Pixel 7

Repair Manual

Version 3

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

Self service repair is not 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 engaging in repair.

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

Welcome!

We are here to help.

At Google, we innovate, design and build in order 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 need support, please reach out.

support.google.com

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

Precautions

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

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 required to complete the repair.

Assembly

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

Troubleshooting & Testing

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

Glossary

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

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Reuse instructions

Troubleshooting

Revision History

Version	Date	Change Description
V1.0	Aug 25th 2022	First release
V1.1	Sep 21th 2022	1. Modify the GPN of G852-02352-01 (RCAM UW Cap), G806-07716-01 (RCAM film). Picture of RCAM UW Cap, RCAM Cap @P.34 2. Add the callout for the thermal rework. @P.86 3. Correct the Prerequisites sequence @P.100 @P.105 @P.111 @P.123 4. Change the BIF Flex reusable from N to Y and Uber Grommet reusable from Y to N @P.32 5. Modify display disassembly method and trim check. @P.49~51 6. Cancel the tool for Universal Disassembly ESD Pick. @P.25 7. Modify RCAM/UW RCAM pictures. @P.31 @P.112
V2.0	Nov 2nd 2022	1. Add the tool for Universal Disassembly ESD Pick. @P.25 @P.51 2. Change the way to slide the right and left side of the display. @P.51 *(yellow highlight for this version change)* 3. Add the Note for separating the Display Module in Universal disassembly fixture @P.50 *(yellow highlight for this version change)* 4. Add the callout for “Avoid to touch the gaskets/springs, as it may deform them.” *@P.74*

Revision History

Version	Date	Change Description
V2.1	Feb 2023	1. This is Only applying to when there is Sidekey damage. Add replacement parts: sidekey GPN:G949-00362-00. @P.34 @P.151 Disassemble the Sidekey @P.154 Assemble the Sidekey @P.157
V2.2	July, 2023	1. Add Volume Button Details Add Replacement part @P.34 in Disassembly @P.155, Assembly@P.163, Troubleshooting @P.183~P.184. 2. Modify the LCD to OLED @P.38~39 3. Add the caution for bending FPC. @P.57 4. Add the caution avoiding scratching the outside of the display flex against the midframe. @P.63~64
V3	**June 2024**	**1. Removed proprietary references** **2. Added disclaimers** **3. Updated tools and fixtures names and part numbers**

Precautions

Important: Before you begin

Precaution

Be careful if engaging in repair

Opening and/or repairing a device can 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 no additional screws or small parts are left in the device after assembly.

Always ensure that screws are securely fastened.

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

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

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

Caution: Pixel 7 contains a Class 1 laser module

The design of the device incorporates optics and protective housing such that there is 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

Precaution

Caution:
Part handling – Glass

- Wear protective gloves and safety glasses when handling damaged parts.
- Use protective film when removing damaged parts.
- Once removed, immediately store the damaged part in the replacement part packaging to prevent injury.

Tools and fixtures

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

Caution:

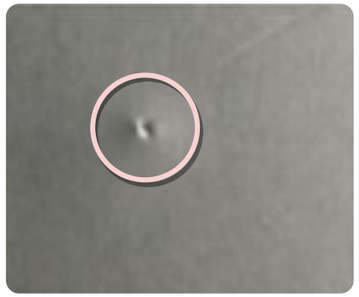
- We don't recommend performing repairs without the specified tools and fixtures.
- Improper use of tools and fixtures may result in injury to yourself, the user of the device or other third parties, as well as damage to the product, tools, fixtures, replacement parts and/or other spare parts.

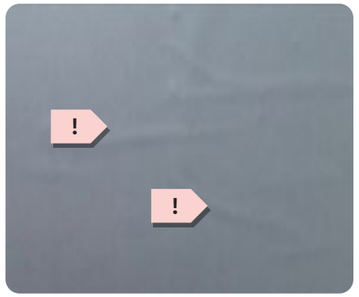
Important: Before Disassembling the Device

- Disconnect the device from all power sources before any disassembly.
- Make sure 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 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 once disassembled.

Caution ⚠

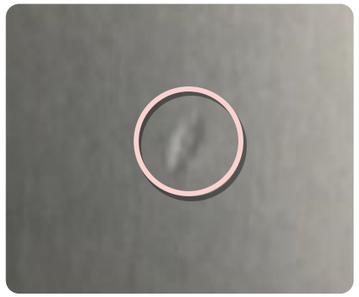
Examples of unacceptable battery conditions - Not suitable for repair*


Pouch damage

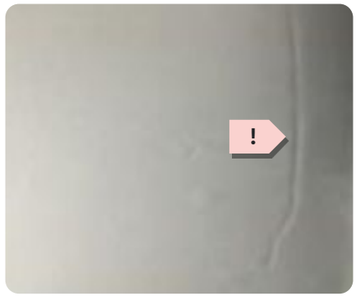

Line protrusion

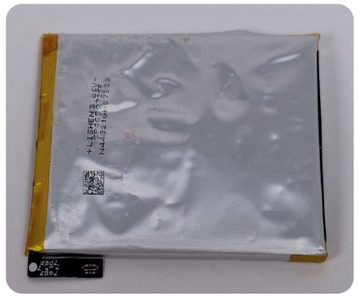

Scratch


Contamination marking

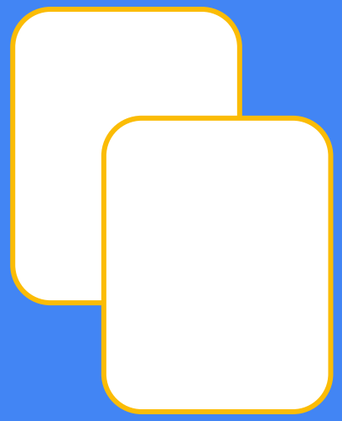

Dent


Bubbling


Imprinted line

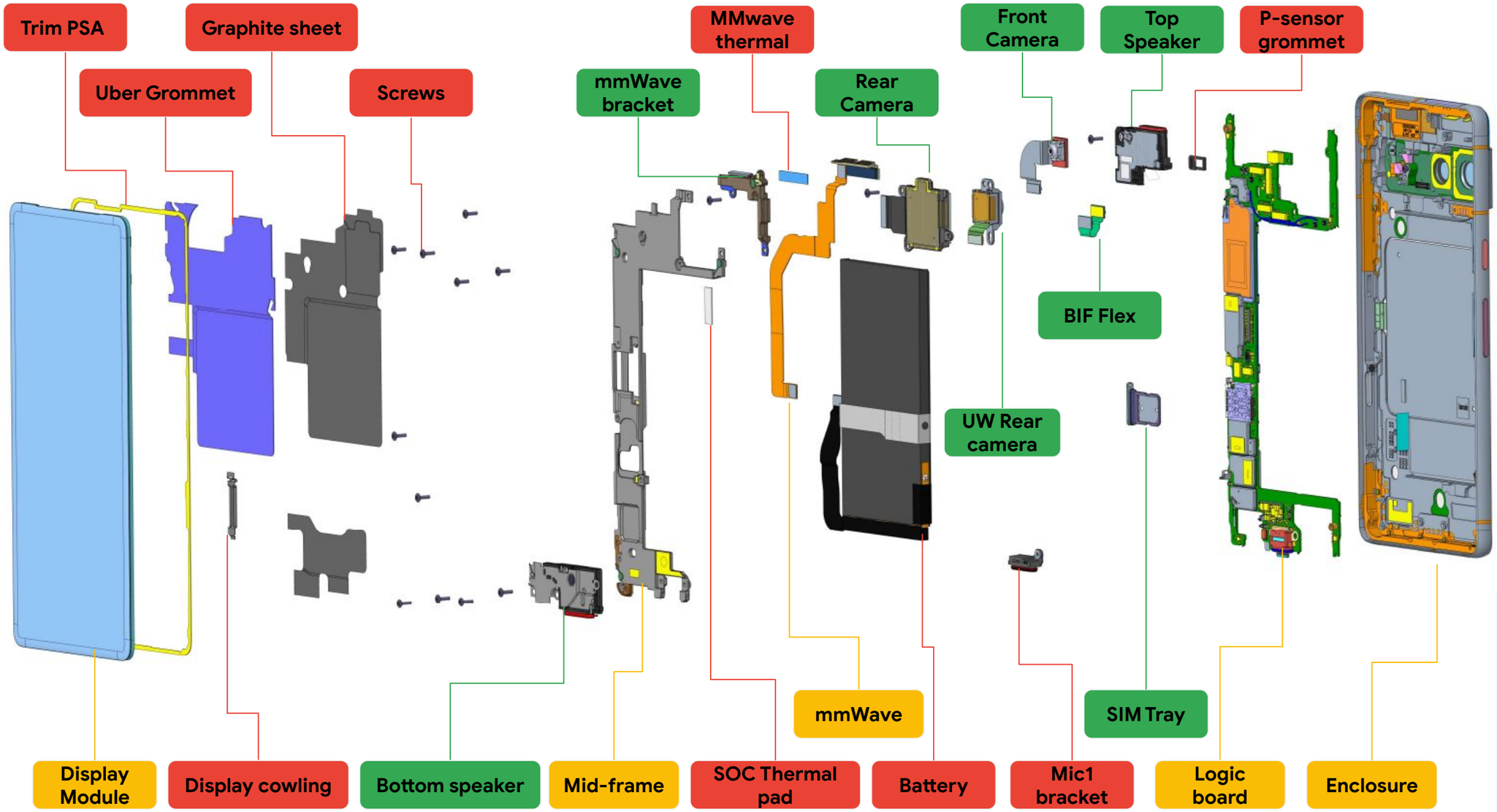

Swelling or electrolyte leakage

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



Introduction

Expanded View - Pixel 7



Pixel touch screen calibration process

For the Pixel 7 product

[Note: This process applies 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.

Protective bags

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

Avoid touching pins

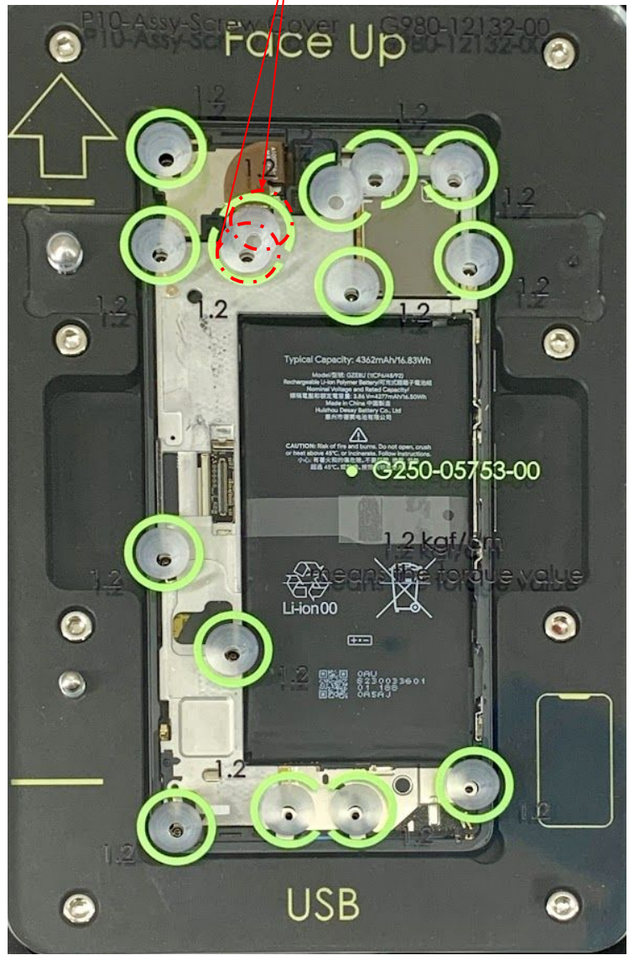
Don't touch pins with use of ESD-safe tools to handle components.

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.

Screw Map

Screw
G250-05753-00



The two screw need to retighten again.
(one in midframe ; one in MLB)

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.

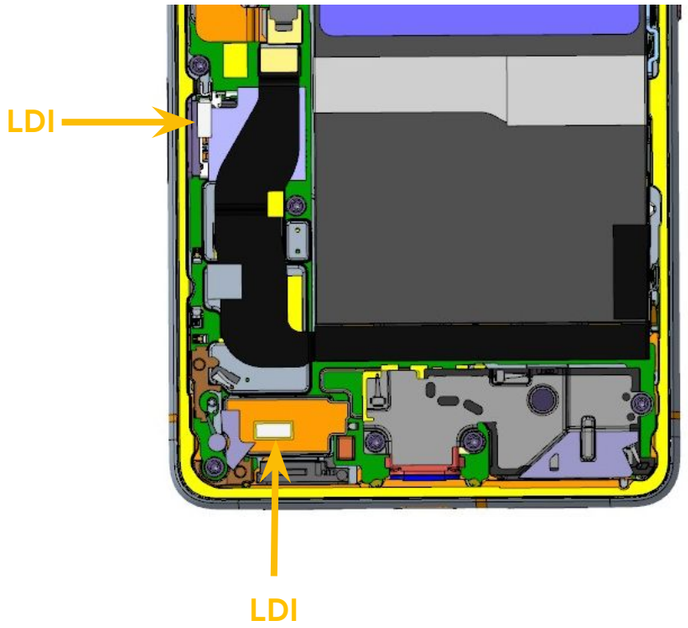
After removal, replace with a new screw

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.

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.



- In the SIM card slot, on the mid-frame (visible without disassembling the device).
- Another on mid-frame (disassembly needed to inspect).

Tools and Fixtures

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

Please note that some tools and fixtures require maintenance and calibration before performing repairs.

Caution:

- Don't perform repairs without Google-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 and/or other spare parts.

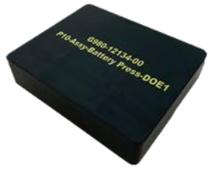
Google-approved fixtures - Pixel 7

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

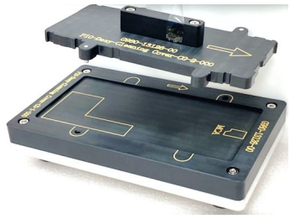
Pixel 7 Enclosure Holder
G940-00907-00

Pixel 7 Enclosure PSA Align & CG Press Cover
G940-00908-00

Pixel 7 Screw Cover
G940-00910-00



Pixel 7 Battery Press
G940-00909-00



Pixel 7 Cleaning Cover
CG
G940-00911-00

Pixel 7 Cleaning Cover
Enclosure
G940-00912-00

Google-approved fixtures

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

Universal Disassembly Fixture
G940-00873-00

Universal Disassembly Fixture - Universal Device Clips
G940-00874-00

Universal adsorption bulb
G940-00780-00

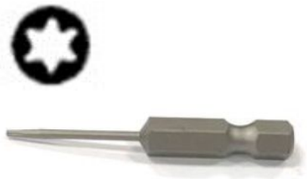
Universal Press Fixture
G940-00733-00

Universal Scraper
G940-00784-00

Upper : SIM TRAY EJECTOR
Lower : CONNECT DSSY

Universal Fish line tool
G940-00779-00

Universal Disassembly ESD stick
G940-00782-00



Screwdriver Hex Shank Torx Plus Bit no.3
G940-00785-00

Universal Cap Removal
G940-00923-00

Universal Disassembly ESD Pick
G940-00783-00

Universal Protective Film
G940-00786-00

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 gloves

Dust free cloth

Dust-free
Dust-free Cotton swabs

Plastic ESD Tweezers

SIM card ejection pin

Heating plate

IPA
(Isopropyl Alcohol)

3M UPUV or AP111 Primer

Screwdriver Torx Plus 3IP
[Optional]

Adjustable type torque screwdriver

Universal Disassembly ESD stick

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.

Suction Cup

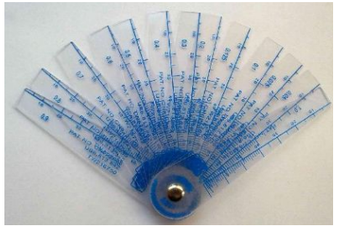
Table C-Clamp

Ionizing air fan

Masking tape

Ionizing air fan

Sankol lubricant CFD 409Z_V2



Feeler gauge

Deglue Machine

Fishing Line (Thickness 0.4mm, 13.9kg/30lb)

Precaution

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

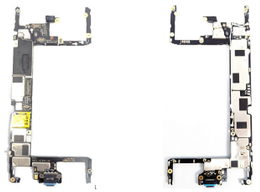
- The use of Google authorized replacement parts is strongly recommended.
- Performance within product specifications cannot be assured if Google authorized replacement parts are not used.

Caution:

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

Replacement parts

Reusable without cleaning
Reusable with cleaning
Not Reusable after disassembly



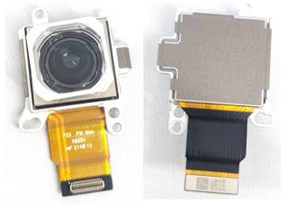
Logic board
Multiple Part Numbers

Display module
G949-00322-01

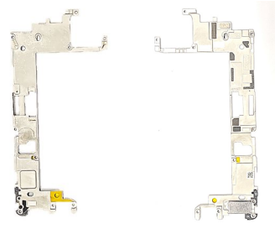
Enclosure
Multiple Part Numbers

Front camera
G949-00332-01

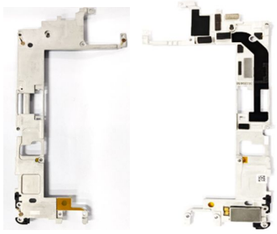
Rear camera UW
G949-00333-01



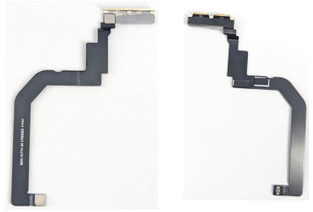
Rear camera
G949-00334-01



Mid-frame_mmWave
G949-00335-01



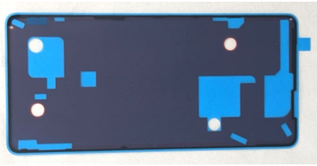
Mid-frame_sub6
G949-00336-01



mmWave module
G949-00337-01

Battery
G949-00338-01

Bottom Speaker
G949-00339-01



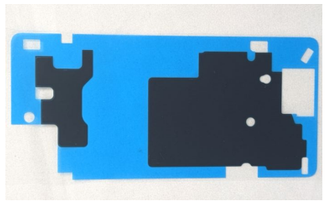
Trim PSA
G806-06919-01

Replacement parts

Reusable without cleaning
Reusable with cleaning
Not Reusable after disassembly

Display cowling
G730-06100-01

Sim Tray
Multiple Part Numbers



Graphite sheet
G864-00539-01

Top Speaker
G863-00407-04

Mic1 Bracket
G730-06087-02

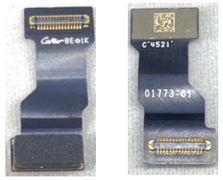
Screw
G250-05753-00

P-sensor grommet
G806-06979-03

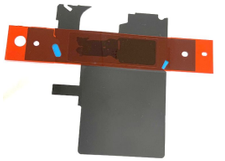
MMwave Bracket
G730-06089-10
(alternate: G730-06740-01)

sub6 Bracket
G730-06088-10
(alternate: G730-06741-01)

mmWave thermal pad
G864-00494-01



BIF Flex
G652-01773-01



Uber GROMMET
G804-00936-01

Replacement parts

Reusable without cleaning

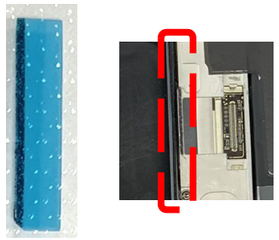
Reusable with cleaning

Not Reusable after disassembly

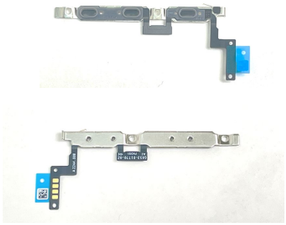
SOC thermal pad
G864-00492-01

ANT7 Grounding
G853-01101-02

Screw
G250-05802-00



Left Pad, Midframe
G806-06607-05

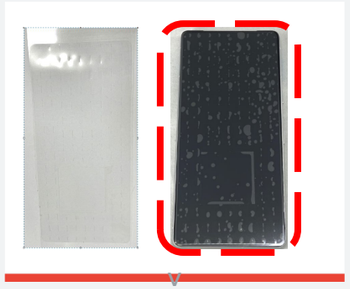


Sidekey
G949-00362-00

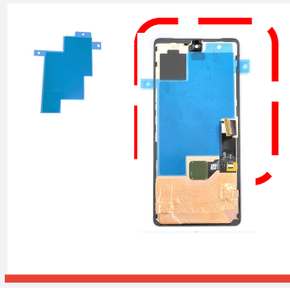
Volume button
Multiple Part Number

Replacement parts

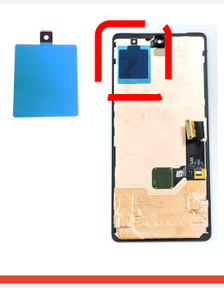
Reusable without cleaning
Reusable with cleaning
Not Reusable after disassembly



CG protective liner
G806-07711-01



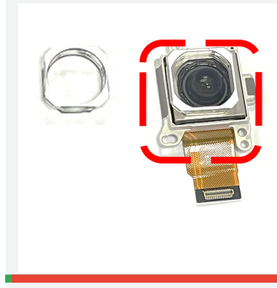
CG copper film
G806-07712-01



CG copper protective
G806-07713-01

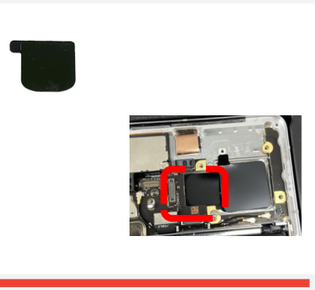
FCAM film
G806-07714-01

RCAM UW Cap
G852-02352-01

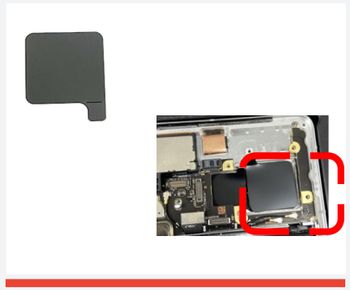


RCAM Cap
G852-02351-01

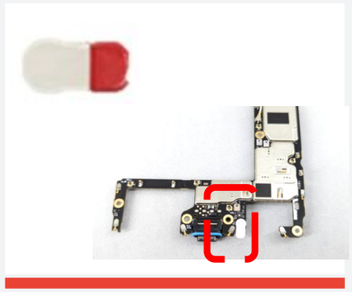
FCAM Cap
G852-02360-01



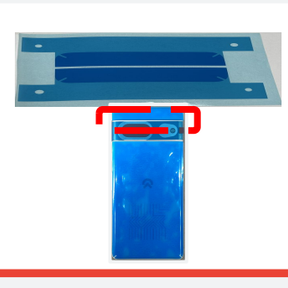
RCAM film UW
G806-07715-01



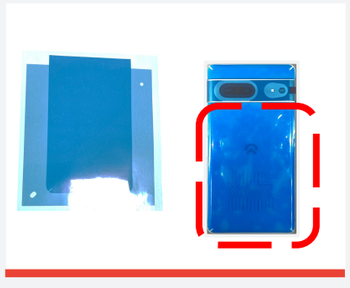
RCAM film
G806-07716-01



Mic protective liner
G806-03591-01



Top BG liner
G806-07717-01



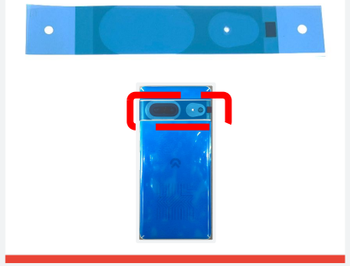
Bottom BG liner
G806-07718-01

Replacement parts

Reusable without cleaning

Reusable with cleaning

Not Reusable after disassembly

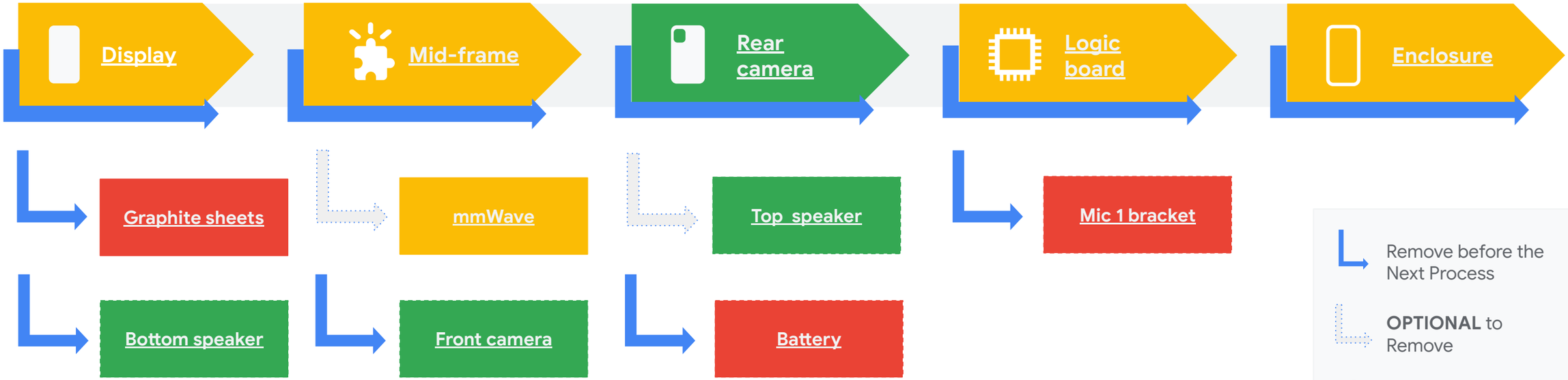


Visor BG liner

G806-07719-01

Repair flows

Pixel 7 Disassembly flowchart



Remove before the Next Process

OPTIONAL to Remove

Reusable without rework

Reusable with rework

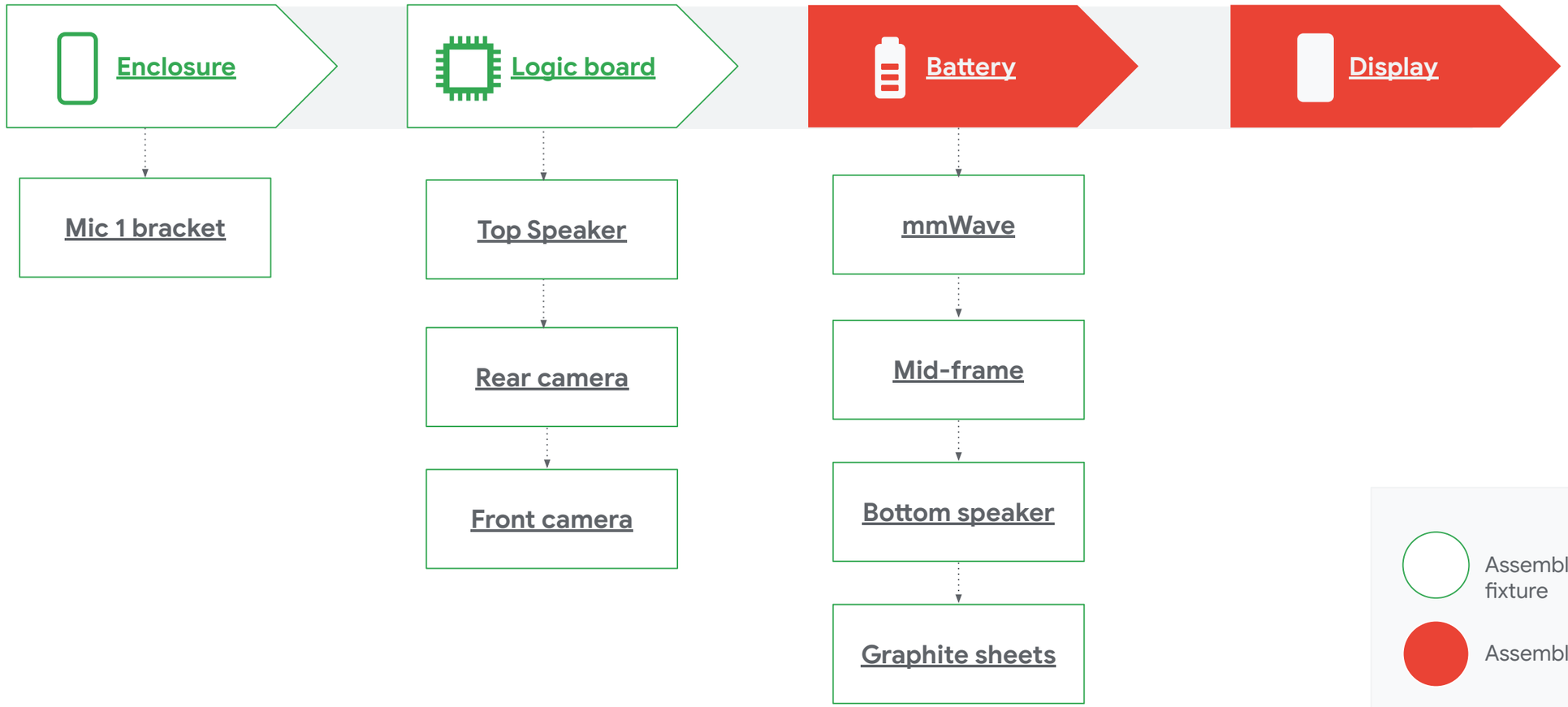
Not Reusable after disassembly

Note : Rear camera/Front camera/Battery are in the same layer, you can replace each of them without interference.

