



# Pixel 6 Pro

## Repair Manual

Version 2



**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](https://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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## Precautions

Important before you begin  
Battery Conditions



## Introduction

Expanded view  
Screw Map  
Liquid damage indicators  
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## Disassembly instructions

<u>Display</u>	<u>Graphite sheets</u>
<u>Mid-frame</u>	<u>mmWave</u>
<u>Upper mid-frame</u>	<u>Rear camera</u>
<u>Top speaker</u>	<u>Front camera</u>
<u>Battery</u>	<u>Logic board</u>
<u>Mic1 Bracket</u>	<u>Bottom speaker</u>
<u>Enclosure</u>	



## Assembly instructions

<u>Display</u>	<u>Graphite sheets</u>
<u>Mid-frame</u>	<u>mmWave</u>
<u>Upper mid-frame</u>	<u>Rear camera</u>
<u>Top speaker</u>	<u>Front camera</u>
<u>Battery</u>	<u>Logic board</u>
<u>Mic1 Bracket</u>	<u>Bottom speaker</u>
<u>Enclosure</u>	



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Mic1

Mic3

Bottom Speaker

Vibrator

Rear Camera

mmWave

Wireless Charge

UDFPS

Mic2

Top Speaker

Display

Power

Front Camera

Proximity sensor

NFC

## Testing

Software resources

## Glossary

## Reclaim instructions

Display

mmWave

Enclosure

Mid-frame

Logic board



# Revision History

Version	Date	Change Description
V1.0	Sept 2021	First release
V1.1	Sept 2021	<ol style="list-style-type: none"><li>1. Correct link of cosmetic and triage SOP <a href="#">@P166</a>.</li><li>2. Modify the content of battery recycling <a href="#">@P26</a>.</li><li>3. Add instruction for Cynergy/CTDI PL/Asurion only to store non-defective RCAM separately <a href="#">@P22</a>.</li><li>4. Correct the RF thermal pad Location in Mid-frame <a href="#">@P67</a>.</li></ol>
V1.2	Nov 2021	<ol style="list-style-type: none"><li>1. Adjust the repair flow sequence <a href="#">@P29</a>.</li><li>2. Add potential root cause for T064: Fingerprint sensor failure <a href="#">@P167</a>.</li><li>3. Add note WLC&amp;NFC pad <a href="#">@P146</a>.</li><li>4. Update the wording of the Note <a href="#">@P47</a>.</li><li>5. Add Tips : Turn your Pixel phone on &amp; off <a href="#">@P23</a>.</li><li>6. Update battery alignment instruction <a href="#">@P114</a> <a href="#">@P115</a>.</li><li>7. Update the screw torque force <a href="#">@P20</a> <a href="#">@P73</a> <a href="#">@P81</a> <a href="#">@P100</a> <a href="#">@P128</a>.</li><li>8. Updated UDFPS calibration software download SOP link <a href="#">@P53</a>.</li><li>9. Moved the battery cosmetic inspection slide to the precaution section.</li></ol>



# Revision History

Version	Date	Change Description
V1.3	Dec 2021	<ol style="list-style-type: none"><li>1. Remove the Note “The case can be reused until they no longer adhere”<a href="#">@P42</a>, <a href="#">@P92</a>.</li><li>2. Address more specific context on how to pull up the battery <a href="#">@P111</a> <a href="#">@P114</a>.</li><li>3. Add to check the sponge while assembling the mid-frame <a href="#">@P73</a>.</li><li>4. Add to check each spring deformed or not before assembling the MLB <a href="#">@P127</a>.</li></ol>
V1.4	Jan 2022	<ol style="list-style-type: none"><li>1. Add note how to paste the mmWave FPC correctly”<a href="#">@P84</a></li><li>2. Add new sponge on the upper mid frame <a href="#">@P89</a>. Update the spare part GPN and picture <a href="#">@P20</a>.</li><li>3. Modify the content of Glossary(Acronym / Term) : Add "sub6" <a href="#">@P178</a>, "RCAM" "FCAM" "PSA" "UDFPS"<a href="#">@P180</a> Microphone AKA, strike out “mic1 bracket”<a href="#">@P178</a> Enclosure AKA, strike out “bottom case” <a href="#">@P179</a></li><li>4. Correct GPN to make spare part color equal to picture. Enclosure from G949-00220-01 to G949-00221-01 <a href="#">@P16</a>. SIM tray from G852-02165-11 to G852-02165-13 <a href="#">@P17</a>.</li><li>5. Update the step to remove the CG liner &amp; front cam film/cap <a href="#">@P53</a>.</li></ol>
V1.5	Jul 2022	<ol style="list-style-type: none"><li>1. Update Logic board swap No Need to swap RCAM together. <a href="#">@P23</a>, <a href="#">@P92</a>, <a href="#">@P123</a>.</li></ol>
V2	April 2024	<ol style="list-style-type: none"><li>1. <b>Removed proprietary references</b></li><li>2. <b>Added disclaimers</b></li><li>3. <b>Updated tools and fixtures names and part numbers</b></li></ol>





# 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 6 Pro 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.





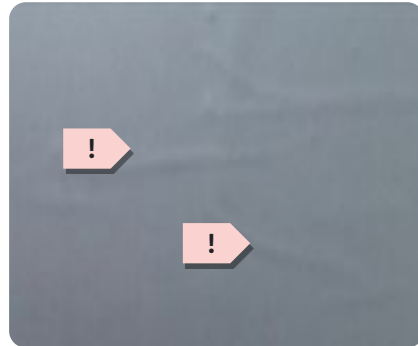
Caution ⚠

Precaution

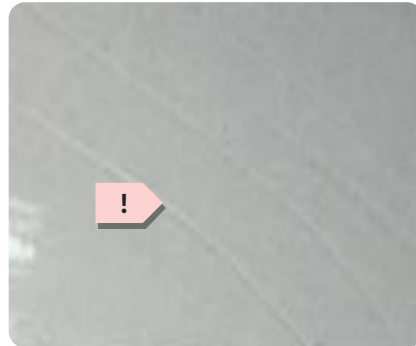
## Examples of unacceptable battery conditions - Not suitable for repair\*



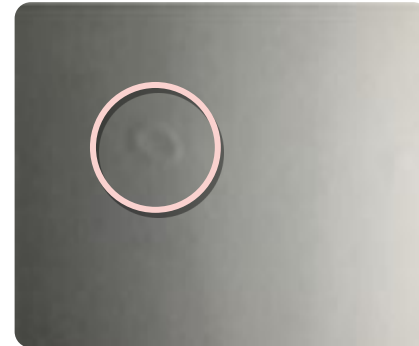
Pouch damage



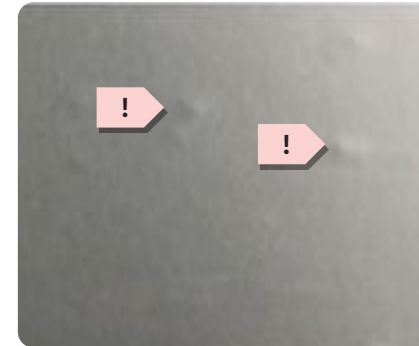
Line protrusion



Scratch



Contamination marking



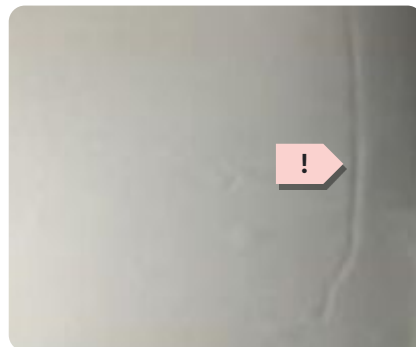
Dot protrusion



Dent



Bubbling



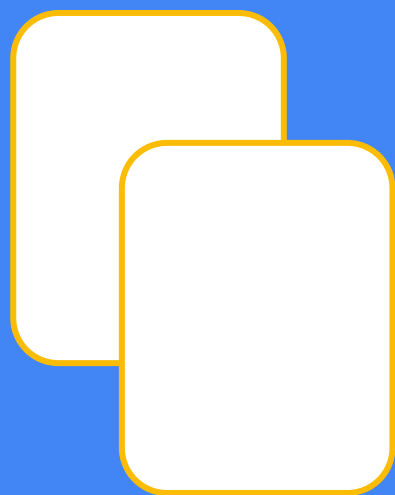
Imprinted line



Swelling or electrolyte leakage

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

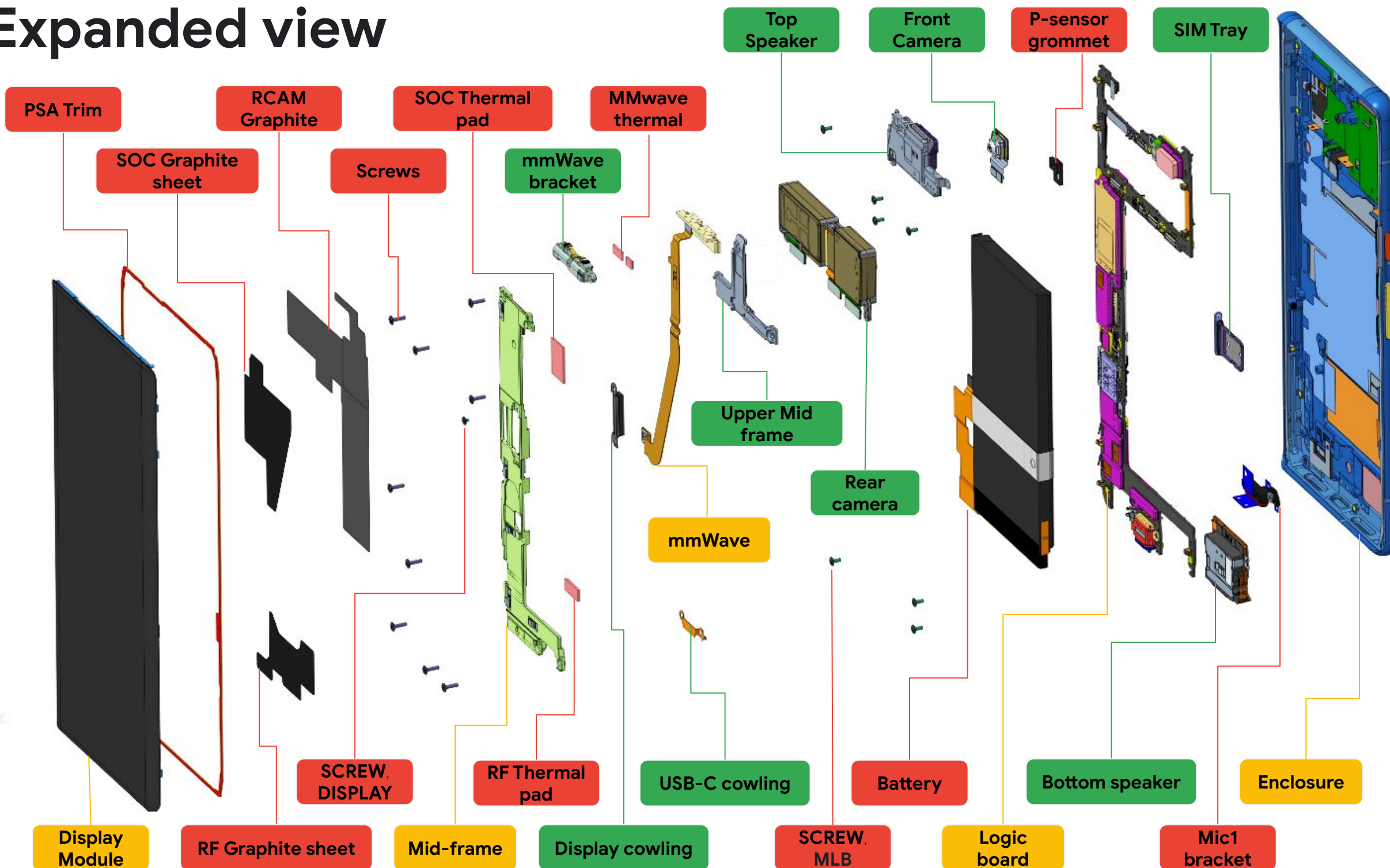




# Introduction



# Expanded view



- Reusable without cleaning
- Reusable with cleaning
- Not Reusable after disassembly





# Pixel touch screen calibration process

## For the Pixel 6 Pro 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.



## Did you know?

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



## Protective bags

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

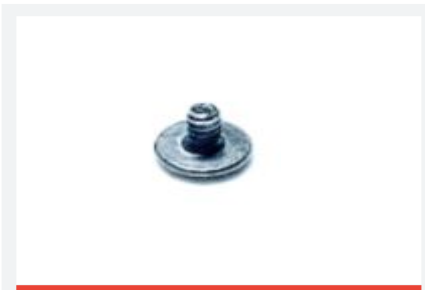


## Avoid touching pins

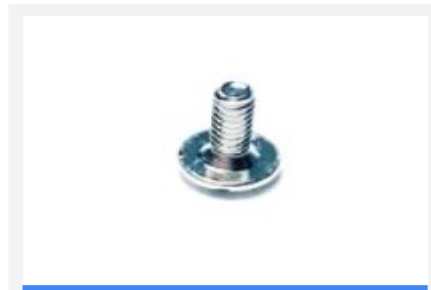
*Don't* touch pins with use of ESD-safe tools to handle components.



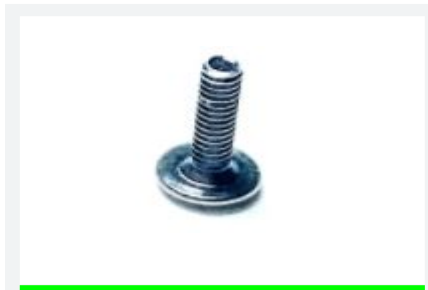
# Screw Map - Pixel 6 Pro



SCREW, DISPLAY  
G250-06026-00



SCREW, MLB  
G250-05752-00



SCREW, HEATSINK  
G250-05753-00

**Note :**

*Torque values on the screw cover fixture(G980-09593-00) have been updated, please refer to the updated Screw Map on the right.*

*If your screw cover does not match the image to the right, please modify the screw cover torque values with a label or other marking before use.*



### 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.



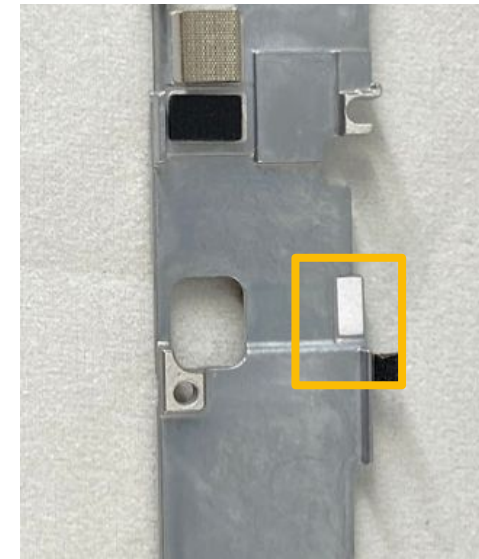
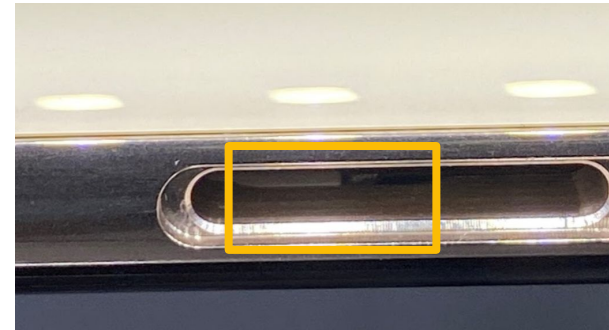
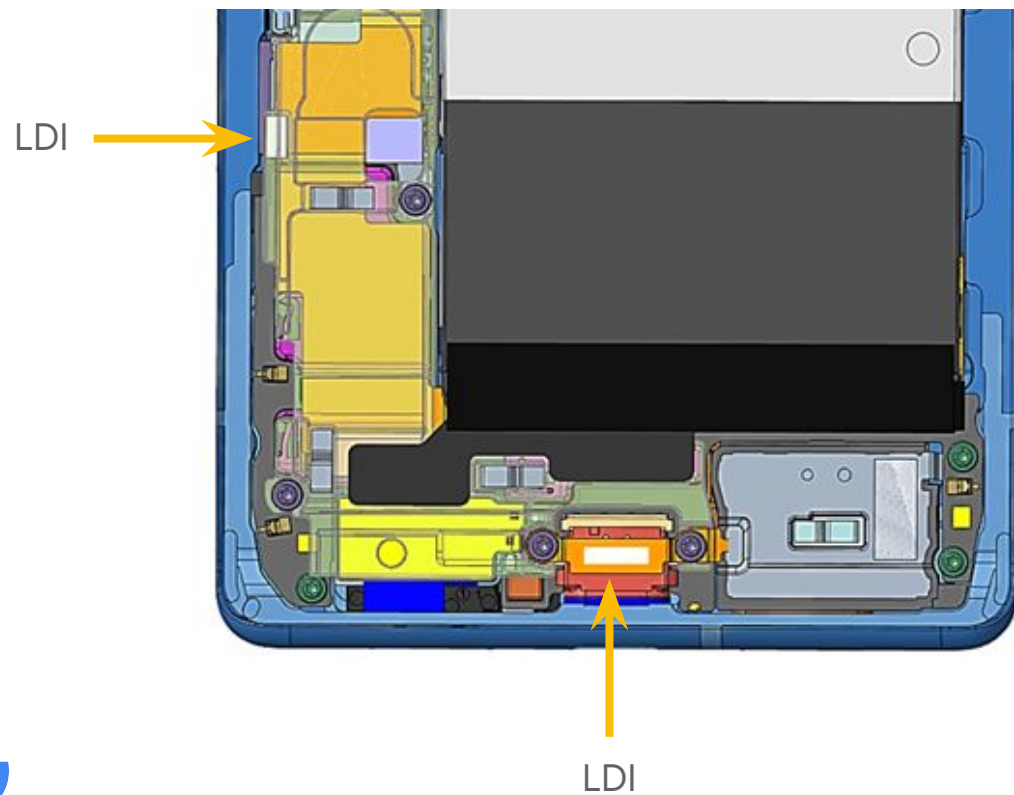




# Liquid damage indicators

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.



- On the underside of the USB-C port, on the cowl.
- On the mid-frame (visible without disassemble the device).





# 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:


- Do not 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 6 Pro

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


Introduction




Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
G940-00895-00




Pixel 6 Pro Assembly Enclosure PSA Align & Press Cover  
G940-00896-00




Pixel 6 Pro Assembly Enclosure and CG Press Cover & Sponge Align  
G940-00897-00



Pixel 6 Pro Assembly Screw Cover  
G940-00898-00



Pixel 6 Pro Assembly Battery Press  
G940-00899-00



Pixel 6 Pro Disassembly Cleaning Cover CG  
G940-00900-00





# Google-approved fixtures

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

Introduction



Universal Disassembly  
Fixture  
G940-00873-00



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



Universal adsorption  
bulb  
G940-00780-00



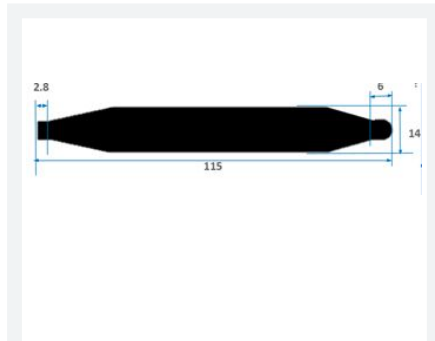
Universal Press Fixture  
G940-00733-00



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

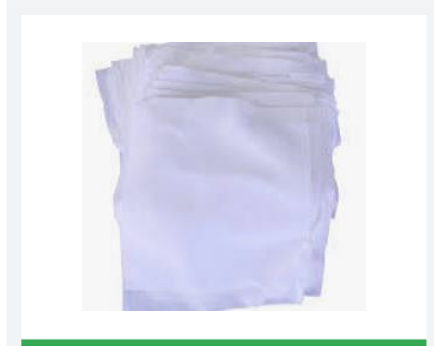
Common tools are suggested to ensure high quality and safe repairs. These items don't need to be purchased from a Google-recommended supplier.



