Vibrator

Rework the vibrator

(for reused vibrator)

- Remove the adhesive from the vibrator with an ESD spudger.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste a new adhesive on the vibrator.

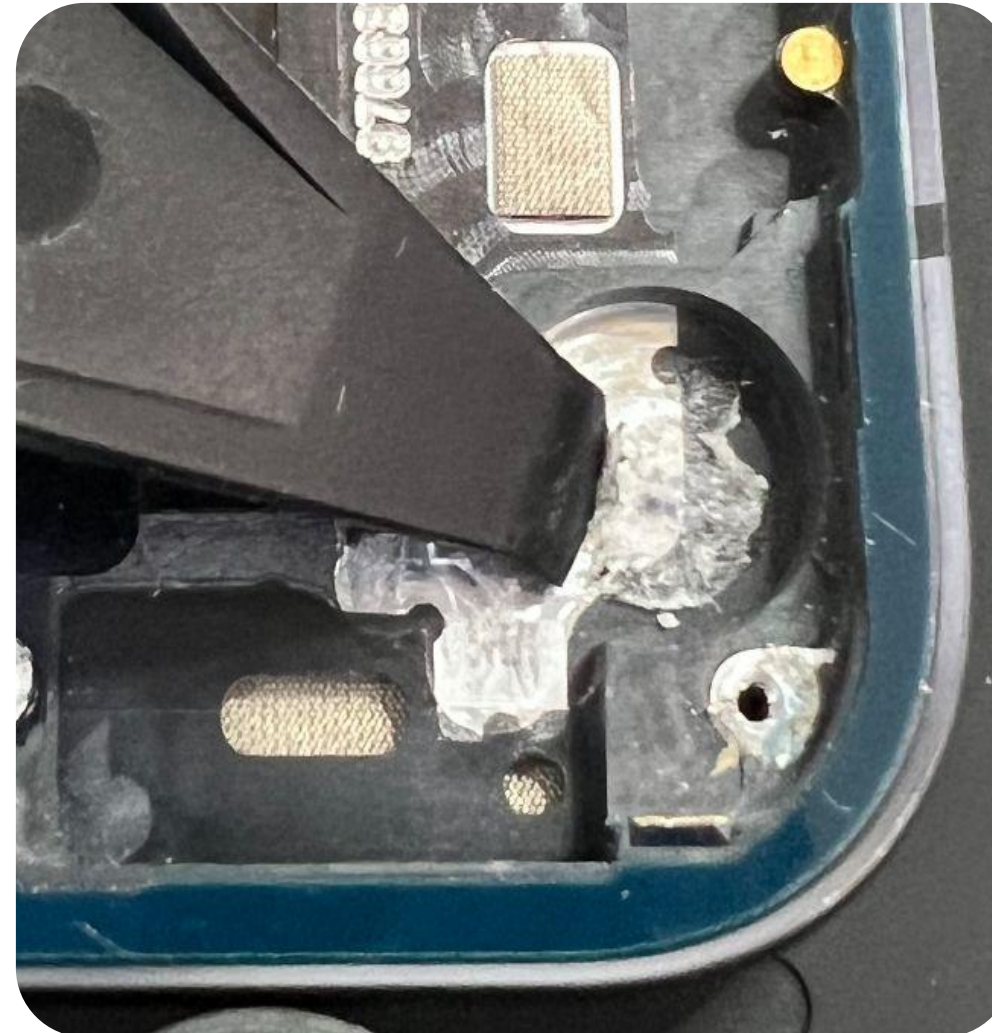
Parts: G806-03299-01 (Vibrator adhesive)



Rework the vibrator area

(for reused enclosure)

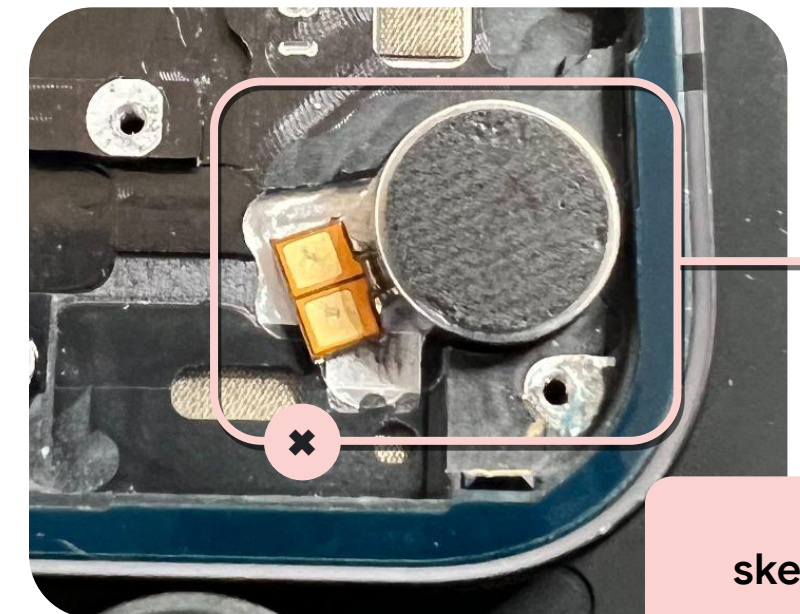
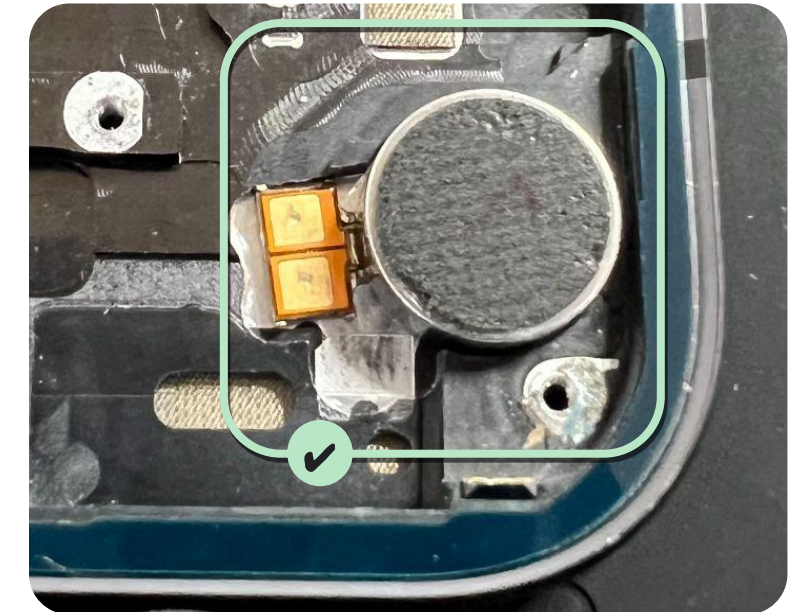
- Use an ESD spudger to remove the vibrator adhesive.
- Use cotton swabs with IPA to wipe the surface and remove any residue.



Install the vibrator

- Remove the release liner from the vibrator adhesive.
- Install the vibrator into the enclosure by aligning it to the cutouts in the enclosure.
- Apply pressure to the vibrator to ensure that it adheres to the enclosure.

Parts: G710-02255-01/-02 (Vibrator)



skewed



Assembly
instructions

Mic 1 bracket

Install mic 1 bracket

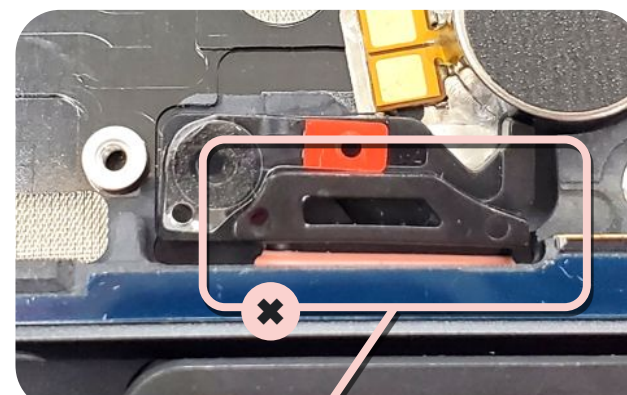
- Use ESD tweezers to remove the release liner attached to the bracket mesh before you install the bracket.
- Apply Sankol lubricant to the mic 1 bracket red gasket area.
- Install the mic 1 bracket into the enclosure so that the red rubber area isn't visible.

Part: G730-07145-01 (Main mic holder)

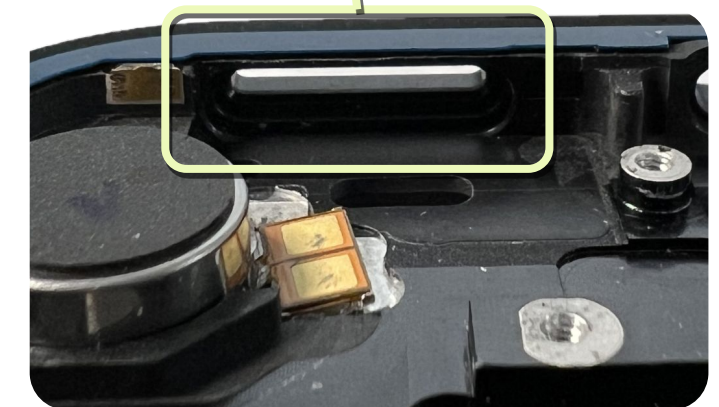


Use caution

Make sure that the mic 1 bracket is installed firmly against the wall, without any open gaps.



Red gasket shouldn't be visible.





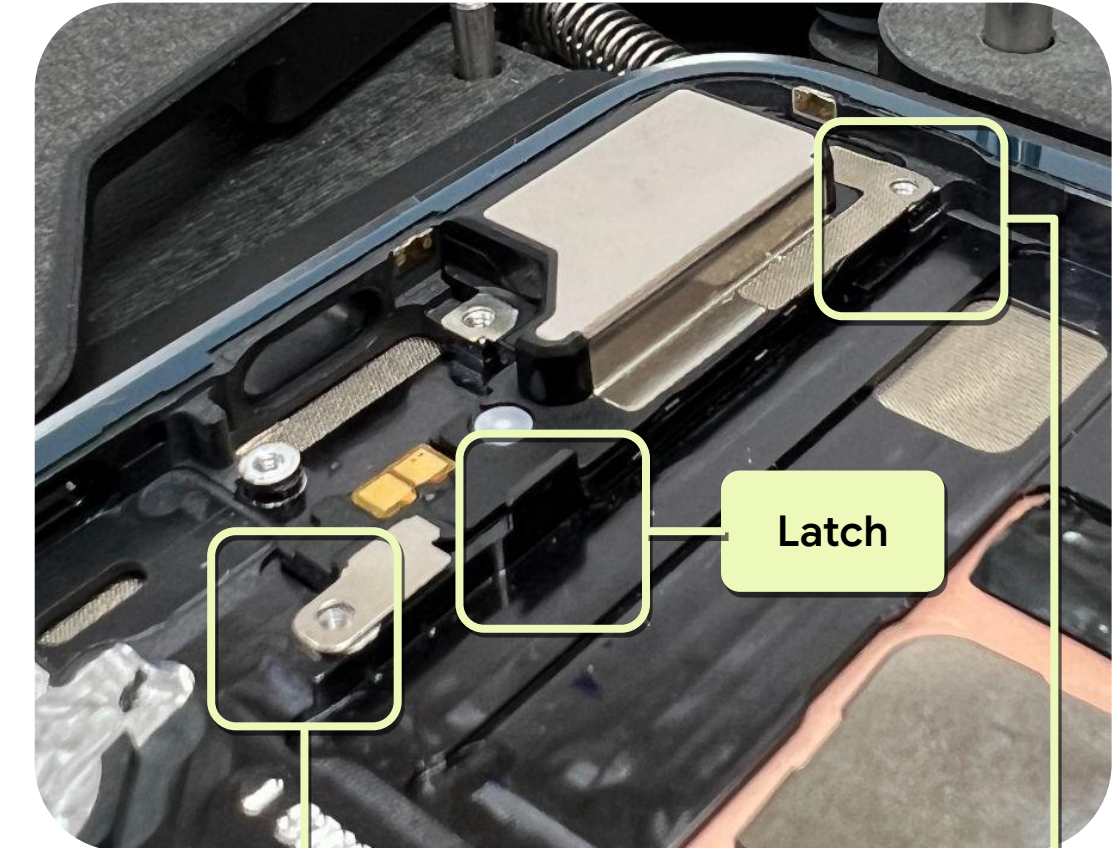
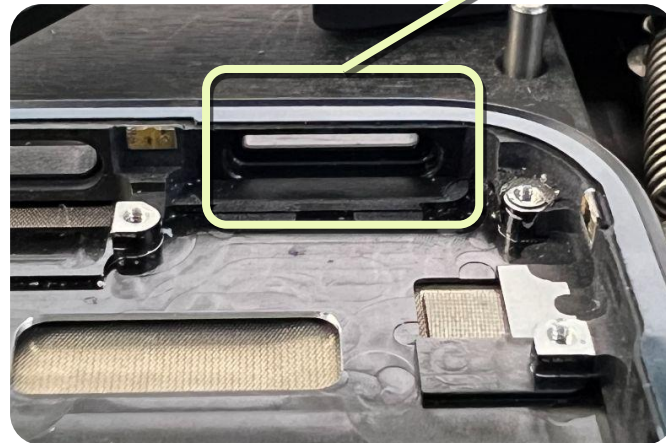
Assembly
instructions

Bottom speaker

Install the bottom speaker

- Apply Sankol lubricant to the gasket before installation.
- Install the bottom speaker onto the enclosure.
- Secure the bottom speaker with one latch and one slot on the enclosure.
- Lightly press the bottom speaker to complete the installation.

Part: G863-00506-01 (Bottom speaker)



Latch

Washers need to be flat to boss.



Assembly
instructions

mmWave

Connect the FPC and module

Connect the mmWave FPC to the mmWave module.

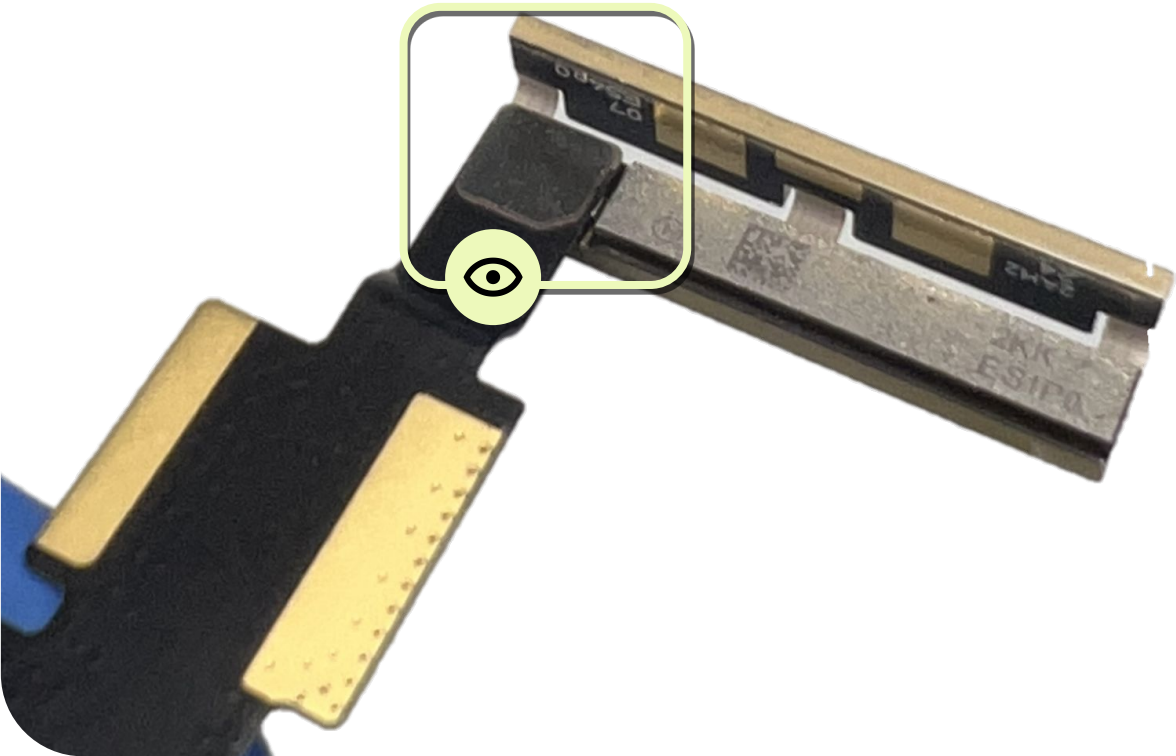
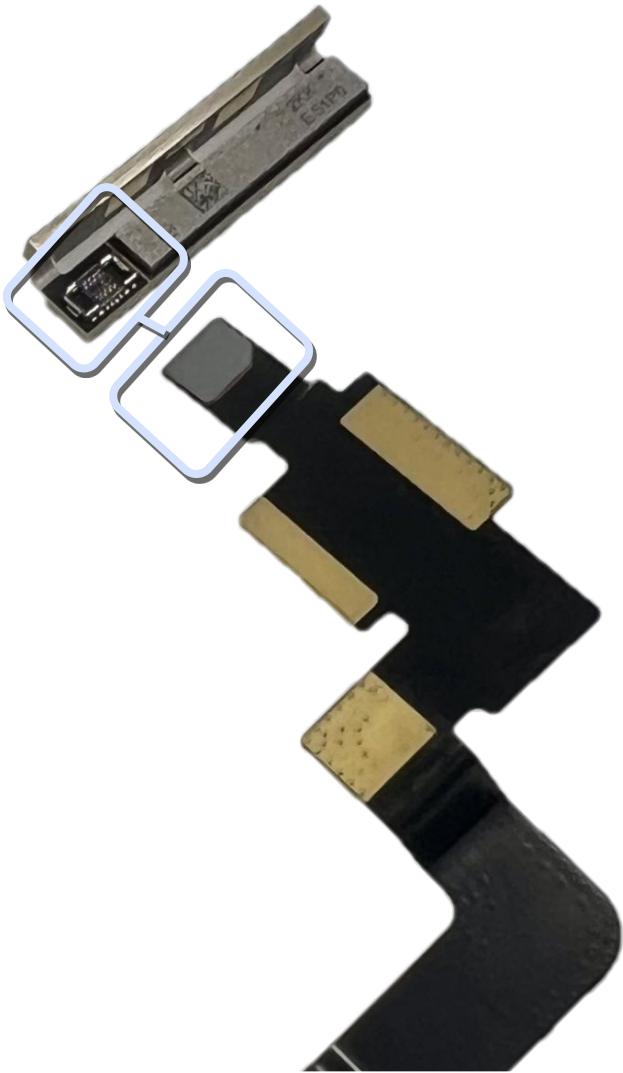
Part: G345-01353-06 (mmWave module)

Part: G652-10140-02 (mmWave FPC)



Use caution

Make sure that the connector attaches securely.



Attach the conductive fabric

- Remove the two red color release liners from the conductive fabric, as shown in Fig 1.
- Paste the conductive fabric to bridge across the top of the FPC connector onto the mmWave module, as shown in Fig 2.
- Use an ESD spudger to smooth the conductive fabric against the side wall of the mmWave module, as shown in Fig 3.
- Remove two release liners from the mmWave module and FPC, as shown in Fig 4.

Part: G806-08990-01 (Conductive fabric 5G module)

Fig 1

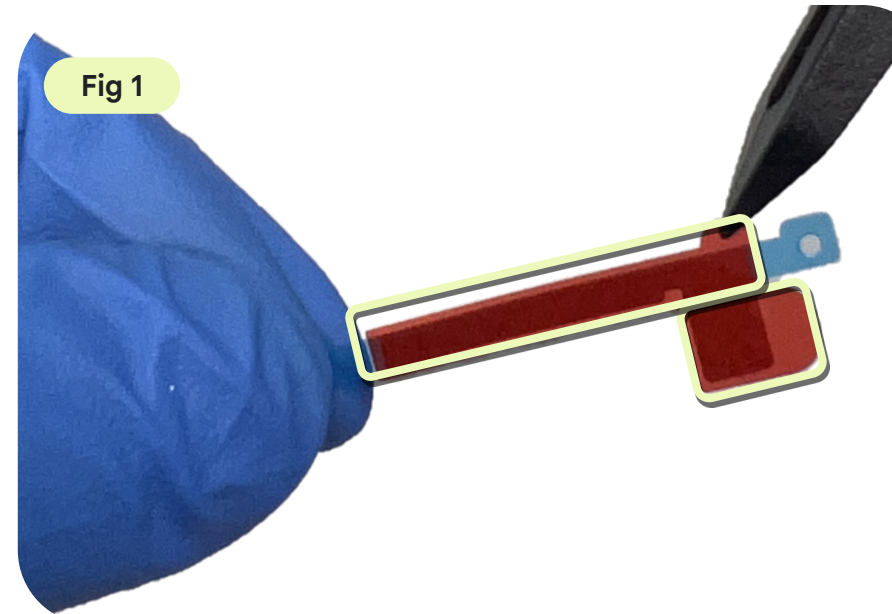


Fig 2

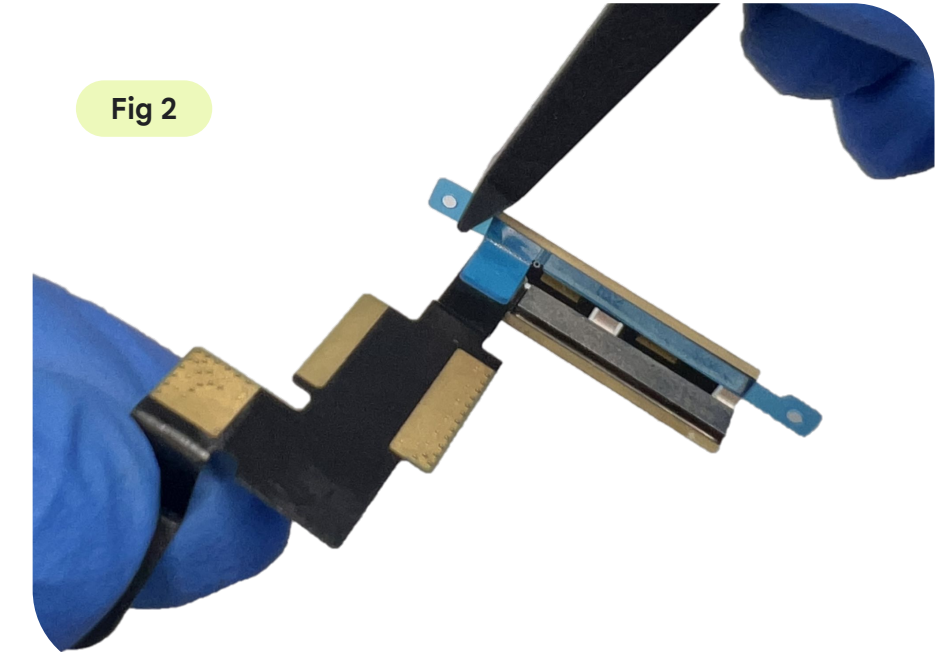


Fig 3

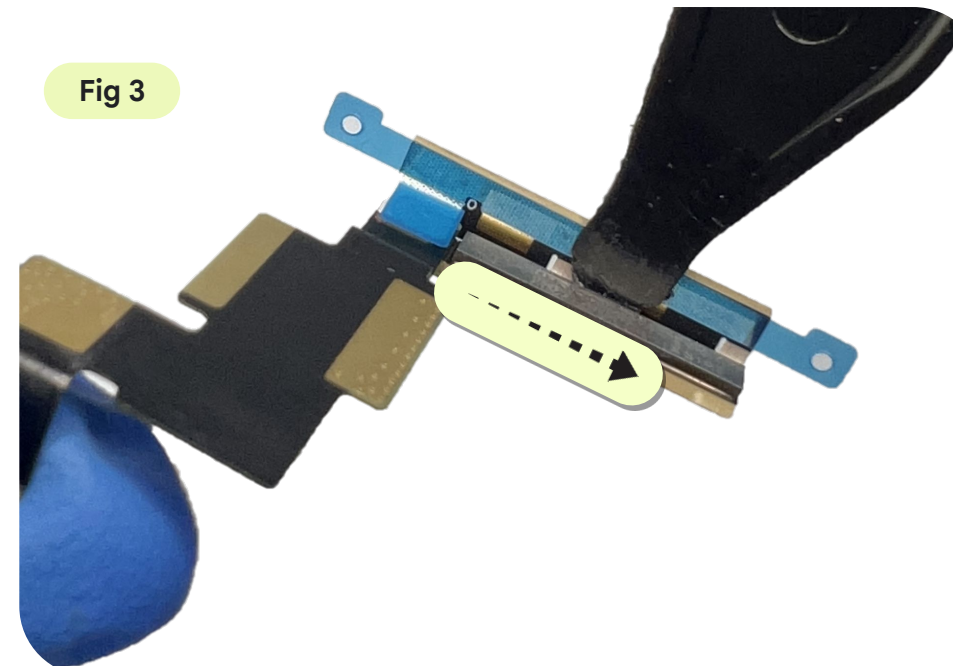
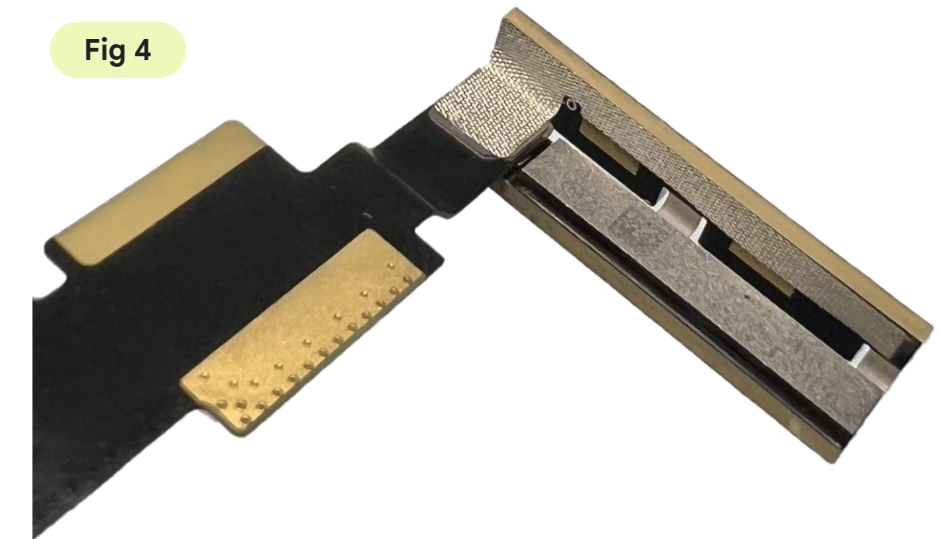


Fig 4





Assembly
instructions

Front camera

Install the front camera

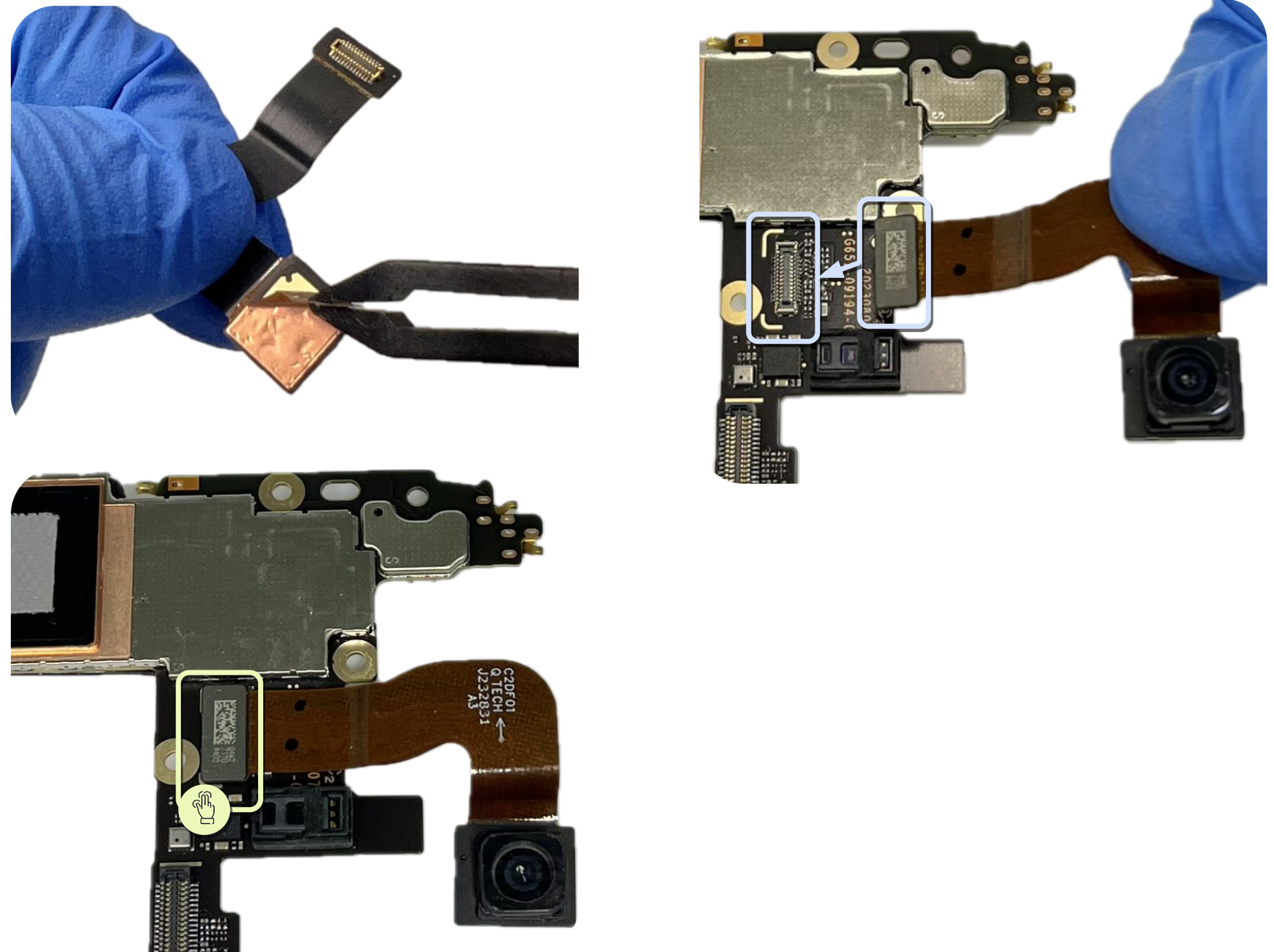
- Remove the FCAM copper foil.
- Install the front camera to the designated location on the logic board.
- Apply pressure to confirm alignment.

Part: G949-00791-00 (Front camera)



Use caution

Make sure that the connector attaches securely to the logic board.



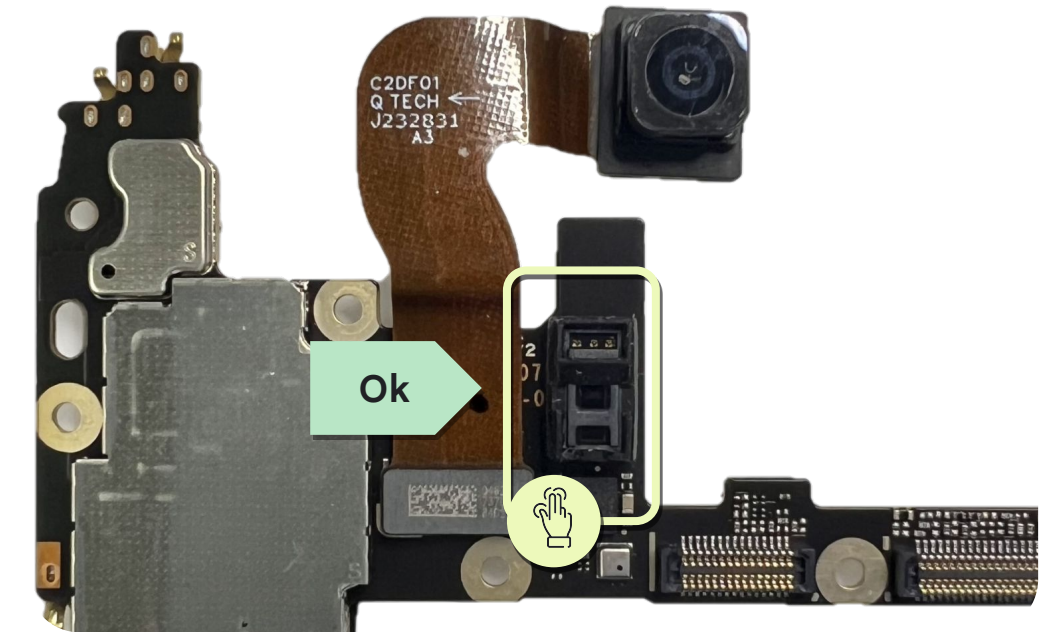
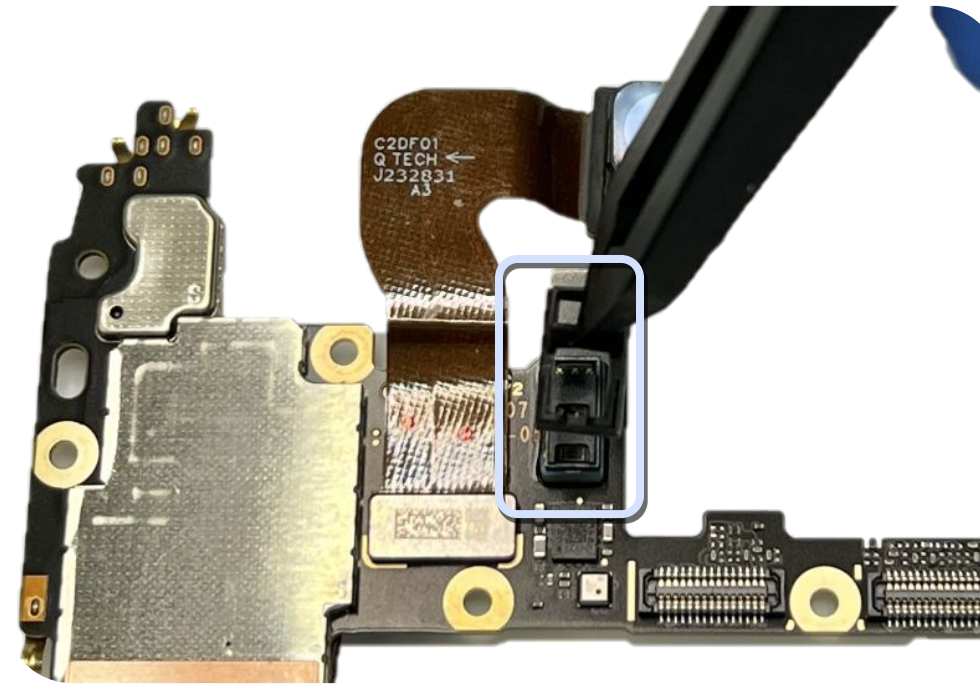
Install the P-sensor rubber

- Use ESD tweezers to hold the middle rib of the P-sensor rubber to install it.
- Make sure that the P-sensor rubber is assembled correctly.

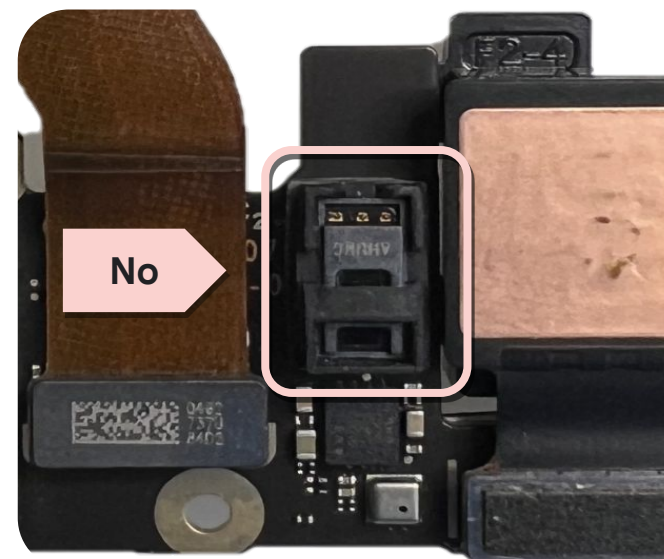
Part: G804-01110-01 (P-sensor rubber)

Note

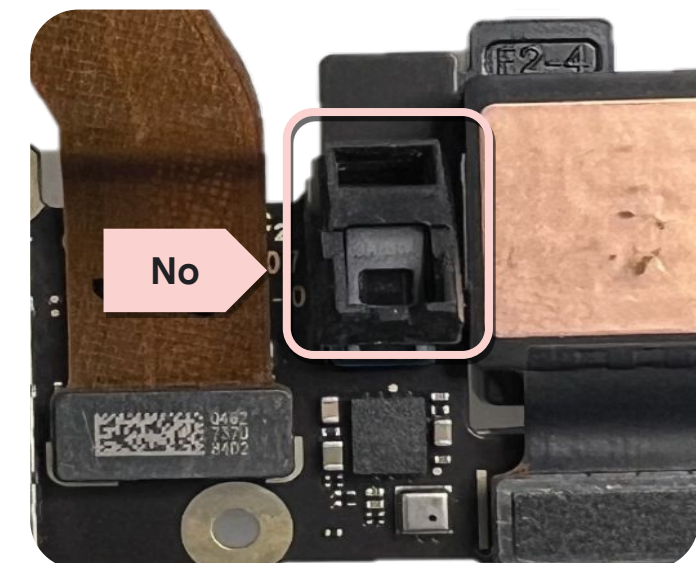
Only replace the P-sensor rubber when it's damaged.



Wrong direction



Skewed





Assembly
instructions

Rear camera

Install the RCAM holder and RCAM to MLB

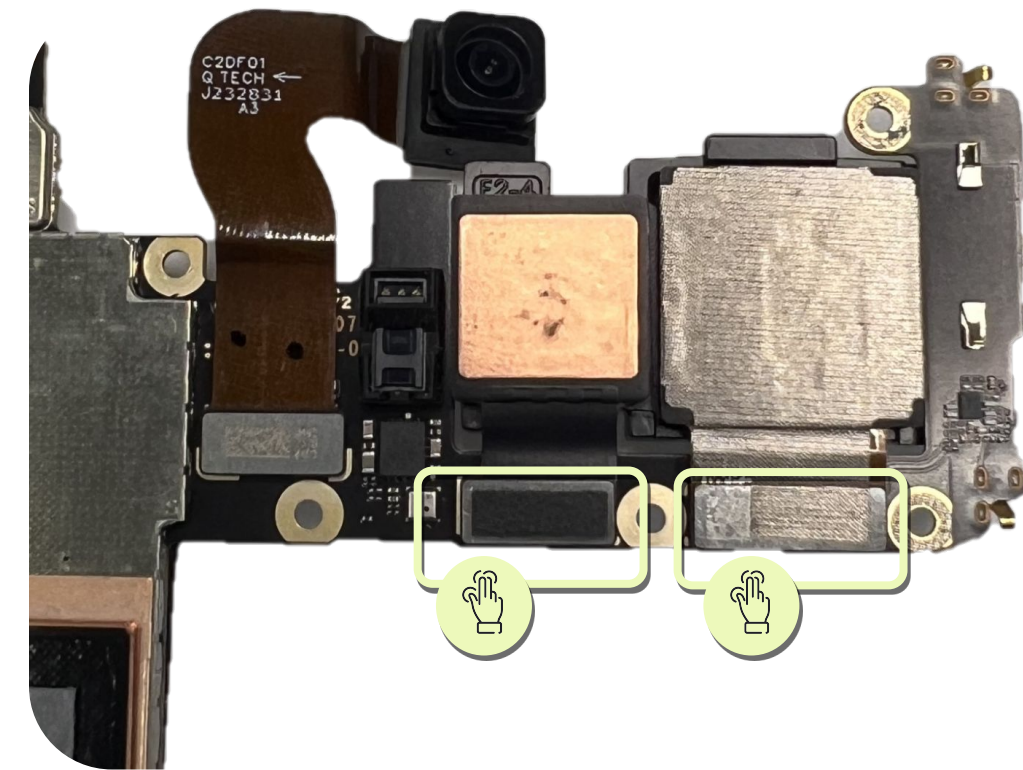
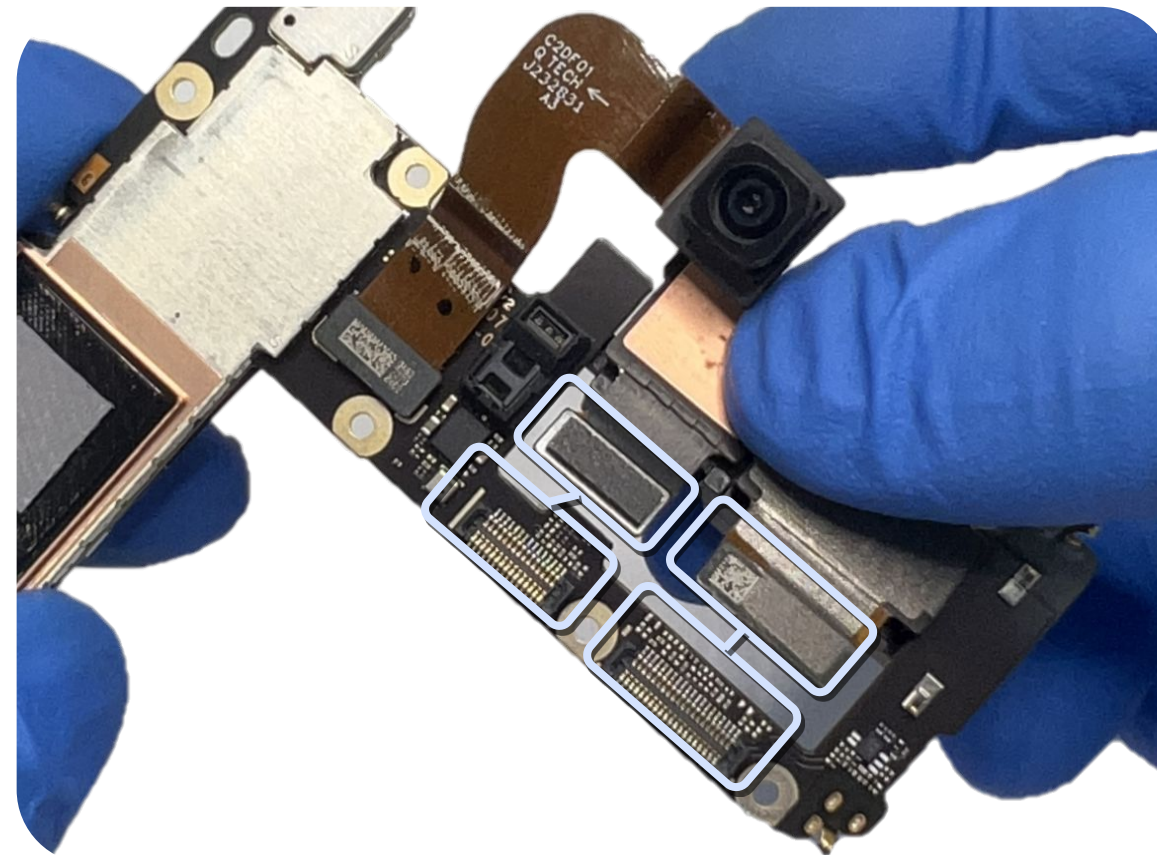
- Assemble the camera holder to the logic board.
- Attach the UW and wide camera BTB connectors to the logic board, and ensure that they're fully engaged.



Use caution

Don't touch the camera lenses.

Make sure that the connectors attaches securely to the logic board.





Assembly
instructions

Logic board

Rework the logic board

(for a reused logic board)

If any conductive fabric washers are damaged:

- Use an ESD spudger to clean up any damaged conductive fabric washers.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Paste the conductive fabric washers on the logic board, then remove the release liners from each one.