How to read this chart...

To replace the battery: Remove the display, mid-frame, bottom speaker, then the battery
To remove the logic board: Remove the display, mid-frame, bottom speaker, mmWave, front camera, rear camera , battery then the logic board

Pixel 7 Assembly flowchart



How to read this chart...

To reinstall the battery: Battery, bottom speaker, mid-frame, then display
To reinstall the logic board: Logic board, battery, rear camera, front camera, mmWave, bottom speaker, mid-frame, then display

Disassembly instructions

Display

Display replacement

The **Display module** is connected to the **Logic board**, so be careful with the flex when opening the device up.

Prerequisites

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

Tools

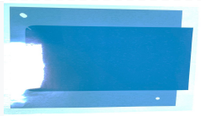
Heat Plate
Universal disassembly fixture
Ionizing air fan
Pixel 7 Enclosure Holder
Pixel 7 Enclosure PSA Align & CG Press Cover
Pixel 7 Battery Press
Pixel 7 Cleaning Cover - CG
Universal press fixture
Universal adsorption bulb
Torx Plus 3IP screwdriver
Universal Fish line tool
ESD tweezers
Universal Disassembly ESD stick
3M 111 Primer
Deglue Machine
Universal Disassembly ESD Pick

Caution!
Use **safety gloves** to handle damaged displays as some splinter during removal and could cause injury. Apply **protective film** to broken glass before removal. Review all **safety precautions** before beginning work.

Display replacement - Cont.

The **Display module** is connected to the **Logic board**, so be careful with the flex when opening the device up.

Parts

G949-00322-01 Display		G730-06100-01 Display Cowling	
G806-07711-01 CG protective liner		G806-07714-01 FCAM Film	
G806-07717-01 Top BG liner		G852-02360-01 FCAM Cap	
G806-07718-01 Bottom BG liner		G806-07712-01 CG copper film	
G806-07719-01 Visor BG liner		G806-07713-01 CG copper protective	

Caution!

Use safety gloves to handle damaged displays as some splinter during removal and could cause injury. Apply protective film to broken glass before removal. Review all safety precautions before beginning work..

Cover the Display

- Make sure the device is turned off before disassembling.
- Cover the **Display module** with **CG protective liner**.

Part: G949-00322-01 (Display module), G806-07711-01 (CG protective liner)

Use Caution: Use safety gloves to handle damaged displays as some splinter during removal and could cause injury. Apply protective film to broken glass before removal. Review all safety precautions before beginning work.

Cover the Back Glass

- Place a **BG protective film** over the Back Glass and Visor.

Part: G806-07717-01 (Top BG liner)

Part: G806-07718-01 (Bottom BG liner)

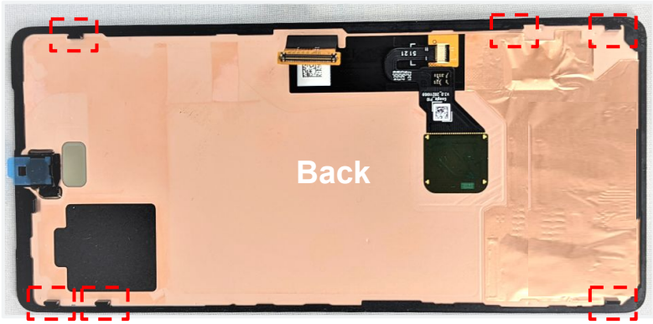
Part: G806-07719-01 (Visor BG liner)

Soften the adhesive

- **Display** face to the **Heat plate** set to **122°F/50 °C for 10 mins** to soften the adhesive.

Caution: Heating plate is a Hot Surface. Use caution as it could cause burns.

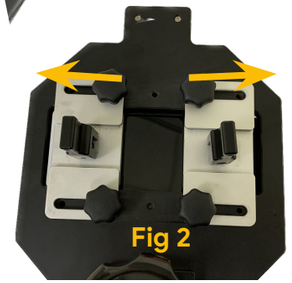
Where snaps are

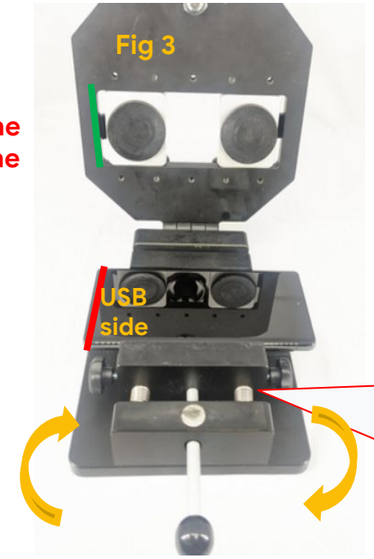


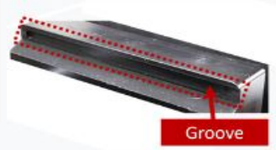
- Before removing the **Display module**, be aware that there are 6 snaps underneath. (Refer to the relative position)
- Avoid damaging the snaps during the disassembly process.

Use fixture

visor contact the edge of the fixture





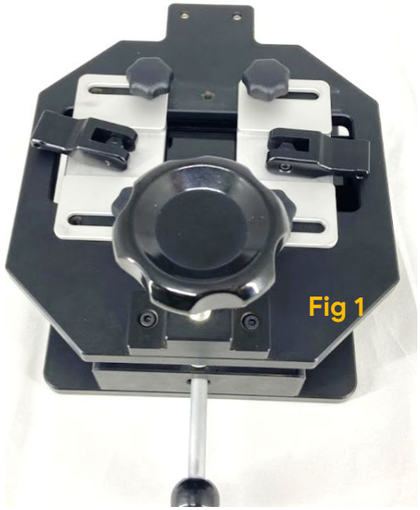


Place power key inside the groove

- Place the device on the holder of **Universal disassembly fixture & Universal Device Clips,** phone visor contact the edge of the fixture, in **Fig1.** And adjust these two suction cups to the end, in **Fig2.**
- Adjust the position of the **Display module** (the red line) to align with the edge of the left suction cup (the green line), in **Fig3.**
- Fix the device and lock with the screws.

Remove the Display front protective film to allow the suction cups attach to the display.
There is a groove which can help to avoid pressing the power button accidentally.

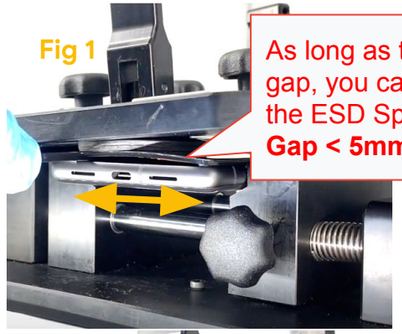
Cover fixture

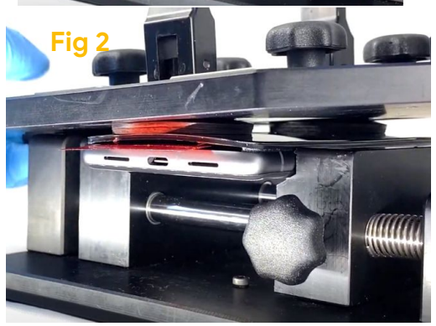


- Release the lid and align the 2 suction cups underneath with the display**(Fig1)**
- Lift up the two suction cups **(Fig2, Fig3)**.

Use Caution: Use safety gloves to handle damaged displays as some splinter during removal and could cause injury. Apply protective film to broken glass before removal. Review all safety precautions before beginning work.

Use fixture





Disassemble Sequence:
1 -> 2 (In Fixture)

- Slowly rotate the knob and the **Display module** to separate from the **Enclosure**. **Slide the sequence 1 & 2 (Bottom & Top side)**, in **Fig1.**
  In some scenario for Pixel 7, it's allowed to open either side(Bottom & Top side).
  If the Left or Right side is partly open, go on the step.
- As they separated from the **USB side**, insert the release liner to prevent the adhesive from sticking back, in **Fig2.**

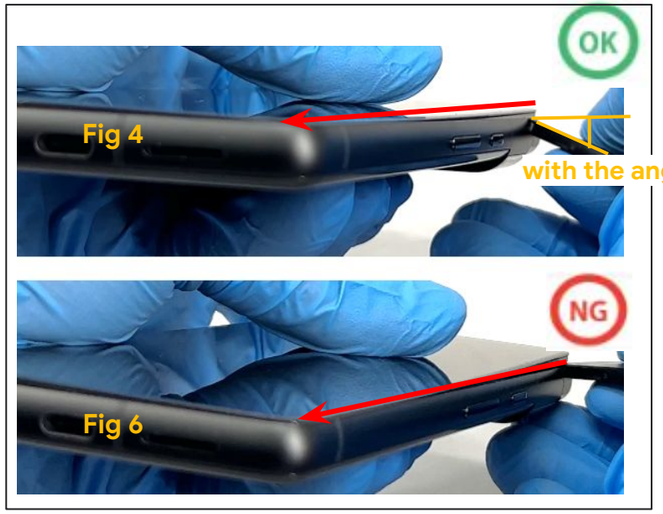
Be careful not to push the ESD Spudger beyond the adhesive surface to avoid damaging the screen, battery, or any other internal components.

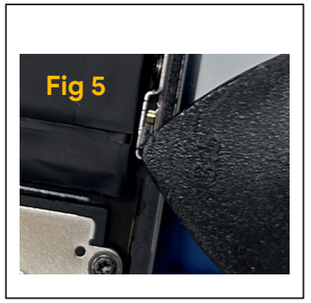
Open the lid

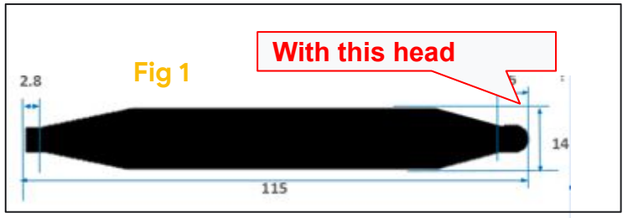
- Release the suction cup, and open the lid.
- Don't remove the release liner from the device.

Reattach the Display front protective film after taking out the device from the fixture.

Separate Top/Right/Left edge



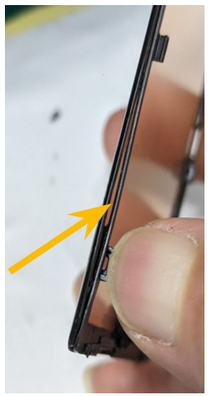


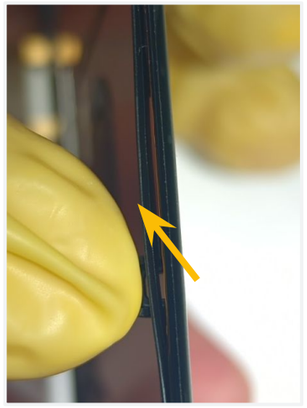
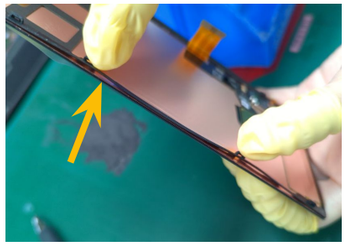
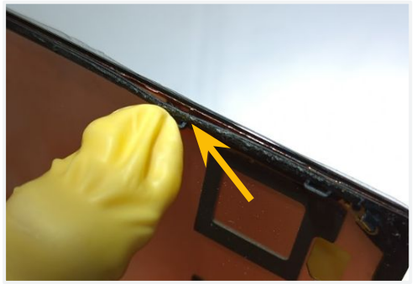


- Insert an **ESD Spudger(use the corner head, Fig1)** into the gap to separate the top(bottom) side if the top(bottom) side is not open.
- Hold the **Universal Disassembly ESD Pick(3.5mm, flat surface face to you)**, like **Fig2.** Slide around the **Left Side** with **Universal Disassembly ESD Pick(3.5mm)**, in **Fig3**
- Slide the **Right side** with **Universal Disassembly ESD Pick(3.5mm) with the angle to pry up the adhesive, Fig4, to avoid damage the spring, Fig5.** ~~Not slide it horizontally, in **Fig6.**~~

Watch out position of the trim(snap), and the FCAM, sidekey spring, ANT7 spring, pull out the ESD Spudger.

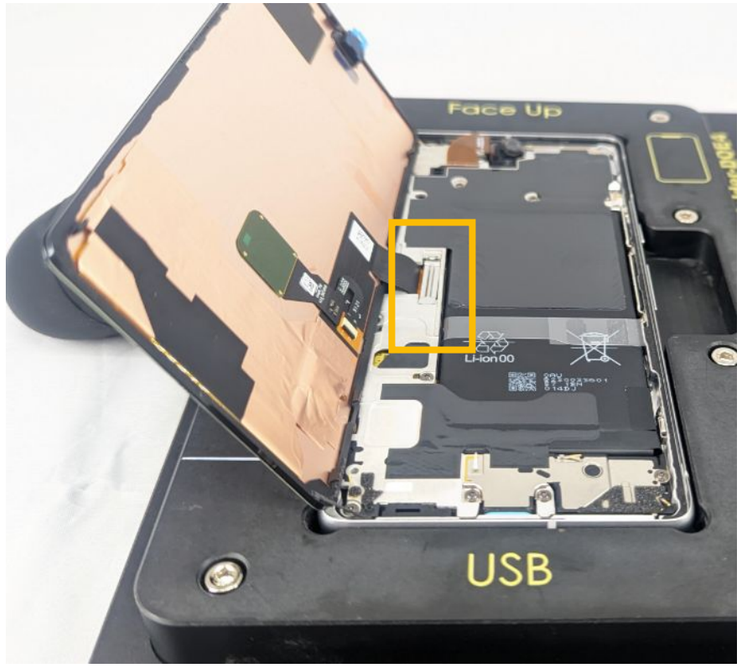
Check the trim snap



- Check the trim snap. If the trim separated from the display, scrap them.
- Some NG photos are for the references.

Hold the Display



- Once the device is open, use the **Universal adsorption bulb** to hold the display.
- Avoid touching the copper foil.

Be careful not to stretch the display flex.

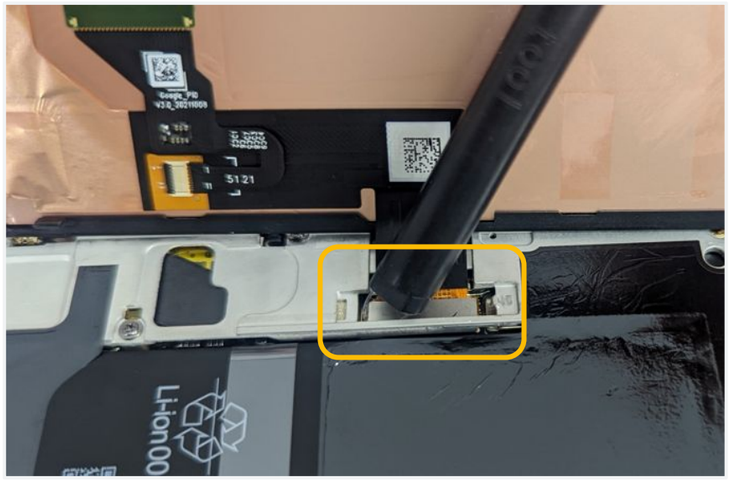
Remove cowling

- Remove with an **Universal Disassembly ESD stick**.

Part: G730-06100-01 (Display Cowling)

Don't reuse the part

Disconnect display

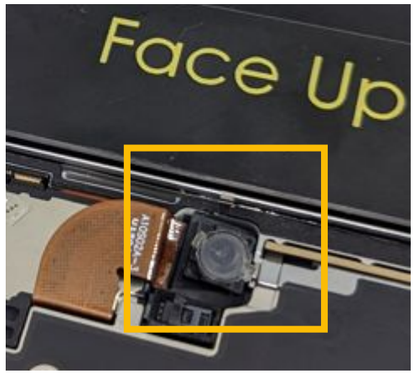


- Loosen the display connector with the **Universal Fish line tool**.
- Remove the **Display module**.

Part: G949-00322-01 (Display module)

Using the **Universal Fish line tool** avoids damage the components.

Camera protection



- Put on the **FCAM Cap** (on front Cam) and **FCAM Film** (on CG's front Cam holder), and gently press with **ESD tweezers**.

Part: G806-07714-01 (FCAM Film)
G852-02360-01(FCAM Cap)

Adhere foil film

- Adhere **two copper protective films** to the **Display module**.

Part: G806-07713-01 (CG copper protective)
G806-07712-01 (CG copper film)

Only apply the copper protective film to reuse a good working, non-damaged screen.

Assembly instructions

Display

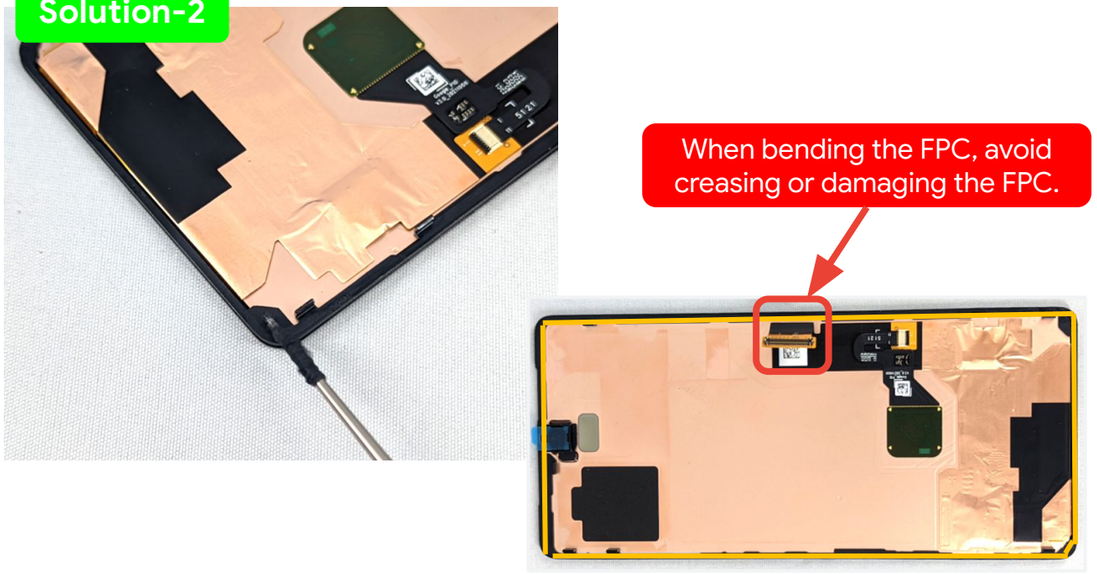
Re-using the Display with fixture

Solution-1
Cleaning Cover - CG

- Use the **Universal adsorption bulb** to place the **Display** in Pixel 7 **Cleaning Cover - CG** and place the cover.
- Use an **Deglue Machine** to clean the residual glue out of the **Display**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

Re-using the Display

Solution-2

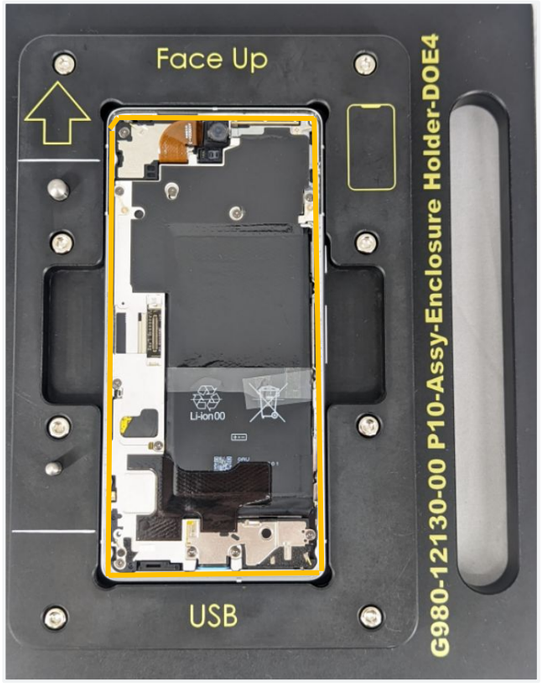


- Use an **Universal Disassembly ESD stick** or **Deglue Machine** to clean the residual glue out of the **Display**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

The highlight is where the residual adhesive exists.

Caution!
Review all safety precautions before beginning work.

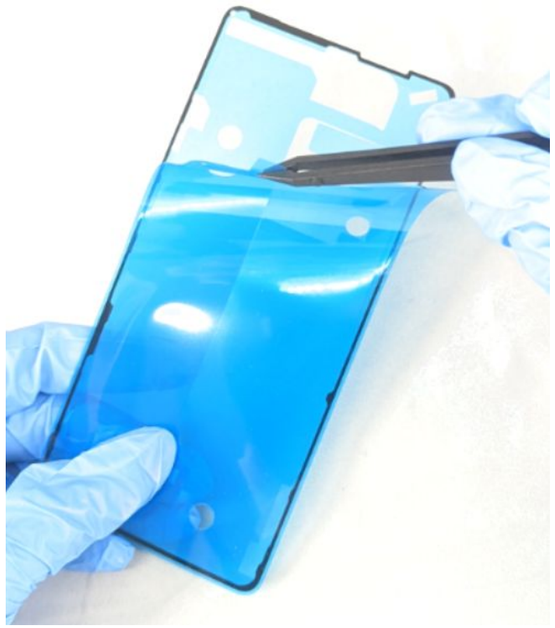
Apply primer



- Apply **IPA** around the edges of the **Enclosure** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.
- Apply **3M 111 Primer** around the edges of the **Enclosure** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

Once **Primer** has been applied, complete assembly in 25 mins.

Remove liner

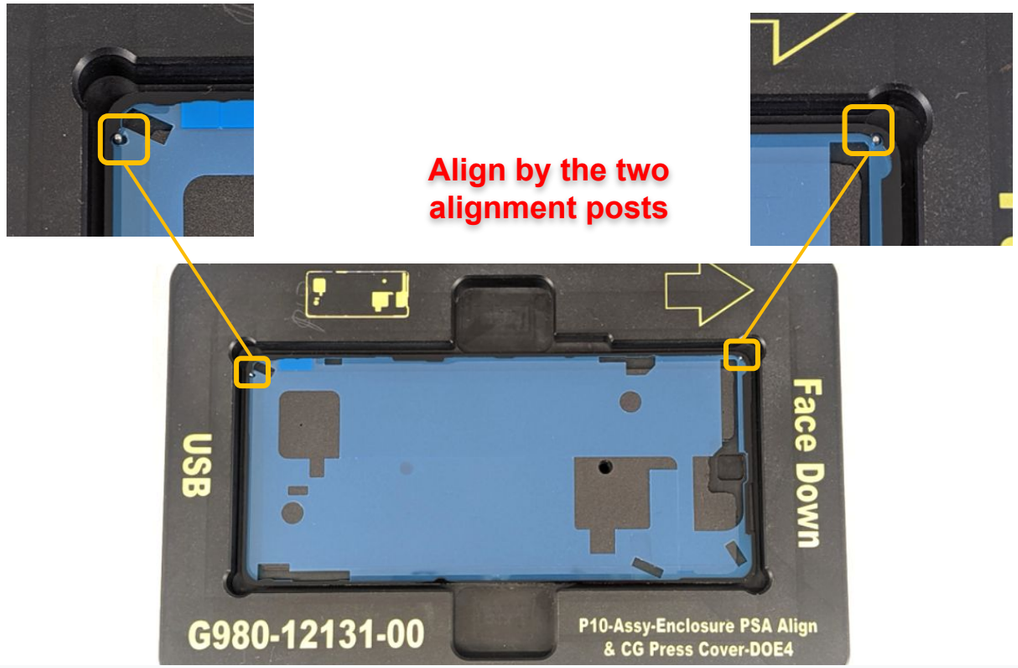


- Slowly remove the liner from the **adhesive** with **ESD tweezers**.

Part: G806-06919-01 (Adhesive)

Don't touch the adhesive. If it gets dirty, change for another one.

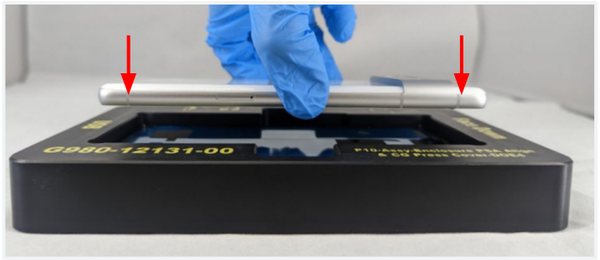
Adhesive alignment

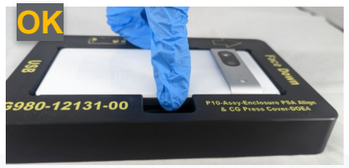


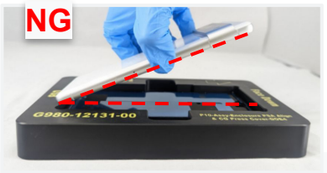
- Place the **adhesive** in the Pixel 7 **Enclosure PSA Align & CG Press Cover** with the ESD tweezers.

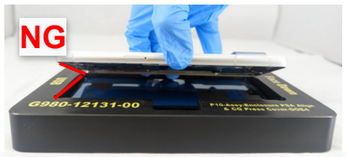
Don't touch the adhesive. If it gets dirty, change for another one.

Enclosure to adhesive





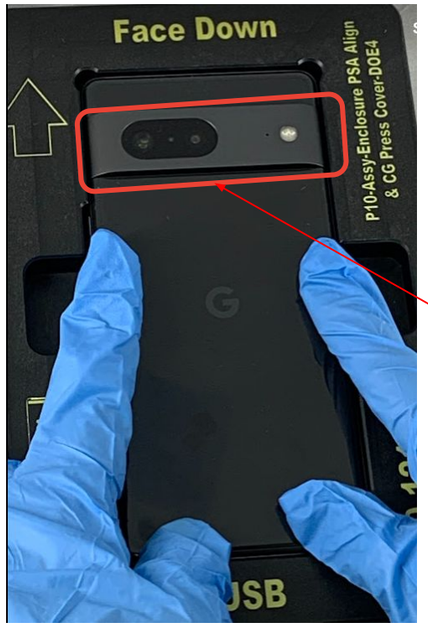




- Vertically place the **Enclosure** into the pocket in the indicated direction.

Place it vertically.