ESD wristband



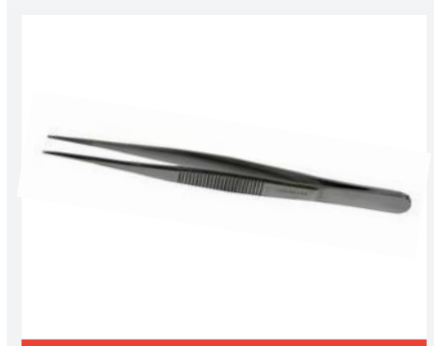
ESD gloves



Dust free cloth



Dust-free  
Dust-free Cotton  
swabs



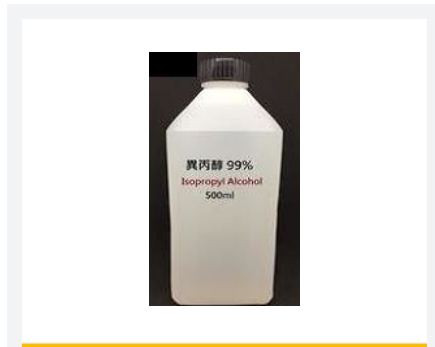
Plastic ESD Tweezers



SIM card ejection pin



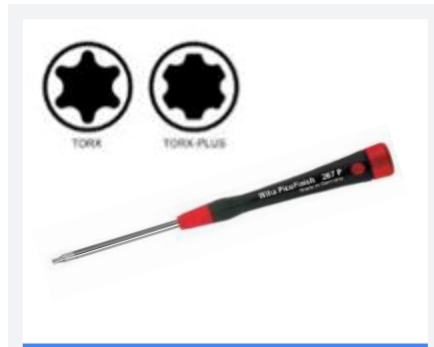
Heating plate



IPA  
(Isopropyl Alcohol)



3M UPUV or AP111  
Primer



Screwdriver Torx Plus  
3IP  
[Optional]



Adjustable type torque  
screwdriver



Spudger (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



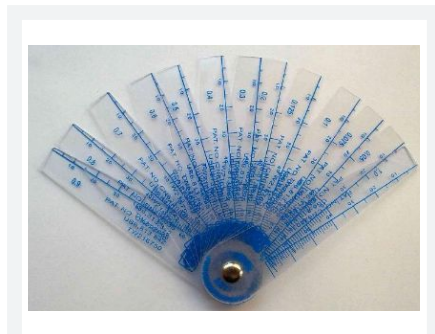
Masking tape



Ionizing air fan



Sankol lubricant  
CFD 409Z\_V2



Feeler gauge



Deglue Machine



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





# 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.

Precaution

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



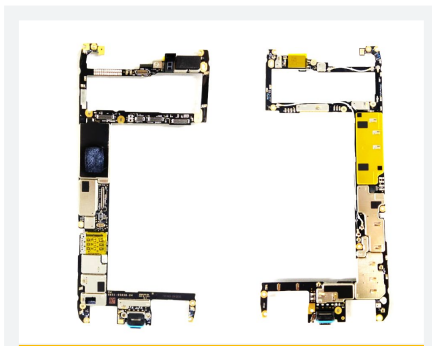
Reusable without cleaning



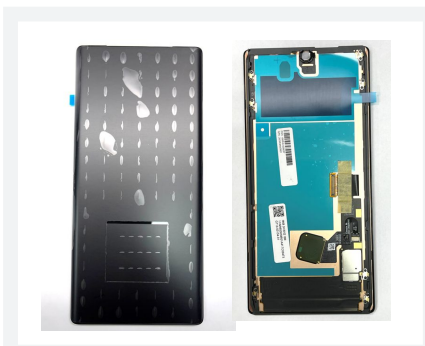
Reusable with cleaning



Not Reusable after disassembly



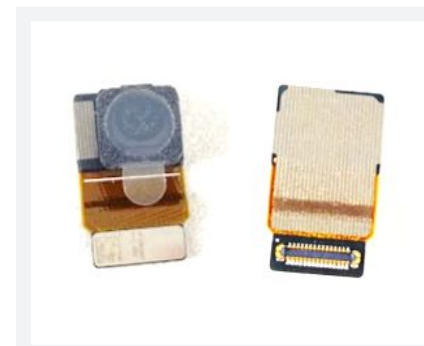
Logic board  
Multiple Part Numbers



Display module  
G949-00219-01



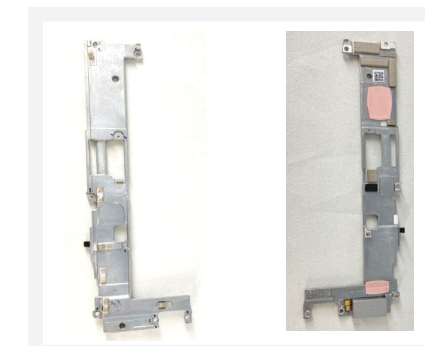
Enclosure  
Multiple Part Numbers



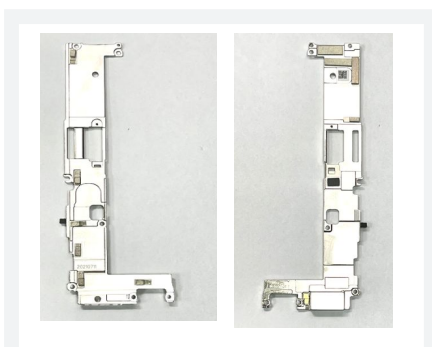
Front camera  
G949-00226-01



Rear camera  
G949-00227-01



Mid-frame\_mmWave  
G949-00228-01



Mid-frame\_Sub-6  
G949-00229-01



mmWave flex  
G949-00230-01



Battery  
G730-06300-01



Display adhesive  
G806-05452-03



USB-C cowling  
G853-01046-02



Display cowling  
G730-05725-01





# Replacement parts



Reusable without cleaning



Reusable with cleaning



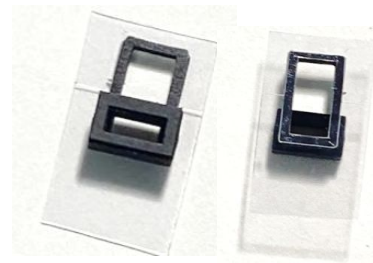
Not Reusable after disassembly



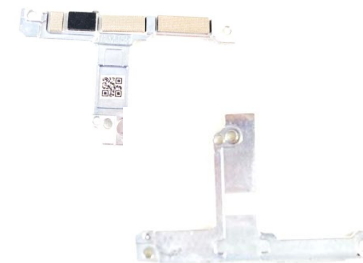
Mic1 bracket  
G730-06000-51



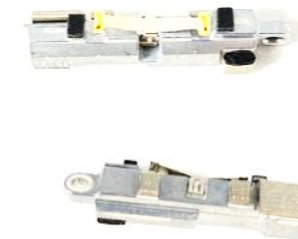
Sim Tray  
Multiple Part Numbers



P-sensor grommet  
G806-04783-13



Upper mid-frame  
G730-05950-01



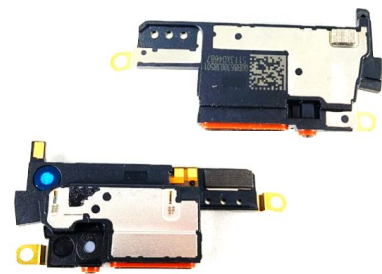
Bracket mmWave  
G730-05758-01



Bracket Sub-6  
G730-05758-03



Bottom speaker  
G863-00367-03



Top speaker  
G863-00396-01



RF thermal pad  
G806-04615-01



SOC thermal pad  
G806-04858-04



mmWave thermal pad  
G806-04854-02



RF Graphite sheet  
G864-00418-01



# Replacement parts



Reusable  
without  
cleaning

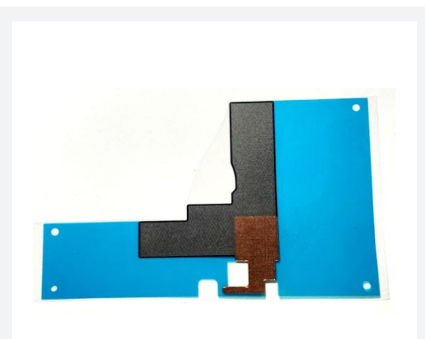


Reusable  
with cleaning



Not Reusable  
after disassembly

Introduction



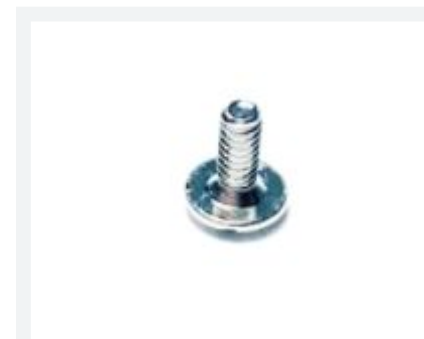
RCAM Graphite  
**G864-00445-01**



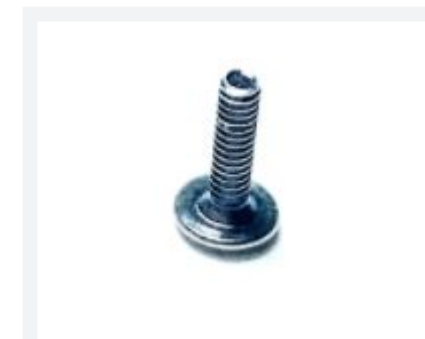
SOC Graphite sheet  
**G864-00446-01**



SCREW, DISPLAY  
**G250-06026-00**



SCREW, MLB  
**G250-05752-00**



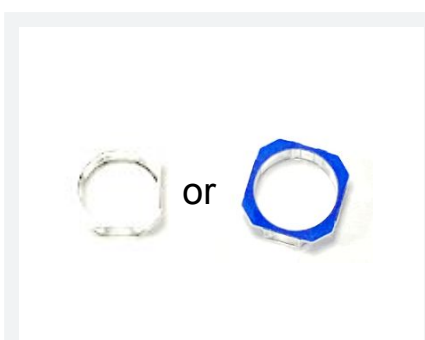
SCREW, HEATSINK  
**G250-05753-00**



FOAM Sub-6  
**G806-05702-01**



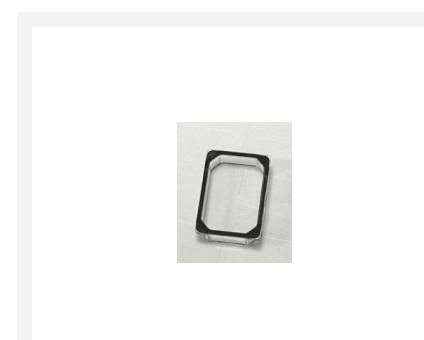
RCAM Cap  
**G852-02351-01**



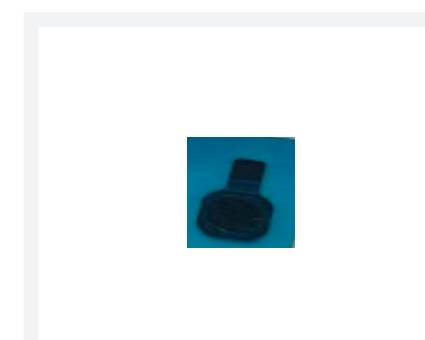
RCAM UW Cap  
**G852-02352-01**



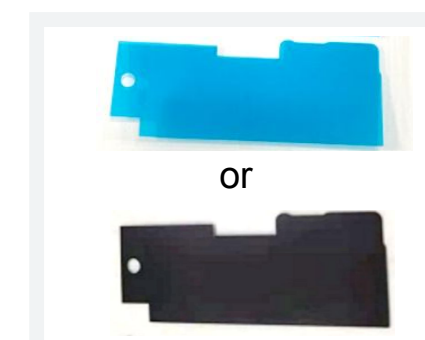
FCAM Cap  
**G852-02355-01**



RCAM Tele Cap  
**G852-02356-01**



FCAM Film  
**G806-06298-01**



Camera liner  
**G806-06299-01**





# Replacement parts



Reusable without cleaning



Reusable with cleaning



Not Reusable after disassembly



Display front protective film  
G806-06300-01



Back cover protective film  
G806-06309-01



Visor Frame protective film  
G806-06310-01



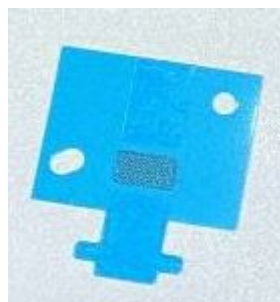
CG\_copper protective  
G806-06032-01



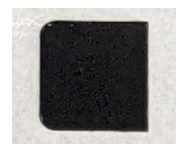
PSA, TOP SPKR  
G806-05716-02



Mic protective liner  
G806-03591-01



MMWAVE\_flex\_CPSA  
G806-05324-01



SPONGE\_Mid Frame  
G806-06554-01



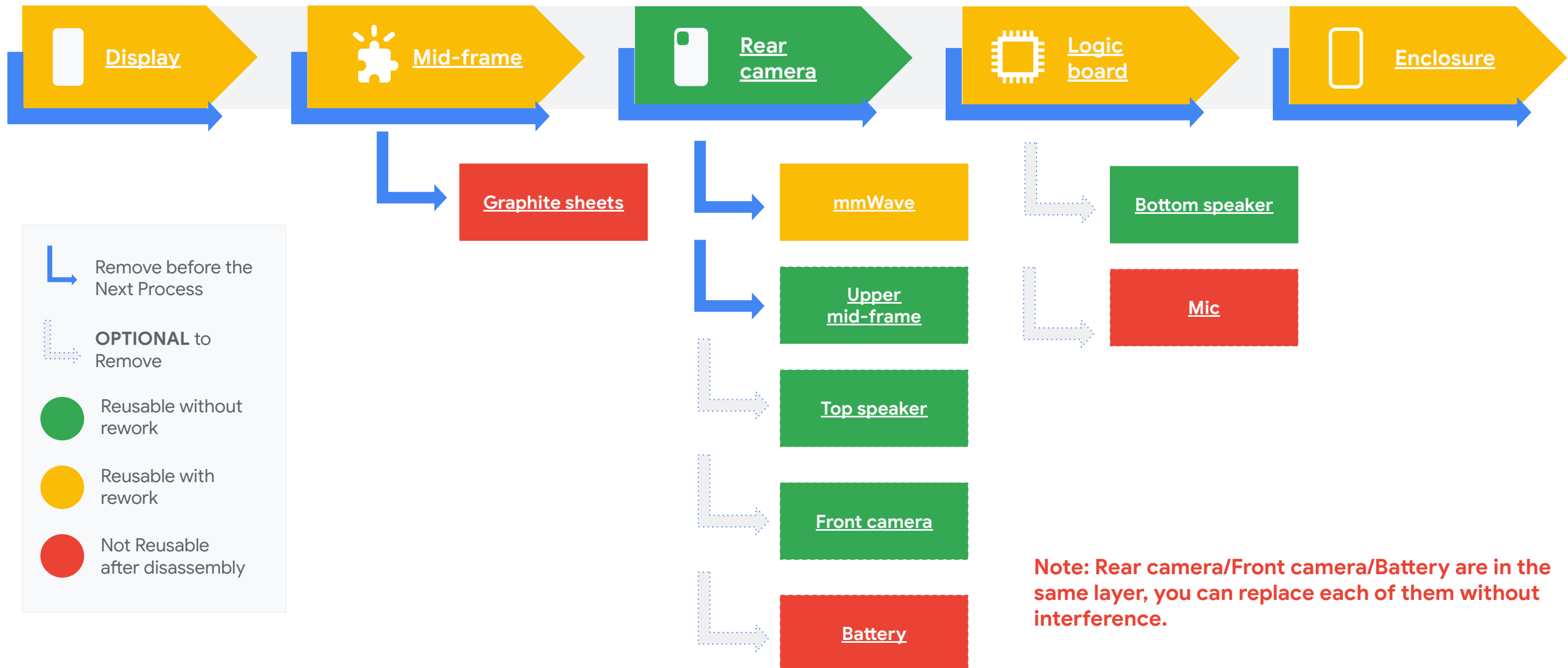


# Repair flows



# Pixel 6 Pro Disassembly flowchart

Disassembly flowchart



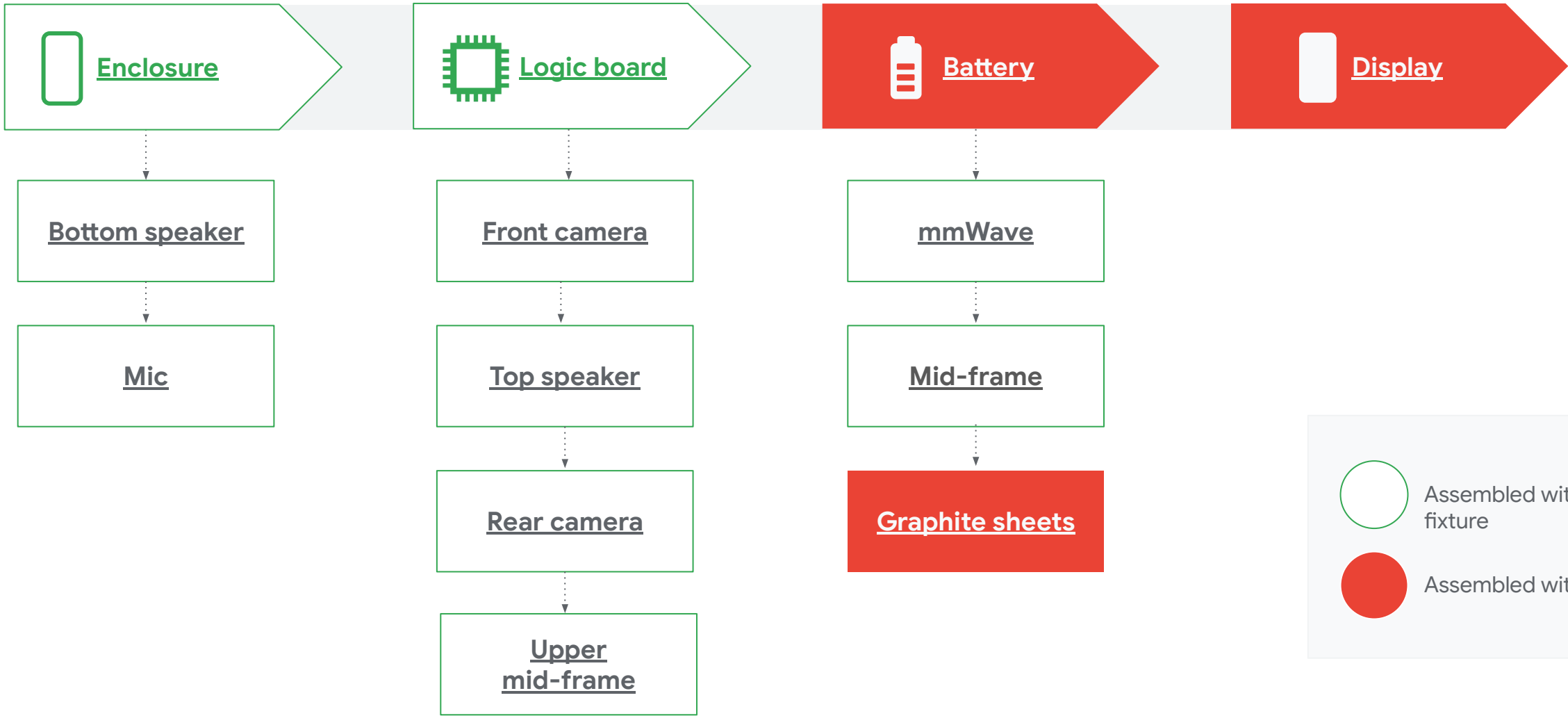
Remove before the Next Process  
 OPTIONAL to Remove  
 Reusable without rework  
 Reusable with rework  
 Not Reusable after disassembly







# Pixel 6 Pro Assembly order

Assembly flowchart



Legend for assembly status:

-  Assembled without fixture
-  Assembled with fixture





Disassembly instructions

# Display





# Display replacement

## Prerequisites



Before beginning a repair, be sure to **power off** the device.

## Tools



- Heat Plate
- Universal disassembly fixture & Universal Device Clips
- Ionizing air fan
- Pixel 6 Pro Enclosure and CG Press Cover & Sponge Align
- Pixel 6 Pro Enclosure PSA Align & Press Cover
- Pixel 6 Pro Enclosure Holder & Graphite Align
- Universal press fixture
- Universal adsorption bulb
- Torx Plus 3IP screwdriver
- Universal Fish line tool
- ESD tweezers
- Universal Disassembly ESD stick
- Universal Disassembly ESD pick
- 3M UPUV Primer
- Pixel 6 Pro Cleaning Cover CG
- Deglude Machine



### 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.



Display

## Parts

		G949-00219-01 Display		G806-06309-01 Back cover protective film	
		G730-05725-01 Display Cowling		G806-06310-01 Visor Frame protective film	
		G250-06026-00 1 x Screw		G806-06032-01 CG_copper_protective	
		G806-05452-01 Display adhesive		G852-02355-01 FCAM Cap	
		G806-06300-01 Display front protective film		G806-06298-01 FCAM Film	



### 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.





## 01. Cover the Display



- Cover the **Display module** with protective film.

**Part:** G949-00219-01 (Display module)

G806-06300-01 (Display front protective film)

## 02. Cover the Back Glass



- Place a Back and Visor protective film over the **Rear camera**.

**Part:** G806-06309-01 (Back cover protective film)

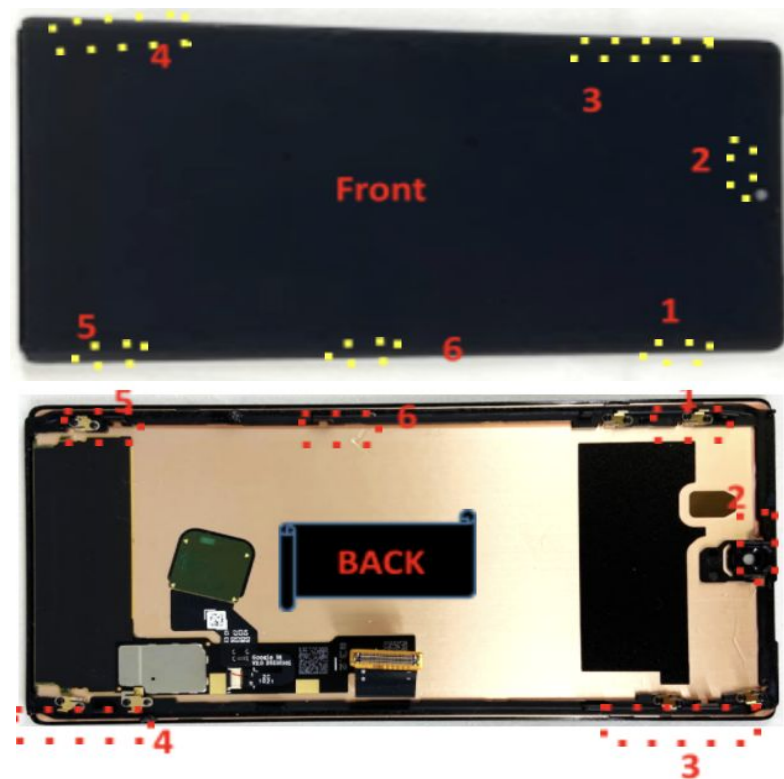
G806-06310-01 (Visor Frame protective film)



### 03. Soften the adhesive



### 04. Where snaps are



- Place the device on a **Heat plate** set to **122°F/50 °C** for 5 mins to soften the adhesive.

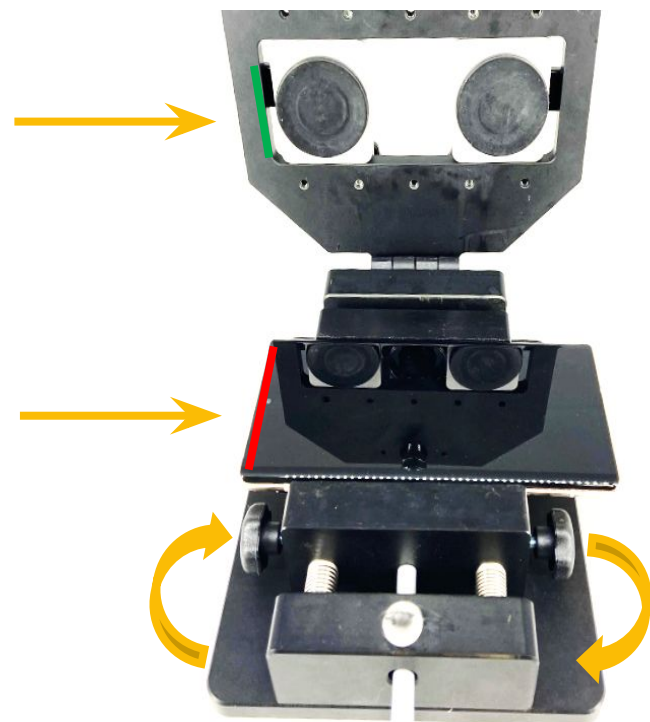
**Caution:** Heating plate is a Hot Surface. Use caution as it could cause burns.



- Before removing the Display module, be aware that there are six snaps underneath.
- Avoid damaging the snaps during the disassembly process.