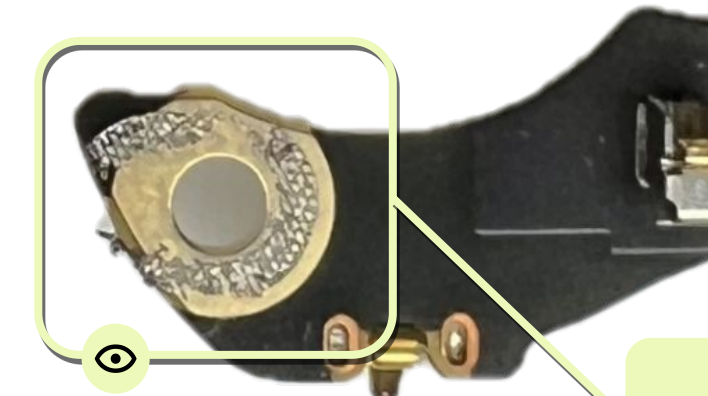
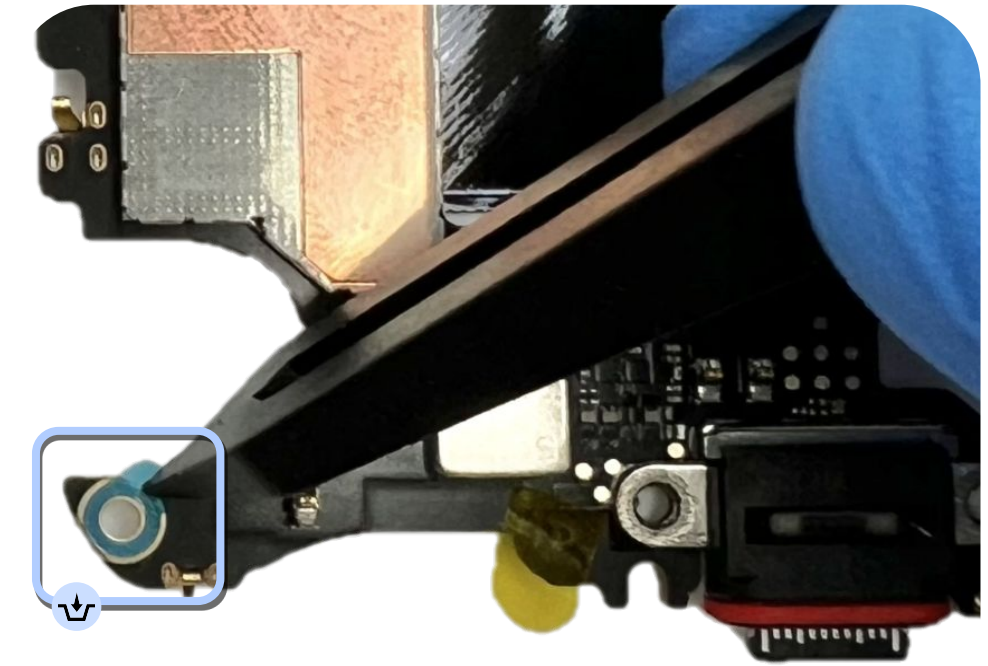
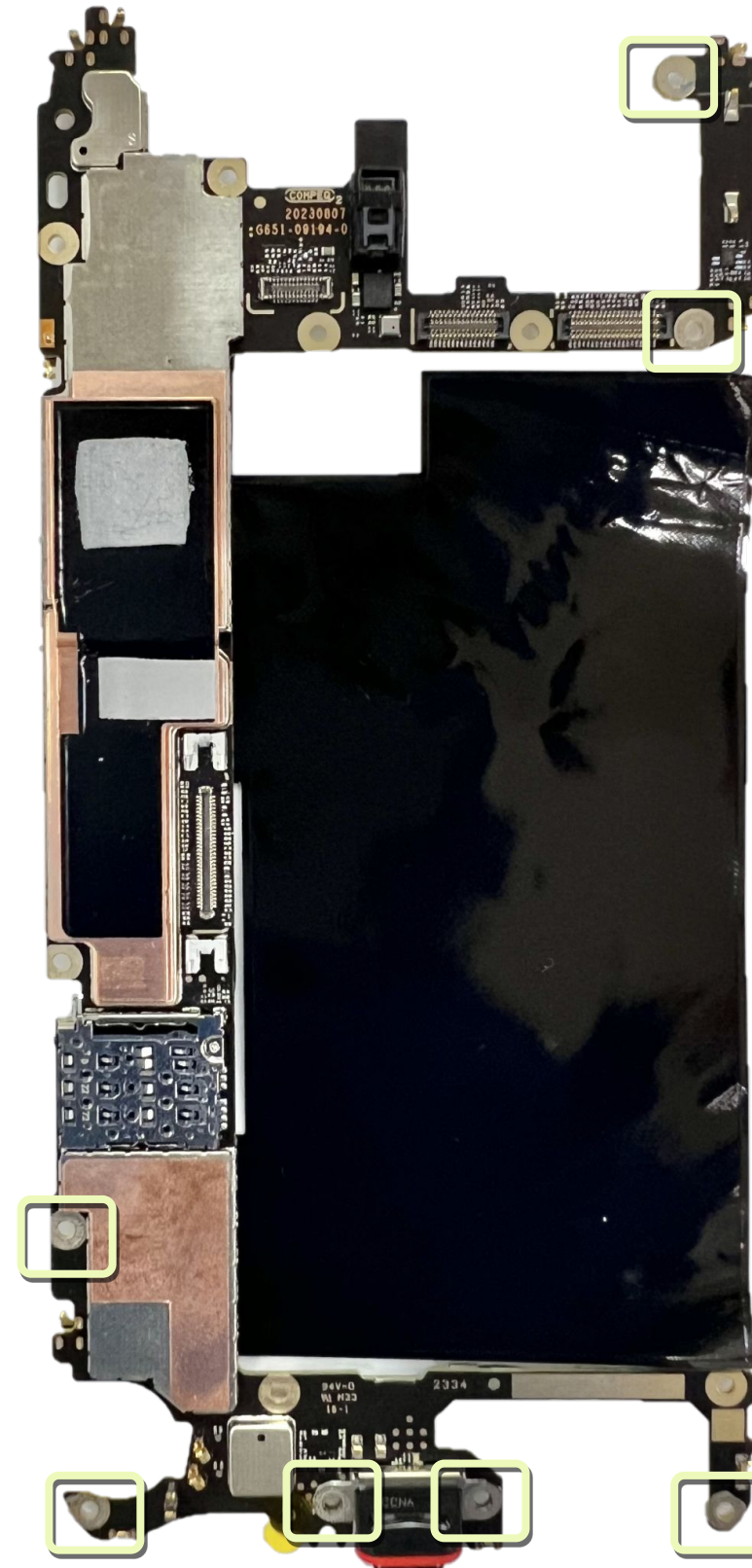
Part: G806-07457-01 (Conductive fabric washer)

Use caution



If the conductive fabric washer is broken, clean up the area and apply a new one.

If the washer is in good condition, no action is needed.



Washer broken

Rework the thermal pad

(for a reused logic board)

If the thermal pad is damaged:

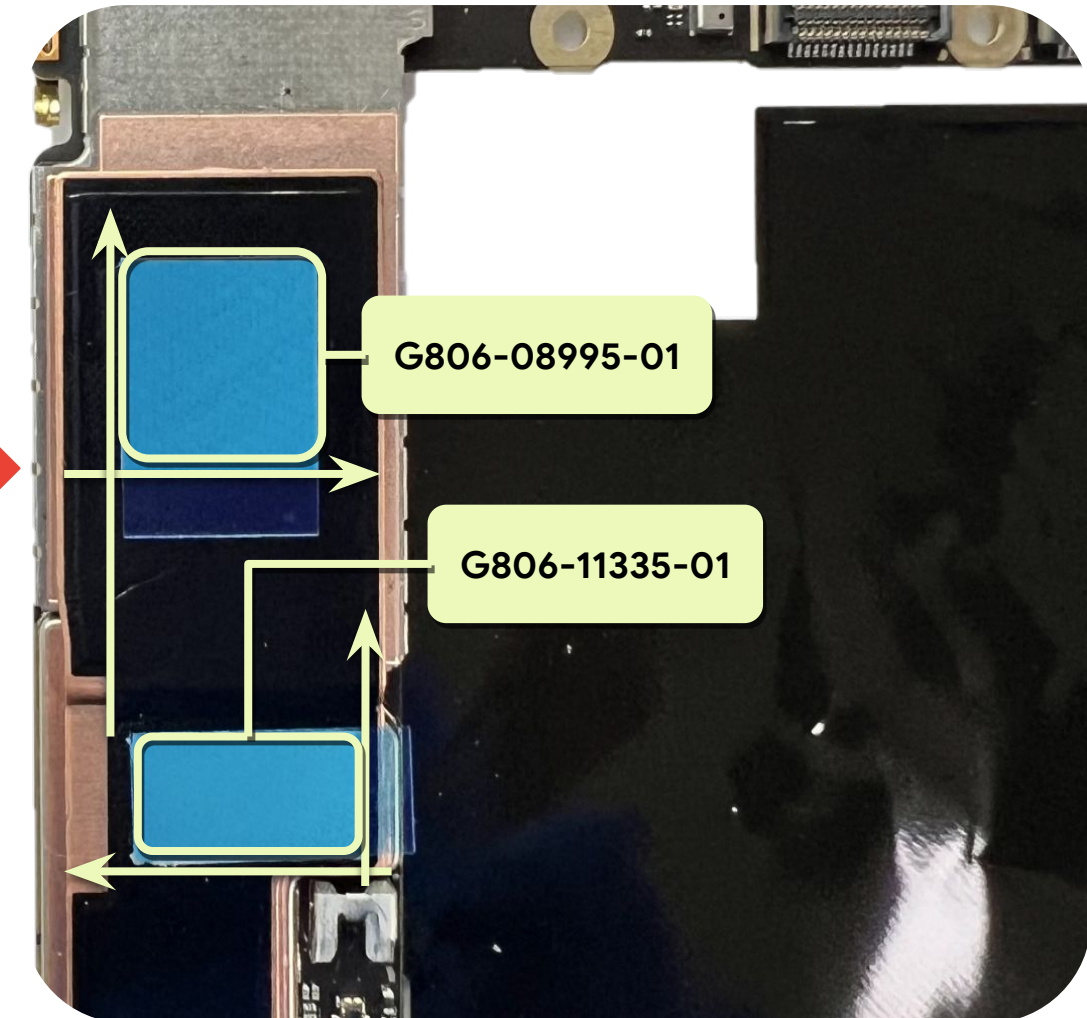
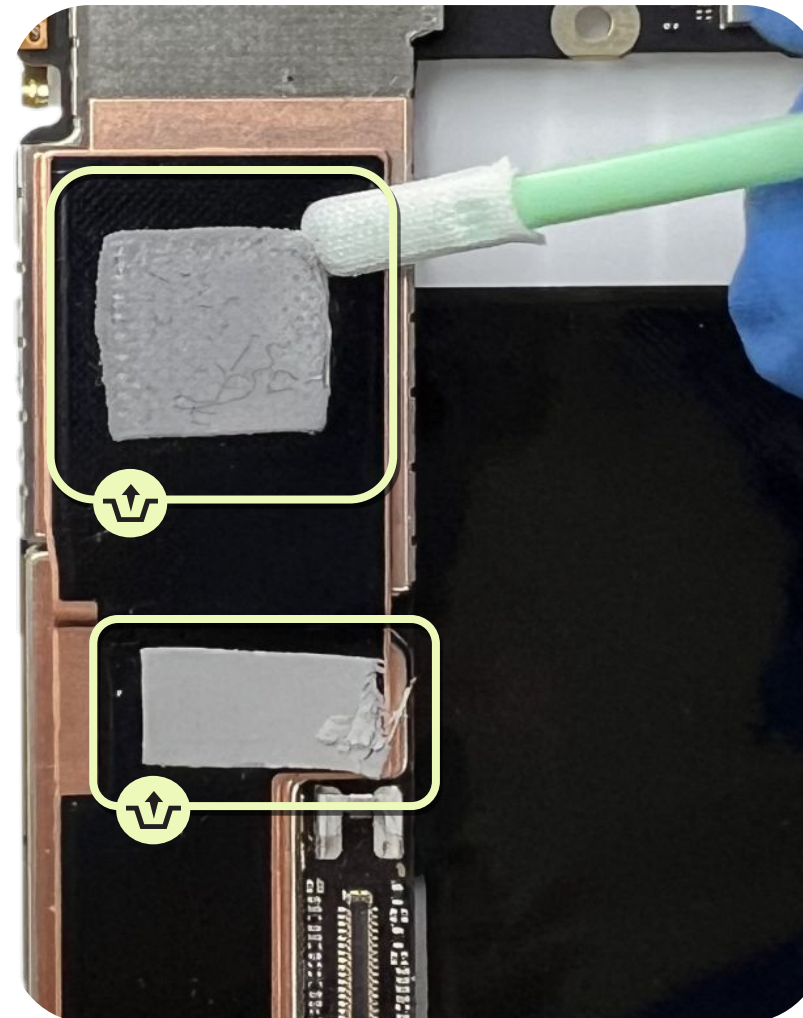
- Use cotton swabs to clean the thermal pad attached on the logic board.
- Use cotton swabs with IPA to wipe the surface and remove any residue.

Use caution



If the thermal pad is damaged, clean up the area and apply a new one.

If it's in good condition, no action is needed.



Rework the MLB graphite

- If the MLB Graphite sheet is damaged:
- Gently remove the graphite on the logic board by hand.
- Use cotton swabs with IPA to wipe the surface and remove any residue.



Note

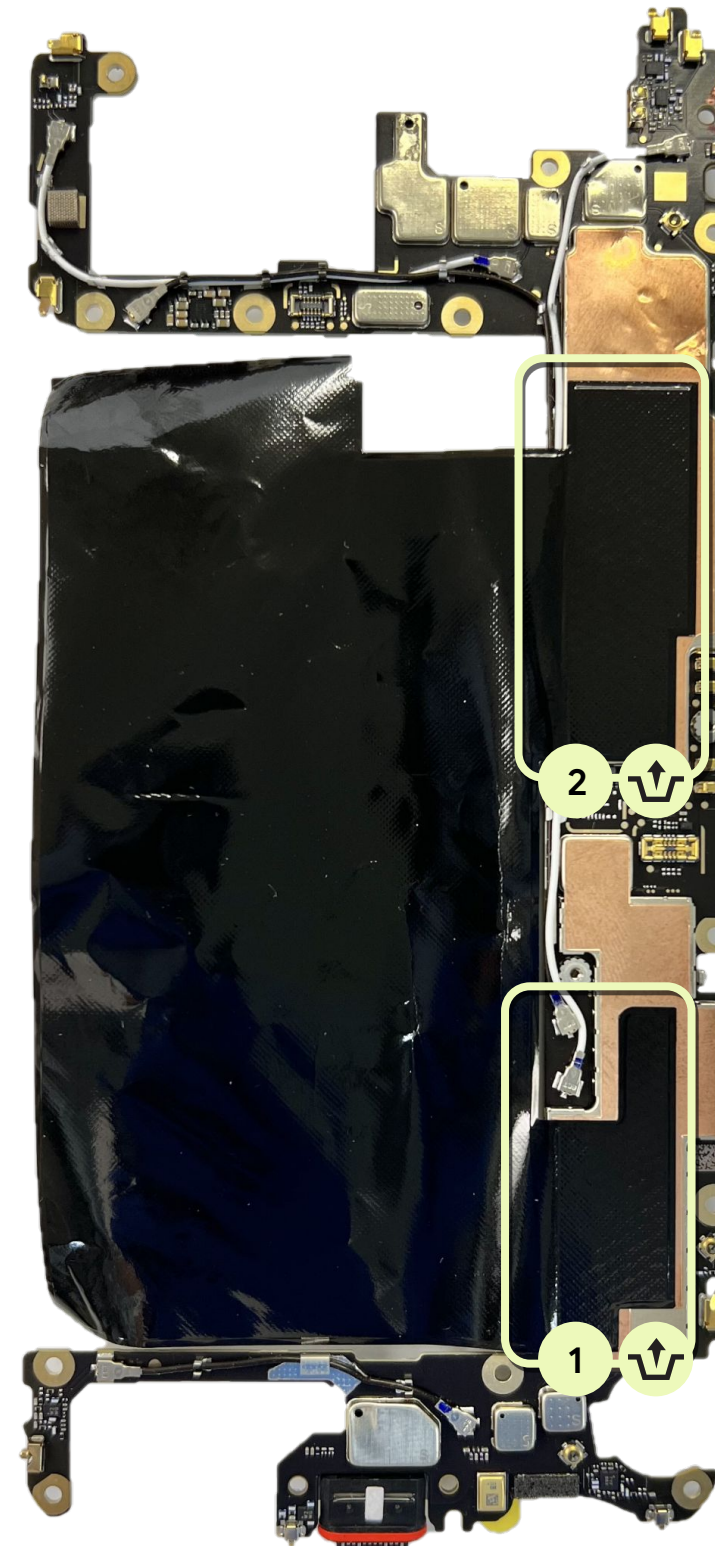
Tears, holes, or breaks in the graphite are not allowed. If there is any damage through the graphite sheet, it should be replaced.



Use caution

If the MLB graphite is damaged, clean up the area and apply a new one.

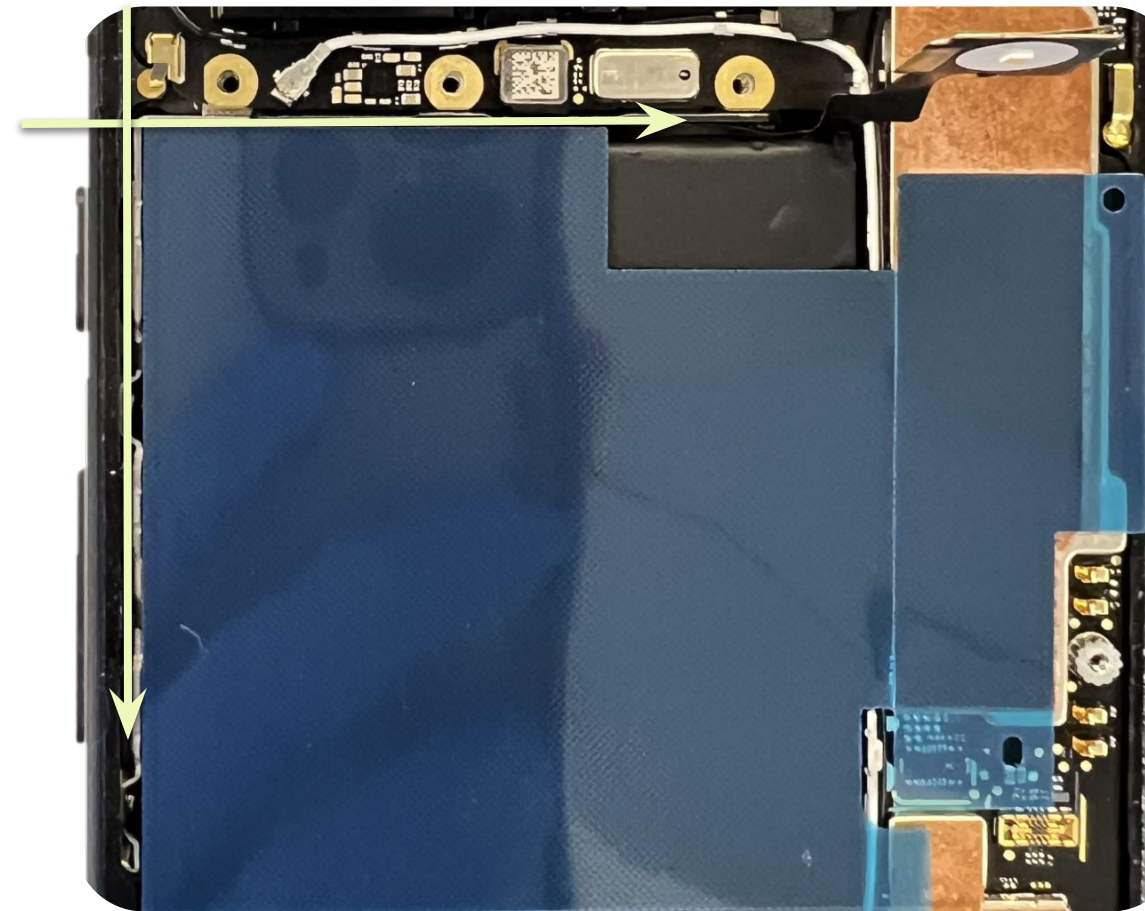
If it's in good condition, no action is needed.



Paste the MLB graphite

- Align a new graphite sheet on the logic board, as shown in figures.
- Use your fingers along the adhesive areas to adhere them.

Part: G806-09146-01 (Diecut_thermal_graphite_MLB)



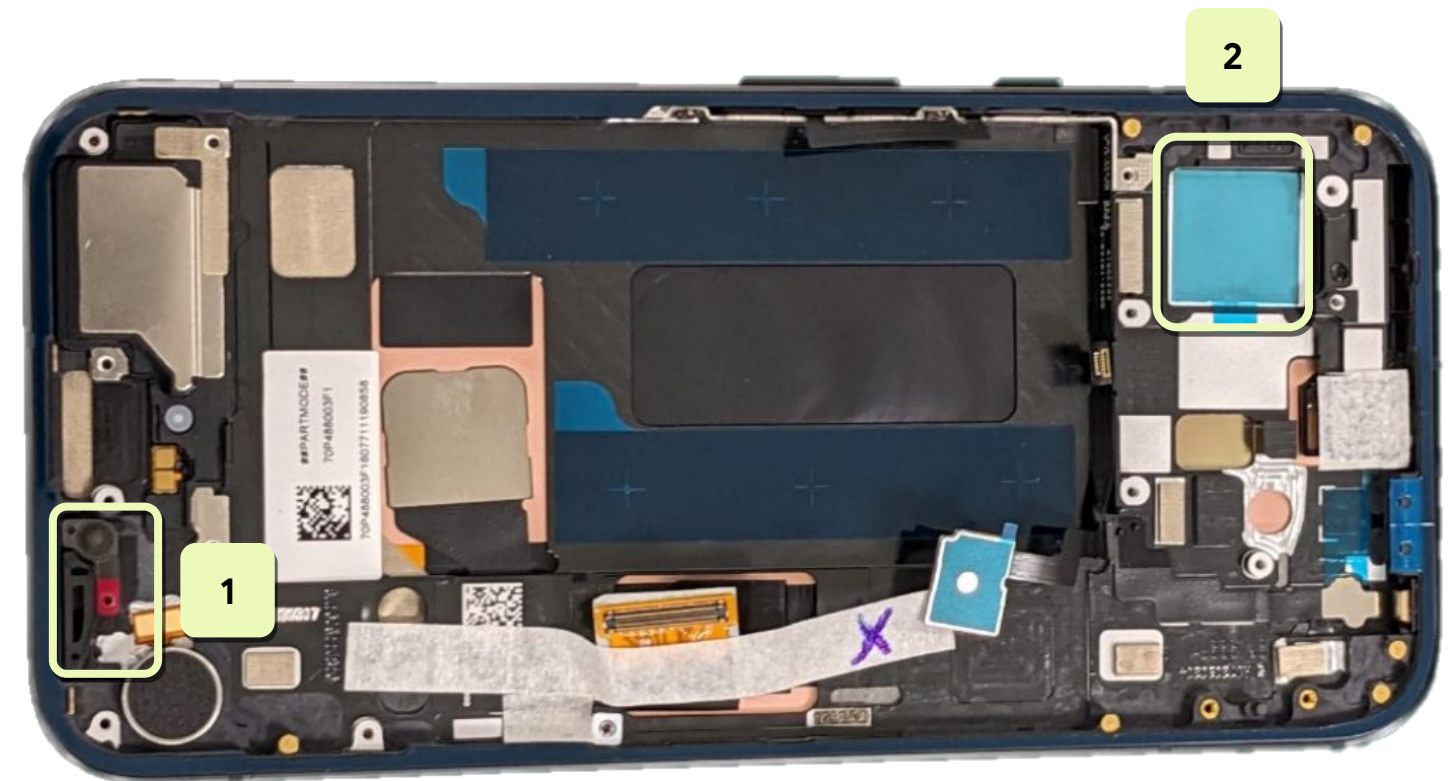
Remove the enclosure release

- Place the enclosure on the fixture holder.
- Remove the five release liners (mmWave) or three release liners (Sub6) from the enclosure.
- Grab and remove the red sections of the release from mic 1 bracket with ESD tweezers.

mmWave



Sub6



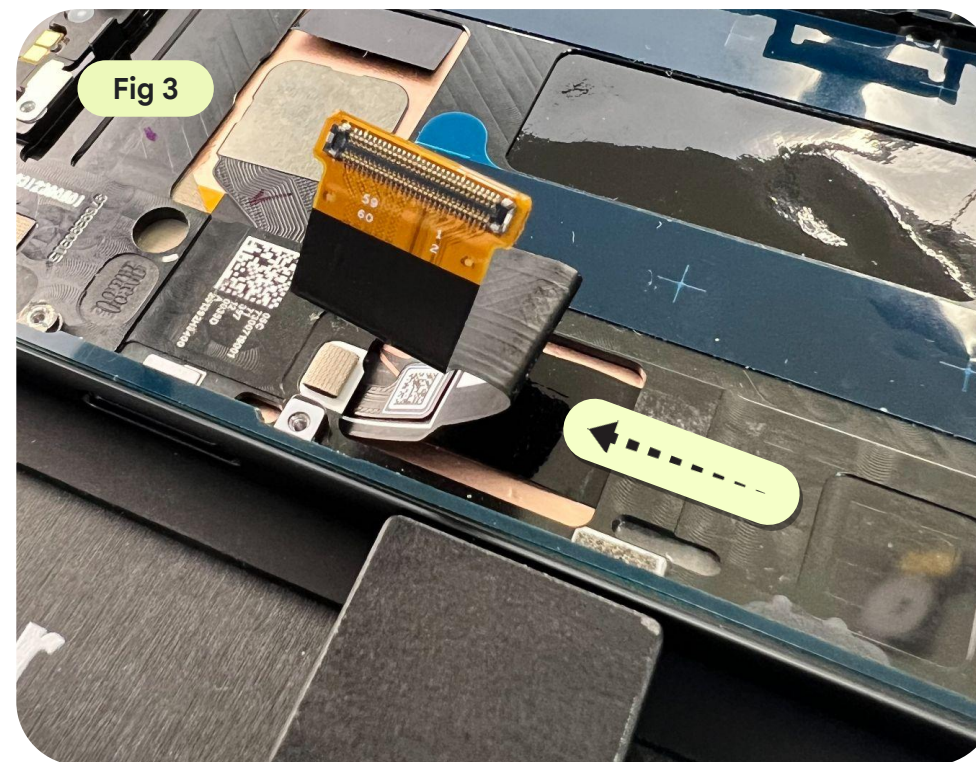
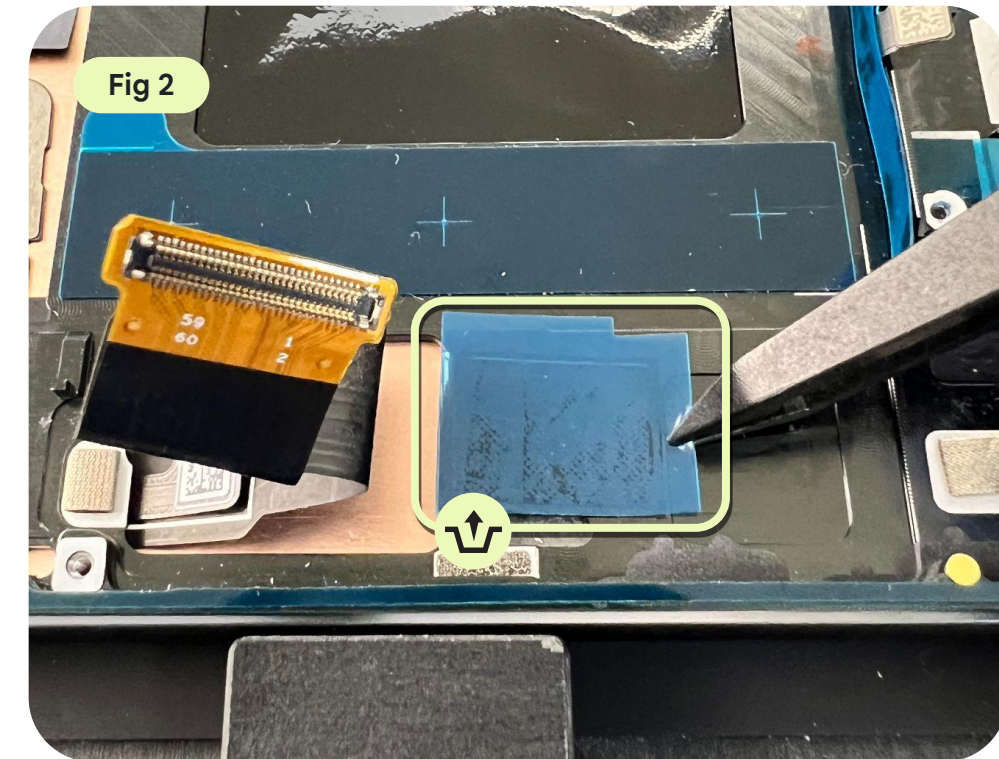
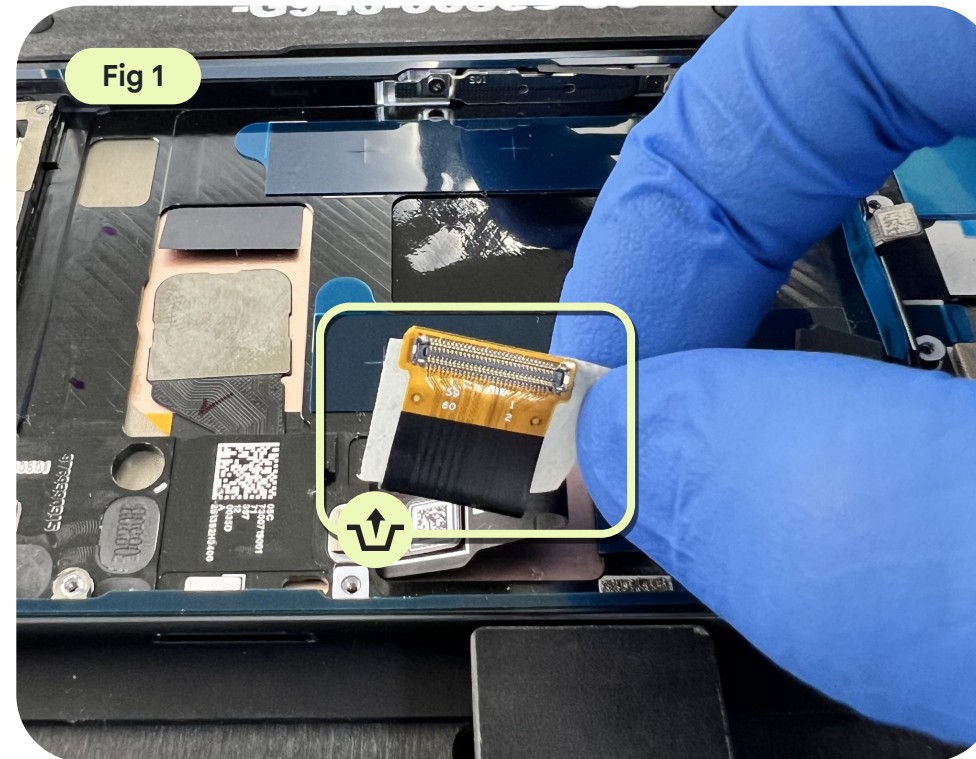
Remove the masking tape and release

- Remove the masking tape from the display FPC, as shown in Fig 1.
- Remove the release from the enclosure, as shown in Fig 2.
- Place the graphite sheet under the display FPC, as shown in Fig 3.



Use caution

Make sure that the graphite sheet is placed under the display FPC.



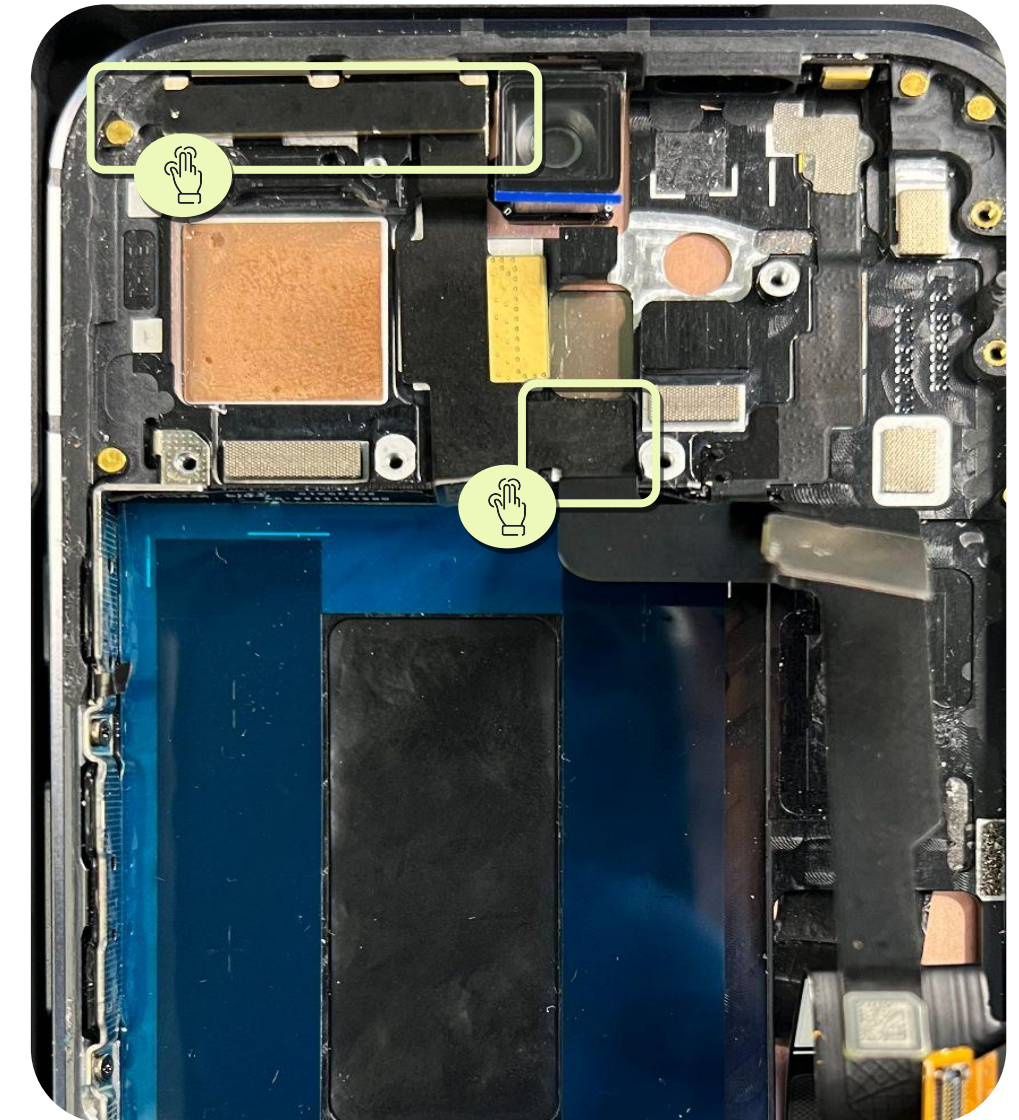
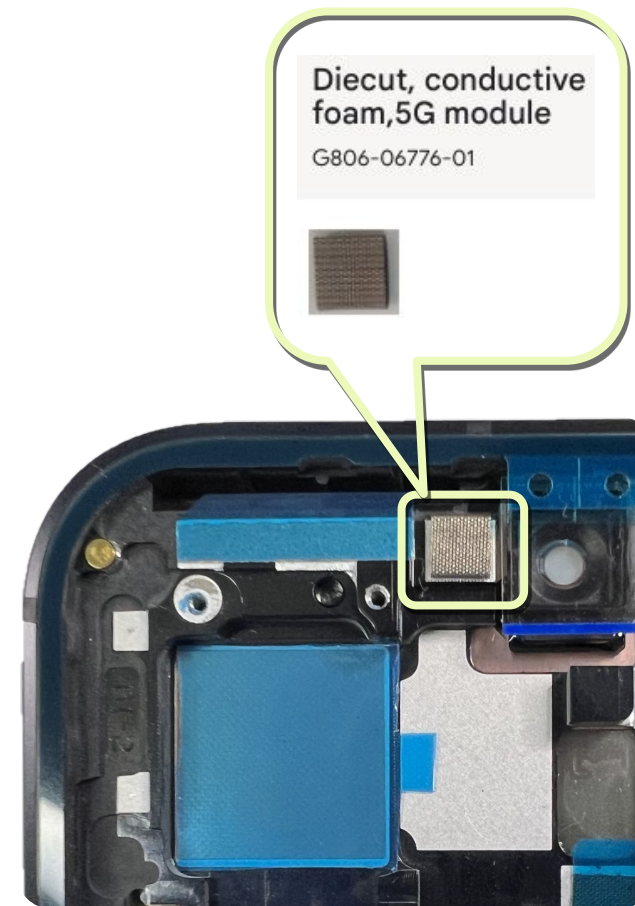
Install the mmWave

- Install the mmWave module and FPC into the enclosure. To activate the PSAs, use your hands to gently press the adhesive twice on the yellow marks shown in the figure to the right.



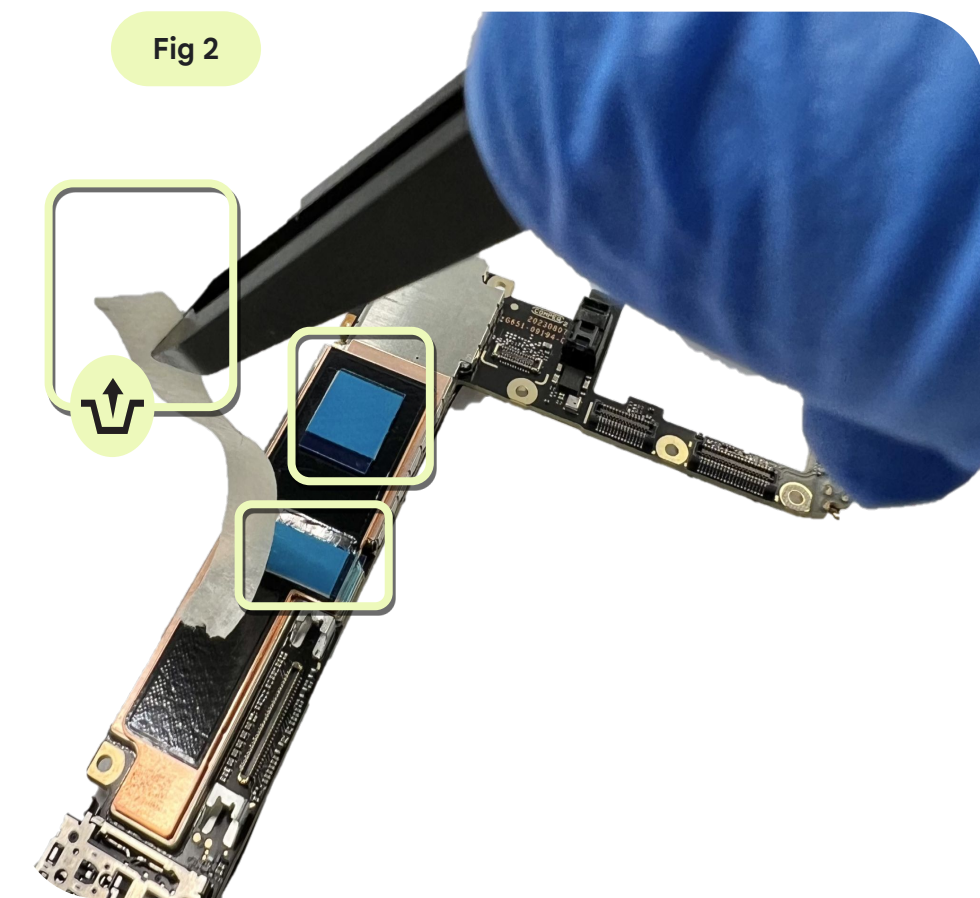
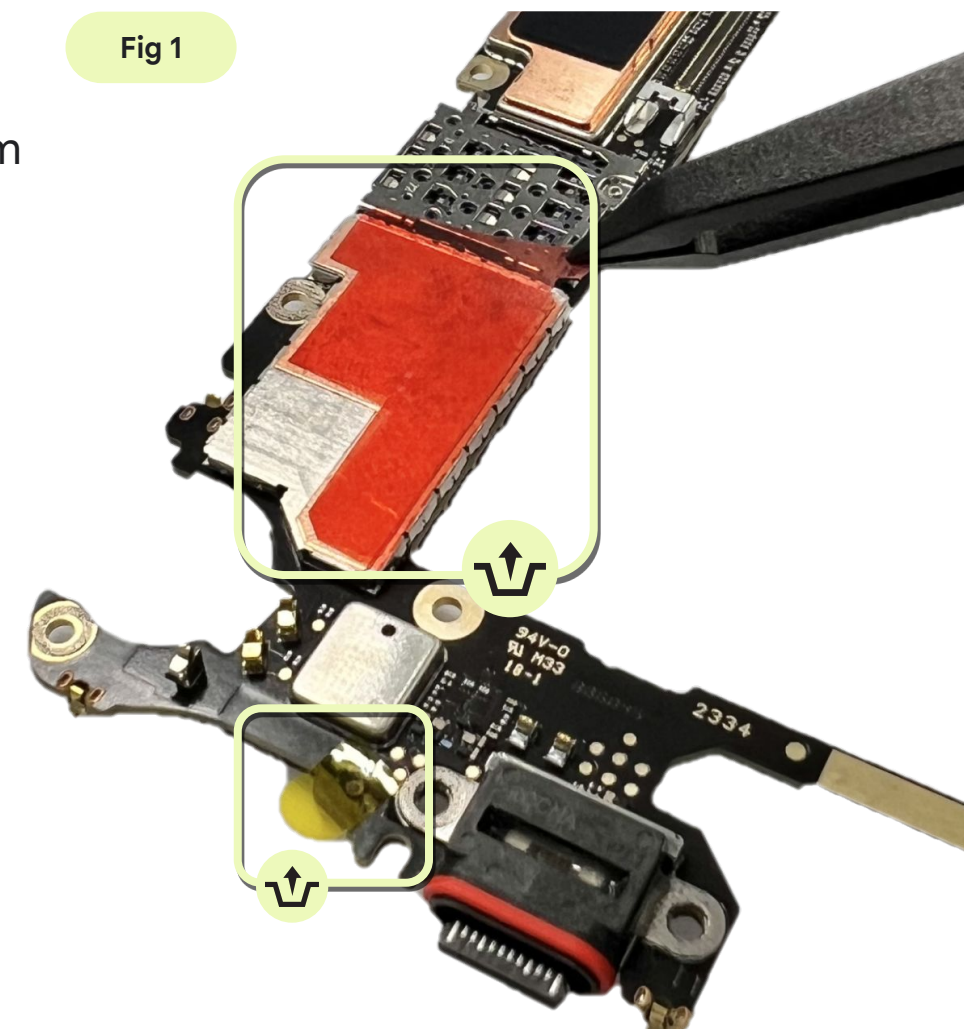
Note

Only replace the 5G conductive foam with new parts if that's damaged.



Remove the masking tape and release

- Use ESD tweezers to remove the release liner and the yellow Kapton from the logic board, as shown in Fig 1.
- Use ESD tweezers to remove the masking tape and thermal pad release liner from the logic board, as shown in Fig 2.



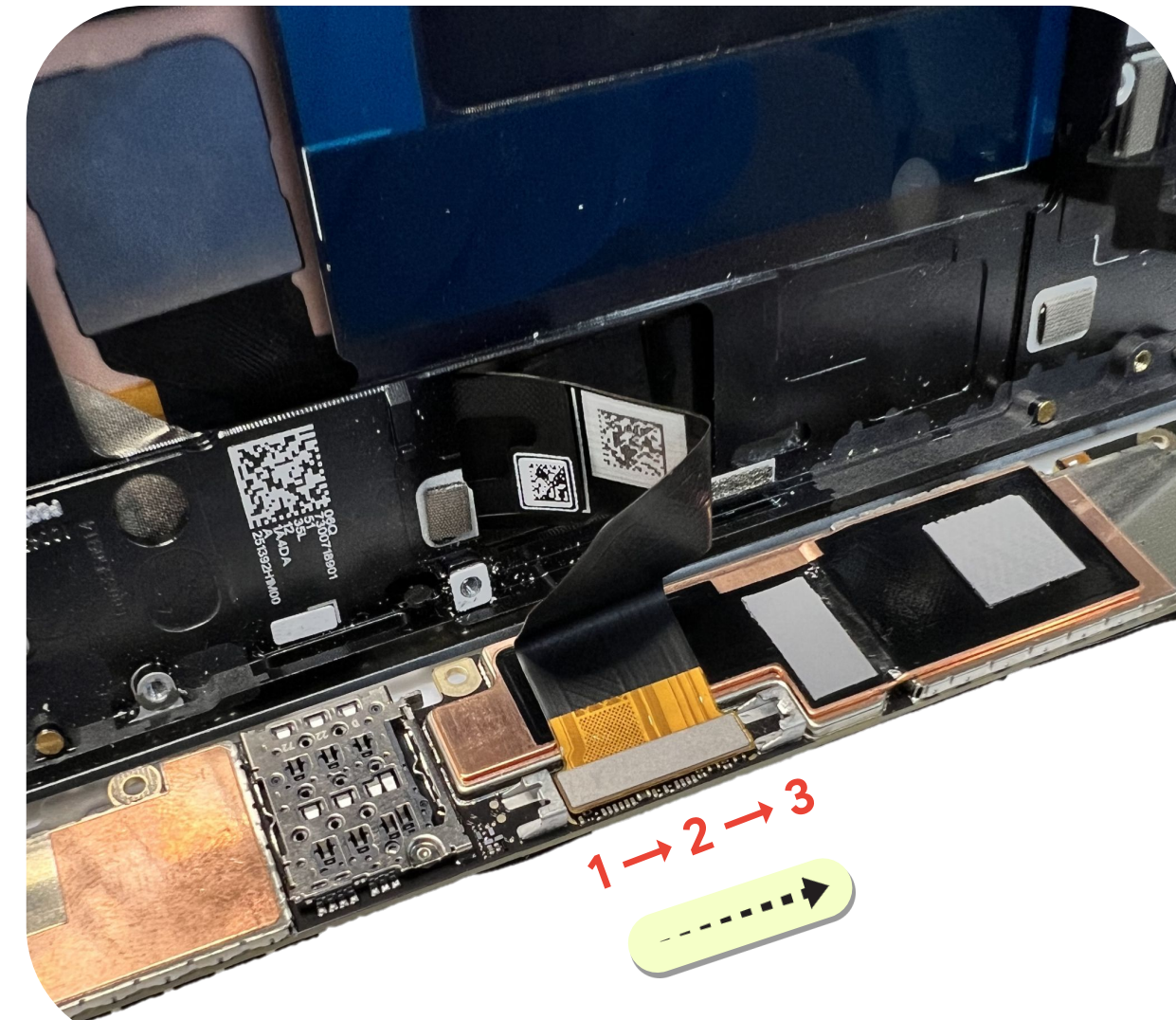
Connect the display module

- Attach the large suction cup to the back of the enclosure and use it to prop up the enclosure vertically next to the logic board.
- Attach the display module connector to the logic board, then apply even pressure across the connector.
- Press three points in sequence and slide twice to ensure that it's fully engaged.