Activate the PSA

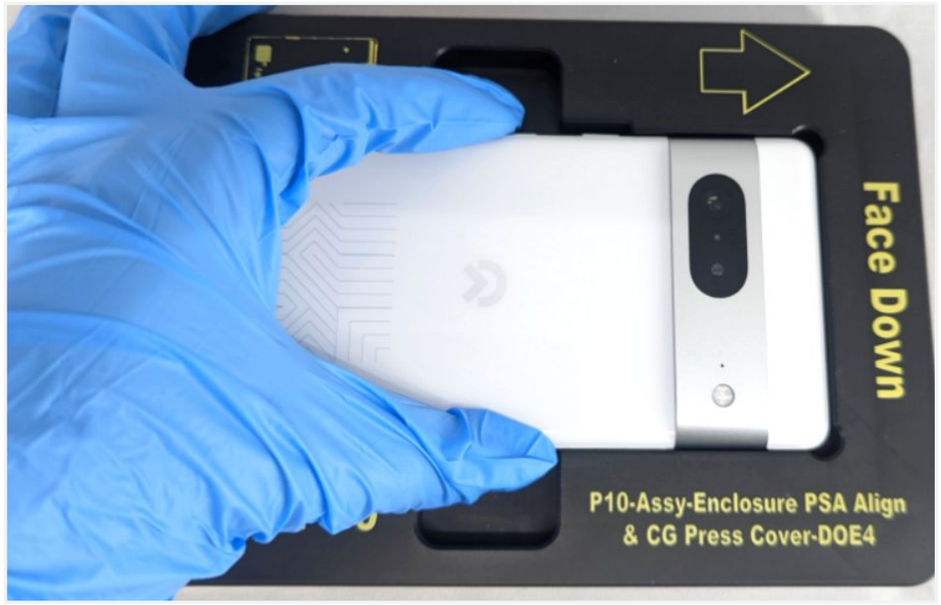


Don't press on RCAM Area(Visor).

- Gently press the all around **adhesive** by hands, to enhance the bonding between **Enclosure** and **adhesive**.

Don't press on RCAM Area(Visor) during the process.

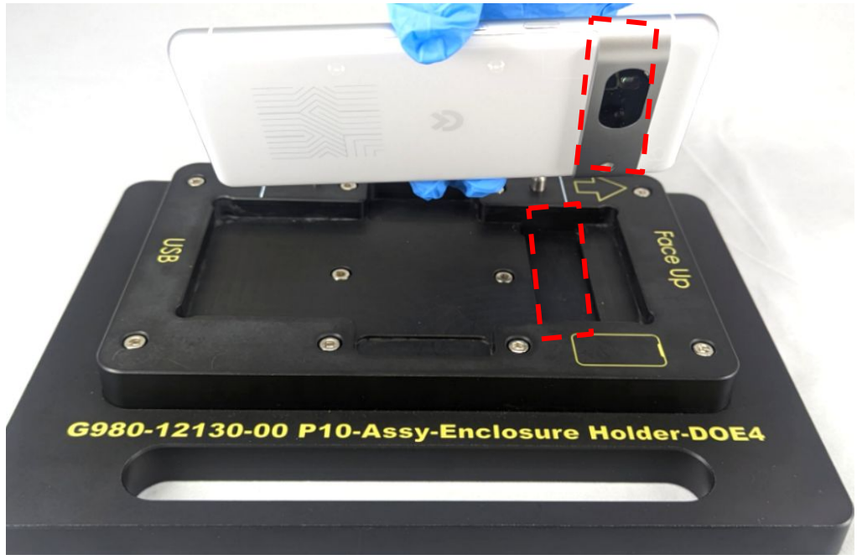
Remove Enclosure



- Remove the **Enclosure** from the Pixel 7 **Enclosure PSA Align & Press Cover** vertically.

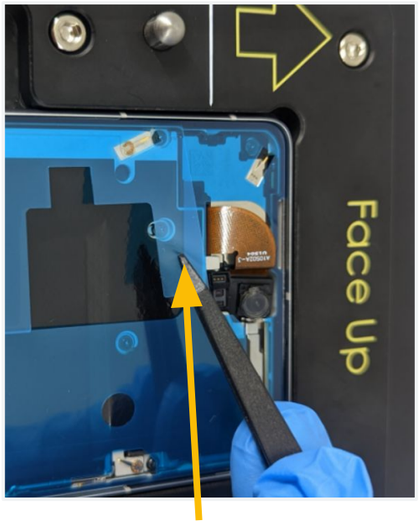
1. Take out the Enclosure vertically.
2. **Don't** put device back side in fixture anytime, otherwise fixture alignment pin and BG may be damaged.

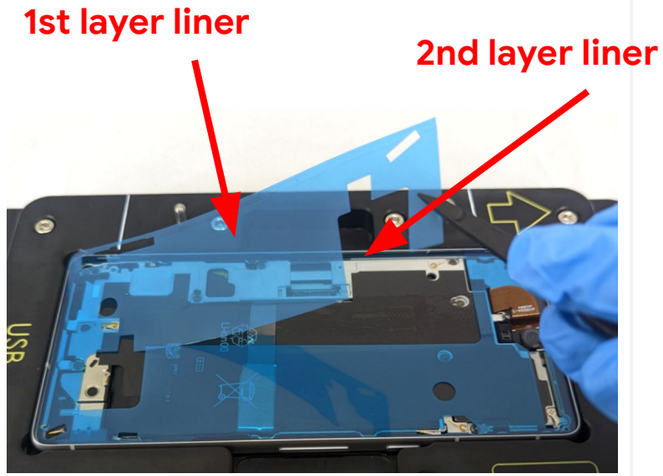
Adhesive to enclosure



- Place the **Enclosure** in the **Pixel 7 Enclosure Holder.**

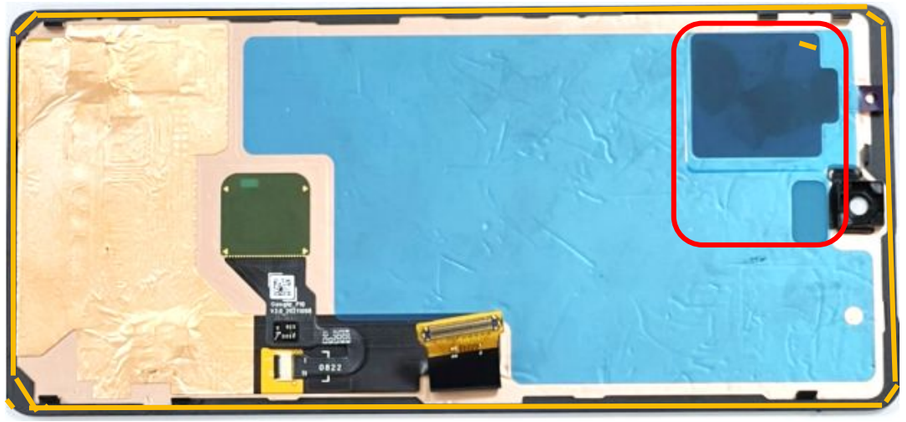
Remove the liner (1st layer)





- Slowly pull the liner to avoid lifting the adhesive, with the pull tab as the figure shown.
- Don't remove the 2nd layer of the liner yet.

Apply primer on display



- Apply **IPA** around the edges of the **Display module** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.
- Apply **3M 111 Primer** around the edges of the **Display module** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

Part: G949-00332-01 (Display module)

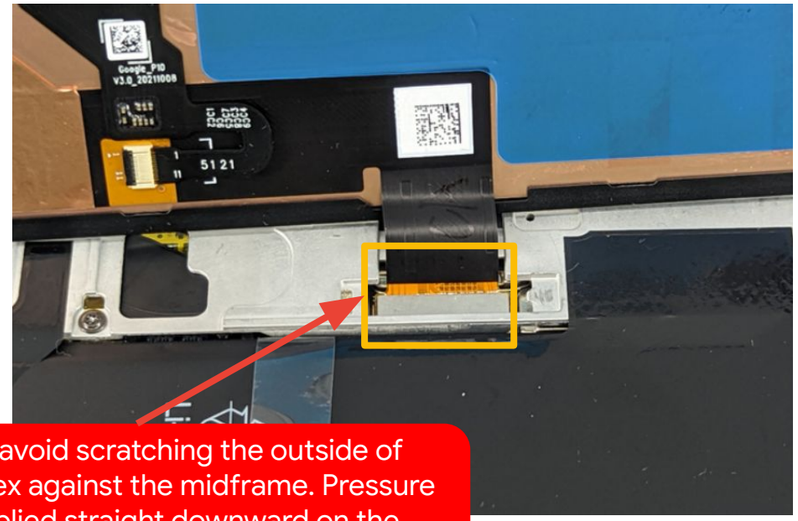
When applying IPA & AP111 primer to the CG module, pay attention to avoid touching copper and sponge areas (as shown above red figure). Once **Primer** has been applied, complete assembly in 25 mins.

Aligning display module

- Before attaching the **Display module**, visually check the spring.
- Use the **Universal adsorption bulb** to prop up the **Display module.**

The step to attach the display, **Don't** damage/deform the spring.

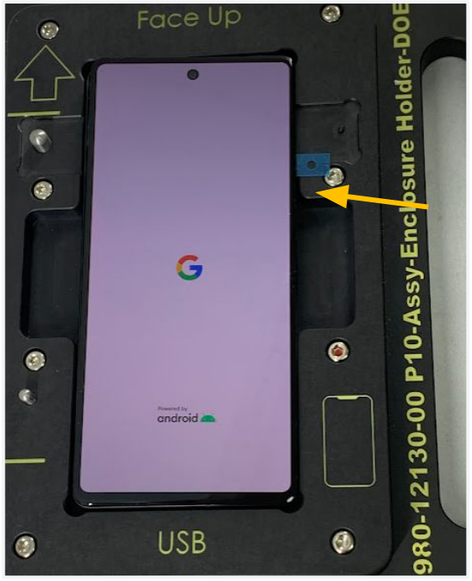
Connect display module



- Connect the **Display flex** to the **Logic board**, applying even pressure across the connector to ensure it is fully engaged.

Avoid to damage the Spring (especially watch out Display encloses to Enclosure Location : **Top Speaker spring/Mid-frame spring A/MLB spring A/Bottom Speaker spring C/MLB spring B**).

Check display



- Remove the **Universal adsorption bulb** and **display protective film**.
- Power on to check if the device is working properly, Power off device after checking.

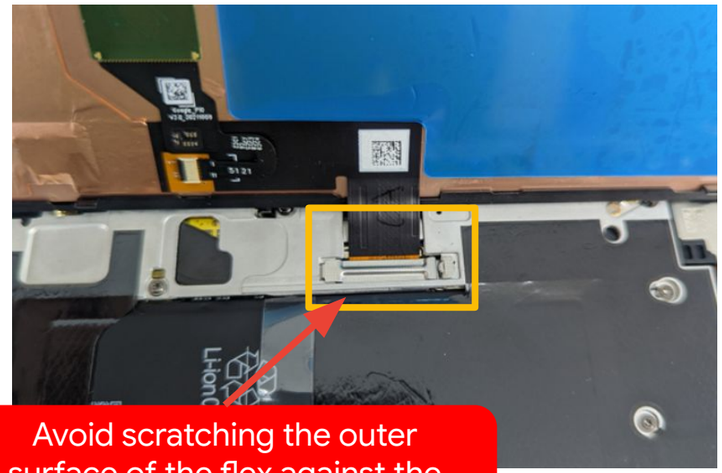
Don't touch the screen until it turns to shipping mode since touch panel self calibration is in progress. Follow the instruction below:
Calibration Note

Install UDFPS Calibration

- Reboot device into the **Fastboot mode.**
- Connect the device with USB-C cable to the computer, and visit pixelrepair.withgoogle.com

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

Attach display cowling

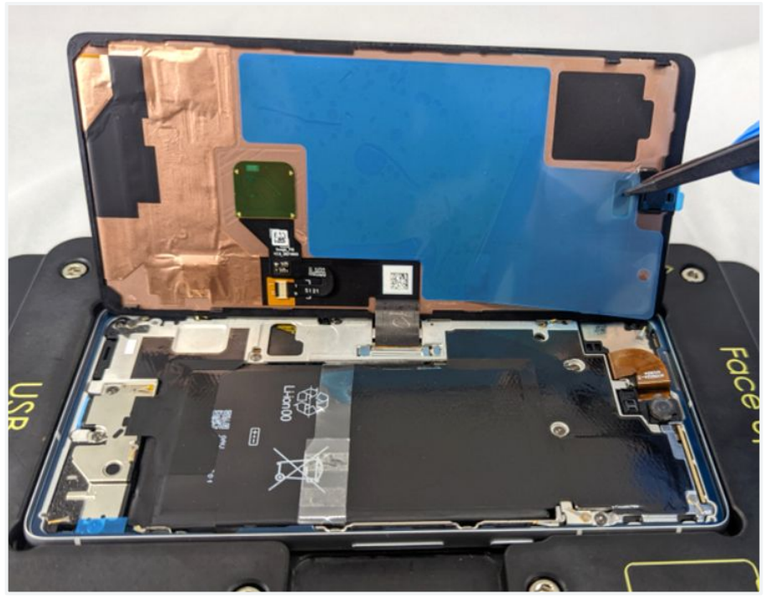


- Attach a new **Display cowling** over the connector.

Part: G730-06100-01 (Display cowling)

Make sure the trim snaps Don't contact the adhesive.

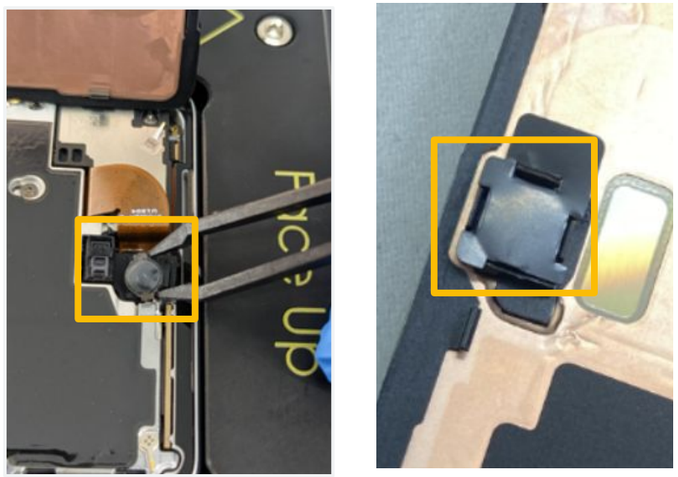
Remove liner



- Use the **Universal adsorption bulb** to lift up the **Display module** and remove the **CG copper protective**.

Part: G806-07713-01 (CG copper protective)
G806-07712-01 (CG copper film)

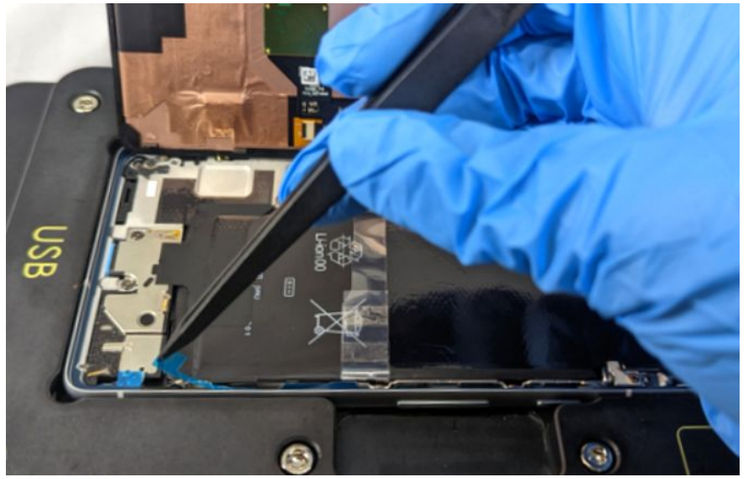
Remove film/cap



- Remove the enclosure **FCAM film / FCAM Cap.**

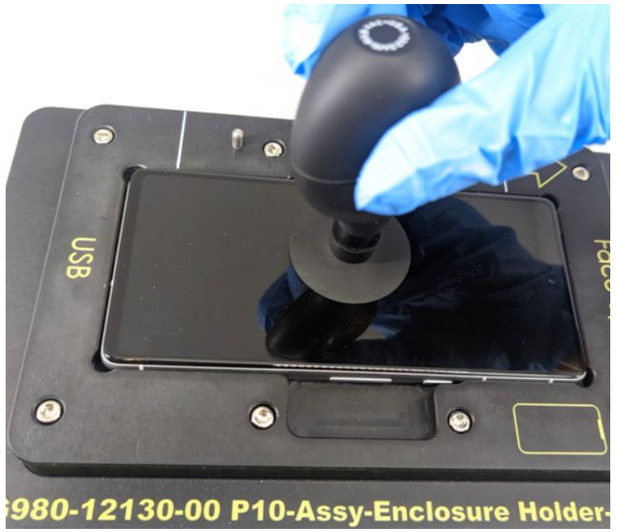
Part: G806-07714-01 (FCAM film)
G852-02360-01 (FCAM Cap)

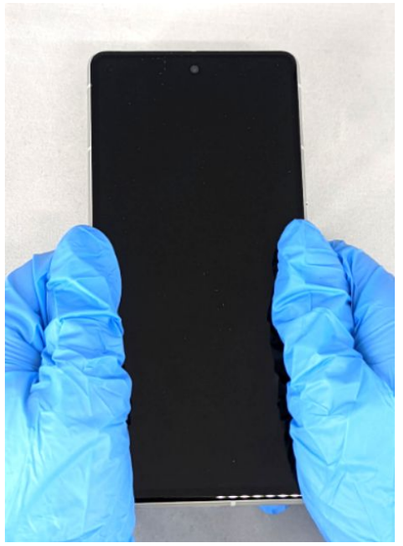
Remove liner



- Use **ESD tweezers** to grab the PSA **liner** and carefully pull it away.

Fix down display

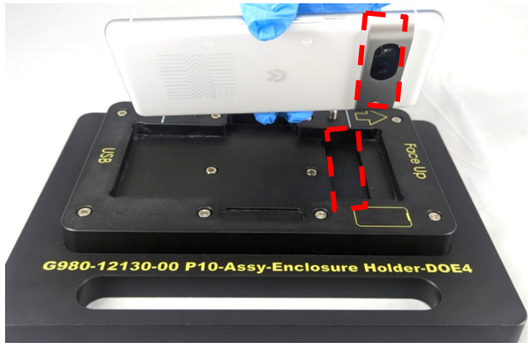




- Align the **Display module** on the **Enclosure vertically**.
- Remove from the **Holder** and press around the display bezel with both hands.

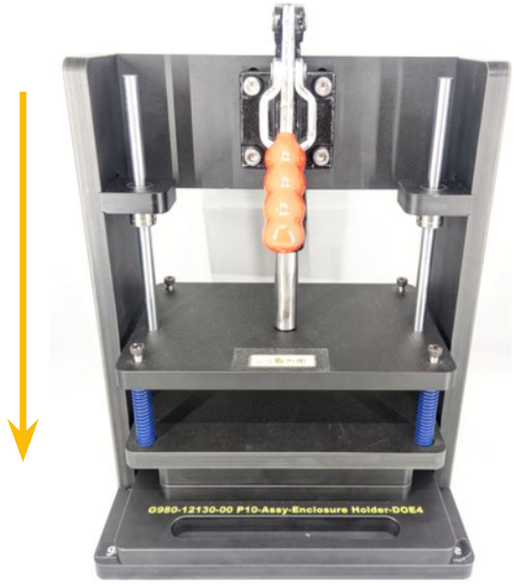
Press the top side middle first, and then follow on 2 long sides and bottom side.

Place in holder



- Place the device in the Pixel 7 **Enclosure holder** and place the **Press cover** on top.

Place in holder



- Place it in the **Universal press fixture** and press the handle down for 30 seconds.
- Push back the handle to the original position and remove the device.

Pinch point. Keeps hands clear during operation.

Disassembly instructions

Graphite sheets

Graphite sheets replacement

Prerequisites

Remove the following items first:

- Display module

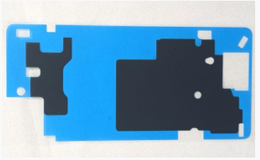
Tools

Pixel 7 Enclosure Holder
ESD Tweezers
Universal scraper

Parts

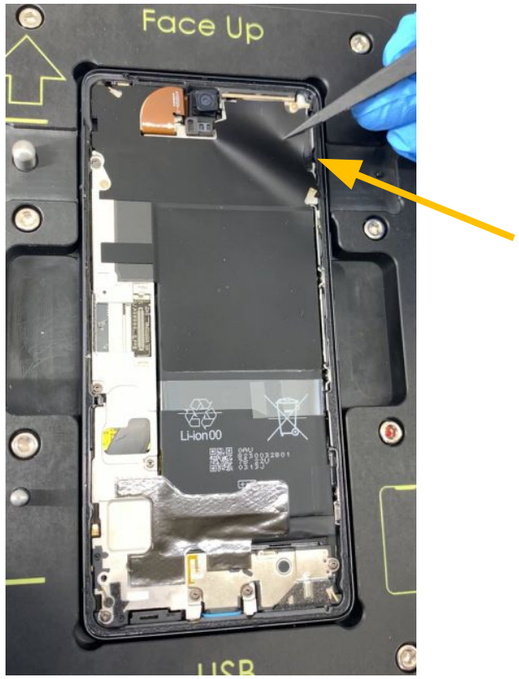
G804-00936-01
Uber GROMMET

G864-00539-01
Graphite sheet



Caution!
Review all **safety precautions** before beginning work.

Uber Grommet removal

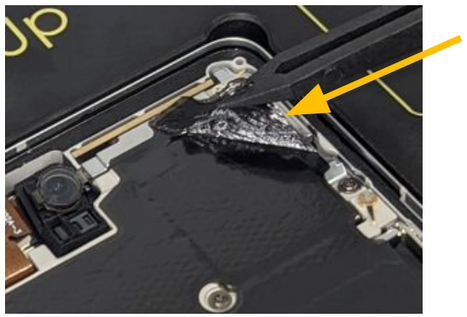


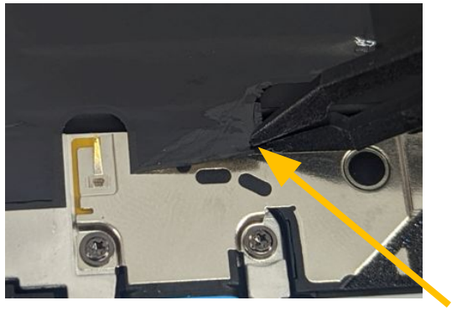
- Use **ESD tweezers** to lift the **Uber GROMMET** and then remove slowly by hand.

Part: G804-00936-01 (Uber GROMMET)

Be careful not to puncture the battery while using the tweezers.
Don't reuse the part.

Graphite removal





- Use **ESD tweezers** to lift the **2 Graphite sheets** and then remove slowly by hand.

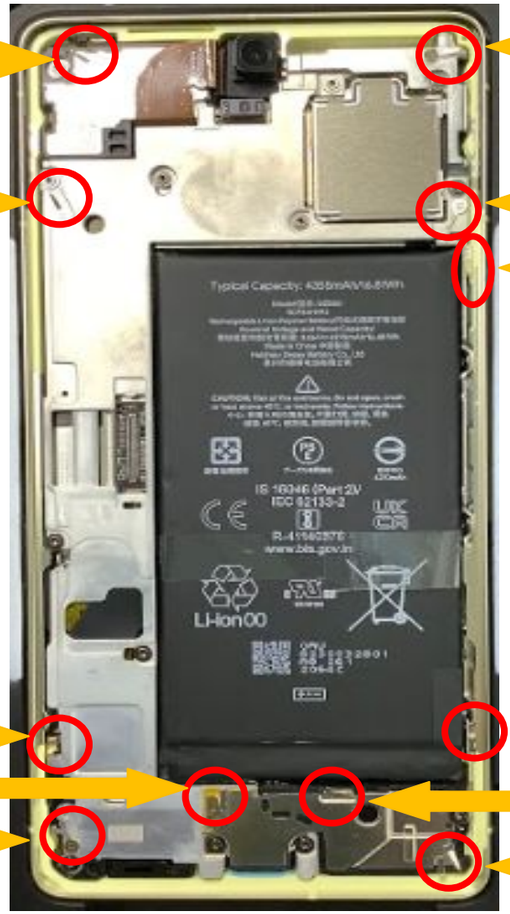
Part: G864-00539-01 (Graphite sheet)

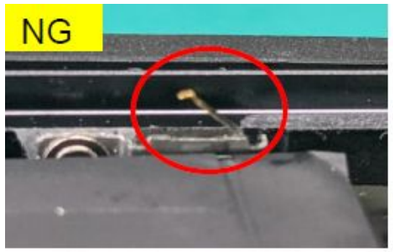
Be careful not to puncture the battery while using the tweezers.
Don't reuse the part.

Assembly instructions

Graphite sheets

Check the spring

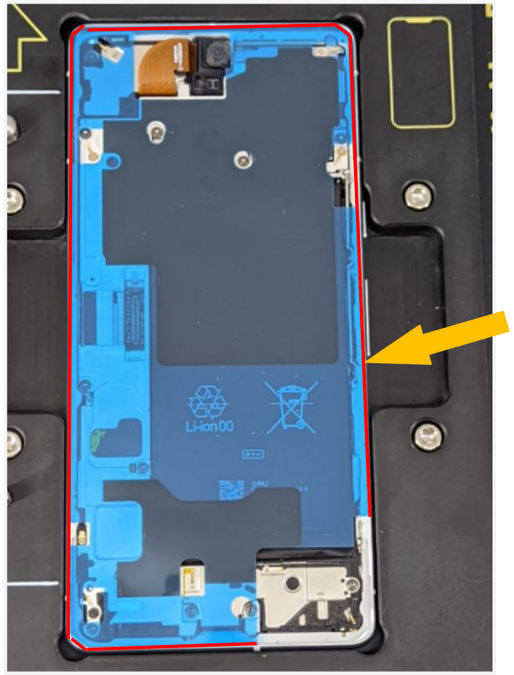




- Visually check the spring before attaching the graphite.

Caution!
Review all safety precautions before beginning work.

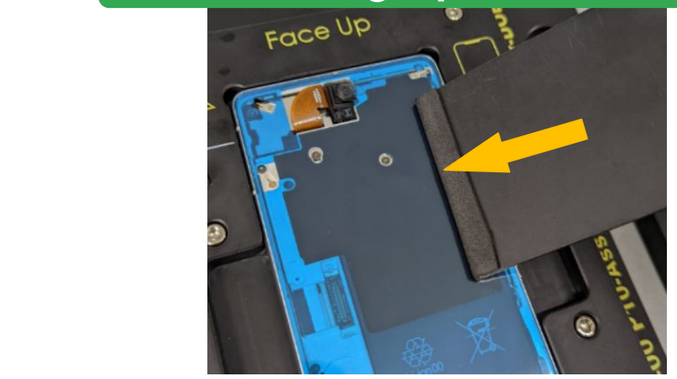
Apply graphite sheet

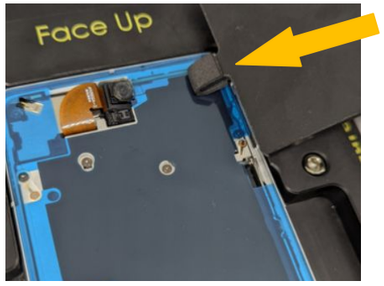


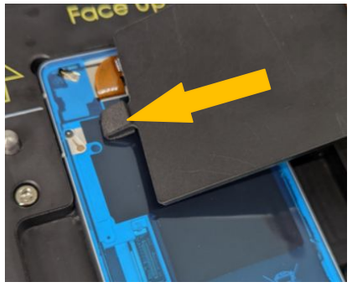
- With the device in the Pixel 7 **Enclosure holder**, place the **Graphite sheet**, align by the outline of **Enclosure**.