## 05. Use fixture

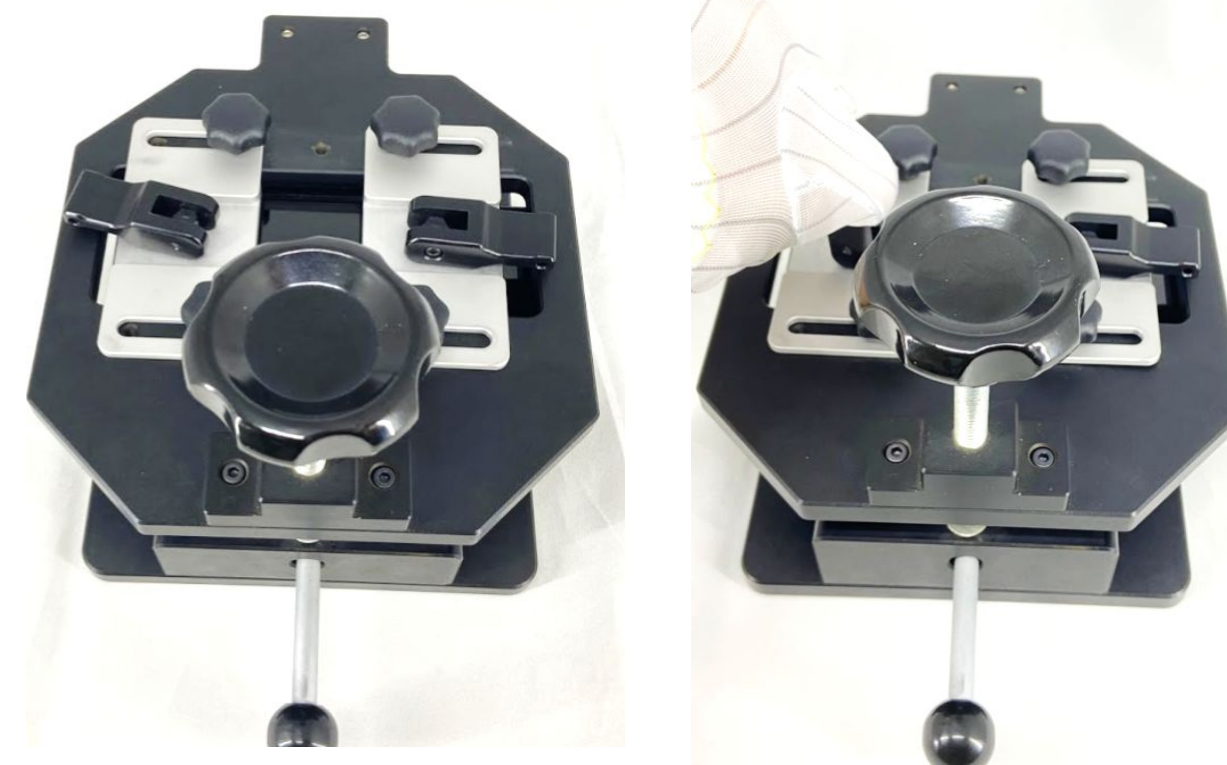


- Place the device on the holder of the **Universal disassembly fixture & Universal Device Clips** and adjust the position to let the **Display module** (the red line) align the edge of the left suction cup (the green line).
- Fix the device and lock with the screws.

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



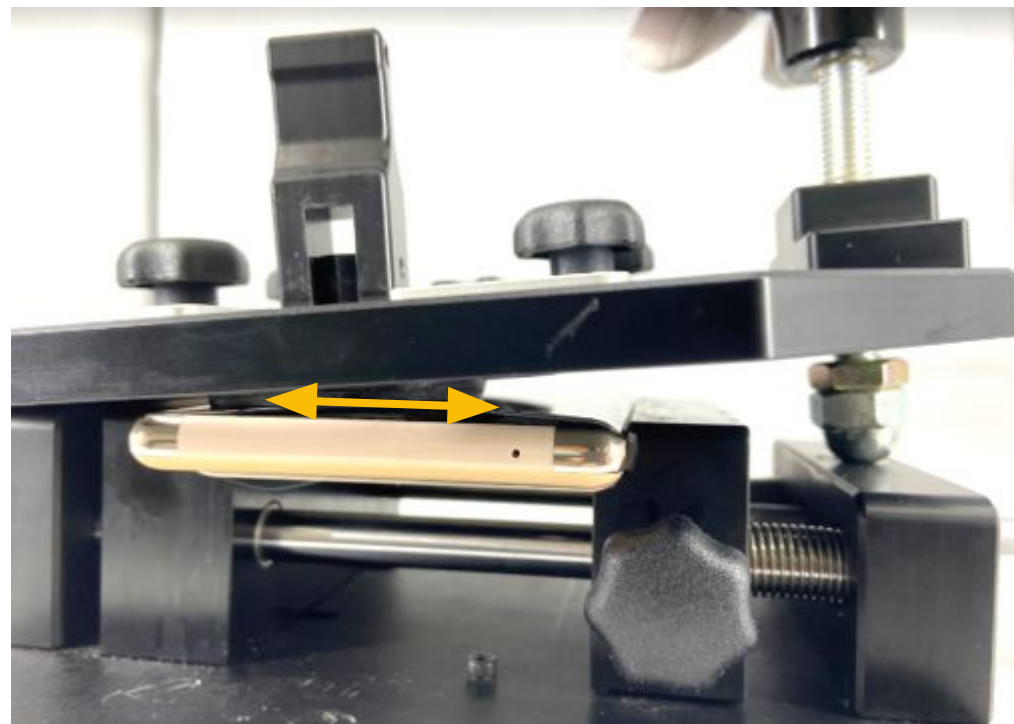
## 06. Cover fixture



- Cover the lid of **Universal disassembly fixture** as shown in the left picture.
- Trigger the left suction cup as shown in the right picture.



## 07. Use fixture



- Slowly rotate the knob and the **Display module** to separate from the **Enclosure**.
- As they part, insert an **Universal Disassembly ESD stick** into the gap to prevent them from re-closing.

Be careful not to push the Universal Disassembly ESD stick beyond the adhesive surface to avoid damaging the screen, battery, or other components.



## 08. Open the lid



- Release the suction cup, and open the lid.
- Do not remove the **Universal Disassembly ESD stick** from the device.

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



### 09. Separate Top/Right/Left edge



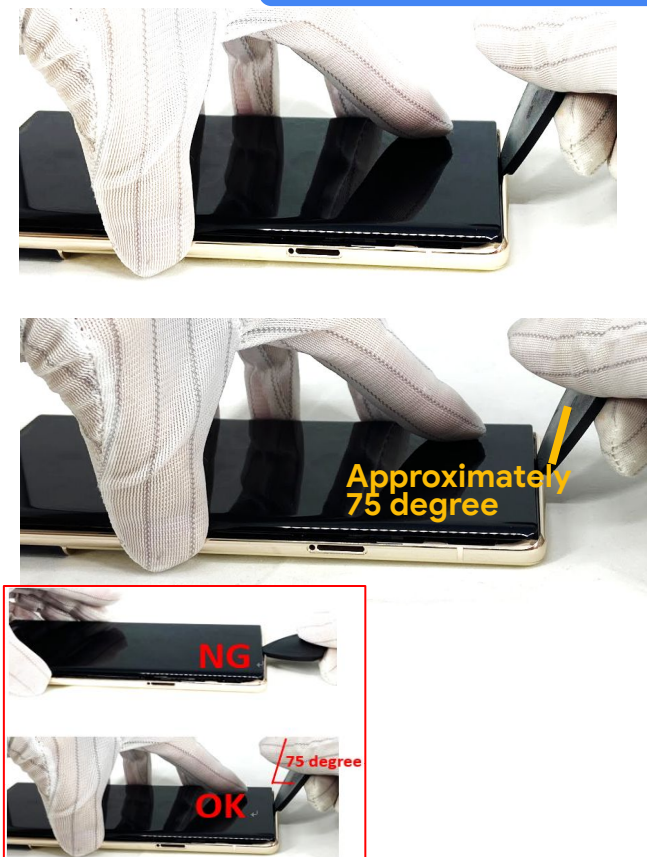
- Insert an **Universal Disassembly ESD pick (3.5mm)** into the gap to separate the top side.
- Then slide around the right side and left side.



Insert and keep pulling the gap horizontally.



### 10. Separate bottom edge



- Separate the bottom edge with the **Universal Disassembly ESD pick (3.5mm)** inserted at an approximately 75 degree.
- $^{\circ}$  angle and slide horizontally, as shown above.

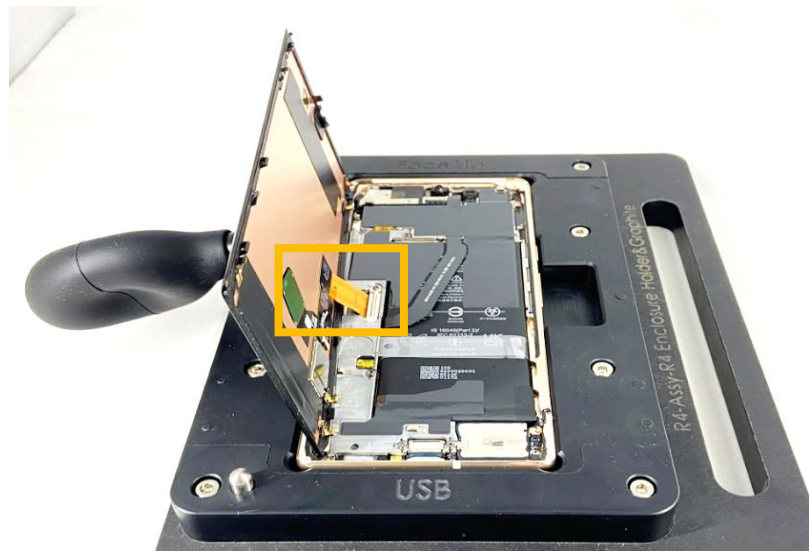


Do not insert the pick horizontally, insert at 75° and keep the **Universal Disassembly ESD pick** at that angle.

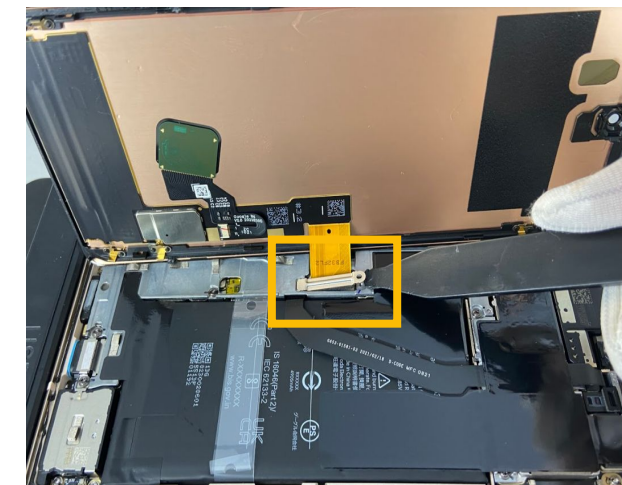
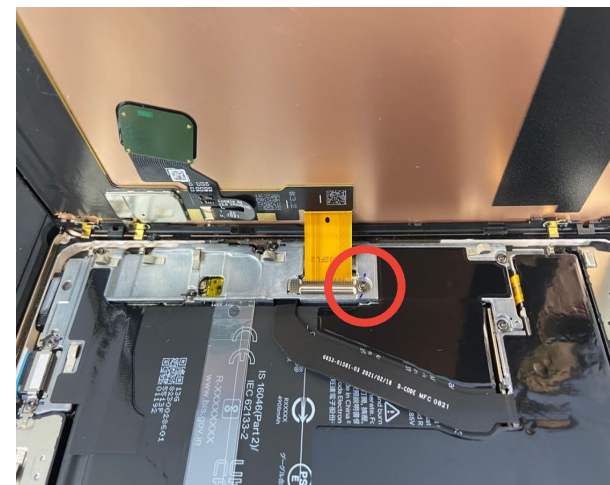




## 11. Hold the Display



## 12. Remove cowling



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

Do not attempt to separate display by force. It is still attached to the enclosure via a very fragile cable. Damage to this cable may cause the device to not function as intended.



- Unscrew the cowling with a **Torx Plus 3IP screwdriver**.
- Remove with an **Universal Disassembly ESD stick**.

Part: G250-06026-00 (Screw)

Part: G730-05725-01 (Display Cowling)

Do not reuse the part (Screw)



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker







### 13. Disconnect display



### 14. Camera protection



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

**Part:** G949-00219-01 (Display module)

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



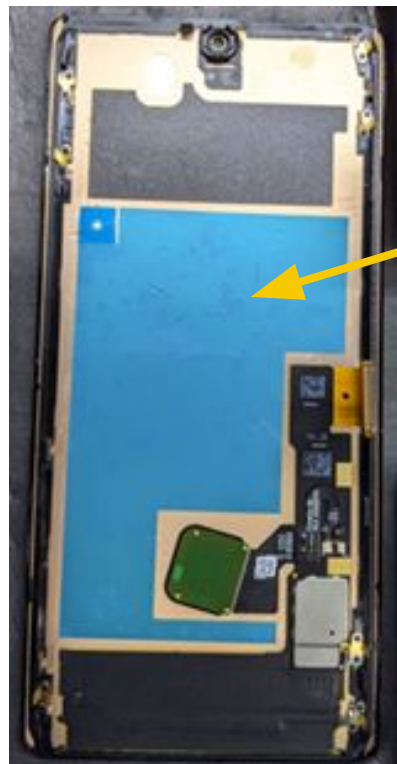
- Put on the protective cap (on front Cam) and FCAM protective film (on CG's front Cam holder), and gently press with **ESD tweezers**.

**Part:** G806-06298-01 (Front Cam Film)  
G852-02355-01 (Front Cam Cap)





## 15. Adhere foil film



- Adhere **copper protective film** to the **Display module**.

**Part:** G806-06032-01 (copper protective film)

Only apply the copper protective film to reuse a good working, none cracked screen.



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

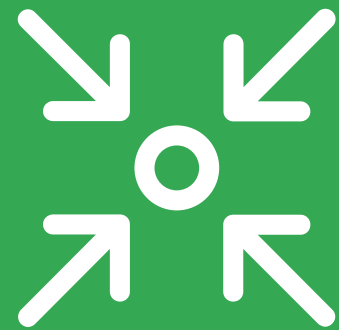
Battery

Logic board

Mic1 Bracket

Bottom speaker



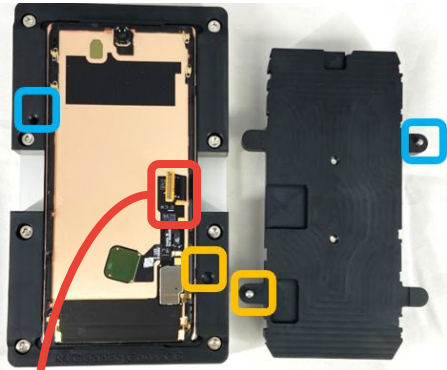


Assembly instructions

# Display

## 01. Re-using the Display with fixture

### Solution-1



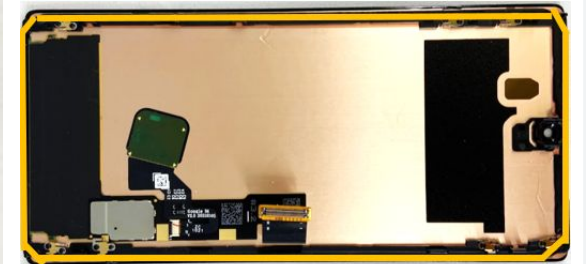
Make sure FPC is correctly held within the edges of CG.



- Use the **Universal adsorption bulb** to place the **Display** in **Pixel 6 Pro Disassembly 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.

## 01. 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 may exists.





## 02. Apply primer



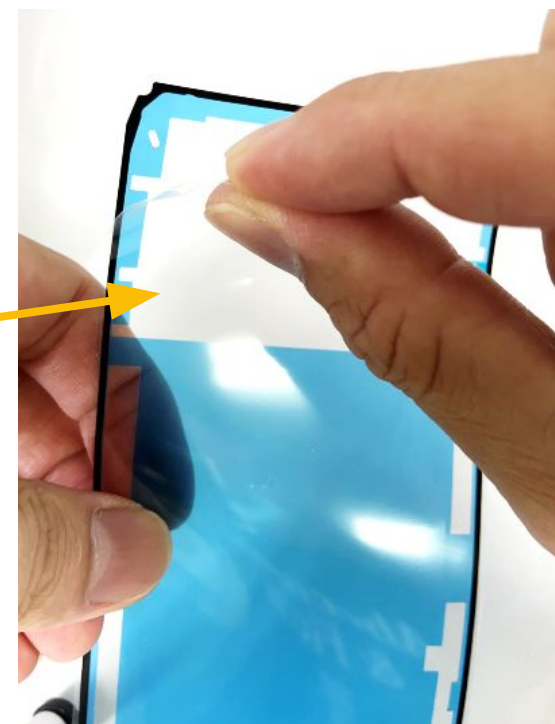
- Apply **3M UPUV Primer** around the edge of the device.
- Use an **ionizing air fan** to blow over the device to prepare the **Primer** for the adhesive.

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



## 03. Remove liner

transparent liner



- Slowly remove the transparent liner from the **adhesive**.
- Part:** G806-05452-03 (Adhesive)

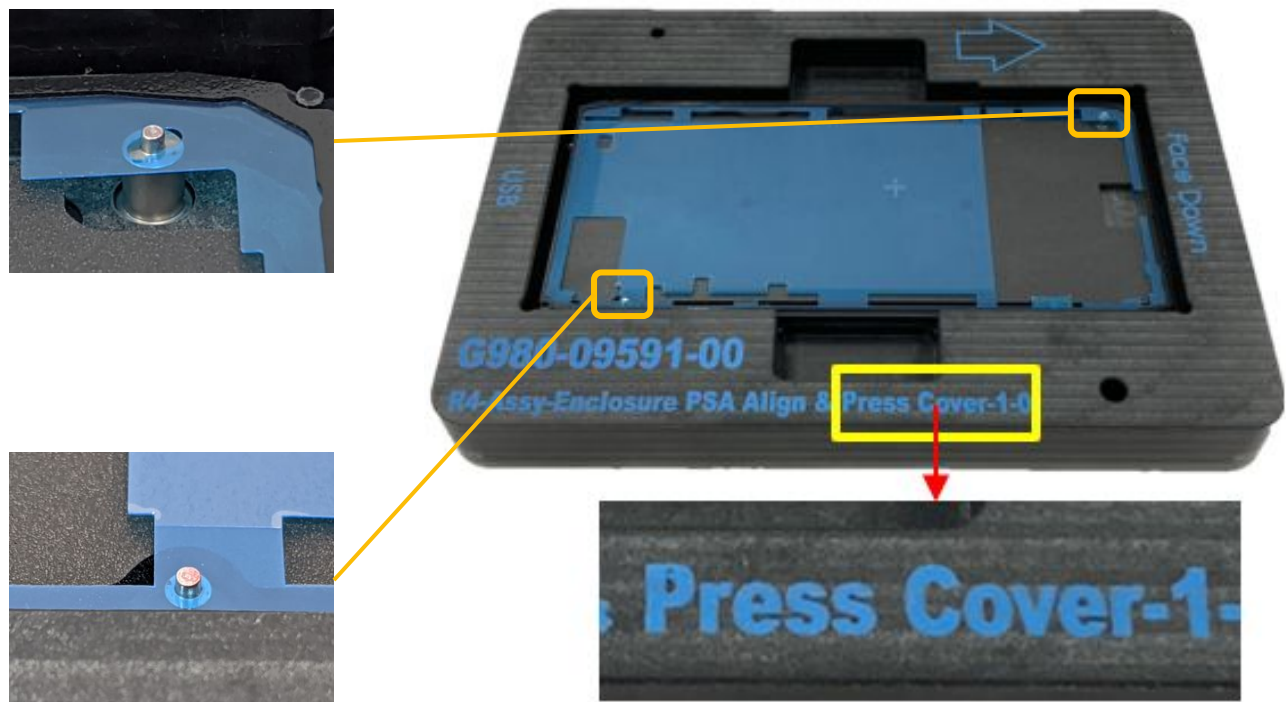
Do not touch the adhesive. If it gets dirty, change for another one.





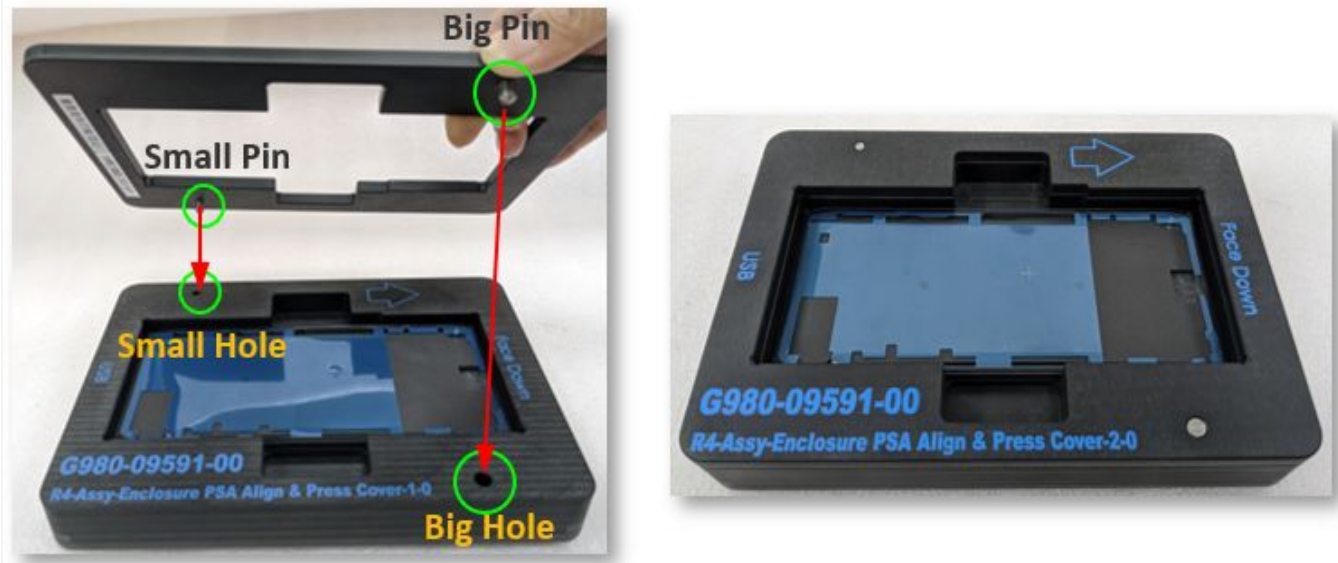
Display

## 04. Adhesive alignment



Align Enclosure PSA with Press Cover – 1 Only

## 05. Place another cover



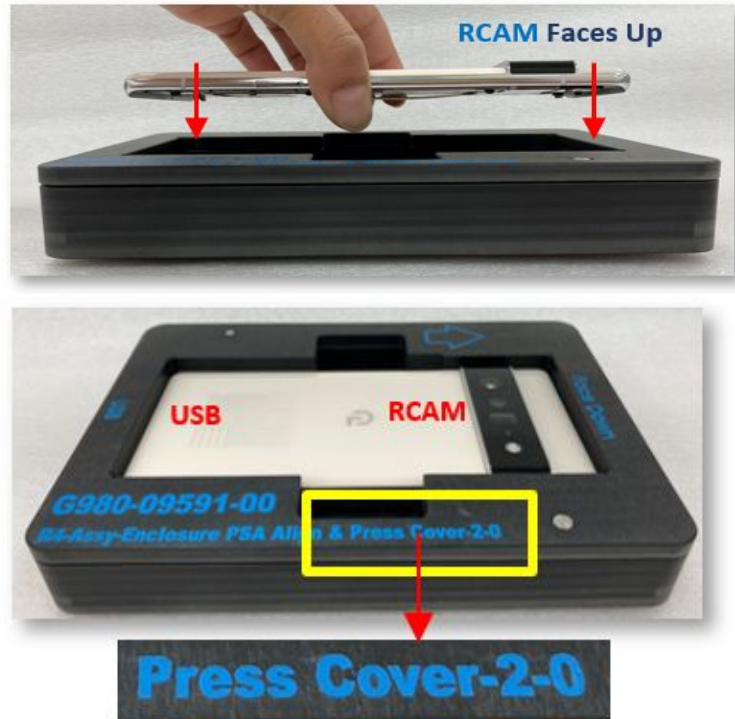
- Place the adhesive in the Pixel 6 Pro Assembly Enclosure PSA Align & Press Cover-1 with the ESD tweezers.