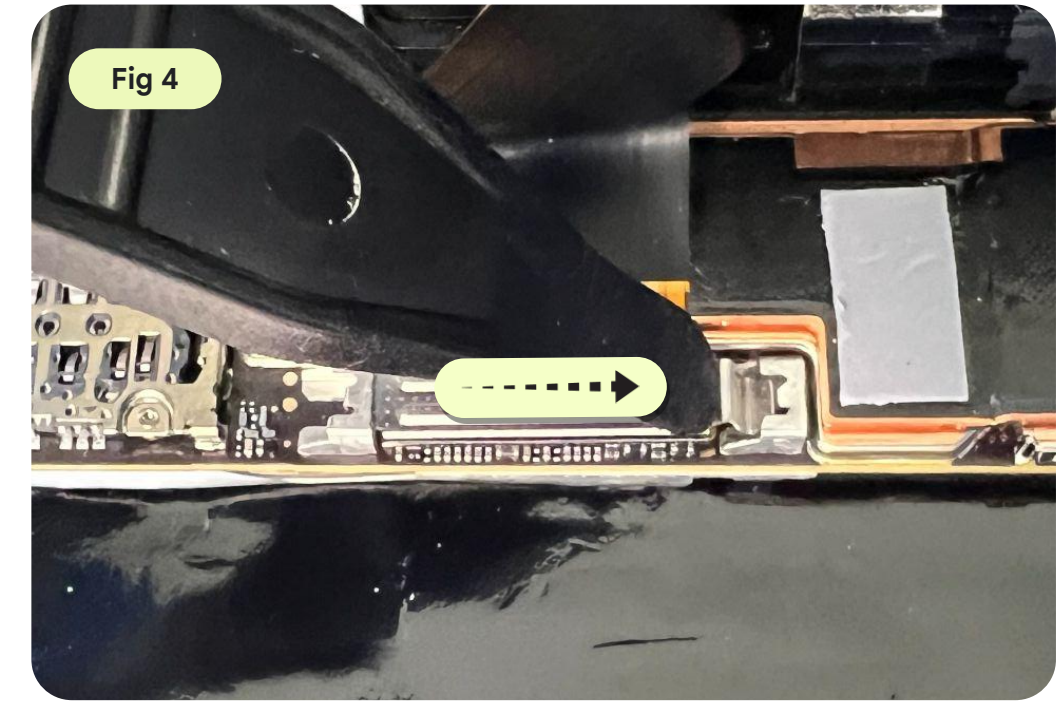
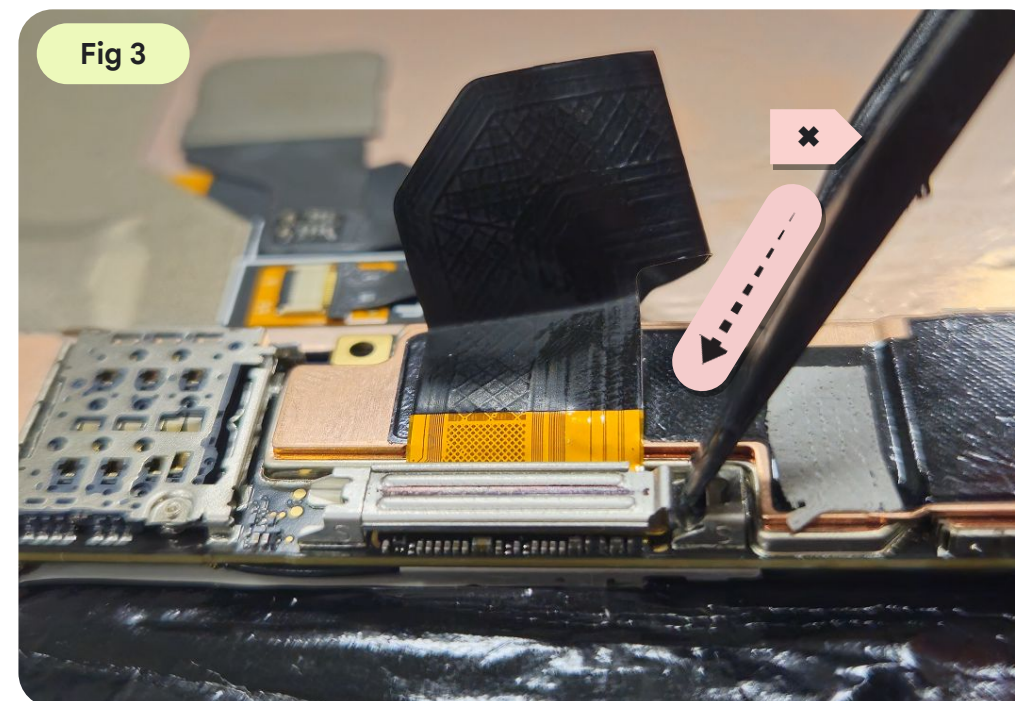
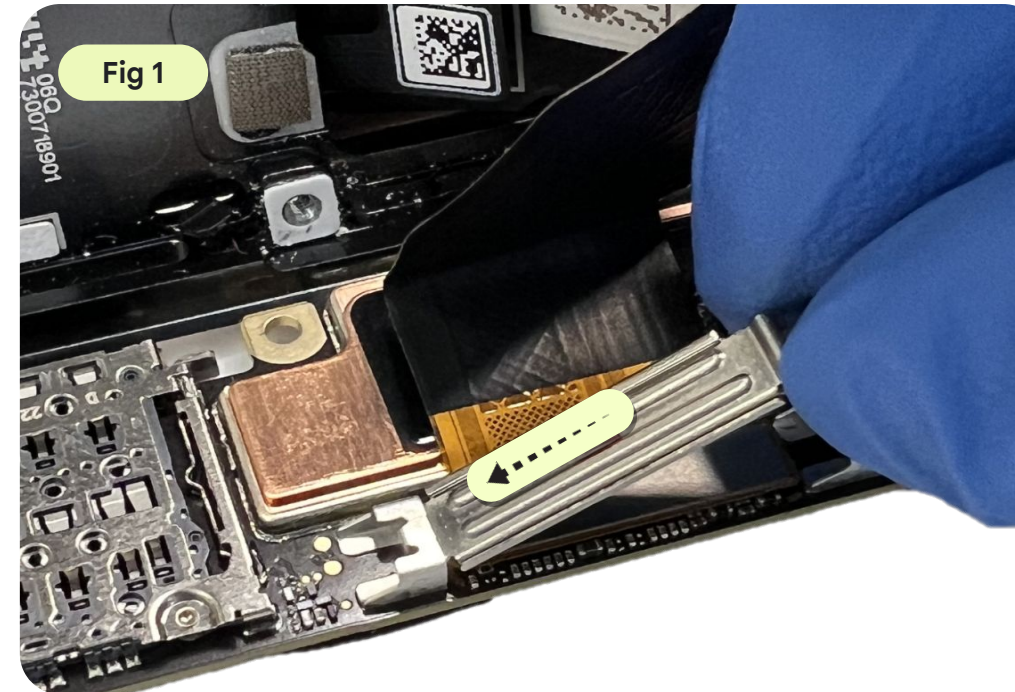
Use caution

Make sure that all of the camera connectors are fully engaged.



Install the display stamping

- Insert the flat end of the display stamping into the socket facing the USB, as shown in Fig 1.
- Press down on the hook end of the display stamping plate with the ESD spudger. It's secured to the logic board by staying below the socket, as shown in Fig 2.
- *Don't* attempt to insert the ESD spudger in the wrong direction, as shown in Fig 3.
- Push the stamping plate to the right as far as you can with the ESD spudger, as shown in Fig 4.



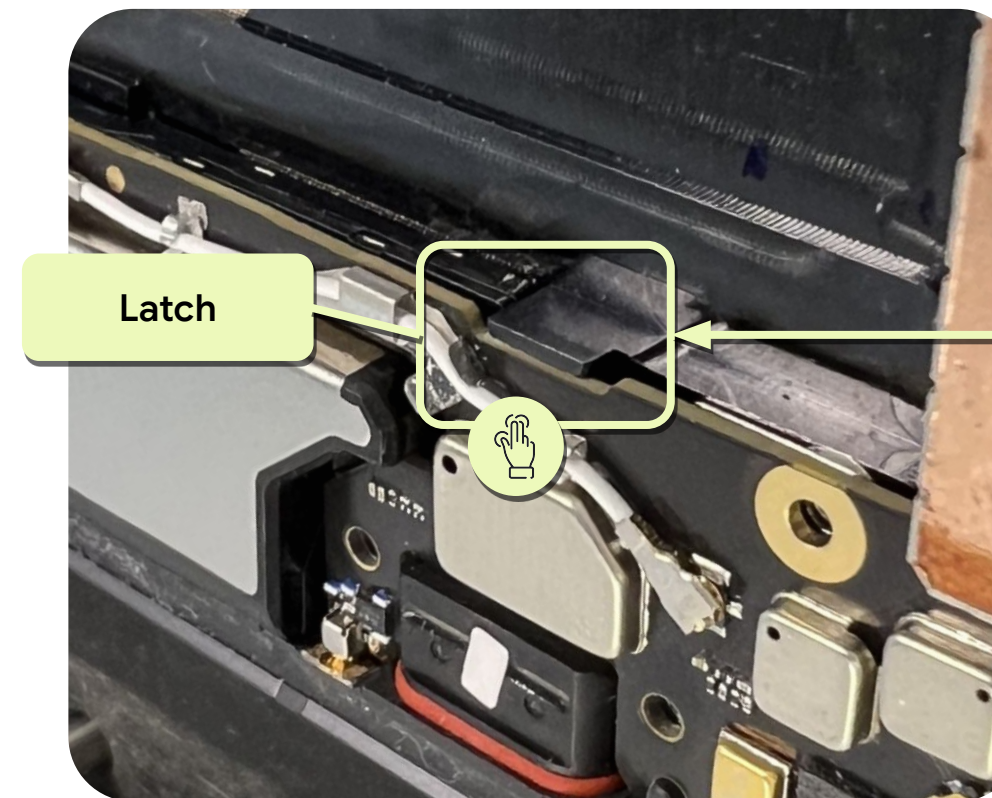
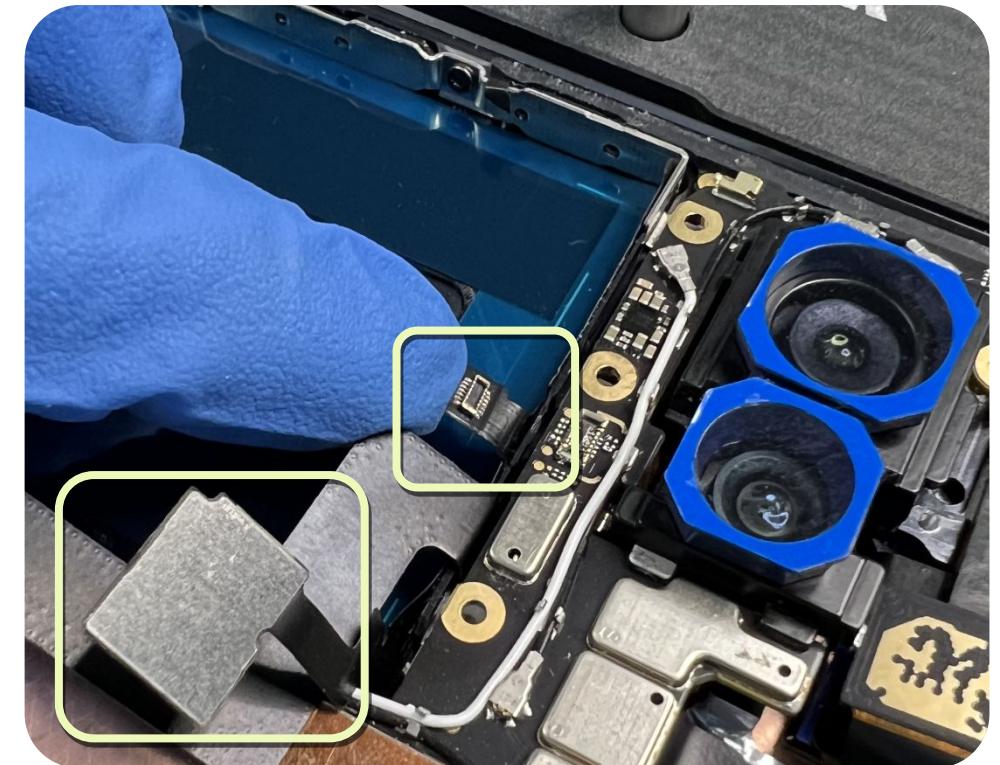
Install the logic board

- Hold the MLB at about 15° above the enclosure.
- Insert the logic board into the USB slot.
- When you assemble the logic board, flip up the SLAM FPC with your fingers, and flip up the mmWave FPC and flash LED with ESD tweezers.
- Secure the logic board with one slot and one vertical latch on the enclosure.
- Press down the logic board and you should hear a clicking sound.



Use caution

Make sure that the SLAM FPC, flash LED, and mmWave FPC aren't caught below the logic board.



Gently press here, so that the logic board clicks into place.

Install the sim tray

- Apply lubricant on the sim tray gasket before installation, as shown in Fig 1.
- Insert the sim tray into the slot, as shown in Fig 2.
- The sim tray hole direction should face upwards, as shown in Fig 3.

Fig 1

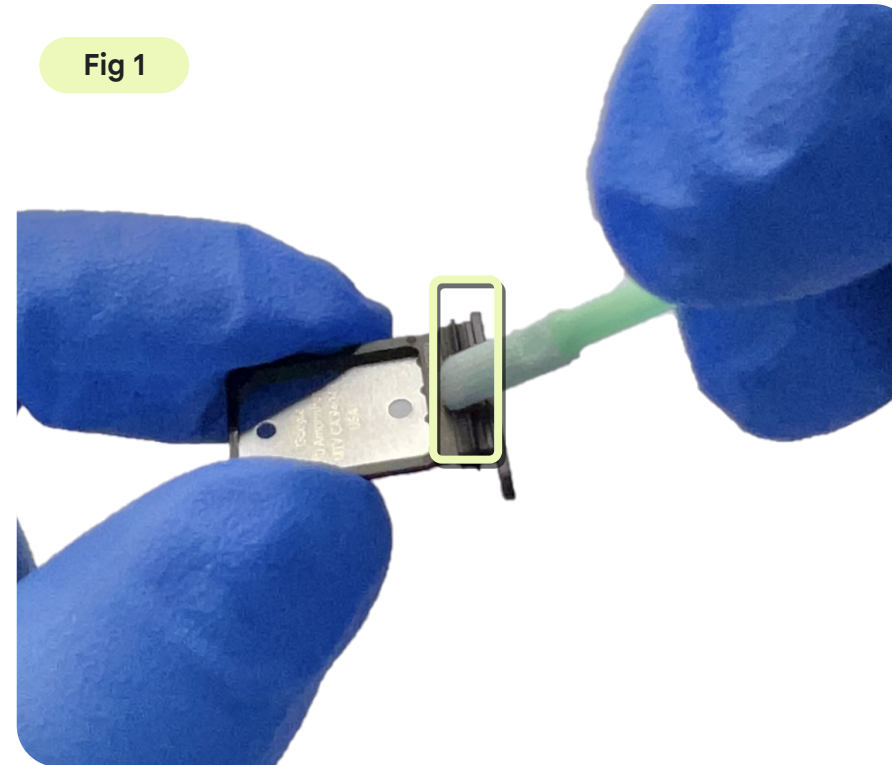


Fig 2

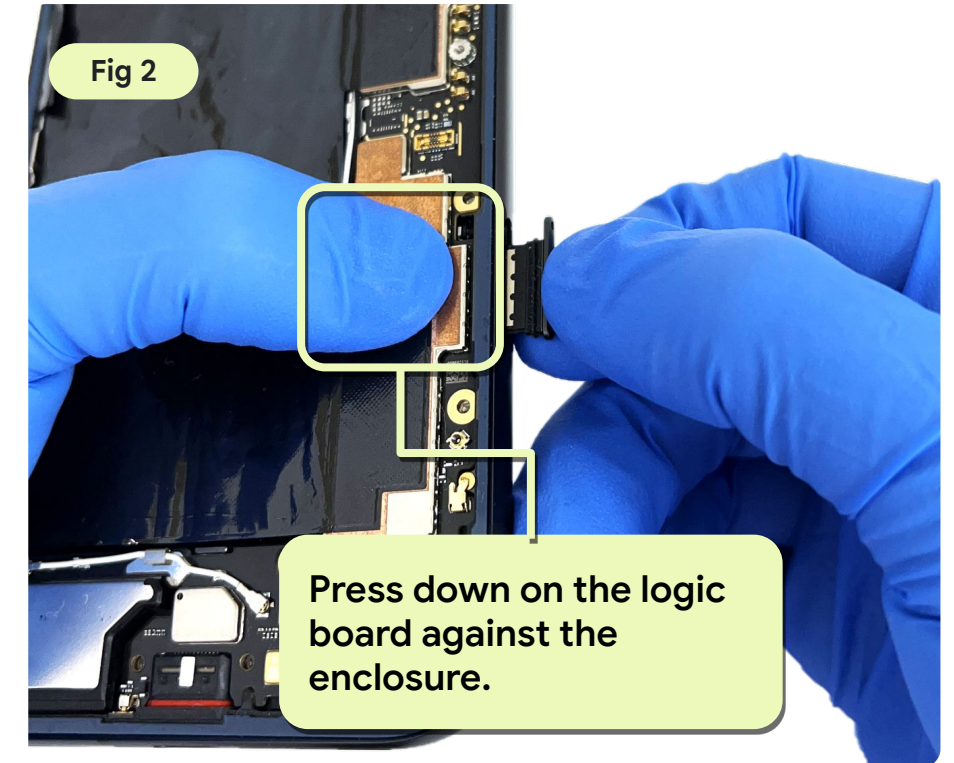
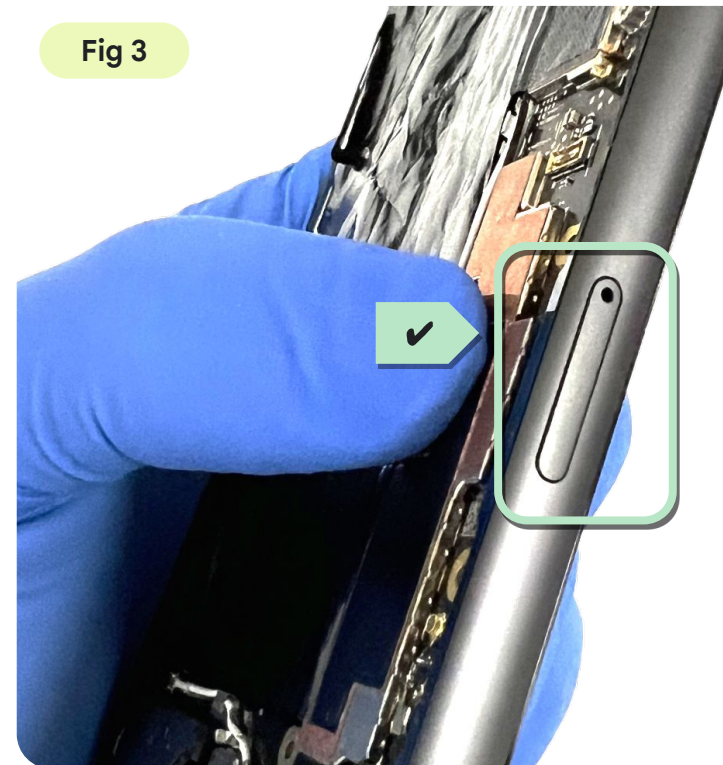


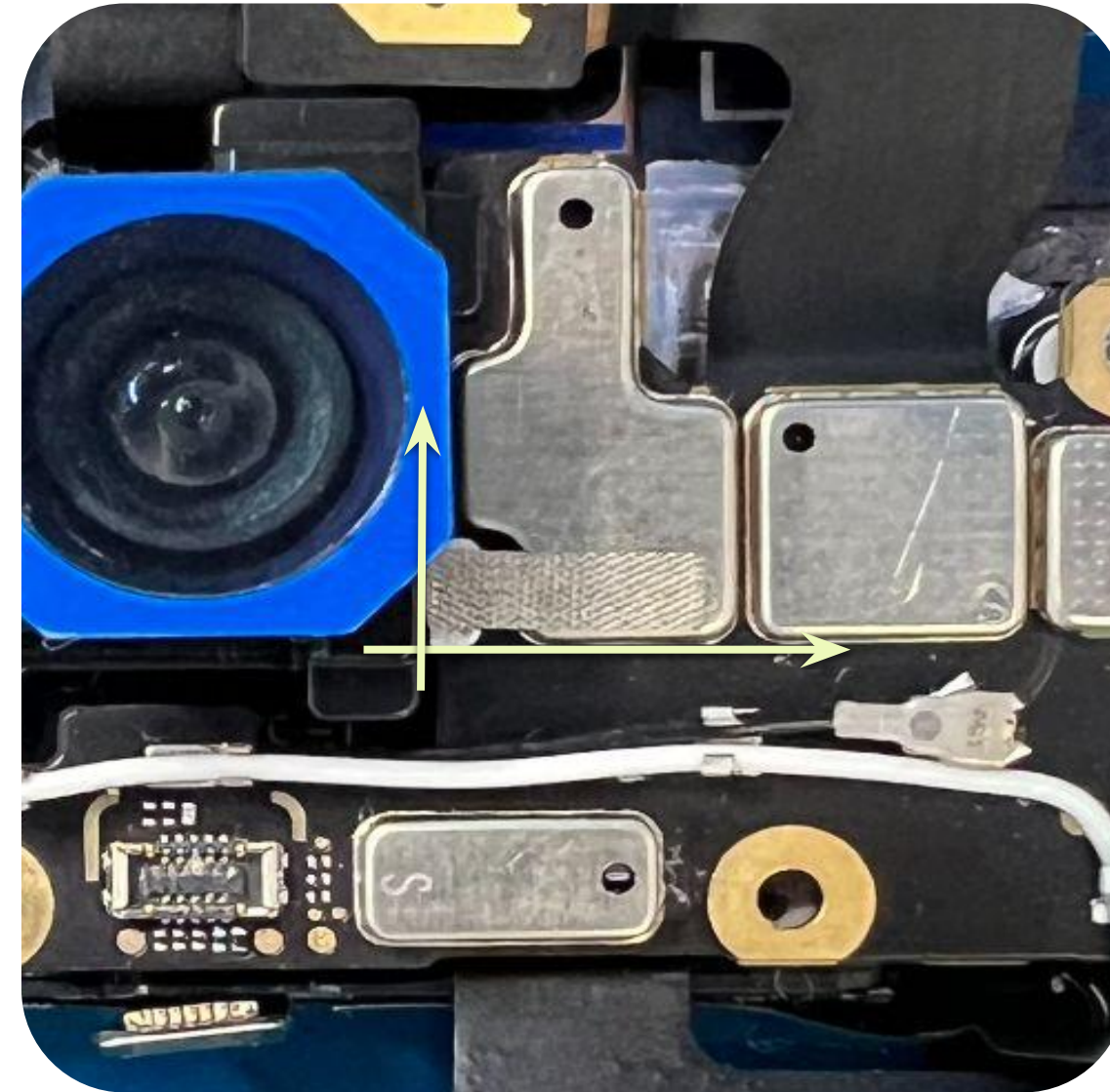
Fig 3



Paste the conductive fabric

- Use ESD tweezers to place the conductive fabric.
- Align and apply the extension to bridge the RCAM holder and the logic board shielding.
- Remove the release liner.

Part: G806-08993-01 (Conductive fabric RCAM holder)



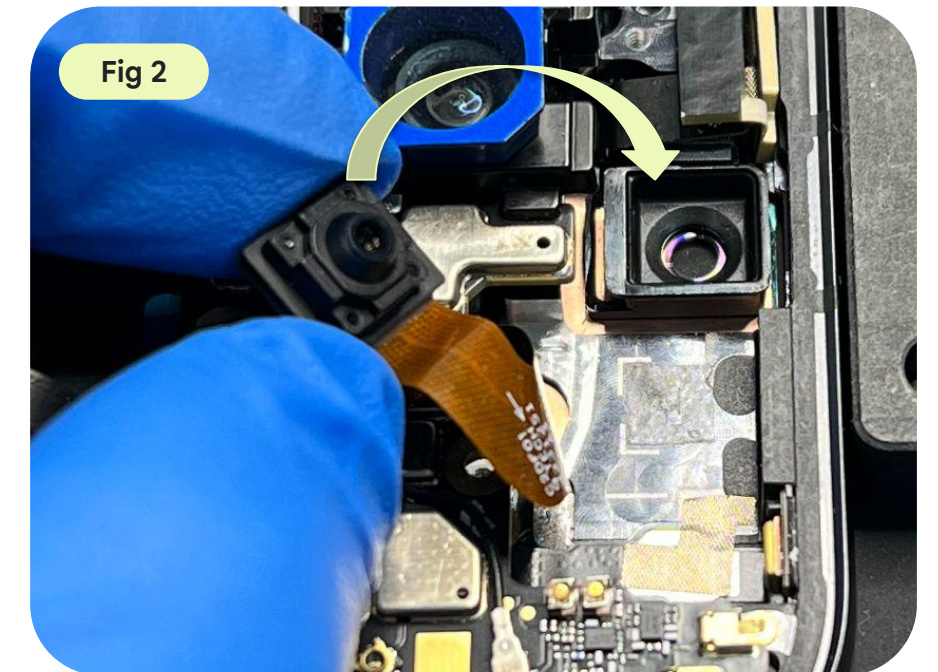
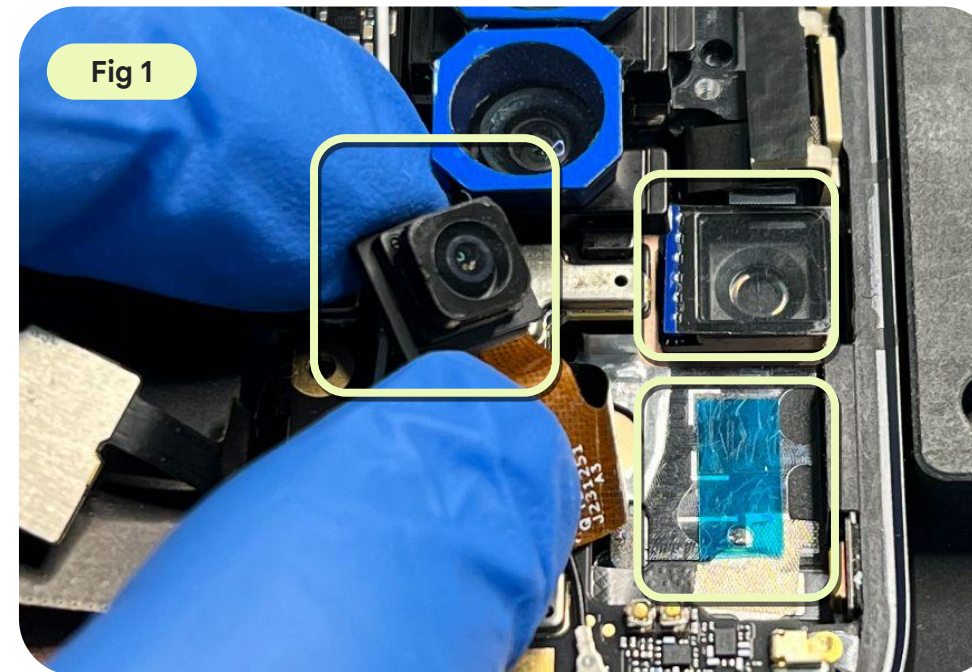
Install the FCAM to the holder

- Remove the release liner and camera holder liner from the enclosure.
- Ensure that all protective film or caps are removed from the camera, as shown in Fig 1.
- Place the front camera into the enclosure camera holder, as shown in Fig 2.
- Use an ESD spudger to flatten the front camera FPC against the enclosure and ensure that the edge of the FPC is parallel with the white line on the enclosure, as shown in Fig 3.



Use caution

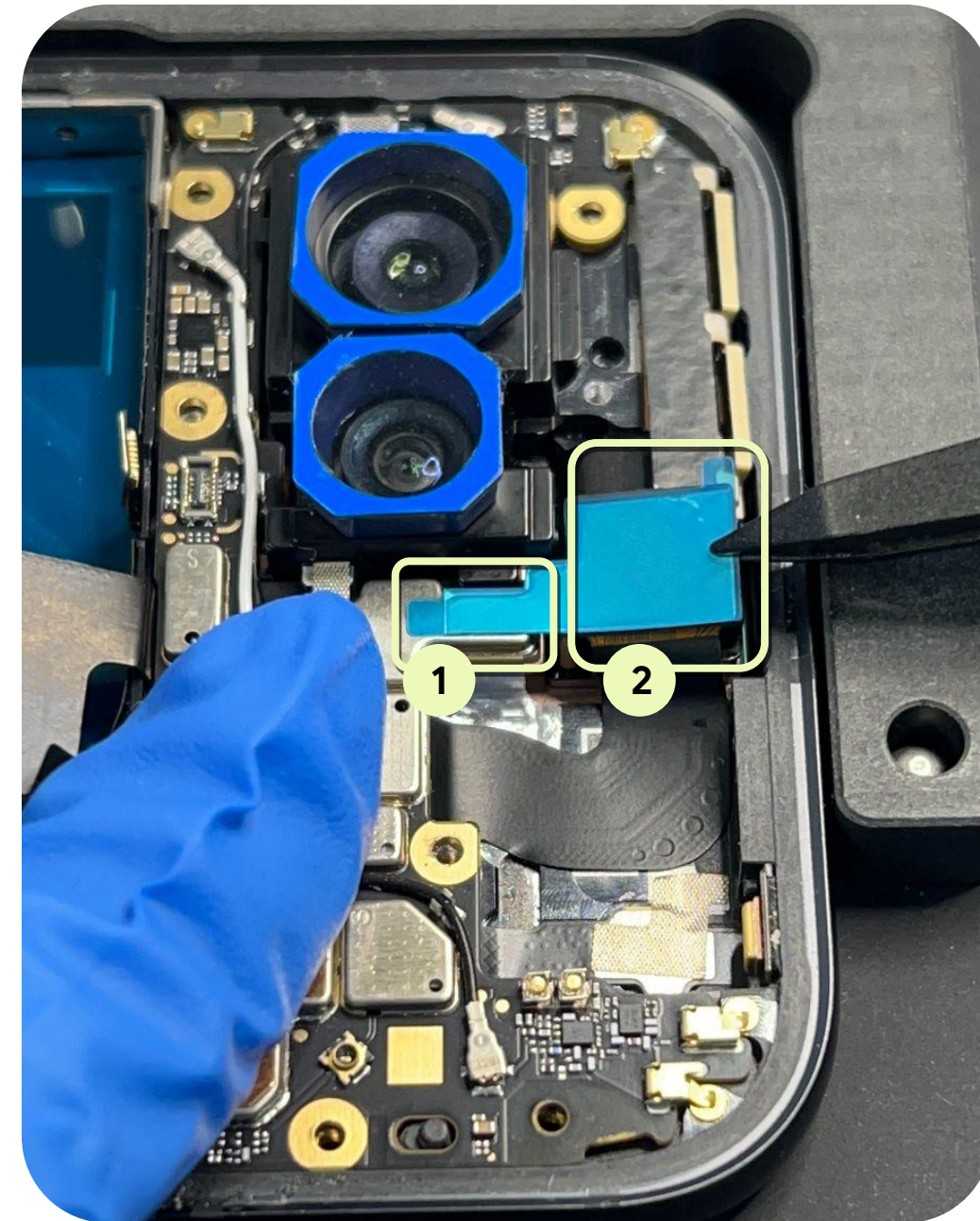
Don't touch the lens.



Paste the copper foil

- Use ESD tweezers to transport the copper foil.
- Align and apply the copper foil to bridge the front camera and MLB.
- Remove the two release liners from the copper foil, as shown in the figure.

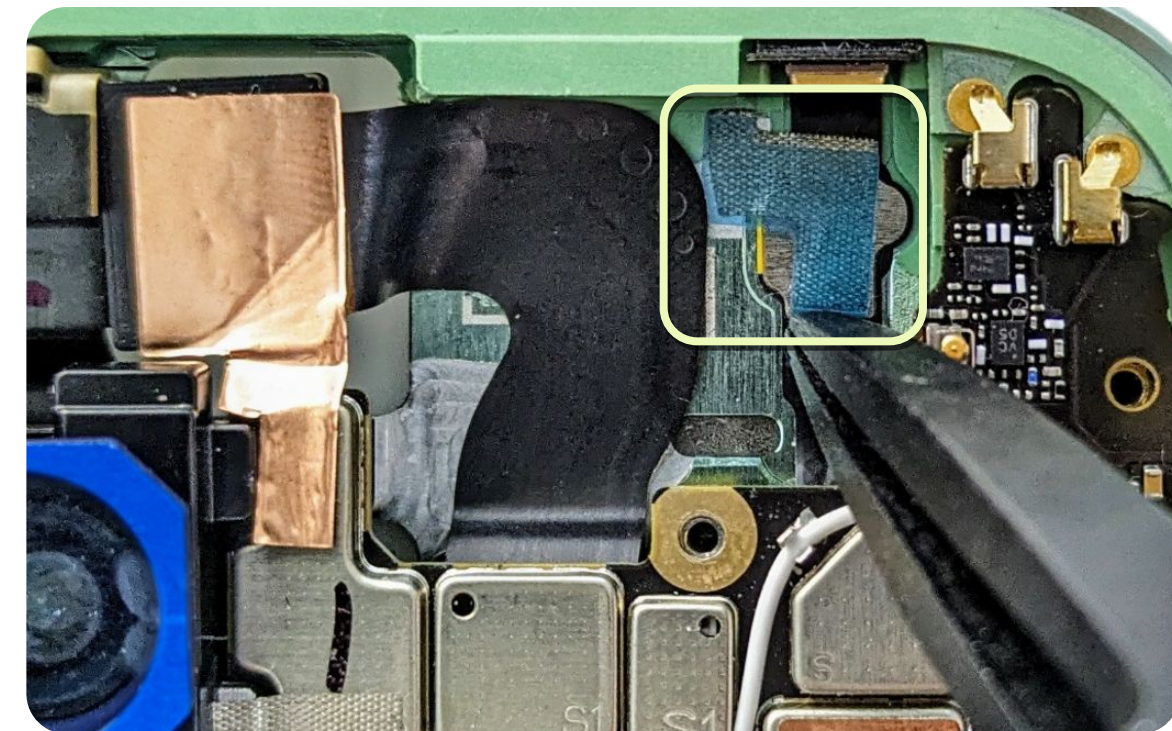
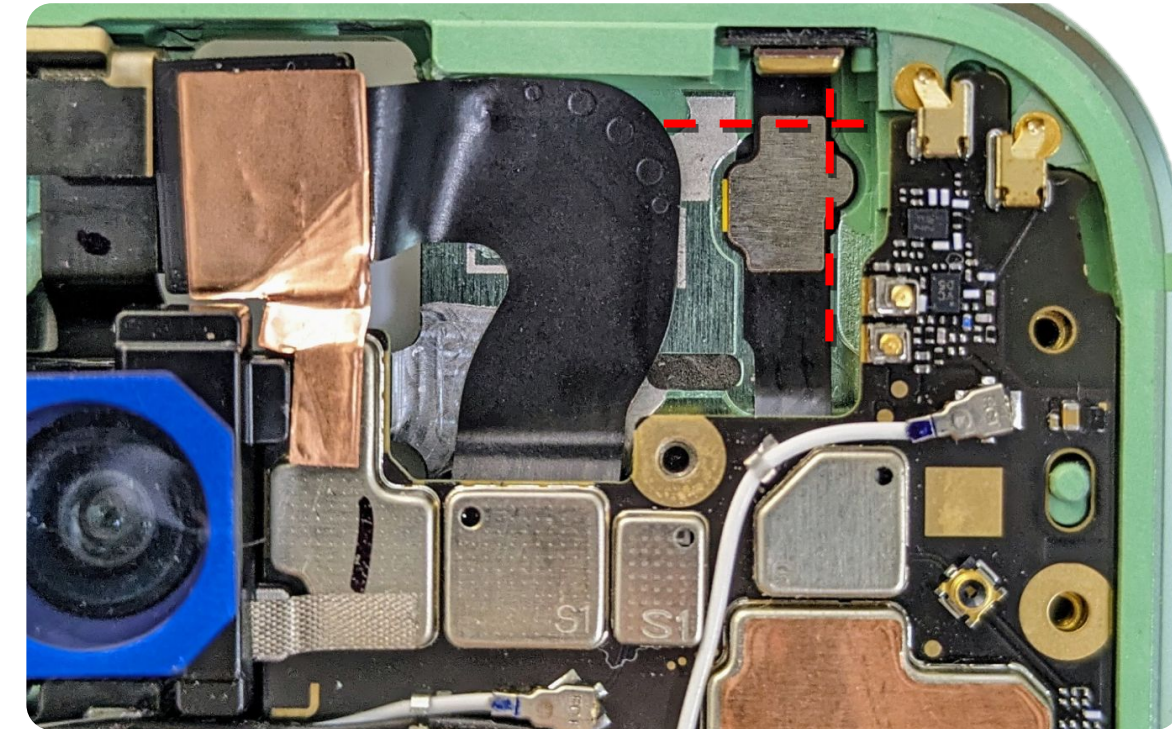
Part: G806-07803-01 (FCAM copper foil)



Attach Ant1 Slam FPC gasket

- Use ESD tweezers to carry Ant1 Slam FPC gasket.
- Align the gasket following the red dotted lines before attaching it.
- Remove the liner.

Part: G806-08994-01 (Gasket, Ant1, Slam FPC)





Assembly
instructions

Top speaker

Install the Top SPK module

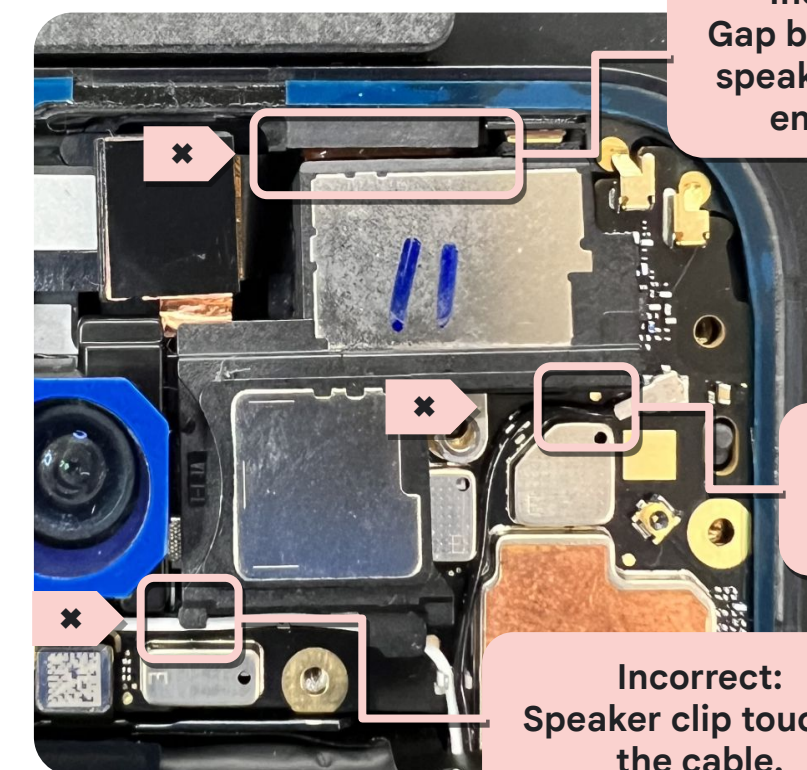
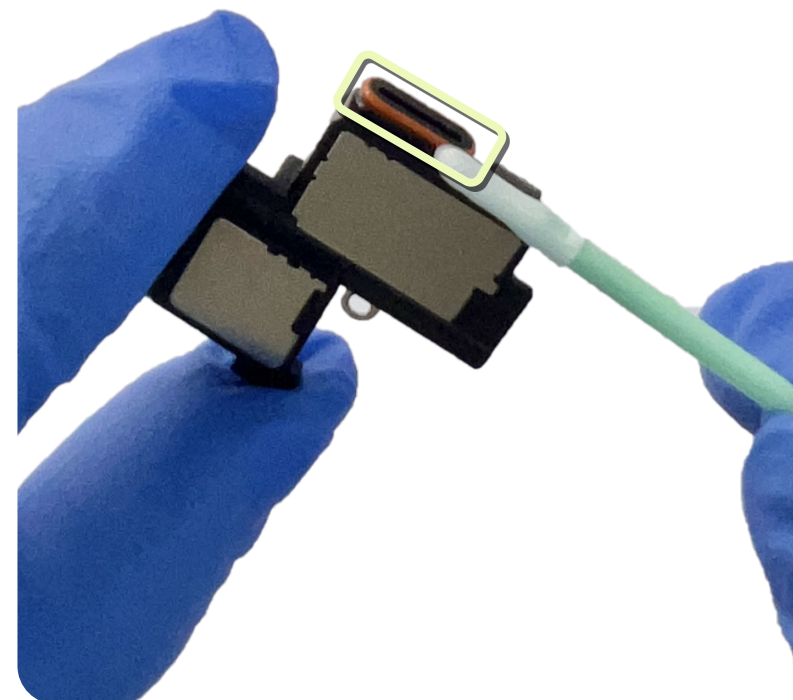
- Apply lubricant on the top speaker gasket before installation.
- Insert the top speaker with your fingers at approximately 15° and push it against the enclosure wall.
- After installation, make sure that no part of the rubber gasket is visible.

Part: G863-00505-01 (Top speaker)



Use caution

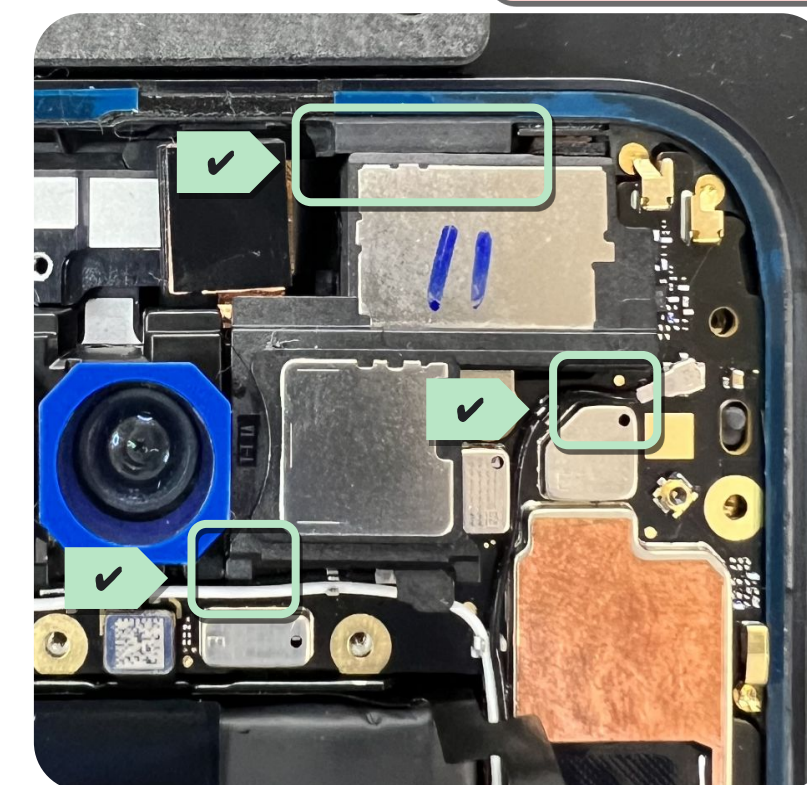
Don't insert horizontally. This could damage nearby electronic components.