Part: G864-00539-01 (Graphite sheet)

Adhere graphite sheet



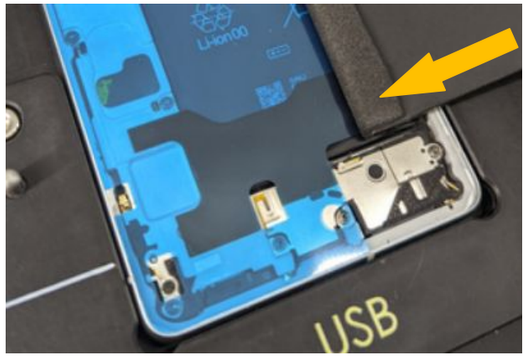


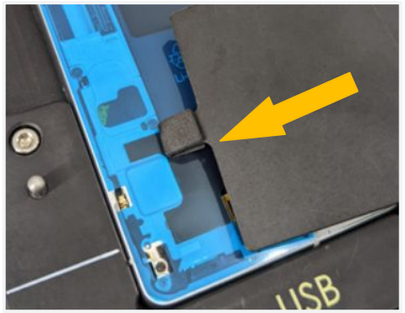


- Use the **Universal Scraper** and roll the **top side of graphite sheet**. Ensure there are no air pockets. Use the smaller scraper where needed.
- Continue to roll over the remaining sheet.

Select the appropriate head of the Universal Scraper to roll the sheet.
Avoid rolling over the gaskets/springs, as it may deform them.

Adhere graphite sheet

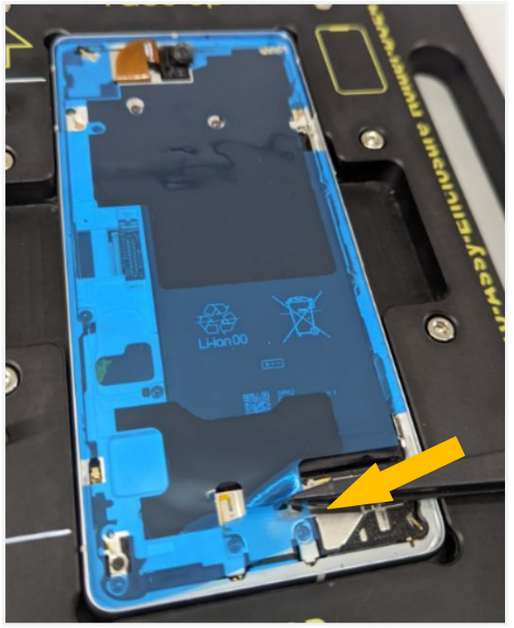




- Use the **Universal Scraper** and roll the **bottom side of graphite sheet**. Ensure there are no air pockets. Use the smaller scraper where needed.
- Continue to roll over the remaining sheet.

Select the appropriate head of the Universal Scraper to roll the sheet. Avoid rolling over the gaskets/springs, as it may deform them.

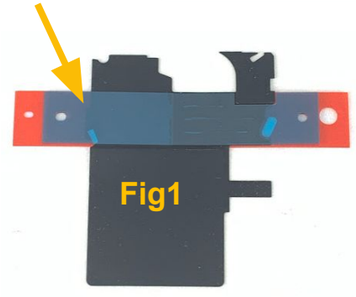
Adhere graphite sheet

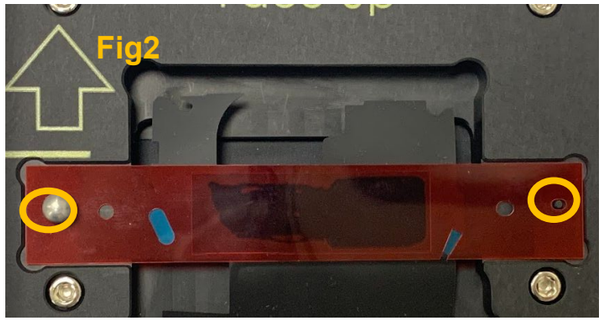


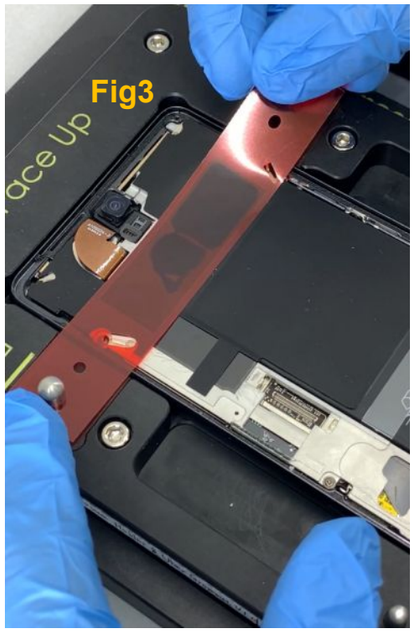
- Remove the release liner with the **ESD tweezers**.

Avoid rolling over the gaskets/springs, as it may deform them.

Adhere Uber Grommet







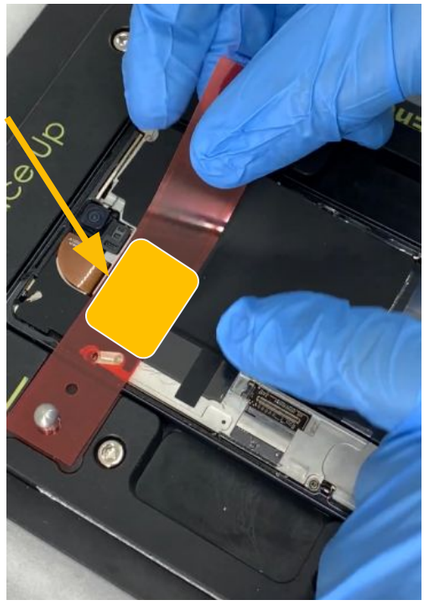
- Remove the blue liner of **Uber Grommet. (Fig1)**
- Place the **Uber GROMMET**, align by the 2 positioning posts **(Fig2)** of Pixel 7 **Enclosure holder. (Fig3)**

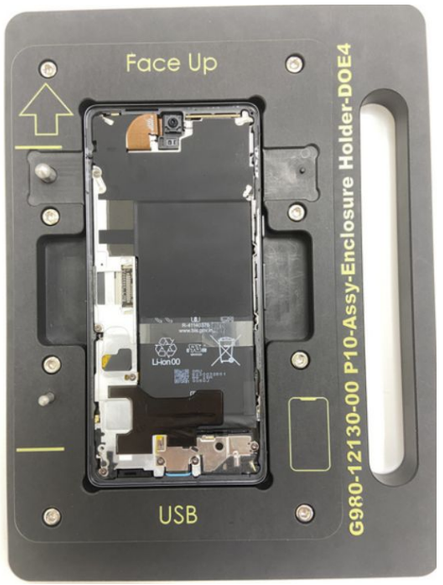
Part: G804-00936-01 (Uber GROMMET)

Avoid to touch the gaskets/springs, as it may deform them.

Adhere Uber Grommet

Press here to activate the PSA





- Slightly press the location as the left figure.
- Remove the red liner of **Uber GROMMET**.
- Finished Grommet should be like the right figure.

Avoid to touch the gaskets/springs, as it may deform them.

Disassembly instructions

Bottom speaker

Bottom speaker replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw cover
Torx plus 3IP screwdriver
Universal Disassembly ESD stick

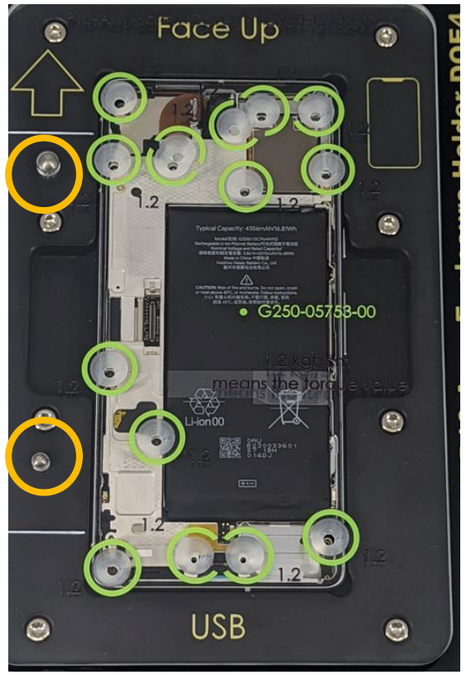
Parts

G949-00339-01
Bottom speaker

G250-05753-00
Screw * 3

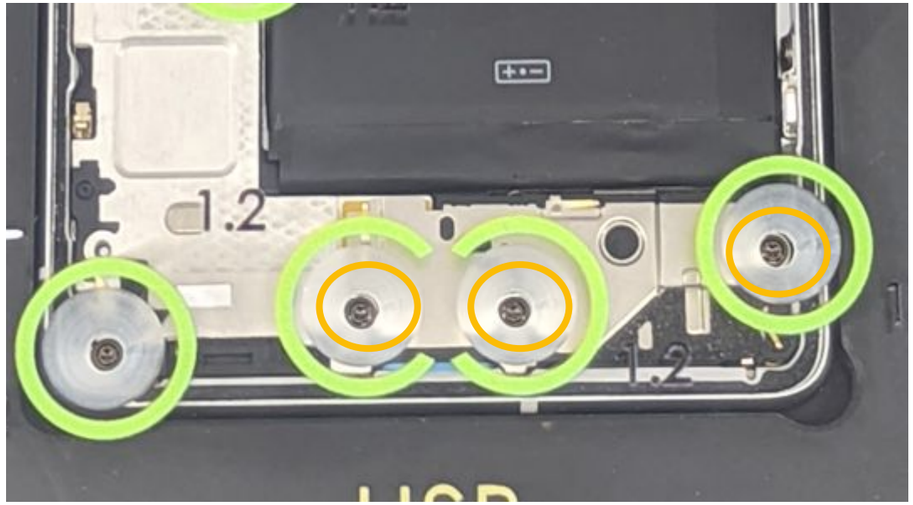
Caution!
Review all **safety precautions** before beginning work.

Screw cover



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure Holder**. The 2 alignment pins are to avoid removing the wrong screws.

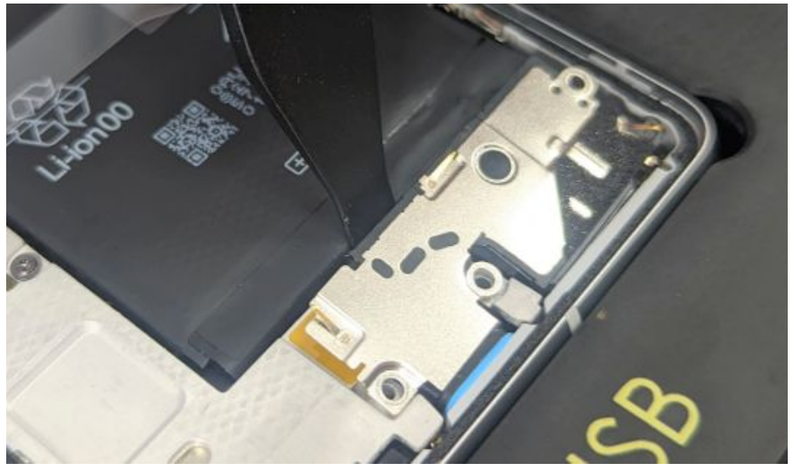
Remove Screws



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Remove the **three Bottom speaker screws** with a **Torx Plus 3IP screwdriver**, remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)
Don't reuse the part

Remove Bottom speaker



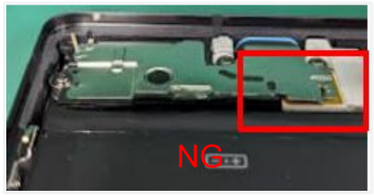
- Remove the **Bottom speaker** with an **ESD tweezers.**

Part: G949-00339-01 (Bottom speaker)

Assembly instructions

Bottom speaker

Attach bottom Speaker

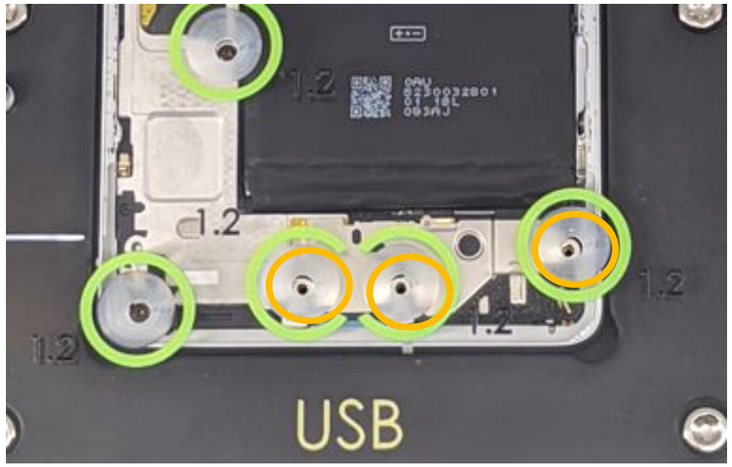


- Before assembling, check whether the foam is off, or broken.
- Insert the **Bottom speaker** at an angle to slot into the **Enclosure**.

Part: G949-00339-01 (Bottom speaker)

Make sure the speaker goes under the enclosure rim.

Fasten the screw



- Place Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder.**
- Fasten the **bottom speaker screws** with a **Torx Plus (3IP),** take out the Pixel 7 **Screw cover**.

Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (screw)

Caution!
Review all safety precautions before beginning work.

Disassembly instructions

Mid-frame

Mid-frame replacement

Prerequisites

Remove the following items first:

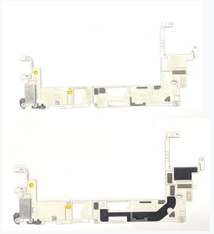
- Display module
- Graphite sheets
- Bottom Speaker

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw Cover
Torx plus 3IP screwdriver
ESD tweezers
Universal Disassembly ESD stick

Parts

G949-00335-01
Mid-frame_mmWave
G949-00336-01
Mid-frame_Sub-6



G250-05753-00
Screws * 8

G864-00492-01
SOC thermal pad

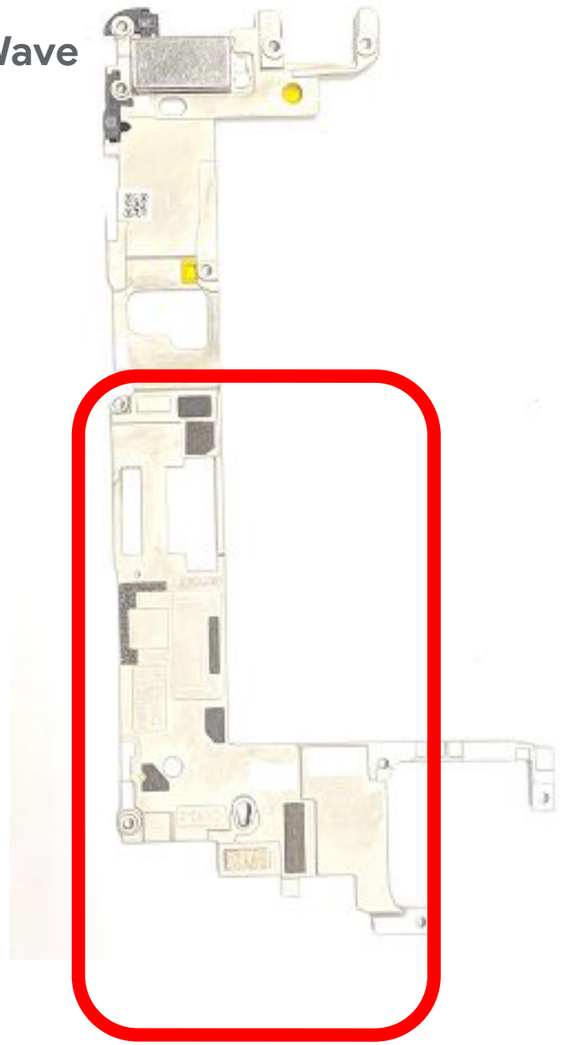
G806-06979-03
P-sensor grommet

G806-06607-05 Left
Pad, Midframe

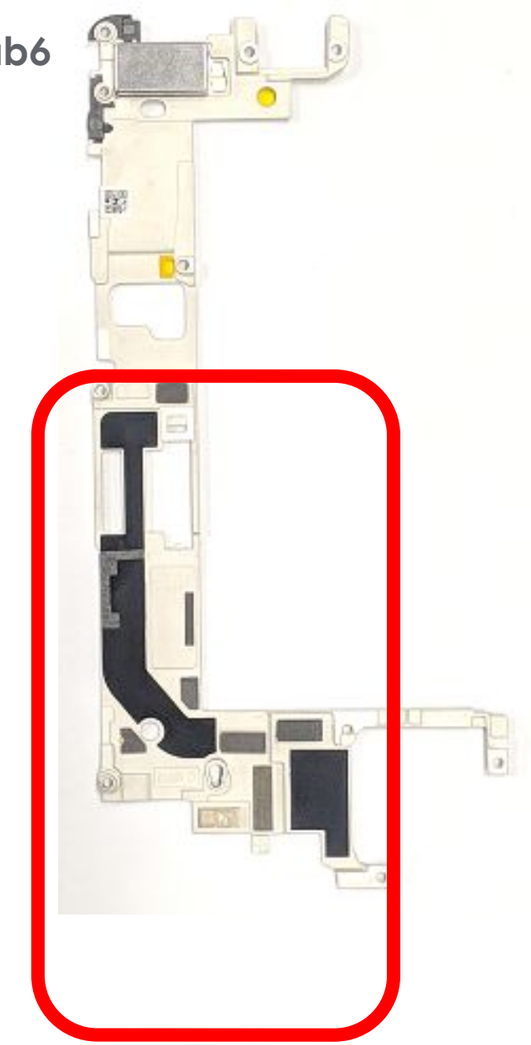
Caution!
Review all **safety precautions** before beginning work.

Mid-frame difference

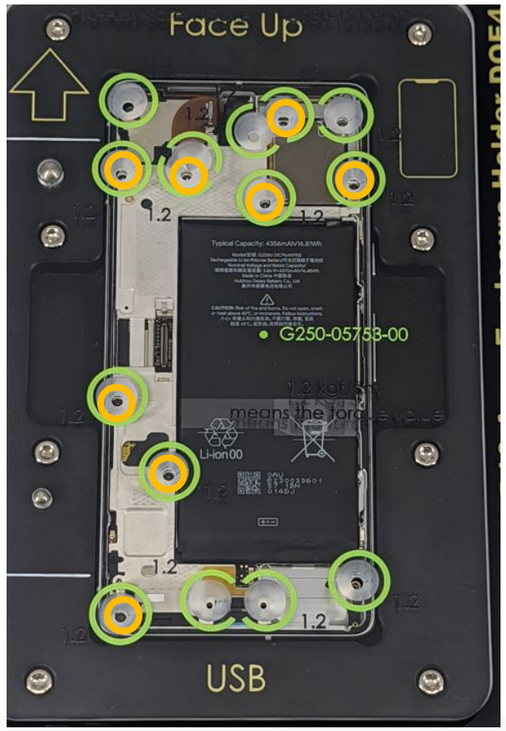
mmWave



Sub6



Remove screws

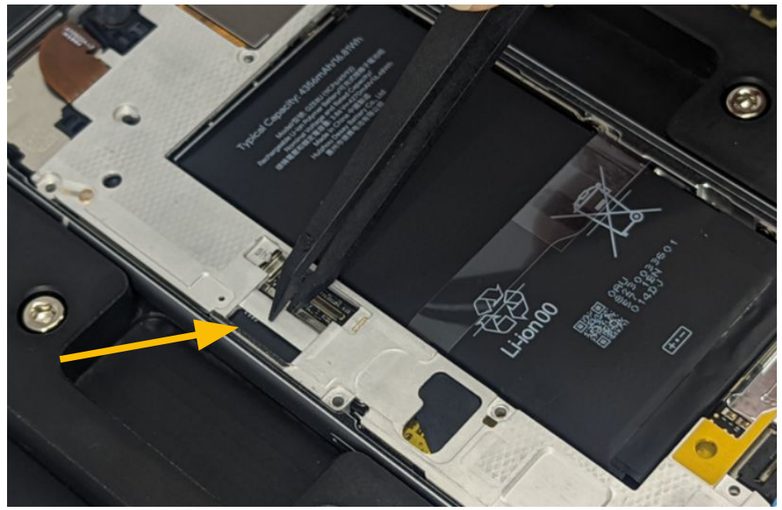


- Remove **8** Mid-frame **Screws** with a **Torx Plus 3IP screwdriver**.
- Then remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 *8 (Screw)

Be careful when using the screwdriver, Don't accidentally damage the adjacent battery.
Incorrect use of the screw driver could cause injury to you or third persons or damage to the battery and/or the product. Don't reuse the part.

Remove mid-frame



- Remove **Mid-frame** with **ESD tweezers** by gripping it in the center, as shown above.

Part: G949-00335-01 (Mid-frame_mmWave)
Part: G949-00336-01 (Mid-frame_Sub-6)

Assembly instructions

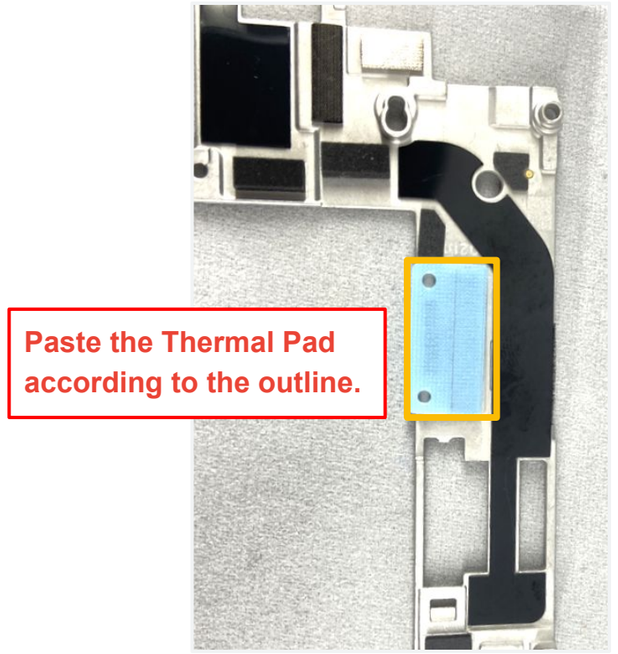
Mid-frame

Re-using Mid-frame

- **Thermal paste** may be left on the **Mid-frame**.
- Undamaged **thermal pads** can be reused, damaged thermal pads should be replaced.

Part: G864-00492-01 (SOC thermal pad)

Apply thermal pads



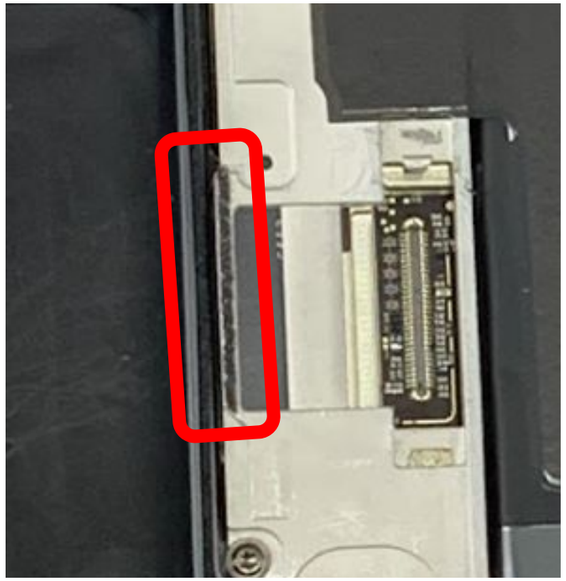
- Align the **thermal pad** on the **Mid-frame**.

Part: G864-00492-01 (SOC thermal pad)

This step is for new and reclaim Mid-frame.

Caution!
Review all safety precautions before beginning work.

Check the Pad



Visually check the **Left Pad, Midframe** on the **Mid-frame**.

- If there's any damage, reclaim and replace a new one like picture.
- If stay intact like the picture, proceed with next step.

Part: G806-06607-05 (Left Pad, Midframe)

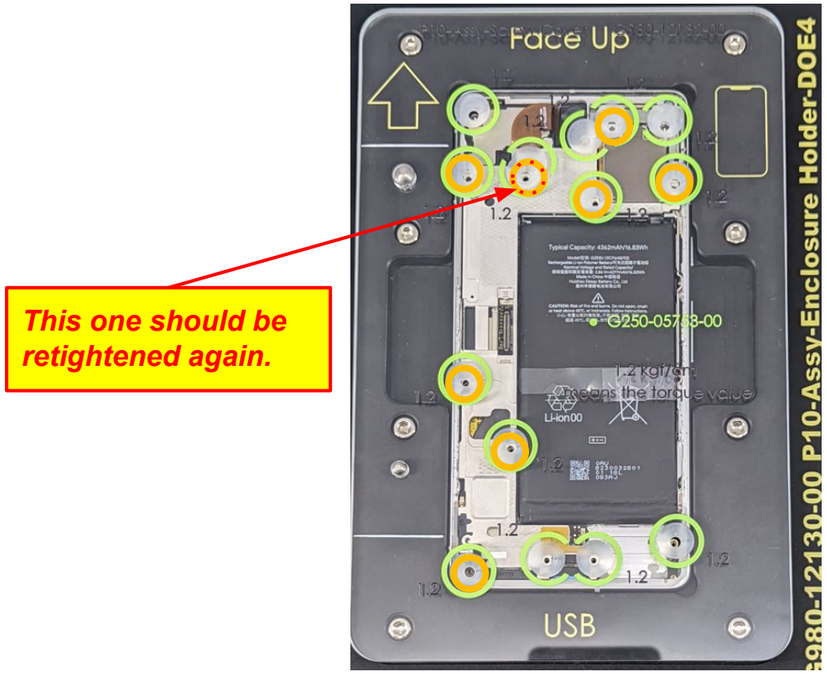
The new Midframe has the pad.

Fit the Mid-frame

- Assemble the **Mid-frame** according to the positioning posts on the **Logic board**.

Part: G949-00335-01 (Mid-frame_mmWave)
Part: G949-00336-01 (Mid-frame_Sub-6)

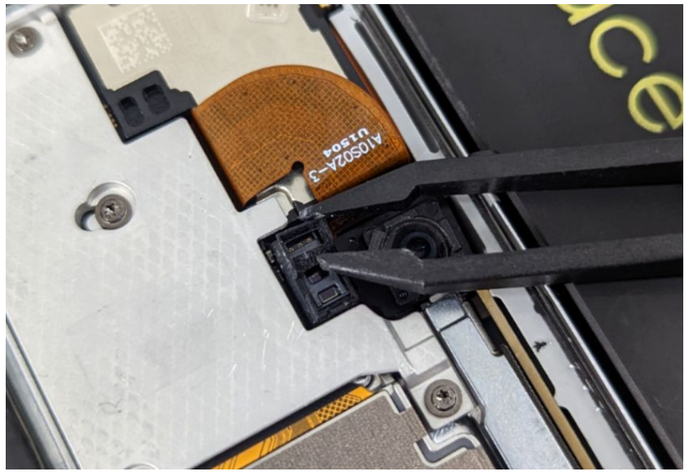
Fasten the Mid-frame



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure Holder.**
- Tighten the **8 Screws** with a **Torx Plus 3IP screwdriver**, take out the Pixel 7 **Screw cover**. *Torque force : 1.2 ± 0.03kgf-cm*
- Retighten **the screw only, as figure shown.** *Torque force : 1.2 ± 0.03kgf-cm*
  Part: G250-05753-00 *8 (Screw)

Be careful when using the screwdriver, Don't accidentally damage the adjacent battery.
Incorrect use of the screw driver could cause injury to you or third persons or damage to the battery and/or the product.

Attach P-sensor grommet



Visually check these three components

OK

NG
Wrong side

NG
broken

- Attach **P-sensor grommet** on Logic board. Also check the P-sensor foam should be posted flat.

Part: G806-06979-03 (P-sensor grommet)

Please skip this step, if not removing the P-sensor grommet from the logic board. Using a new groment(not to reuse old one) if replacing new MLB.