- Place the Pixel 6 Pro Enclosure PSA Align & Press Cover-2 on the Pixel 6 Pro Enclosure PSA Align & Press Cover-1.

Do not touch the adhesive. If it gets dirty, change for another one.



## 06. Enclosure to adhesive



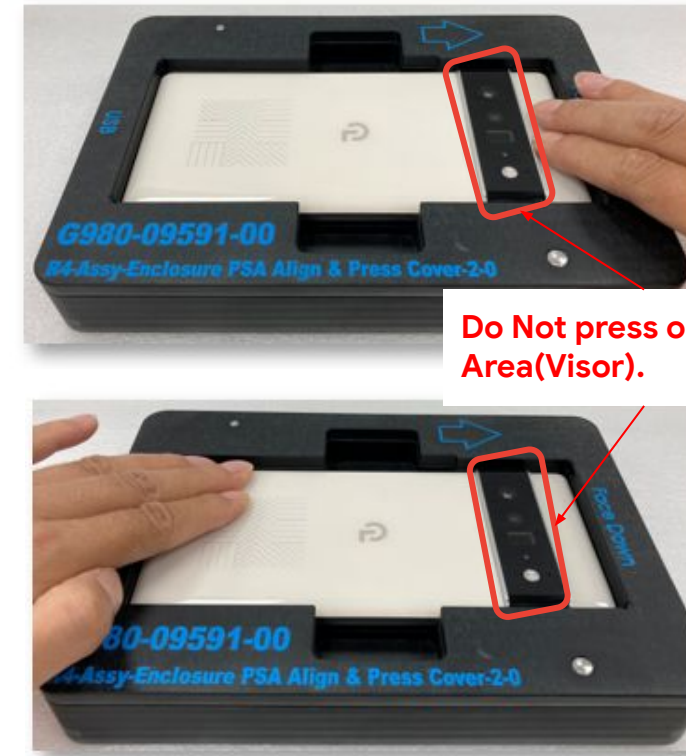
Align Enclosure with Press Cover – 2 added on

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

Place it vertically.



## 07. Activate the PSA



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

Do Not press on RCAM Area(Visor) during the process.





Display

## 08. Remove another cover



## 09. Remove Enclosure



- Remove the **Pixel 6 Pro Enclosure PSA Align & Press Cover-2** from the **Pixel 6 Pro Enclosure PSA Align & Press Cover-1**.

- Remove the **Enclosure** from the **Pixel 6 Pro Enclosure PSA Align & Press Cover-1** vertically.

Take out the Enclosure vertically.



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker

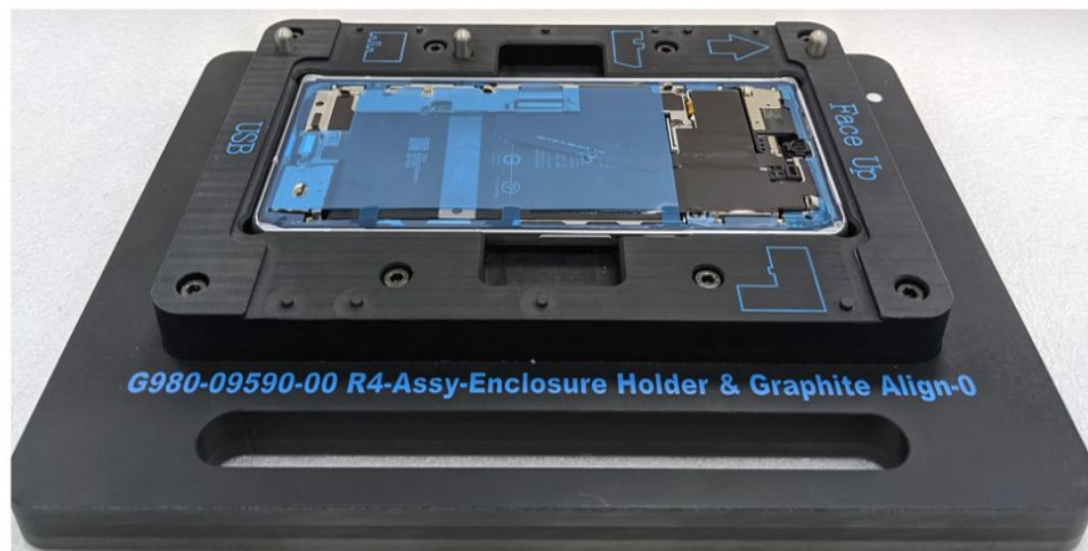






Display

## 10. Adhesive to enclosure



- Place the **Enclosure** in the **Pixel 6 Pro Assembly Enclosure Holder & Graphite Align**.

## 11. Remove the liner (1st layer)



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

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

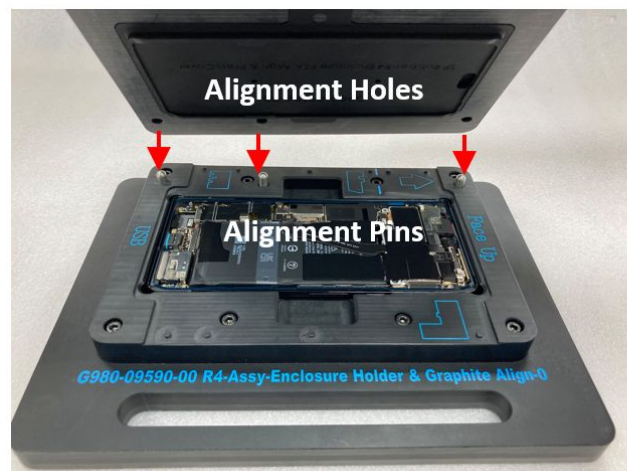
Bottom speaker





Display

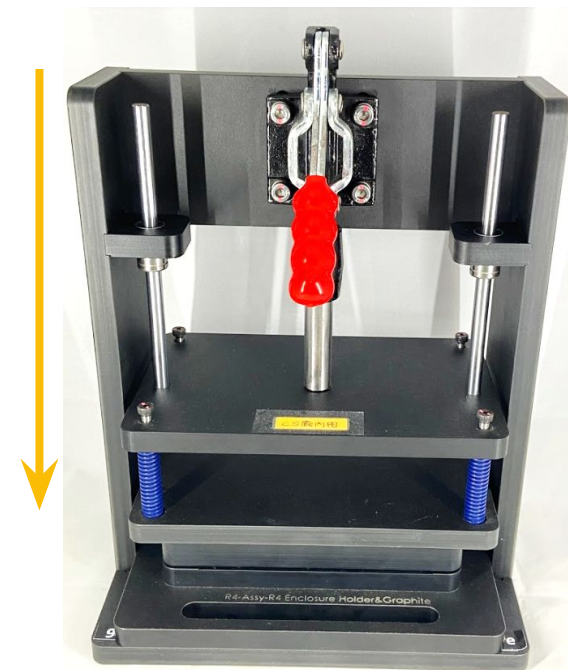
## 12. Place the press cover



Pre-press PSA with Press Cover – 1 Only

- Place the **Pixel 6 Pro Assembly Enclosure PSA Align & Press Cover-1** ON TOP OF **Pixel 6 Pro Assembly Enclosure Holder & Graphite Align**.

## 13. Press together in fixture



- Place into the **Universal press fixture** and press the handle down for **10 seconds**.
- Then push back the handle to the original position and remove the holder.

Pinch point. Keeps hands clear during operation.



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

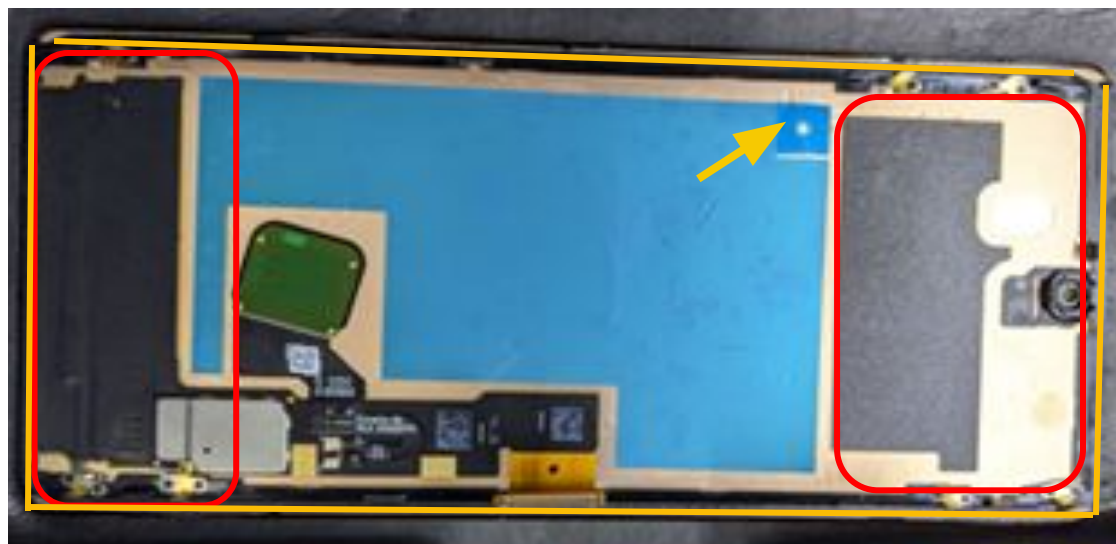
Mic1 Bracket

Bottom speaker





## 14. Apply primer on display



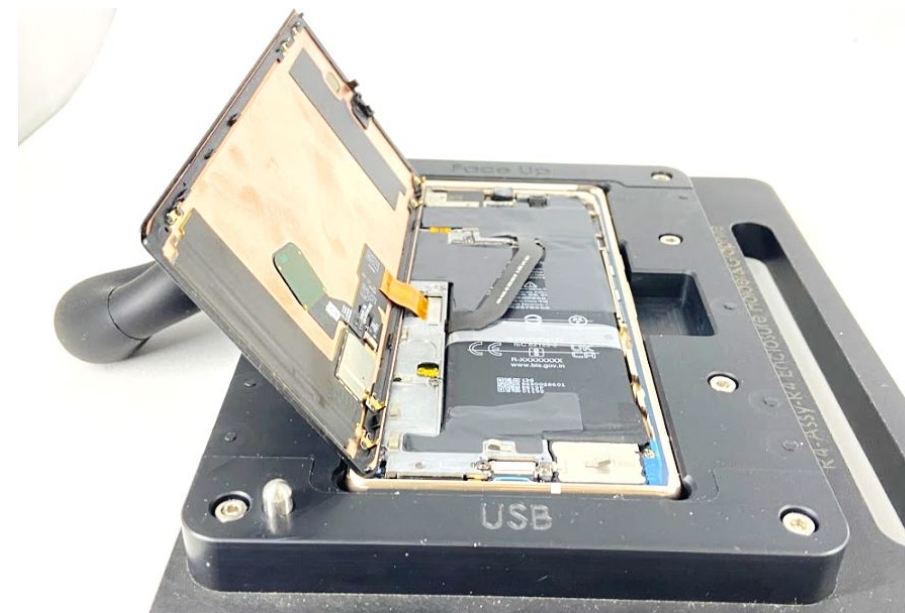
- Apply **3M UPUV Primer** around the edges of the **Display module** using a **Dust-free Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over the device to prepare the Primer for the adhesive.

Part: G949-00219-01 (Display module),

When apply UPUV 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.



## 15. Aligning display module

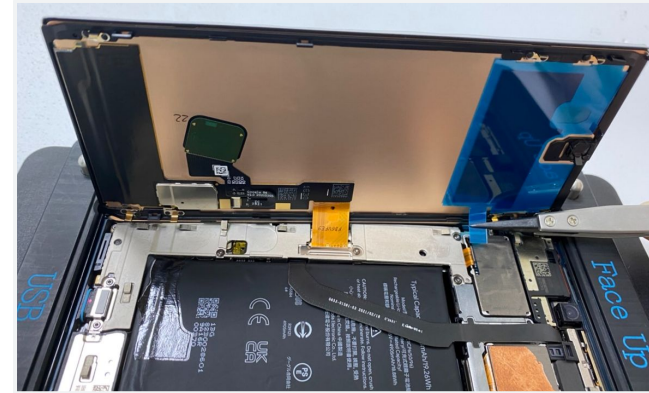


- Use the **Universal adsorption bulb** to prop up the **Display module**.

## 16. Remove liner



CG\_copper\_protective

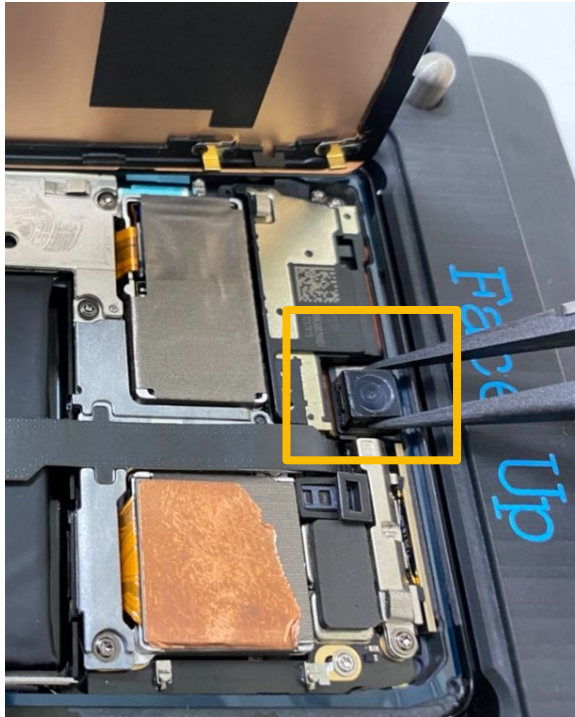
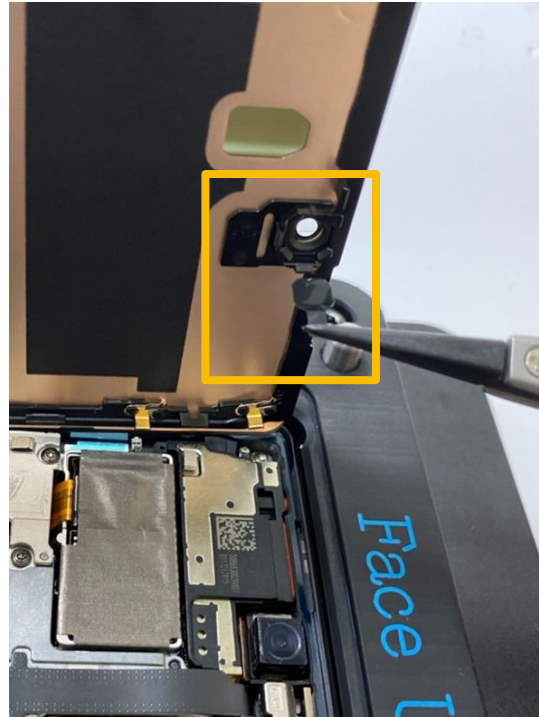


sponge protective

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

Part: G806-06032-01 (CG\_copper\_protective)

## 17. Remove film/cap

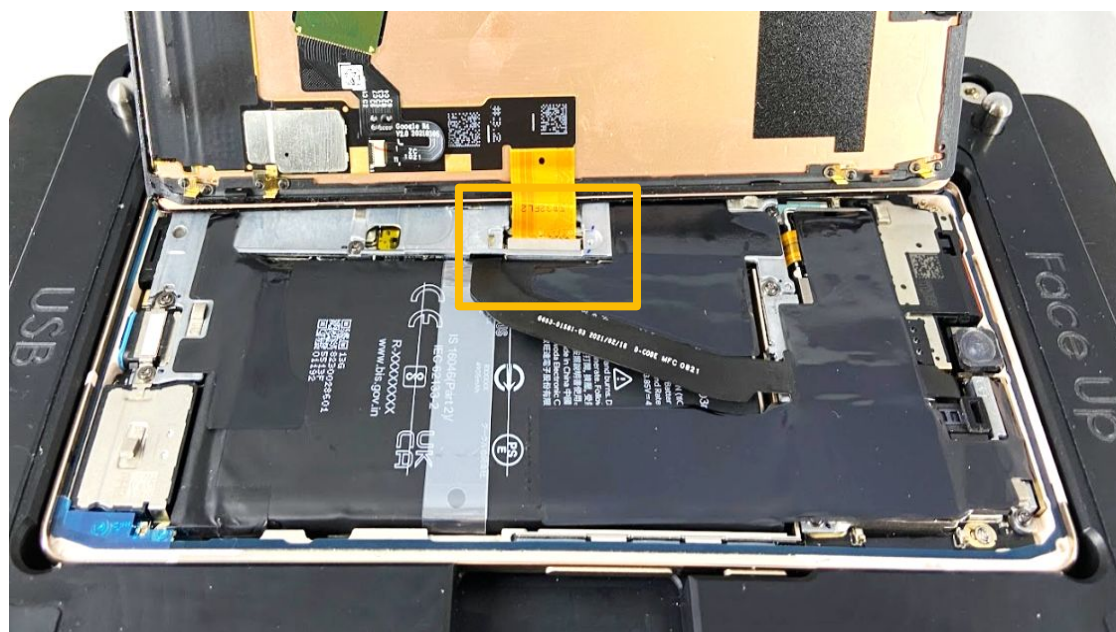


- Remove the enclosure **Front Cam film / Front Cam Cap**.

Part: G806-06298-01 (FCAM film)  
G852-02183-01 (FCAM Cap)



## 18. Connect display module



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

## 19. 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.

Do not touch the display until it turns on fully since display self-calibration is in progress.

[Display Touch Calibration Details](#)





## 20. Install UDFPS Calibration



- Reboot device into the Fastboot mode
- Connect the device with USB-C cable to the computer, and visit [pixelrepair.withgoogle.com](https://pixelrepair.withgoogle.com) to download the UDFPS calibration software

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



## 21. Attach display cowling



- Attach a new **Display cowling** over the connector.
- Tighten the one screw with a **Torx Plus 3IP screwdriver**.

**Torque force : 0.7 ± 0.03kgf-cm**

Part: G730-05725-01 (Display cowling)

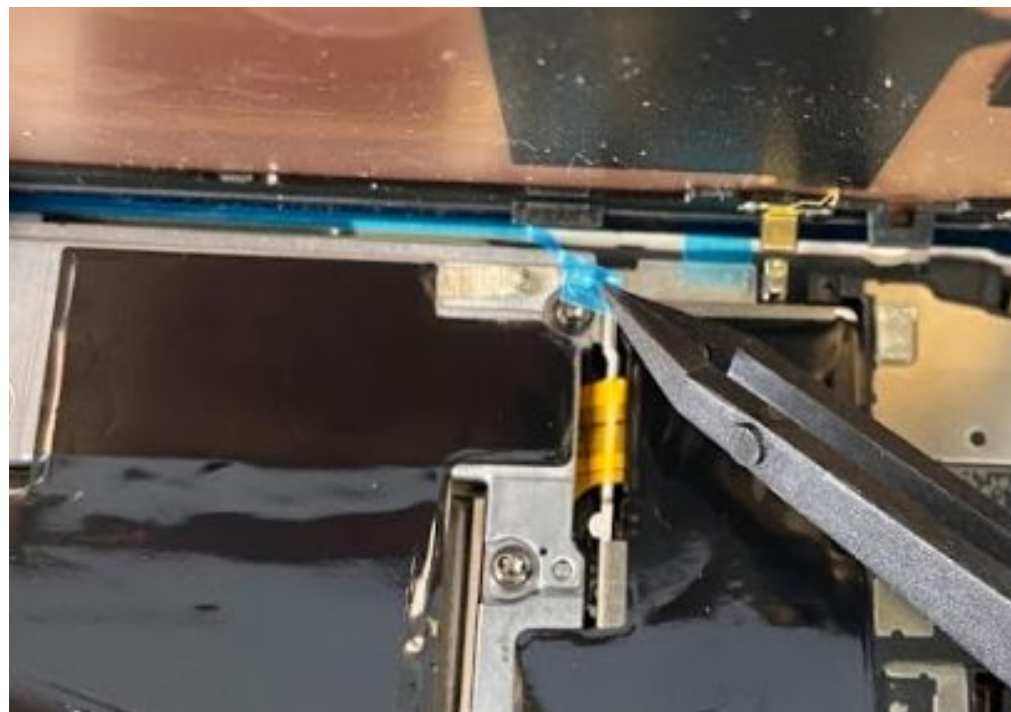
Part: G250-06026-00 (Screw)

Be careful not to puncture the battery when tightening the screw.





## 22. Remove liner



- Use the **Universal adsorption bulb** to lift up the **Display module**.
- Use **ESD tweezers** to grab the liner and carefully pull it away.