Incorrect:
Gap between the
speaker and the
enclosure

Incorrect:
Speaker clip touches
the cable.

Incorrect:
Speaker clip touches
the cable.



Fasten the screws

Fasten the one screw on the top speaker with an adjustable torque screwdriver.

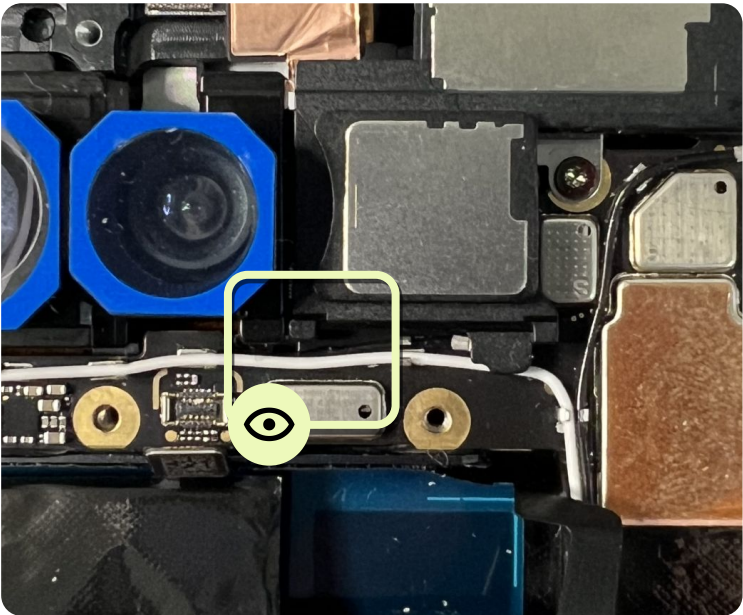
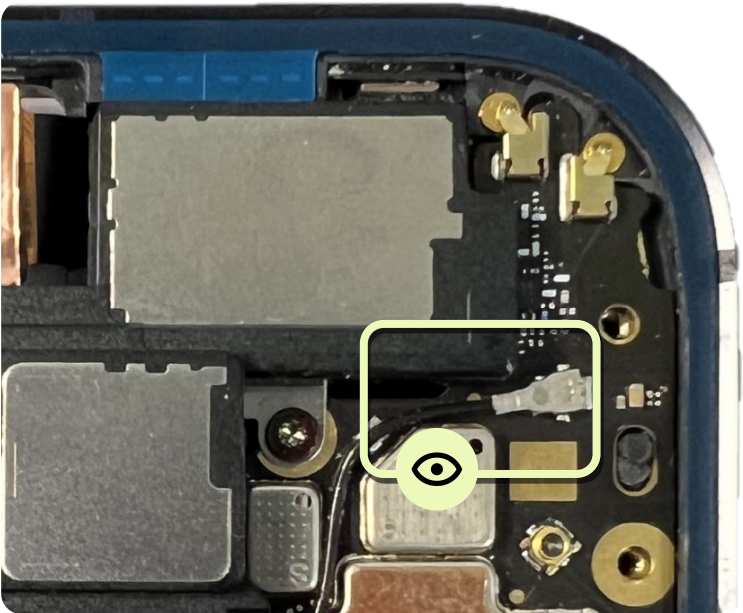
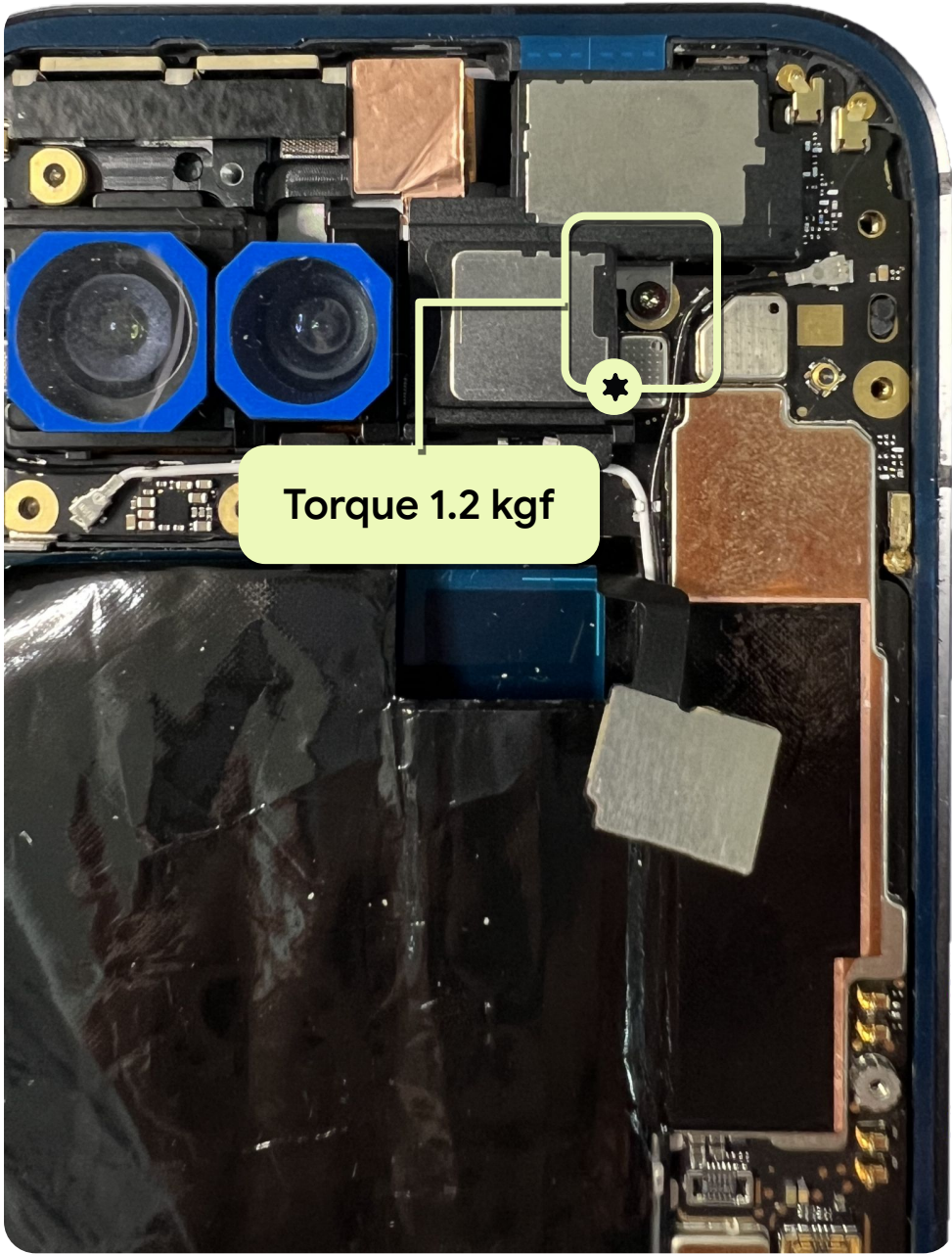
Part: G250-05370-00 (Screw)



Note

Check to make sure the module is fully seated and ensuring that no coaxial cable on the MLB is caught underneath the module.

In order for the module to fully seat into place, it may require downward pressure by placing a finger on top of the module during the torquing process.





Assembly
instructions

Battery

Remove the release liners

- Before installation, remove any debris or loose screws from the enclosure.
- Remove the two release liners from the enclosure with ESD tweezers.



Use caution

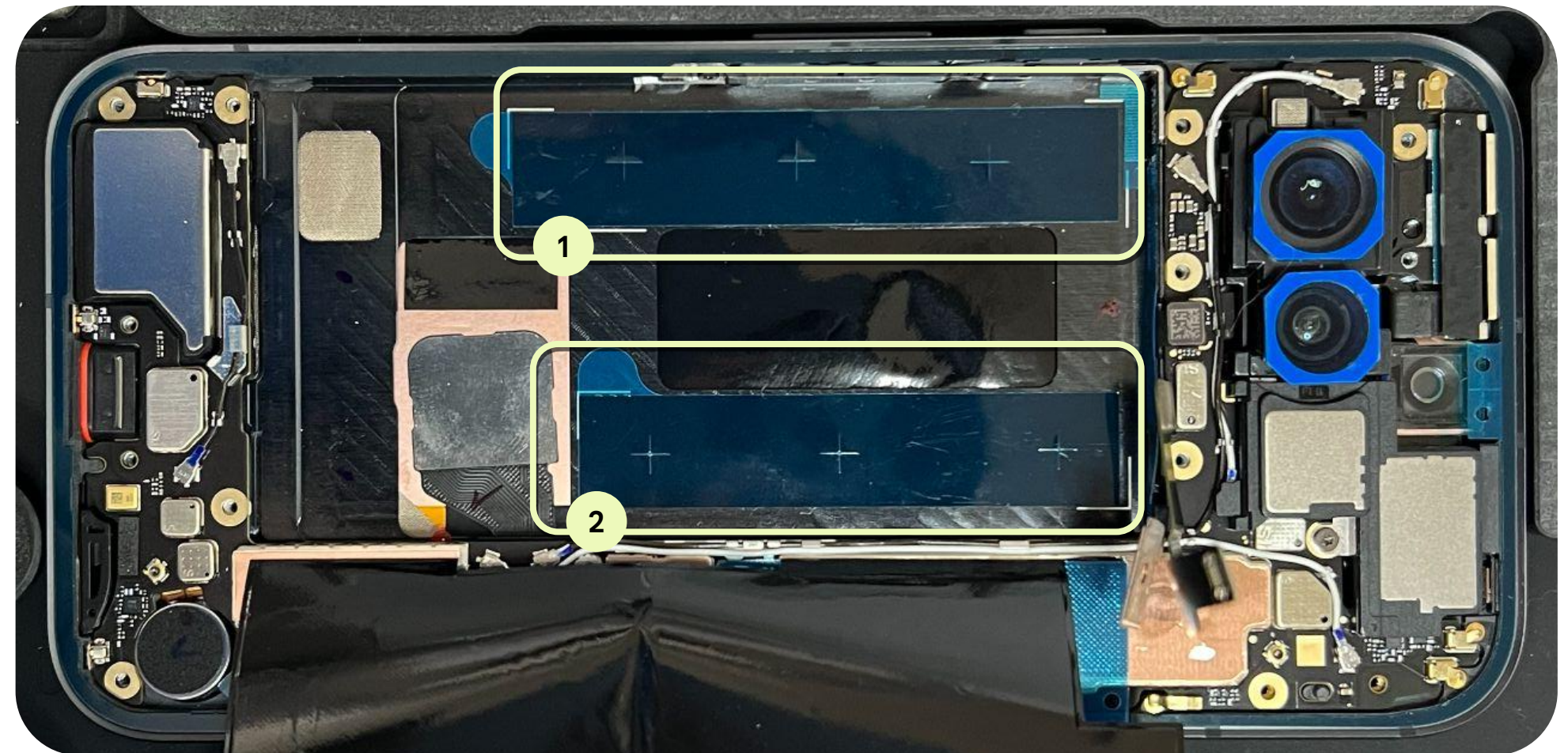
Ensure that the battery cosmetic checks are completed on the replacement battery.



Note

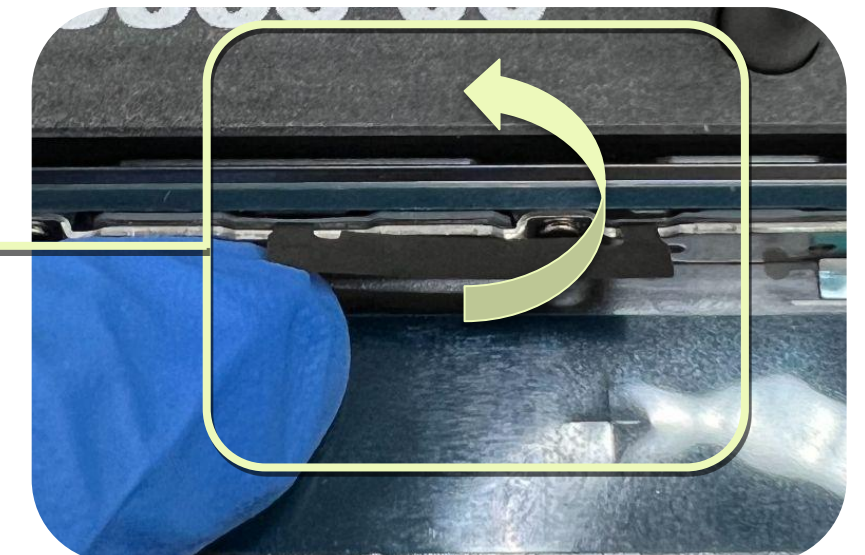
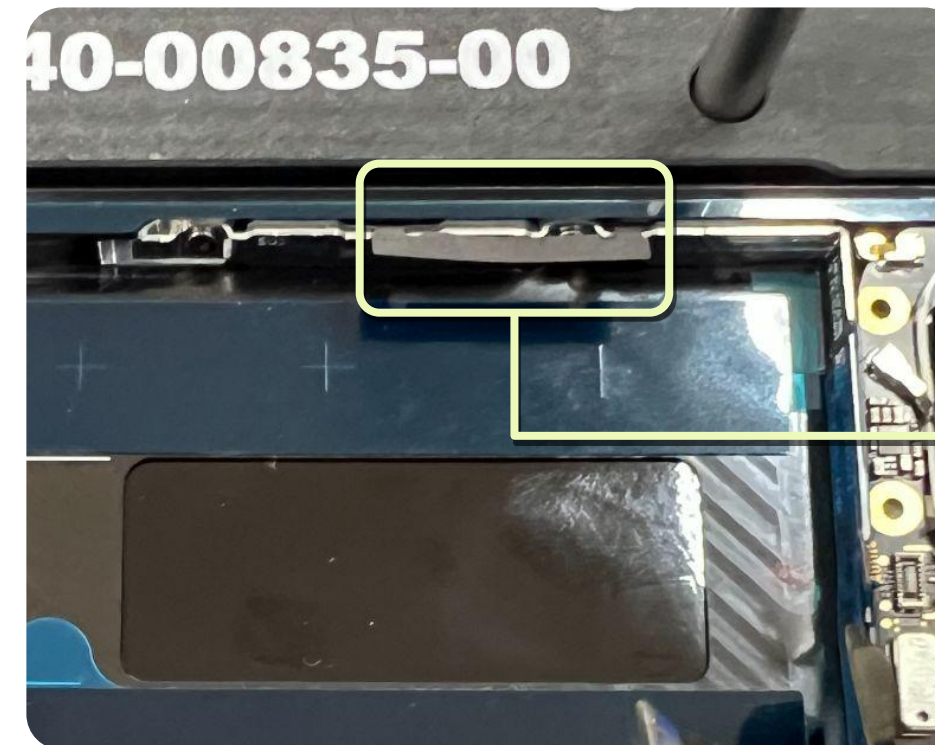
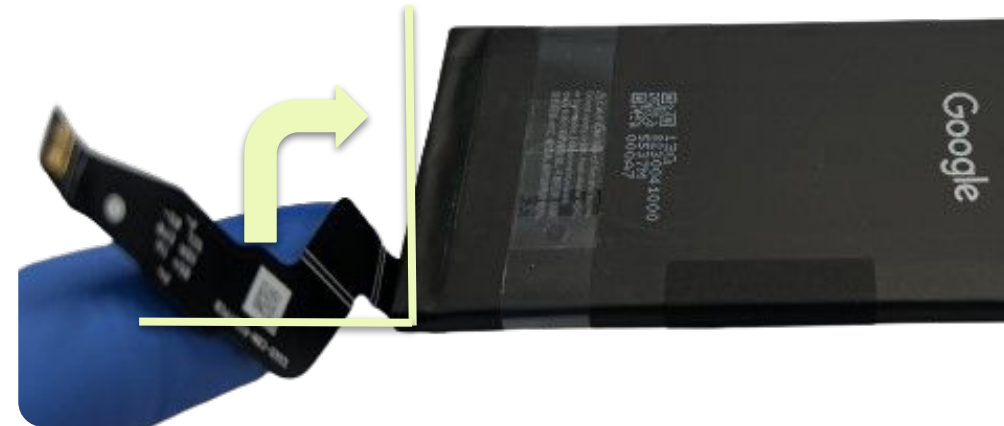
Masking tape can be used to hold the graphite sheet away from the battery area during this and the following steps.

If used, ensure the masking tape is removed after the battery installation steps are complete.



Prepare to install the battery

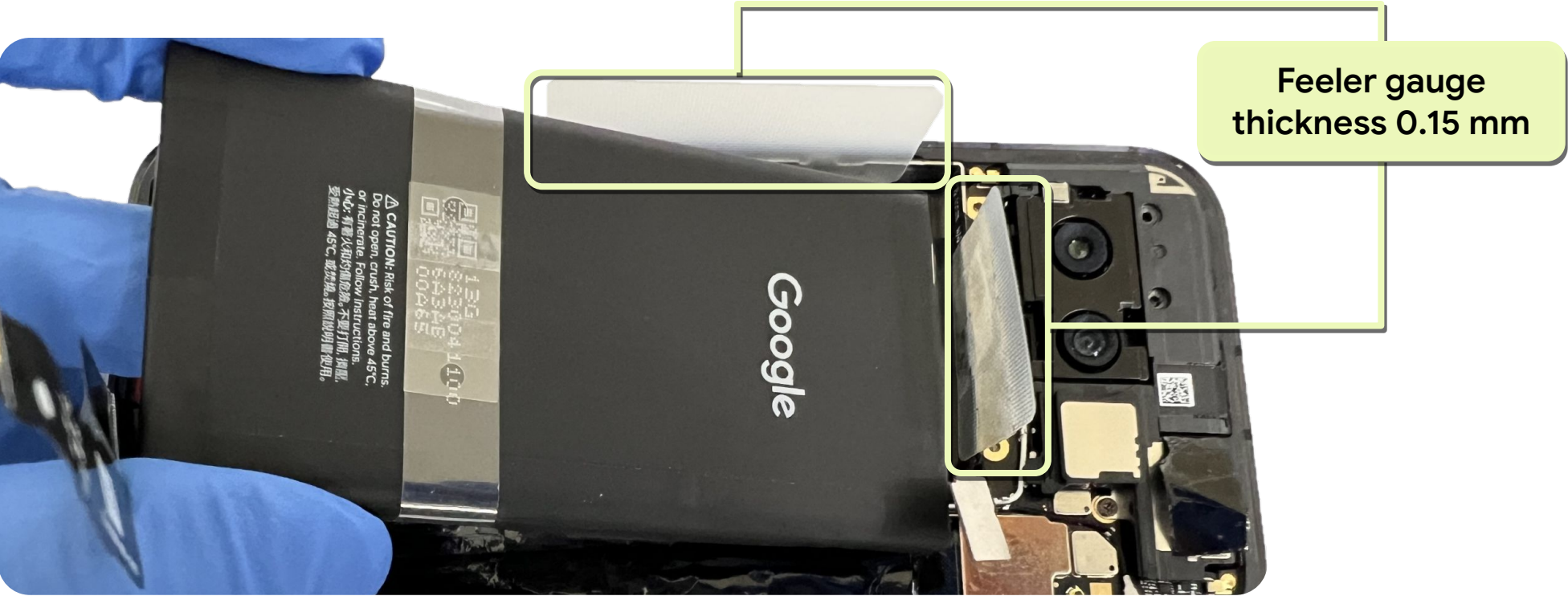
- Fold the battery FPC upwards.
- Fold the side key FPC upwards.



Align and install the battery

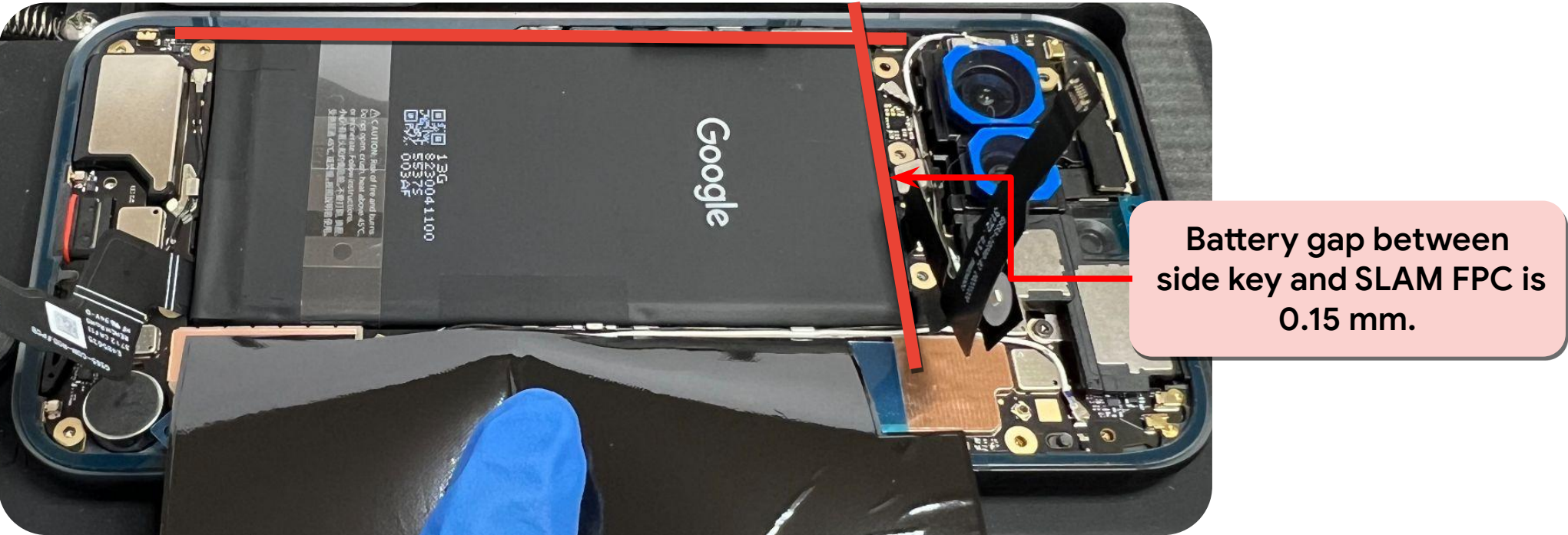
Use the feeler gauge with a thickness of **0.15 mm** at the upper-left hand corner first, then proceed with the battery installation.

Part: G949-01097-00 (Replacement battery)



Use caution

Make sure that the side FPC and SLAM FPC aren't compressed by the battery.



Press the battery in the fixture

- Gently fold the battery FPC, MLB graphite, flash LED, and mmWave FPC (mmWave only) aside so that they aren't under the pressing surfaces, as shown in Fig 1 and Fig 2.
- Assemble the universal holder onto the universal base according to the specific position, as shown in Fig 3.

Assembly holder sequence (Fig 4):

1 → 2 → 3 → 4 → 5 → 6

Part 1: G940-00833-01 (Universal base plate 12mm)

Part 2: G940-00834-00 (Universal holder)

Part 3: G940-00804-00 (Universal supporting rubber)

Part 4: G940-00835-00 (Universal holder limiting block)

Part 5: G940-00826-00 (Pixel 8a-battery press rubber)

Part 6: G940-00736-00 (Universal press plate 12 mm)

Fig 1

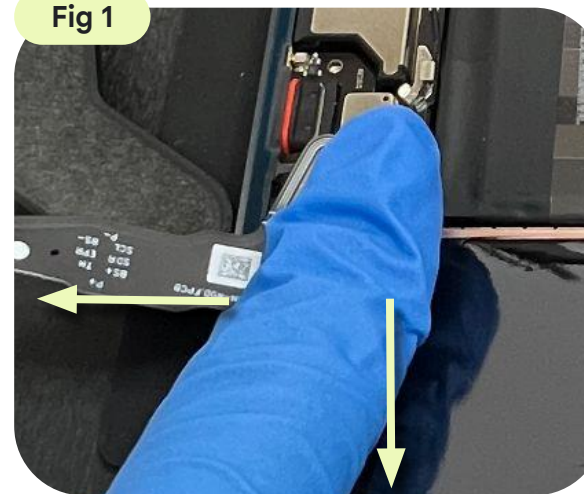


Fig 2

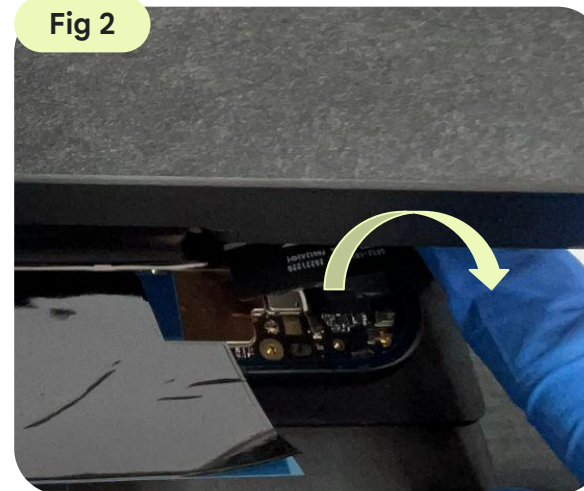


Fig 3

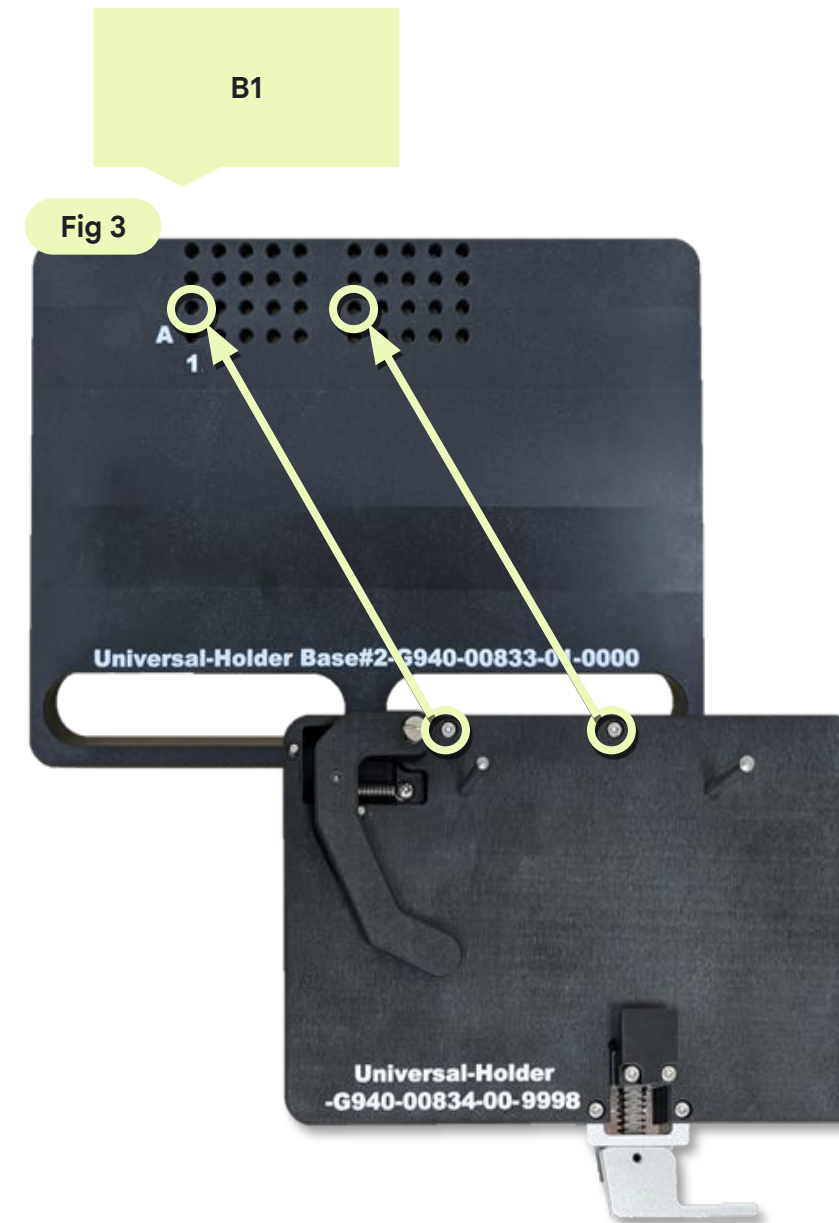
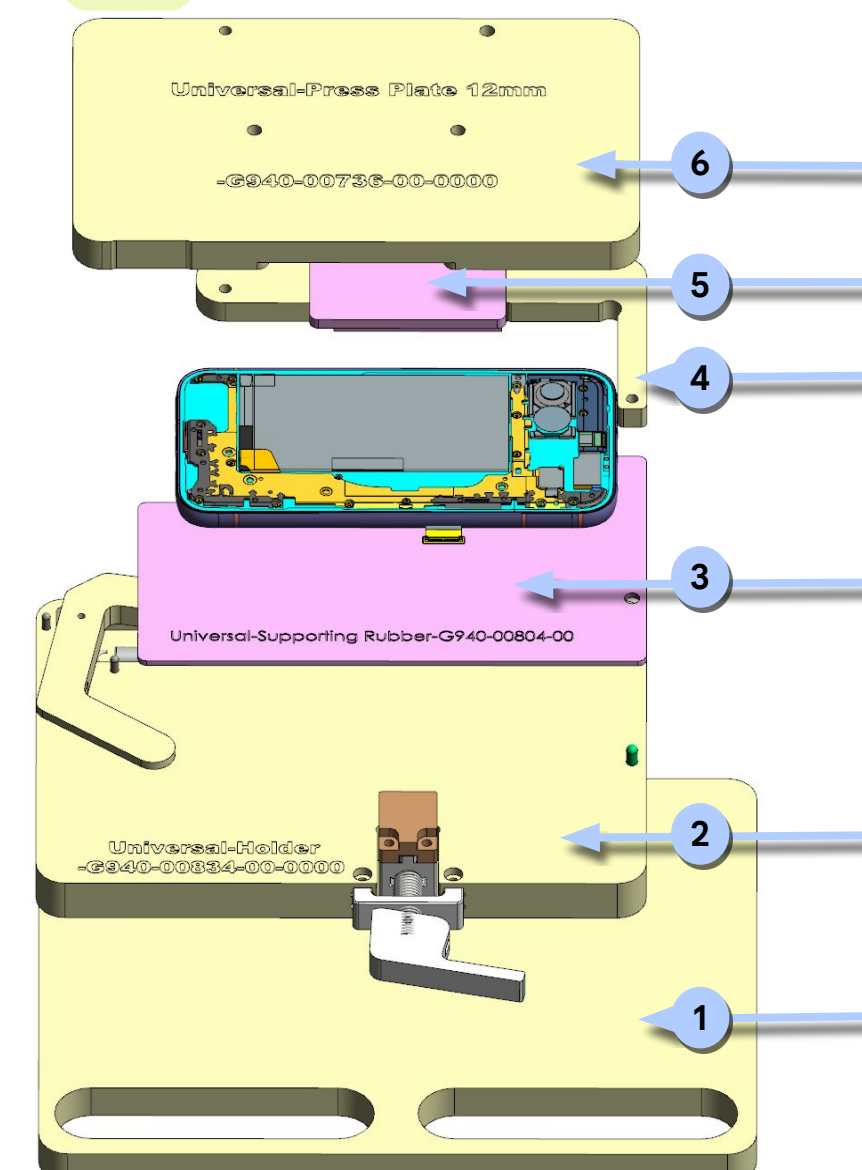


Fig 4



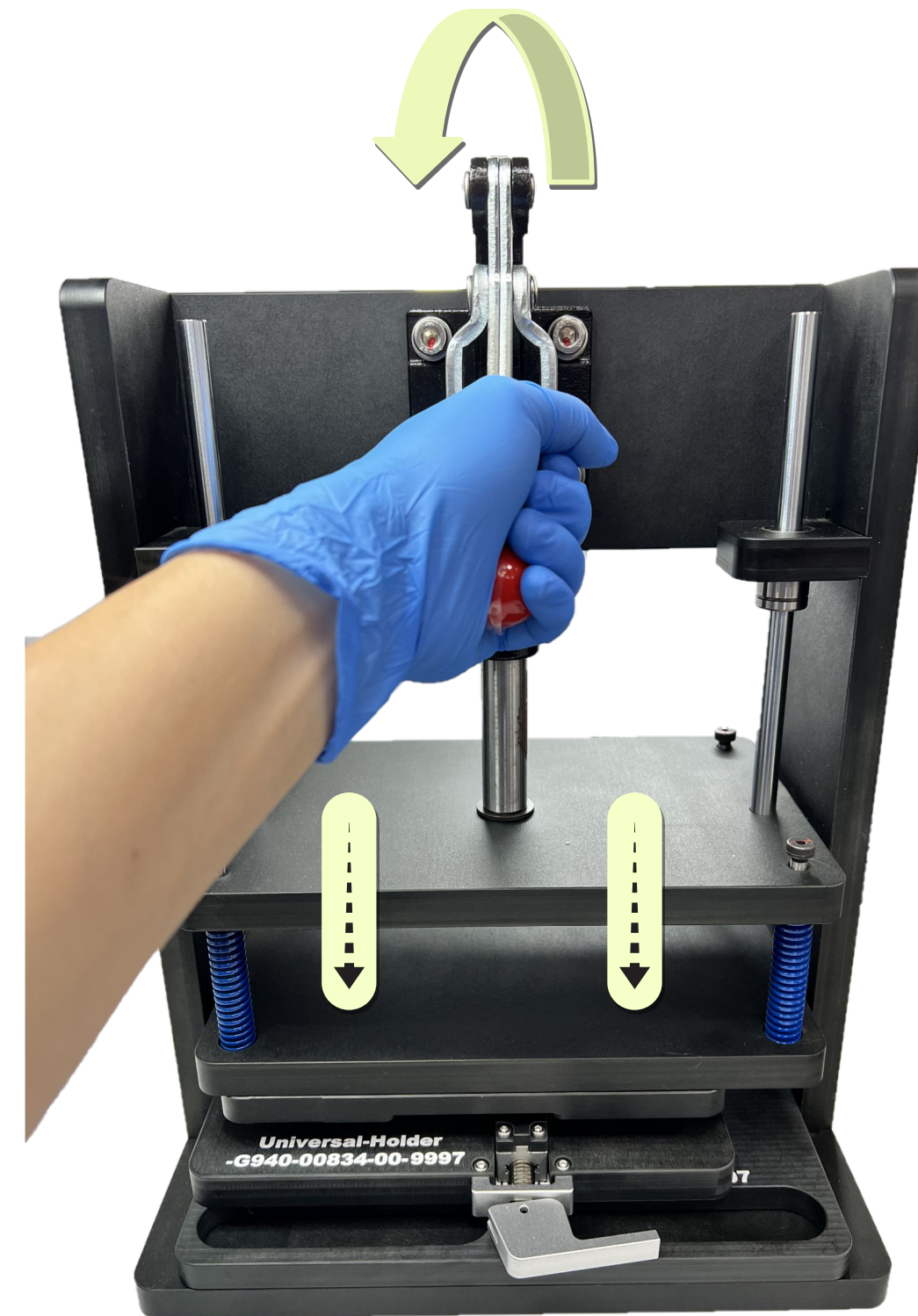
Press the battery in the fixture

- Place the stack in the universal press and press the handle down for **30 seconds**.
- Restore the handle to the original position and remove the device.



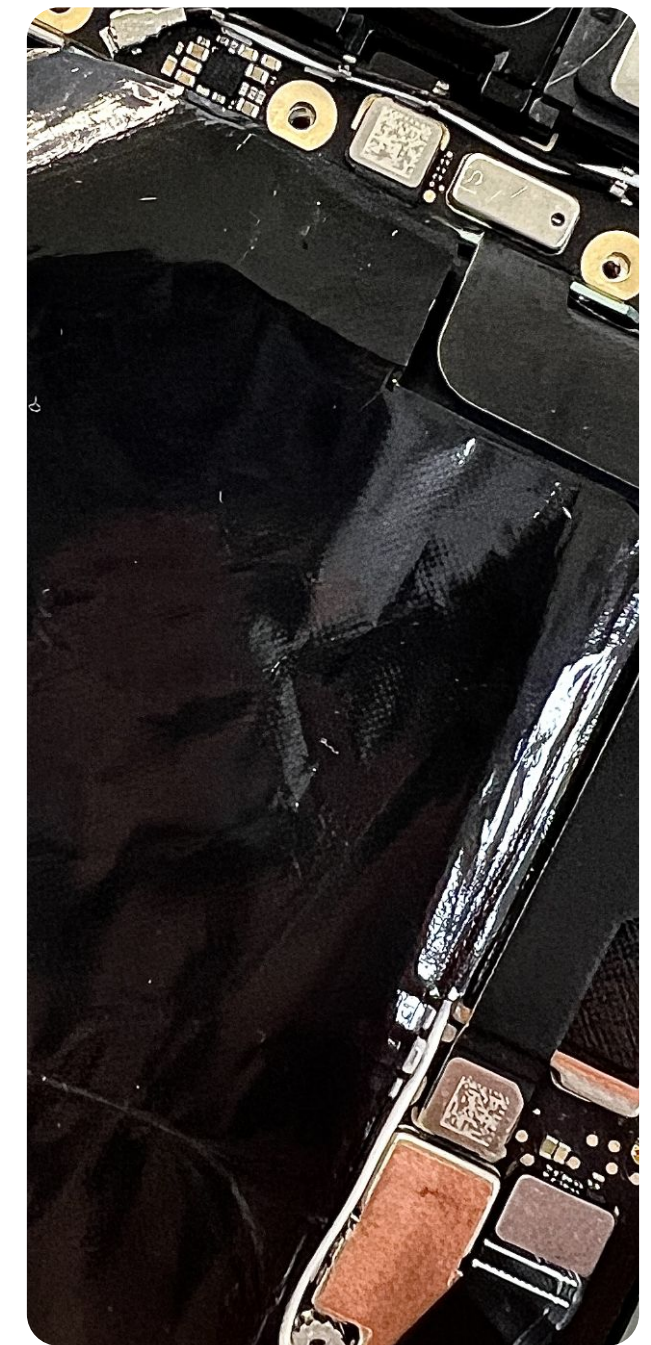
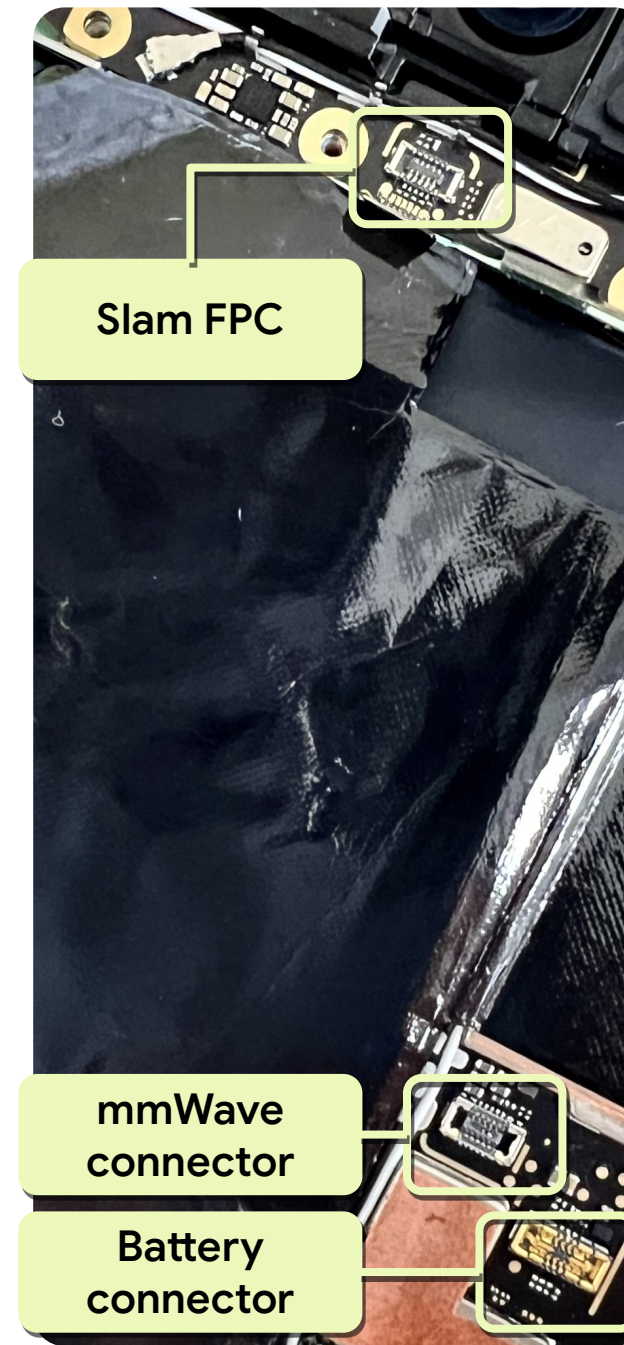
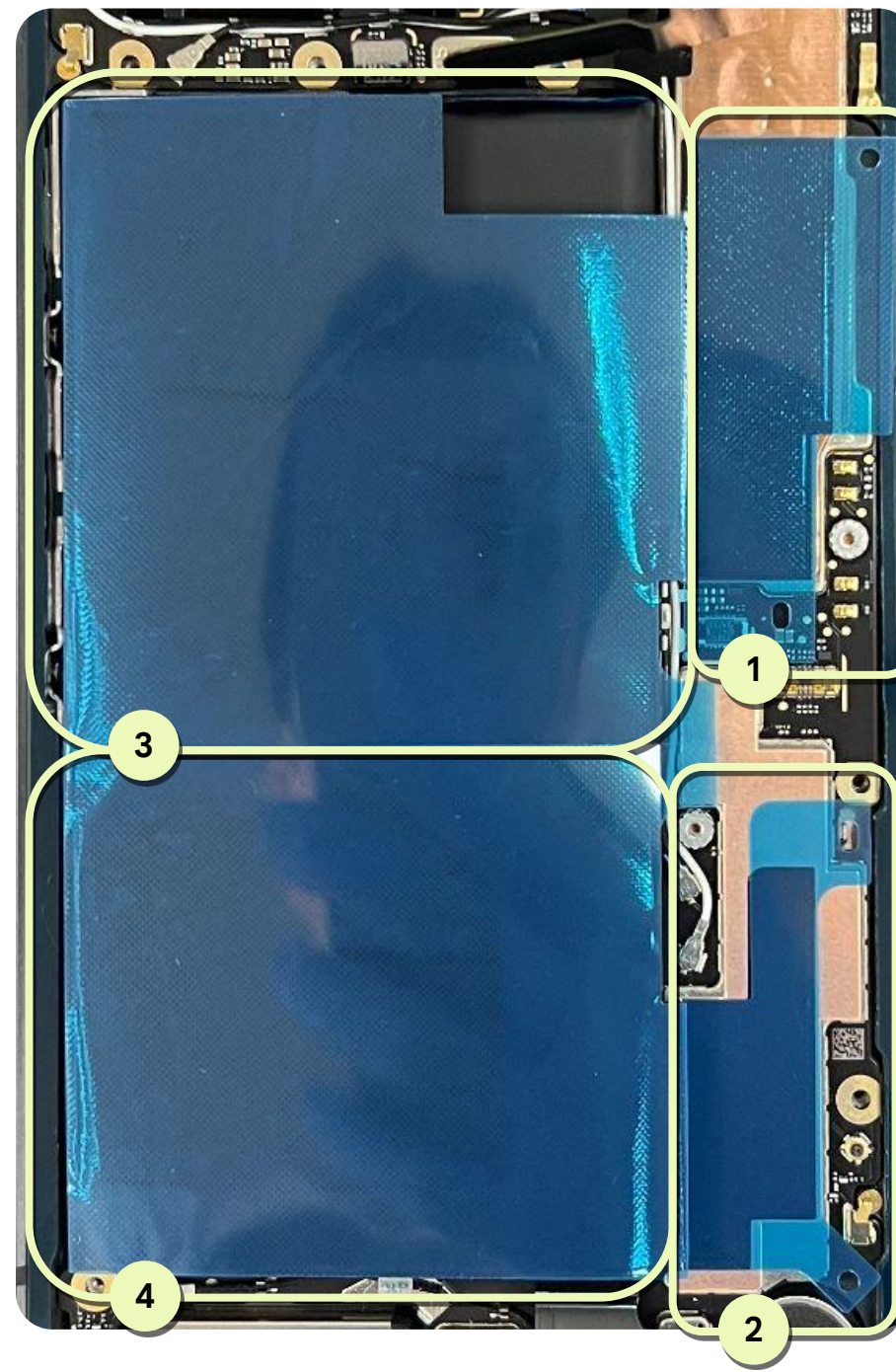
Use caution

Keep hands clear during operation.



Attach the Batt., Slam FPC & mmWave connector

- Remove the four release liners from the shielding with ESD tweezers.
- Connect the battery FPC, slam FPC and the mmWave FPC (mmWave only) to the logic board.