Disassembly instructions

mmWave

mmWave replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw Cover
Torx plus 3IP screwdriver
ESD tweezers
Universal Disassembly ESD stick
Universal Fish line tool

Parts

G949-00337-01
mmWave flex

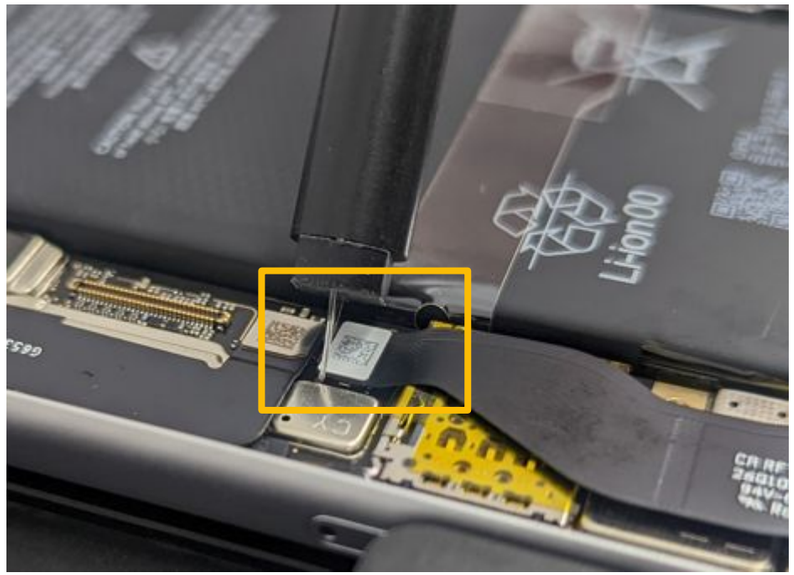
G730-06089-10
bracket mmWave
G730-06088-10
bracket sub-6

G250-05753-00
Screw

G864-00494-01
mmWave thermal pad

Caution!
Review all **safety precautions** before beginning work.

Disconnect battery

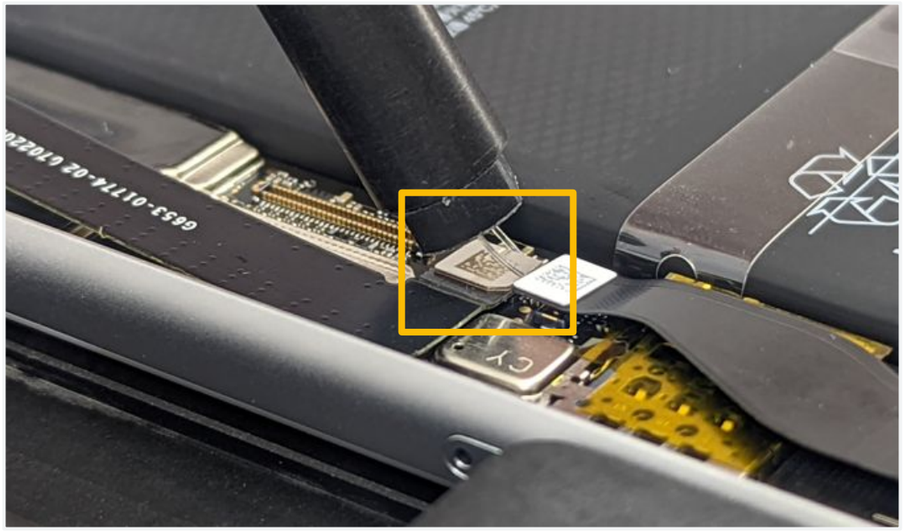


- Loosen the battery connector and disconnect the **Battery** from the **Logic board** with a **Universal Fish line tool**.

Using the **Universal Fish line tool** helps avoid damaging components.

Be careful when using the screwdriver, Don't accidentally damage the adjacent battery.
Incorrect use of the screw driver could cause injury to you or third persons or damage to the battery and/or the product.

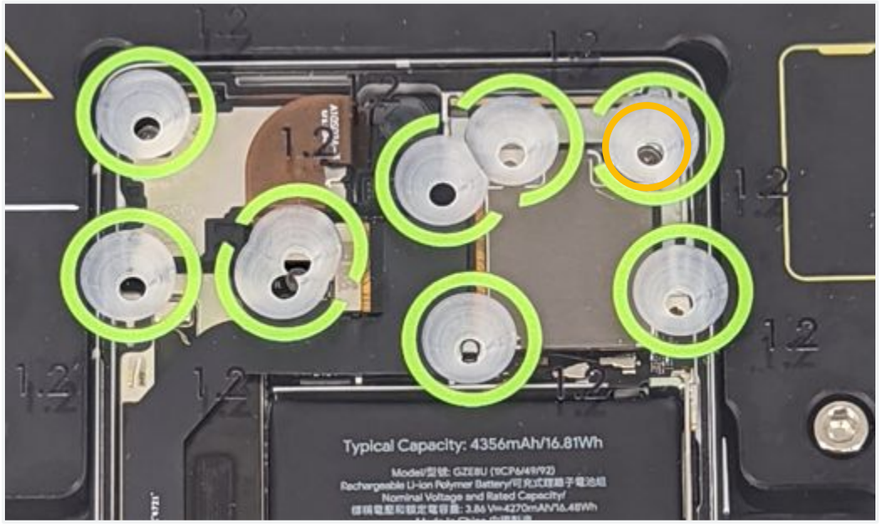
Disconnect 5G



- Loosen the **mmWave connector** and disconnect from the **Logic board** with a **Universal Fish line tool**.

Using the **Universal Fish line tool** avoids damage the components.
This step is only for mmWave Sku.

Remove Screws

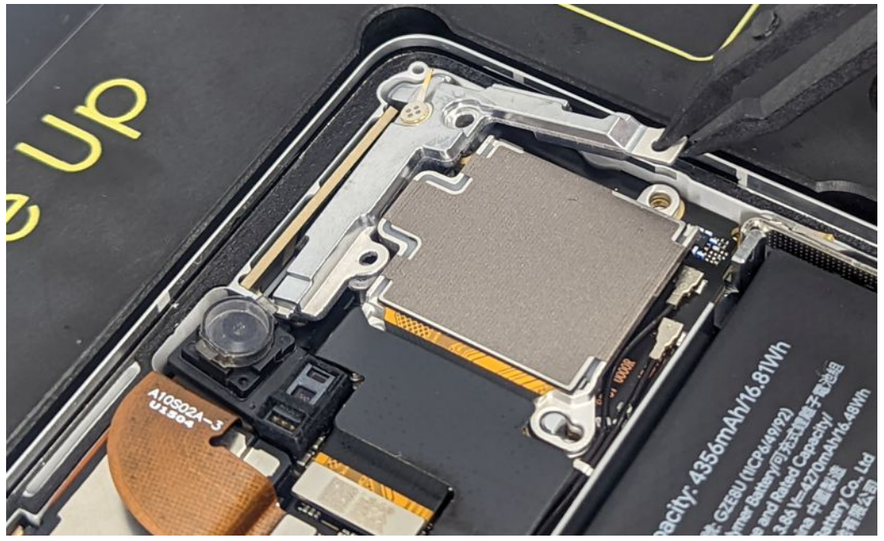


- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Remove the **mmWave bracket** screw with a **Torx Plus 3IP screwdriver**, then remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)

Don't reuse the part

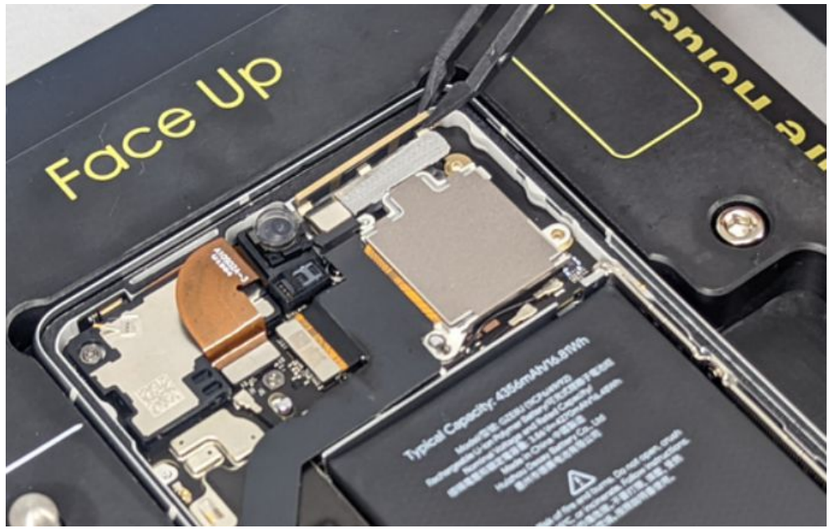
Remove bracket



- Remove the **bracket** with an **ESD Tweezers.**

Part: G730-06089-10 (bracket mmWave)
Part: G730-06088-10 (bracket sub-6)

Remove mmWave flex



- Remove the **mmWave module**.

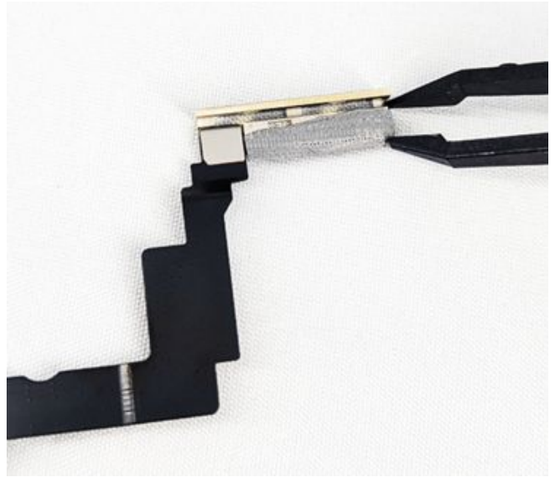
Part: G949-00337-01 (mmWave module)

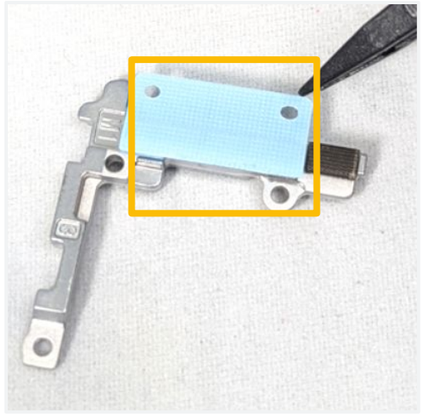
This step is only for mmWave Sku.

Assembly instructions

mmWave

Re-using mmWave





- Clean residue TIM from mmWave Bracket by the **Universal Disassembly ESD stick**.
- Align the TIM thermal paste to the mmWave bracket by the outline.

  Part: G949-00337-01 (mmWave module)
  G864-00494-01 (mmWave thermal pad)

This step is only for mmWave Sku.

Assemble mmWave

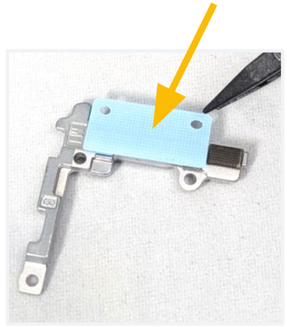
- Insert **mmWave Assy module** into the **Enclosure**.

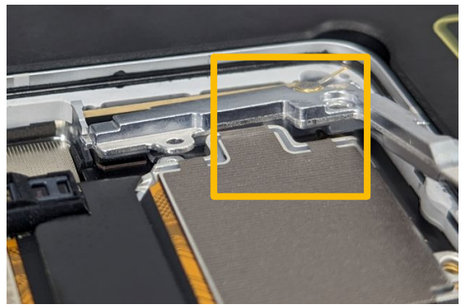
  Part: G949-00337-01 (mmWave module)

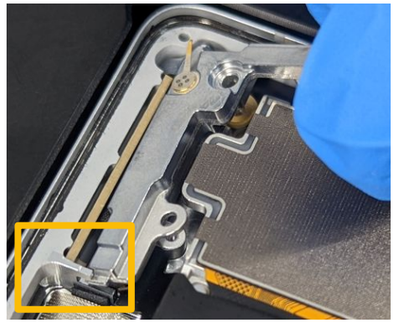
If the buckle is not fastened, Connect the flex to the mmWave module.

Caution!
Review all safety precautions before beginning work.

Assemble bracket



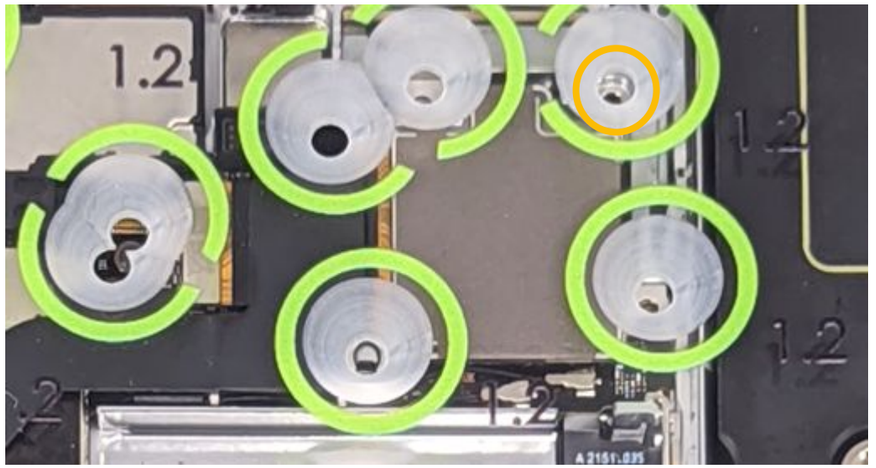




- Tear off the blue release liner before assembling the bracket.
- Insert the **bracket** at an angle into the **Enclosure**.

Part: G730-06089-10 (bracket mmWave)
Part: G730-06088-10 (bracket sub-6)

Fasten bracket

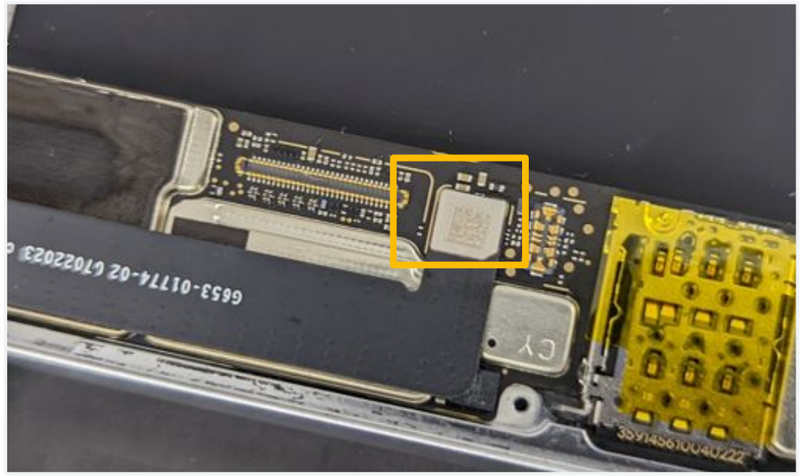


- Place Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder.**
- Fasten the **mmWave bracket screw** with a **Torx Plus (3IP),** take out the Pixel 7 **Screw cover**.

Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (screw)

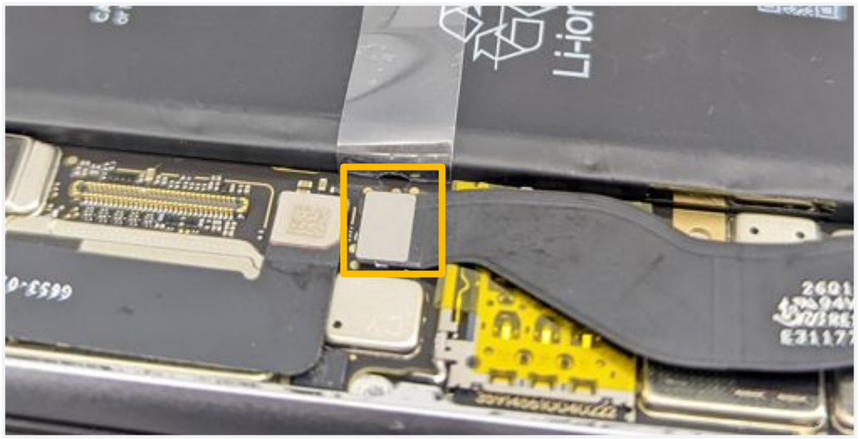
Connect to Logic board



- Connect **mmWave flex** to the **Logic board**.

Check every connector is attached fully to the **Logic board**.
This step is only for mmWave Sku.

Connect to Logic board



- Connect **battery flex** to the **Logic board**.

Check every connector is attached fully to the **Logic board**.

Disassembly instructions

Front camera

Front camera replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame

Tools

Pixel 7 Enclosure Holder
Universal Fish line tool
Ionizing air fan

Parts

G949-00332-01
Front camera

Caution!
Review all **safety precautions** before beginning work.

Loosen the connector

- Loosen the **Front camera** connector from the **Logic board** with the **Universal Fish line tool**.

Part: G949-00332-01 (Front camera)

Using the **Universal Fish line tool** avoids damage the components.

Assembly instructions

Front camera

Attach front camera

- Pick up the **Front camera** with **ESD tweezers**.
- Attach the **Front camera** with the connector to the **Logic board**.

Part: G949-00332-01 (Front camera)

Check every connector is attached fully to the **Logic board**.

Caution!
Review all safety precautions before beginning work.

Disassembly instructions

Top speaker

Top speaker replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame
- Front camera

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw Cover
Torx plus 3IP screwdriver
Universal Disassembly ESD stick

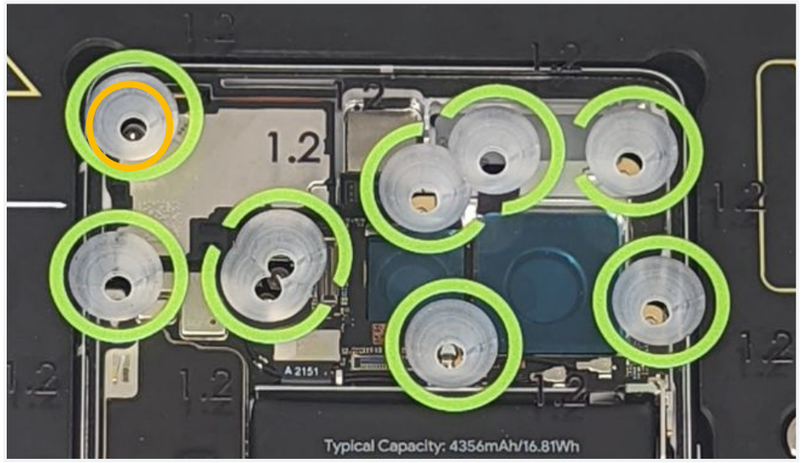
Parts

G863-00407-04
Top Speaker

G250-05753-00
Screws

Caution!
Review all **safety precautions** before beginning work.

Remove screws



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Remove the **Top speaker screws** with a **Torx Plus 3IP screwdriver**, then remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)

Don't reuse the part

Remove Top Speaker

- Remove the **Top speaker** with an **Universal Disassembly ESD stick**.

Part: G863-00407-04 (Top speaker)

Assembly instructions

Top speaker

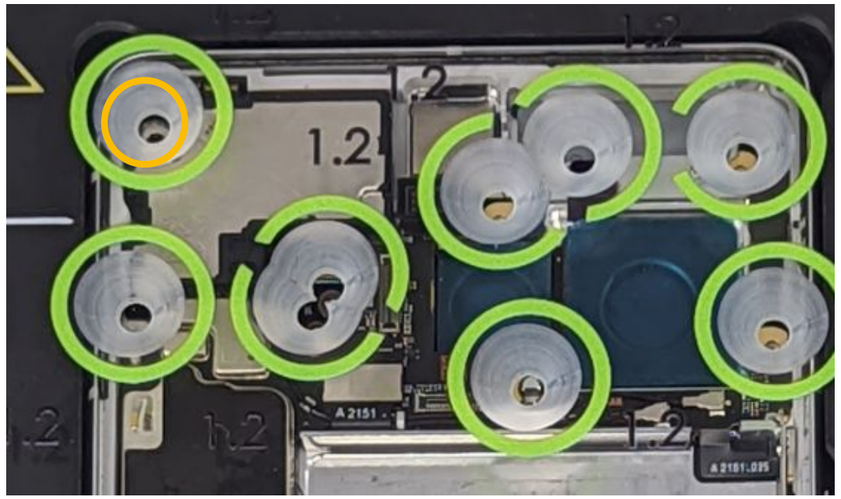
Insert top speaker

- Check the spring if it's deformed. **(Fig1)**
- Insert it into the **Top speaker** slot on the **Enclosure** at an angle of about 15°, making sure to fit it completely. **(Fig2)**
- Press it accordingly. **(Fig3)**

Part: G863-00407-04 (Top speaker)

Make sure the speaker goes under the enclosure rim.

Fasten top speaker

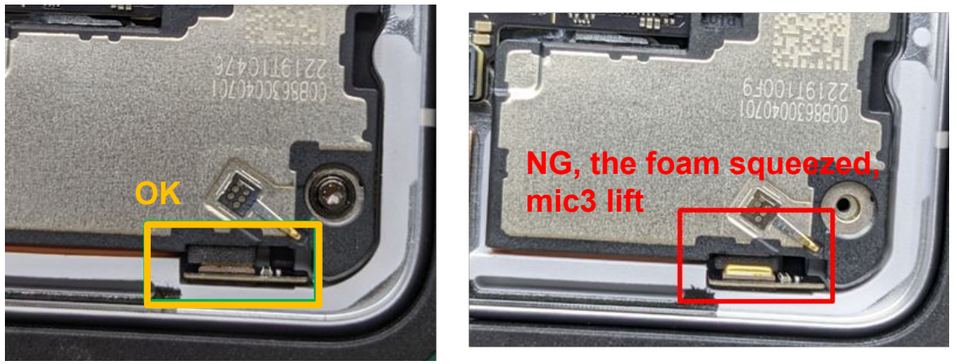


- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Tighten the **Top speaker screw** with a **Torx Plus 3IP screwdriver**, then remove the Pixel 7 **Screw cover.**
  Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (Screw)

Caution!
Review all safety precautions before beginning work.

Check top speaker



- Check the foam status after assembling the Top Speaker.

Disassembly instructions

Rear camera

Rear camera replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame
- mmWave

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw Cover
Torx plus 3IP screwdriver
ESD tweezers
Universal Disassembly ESD stick
Universal Fish line tool
Ionizing air fan

Caution!
Review all **safety precautions** before beginning work.

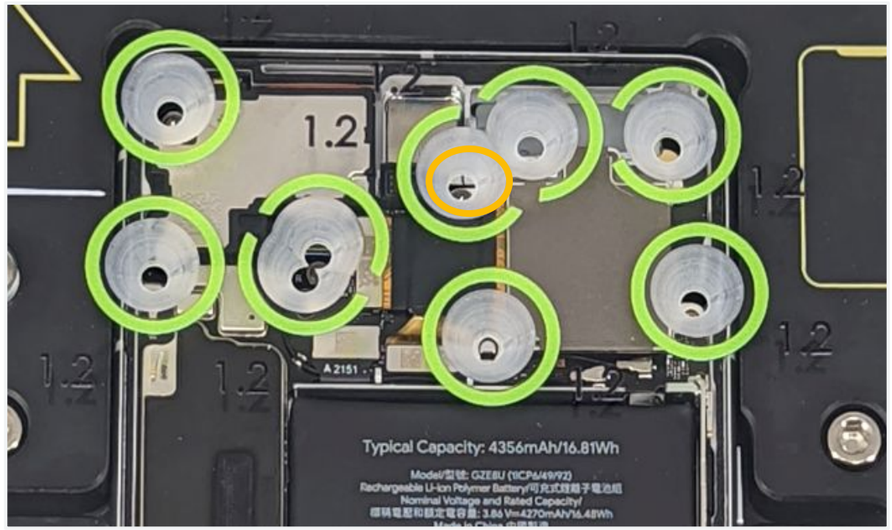
Rear camera replacement- Cont.

Parts

G949-00334-01 Rear camera		852-02352-01 RCAM UW Cap	
G949-00333-01 Rear camera UW		G806-07715-01 RCAM film UW	
G250-05753-00 Screw		G806-07716-01 RCAM film	
G852-02351-01 RCAM Cap			

Caution!
Review all **safety precautions** before beginning work.

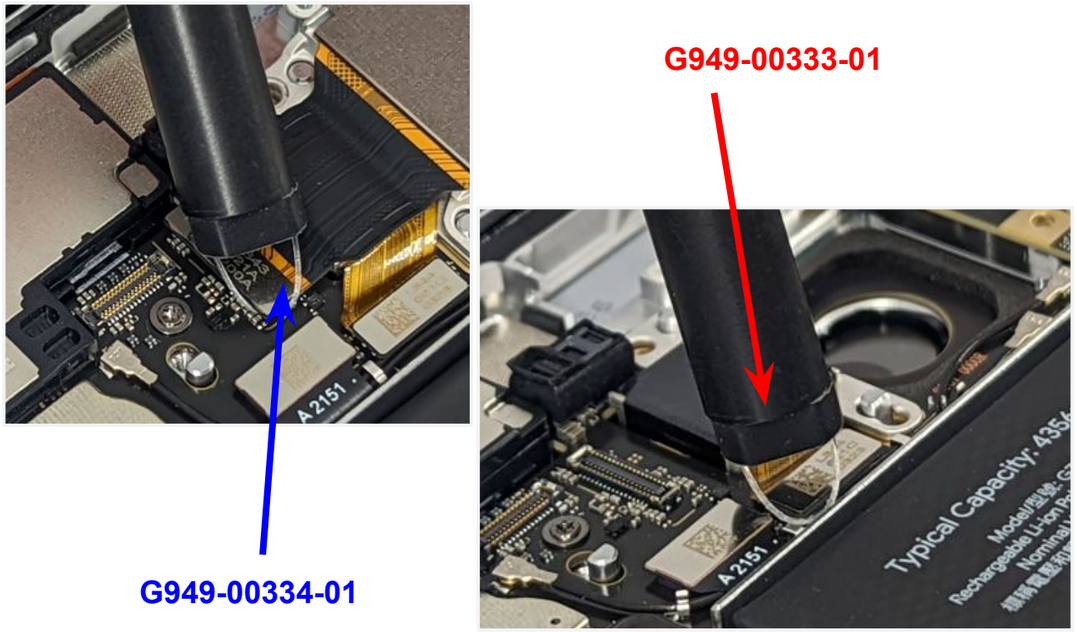
Remove screw



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Remove the **Rear camera screw** with a **Torx Plus 3IP screwdriver**, remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)
Don't reuse the part

Remove rear camera

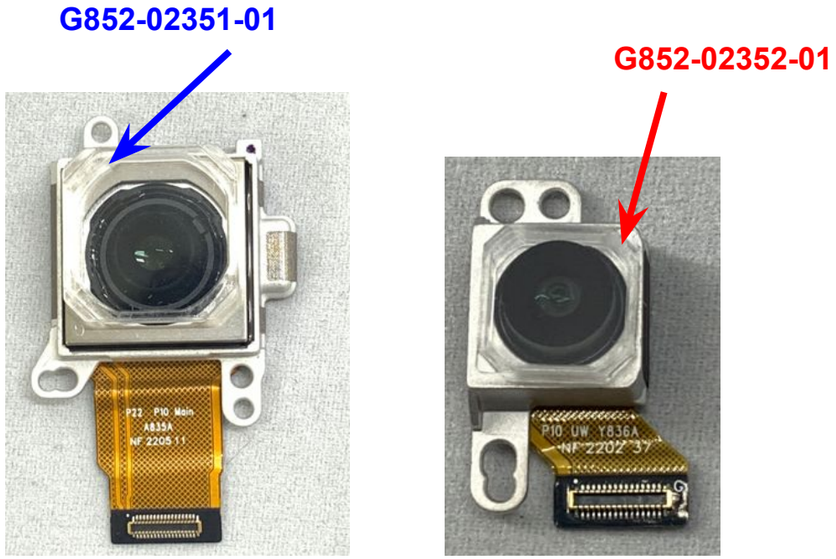


- Loosen 2 **Rear Camera** connectors and disconnect from the **Logic board** with a **Universal Fish line tool**.
- Remove the **2 Rear Camera** with **ESD tweezers**.