## 23. Tilt the FCAM



Fig 1  
OK



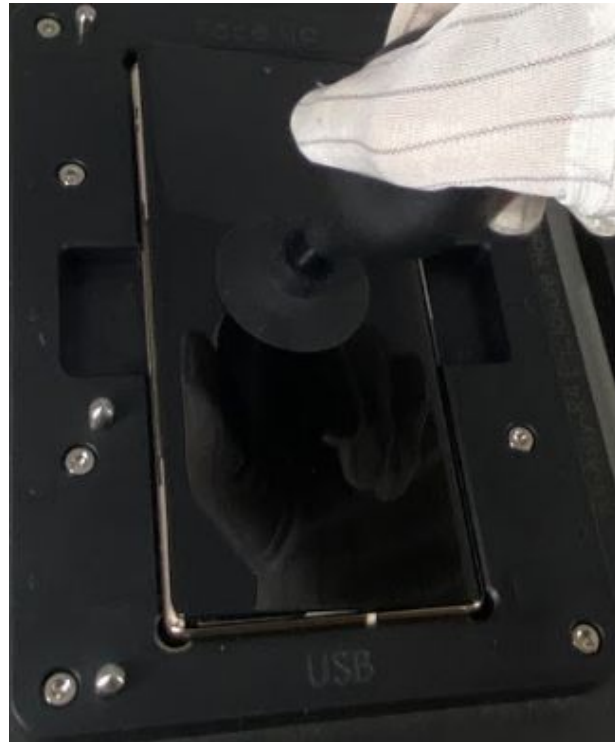
Fig 2  
NG

- Tilt **FCAM** approx. 10 degrees to be higher than the trim PSA. The purpose is to ensure FACM concentricity while FCAM is assembling to the bracket of the CG.

FCAM should tilt a bit as Fig 1. to ensure concentricity.  
Fig 2, almost flat, NG



## 24. Fix down display

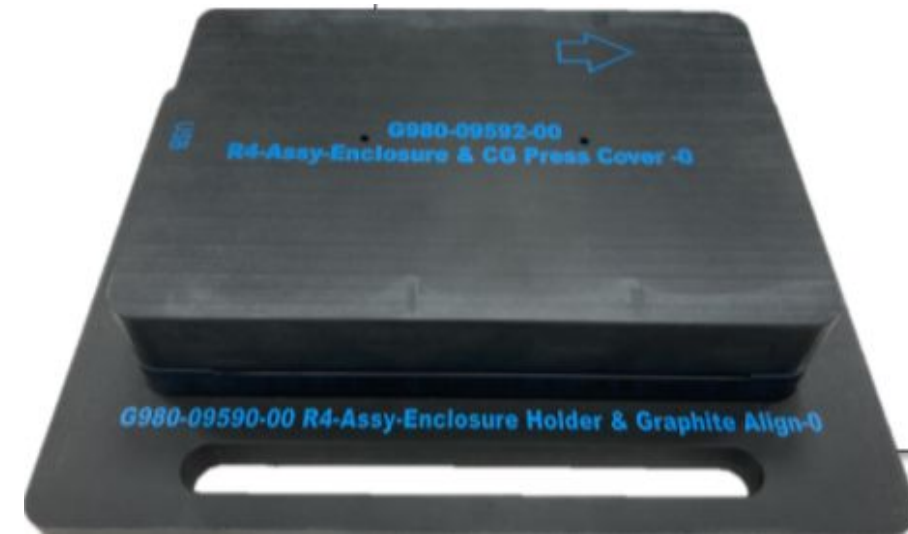


- Align the **Display module** on the **Enclosure vertically**.
- Take the device out from the **Holder** and press around the display bezel with both hands.

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



## 25. Place in holder

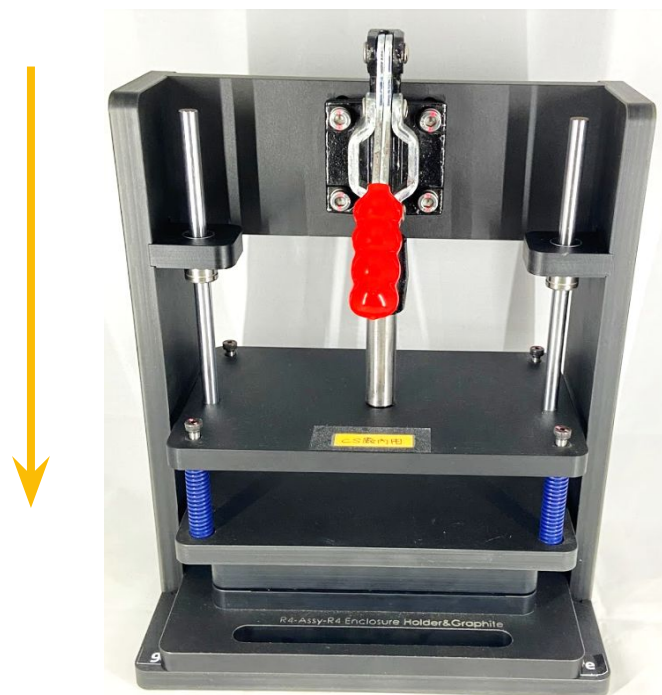


- Place the device back in the **Pixel 6 Pro Enclosure holder** and place the **Press cover** on top.





## 26. Place in Press fixture



- 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 6 Pro Enclosure Holder & Graphite Align  
ESD Tweezers  
Universal Disassembly ESD stick  
Universal scraper

## Parts



G864-00418-01  
RF Graphite Sheet



G864-00445-01  
Rear camera  
graphite sheet



G864-00446-01  
SOC graphite  
sheet



### Caution!

Review all [safety precautions](#) before beginning work.



## 01. Graphite removal



## 02. Two remaining sheets



- Use **ESD tweezers** to lift the 3 **Graphite sheets** and then remove slowly by hand. Do not reuse the part.

Part: G864-00418-01 (RF graphite sheet)

Part: G864-00445-01 (Rear camera graphite sheet)

Part: G864-00446-01 (SOC graphite sheet)

Be careful not to puncture the battery while using the tweezers.

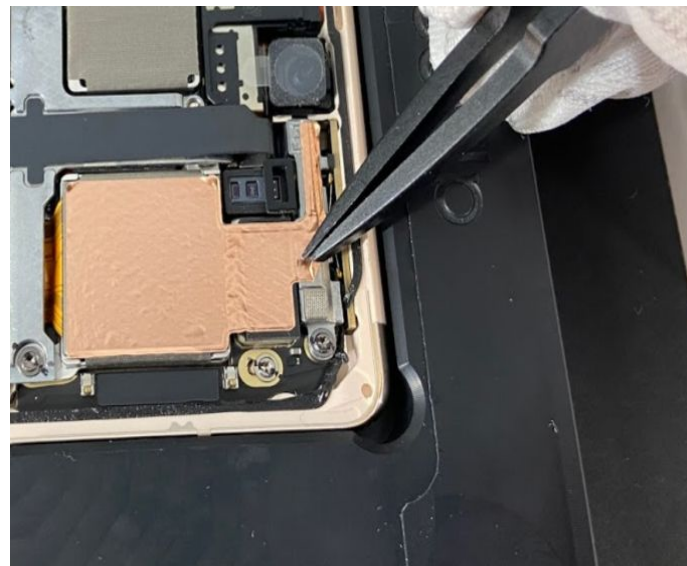


Do not reuse the part





### 03. Remove copper foil



- Use **ESD tweezers** to pick up and pull out the copper foil. It's part of the **Rear camera graphite sheet**.

**Part:** G864-00445-01 (Rear camera graphite sheet)

Do not reuse the part



Display

**Graphic sheet**

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker



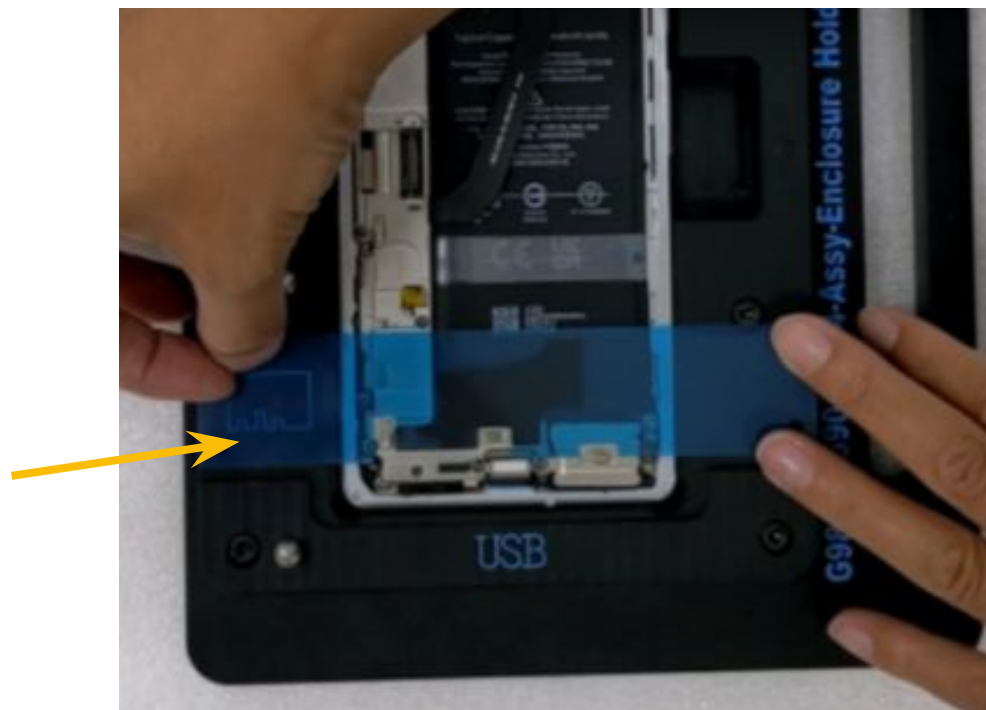


Assembly instructions

# Graphite sheets



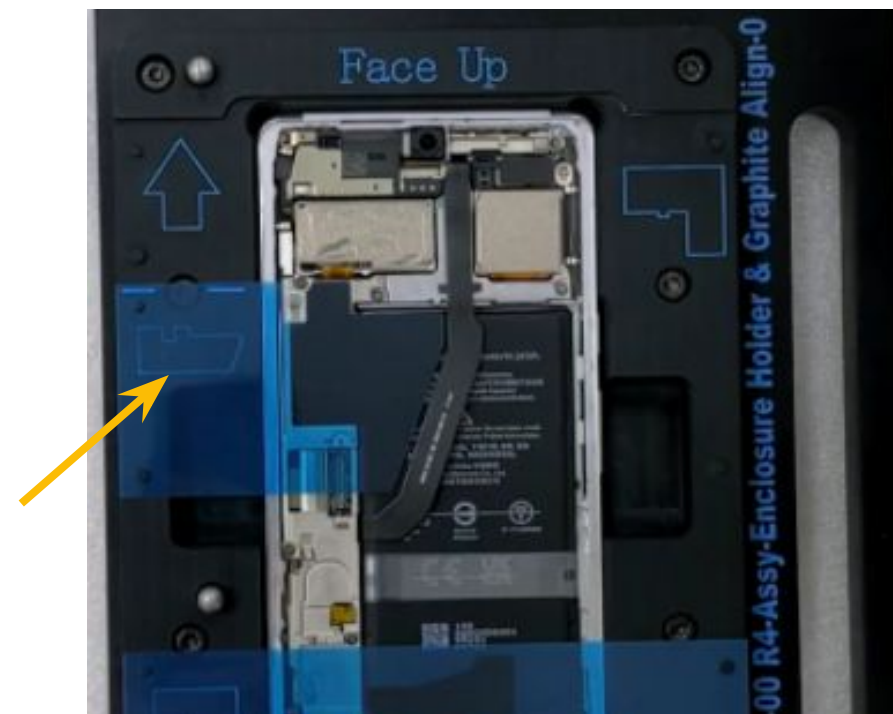
## 01. Apply graphite sheet



- With the device in the **Pixel 6 Pro Enclosure holder**, place the **RF graphite sheet**, aligning with the 4 positioning columns.

Part: G864-00418-01 (RF graphite sheet)

## 02. Apply graphite sheet



- Place the **SOC graphite sheet** and align it with the 2 positioning columns on the left.

Part: G864-00446-01 (SOC graphite sheet)

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

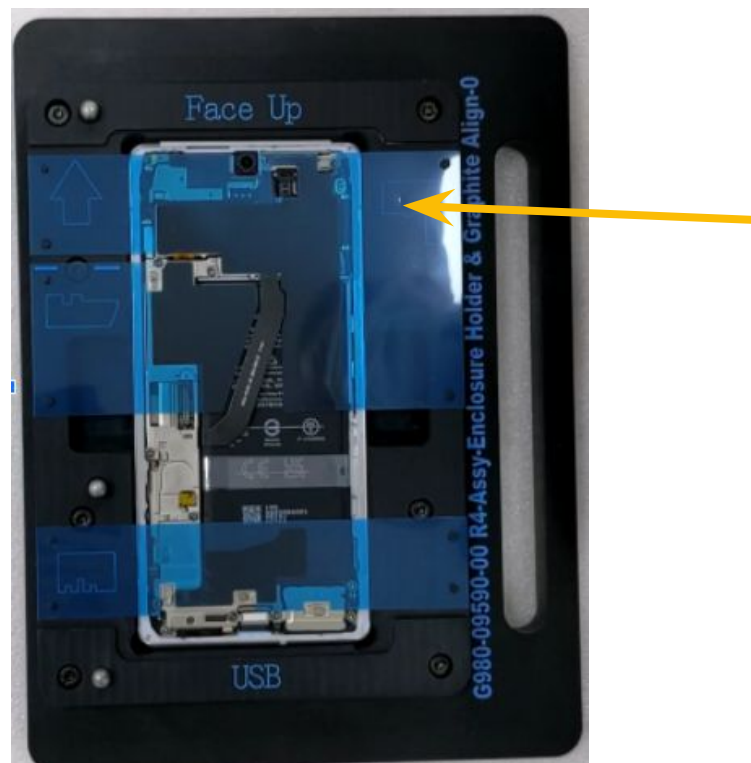
Mic1 Bracket

Bottom speaker





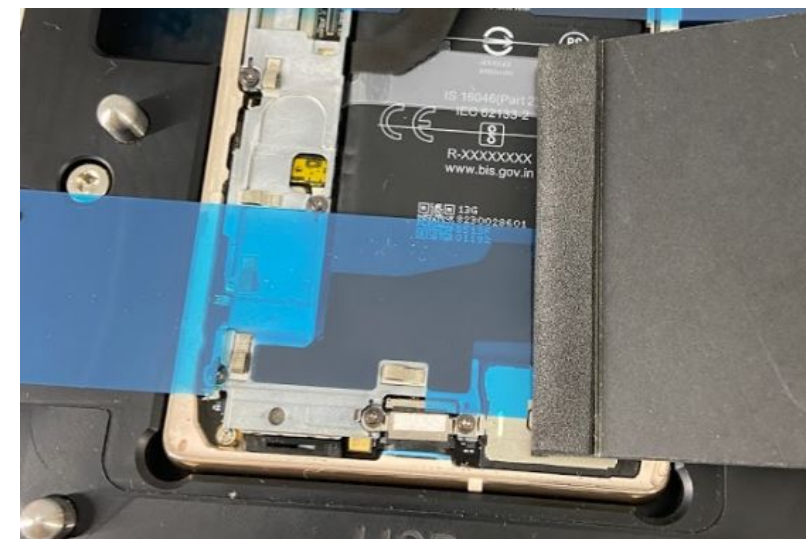
### 03. Apply graphite sheet



- The **Rear camera graphite sheet** is aligned by the remaining 4 positioning columns.

**Part:** G864-00445-01 (Rear camera graphite sheet)

### 04. Adhere graphite sheet

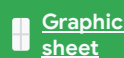


- Use the **Universal Scraper** and roll the **RF graphite sheet**. Ensure there are no air pockets. Use the smaller scraper where needed.
- Continue to roll over the 2 remaining sheets.

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



Display



Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker



## 05. Remove liners



- Remove the 3 blue release liners from each sheet.

Display

**Graphic sheet**

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

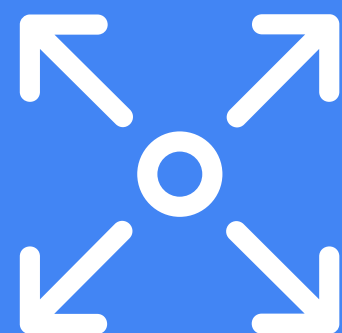
Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker



Disassembly instructions

# Mid-frame



# Mid-frame replacement

Mid-frame

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)

## Tools



Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
 Pixel 6 Pro Screw cover  
 Torx plus 3IP screwdriver  
 ESD tweezers  
 Universal Disassembly ESD stick

## Parts



G853-01046-02  
 USB-C Cowling



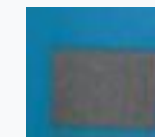
G949-00228-01  
 Mid-frame\_mmWave



G949-00229-01  
 Mid-frame\_Sub-6



G806-04615-01  
 G806-04858-04  
 Thermal pads



G250-05753-00  
 7 x Screws



### Caution!

Review all [safety precautions](#) before beginning work.

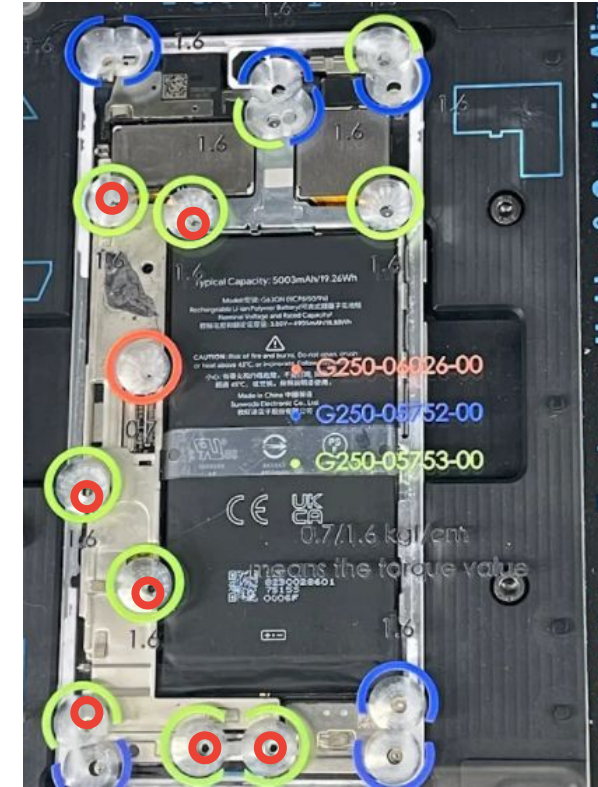


## 01. Screw cover



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Assembly Enclosure Holder & Graphite Align**. The 3 alignment pins are to avoid removing the wrong screws.

## 02. Remove screws



- Remove 7 Mid-frame **Screws** with a **Torx Plus 3IP screwdriver**.
- Then remove the **Pixel 6 Pro Screw cover**.

Part: G250-05753-00 (Screw)

Do not reuse the part





### 03. Remove USB-C cowling



- Remove the **USB-C cowling** with **ESD tweezers**.

Part: G853-01046-02 (USB-C cowling)

### 04. Remove mid-frame

Remove from here



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

Part: G949-00228-01 (Mid-frame\_mmWave)

Part: G949-00229-01 (Mid-frame\_Sub-6)



## 05. Note



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

**Part:** G806-04615-01 (RF thermal pad)

**Part:** G806-04858-04 (SOC thermal pad)

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

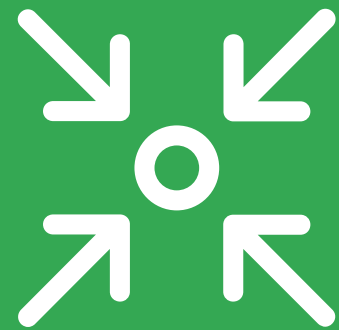
Battery

Logic board

Mic1 Bracket

Bottom speaker



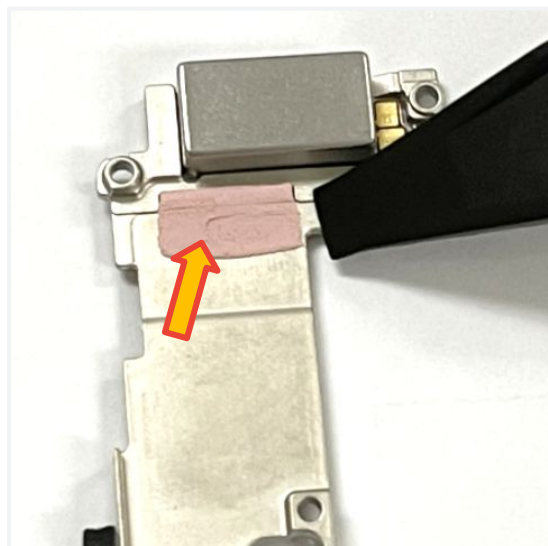


Assembly instructions

# Mid-frame



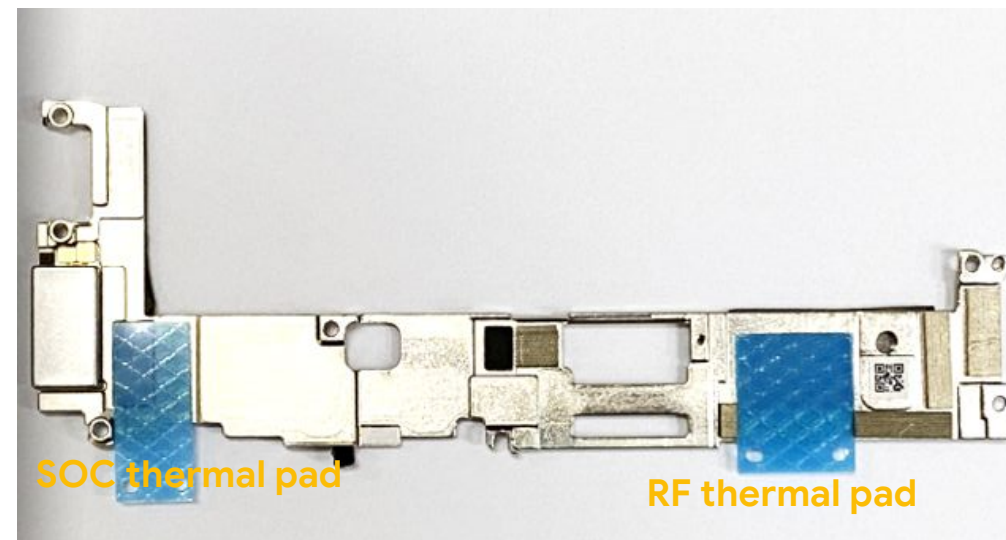
## 01. Re-using Mid-frame



- Clean any residue from the **Mid-frame** with an **Universal Disassembly ESD stick** .