Install the BTB bracket

- Take the stamping plate and install it onto the logic board.
- Make sure the stamping plate is latched into place, as shown in Fig 1.
- Tighten the screw on stamping plate with an adjustable torque screwdriver, as shown in Fig 2.
- Make sure that the stamping plate remains aligned after screw installation and doesn't overlap with the enclosure, as shown in Fig 3.

Part: G730-07372-01 (Stamping plate 5G/battery)

Part: G250-06929-01 (Screw)

Fig 1

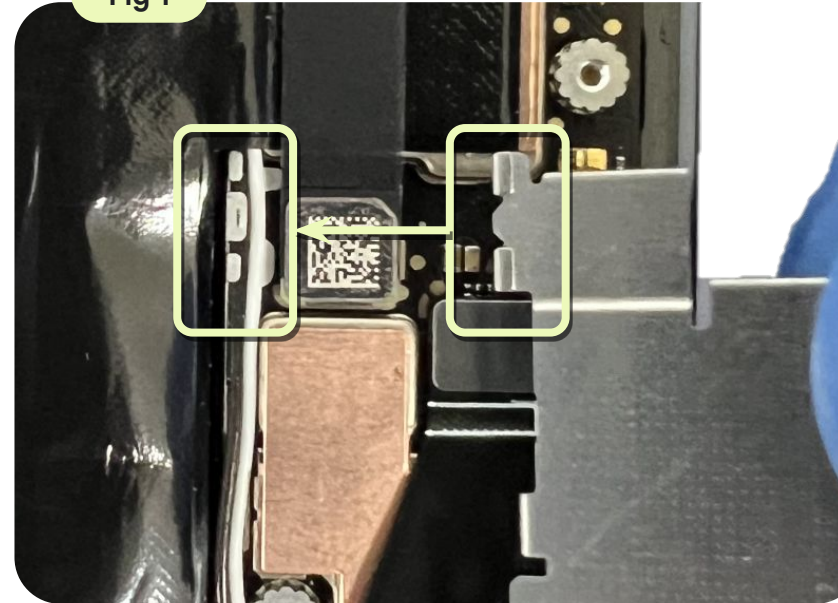


Fig 2

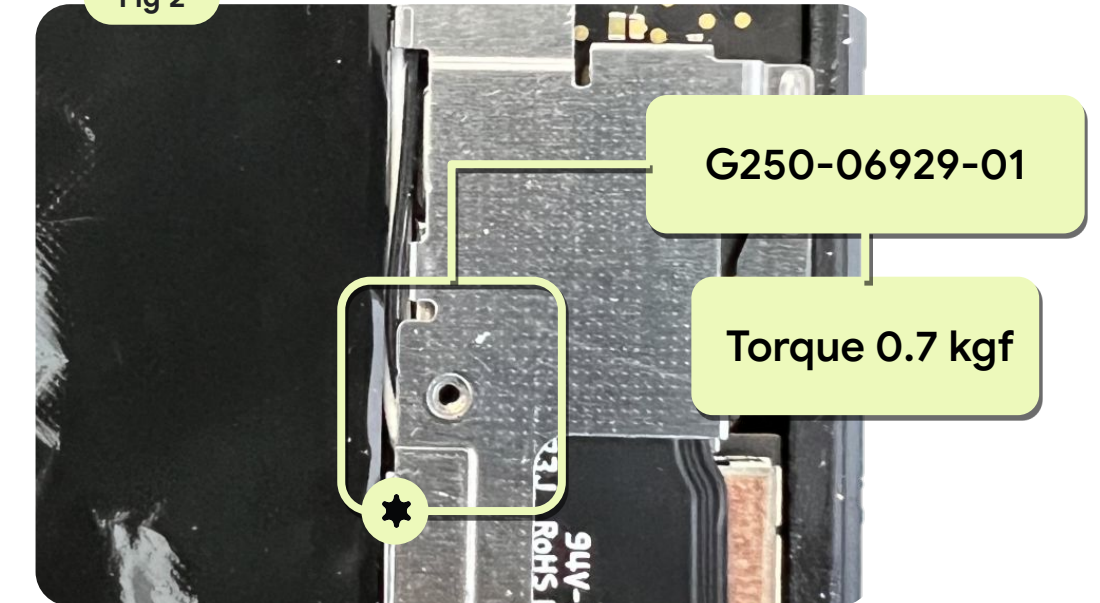
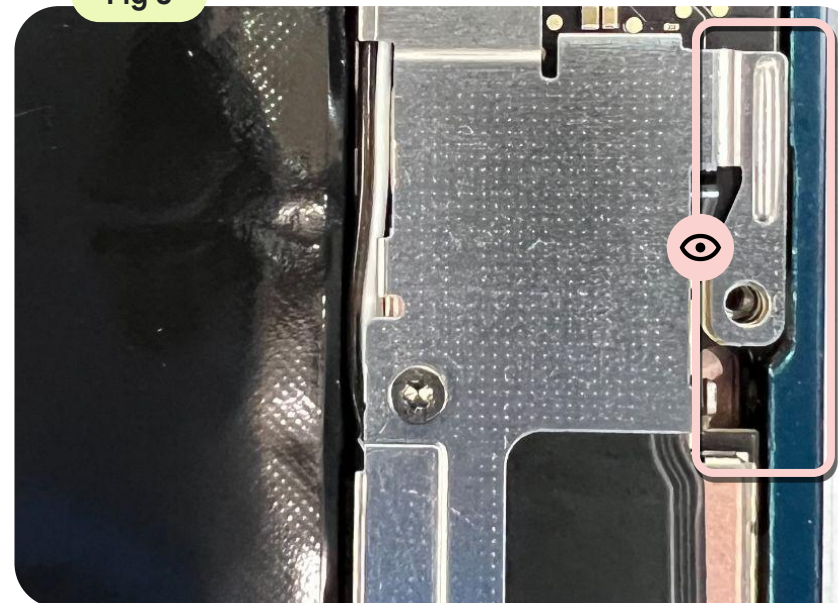


Fig 3





Assembly
instructions

Inner and antenna housing

Install the antenna housing

(for reused inner and antenna housing)

- Insert the antenna housing and push the snap area to assemble it into the enclosure.
- Ensure that the snaps at the three locations on the antenna housing are securely attached to the enclosure.

Part: G730-07191-01 (Antenna housing)



Use caution

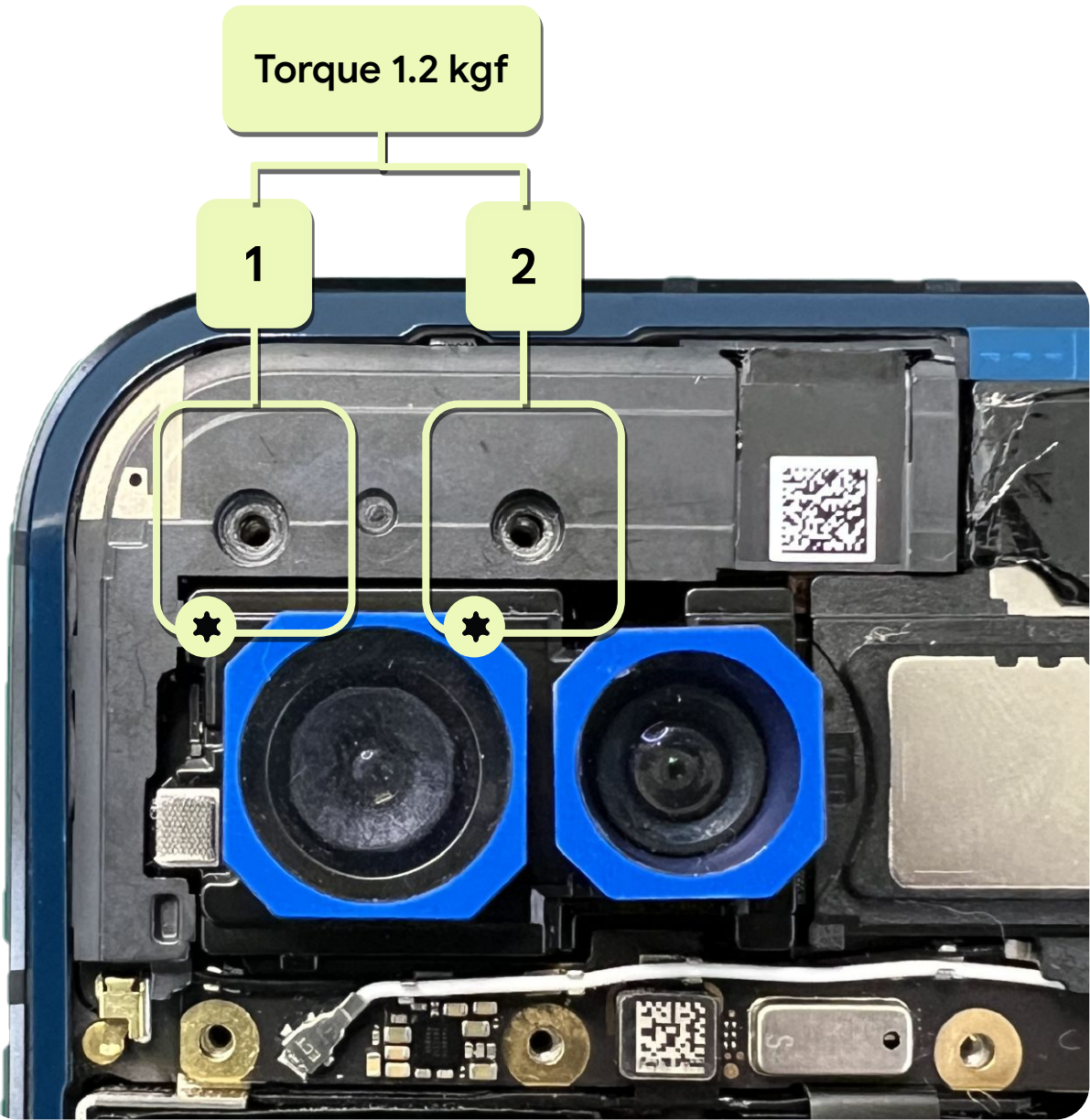
Make sure that the front camera is installed firmly against the holder before you begin installation.



Fasten the screws

Fasten the two screws on the antenna housing with an adjustable torque screwdriver.

Part: G250-05370-00*2 (Screw)



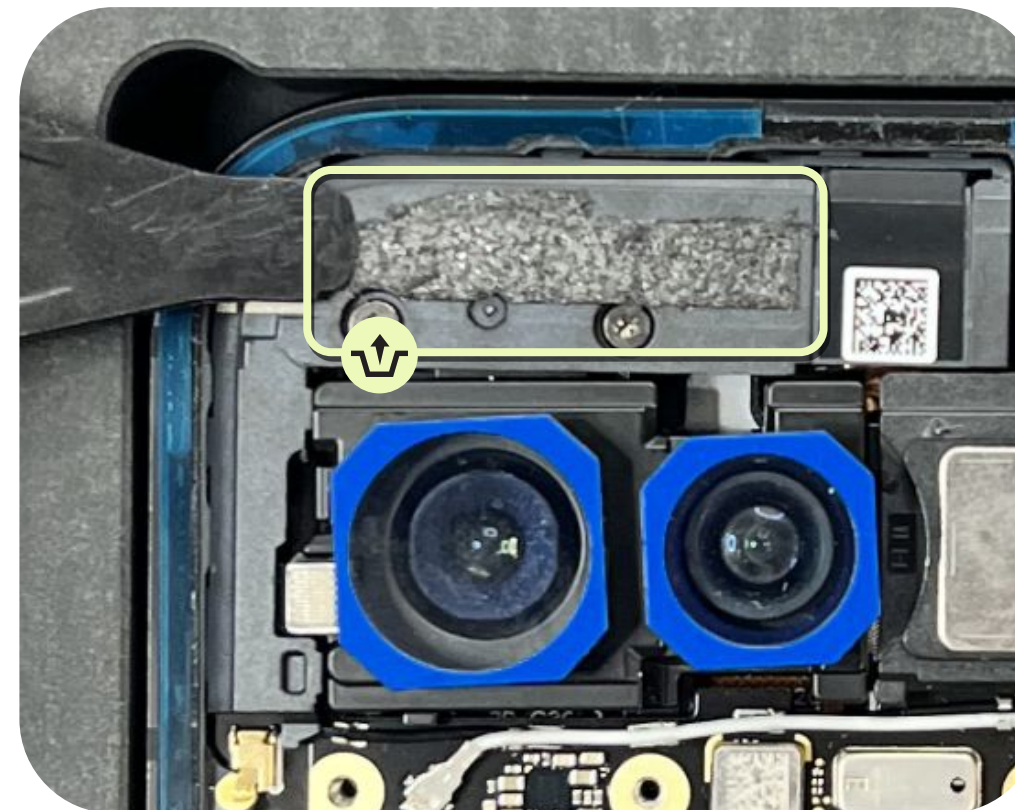
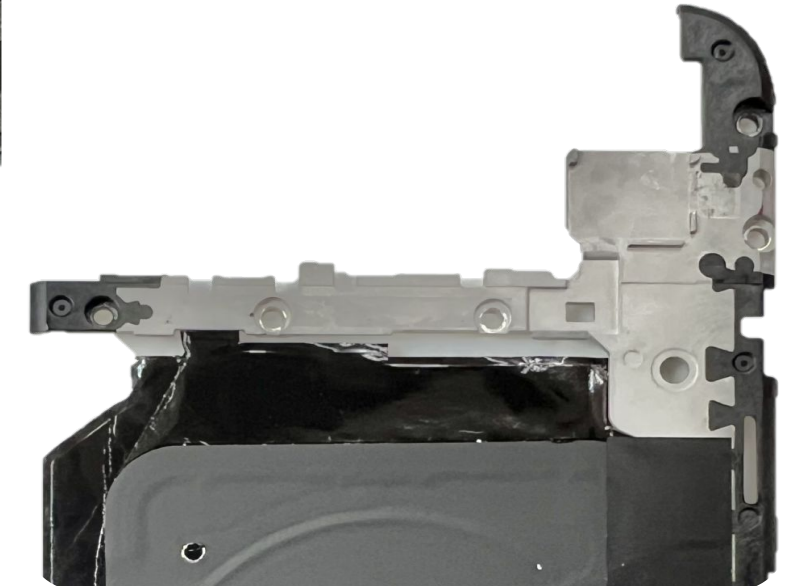
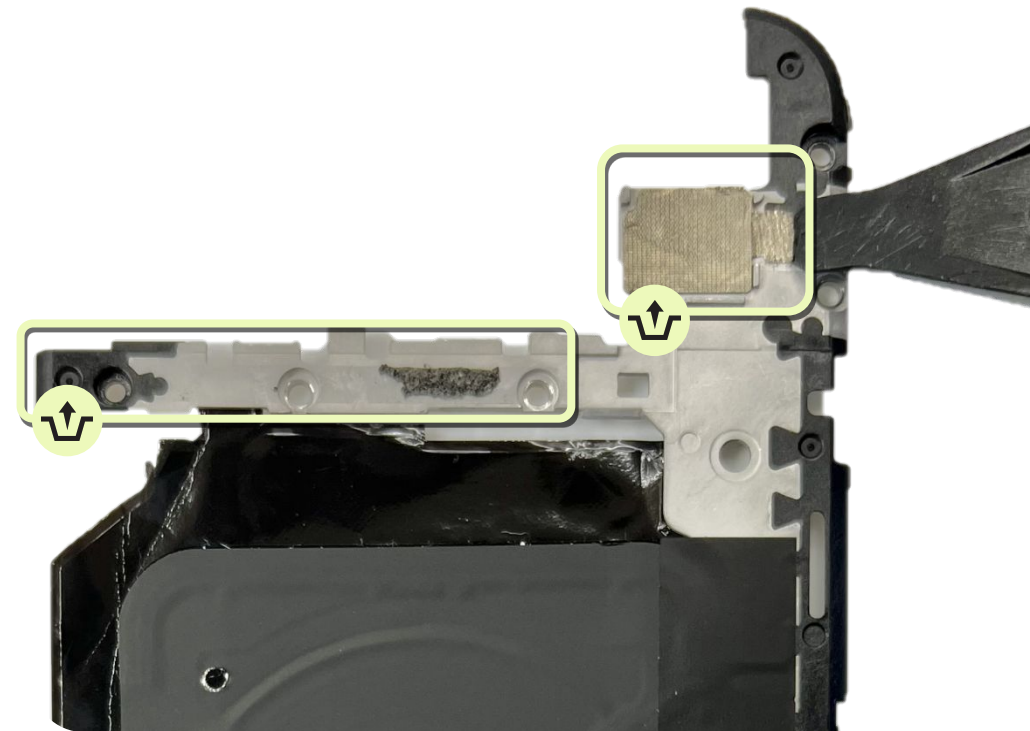
Rework the inner housing and the antenna housing

- Use an ESD spudger to clean up the adhesive on both the inner housing and the antenna housing.
- Use cotton swabs with IPA to wipe the surfaces and remove any residue.



Use caution

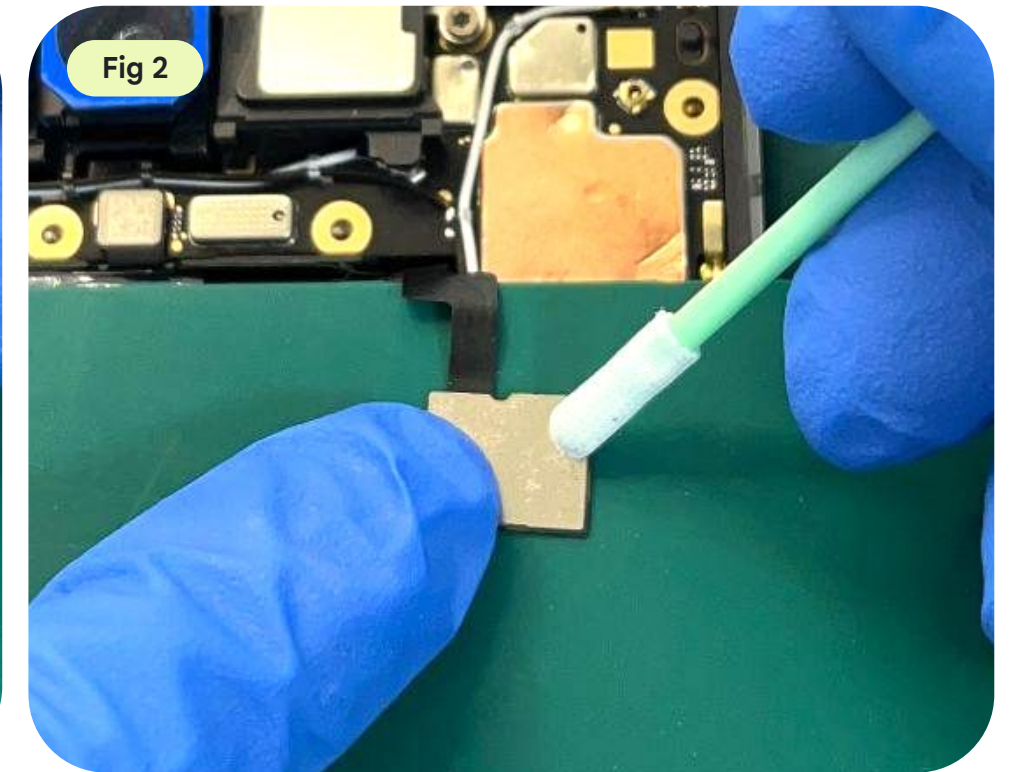
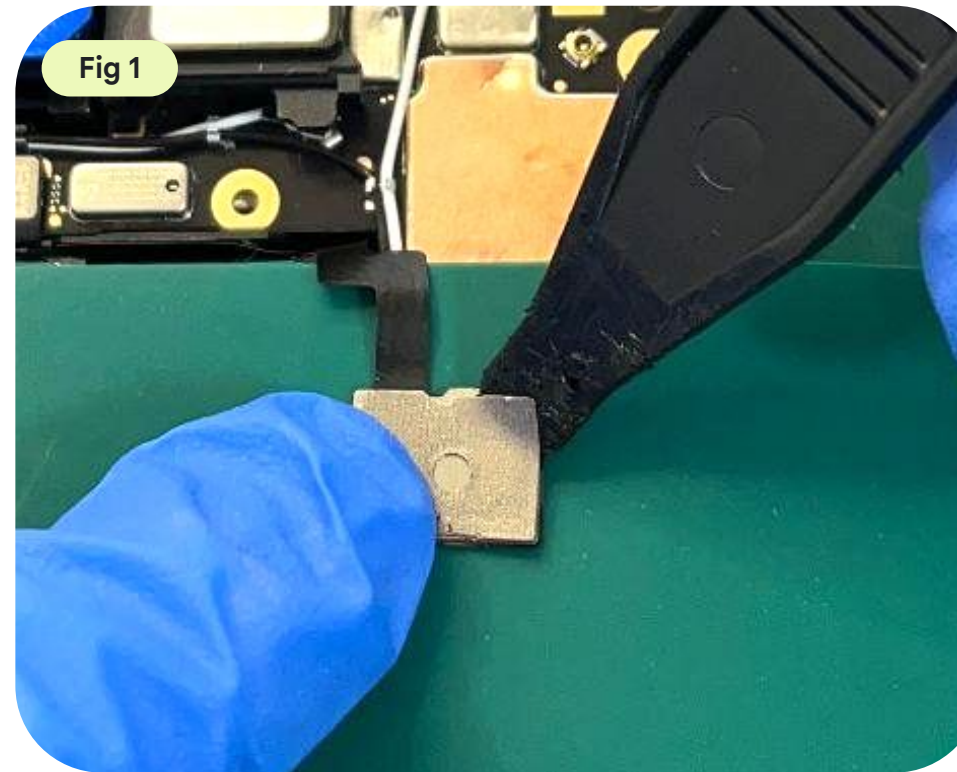
Don't damage the graphite sheet.



Rework the flash LED

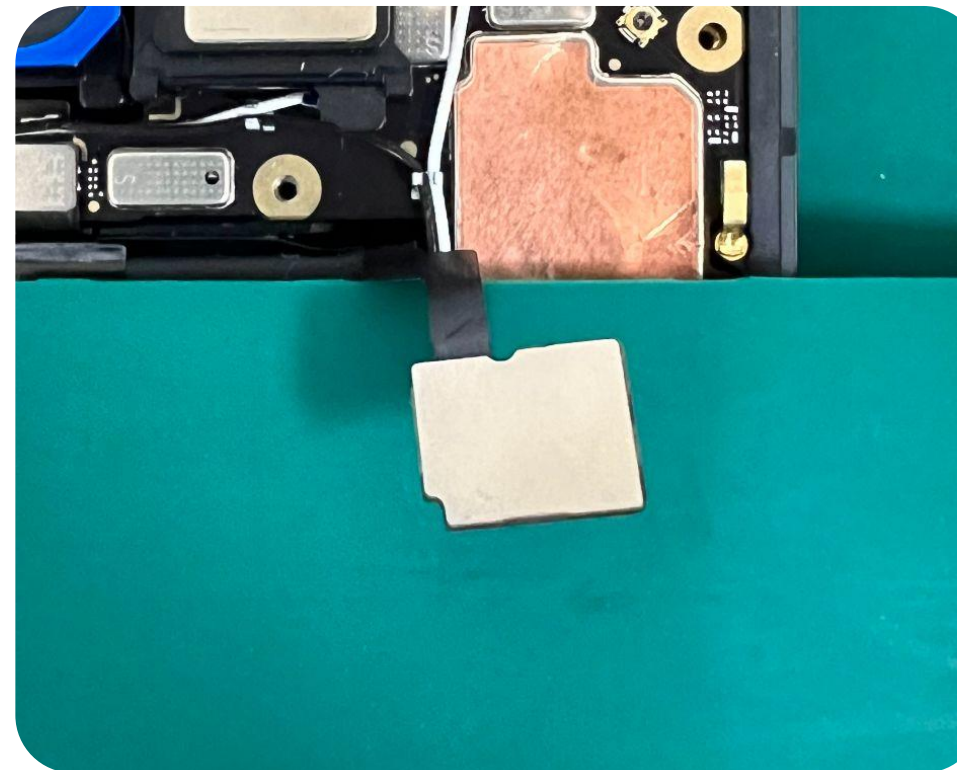
(for a reused enclosure)

- Place a cutting mat on the enclosure and use an ESD spudger to clean up the flash LED adhesive, as shown in Fig 1.
- Use cotton swabs with IPA to wipe the surface and remove any residue, as shown in Fig 2.



Use caution

Use an ESD safe mat to avoid damage to the battery.

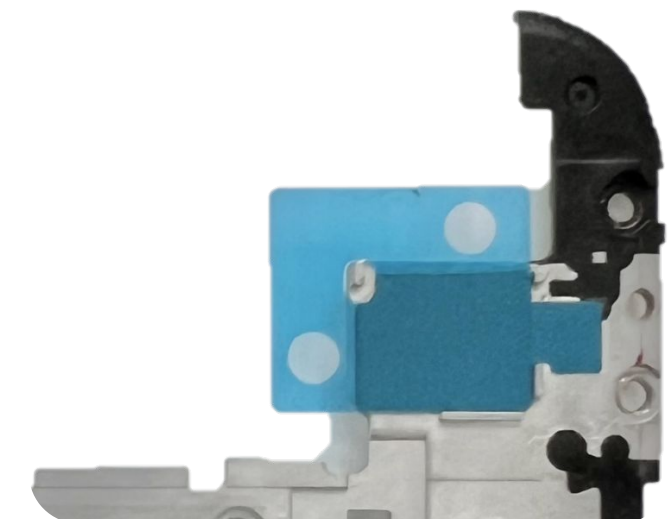
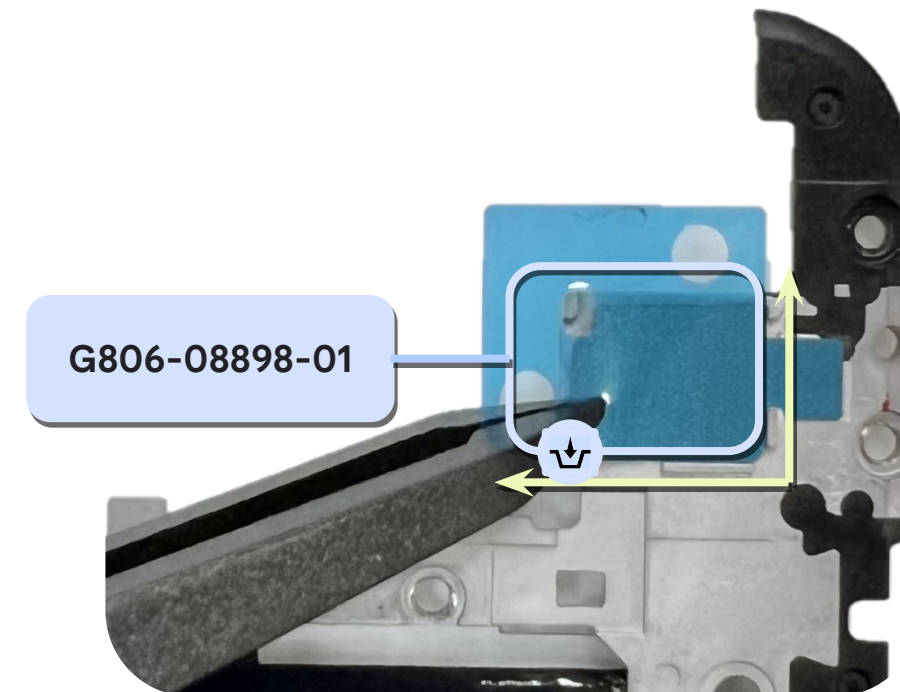
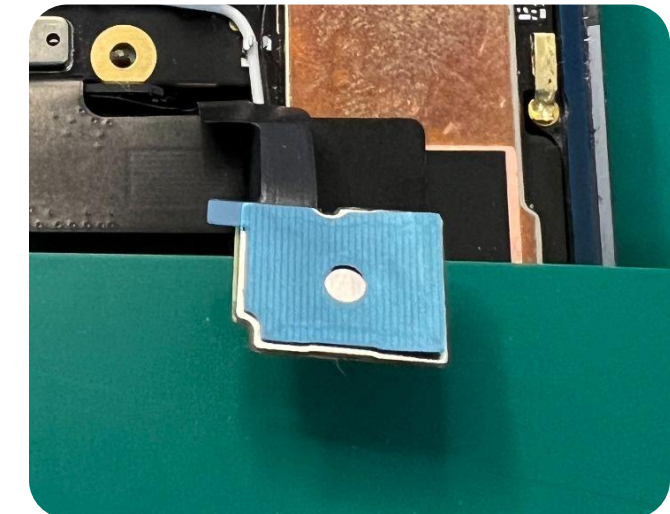
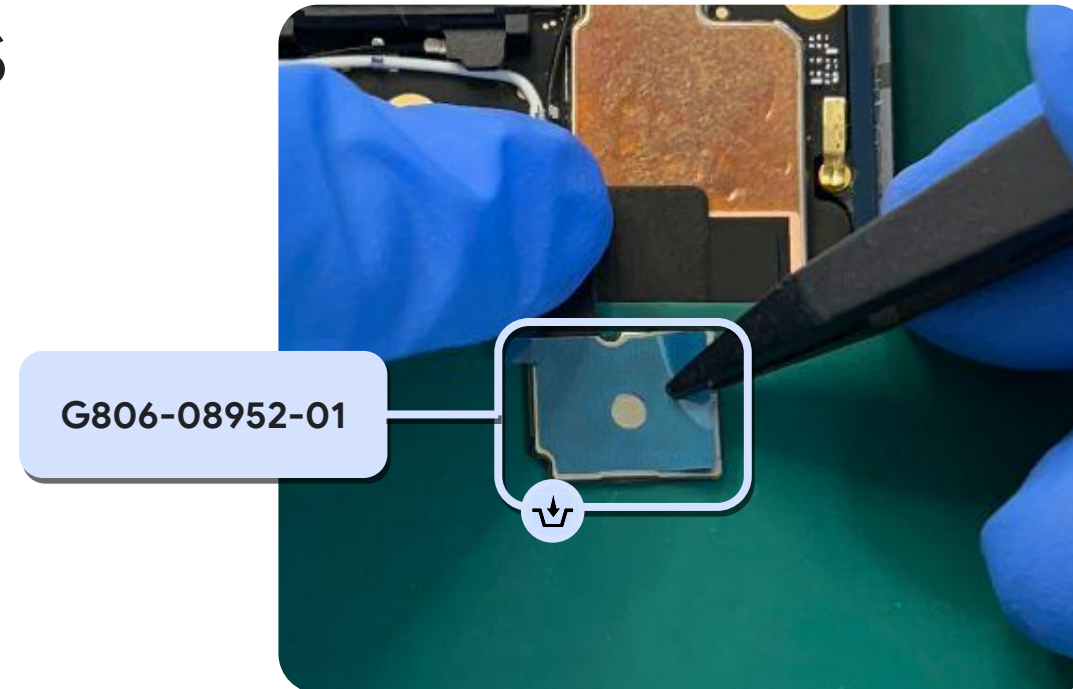


Paste the flash LED adhesives

- Paste a new adhesive on the flash LED with ESD tweezers.
- Paste a new adhesive on the inner housing with ESD tweezers following the alignment features on the inner housing.

Part: G806-08952-01 (Diecut Cu foil flashlight)

Part: G806-08898-01 (Diecut, conductive, inner housing)



Install the inner housing

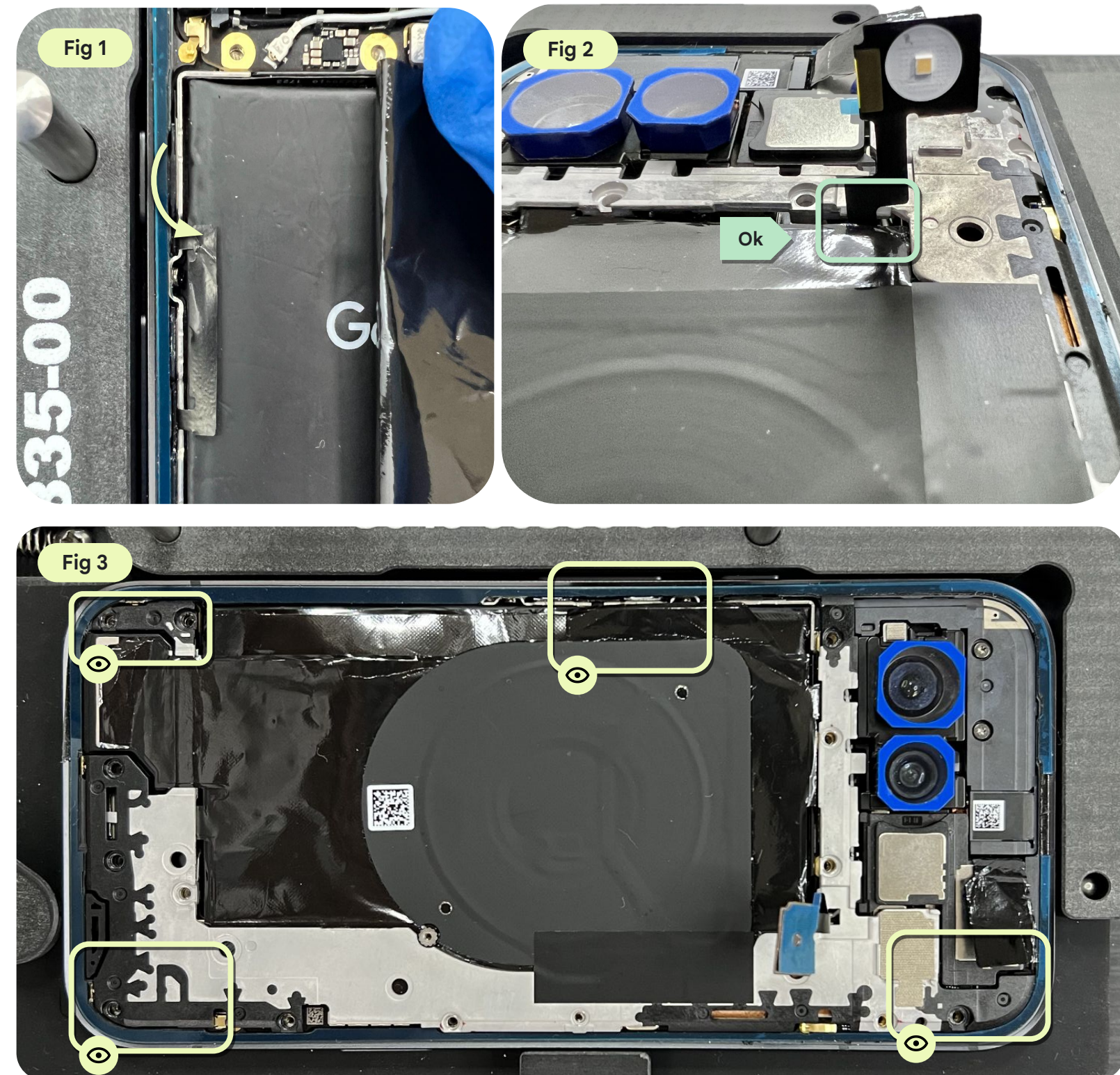
- Remove all release liners on the inner housing and fold the side key FPC inward toward the center of the phone, by laying it on top of the battery and below the graphite sheet, as shown in Fig 1.
- Slide the flash LED FPC through the hole in the middle of inner housing, as shown in Fig 2.
- Ensure that all of the snaps on the inner housing are securely clipped into the enclosure, as shown in Fig 3.

Part: G949-00788-00 (Inner housing)



Use caution

Make sure that the side key FPC is under the MLB graphite and inner housing.

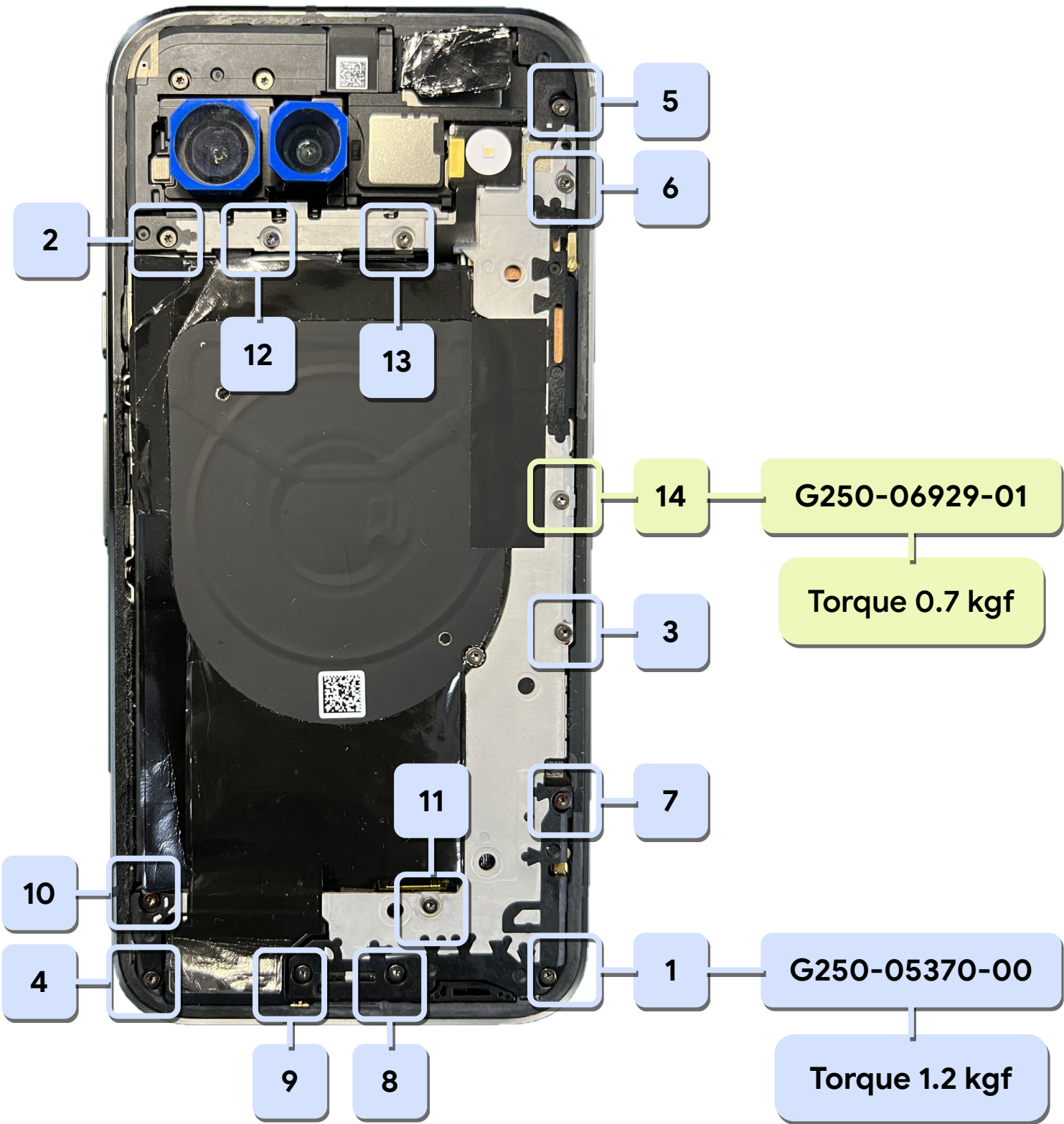


Fasten the screws

Fasten 14 screws on the inner housing with an adjustable torque screwdriver.

Part: G250-05370-00*13 (Screw)

Part: G250-06929-01*1 (Screw)



Attach the flash LED

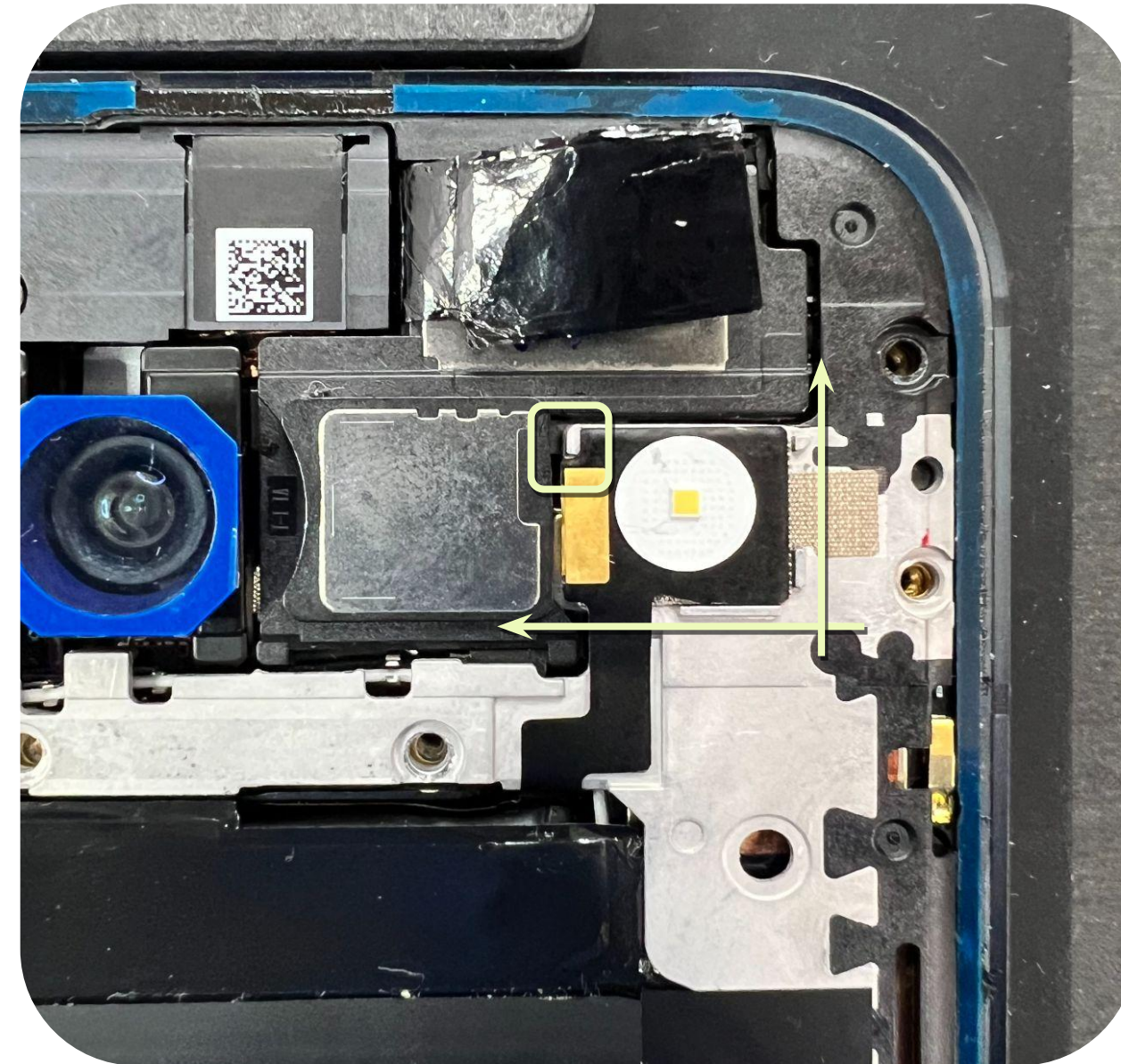
- Remove the release liner from the flash LED.
- Align and apply flash LED on the inner housing.
- Apply gentle pressure to the flash LED to ensure that it's adhered to the inner housing.



Use caution

Don't apply and then remove the flash LED.

This adhesive is single use.





Assembly
instructions

Back cover

Rework the back cover

(for a reused back cover)

- **Outer edge of back cover:** Remove adhesive residue from the outer edge of the back cover with an ESD Spudger or Electric glue remover tool.
- **Near visor area:** Use ESD tweezers or Electric glue remover tool to clean the adhesive residue near the visor area.
- **All areas:** Use cotton swabs with IPA to wipe the surface and remove any residue.

Part: Multiple part numbers (Back cover)



Note

Clean off the LDA residues located in between visor and the edge of the back cover. The parameter is indicated in red dots.

Also, there is a chance to appear in the relative position on the inner housing.



Attach adhesives to the enclosure

(for a reused back cover)

- **Attach a new back cover:** Apply the top adhesive on the antenna housing following the green alignment lines in the figure.
- **Attach a new back cover:** Apply the bottom adhesive on the inner housing following the green alignment lines in the figure.

Part: G806-09465-01 (Adhesive, BC-Top)

Part: G806-06932-01 (Adhesive, BC-Bottom)



Apply the 3M AP111 primer

(Both new and reused back cover)

Apply 3M AP111 primer around the entire back cover twice following the designated order shown here.



Use caution

After the primer is applied, complete assembly in 25 minutes.



X2

Remove the release liners

- **New back cover:** If applied, remove five items, three release liners, and two lens liners from the inside of back cover.
- **Reused back cover:** If applied, remove two lens liners from the inside of the back cover.



Remove the release liners and the caps

- Slowly remove the release liner from enclosure.
- Slowly remove three release liners from the enclosure, antenna housing, and inner housing.
- If installed, remove the protective caps from the UW and wide camera.