Part: G949-00334-01 (Rear Camera), G949-00333-01 (Rear Camera UW)

Using the **Universal Fish line tool** avoids damage the components.

Camera protection

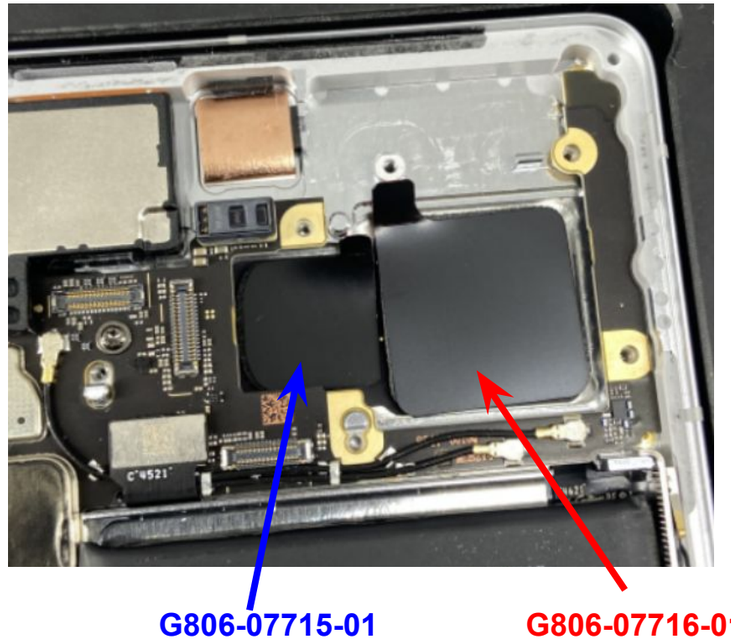


- Apply **two RCAM Caps** over the **Rear camera**.

Part: G852-02351-01 (RCAM Cap)
Part: G852-02352-01 (RCAM UW Cap)

Ensure that the environment is clean for this process.

Enclosure protection



- Cover the **two liners** over the **Enclosure** as the figure.

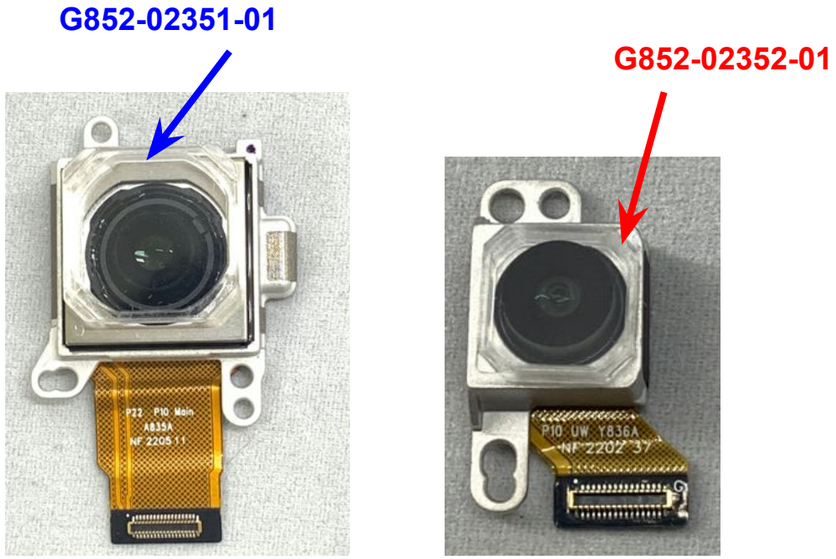
Part: G806-07715-01 (RCAM film UW)
Part: G806-07716-01 (RCAM film)

Ensure that the environment is clean for this process.
Make sure the camera socket is clear from dust and debris.

Assembly instructions

Rear camera

Prepare rear camera

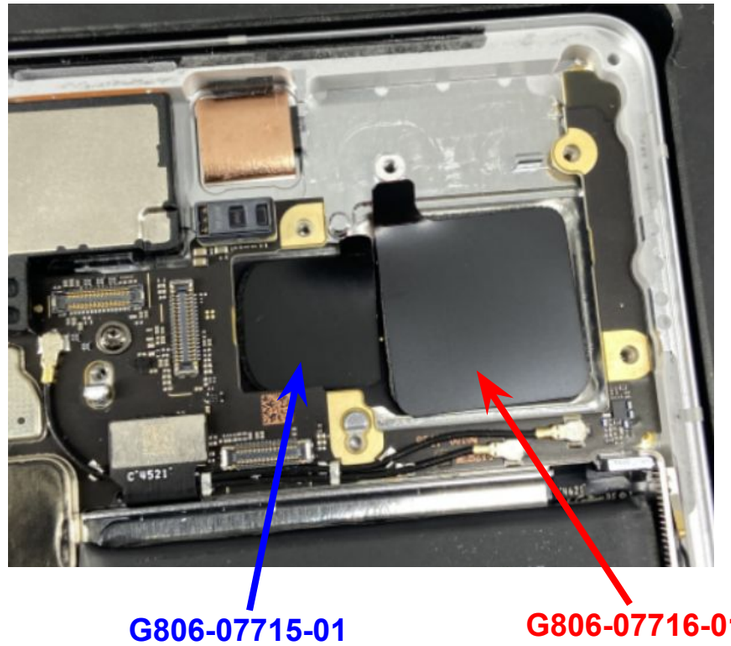


- Remove the **2 protective caps** from the **Rear camera**. Blow it by **ionizing air Fan**.

Part: G852-02351-01 (RCAM Cap)
Part: G852-02352-01 (RCAM UW Cap)

Ensure that the environment is clean for this process.

Remove liner



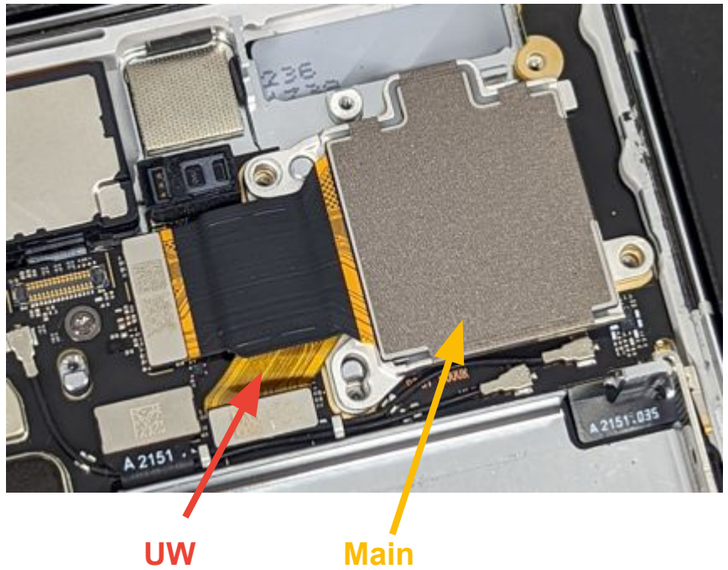
- Remove the **Rear camera liner UW / Rear Camera liner** from the **Enclosure** with **ESD tweezers.** Blow it by **ionizing air Fan**.

Part: G806-07715-01 (RCAM film UW)
Part: G806-07716-01 (RCAM film)

Ensure that the environment is clean for this process.

Caution!
Review all safety precautions before beginning work.

Assemble rear camera

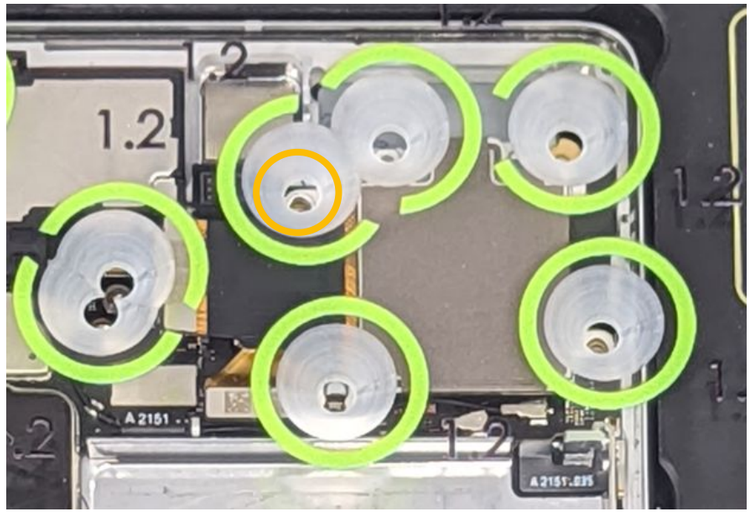


- Place the **UW Rear camera / Rear camera** into position, keeping it aligned with the lenses in the enclosure.

  Part: G949-00334-01 (Rear camera)
  Part: G949-00333-01 (UW Rear camera)

This left flex area cannot be pressed, as the arrow in figure.

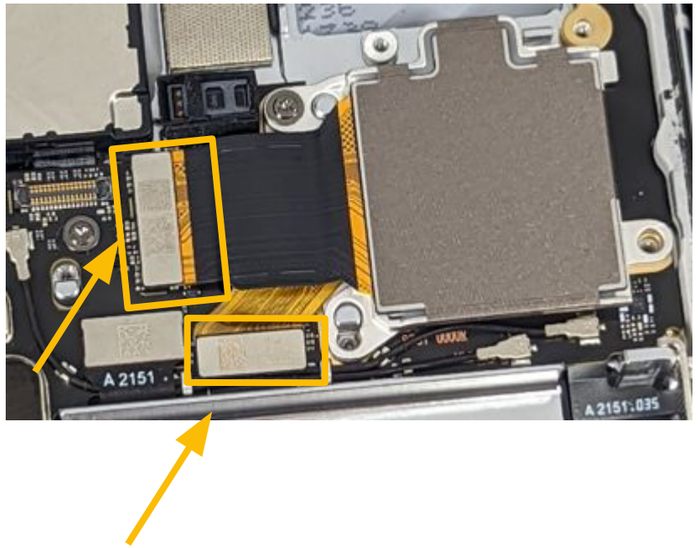
Fasten rear camera



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Tighten **Rear camera screw** with a **Torx Plus 3IP screwdriver,** take out the Pixel 7 **Screw cover**.
  Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (Screw)

Buckle rear camera



- Attach the 2 connectors to the **Logic board**, applying pressure evenly across the connectors to ensure they are fully engaged. Viewing from different angles to assist the alignment.

Check every connector is attached fully to the **Logic board**.

Disassembly instructions

Battery

Battery replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame

Tools

Heat plate
Universal disassembly fixture
Pixel 7 Enclosure Holder
Pixel 7 Battery Press
Universal press fixture
ESD tweezers
Feeler gauge
Universal adsorption bulb
3M AP111 Primer
Table C-Clamp

Parts

G949-00338-01
Battery

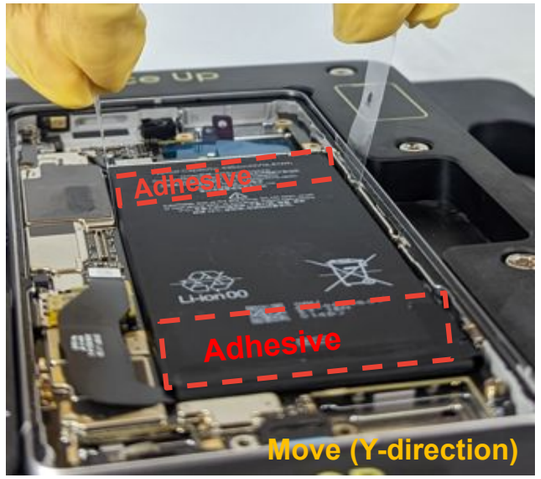
Caution!
Review all **safety precautions** before beginning work.

Lift pull jacket

- Lift the pull jacket using **ESD tweezers**.

Move pull jacket in Y-direction

Fig2



- Wear the finger cot to increase the friction to avoid the pull jacket slip away. Move pull jacket (green dot line, from position 1 to 2) in Y-direction(Fig1) to the top edge of the battery. Since the adhesive area (Fig 2,red dot lines) is smaller on the top side. It may be easier to pull from here.

  Part: G949-00338-01 (Battery)

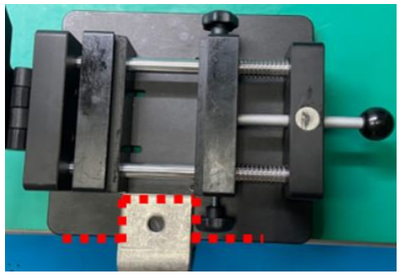
The intent of the pull jacket is to pull on battery for release, **NOT to cut through the adhesive.**

Soften glue

- Place the device flat on the **Heat plate** and set to 158°F/70 ℃ for 10 mins to soften the **Battery** adhesive equally.
- Ensure the Rear camera area is not touching the Heat plate.

Heating plate is a Hot Surface. Use caution as it could cause burns.

Clamp fixture

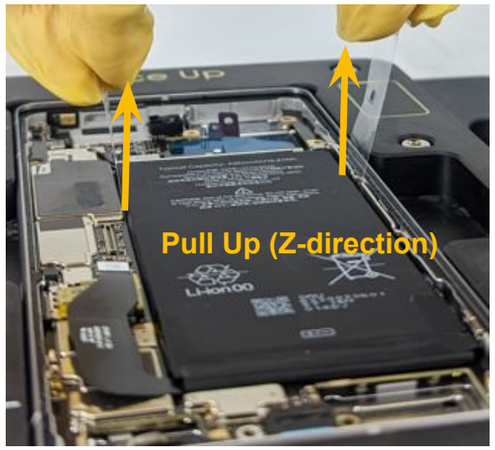


- Place the **Universal disassembly fixture** on the desk and fasten down with the clamp.
- Align the **Table C-Clamp** with the fixture using the dotted line. And make sure it's as tight as possible.

Secure the device

- Use the **Universal disassembly fixture** to remove the **Battery**.
- Place the device on the **holder** and adjust so the device is central.
- Lock the device in position with the screws.

Pull Up in Z-direction



- **Wear the finger cot to increase the friction to avoid the pull jacket slip away.** Pull up jacket both sides together in (Z-direction) to remove the **Battery**.

The battery may be easier to remove, as soon as you lift up the battery after leave heat plate (before adhesive curing).

Remove battery

- Gently remove the **Battery** and store it safely.

Part: G949-003380-01 (Battery)

Keep small screws and sharp objects away from the **Battery**.
Don't reuse the part.

Assembly instructions

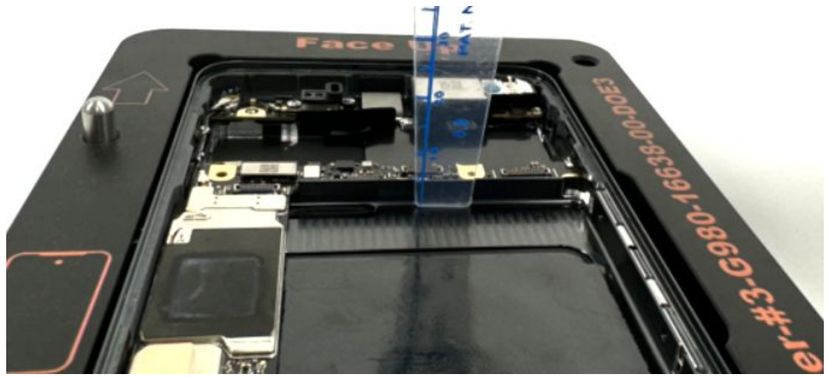
Battery

Clean enclosure

- Before installation, remove any debris/loose screws from the **Enclosure**. Tear off the two battery liners. Ensure **Battery** cosmetic checks are completed.
- Apply **IPA** around the edges of the **Battery** figure shown using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.
- Apply **3M 111 Primer** around the edges of the **Battery** figure shown using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

Once Primer has been applied, complete assembly in 25 mins.

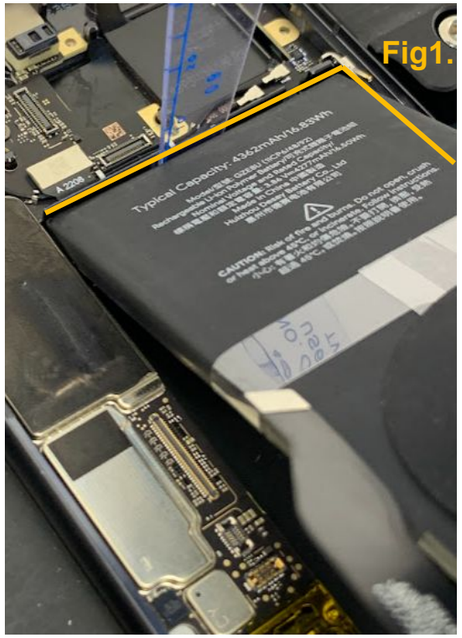
Align battery



- Place **0.9mm Feeler gauge** in the middle against the wall.

Caution!
Review all safety precautions before beginning work.

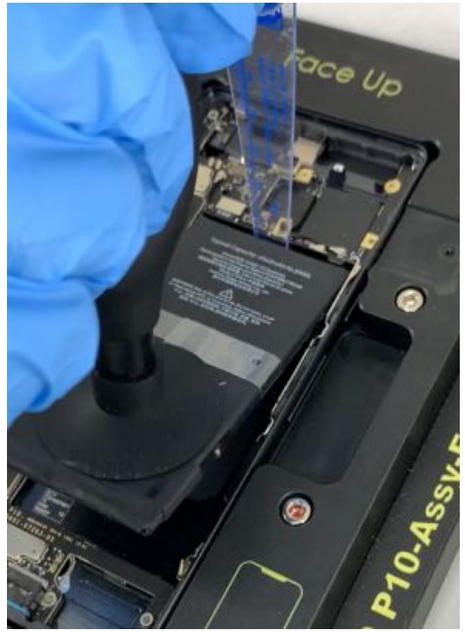
Align battery



- Use the **Universal adsorption bulb** to pick up the **Battery** and remove the adhesive liner.
- Align the **Battery** at the corners as the figure circles.**(Fig1.)**
- Gently press the **Battery** down with the **Universal adsorption bulb** by the alignment line. **(Fig2.)**

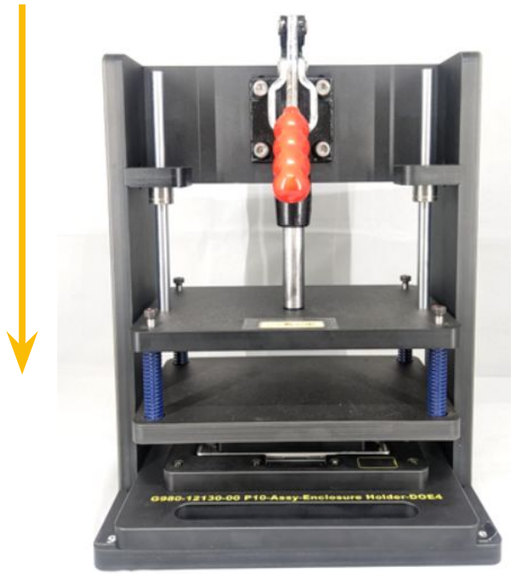
Part: G949-00338-01 (Battery)

Prepare to press



- Remove the **0.9mm Feeler gauge** and **Universal adsorption bulb.**
- Place the Pixel 7 **Battery Press** on the Pixel 7 **Enclosure holder**.

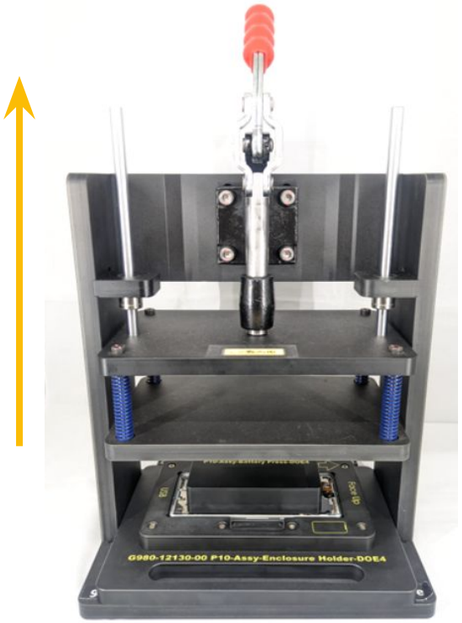
Press together in fixture



- Place the Pixel 7 **Enclosure holder** in the **Universal press fixture.**
- Press the handle down for 10 seconds.

Pinch point. Keeps hands clear during operation.

Press together in fixture



- Return the handle to the original position and remove the Pixel 7 **Enclosure holder**.

Pinch point. Keeps hands clear during operation.

Disassembly instructions

Logic board

Logic board replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame
- mmWave
- Front camera
- Top Speaker
- Rear camera
- Battery

Tools

Pixel 7 Enclosure Holder
Pixel 7 Screw Cover
Torx plus 3IP screwdriver
ESD tweezers
Universal Disassembly ESD stick
Universal Fish line tool
Ionizing air fan
IPA and cloth
Sankol lubricant CFD 409Z_V2
Dust-free Cotton swabs

Parts

Multiple Part Numbers
Logic board

Multiple Part Numbers
Sim tray

G250-05753-00
Screw

G806-03591-01
Mic protective liner

Caution!
Review all **safety precautions** before beginning work.

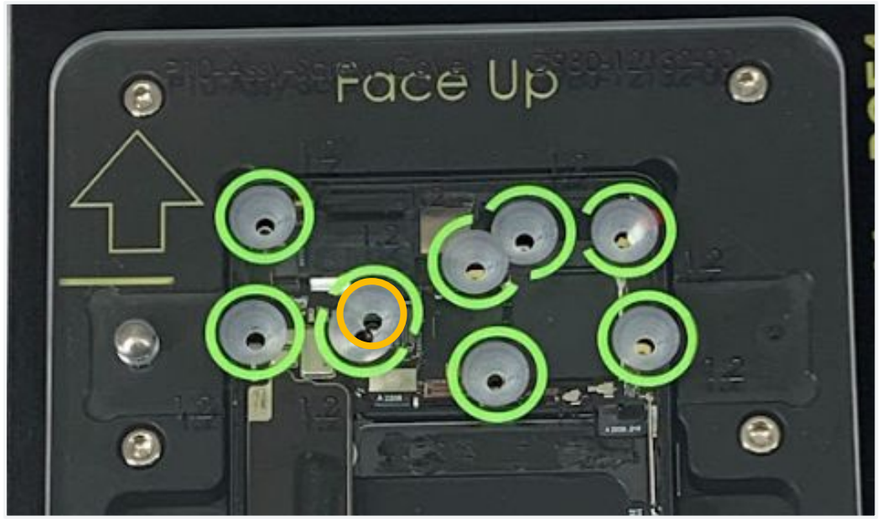
Remove SIM tray

- Remove the **SIM tray** with a **Universal Fish line tool**.

Part: Multiple Part Numbers (SIM tray)

Be careful to avoid scratching the **Enclosure**.

Remove the screw

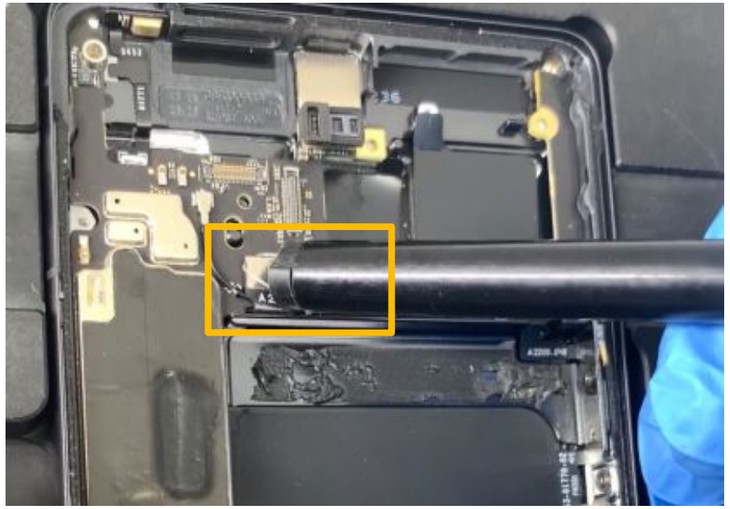


- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Remove the **Logic board screw** with a **Torx Plus 3IP screwdriver**, remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)

Don't reuse the part.

Disconnect logic board



- Loosen and remove the BIF connector as shown with a **Universal Fish line tool**.

Using the **Universal Fish line tool** avoids damage the components.

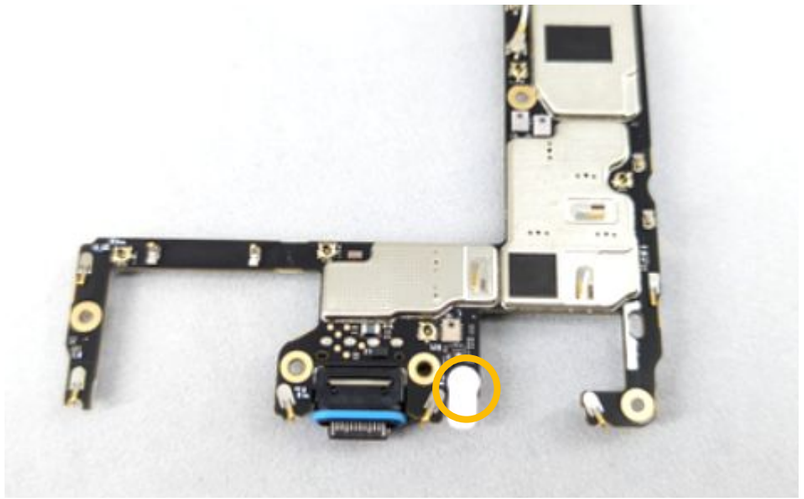
Remove logic board

- Lift the **Logic board** from the area shown by the arrow.

Part: Multiple Part Numbers (Logic board)

Be careful to avoid damaging components on the **logic board.**

Protective film



- Paste a **Mic protective liner** on the **Mic1 hole**.