**Part:** G806-04615-01 (RF thermal pad)  
**Part:** G806-04858-04 (SOC thermal pad)

## 02. Apply thermal pads



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

**Part:** G806-04615-01 (RF thermal pad)  
**Part:** G806-04858-04 (SOC thermal pad)

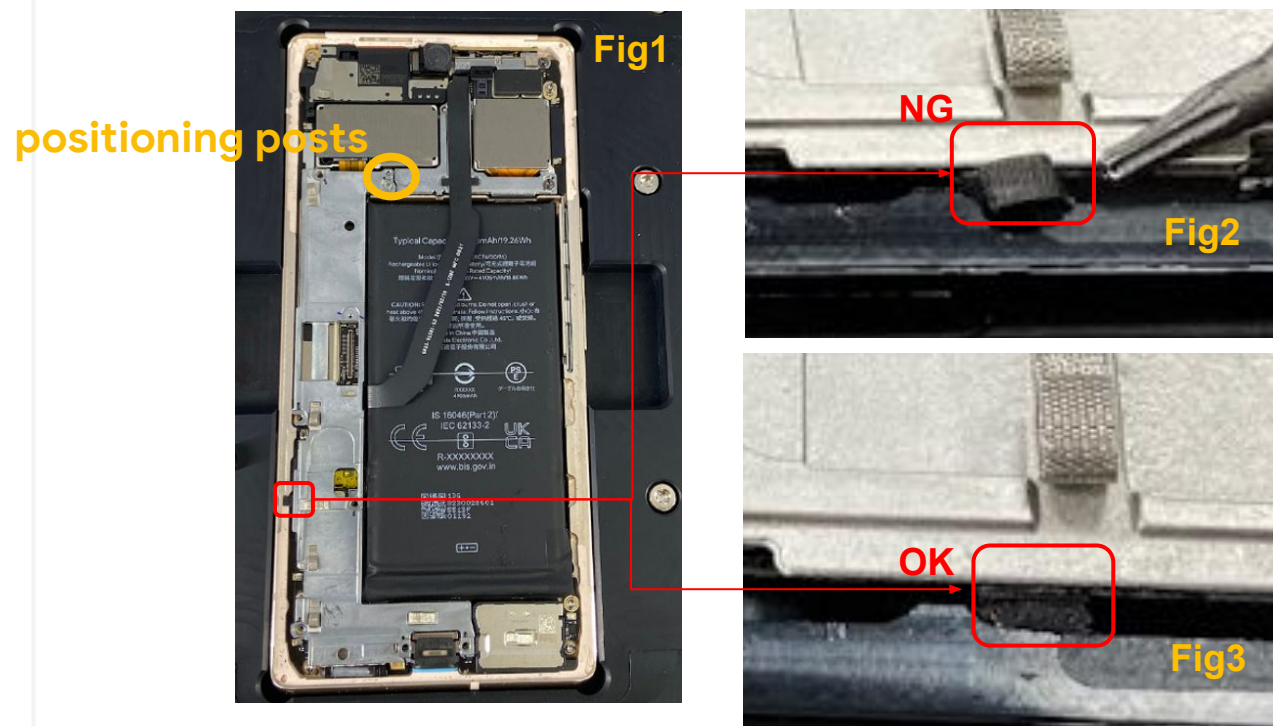
This step is for new and reclaim Mid-frame.







### 03. Fitting the Mid-frame



- Assemble the **Mid-frame** according to the positioning posts on the **Logic board**, Fig1.
- Check the sponge(the red rectangle in Fig1 is the relative position). If the sponge is above the midframe(side-view) Fig2, press down like the Fig3.

Part: G949-00228-01 (Mid-frame\_mmWave)

Part: G949-00229-01 (Mid-frame\_Sub-6)

### 04. Fasten USB-C cowling



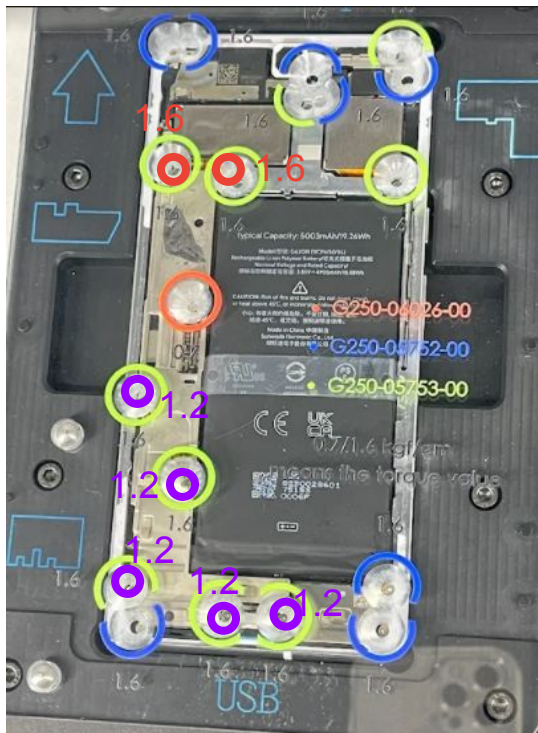
- Assemble the **USB-C cowling** according to the two positioning posts (above figure circle positions) on the Logic Board.

Part: G853-01046-02 (USB-C cowling)





# 05. Fasten Mid-frame



OK



NG



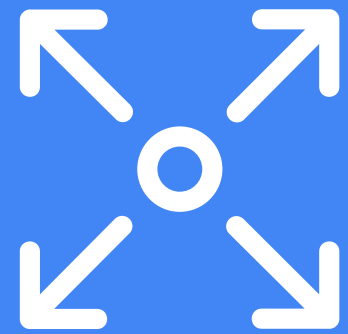
NG

- Place the Pixel 6 Pro Screw cover on the Pixel 6 Pro Assembly Enclosure Holder & Graphite Align.
- Tighten the 7 Screws with a Torx Plus 3IP screwdriver, take out the Pixel 6 Pro Screw Cover.
  - Torque force: 1.6 ± 0.03kgf-cm \*2*
  - Torque force: 1.2 ± 0.03kgf-cm \*5*

Part: G250-05753-00 (Screw)

Check P-sensor foam is flat.





Disassembly instructions

# mmWave



# mmWave replacement

mmWave

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)

## Tools



Pixel 6 Pro Enclosure Holder & Graphite Align  
 Pixel 6 Pro Screw Cover  
 Universal Fish line tool  
 Torx plus 3IP screwdriver  
 Universal Disassembly ESD stick

## Parts



 G949-00230-01 mmWave flex	
G730-05758-01 bracket mmWave	
G730-05758-03 bracket sub-6	
G806-05324-01 MMWAVE_flex_CPSA	
G250-05753-00 1 x Screw	
G806-05702-01 FOAM Sub-6	
G806-04854-02 mmWave thermal pad	



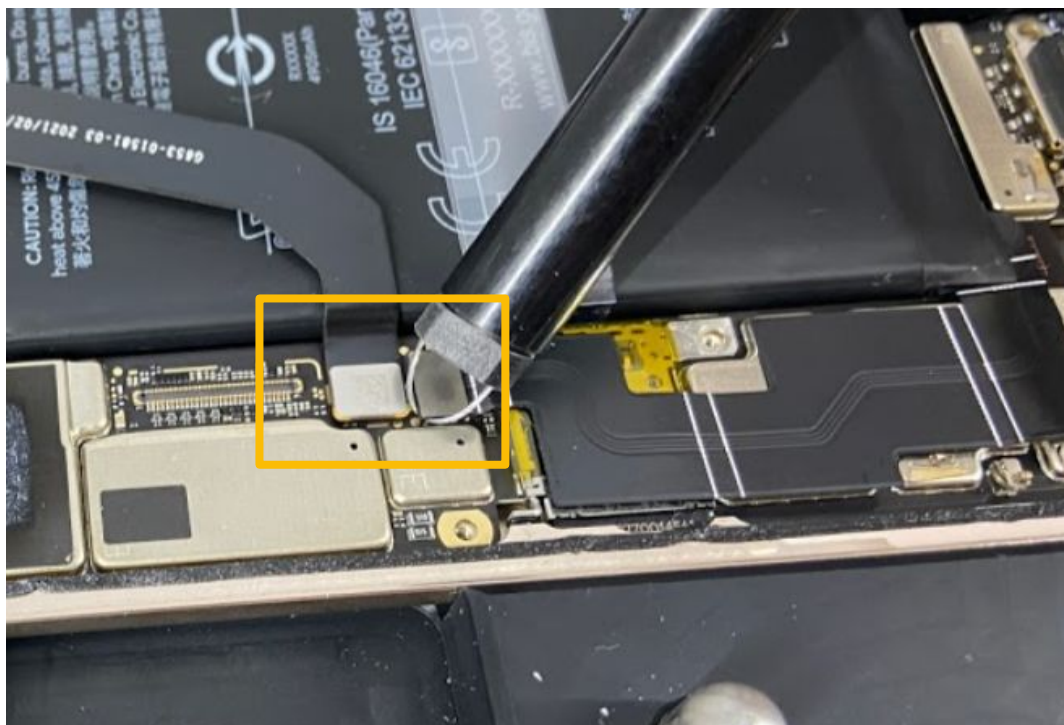
### Caution!

Review all [safety precautions](#) before beginning work.





# 01. Disconnect battery

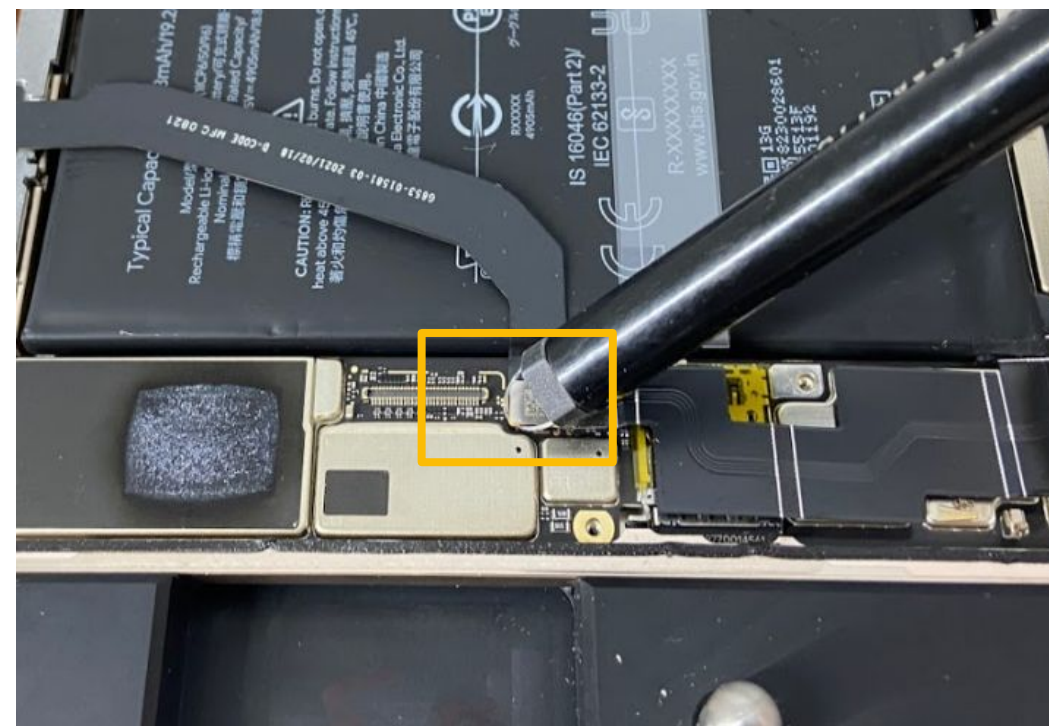


- Loosen the battery connector and disconnect the **Battery** from the **Logic board** with a **Universal Fish line tool**.

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



# 02. Disconnect 5G



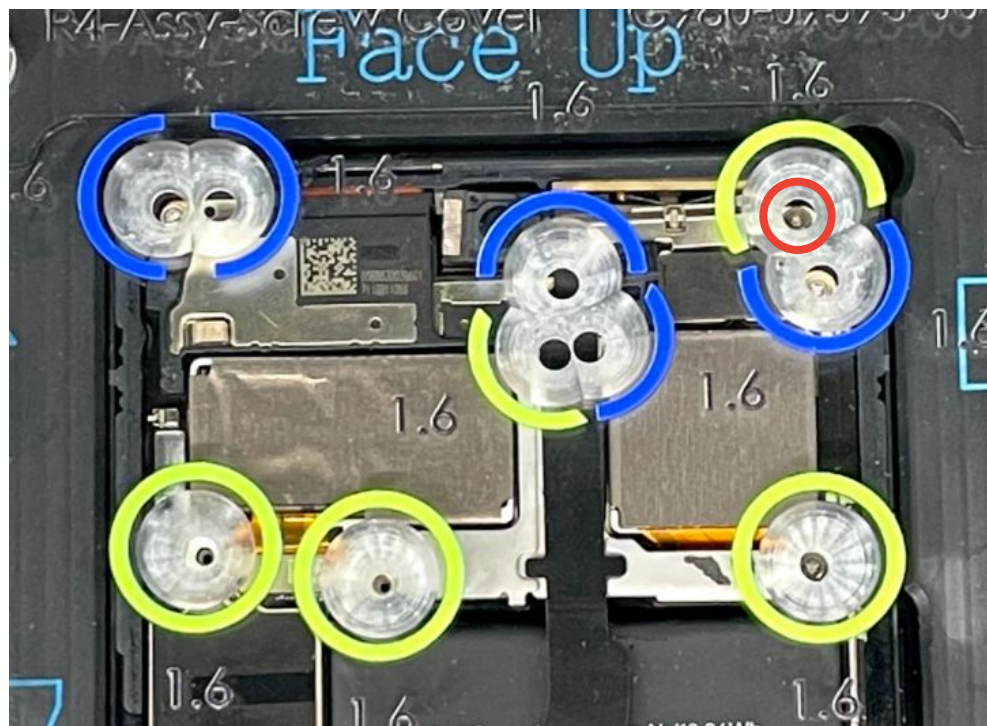
- Loosen the **5G connector** and disconnect from the **Logic board** with a **Universal Fish line tool**.

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





### 03. Remove Screws



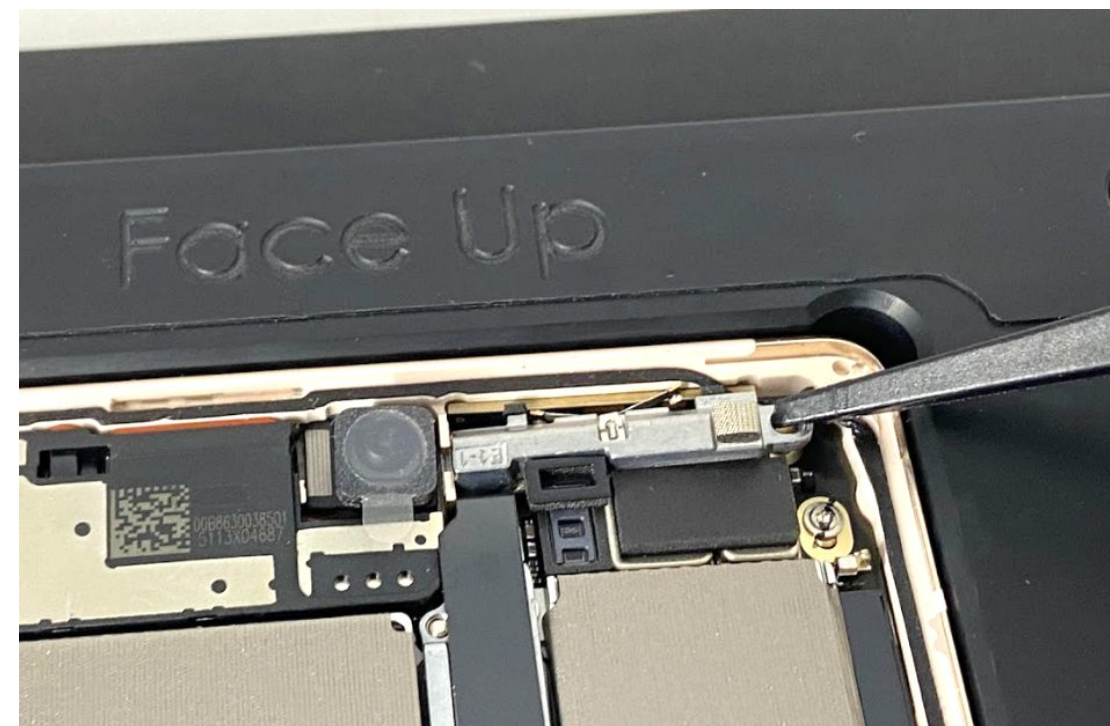
- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Remove the **mmWave bracket screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 6 Pro Screw cover**.

Part: G250-05753-00 (Screw)

Do not reuse the part



### 04. Remove bracket



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

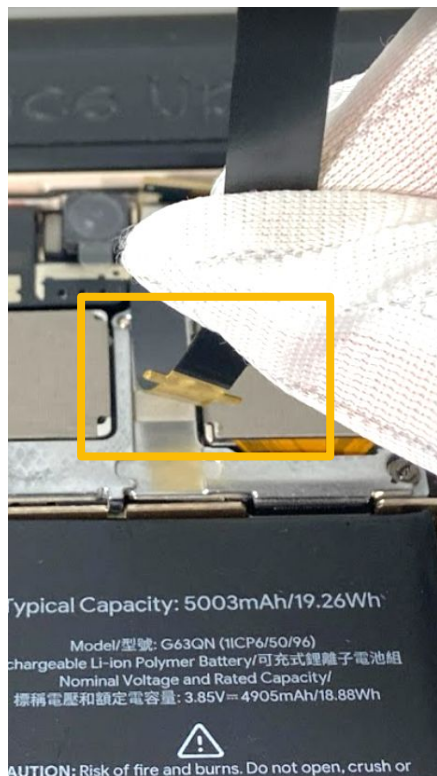
Part: G730-05758-01 (bracket mmWave)

Part: G730-05758-03 (bracket sub-6)

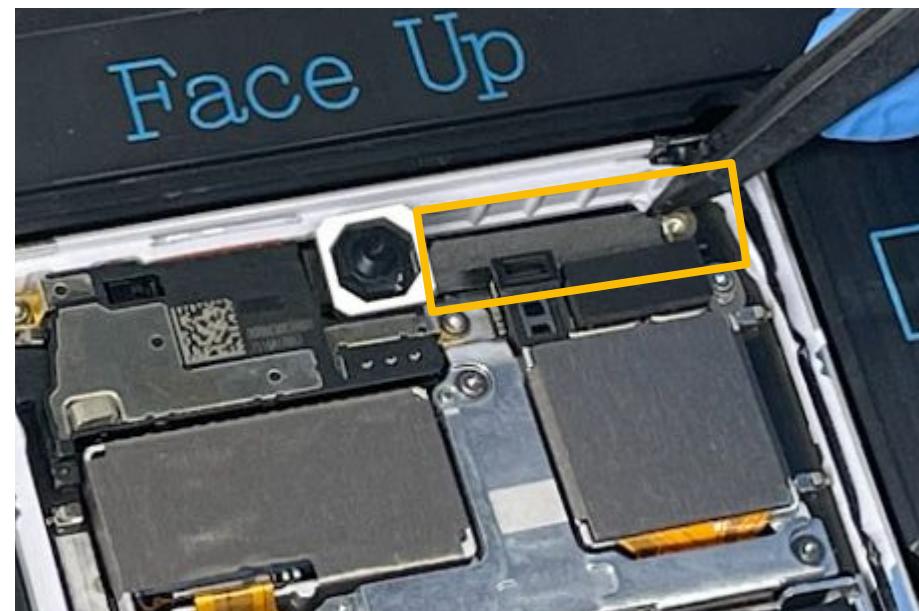


mmWave

## 05. Remove mmWave flex



## 06. Remove Sub-6 Foam



- Remove the **mmWave flex**.
- Part of the flex is adhered to the **Upper mid-frame**, as shown above, so slowly peel it away.

**Part:** G949-00230-01 (mmWave flex)

This step is only for mmWave Sku.



- Remove the **FOAM Sub-6** with an **ESD tweezers**.

**Part:** G806-05702-01 (Foam Sub-6)

This step is only for Sub-6 Sku.



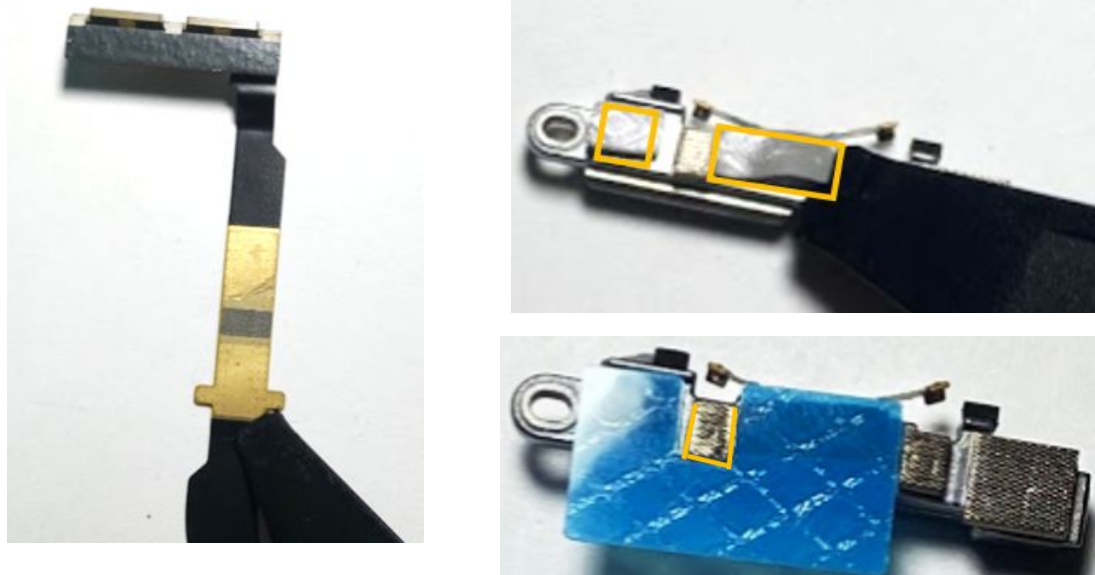


Assembly instructions

# mmWave



## 01. Re-using mmWave



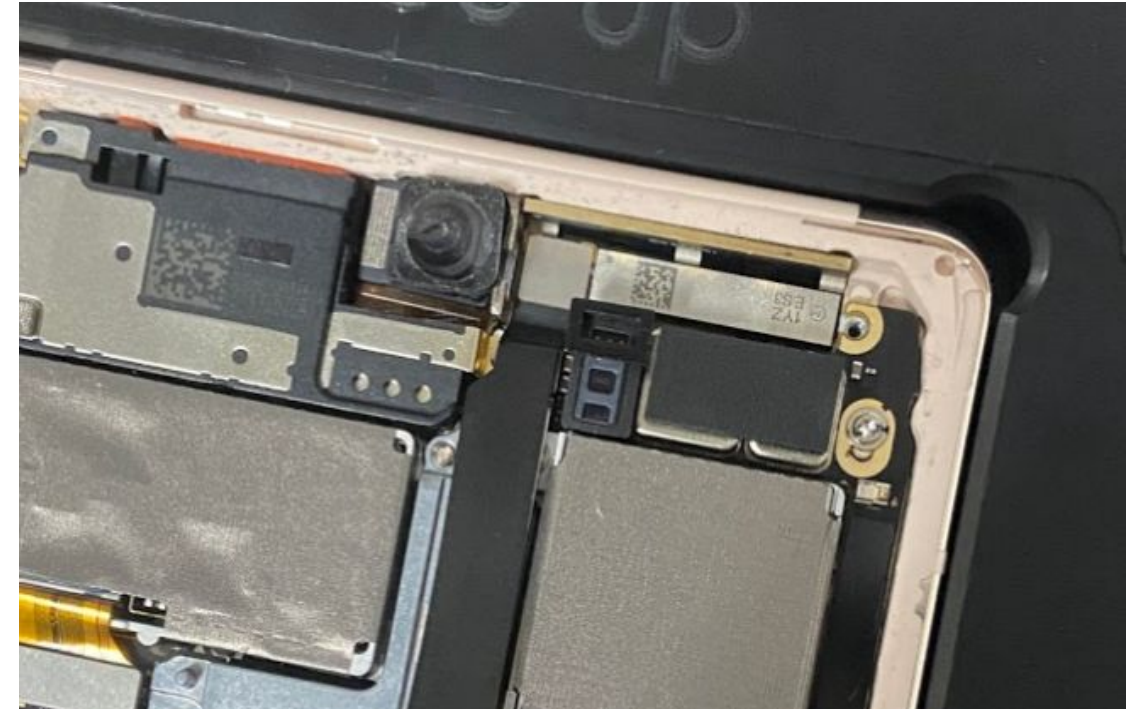
- Clean any residue from the **mmWave flex** with an **Universal Disassembly ESD stick** . Paste the **MMWAVE\_flex\_CPSA** according to the outline.
- Clean 2 residue TIM from mmWave Bracket by the **Universal Disassembly ESD stick** . Align the TIM thermal paste by the outline.