Note

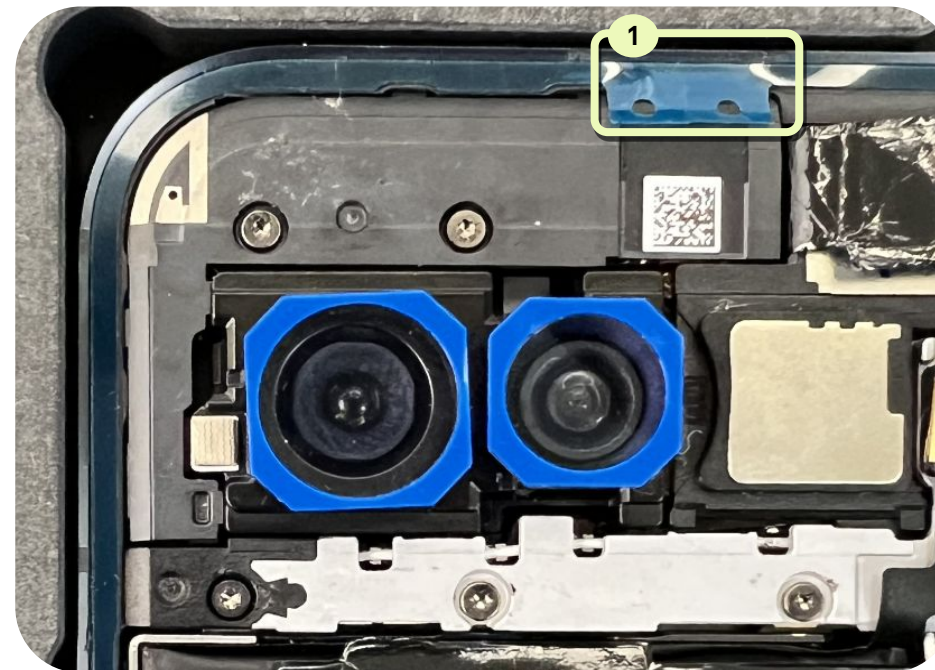
- **New back cover:** All three PSAs are located on the back cover.
- **Reused back cover:** Two PSAs are located on the inner housing.



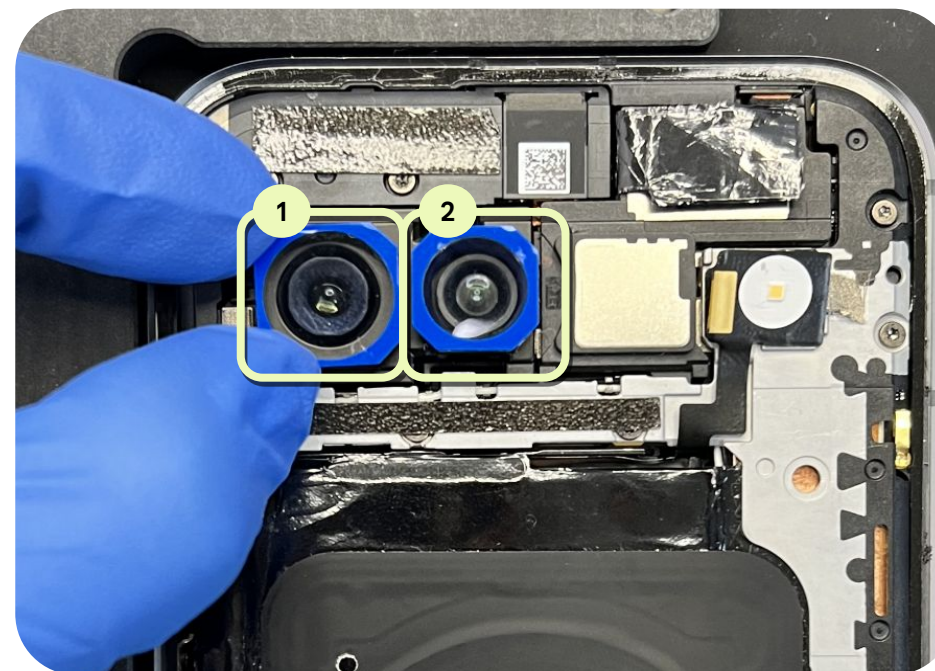
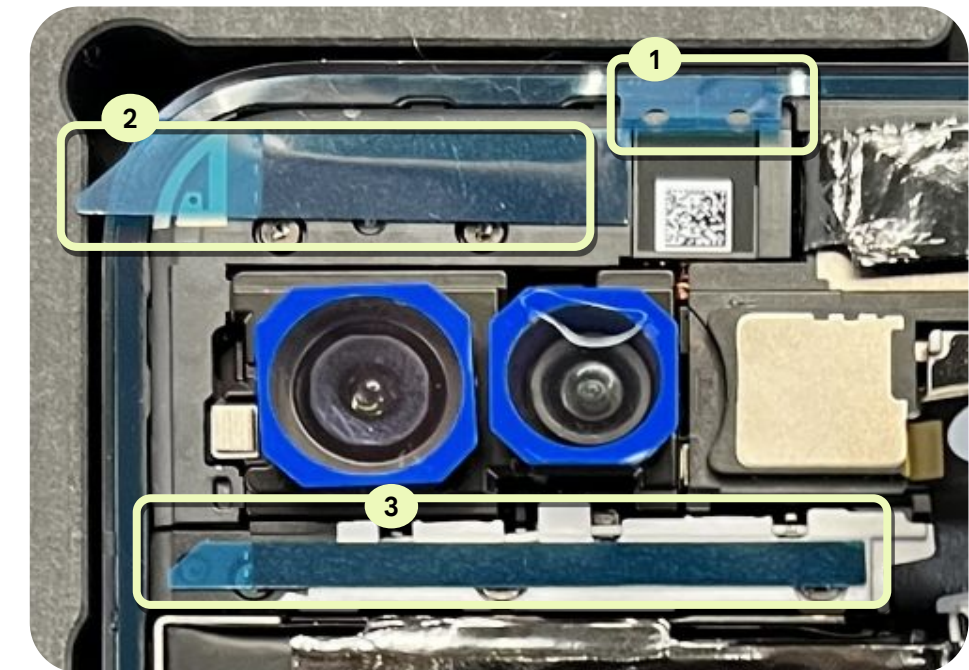
Use caution

Don't touch the camera lenses.

New parts



Reused parts



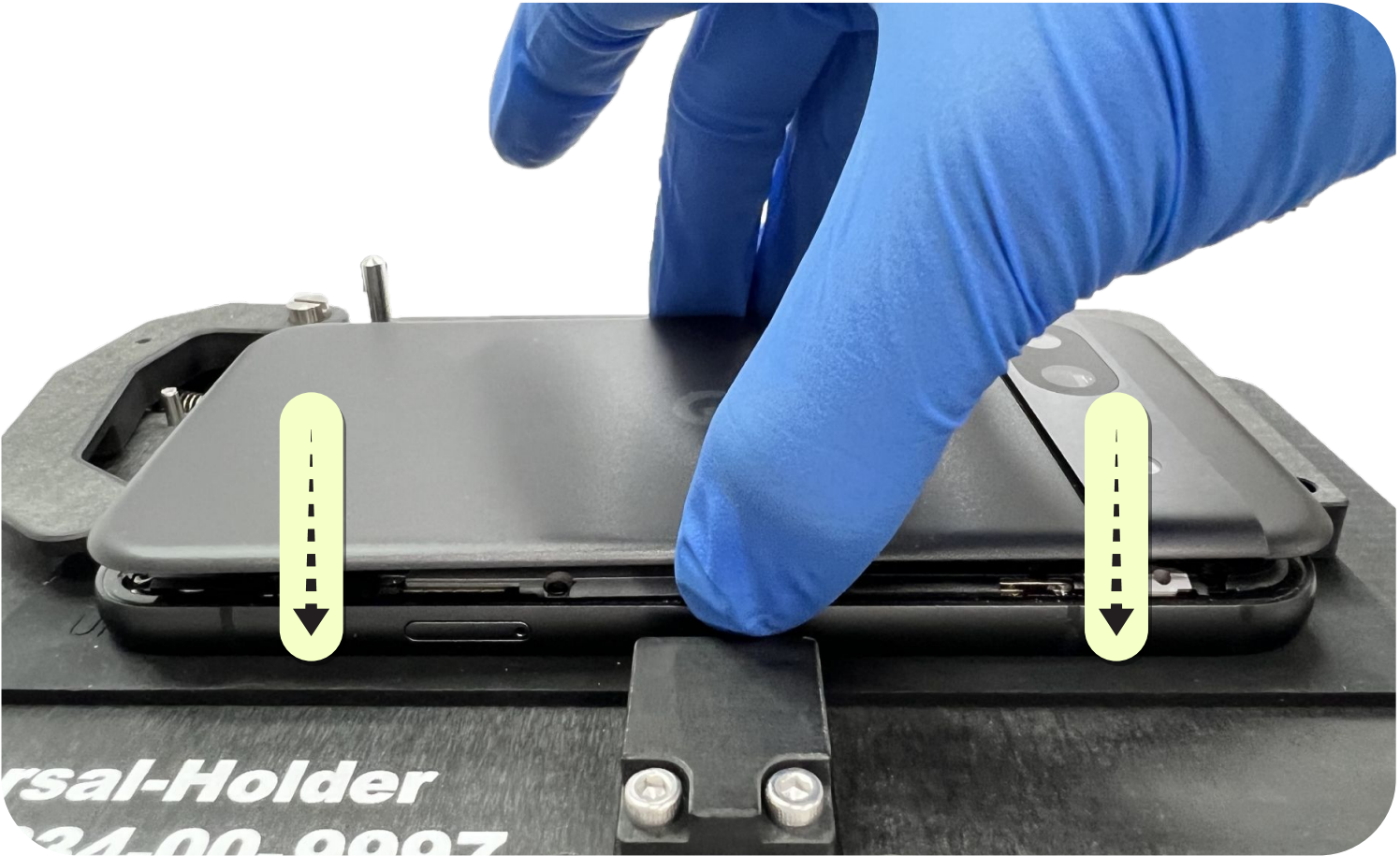
Assemble the back cover and enclosure

Hold the back cover above the enclosure, align them on all four corners, and slowly lower the back cover onto the enclosure.



Use caution

Make sure that the back cover is lowered horizontally.



Activate the PSA

Gently press the back cover onto the device. Ensure that it's correctly aligned to the frame and no adhesive is visible.



Use caution

Don't touch the power key.



Place the device in the fixture

Assembly holder sequence:

1 → 2 → 3 → 4 → 5 → 6

Assemble the universal holder onto the universal base at position **C1**.

Part 1: G940-00833-01 (Universal base plate 12mm)

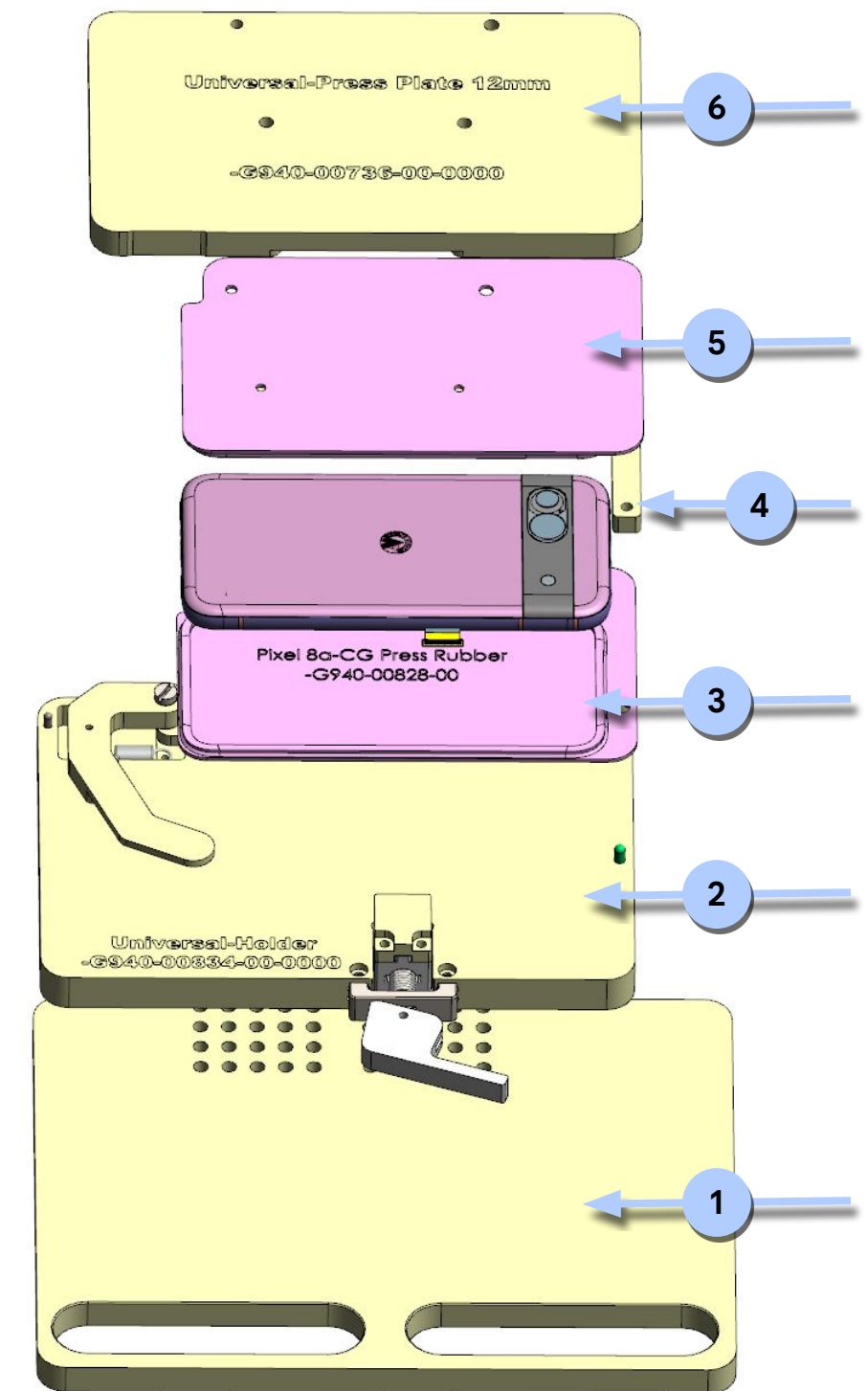
Part 2: G940-00834-00 (Universal holder)

Part 3: G940-00828-00 (Pixel 8a screen press rubber)

Part 4: G940-00835-00 (Universal holder limiting block)

Part 5: G940-00827-00 (Pixel 8a back cover press rubber)

Part 6: G940-00736-00 (Universal press plate 12 mm)



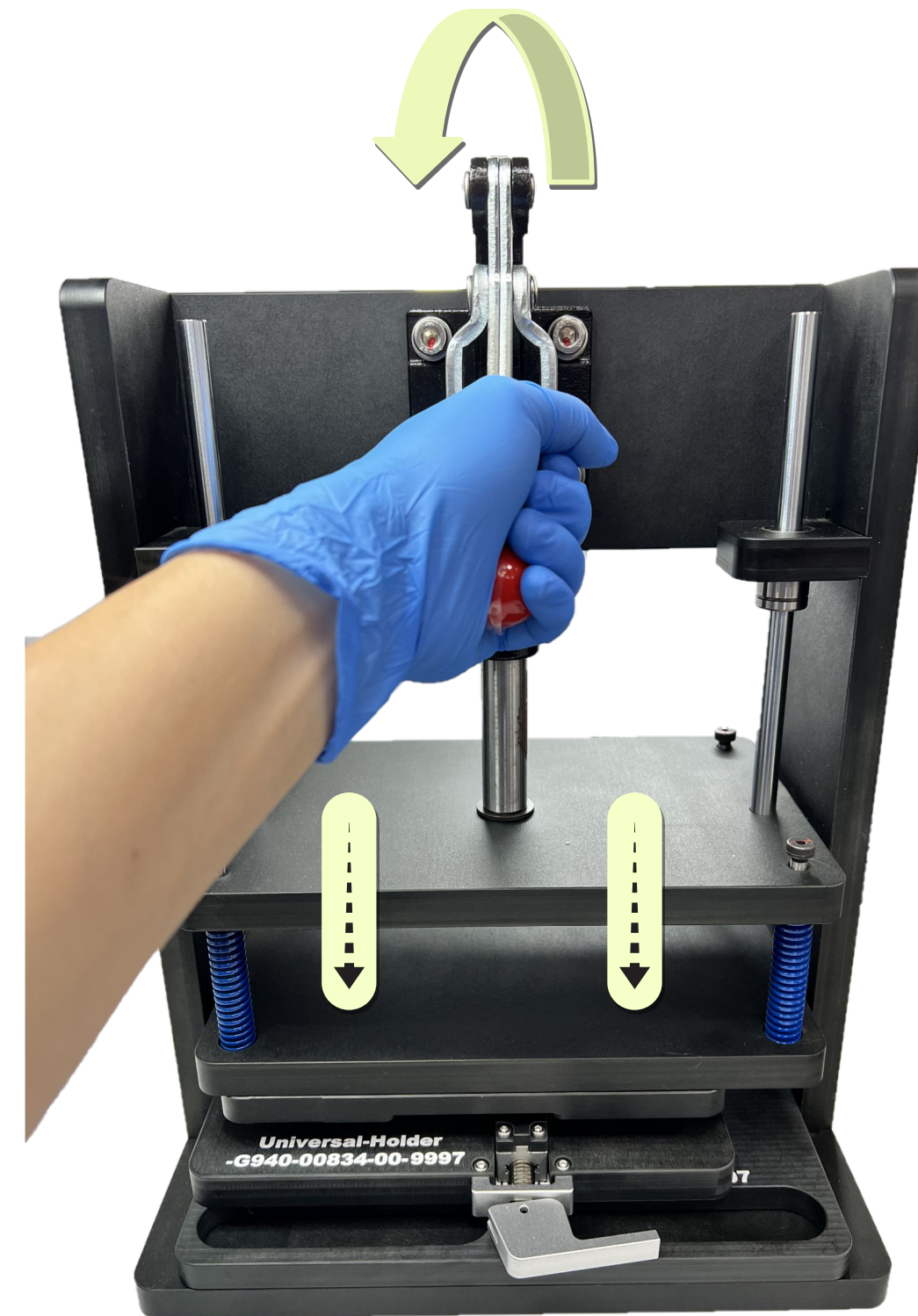
Press the device

- Place the stack in the universal press, turn the handle down, and allow the product to remain in the press fixture for **60 seconds**.
- Restore the handle to the original position and remove the device.



Use caution

Keep hands clear during operation.





Pixel 8a repair manual

Disassembly-CG

Display



Disassembly
instructions

Display



Use caution

Use **safety gloves** to handle damaged displays as some could splinter during removal and cause injury.

Apply the **protective film** to the broken glass before removal.

Review all **safety precautions** before you begin work.



Prerequisites

Before you begin a repair, be sure to **power off** the device and disconnect any charging cables.



Tools

Heat plate

Universal disassembly fixture

Universal press

Universal base plate 12mm

Universal holder

Universal holder limiting block

Universal supporting rubber

Pixel 8a screen press rubber

Pixel 8a back cover press rubber

Universal press plate 12 mm

ESD tweezers

ESD spudger

ESD pick

Cotton swabs

3M AP111 primer

IPA



Parts

Reuse indications



Reusable without
cleaning



Reusable after
cleaning



Not reusable
after disassembly

Display

Here's the list of parts for the display disassembly.

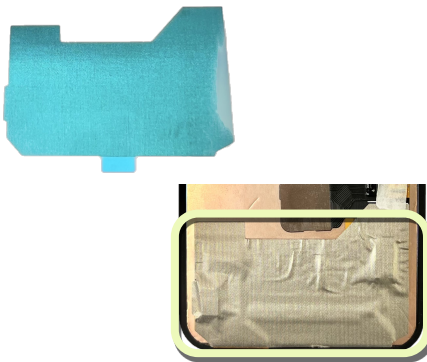
Display module

G949-00767-00



Conductive fabric display

G806-08971-01



Adhesive enclosure to CG

G806-12606-01



Stamping plate display BTB

G730-07370-01



Soften the adhesives

- Set the heating plate to **176° F (80° C)**.
- Set the device on there, display facing down, for **10 minutes (600 seconds)** to soften the glue.



Use caution

The heating plate is a hot surface.
Use caution as it could cause burns.



Display
▲

Cover the enclosure

Cover the back side of the device with protective film.



Use caution

Use safety gloves to handle damaged displays as some could splinter during removal and cause injury.

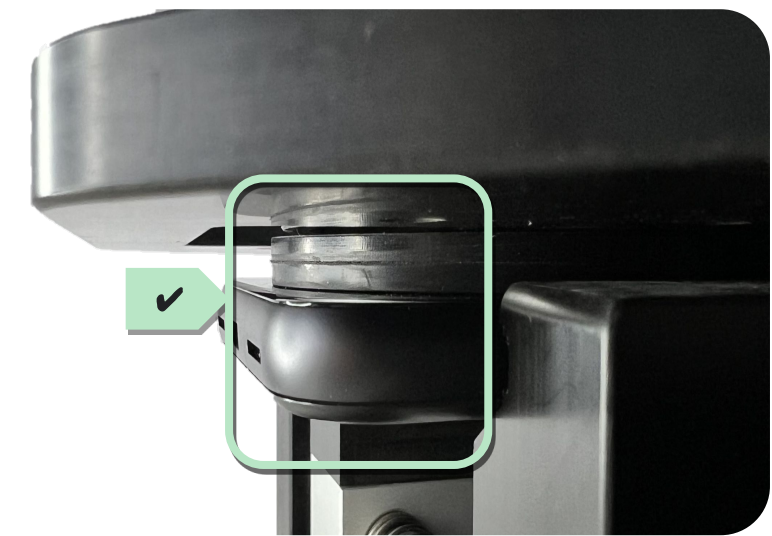
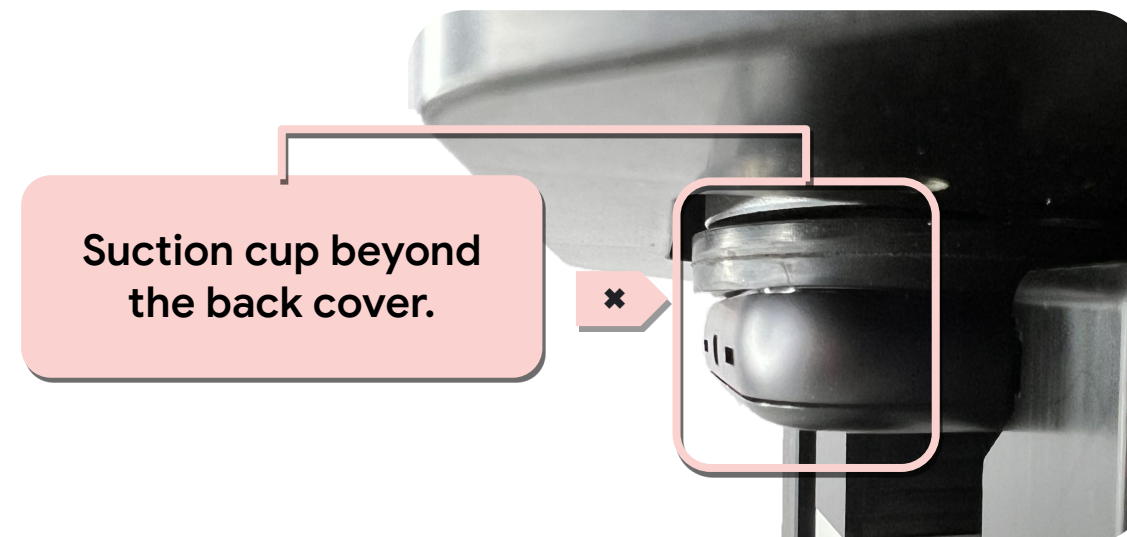
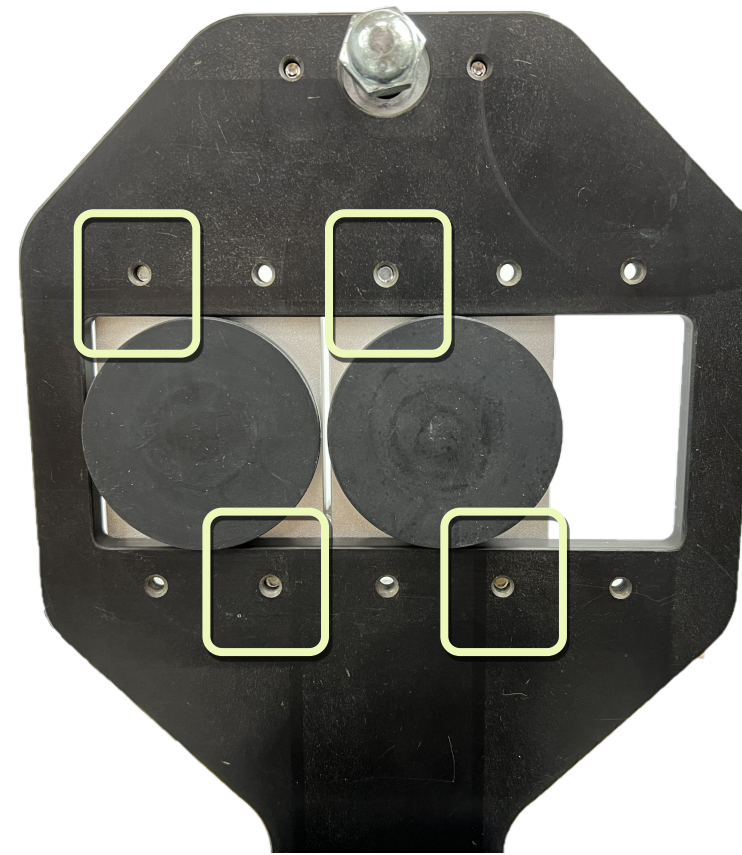
Apply protective film to broken glass before removal. Review all safety precautions before you begin work.



Display

Set up the fixture

- Use the left four sockets to install two suction cup modules. *Don't* use the one on the right-hand side.
- Secure the knobs with the designated socket shown in the figure below.
- Make sure that the suction cups are aligned with the display underneath.



Display

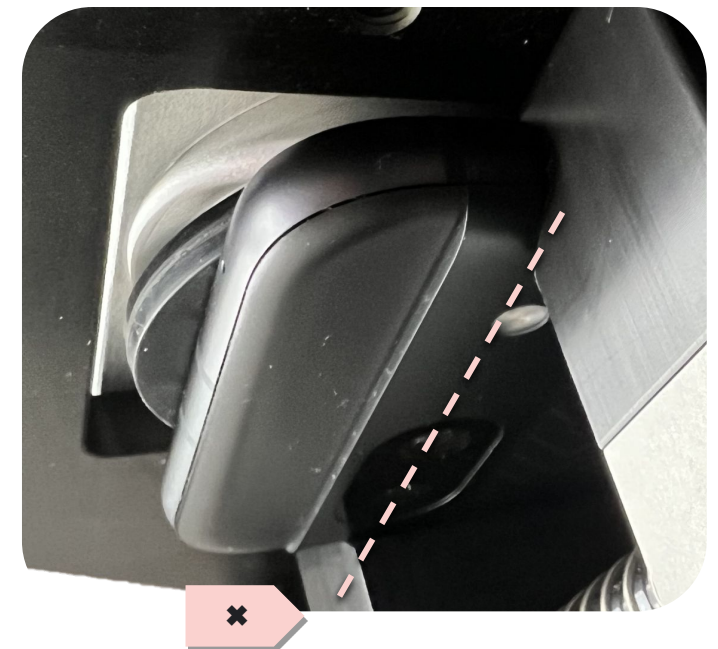
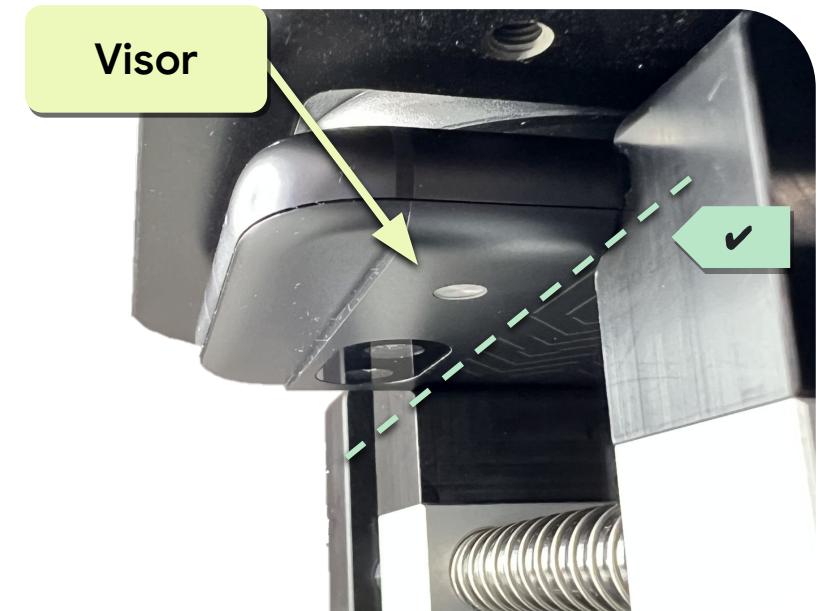
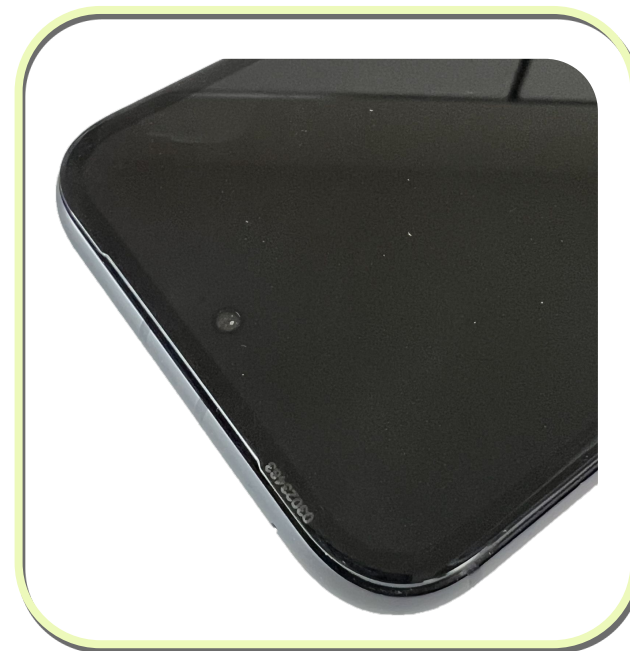
Set up the fixture

- Place the device into the **Universal disassembly fixture**, display facing upward.
- Adjust the position of the device so that the front camera faces to the left side.
- Let the lower edge of the visor align with the clip edges on the bottom of the jig.



Use caution

Don't secure the rear camera bump-out into the clamps. Only use the side clamps to secure the lower back cover area.



Display

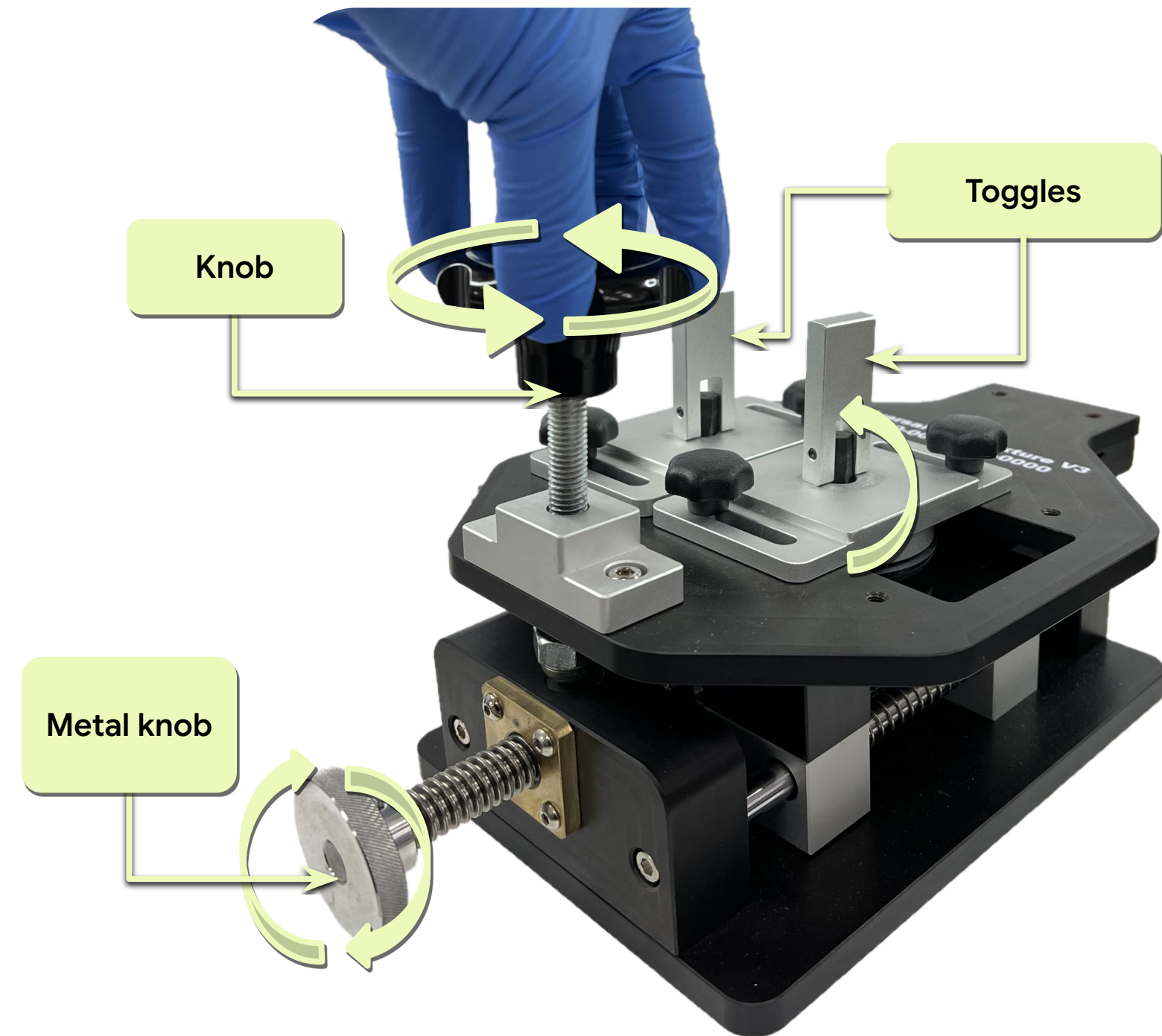
Use the fixture

- Turn the metal knob until the device is fixed in place.
- Press down firmly on the handle and lift the two toggles until they face upward to secure the suction cups to the display.
- **Slowly** turn the knob until you see an opening between display and enclosure. Best practice is to turn half or one full revolution and then wait one second before you repeat the process.



Note

Clean the suction cup and display surface before you use the fixture.



Use the fixture

- After the display is detached from the enclosure, insert the ESD pick at the **top side of the device**.
- Cut the adhesive as soon as possible to prevent the display from re-sealing.
- Open the lid and turn the knob to remove the device from the fixture.



Display

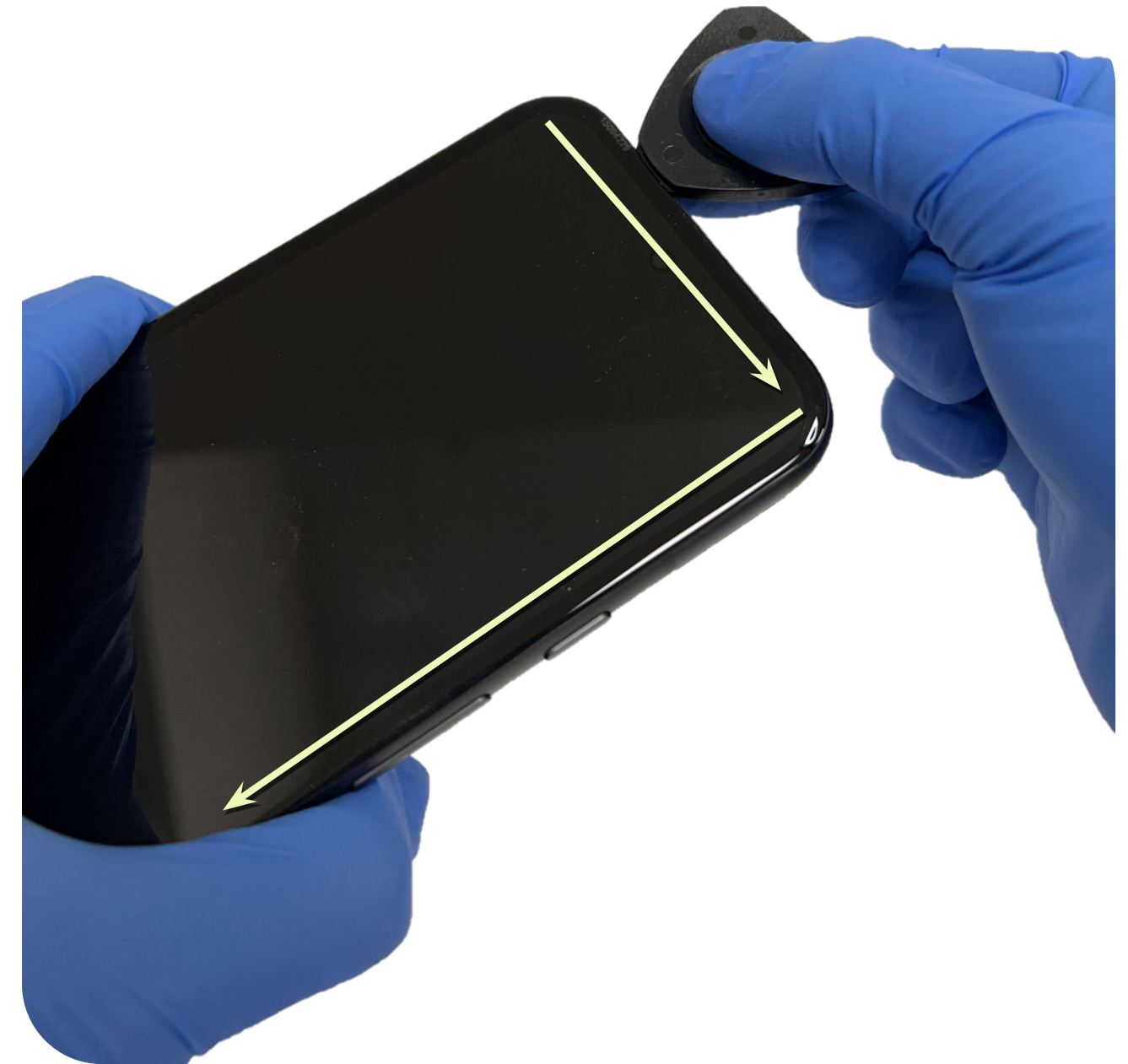
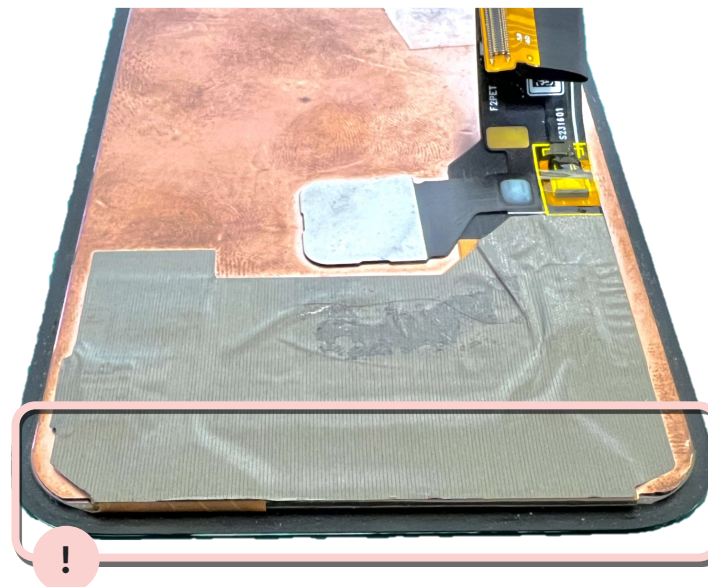
Separate the display

- Insert the ESD pick into the opening.
- Slide it around the entire device slowly and carefully to continue display separation.



Use caution

Don't insert more than 2 mm, as this could damage the FPC and copper foil.



Display

Flip the display

- Lift up the display with a suction cup.
- Rest the suction cup on the side to support the display.



Use caution

Don't attempt to separate the display by force. It's still attached to the enclosure through a very fragile cable.



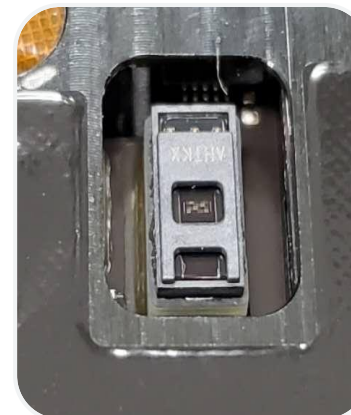
Display

Inspect the P-sensor rubber

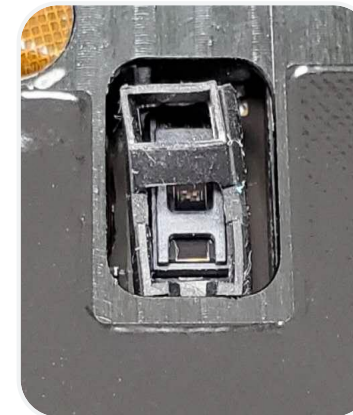
Make sure that the P-sensor rubber isn't damaged, missing, skewed, and that it's placed in the correct position.