Part: G806-03591-01 (Mic protective liner)

Assembly instructions

Logic board

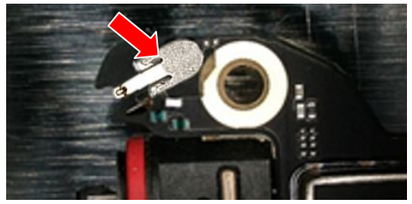
Logic Board check

Generic Rule to check

NG

OK

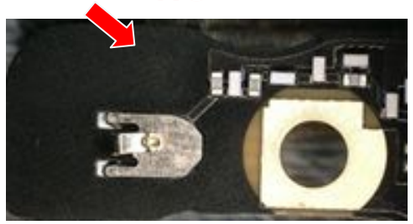
bird view

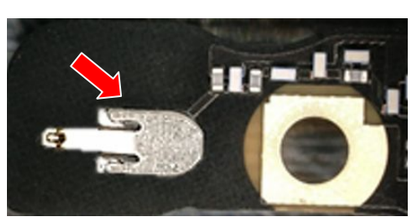


NG

OK

bird view

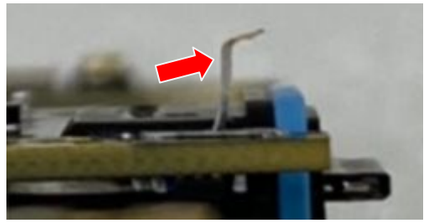


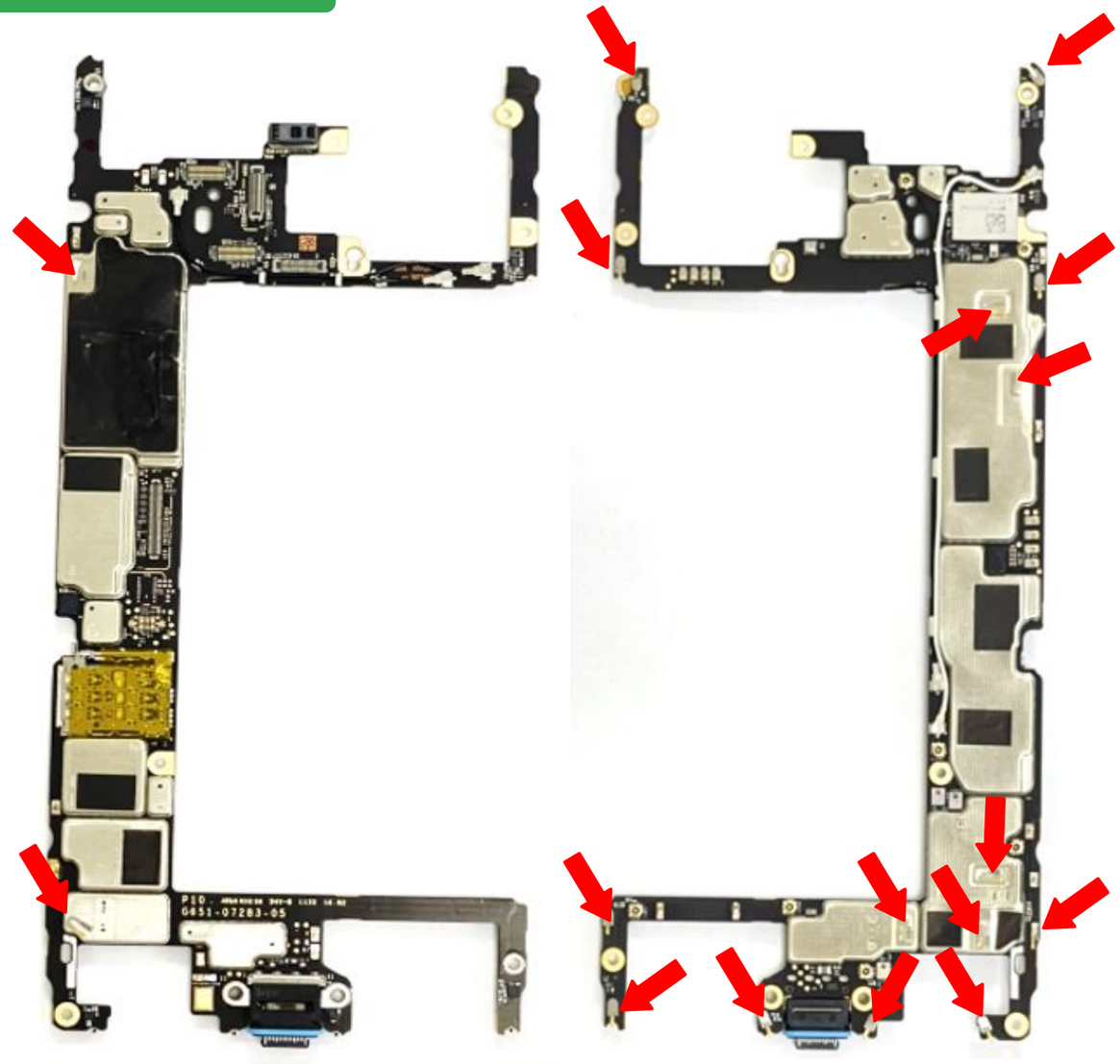


NG

OK

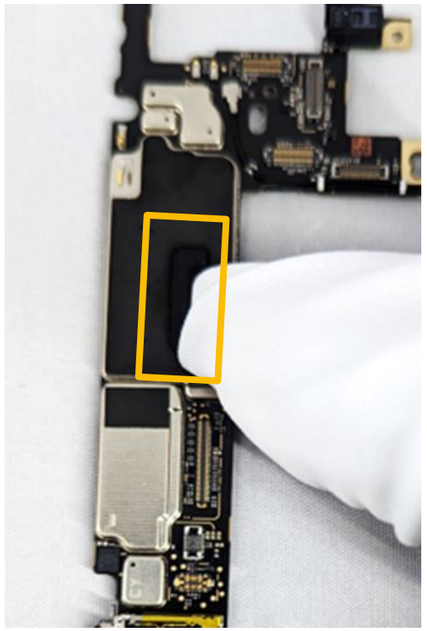
side view





⚠ Before assembly the MLB, check each spring deformed or not. And pay **EXTRA ATTENTION** to the springs areas during assembly to avoid damaging them.

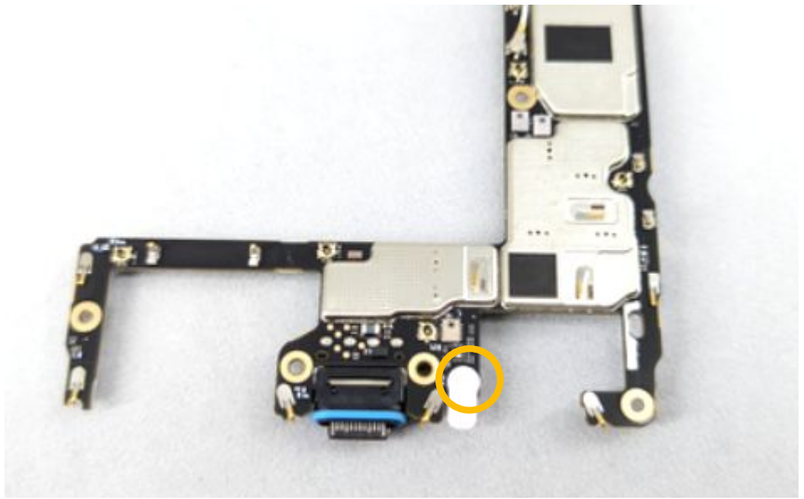
Re-using a logic board



- Clean any thermal pad residual from the **Logic board** with an **Universal Disassembly ESD stick**.
- If there is any residue remaining, use a dust free cloth with **IPA** to gently clean the surface.

Part:Multiple Part Numbers (Logic board)

Remove protective film



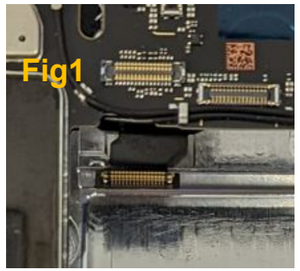
- Peel off the **Mic protective liner** from the **Logic board**.

Part: G806-03591-01 (Mic protective liner)

Don't reuse the part

Caution!
Review all safety precautions before beginning work.

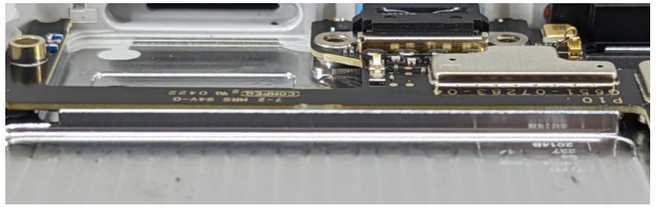
Align logic board



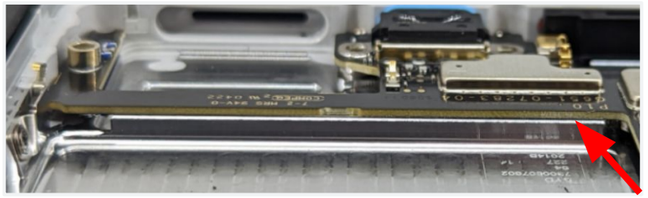
- Lift the BIF connector in the **Enclosure** with an **Universal Disassembly ESD stick** to avoid trapping them under the **Logic board**. **(Fig1)**
- Push downwards towards the USB-C and straight down to push the **Logic board** into the retaining wall. **(Fig2)**

Be careful to avoid damaging components on the **logic board**.

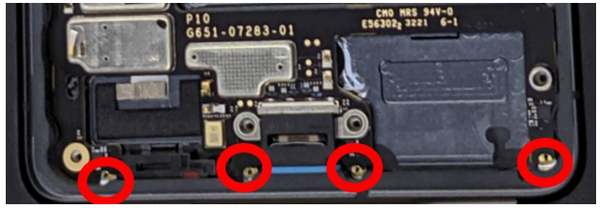
Check seating



OK

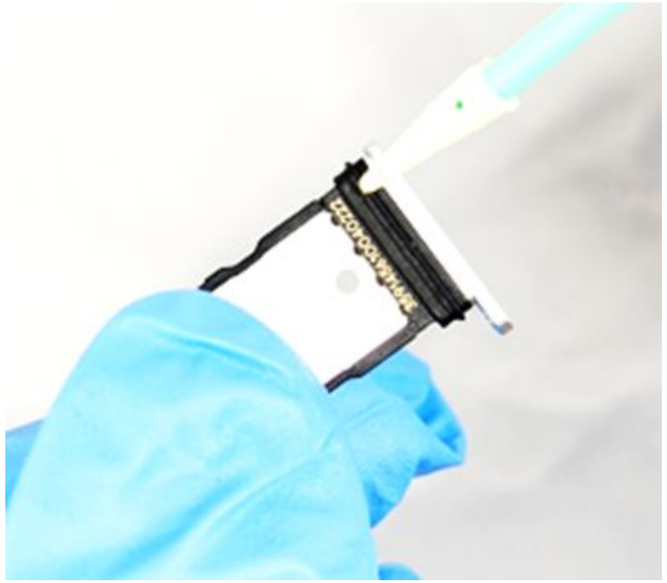


NG : MLB lift



- Press down and push MLB under the wall. The **Logic board** should sit under the retaining wall, as shown above, as the figure.
- Ensure FOUR ANT contacts are visible through slots in **Logic board,** as right figure.

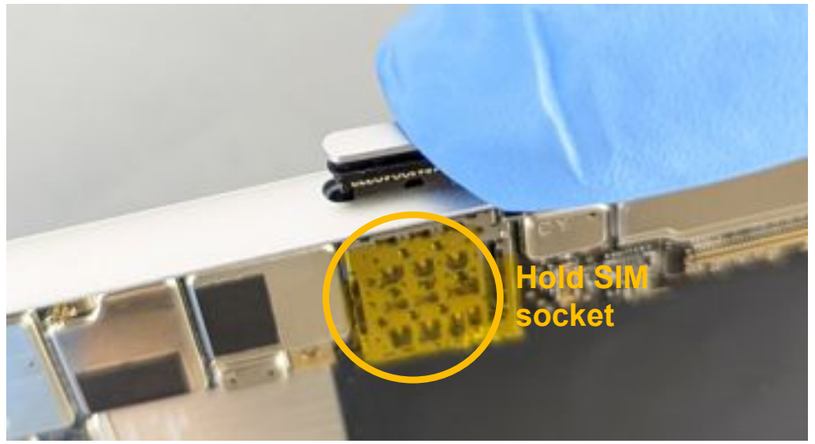
SIM tray



- Apply **Sankol lubricant CFD 409Z_V2** to the rubber of the **SIM tray** with a dust-free cotton swab.

Part: Multiple Part Numbers (SIM tray)

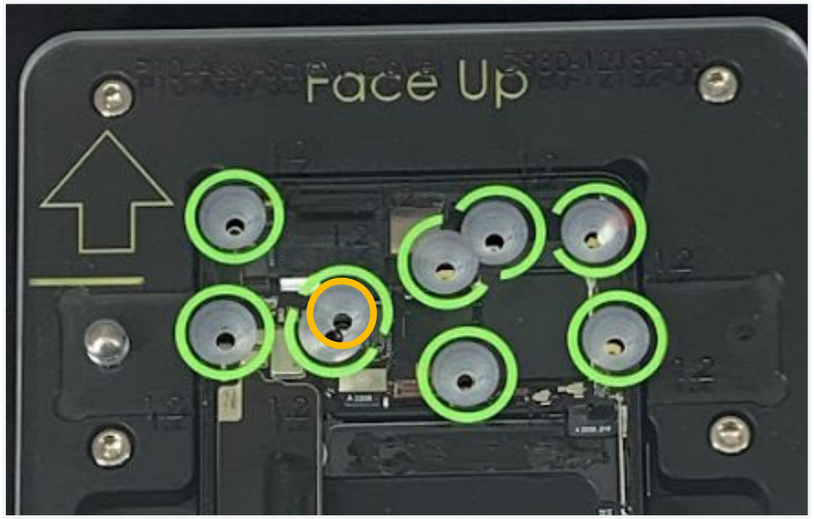
Insert SIM tray



- Slightly hold the **Logic board** and insert the **SIM tray** with your right hand.

Part: Multiple Part Numbers (SIM tray)

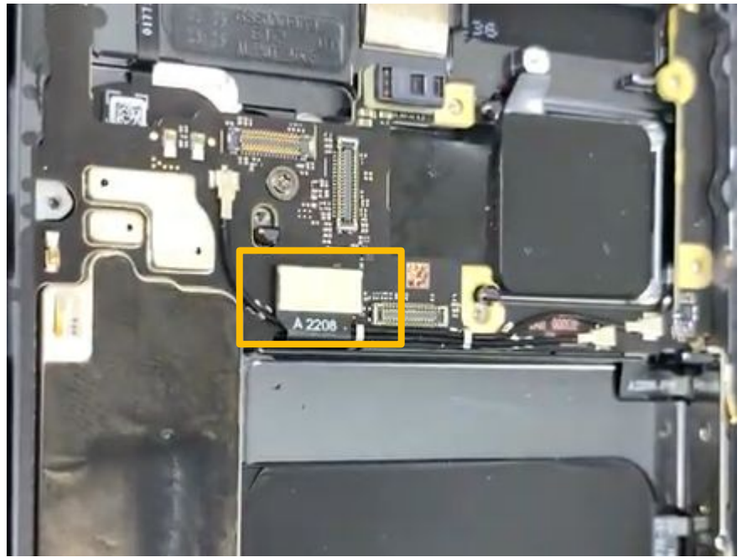
Screw in logic board



- Place the Pixel 7 **Screw cover** on the Pixel 7 **Enclosure holder**.
- Tighten **the screw** with a **Torx Plus (3IP) screwdriver**, as shown. ***Torque force : 1.2 ± 0.03kgf-cm***
- Retighten **the screw.** ***Torque force : 1.2 ± 0.03kgf-cm***
- Remove the Pixel 7 **Screw cover**.

Part: G250-05753-00 (Screw)

Attach connectors



- Attach the BIF connector to the **Logic board**.

Disassembly instructions

Mic1 Bracket

Mic 1 replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame
- mmWave
- Front camera
- Top Speaker
- Rear camera
- Battery
- Logic board

Tools

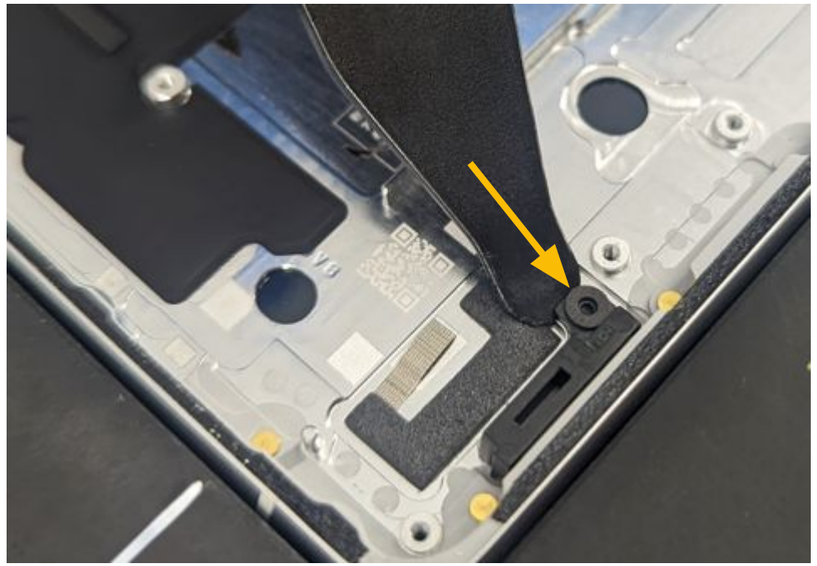
Pixel 7 Enclosure Holder
Universal Disassembly ESD stick
ESD tweezers
Sankol lubricant CFD 409Z_V2
Dust-free Cotton swabs

Parts

G730-06087-02
Mic1 bracket

Caution!
Review all **safety precautions** before beginning work.

Remove mic bracket



- Remove the **Mic1 bracket** with an **Universal Disassembly ESD stick**.

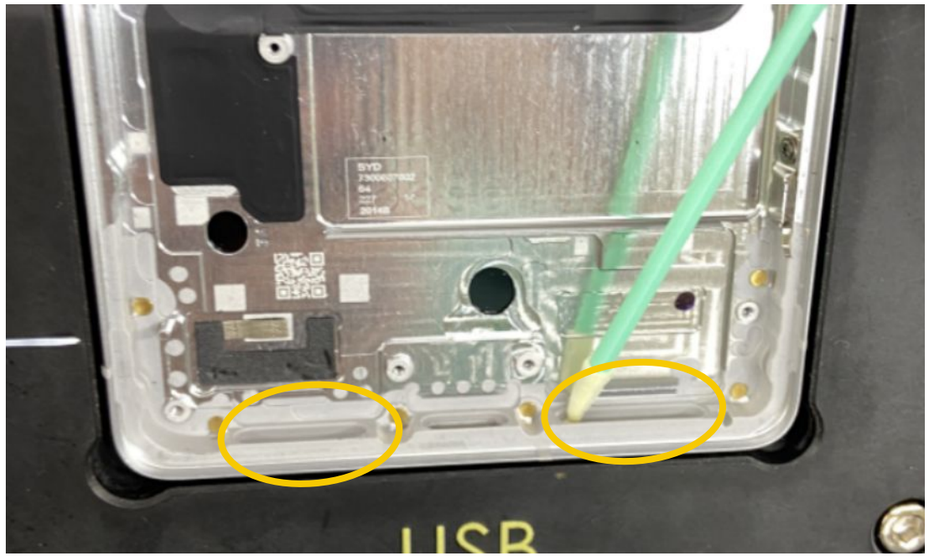
Part: G730-06087-02 (Mic1 bracket)

Don't reuse the part

Assembly instructions

Mic1 Bracket

Seal the area



- Apply **Sankol lubricant CFD 409Z_V2** with a **dust-free cotton swab** around the mic grill and bot speaker.

Bent the dust-free cotton bud to insert the hole and apply.

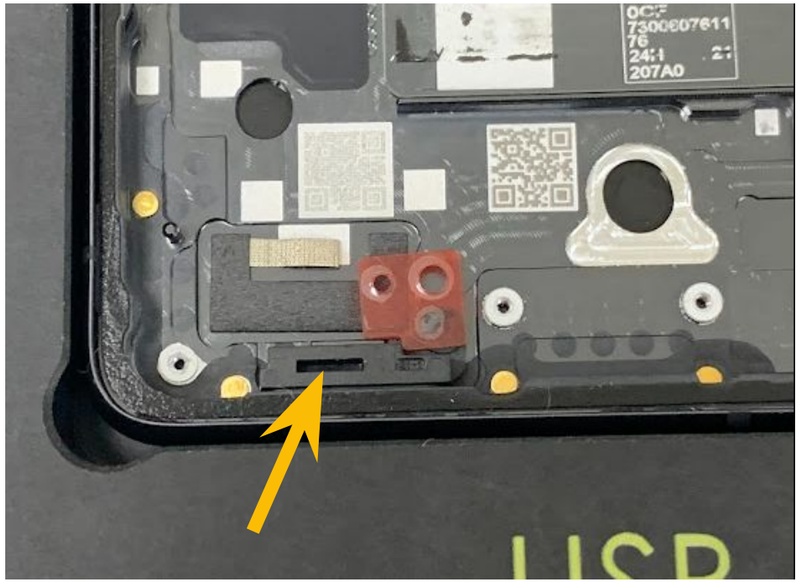
Remove release film

- Remove the **Mic1 bracket** liner,

Part: G730-06087-02 (Mic1 bracket)

Caution!
Review all safety precautions before beginning work.

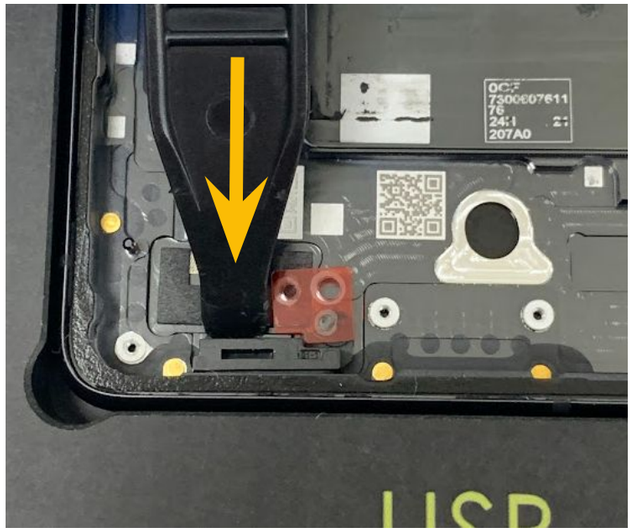
Remove release liner



- Assemble the new **Mic1 bracket**. Ensure it is snapped past the **Enclosure** rim.

Avoid touching the **Mic1** membrane during assembly.

Insert new mic 1 bracket



- Press for 3 seconds with an **Universal Disassembly ESD stick**.
- Use **ESD tweezers** to tear off the the release liner on the **Mic1 bracket**.

Avoid touching the **Mic1** membrane during assembly.

Disassembly instructions

Enclosure

Enclosure replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Bottom Speaker
- Mid-frame
- mmWave
- Front camera
- Top Speaker
- Rear camera
- Battery
- Logic board
- Mic1 Bracket

Tools

Pixel 7 Enclosure Holder
Universal Fish line tool
Universal Disassembly ESD stick
Dust-free Cotton swabs
IPA and cloth
Deglue Machine
Pixel 7 Cleaning Cover - Enclosure
ESD tweezers
ESD spudger

Parts

Multiple Part Numbers
Enclosure

G652-01773-01
BIF Flex

G250-05802-00
Screw *3

G853-01101-02
ANT7 Grounding

G949-00362-00
Sidekey

Multiple Part Numbers
Volume button

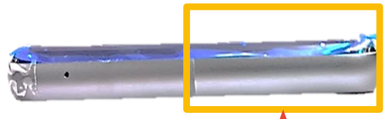
Caution!
Review all **safety precautions** before beginning work.

Enclosure difference

mmWave

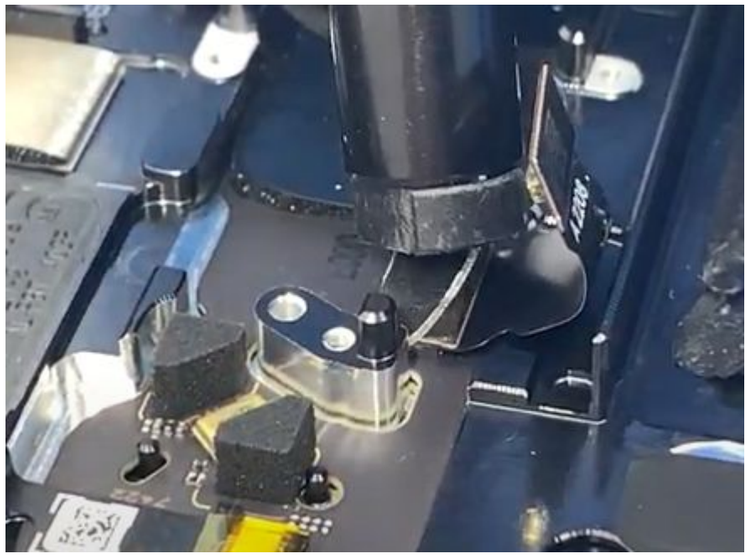
sideview

Sub6



sideview

Remove BIF Flex

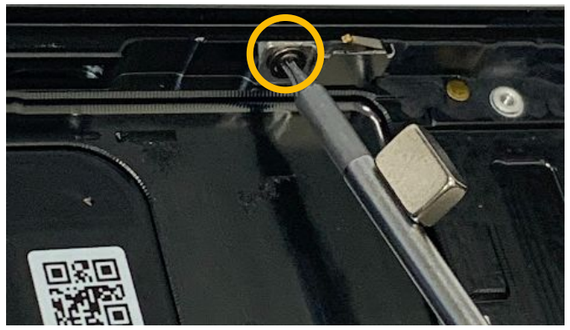


- Loosen the **BIF** connector from the **Flam board** with the **Universal Fish line tool**.
- Remove the **BIF Flex.**

Part: G652-01773-01 (BIF Flex)

Using the **Universal Fish line tool** avoids damage the components.

Remove the ANT7

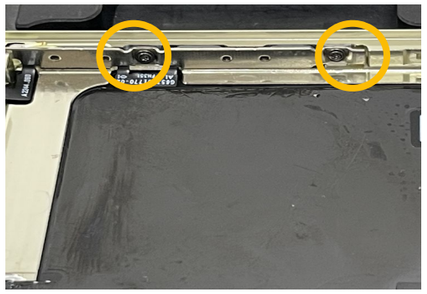


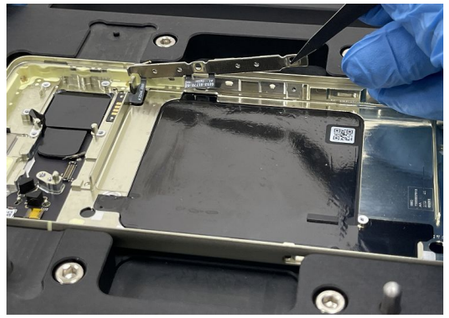
- Remove the **ANT7 screw** with a **Torx Plus 3IP screwdriver**.
- Remove the **ANT7 Grounding** with a **ESD Tweezers.**

Part: G250-05802-00 (Screw), G853-01101-02 (ANT7 Grounding)

Don't reuse the part(screw).
Note that the Enclosure has the ANT7 Grounding, this step is ONLY for changing the ANT7 if it's damaged.

Remove Sidekey





- Peel off Sidekey FPC by the **ESD tweezers**.
- Use a **Torx Plus 3IP screwdriver** to remove the two screws.
- Remove the **Sidekey.**

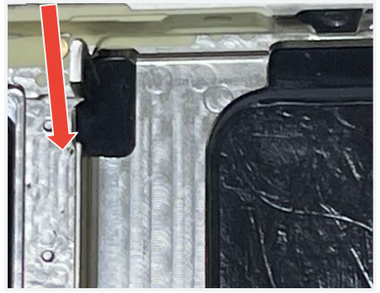
Part: G949-00362-00 (Sidekey)
G250-05802-00 (screw)

Only applying to when there is Sidekey damage.

Remove Sidekey adhesive

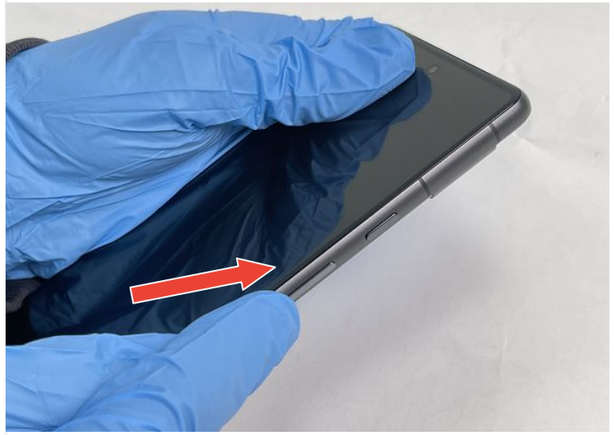
Before cleaning

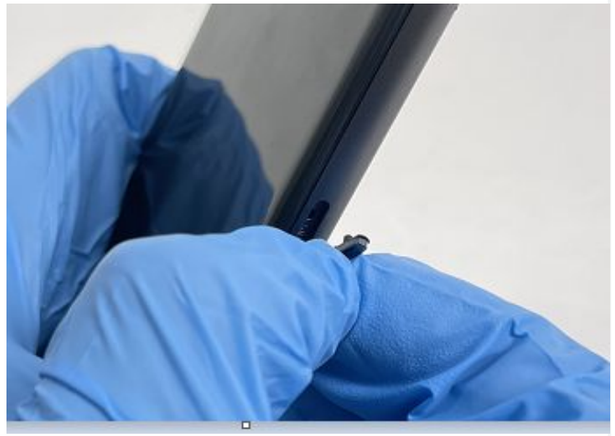
After cleaning



- The **Sidekey adhesive** remains on the **Enclosure** and needs to be removed**.**

Remove Volume Button





- Using an **ESD spudger**, press the **volume button** firmly the bottom of the tip of the button until the volume key begins to lift out of the enclosure.
- While one side of the **volume button** can now be grasped with your finger for removal.