Part: G806-05324-01 (MMWAVE\_flex\_CPSA)  
 Part: G806-04854-02 (mmWave thermal pad)

This step is only for mmWave SKU.



## 02. Assemble mmWave



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

Part: G949-00230-01 (mmWave Flex)



This step is only for mmWave Sku.  
 Bend the **mmWave flex** into an L shape where the flex is scored.



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

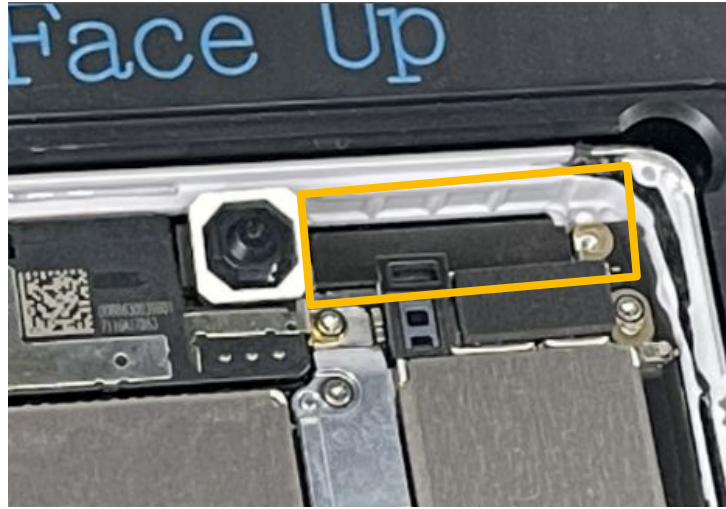
Battery

Logic board

Mic1 Bracket

Bottom speaker

### 03. Assemble Sub-6 Foam



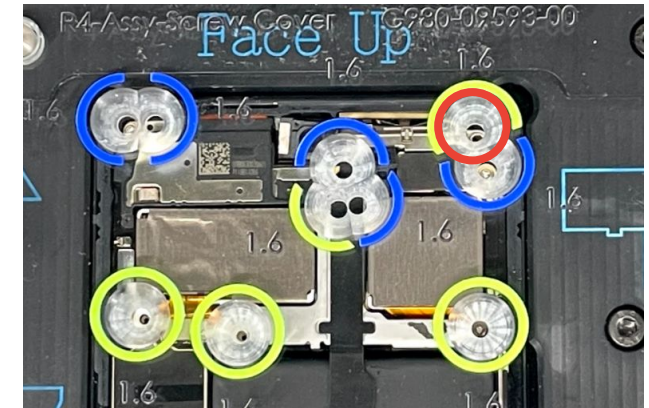
- Insert **Foam Sub-6** into the **Enclosure**.
- Place the **Foam Sub-6** matte side to yourself, not the glossy side. And the recess as the figure shown.

Part: G806-05702-01 (Foam Sub-6)

This step is only for Sub-6 Sku.



### 04. Assemble bracket



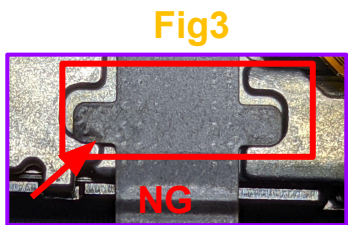
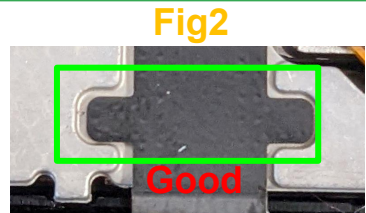
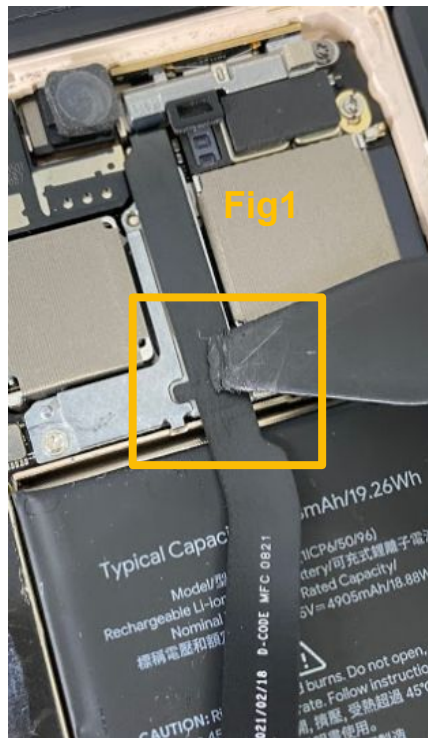
- Insert the **bracket** at an angle.
- Place **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure Holder**.
- Fasten the **mmWave bracket screw** with a **Torx Plus (3IP)**, take out the **Pixel 6 Pro Screw Cover**.

**Torque force : 1.2 ± 0.03kgf-cm**

Part: G730-05758-01 (bracket mmWave), G730-05758-03 (bracket sub-6)

Part: G250-05753-00 (screw)

## 05. Peel off liner



- Peel off the **mmWave flex adhesive liner**, align flex according to the outline to **Upper mid-frame**, and press down with an **ESD Stick** (Fig1).
- Make sure the flex is **NOT** overlapped with the **Upper mid-frame** (Fig2 is good; Fig3 is NG). Otherwise, it may lead to display abnormal, such as bright dots (Fig4).

This step is only for mmWave Sku.



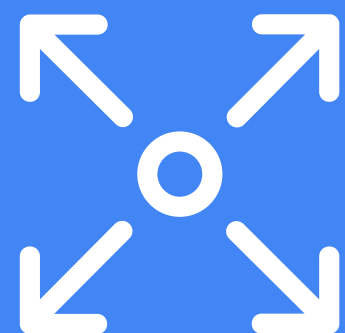
## 06. Connect to Logic board



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

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





Disassembly instructions

# Upper mid-frame

# Upper mid-frame replacement

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)

## Tools



Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
Pixel 6 Pro Screw cover  
Torx plus 3IP screwdriver  
ESD tweezers

## Parts



G730-05950-01  
Upper mid-frame



G250-05753-00  
1 x Screw



G806-06554-01  
Sponge\_Mid Frame

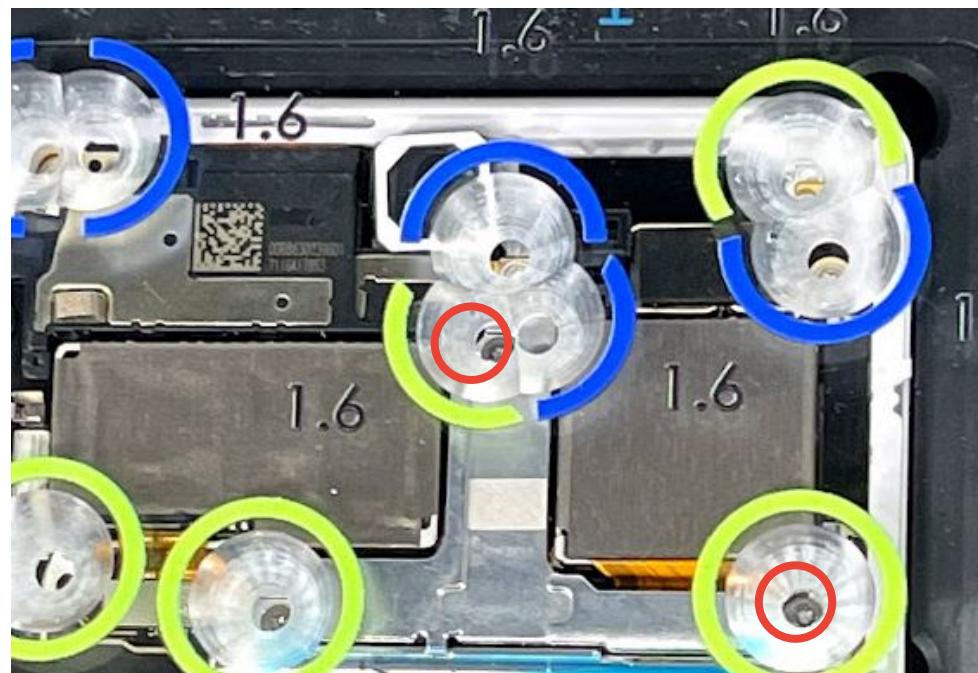


### Caution!

Review all [safety precautions](#) before beginning work.



## 01. Remove screws

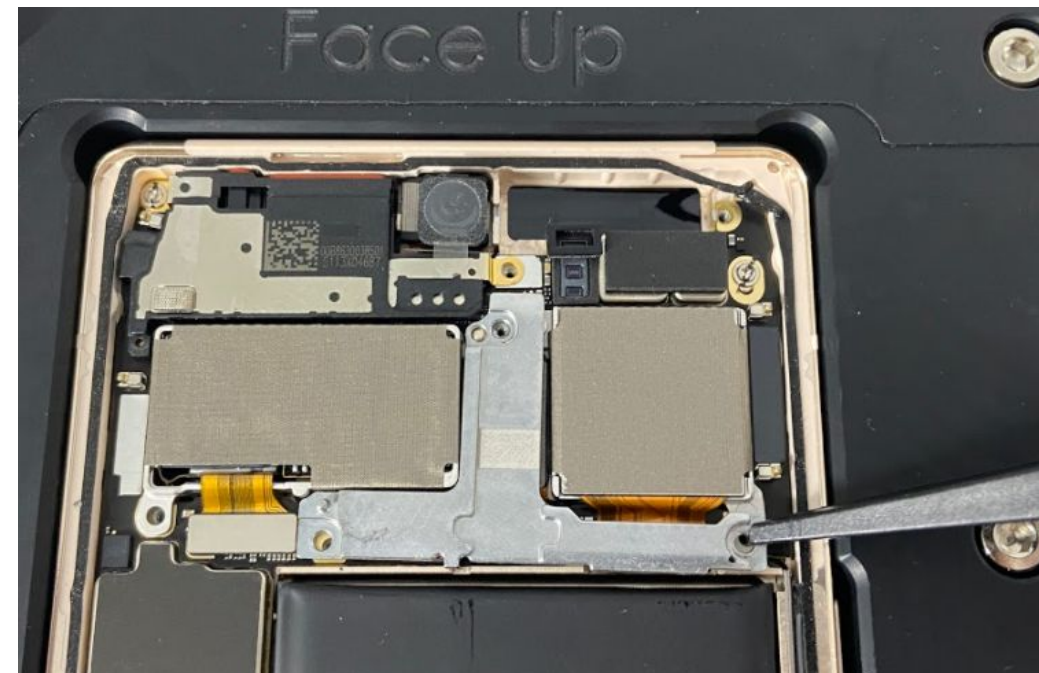


- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Remove the **2 screws** of the **Upper mid-frame** with a **Torx Plus 3IP screwdriver**, remove the **Pixel 6 Pro Screw cover**.

**Part:** G250-05753-00 (Screw)  
Do not reuse the part



## 02. Remove upper mid-frame



- Remove the **Upper mid-frame** with **ESD tweezers** from the right side, as shown.

**Part:** G730-05950-01 (Upper mid-frame)



Assembly instructions

# Upper mid-frame



## 01. Check sponge of upper mid-frame

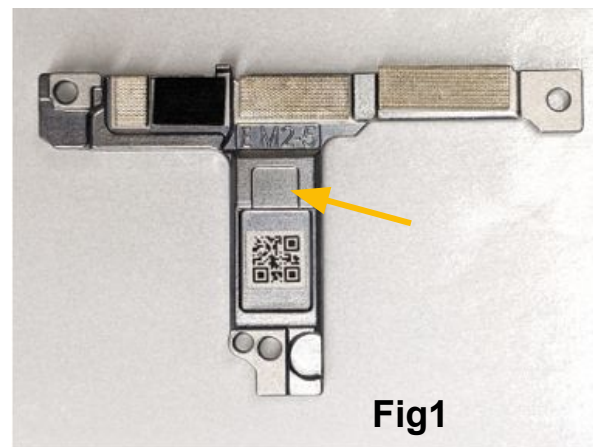


Fig1

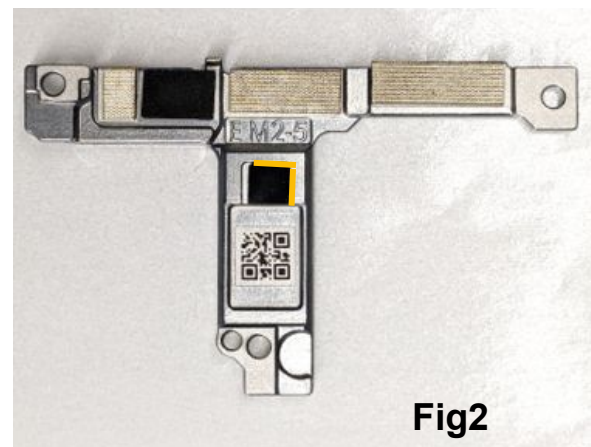


Fig2

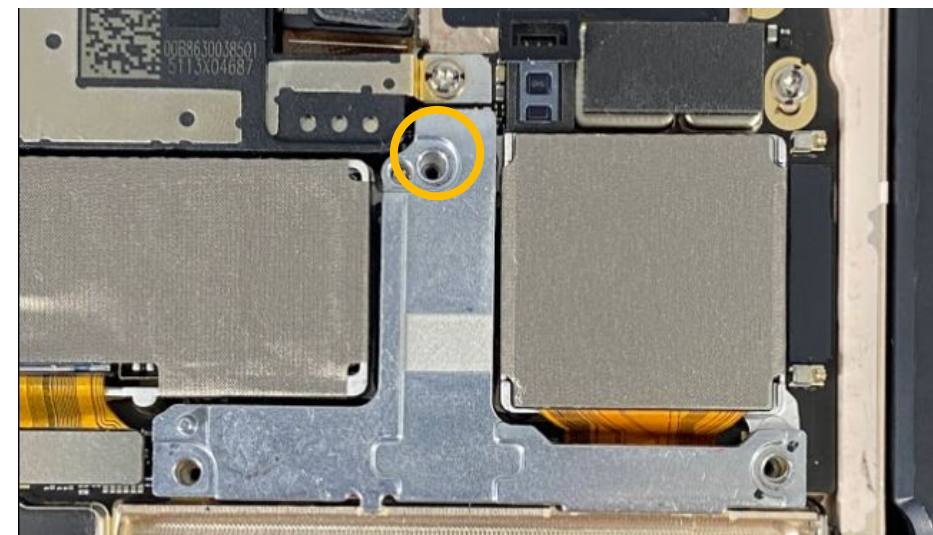
- Check the sponge in **Upper mid-frame**. If there's no **sponge (Fig1)**, paste the sponge by the alignment line, like the **(Fig2)**.
- Ignore this step if there's sponge on the **Upper mid-frame**.

**Part:** G730-05950-01 (Upper mid frame), G806-06554-01 (sponge)

Only conduct this step when the device is disassembled.



## 02. Position Upper mid-frame



- Assemble the **Upper mid-frame** by aligning it with the positioning post.

**Part:** G730-05950-01 (Upper mid frame)

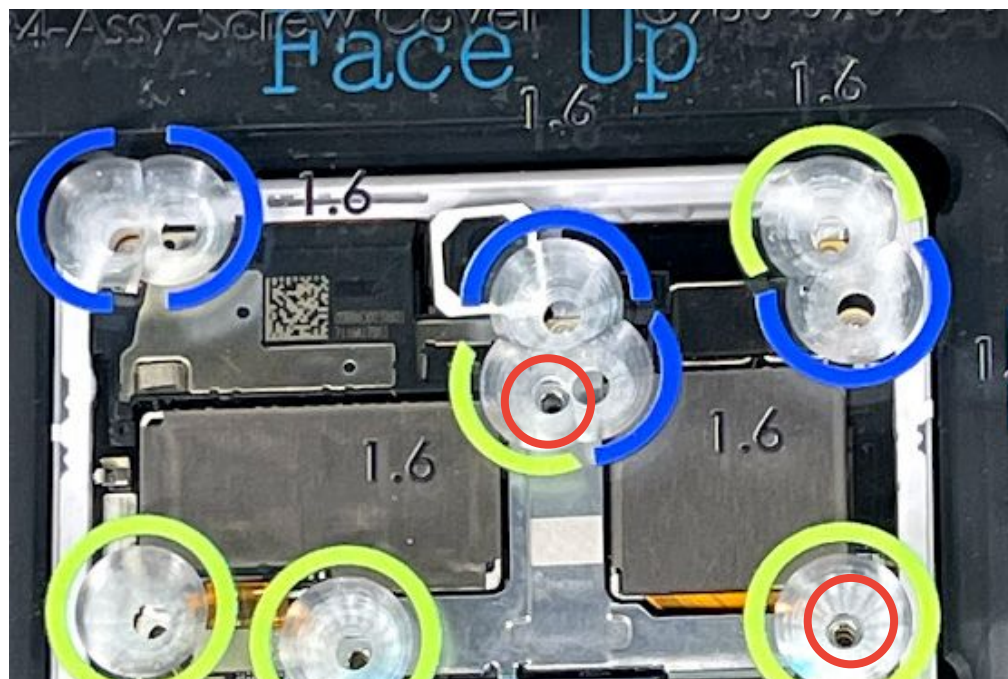
The position Pin of the upper middle frame should be at the gap of the retaining wall.





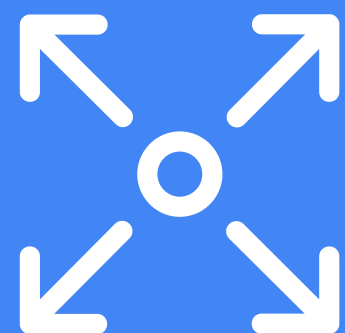


### 03. Fasten Upper mid-frame



- Place **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure Holder**.
- Fasten the **2 screws** with a **Torx Plus (3IP)**, take out the **Pixel 6 Pro Screw Cover**. **Torque force:  $1.6 \pm 0.03\text{kgf-cm}$**

Part: G250-05753-00 (Screw)



Disassembly instructions

# Rear camera



# Rear camera replacement

The **Rear camera** module carries all the rear cameras. It is not possible to replace a single camera and lens.

~~RL Rear camera is different with the device original one. If replacing the Rear camera, make sure to use the service camera with 'GEO' mark".~~ [Detail Instruction](#)

Rear camera

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)

## Tools



Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
 Pixel 6 Pro Screw cover  
 Torx plus 3IP screwdriver  
 Universal Fish line  
 ESD tweezers

## Parts



G949-00227-01  
 Rear camera



G250-05752-0  
 1 x Screw



G806-06299-01  
 Camera liner



G852-02351-01  
 RCAM Cap  
 G852-02352-01  
 RCAM UW Cap  
 G852-02356-01  
 RCAM Tele Cap



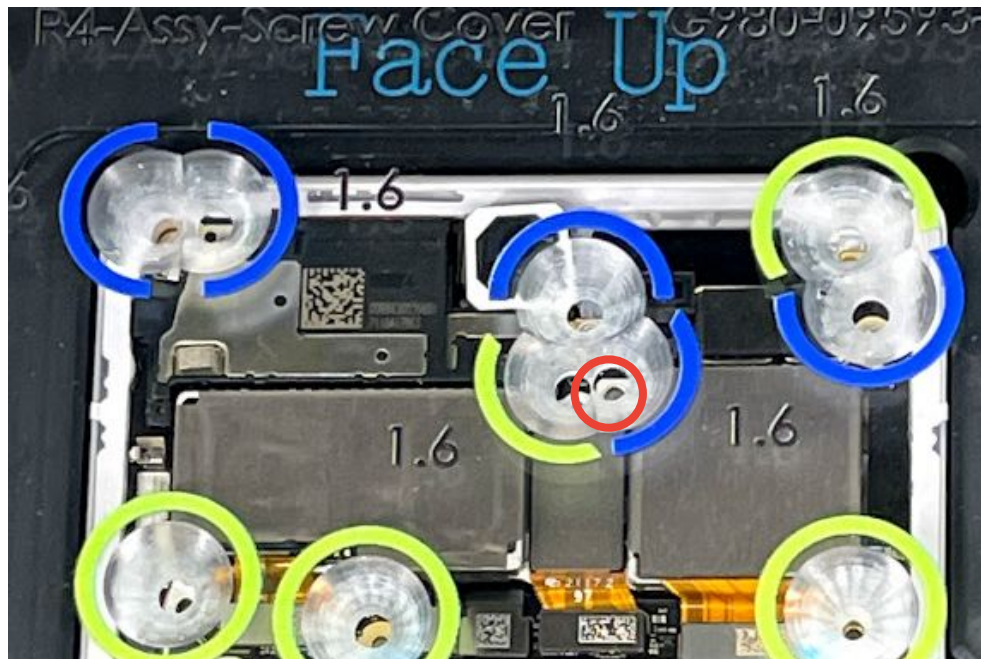
### Caution!

Review all [safety precautions](#) before beginning work.