Missing



Skewed



Skewed



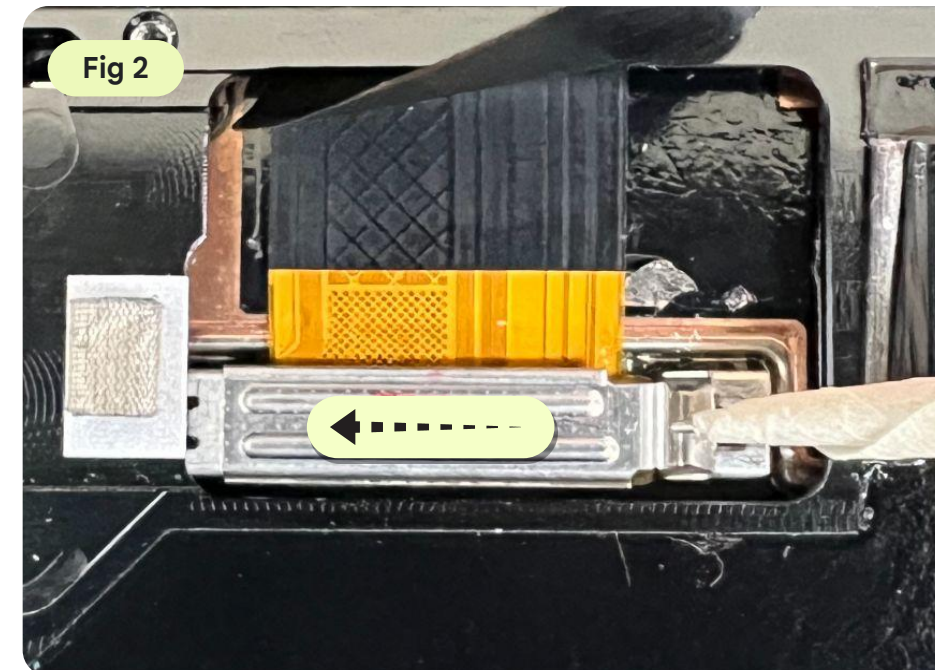
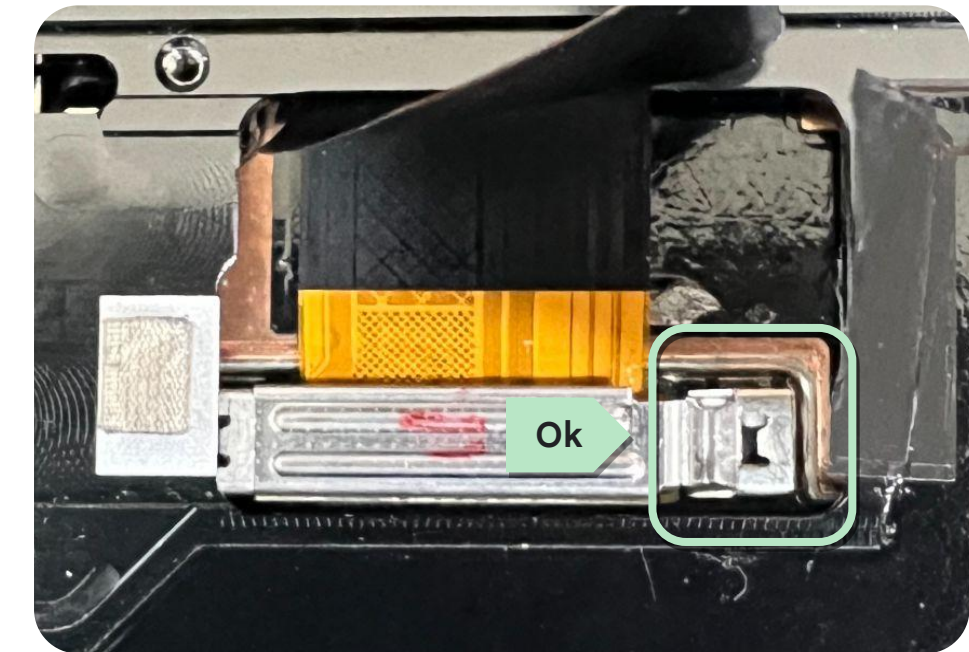
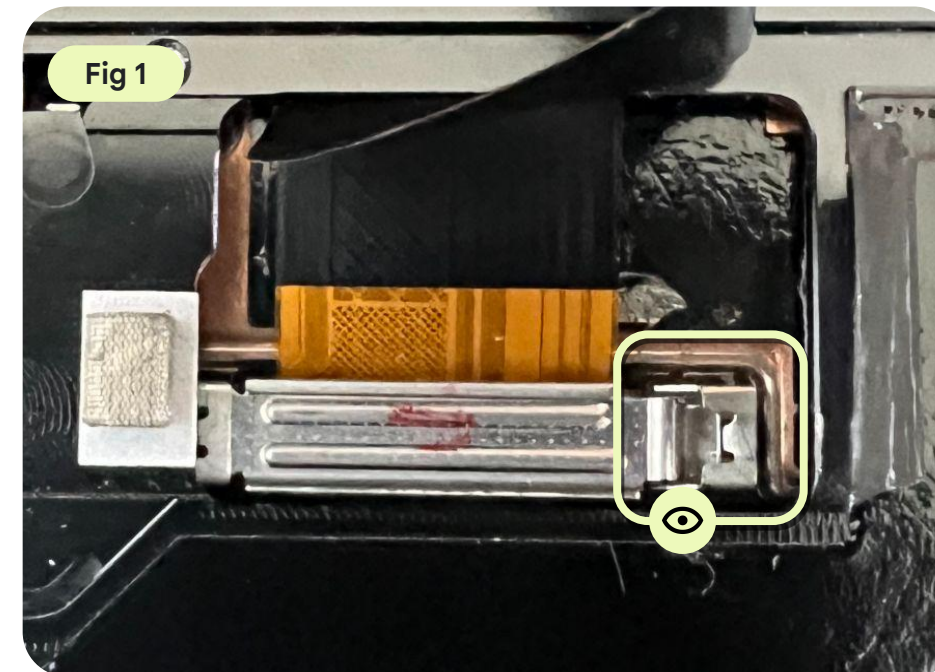
Skewed



Display

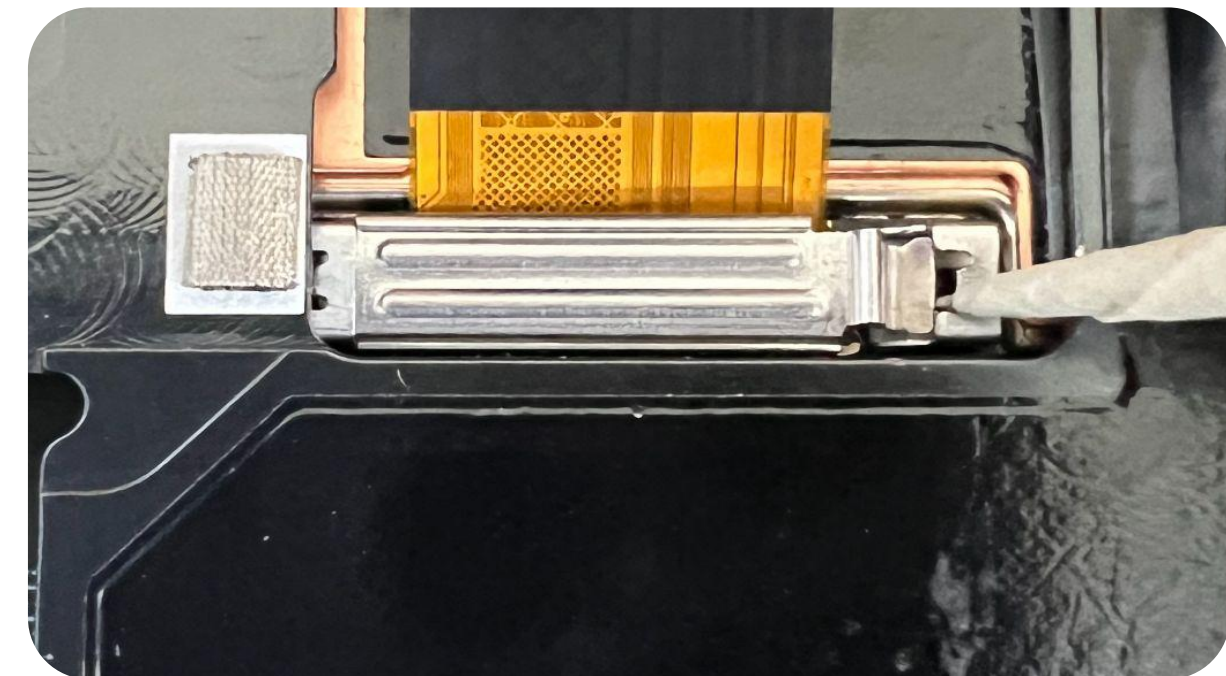
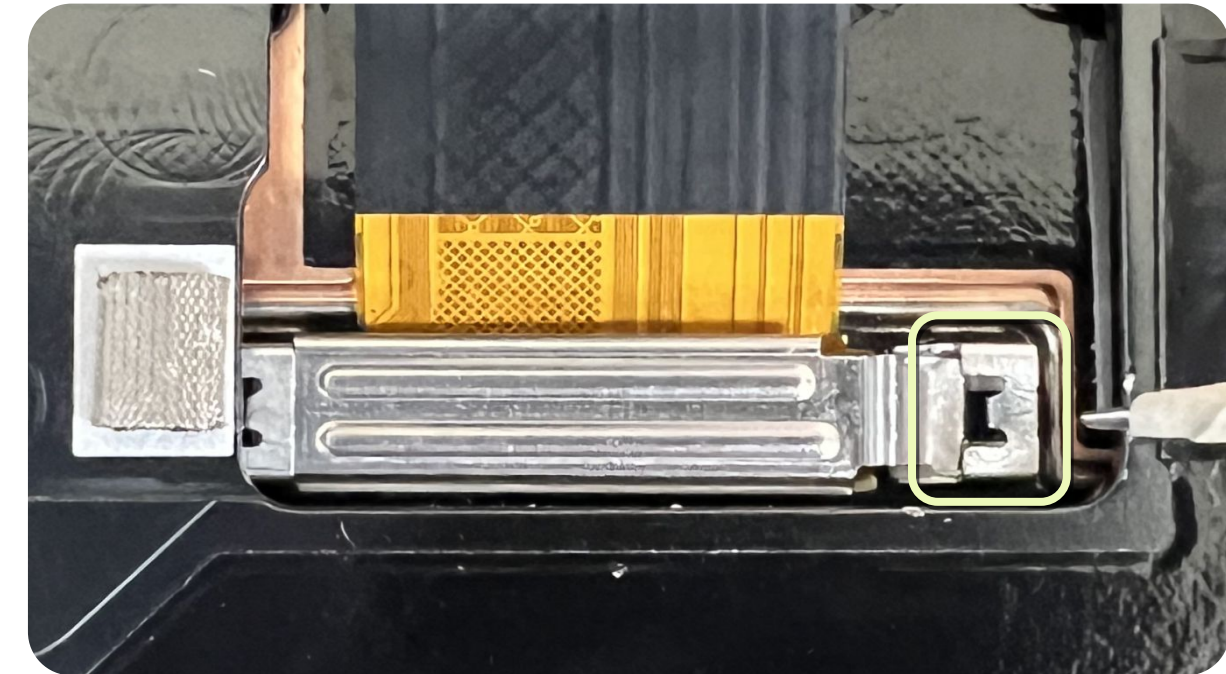
Prerequisite to remove the display metal plate

- Check whether the space between the stamping plate and the bracket is enough to insert ESD-14, as shown in Fig 1.
- If space isn't large enough, use ESD-14 to push the stamping plate to the left, as shown in the Fig 2.



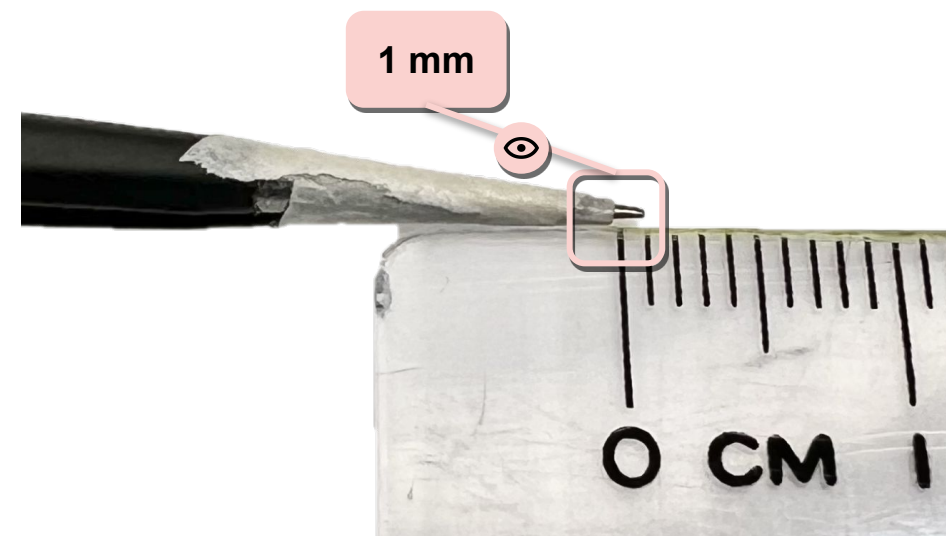
Remove the display metal plate

- Lift the graphite sheet.
- Insert ESD-14 to the hole between the stamping plate and the bracket.
- Use ESD tweezers to remove the metal plate from the logic board.



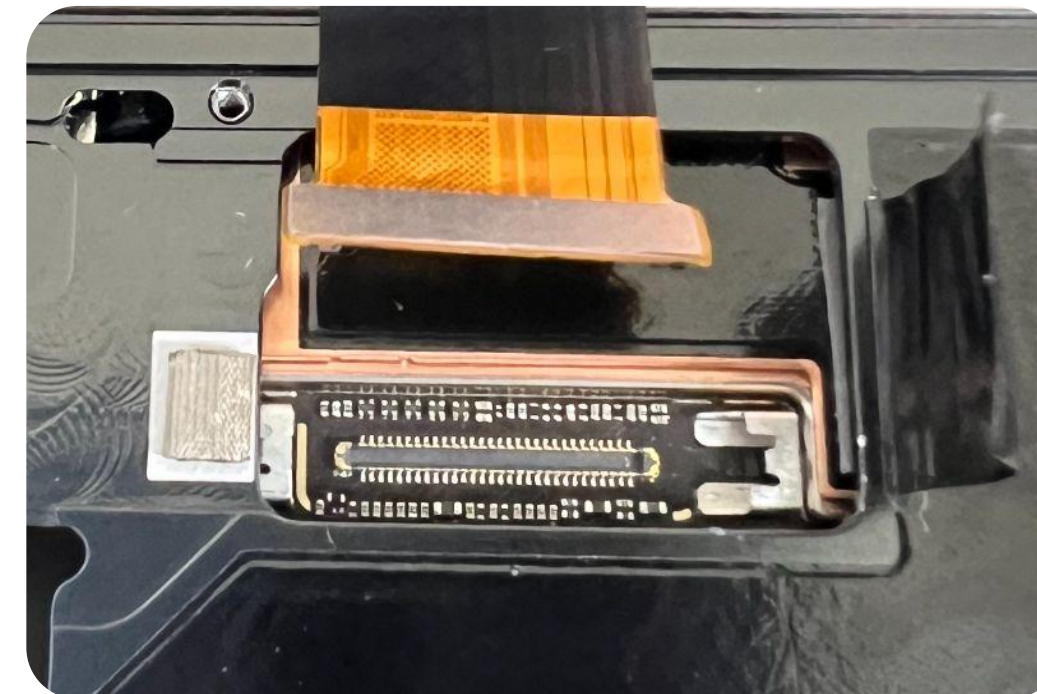
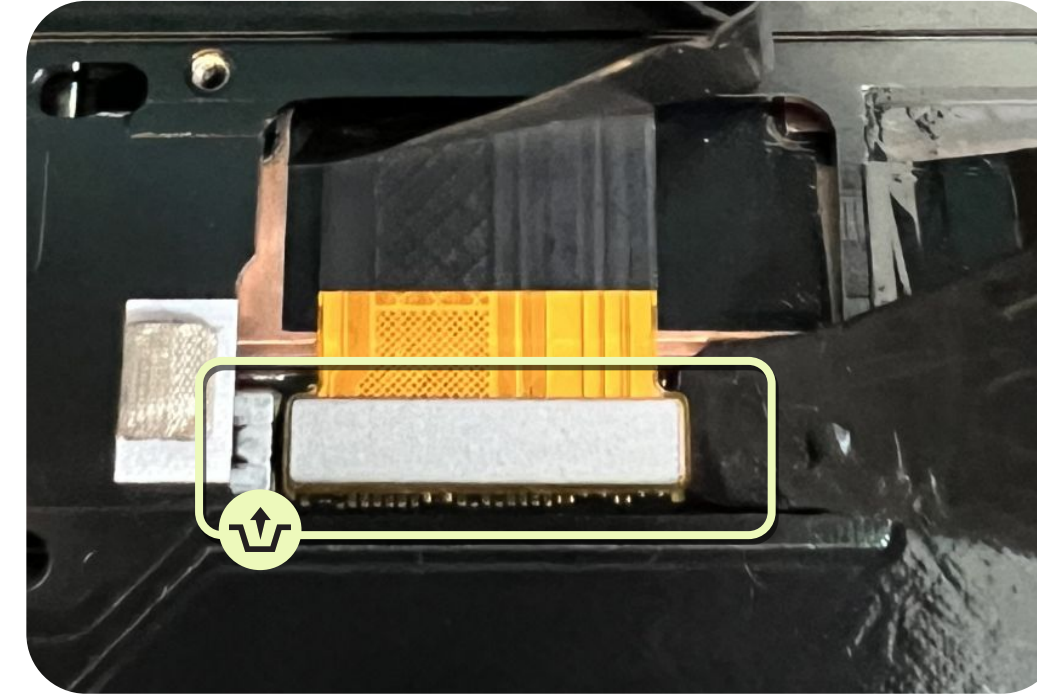
Use caution

Use tape to limit the length of the front section of ESD-14 to 1 mm to avoid damage to the MLB during disassembly.



Disconnect the display

- Use the ESD spudger to disconnect the display connector from the logic board.
- Remove the display.



Finished! Need assembly instructions? →

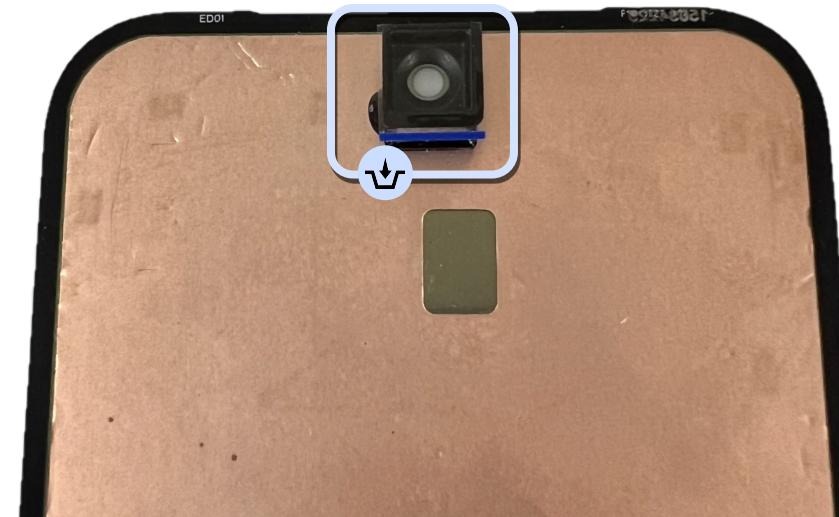
Protect the screen (optional)

- Use protective film to cover the front camera socket.
- Use protective film to cover the front of the screen.



Use caution

1. Make sure that the camera socket is clear from dust and debris before covering it with the protective film.
2. *Don't* wrap the film to the back side of the display. It can damage the copper foil and the conductive fabric.



Display



Pixel 8a repair manual

Assembly-CG

Display

Rework the display

(for a reused display)

- Use plastic ESD tweezers to remove damaged display conductive fabric.
- Align and adhere a new conductive fabric onto the display.
- Smooth the conductive fabric after removing liner.



Note

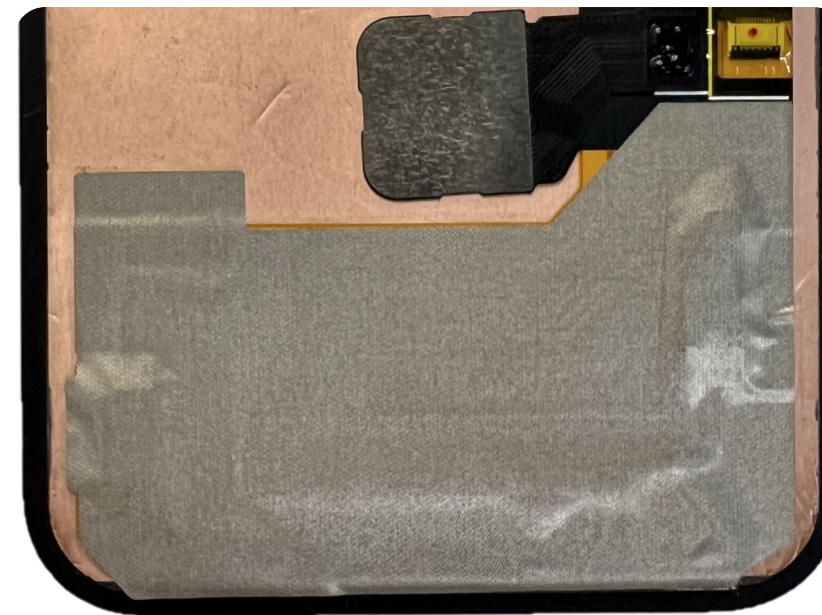
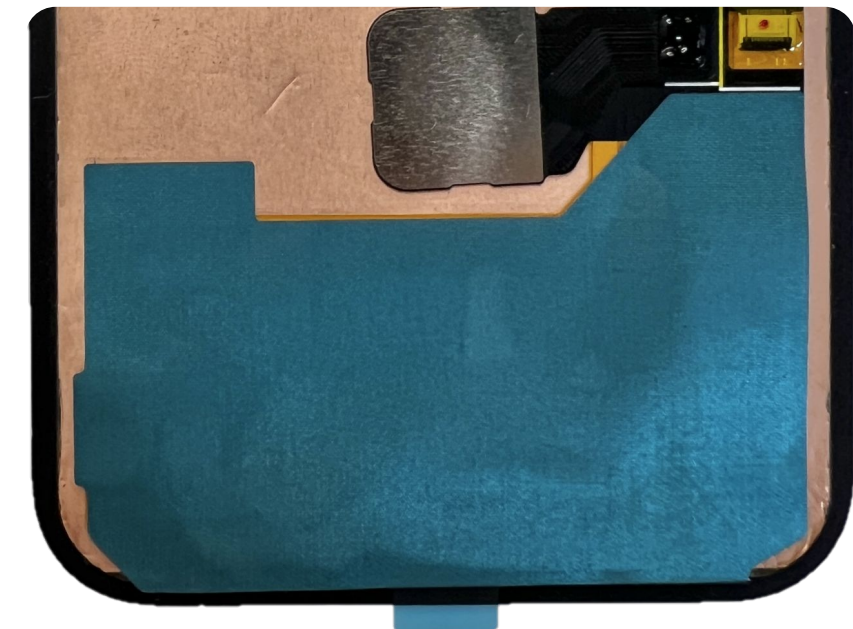
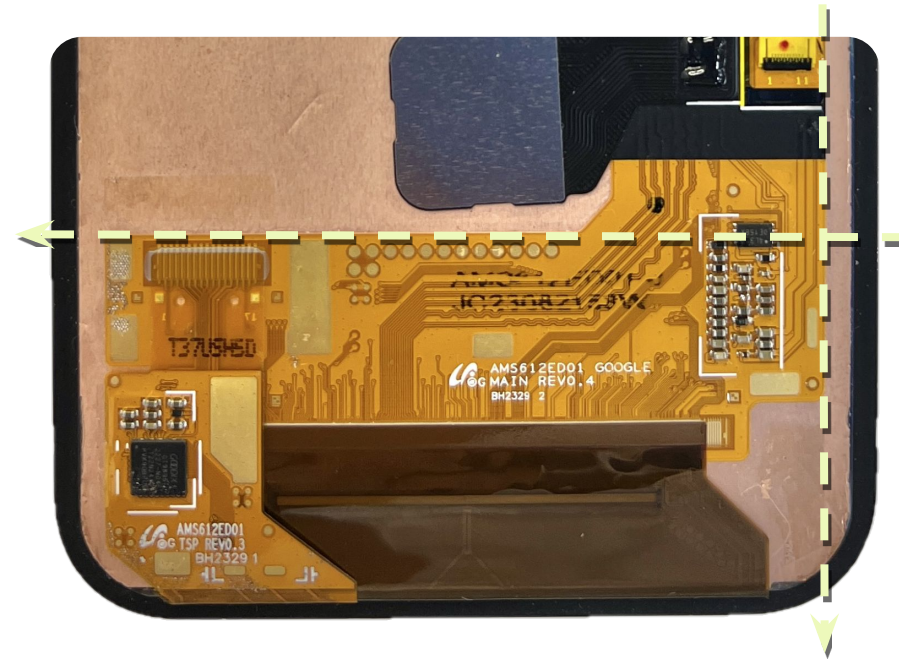
This step only applies if the conductive fabric is damaged during the removal of the display and the display will be reused..



Use caution

Take care to NOT damage any electronic parts under the conductive fabric.

Conductive fabric should not overlap the edge where the CG adhesive is applied.



Display

Rework the display

(for a reused display)

- Clean the outer edge of the display to remove the adhesive using an ESD spudger or Electric glue remover tool.
- Use cotton swabs with IPA to wipe the surface and remove any residue.
- Apply **AP111** around the entire display **twice** and follow the same steps as above.



Use caution

1. Don't apply excessive primer. It can overflow.
2. Apply primer in one direction. Don't rub back and forth.



Use caution

After the primer is applied, complete assembly in 25 minutes.



Display

Apply AP111 on the enclosure

(for a reused enclosure)

Apply AP111 around the entire enclosure **twice** and follow the same steps as above.



Use caution

1. Don't apply excessive primer. It could overflow.
2. Apply primer in one direction. Don't rub back and forth.



Use caution

After the primer is applied, complete assembly in 25 minutes.



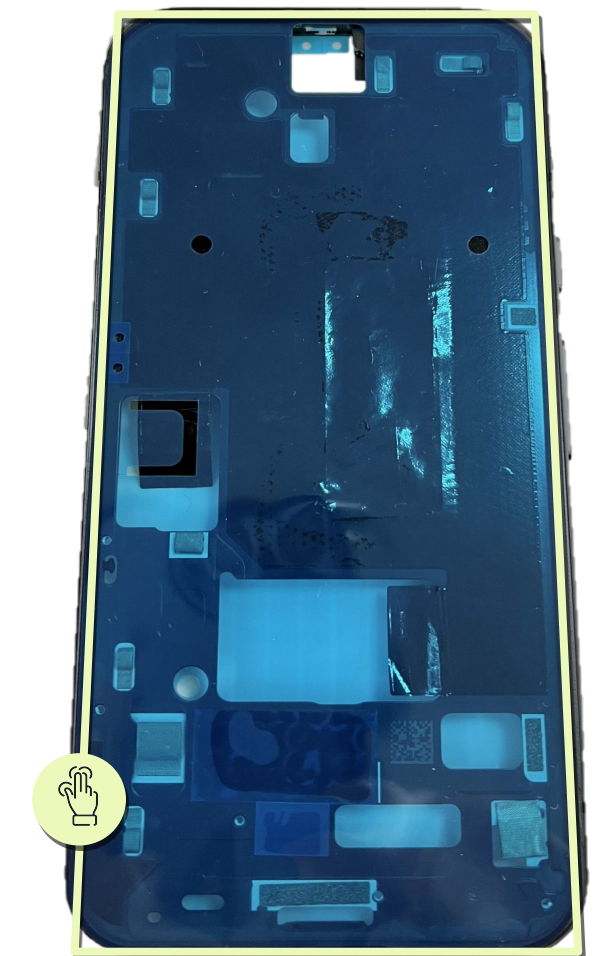
Display

Paste the display PSA onto the enclosure

(for a reused enclosure)

- Hold the enclosure PSA above the enclosure and align with the upper-left and upper-right corners first.
- After the alignment is confirmed, slowly lower the enclosure PSA onto the enclosure.
- Firmly apply pressure to attach the PSA.

Part: G806-12606-01 (Adhesive enclosure to CG)

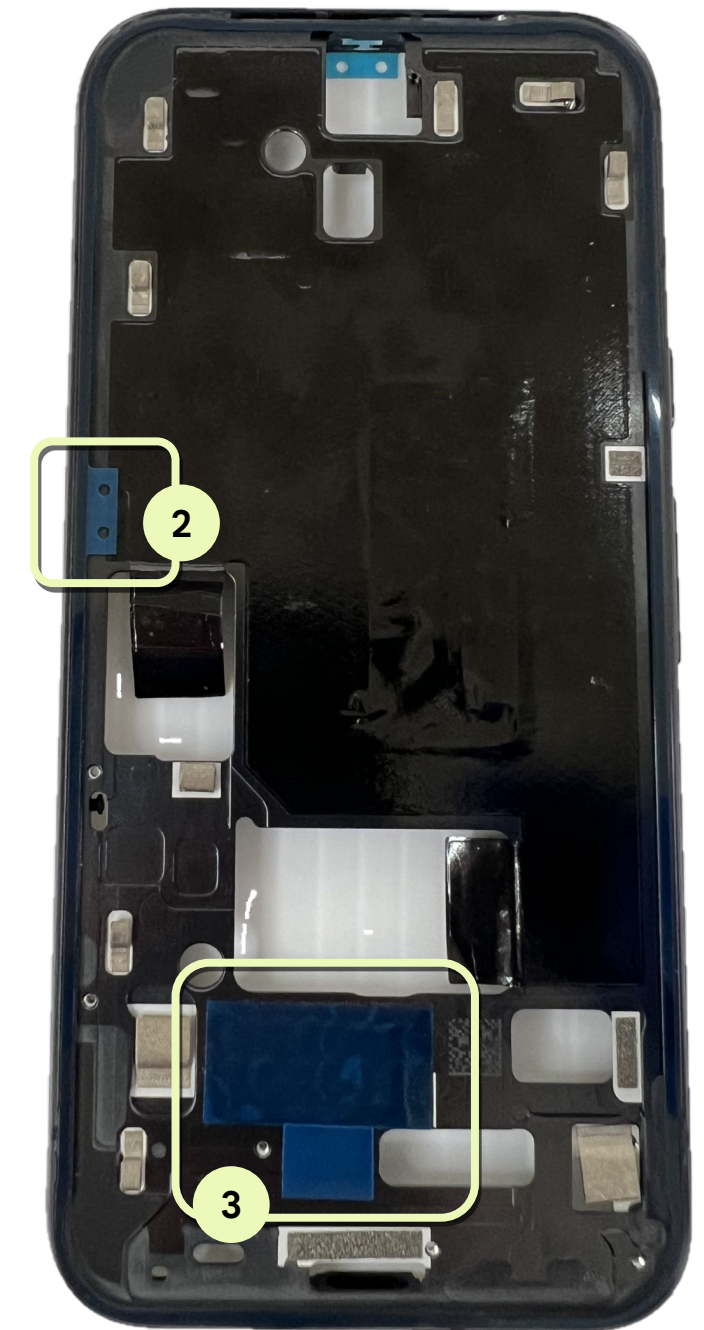
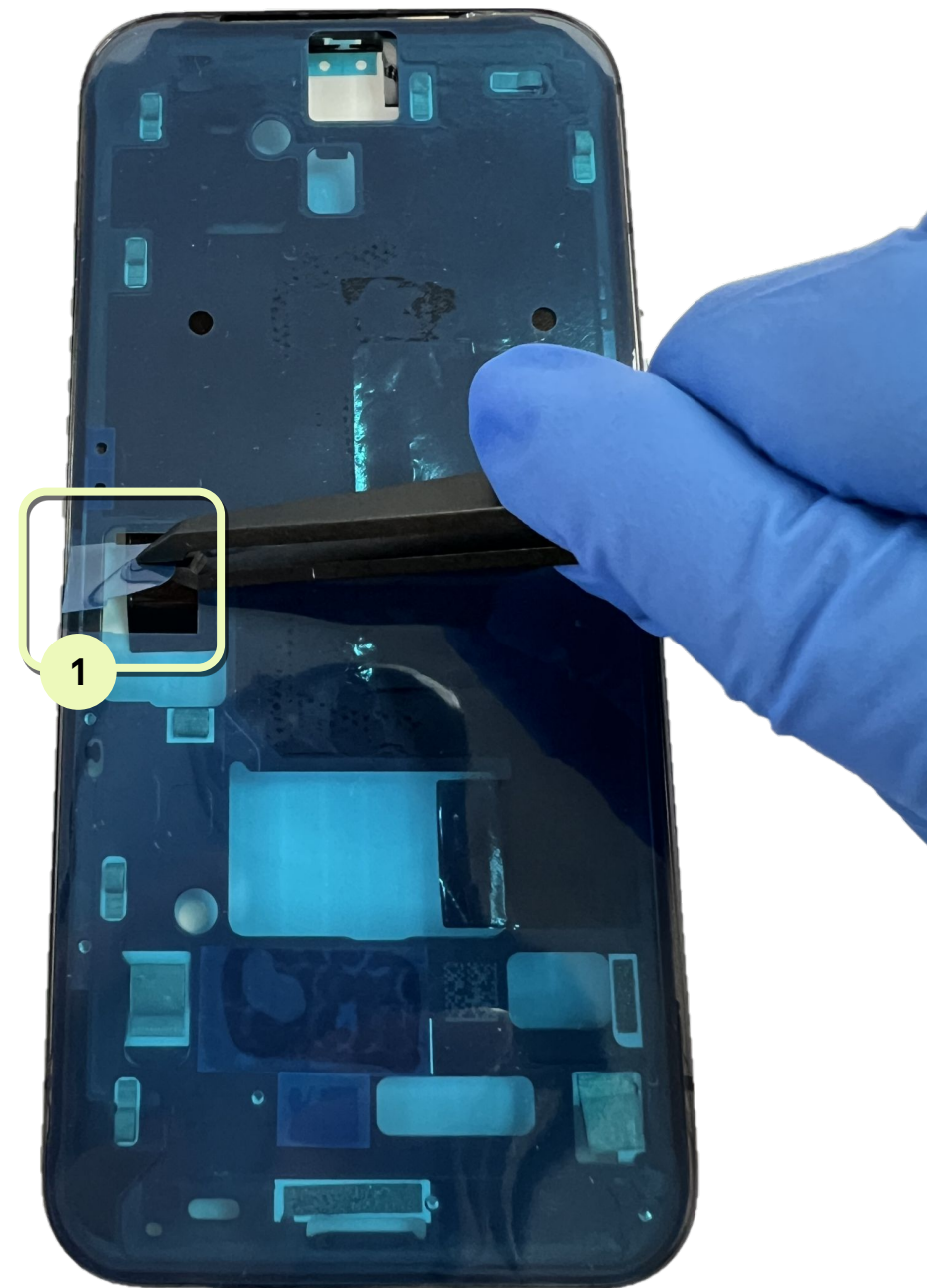


Display

Remove the release liners

(for a reused enclosure)

Slowly remove the three release liners from the enclosure with ESD tweezers.



Display

Enclosure to the adhesive

- Apply AP111 around the entire enclosure **twice** and follow the designated order as shown.
- Slowly remove all of the release liners and protective film from the enclosure with ESD tweezers.



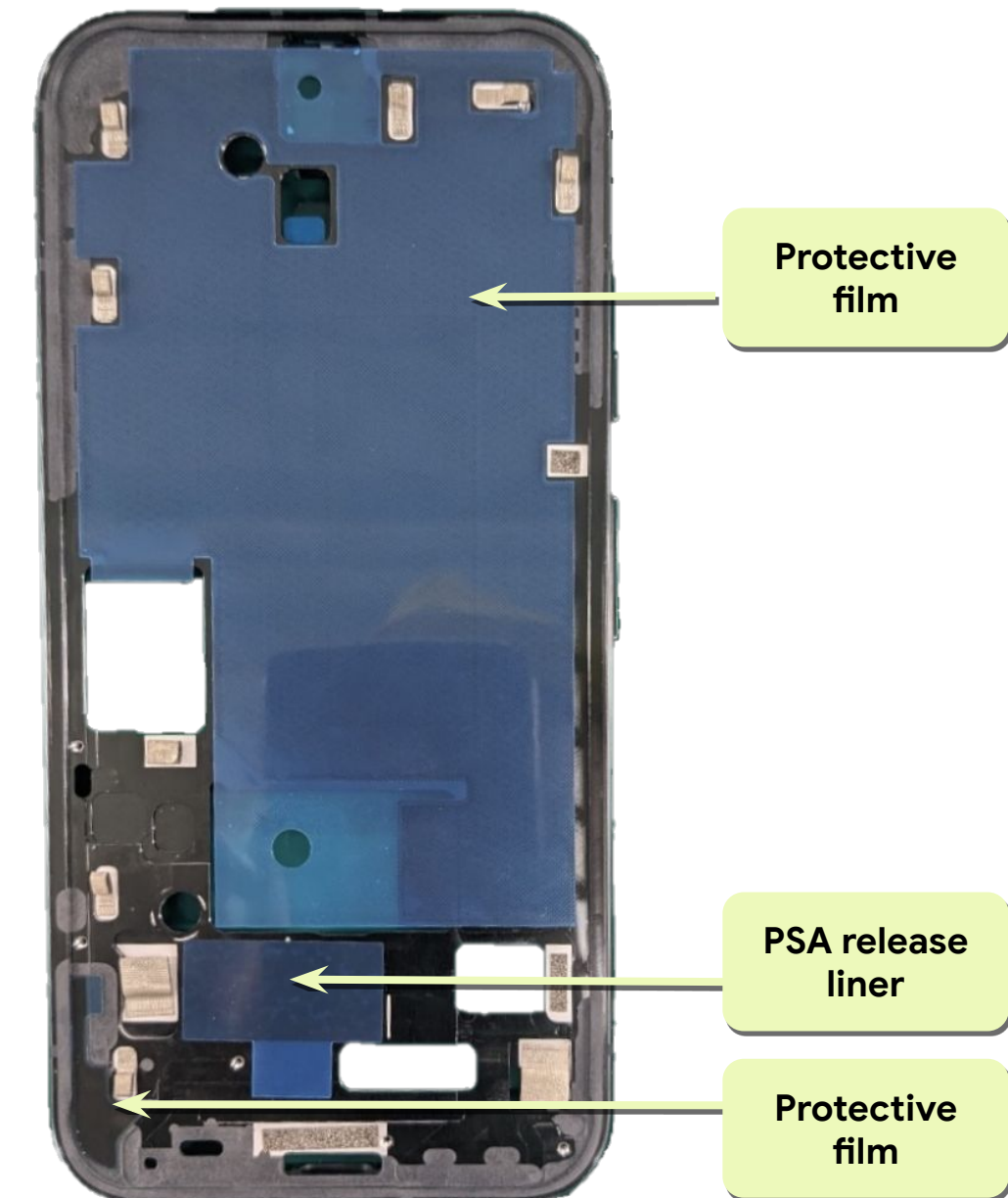
Use caution

1. Primer shouldn't be missing, overflow, or be excessive.
2. Apply primer in one direction. *Don't rub back and forth.*



Use caution

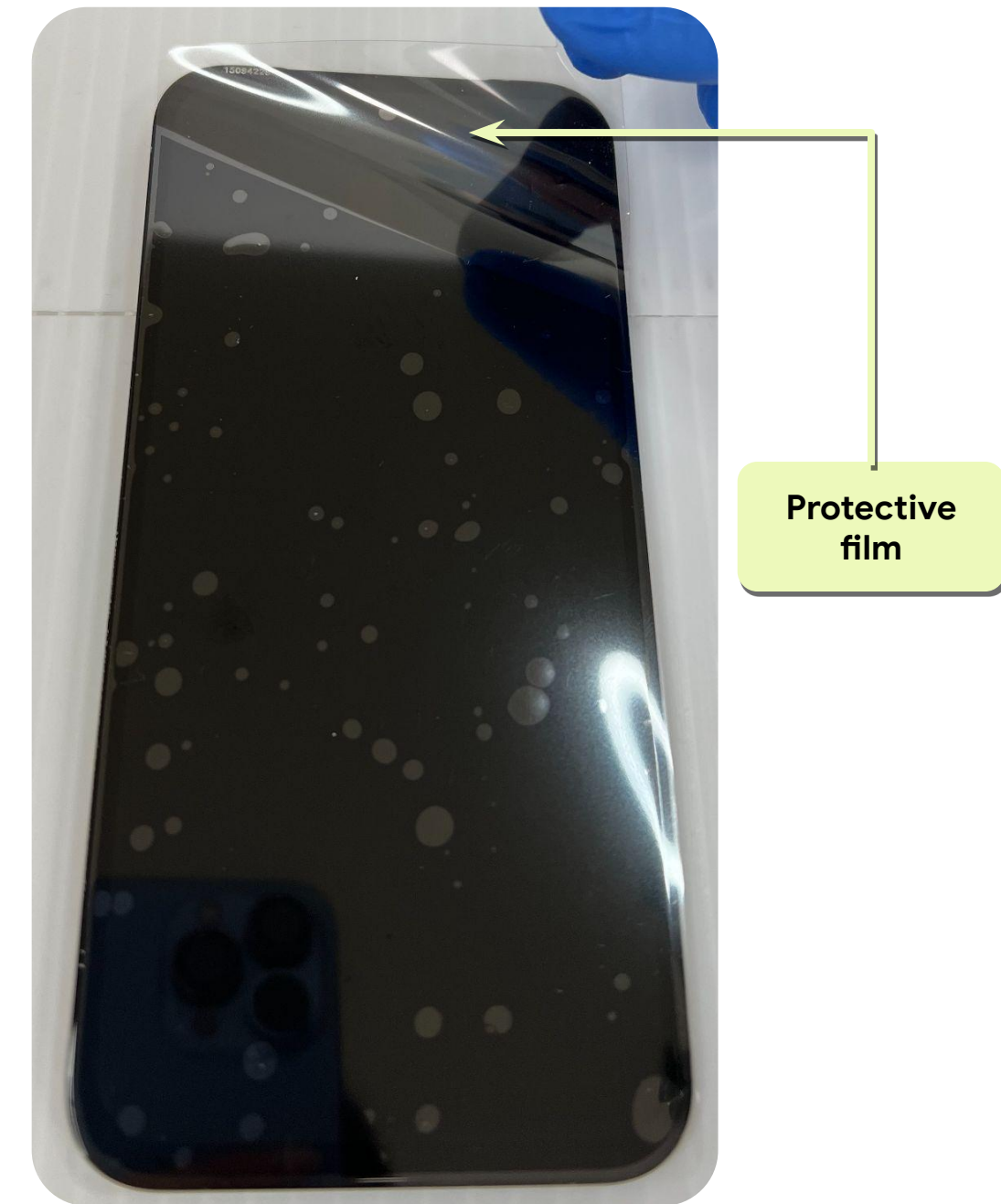
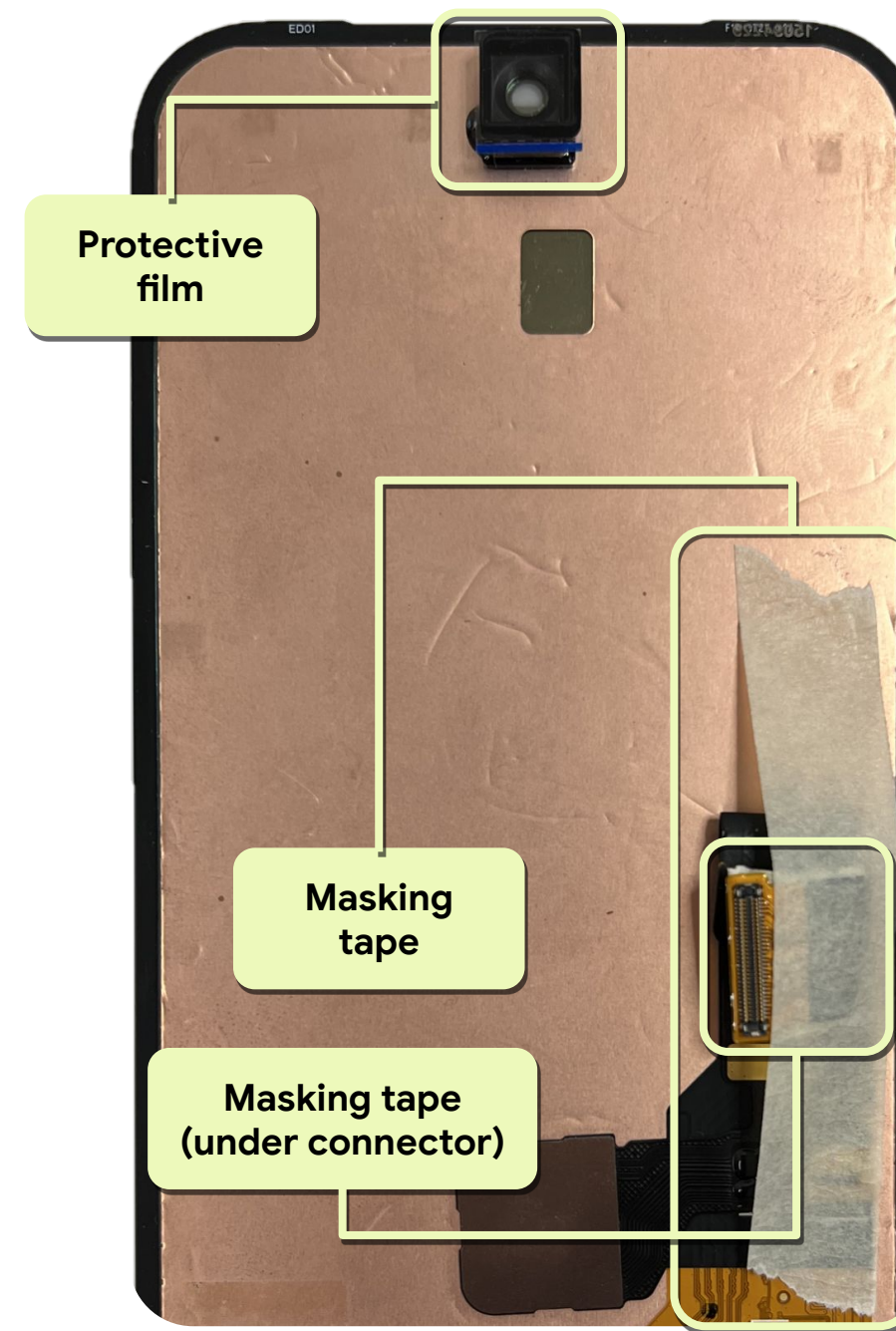
After the primer is applied, complete assembly in 25 minutes.