Part: **Multiple Part Numbers** (Volume button)

Only applying when there is a Volume Button issue.

Assembly instructions

Enclosure

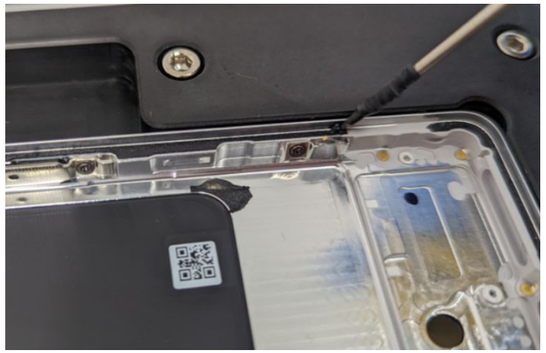
Re-using the Enclosure with fixture

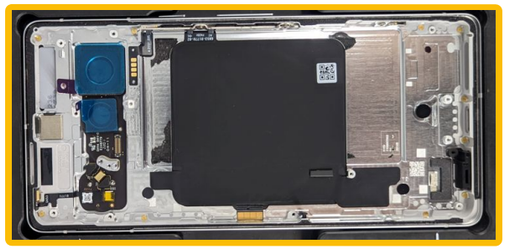
Solution-1
Cleaning Cover - Enclosure

- Place the **Enclosure** in Pixel 7 **Cleaning Cover - Enclosure** to Pixel 7 **Enclosure Holder.**
- Use an **Deglue Machine** to clean the residual glue out of the **Display**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

Re-using the Enclosure

Solution-2



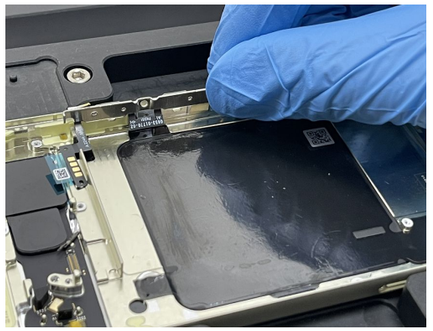


- Use an **Universal Disassembly ESD stick** or **Deglue Machine** to clean the residual glue out of the **Enclosure**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

The highlight is where the residual adhesive exists.

Caution!
Review all safety precautions before beginning work.

Press the Sidekey

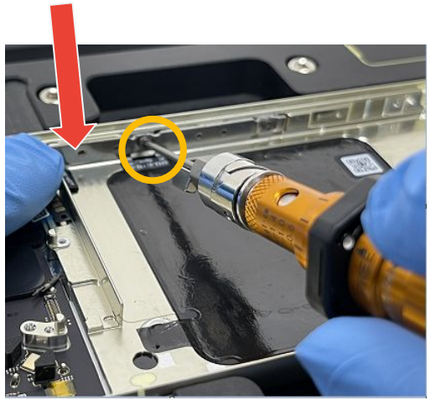


- Place the **Enclosure** to **Enclosure Holder.**
- Put **Sidekey** on the **Enclosure**. The button should be locked in place (like Figure red circle).
- The **FPC** should be locked in place (like Figure blue rectangle).

Part: G949-00362-00 (Sidekey)

Only applying to when there is Sidekey damage.

Tear off the FPC liner



- Fasten the **two Sidekey screws** with a **Torx Plus 3IP screwdriver.**

Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05802-00(screw)

During the process, don't touch on the spring.

Press the Sidekey

- After assembly, press the **sidekey** to see if we can press the volume and power key feeling.

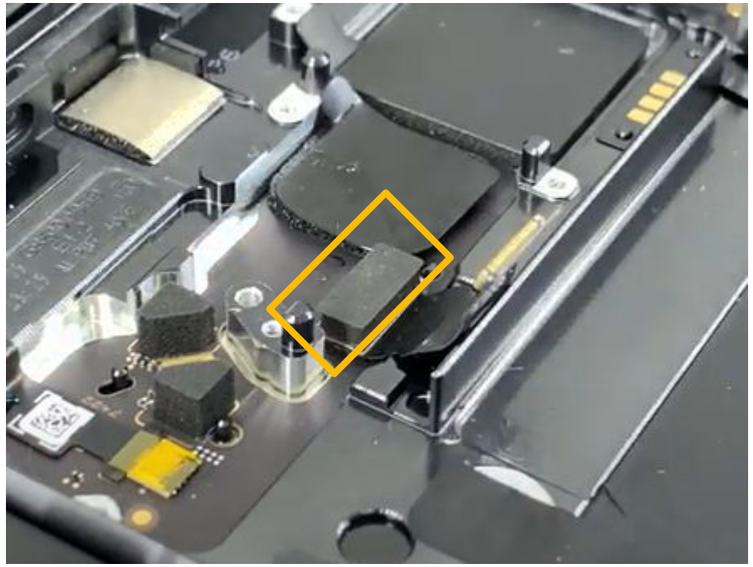
Align FPC

- Tear off the **liner** paper.
- Algn the two alignment holes and press it.

Clean battery area

- Clean any residue in the **Battery** area with an **Universal Disassembly ESD stick**.
- Apply **IPA** with a cloth afterward.

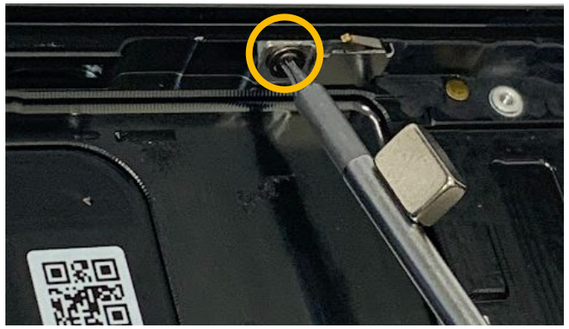
Attach BIF Flex



- Pick up the **BIF Flex** with **ESD tweezers**.
- Attach the **BIF Flex** with the connector to the **Flam board**.

Part: G652-01773-01 (BIF Flex)

Screw the ANT7



- Attach the **ANT7 Grounding** to the Enclosure.
- Tighten **the screw** with a **Torx Plus (3IP) screwdriver**, as shown.
  Torque force : 1.2 ± 0.03kgf-cm

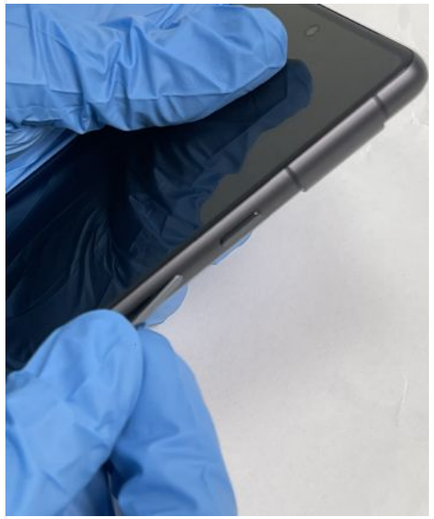
Part: G853-01101-02 (ANT7 Grounding), G250-05802-00 (Screw)

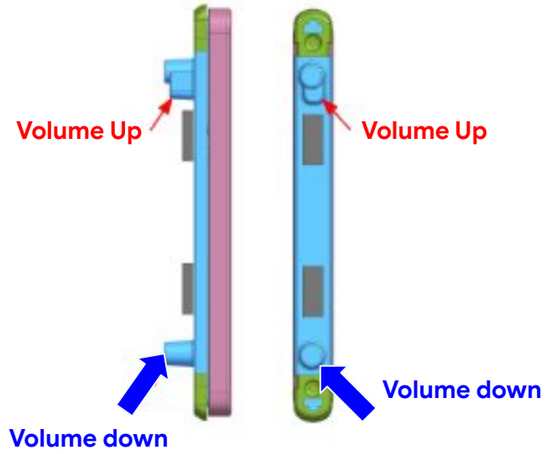
Note that the Enclosure has the ANT7 Grounding, this step is only for changing the ANT7 if it's damaged.

Check the Pad

- Visually check the **WC & NFC Pad,** make sure it is not covered/obstructed by the graphite sheet or other components, and the Flex tail align on enclosure edge.
- If you see flex NG in right position like, please contact your google representative.

Assemble Volume Button





Ensure that the new volume key is oriented with point as figure shown . If the direction is reversed, it cannot be installed,

- Insert the new **volume button** into the **enclosure** at an angle until the top end is fully inserted.
- Press the bottom end of the key in until it is fully in place.
- Check if it can press each side of the **volume button** 20 times.

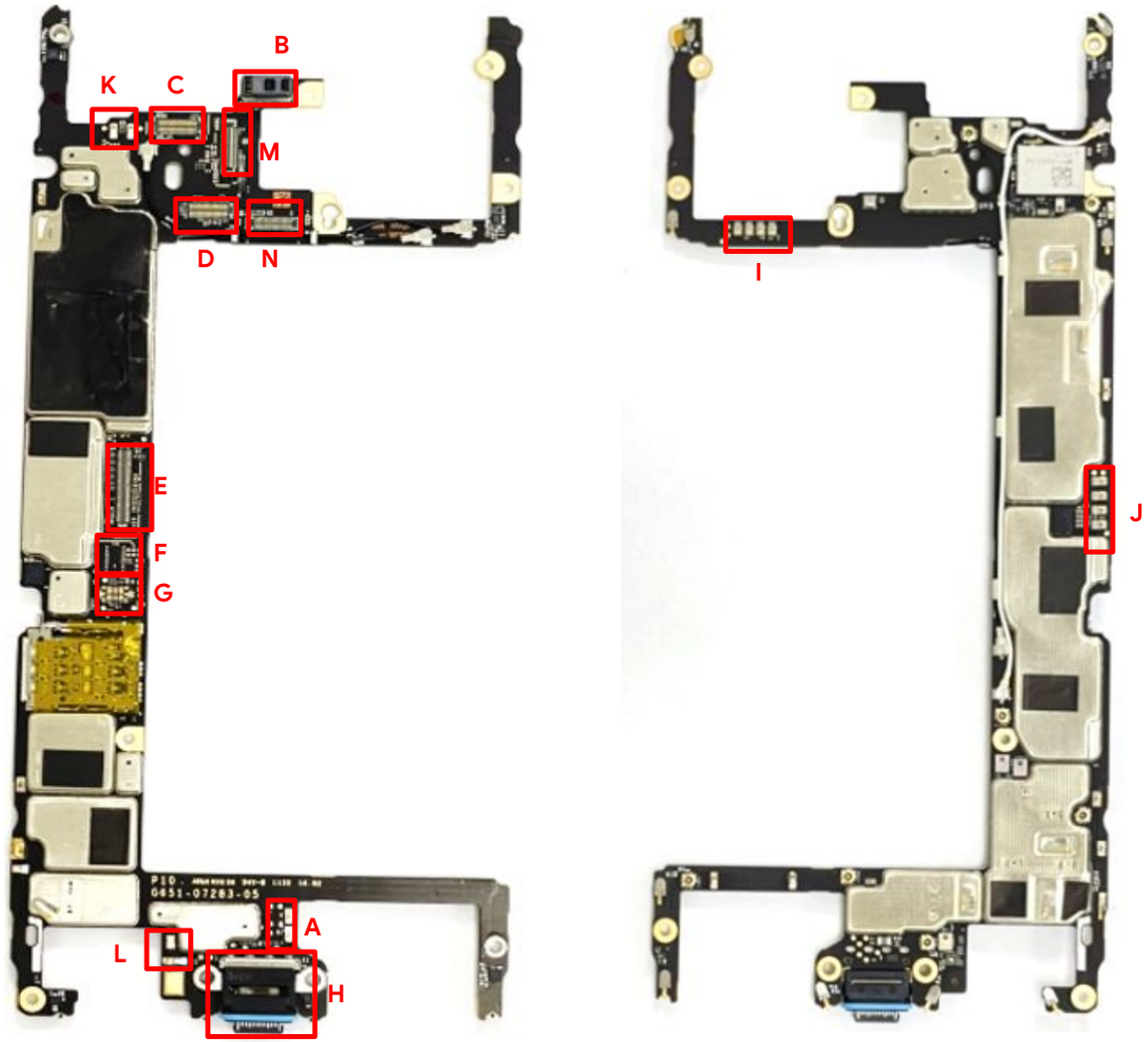
Part: **Multiple Part Numbers** (Volume button)

Only applying to when there is a Volume Button issue.

Troubleshooting

Connectors Location

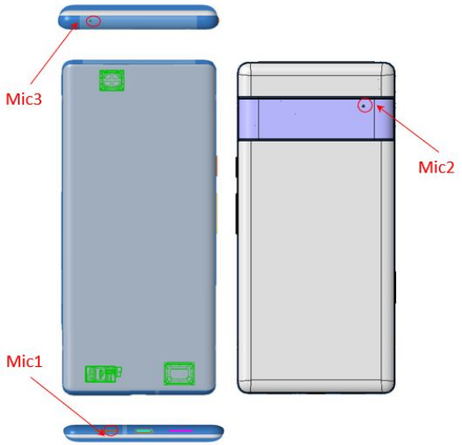
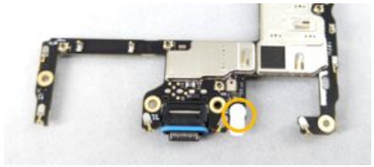
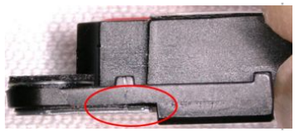
Location & Description	
A	Bottom Speaker pad
B	P-sensor/light sensor
C	Front camera connector
D	Flam board connector(BIF Flex)
E	Display connector
F	mmWave connector
G	Battery connector
H	USB Port
I	Sidekey pad
J	WC & NFC Pad
K	Top Speaker pad
L	Vibrator pad
M	Rear camera Main connector
N	Rear camera UW connector



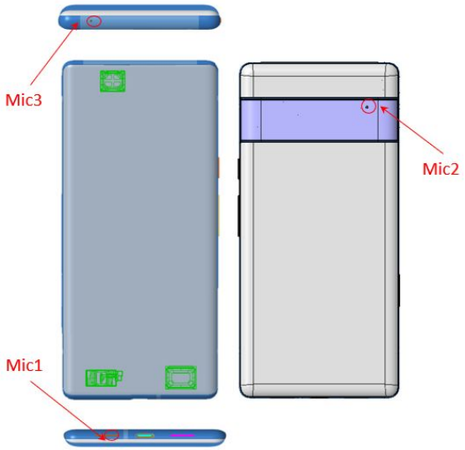
Caution!

Review all safety precautions before beginning work.

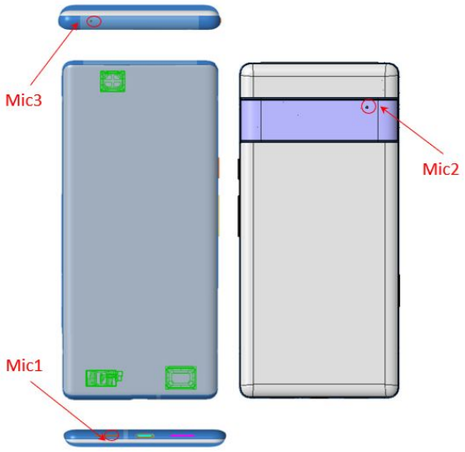
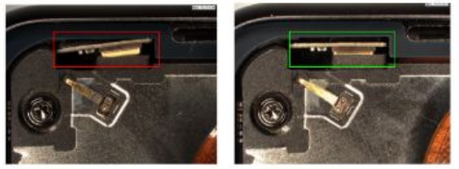
Mic1

Symptom	Potential Root Cause	Procedure	
T010: Mic 1 - no sound T011: Mic 1 - low sound T012: Mic 1 - distorted sound 	Mesh not clean	• Use a microscope and check the mesh for damage or blockage. **(Fig1)** • Clean the mesh and test audio.	 **(Fig1)**
	Assembly Problem	• Disassemble the device, check Mic1 bracket is fully seated. • Check if the MLB mic1 liner is removed**. (Fig2)** If not, go to the next step. • Test audio again.	 **(Fig2)**
	Component issue	• Check the **Mic1 bracket** to check if there is a little delamination at the PET corner at the bottom. **(Fig3)** • Use a good **mic1 bracket** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • mic1 bracket  **(Fig4)**

Mic2

Symptom	Potential Root Cause	Procedure	
T013: Mic 2 - no sound T014: Mic 2 - low sound T015: Mic 2 - distorted sound 	Connectivity issue	• Check if connectivity between **Flam board connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Enclosure** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

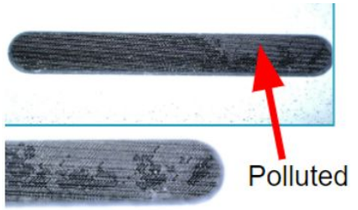
Mic3

Symptom	Potential Root Cause	Procedure	
T016: Mic 3 - no sound T017: Mic 3- low sound T018: Mic 3 - distorted sound	Connectivity issue	• Check if connectivity between **Flam board connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Visually check whether the Mic3 component is damaged.  • Use a good **Enclosure** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

Top Speaker

Symptom	Potential Root Cause	Procedure	
 T019: Top Speaker no sound T020:Top Speaker low sound T021: Top Speaker distorted sound	Mesh not clean	• Inspect **Top Speaker mesh** and a soft **ESD brush** to remove any debris. • Test audio.	
	Internal debris	• 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	• Check if connectivity between **Top SPK Pad** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• If sound quality is still poor, use a good **Top Speaker** and **Logic board** to cross check with original ones • Replace the defective component.	**Disassembly** • Logic board • Top Speaker

Bottom Speaker

Symptom	Potential Root Cause	Procedure	
T023: Bottom Speaker no sound T024: Bottom Speaker low sound T025: Bottom Speaker distorted sound	Mesh not clean	• Visually inspect the exterior of the phone check for a polluted mesh on the **Bottom Speaker** port. And use a soft **ESD brush** to remove any debris. • Test audio.	
	Internal debris	• 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	• Check if connectivity between **Bottom SPK Pad** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• If sound quality is still poor, use a good **Bottom Speaker** and **Logic board** to cross check with original ones • Replace the defective component.	**Disassembly** • Logic board • Bottom Speaker

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 T032: Display flickering/abnormal T033: Display image quality T034: Display color mura T035: Display light leakage T036: Display backlight issue T037: Display shadow T038: Display permanent burnin T039: Display temporary burnin	Damage	• Inspect display for damage and replace if necessary.	
	Connectivity issue	• Check if connectivity between **Display connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Dead pixels Distorted graphics Flickering Color issues	• Remove **Display module**, fit a replacement part without adhesive and test. • If issue is resolved, apply adhesive and fit new **Display module.**	**Disassembly** • Display
	Component issue	• Use a good **Display** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Display

Display

Symptom	Potential Root Cause	Procedure	
 T044: Multi-touch poor response T045: Multi-touch no response T046: Multi-touch erratic response	Connectivity issue	• Check if connectivity between **Display connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Touch screen Fingerprint sensor	• Remove **Display module**, fit a replacement part **without adhesive** and test. • If issue is resolved, apply adhesive and fit new **display module.**	**Disassembly** • Display
	Component issue	• Use a good **Display** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Display

Vibrator

Symptom	Potential Root Cause	Procedure	
 T026: Vibrator failure	Connectivity issue	• Check **Vibrator Pad** between **Logic board** and the **Mid-frame**. • Test vibrator again. Check the function by triage test.	Connectors Location
	Component issue	• Use a good **Mid-frame** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Mid-frame

Power

Symptom	Potential Root Cause	Procedure	
 T001: Does not power on T002: Powers off suddenly	Damage	• Inspect USB-C connector for debris preventing charging. • Inspect device for damage. • Inspect liquid damage indicators.	
	Display	• Remove the **Display module** and seat a new one. Charge for 10 minutes to see if the device can power on.	**Disassembly** • Display
	Connectivity issue	• Check if connectivity between **Battery connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Battery** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Battery

Power

Symptom	Potential Root Cause	Procedure	
 T053: Battery damage T054: Battery draining fast	Connectivity issue	• Check if connectivity between **Battery connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Battery** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Battery

Rear Camera

Symptom	Potential Root Cause	Procedure	
 T071: Camera no preview T072: Camera AR failure T073: Camera Rear Photo quality T074: Camera Rear Video quality T078: Cannot switch between cameras T079: Camera damage T111: Main RCAM crashes T112: UW RCAM crashes T114: Main RCAM no preview T115:UW RCAM no preview T116:Ultrawide Rear Camera Photo quality T117:Ultrawide Rear Camera video quality	Damage	• Inspect display and camera for damage.	
	Connectivity issue	• Check if connectivity between **Rear camera connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Image quality	• Remove **Display module**, connect a new **Rear camera** to test. • If issue is resolved, proceed with **Rear camera** replacement and assemble device.	**Disassembly** • Rear Camera
	No image	• If camera issue remains, replace **Logic board**.	**Disassembly** • Logic board

Front Camera

Symptom	Potential Root Cause	Procedure	
 T071: Camera no preview T075: Camera Front Photo quality T076: Camera Front Video quality T078: Cannot switch between cameras T079: Camera damage T110: FCAM crashes T113: FCAM no preview	Damage	• Inspect display and camera for damage.	
	Connectivity issue	• Check if connectivity between **Front camera connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Image quality	• Connect a new **Front camera** to test. • If issue is resolved, proceed with **Front camera** replacement and assemble device.	**Disassembly** • Front Camera
	No image	• If camera issue remains, replace **Logic board**.	**Disassembly** • Logic board

mmWave

Symptom	Potential Root Cause	Procedure	
 T105: 5G_low_med_band_failure T106: 5G_high_band_failure	Connectivity issue	• Inspect **Mid-frame** and check **mmWave flex** is correctly seated. • Check if connectivity between **mmWave connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Connect a new **mmWave** to test. • If issue is resolved, proceed with **mmWave** replacement and assemble device.	**Disassembly** • mmWave
		• If camera issue remains, replace **Logic board**.	**Disassembly** • Logic board

Proximity sensor

Symptom	Potential Root Cause	Procedure	
T059: Proximity sensor failure	Assembly issue	• Check P-sensor foam is posted flat or not.	**Assembly** • P-sensor foam status  OK NG Wrong side NG broken
	Component issue	• Disassemble and check the appearance of Proximity sensor without abnormality. • Use a good **P-sensor grommet** to **Logic board** to check. • Replace the defective component.	**Disassembly** • Logic board

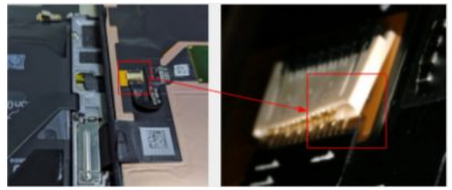
Wireless Charge

Symptom	Potential Root Cause	Procedure	
T003: Wireless charging failure	Connectivity issue	• Check the contact condition between WC and Pin contact pads. If there is no mark on the pin contact pads, it shows poor connectivity. • If marks are observed, clean the contact pad and test again.	 the wireless charging coil FPC is torn
		• Check if connectivity between **WC & NFC Pad** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Enclosure** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

NFC

Symptom	Potential Root Cause	Procedure	
 T051: NFC connectivity Issues	Connectivity issue	• Check the contact condition between WC and Pin contact pads. If there is no mark on the pin contact pads, it shows poor connectivity. • If marks are observed, clean the contact pad and test again.	
		• Check if connectivity between **WC & NFC Pad** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Enclosure** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

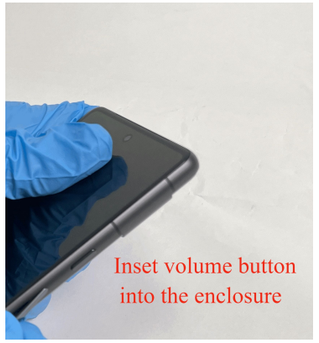
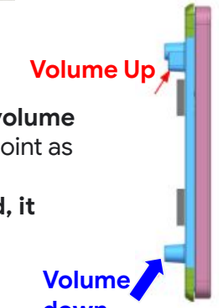
UDFPS

Symptom	Potential Root Cause	Procedure	
T064: Fingerprint sensor failure	Interference Issue	• Remove any screen protector prior to testing related to display function.	
	Damage	• Inspect display for damage and replace if necessary.	
	Connectivity issue	• Check if connectivity between **Display connector** and **Logic board** are normal. • Check if connectivity between **Display flex connector** and **UDFPS** are normal. **(Fig)** • If they are not fully buckled, re-assemble and then retest.	Connectors Location 
	Component issue	• Use a good **Display** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Display

Volume Button

Symptom	Potential Root Cause	Procedure	
T069:Volume button failure	Component issue	• Check if the **Volume key button** would fall off by pressing each side of the volume key 20 times. If it falls off, go to the **Assembly Instruction(Next Page)**.	
		• **Disassembly Instruction**: (1) Using an **ESD spudger**, press the **volume button** firmly the bottom of the tip of the button until the volume key begins to lift out of the enclosure. (2) While one side of the **volume button** can now be grasped with your finger for removal.	

Volume Button - cont.

Symptom	Potential Root Cause	Procedure	
T069:Volume button failure	Component issue	• [Assembly Instruction]: (1) Insert the new **volume button** into the enclosure at an angle until the top end is fully inserted. (2) Press the bottom end of the key in until it is fully in place.	  Ensure that the new **volume key** is oriented with point as figure shown . **If the direction is reversed, it cannot be installed.**
		• Quality Check : by pressing each side of the **volume button** 20 times.	

Glossary

Terminology and definitions

Acronym / Term	Definition
ESD	**Electro Static Discharge** The sudden flow of electricity through two electrically charged objects.
IPA	**Isopropyl Alcohol (99.8%)** Used for cleaning components and enclosures. Comes as pads or a solution.
EHS	**Environmental Health and Safety** Requirements for keeping technicians and customers safe.
LCD	**Liquid Crystal Display** A type of flat panel display which uses liquid crystals to show images.
mmWave	**Millimeter Wave** The radio waves used to build a 5G network, providing fast, reliable mobile data.
LDI	**Liquid Damage Indicator** An indicator that turns from white into another color, typically red, after contact with water. **Also known as:** Liquid damage indicator

Terminology and definitions

Acronym / Term	Definition
Display module	The cover glass, and sometimes other components such as the fingerprint sensor. **Also known as:** cover glass (CG) · screen · display
Logic board	The main electronic component in the device with the processor, memory, storage, and often Wi-Fi and Bluetooth components all soldered on. **Also known as:** main logic board · main board · motherboard · PCBA
Microphone	The component used for capturing audio to make a call, video or dictate some notes. **Also known as:** mic
Enclosure	The housing that contains the buttons and provides protection for the logic board and other components. **Also known as:** Housing (HSG) · rear cover · back cover (BC) · back glass (BG)

Terminology and definitions

Acronym / Term	Definition
RCAM	Rear Camera modules. **Also known as:** Rear Camera
FCAM	Front Camera modules. **Also known as:** Front Camera
PSA	The adhesive that are used to bond enclosure and display module, battery and enclosure, or other parts. **Also known as:** Pressure Sensitive Adhesive
Audio Jack	Handset Jack **Also known as:** HSJ

Terminology and definitions

Acronym / Term	Definition
FRP	Factory Reset Protection
FDR	Factory Data Reset
SUR	Same Unit Repair
RTV	Return To Vendor
SBOM	Service Bill of Materials