Display

Remove the protective film and masking tape

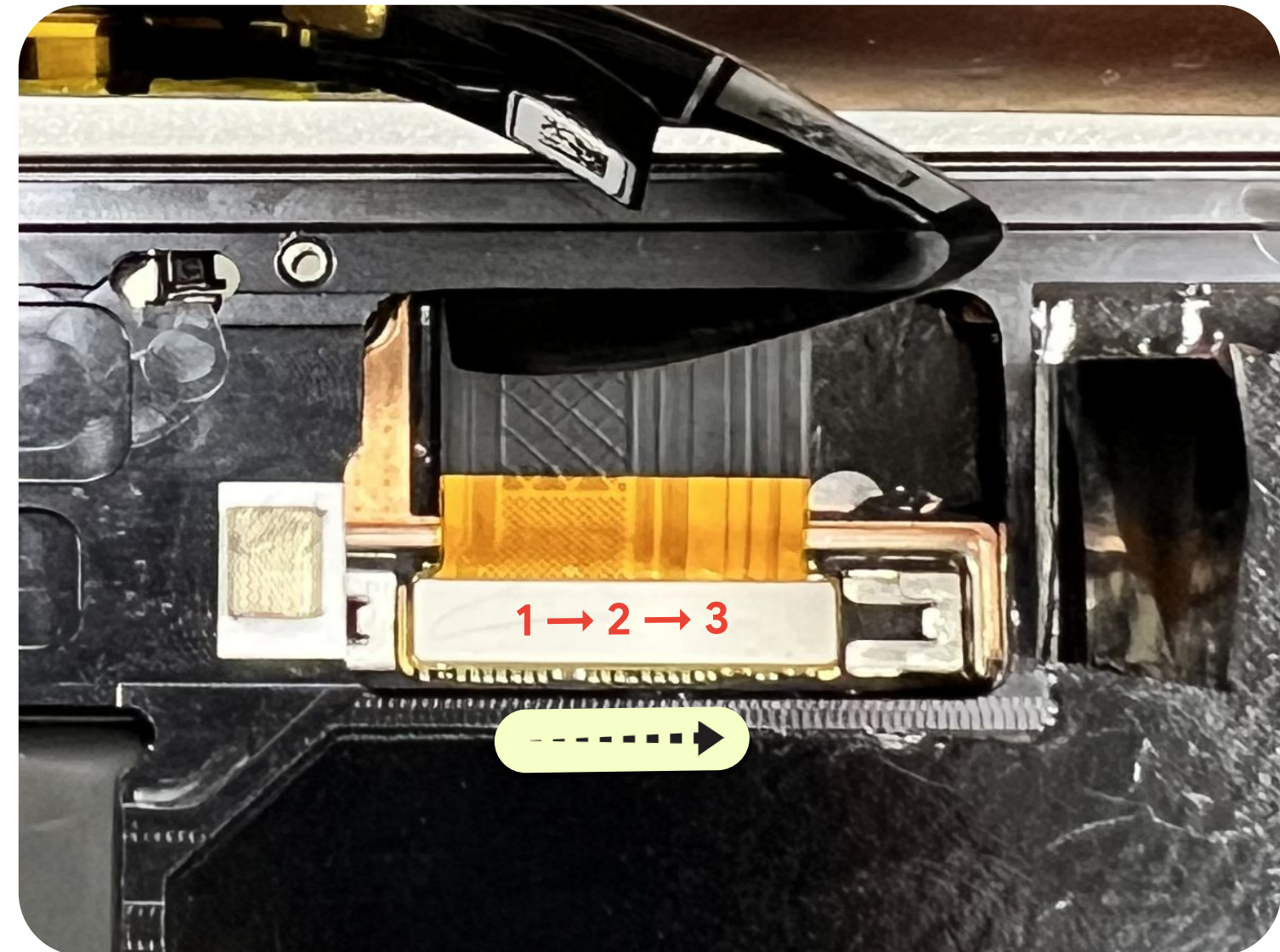
Slowly remove all of the masking tape and protective film from the display with ESD tweezers.



Display

Connect the display FPC

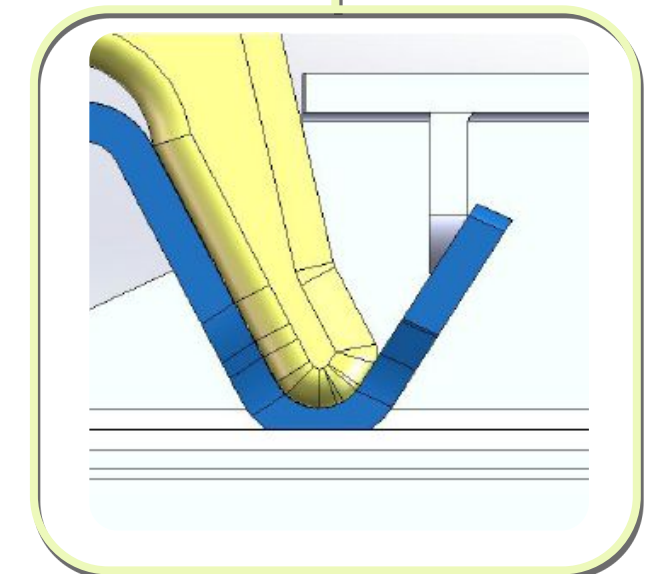
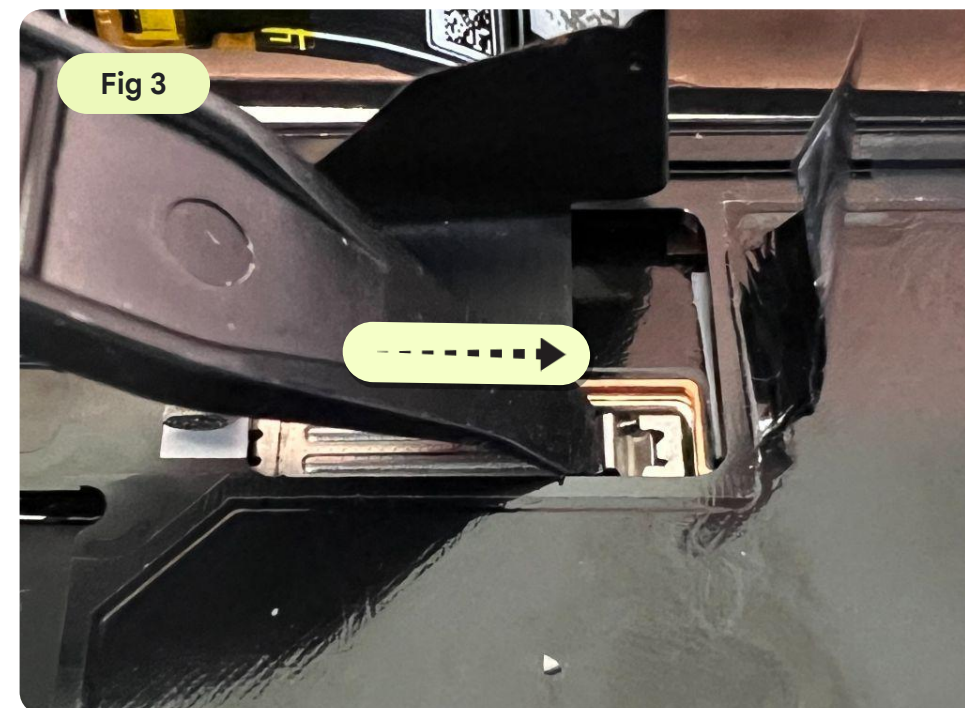
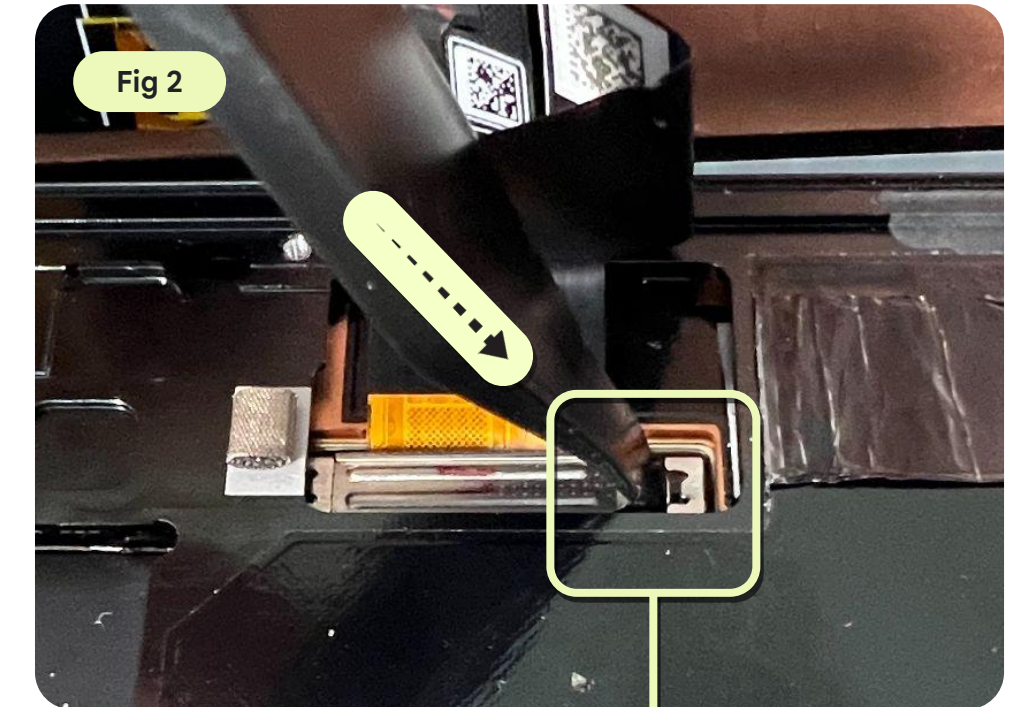
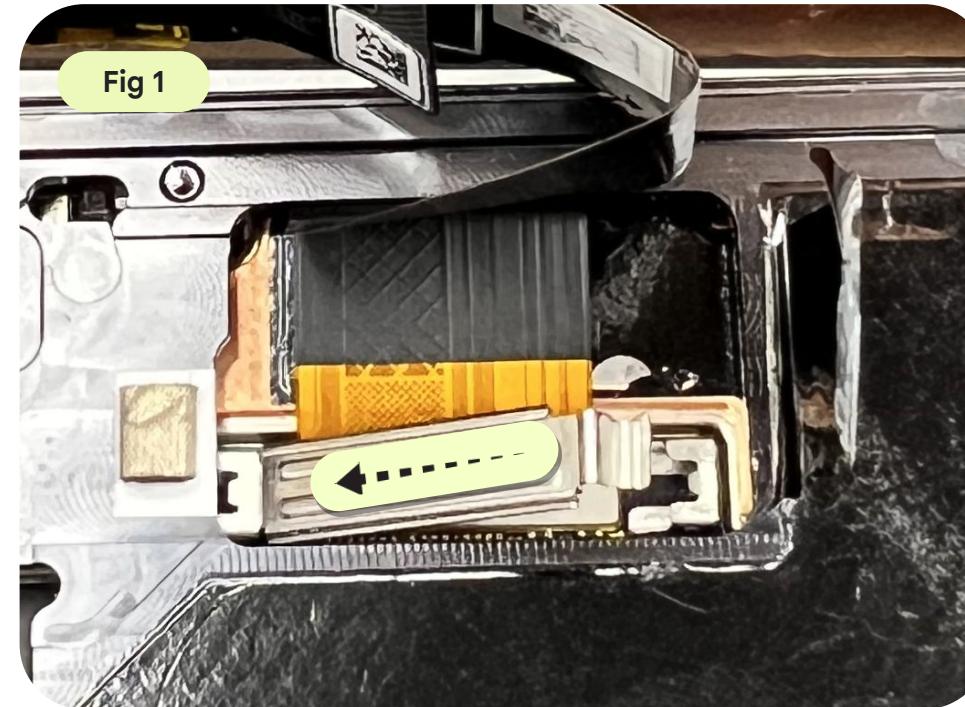
- Lift the graphite sheet.
- Attach the display FPC connector to the logic board and apply even pressure across the connector.
- Pressing the three points in sequence and slide twice to ensure that it's fully engaged.



Install the stamping plate

- Insert the display stamping plate and follow the designated direction, as shown in Fig 1.
- Use the ESD bar to press down on the stamping plate (hook end) at a 45° angle, as shown in Fig 2.
- Push the stamping plate to the right until the hook is secured behind the wall, as shown in Fig 3.

Part: G730-07370-01 (Stamping plate display BTB)



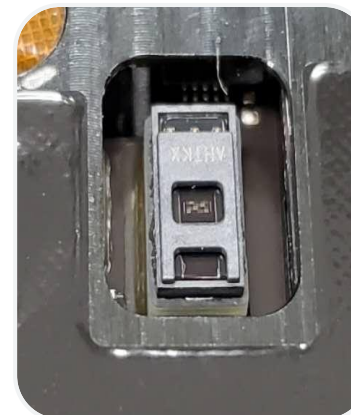
Display

Inspect the P-sensor rubber

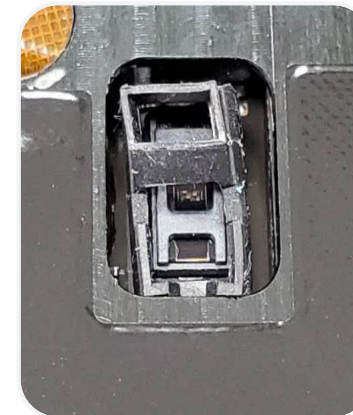
Make sure that the P-sensor rubber isn't damaged, missing, skewed, and that it's placed in the correct position.



Missing



Skewed



Skewed



Skewed



Install the UDFPS calibration

- Visit pixelrepair.withgoogle.com to download the UDFPS calibration software.



Note

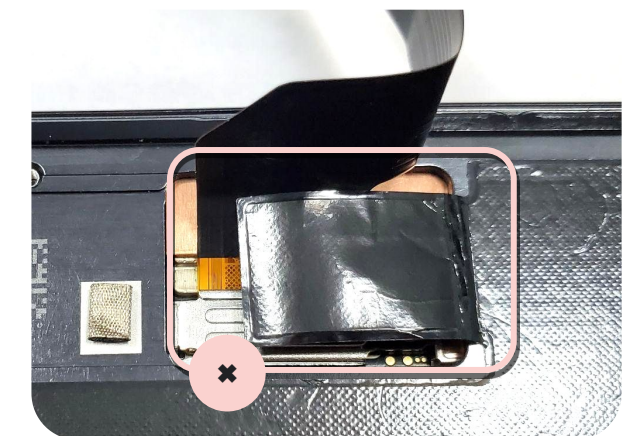
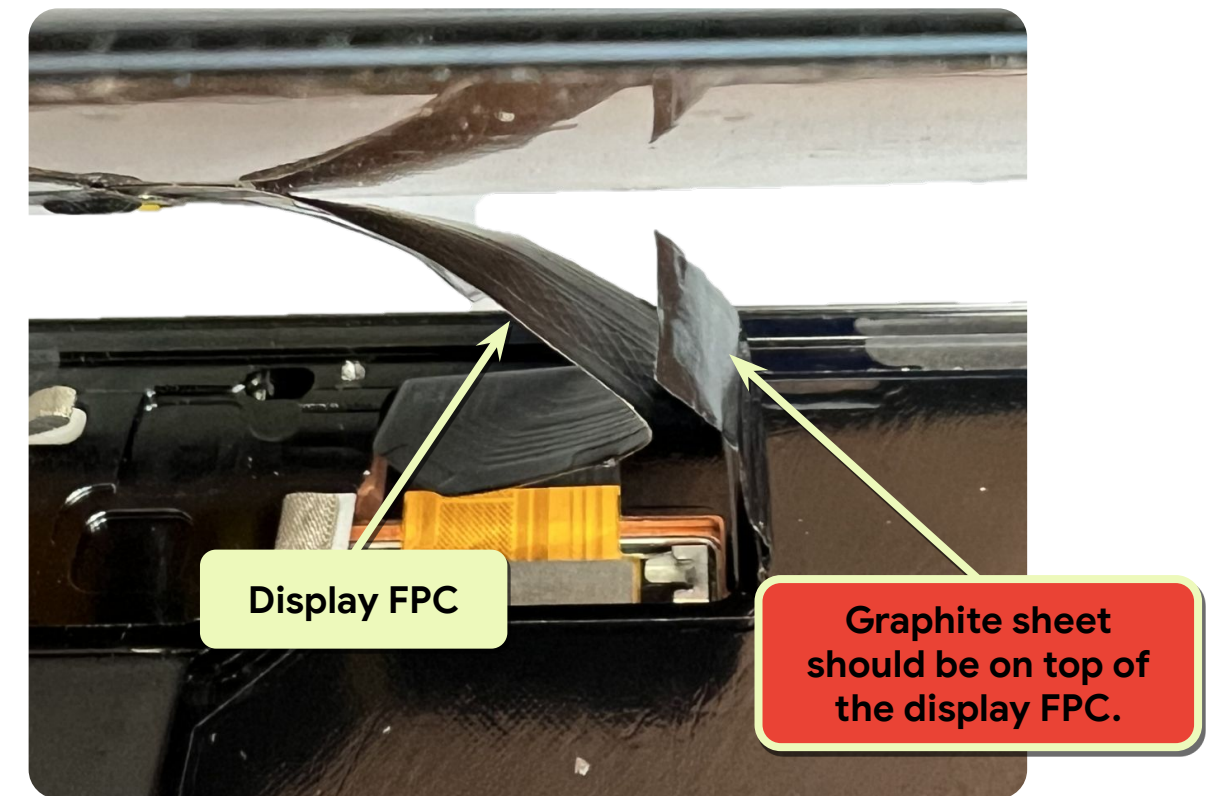
This step is only needed if the display or the mainboard has been replaced.



Display

Display and enclosure assembly

- Slowly remove the display module PSA release liner from the display with ESD tweezers.
- Be sure to place the **graphite sheet on top of the display FPC** and guide its placement through the entire screen installation process, using a spudger to hold placement as needed.



Display assembly

- Hold the display above the enclosure and align them on all four corners.
- After the alignment is confirmed, slowly lower the display onto the enclosure.



Finished! Need assembly instructions? →

Place the device in the fixture

Assembly holder sequence:

1 → 2 → 3 → 4 → 5 → 6

Assemble the universal holder onto the universal base according to the **C1** and use the Universal press to complete the final assembly.

Part 1: G940-00833-01 (Universal base plate 12mm)

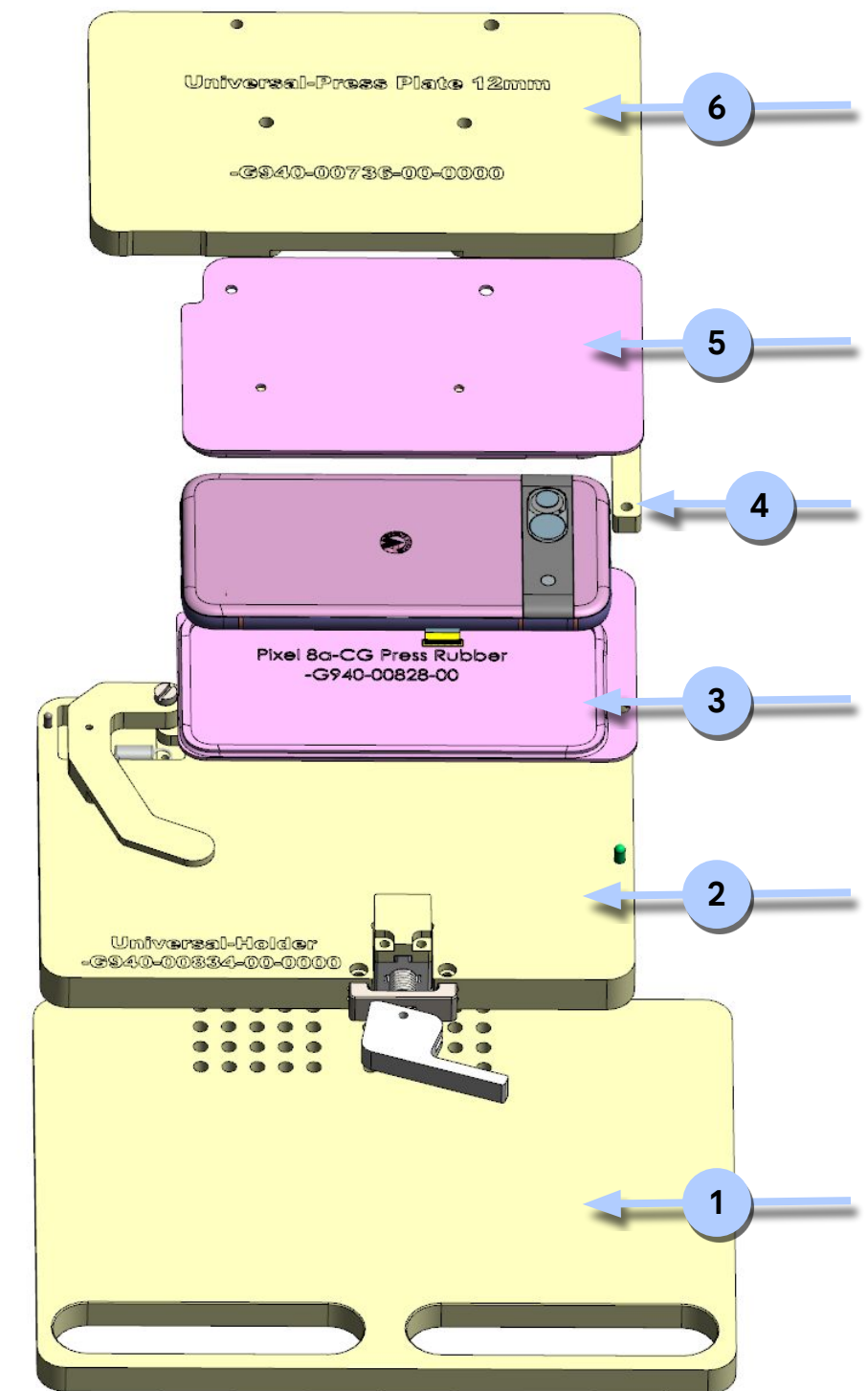
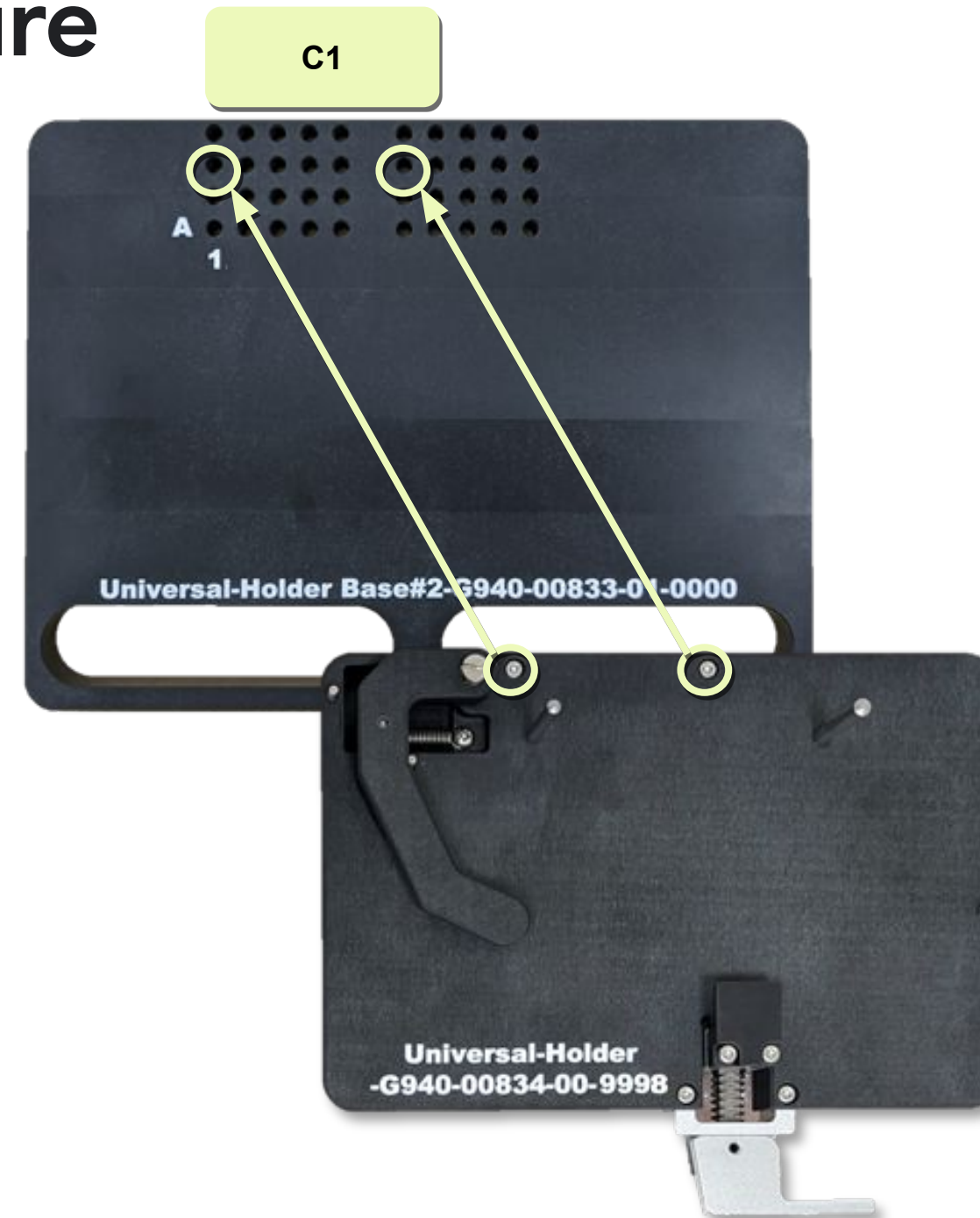
Part 2: G940-00834-00 (Universal holder)

Part 3: G940-00828-00 (Pixel 8a screen press rubber)

Part 4: G940-00835-00 (Universal holder limiting block)

Part 5: G940-00827-00 (Pixel 8a back cover press rubber)

Part 6: G940-00736-00 (Universal press plate 12 mm)





Pixel 8a repair manual

Troubleshooting

SoC Block Diagram

Top speaker

Battery

Connectors location

Bottom speaker

Sensor

Power

Vibrator

UDFPS

Wireless charge

Display

Camera

Mic 1

Touch panel

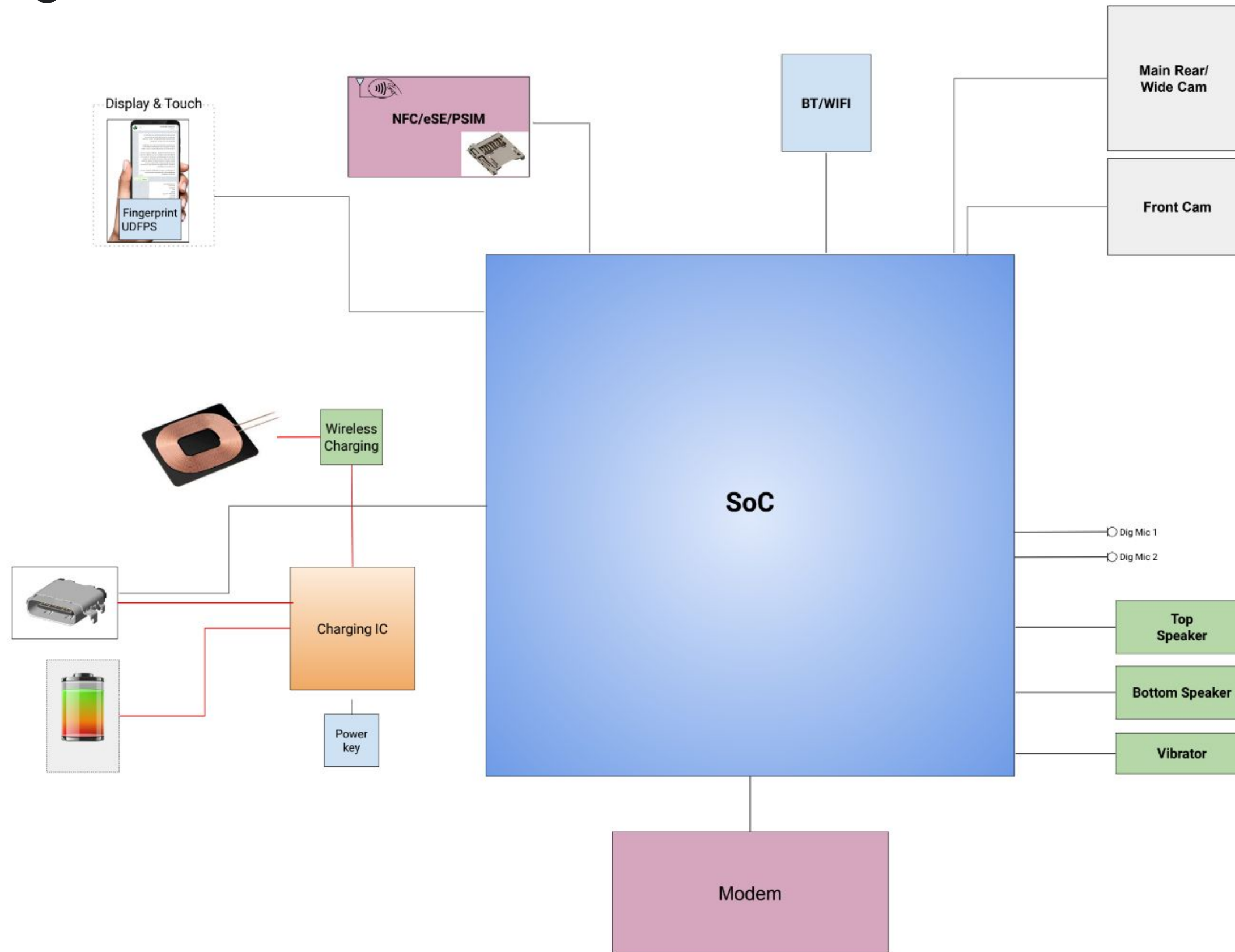
USB

Mic 2

RF (BT, WiFi, GPS, NFC)

mmWave

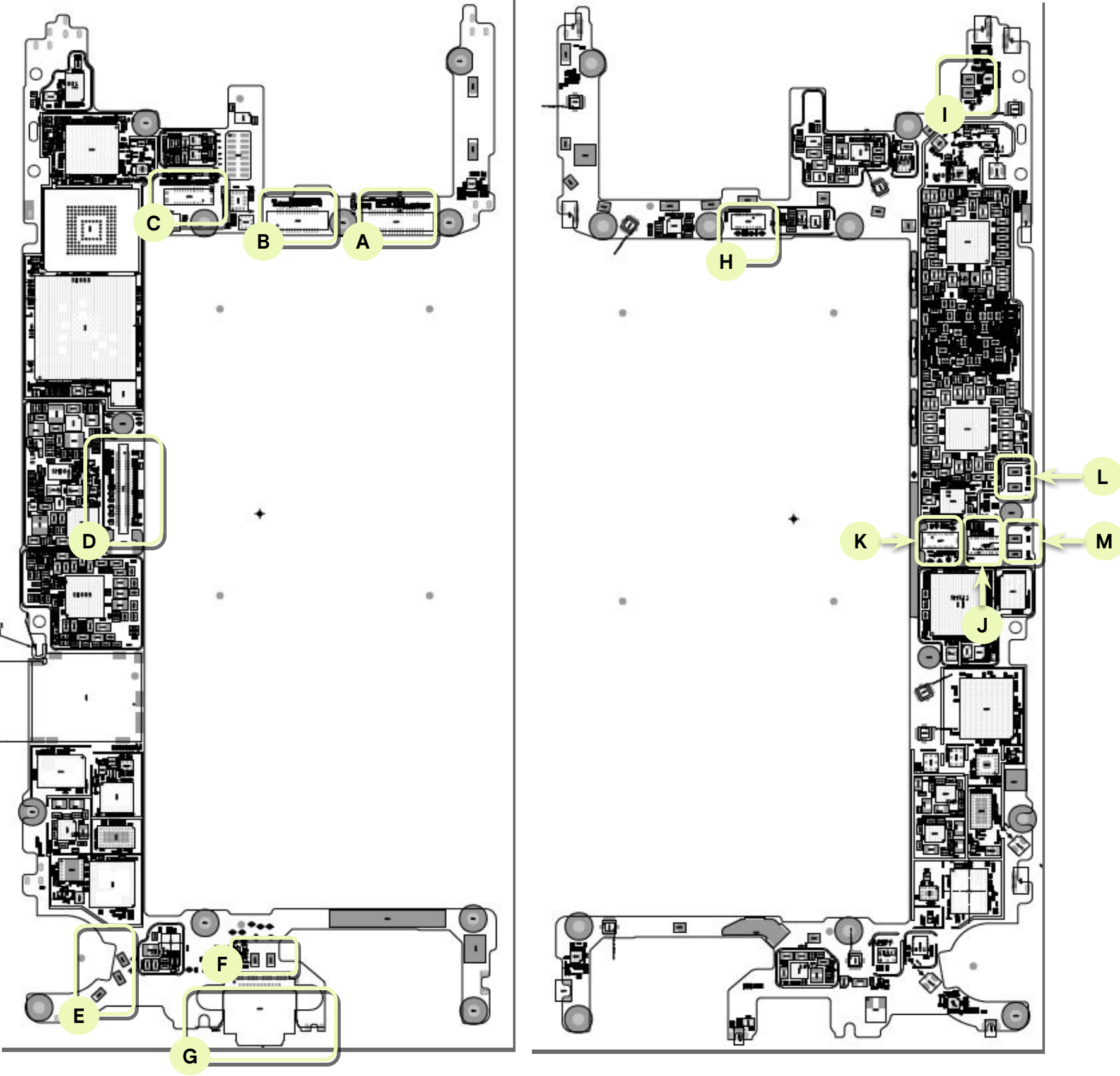
SoC Block Diagram




Connectors location

Location and description


A	Wide rear camera (Main) connector
B	UW rear camera connector
C	Front camera connector SLAM CONN (Side key, mic 2, and flash) connector
D	LCM connector
E	Vibrator spring connector
F	Bottom speaker spring connector
G	USB connector
H	SLAM CONN (Side key, mic 2, and flash) connector
I	Top speaker spring connector
J	Battery connector
K	MMW connector
L	NFC spring connector
M	WLC spring connector




Power


Symptom	Potential root cause	Procedure
 T001: Doesn't power on T002: Powers off suddenly T004: Wired charging failure	Battery capacity problem	<ul style="list-style-type: none">Insert the USB cable and try to charge the device for at least 10 minutes, or a dummy battery, to see if the device is out of battery capacity. If not, go to the next step.
	Connectivity problem	<ul style="list-style-type: none">Disassemble the enclosure, then reconnect the battery, USB, and display module connector to confirm whether it can be charged or power on. If not, go to the next step.
	Module problem	<ul style="list-style-type: none">If all of the failure symptoms aren't present, use a good logic board and battery to cross check with the corresponding failing ones. <div>Disassembly<ul style="list-style-type: none">Logic boardBattery</div>

Wireless charge

Symptom	Potential root cause	Procedure	
<div></div> <div>T003: Wireless charging failure</div>	Connectivity issue	<ul style="list-style-type: none">Check the contact condition between WC and pin contact pads. If there’s no mark on the pin contact pads, it shows poor connectivity.If marks are observed, clean the contact pad and test again.	
		<ul style="list-style-type: none">Check whether the connectivity between the WLC, NFC ANT pad, and logic board are normal.If they aren’t fully buckled, reassemble and then retest.	Connectors location
	Component issue	<ul style="list-style-type: none">Disassemble the main board and find whether the connectors’ location (L and M) pad has fallen off.	<div>Disassembly</div> <div>Logic board</div>

Mic 1

Symptom	Potential root cause	Procedure
<div></div> <div>T010: Mic 1 - no sound</div> <div>T011: Mic 1 - low sound</div> <div>T012: Mic 1 - distorted sound</div>	Mesh not clean	<ul style="list-style-type: none">Take a microscope to check whether the mesh is damaged, blocked, shifted, another foreign substance is on it, or the release liner is still attached. <p>If yes, remove the foreign substance and change with a new mic 1 bracket.</p> <p>If not, go to the next step.</p>
	SW problem	<ul style="list-style-type: none">Reflash to the latest version of the shipping ROM.
	Module problem	<ul style="list-style-type: none">Use a good logic board to cross check with the failed hardware.



BTM
SPK



USB-C

MIC1


Disassembly

- Logic board
- Mic 1 bracket


Mic 2

Symptom	Potential root cause	Procedure	
<div></div> <div>T013: Mic 2 - no sound T014: Mic 2 - low sound T015: Mic 2 - distorted</div>	Connectivity problem	<ul style="list-style-type: none">• Check whether the connectivity between the SLAM FPC and logic board is normal.• If they aren't fully attached, reassemble and then retest. If you fail, go to the next step; if you pass, the repair process is done.	<div>Note: SLAM FPC = Mic 2+flashlight+key functions</div>
<div><div>MIC2</div></div>	Module problem	<ul style="list-style-type: none">• Use a good enclosure and logic board to cross check with the original ones.	<div>Disassembly</div> <ul style="list-style-type: none">• Logic board• Enclosure


Top speaker

Symptom	Potential root cause	Procedure	
<div></div> <div>T019: Top speaker no sound</div> <div>T020: Top speaker low sound</div> <div>T021: Top speaker distorted sound</div>	Mesh not clean	<ul style="list-style-type: none">Inspect the top speaker mesh and use a soft ESD brush to remove any debris.Test audio.	Top speaker mesh located between the top display module or mid-frame.
	Internal debris	<ul style="list-style-type: none">If sound quality is still poor, inspect the mesh and speaker with a microscope.Disassemble the device and inspect the speaker. Use an ionizing air fan to remove any debris and test audio.	
	Connectivity issue	<ul style="list-style-type: none">Check whether the connectivity between the top SPK pad and logic board is normal.If they aren't fully buckled, reassemble and then retest.	Connectors location
	Component issue	<ul style="list-style-type: none">If sound quality is still poor, use a good top speaker and logic board to cross check with the original ones.Replace the defective component.	<div>Disassembly</div> <ul style="list-style-type: none">Logic boardTop speaker


Bottom speaker

Symptom	Potential root cause	Procedure
<div></div> <div>T023: Bottom speaker no sound</div> <div>T024: Bottom speaker low sound</div> <div>T025: Bottom speaker distorted sound</div>	Connectivity problem	<ul style="list-style-type: none">Check whether the bottom speaker assembly shifts. Or you can disassemble the bottom speaker and check whether membrane is damaged, or if there’s debris.If yes, then clean or change to a new bottom speaker and logic board. If not, go to the next step.
	Component problem	<div><ul style="list-style-type: none">If all the failure symptoms are not present, use a good bottom speaker and logic board to cross check with the corresponding failed hardware.</div> <div>Disassembly<ul style="list-style-type: none">Logic boardBottom speaker</div>


Vibrator

Symptom	Potential root cause	Procedure
<div></div> <div>T026: Vibrator failure</div>	Module problem	<div><ul style="list-style-type: none">If all the failure symptoms aren’t present, use a good logic board and vibrator to cross check with the corresponding failed hardware.</div> <div>Disassembly<ul style="list-style-type: none">Logic boardVibrator</div>


Display

Symptom	Potential root cause	Procedure	
 T027: Display blank T028: Display dead pixel, dark spots, or foreign material T029: Display bright pixel, bright or colored spots T030: Display vertical or horizontal lines T031: Display black, white, or colored screen	Damage	Inspect display for damage and replace if necessary.	
	Connectivity issue	<ul style="list-style-type: none">Check whether the connectivity between the display connector and logic board is normal.If they aren't fully attached, reassemble and then retest.	Connectors location
T032: Display flickering or abnormal T033: Display image quality T034: Display color mura T035: Display light leakage T036: Display backlight issue	Dead pixels Distorted graphics Flickering Color issues	<ul style="list-style-type: none">Remove display module, fit a replacement part without adhesive, and test.If the issue is resolved, apply adhesive and fit a new display module.	Disassembly <ul style="list-style-type: none">Display
T037: Display shadow T038: Display permanent burnin T039: Display temporary burnin T040: Display single crack T041: Display multiple cracks T042: Display to enclosure gap T043: Display cosmetic defects	Component issue	<ul style="list-style-type: none">Use a good display and logic board to cross check with the original ones.Replace the defective component.	Disassembly <ul style="list-style-type: none">Logic boardDisplay


Touch panel

Symptom	Potential root cause	Procedure
<div></div> <div>T044: Multi-touch poor response</div> <div>T045: Multi-touch no response</div> <div>T046: Multi-touch erratic response</div>	SW problem	<ul style="list-style-type: none">Make sure that the SW is updated to the latest version.Ensure that the touch calibration process was followed 100% to the instructions.
	Connectivity problem	<div><ul style="list-style-type: none">Check the function by triage test.If it fails, disassemble the device and check the assembly condition of the display BTB connector. If the connectivity is poor, reassemble and retest.</div> <div>Connectors location</div>
	Module problem	<div><ul style="list-style-type: none">If all of the failure symptoms aren't present, use a good logic board and display module to cross check with the corresponding failed ones.</div> <div><div>Disassembly</div><ul style="list-style-type: none">Logic boardDisplay</div>


RF (BT, WiFi, GPS, NFC)

Symptom	Potential root cause	Procedure
<div></div> <div>T047: RF failure T048: Wi-Fi connectivity issues T049: Bluetooth connectivity T050: GPS failure T051: NFC connectivity issues</div>	Connectivity problem	<div><ul style="list-style-type: none">Check whether the screws are loose or the springs are damaged or disconnected.<p>If not, go to the next step.</p></div>
	Module problem	<div><ul style="list-style-type: none">Use a good logic board, enclosure to cross check with the corresponding failed ones.<div>Disassembly<ul style="list-style-type: none">Logic boardEnclosure</div></div>


Battery

Symptom	Potential root cause	Procedure	
<div></div> <div>T053: Battery damage</div> <div>T054: Battery draining fast</div> <div>T055: Device overheats</div>	Connectivity issue	<ul style="list-style-type: none">• Check whether the connectivity between the battery connector and logic board is normal.• If they aren't fully attached, reassemble and then retest.	Connectors location
	Component issue	<ul style="list-style-type: none">• Use a good battery and logic board to cross check with the original ones.• Replace the defective component.	<div>Disassembly</div> <ul style="list-style-type: none">• Logic board• Battery


Sensor

Symptom	Potential root cause	Procedure	
 T059: Proximity sensor failure T060: Ambient light sensor failure T061: Accelerometer sensor failure T062: Gyroscope sensor failure	SW problem	Make sure that the SW is updated to the latest version.	
	Assembly issue	Check the P-sensor rubber to ensure that it's in the correct position.	Assembly P-sensor rubber status
	Connectivity problem	Check the function by triage test. Make sure that there's no foreign substance on the P-sensor area.	
	Module problem	<ul style="list-style-type: none">Disassemble and check that the appearance of the proximity sensor isn't abnormal.Use a good P-sensor rubber and logic board to cross check with the corresponding failed ones.Replace the defective components.	Disassembly <ul style="list-style-type: none">Logic boardDisplay (P-sensor rubber)


UDFPS

Symptom	Potential root cause	Procedure	
<div></div> <div>T064: Fingerprint sensor failure</div>	Damage	Inspect the display for damage and replace if necessary.	
	SW problem	Reinstall the UDFPS calibration software.	
	Connectivity issue	<ul style="list-style-type: none">Check whether the connectivity between the fingerprint connector and logic board is normal.If they aren't fully buckled, reassemble and then retest.	Connectors location
	Component issue	<ul style="list-style-type: none">Use a good fingerprint module and logic board to cross check with the original ones.Replace the defective component.	<div>Disassembly</div> <ul style="list-style-type: none">Logic boardDisplay


Camera

Symptom	Potential root cause	Procedure	
<div></div> <div>T070: Camera crashes</div> <div>T071: Camera no preview</div> <div>T072: Camera AR failure</div> <div>T073: Camera rear photo quality</div> <div>T074: Camera rear video quality</div>	Cosmetic problem	<ul style="list-style-type: none">Inspect the camera lens area for damage.Check the function by triage test.Disassemble the device to check whether the camera connector is seated properly. Power on the unit and check whether the camera fails again.	
	Connectivity problem	Check the camera BTB and logic board side to identify whether the assembly is deformed or there're flex cracks. Reboot device again to check whether symptoms of the failure still exist.	Connectors location
	Module problem	If symptoms of failure still exist, cross check the logic board itself or camera module to determine whether the symptom of failure is caused by the camera module or logic board.	<div>Disassembly</div> <ul style="list-style-type: none">Logic boardFront cameraRear camera
T075: Camera front photo quality			
T076: Camera front video quality			
T077: Camera flash not working			
T078: Cannot switch between cameras			
T079: Camera damage			

USB

Symptom	Potential root cause	Procedure	
<div></div> <div>T085: USB-C failure</div>	Connectivity issue	<ul style="list-style-type: none">Inspect the USB port to see if any dust is inside.Check whether the device can detect the USB adaptor.Reconnect the battery and then boot up without charging with the USB power cable.	Connectors location
	Component issue	<ul style="list-style-type: none">Use a good logic board to cross check with the original one.Replace the logic board if needed.	<div>Disassembly</div> <div>Logic board</div>

mmWave

Symptom	Potential root cause	Procedure	
<div></div> <div>T105: 5G_low_med_band_failure</div> <div>T106: 5G_high_band_failure</div>	Connectivity issue	<ul style="list-style-type: none">Inspect the mid-frame and check that the mmWave flex is correctly seated.Check whether the connectivity between the mmWave connector and logic board is normal.If they aren't fully attached, reassemble and then retest.	Connectors location
	Component issue	<ul style="list-style-type: none">Connect a new mmWave to test.If the issue is resolved, proceed with the mmWave replacement and assemble the device.	<div>Disassembly</div> <div>mmWave</div>
		If the mmWave issue remains, replace the logic board.	<div>Disassembly</div> <div>Logic board</div>



Pixel 8a repair manual

Testing

Software tools

Description	Documentation
Update or reinstall the software on Pixel devices	Link