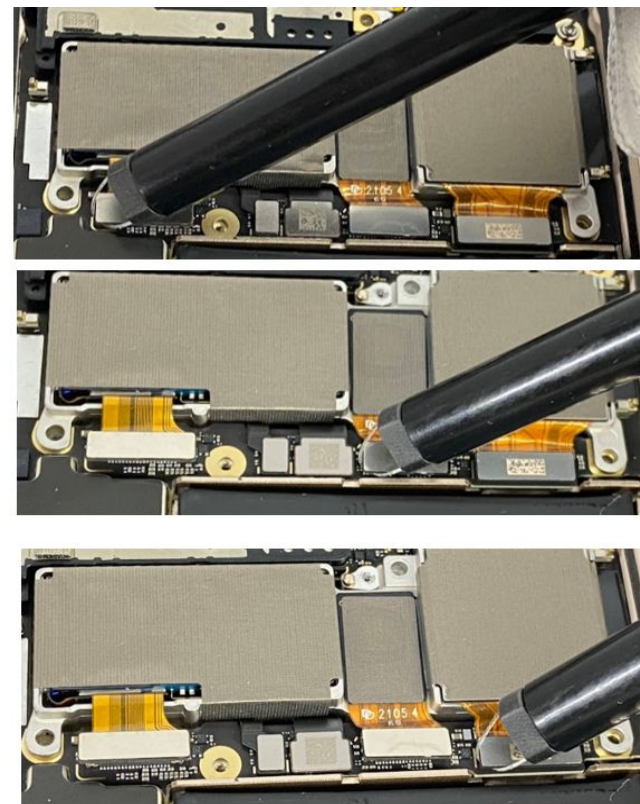




## 01. Remove screws



## 02. Disconnect camera



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Remove the **Rear camera screw** with a **Torx Plus 3IP screwdriver**, remove the **Screw cover**.

- Loosen 3 **Rear camera** connectors and disconnect from the **Logic board** with a **Universal Fish line tool**.

Part: G250-05752-00 (Screw)

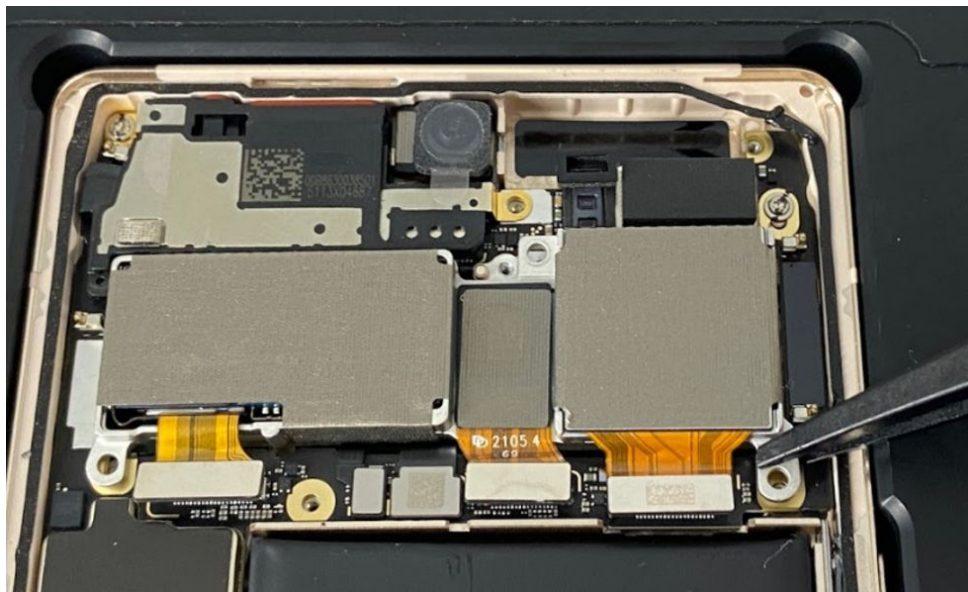
Do not reuse the part



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



### 03. Remove rear camera



- Remove the **Rear camera** with **ESD tweezers**.

**Part:** G949-00227-01 (Rear camera)

### 04. Camera protection

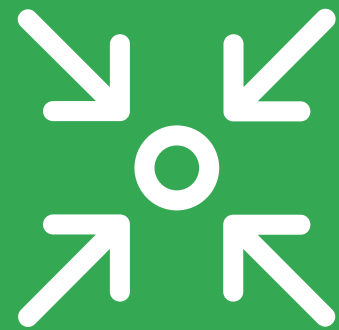


- Clean out the cover liner and apply a protective case over the **Rear camera**.

**Part:** G852-02351-01 (RCAM Cap), G852-02352-01 (RCAM UW Cap)  
G852-02356-01 (RCAM Tele Cap), G806-06299-01 (Camera liner)

If reuse the RCAM, it can only be used for the original device only



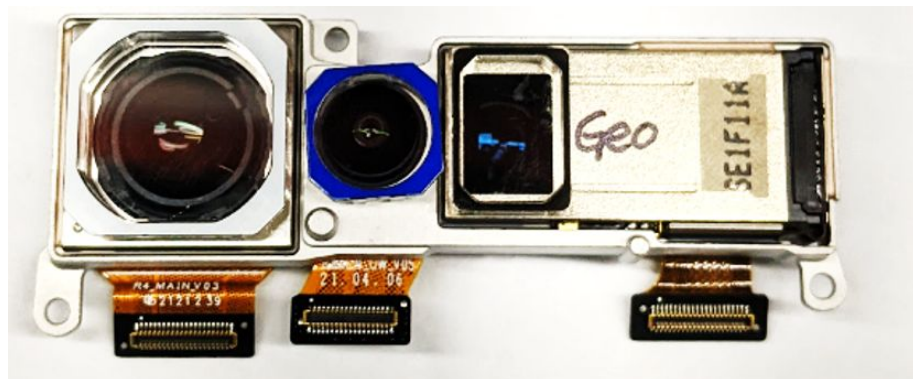


Assembly instructions

# Rear camera



## 01. Prepare rear camera



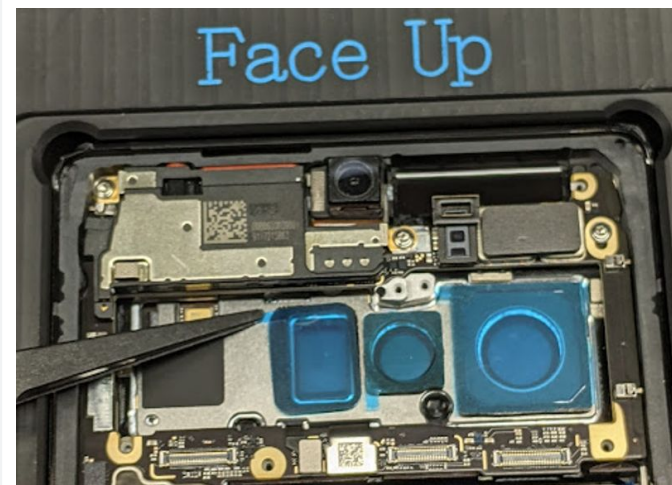
- Remove the **3 protective caps** from the **Rear camera**. Blow it by **ionizing air Fan**.

**Part:** G852-02351-01 (RCAM Cap), G852-02352-01 (RCAM UW Cap)  
G852-02356-01 (RCAM Tele Cap)

Ensure that the environment is clean for this process.



## 02. Remove liner



- Remove the **3 Rear camera liners** from the **Enclosure** with **ESD tweezers**. (If reusing the Enclosure, remove the one liner.)

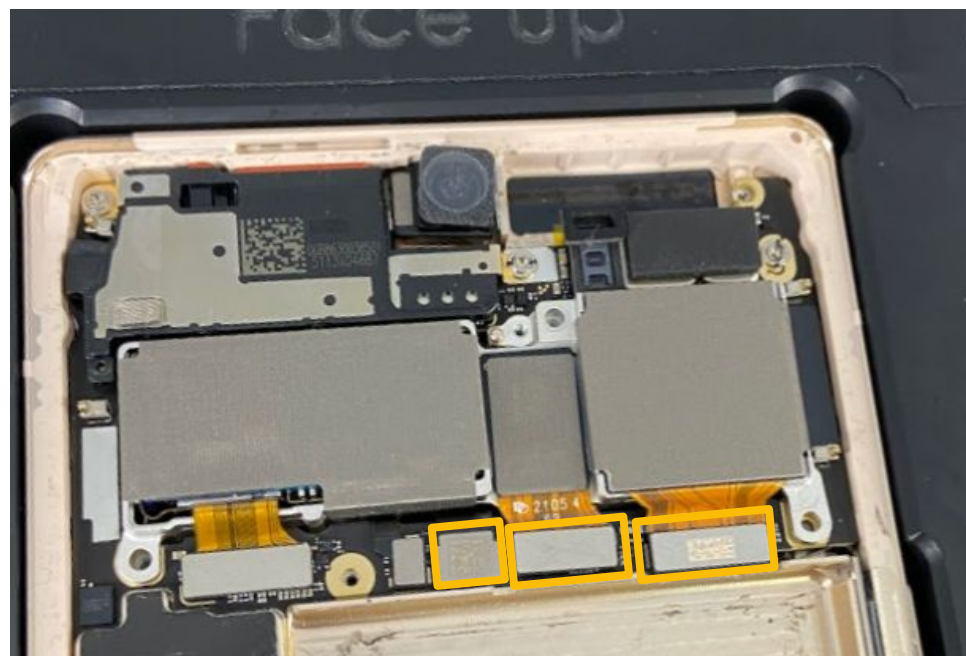
**Part:** G806-06299-01 (Camera liner)

Ensure that the environment is clean for this process.





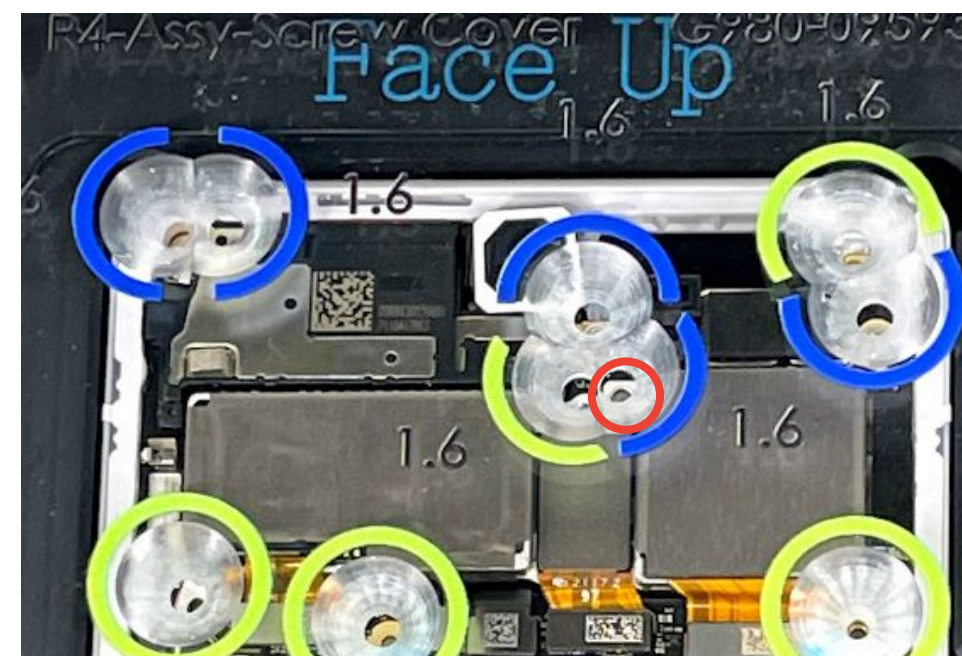
### 03. Attach rear camera



- Place the **Rear camera** into position, keeping it aligned with the lenses in the enclosure.
- Attach the 3 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

Part: G949-00227-01 (Rear camera)

### 04. Fasten rear camera



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Tighten **Rear camera** screw with a **Torx Plus 3IP screwdriver**, take out the **Pixel 6 Pro Screw Cover**.  
*Torque force: 1.6 ± 0.03kgf-cm*

Part: G250-05752-00 (Screw)







Disassembly instructions

# Top speaker

# Top speaker replacement

The **Top speaker** is used both as an ear speaker for making calls and a second loudspeaker for music and video.

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)
- [Rear camera](#)

## Tools



Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
Pixel 6 Pro Screw cover  
Torx Plus 3IP screwdriver  
ESD stick

## Parts



G863-00396-01  
Top Speaker



G250-05752-00  
2 x Screws



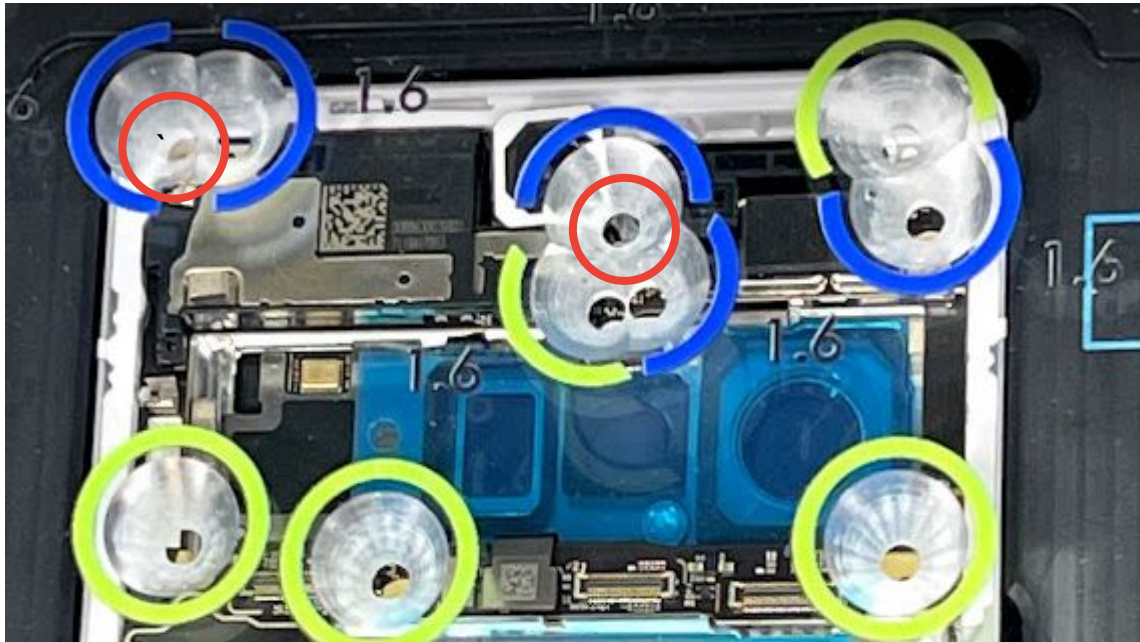
G806-05716-02  
Top Spk PSA



### Caution!

Review all [safety precautions](#) before beginning work.

## 01. Remove screws

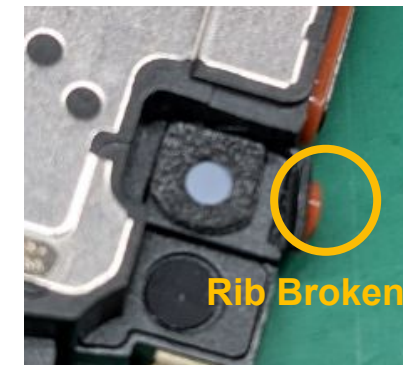


- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Remove the **2 Top speaker screws** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 6 Pro Screw cover**.

**Part:** G250-05752-00 (Screw)  
Do not reuse the part



## 02. Remove speaker

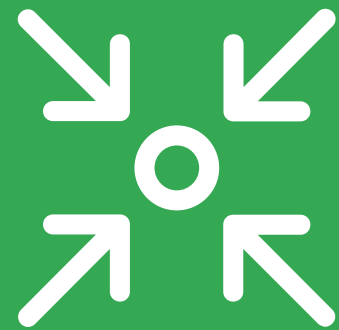


- Remove the **Top speaker** with an **ESD stick**.

**Part:** G863-00396-01 (Top speaker)

If the rib is broken, it cannot be reused .



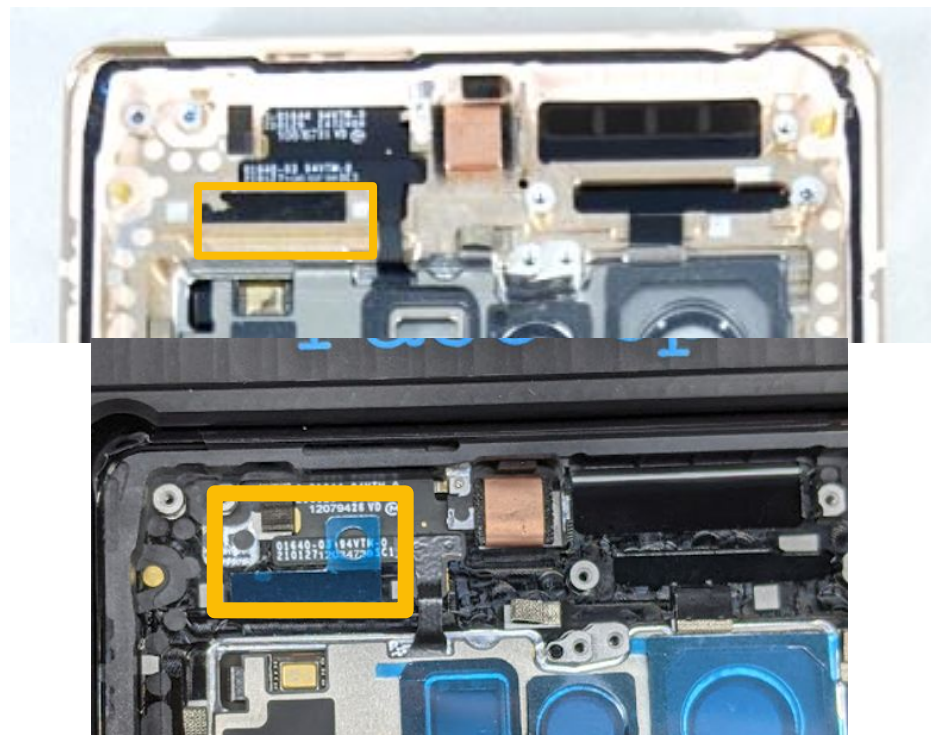


Assembly instructions

# Top speaker



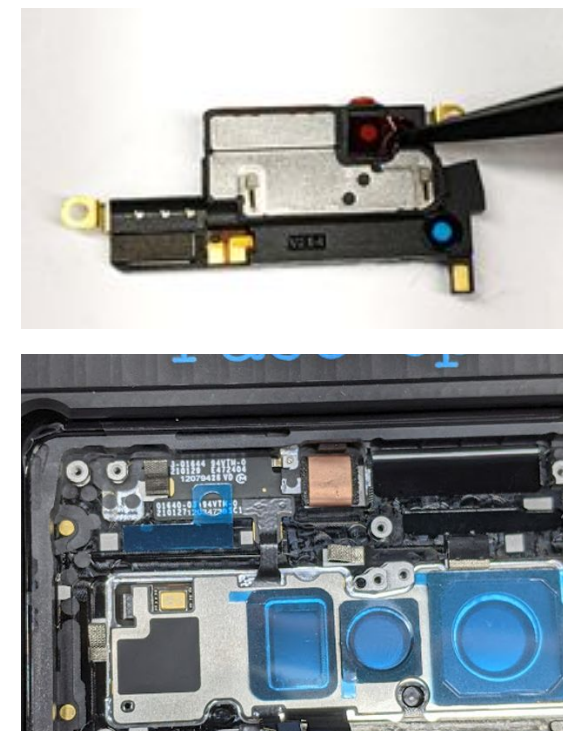
## 01. Repaste Top speaker PSA



- Clean any residue in the **Top speaker** area with an **ESD stick**. Apply **IPA** with a cloth afterward.
- Take the **Top speaker PSA** and attach it to the empty slot of the speaker flatten the left and right sides of the PSA.
- Press it by Universal ESD Stick slightly.

Part: G806-05716-02 (Top Spk PSA)

## 02. Remove the liners



- If using a new **Top speaker**, remove the protective mylar film.
- Remove the **Top speaker PSA liner** from the **Enclosure**.

Part: G863-00396-01 (Top speaker)

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

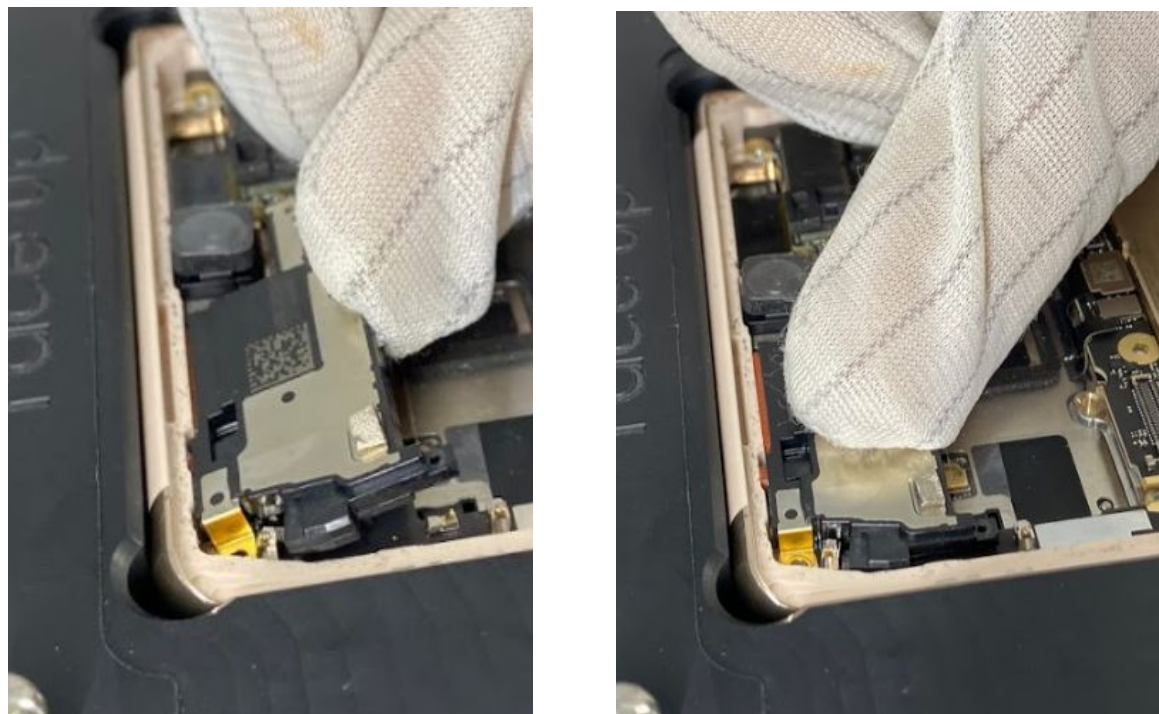
Mic1 Bracket

Bottom speaker





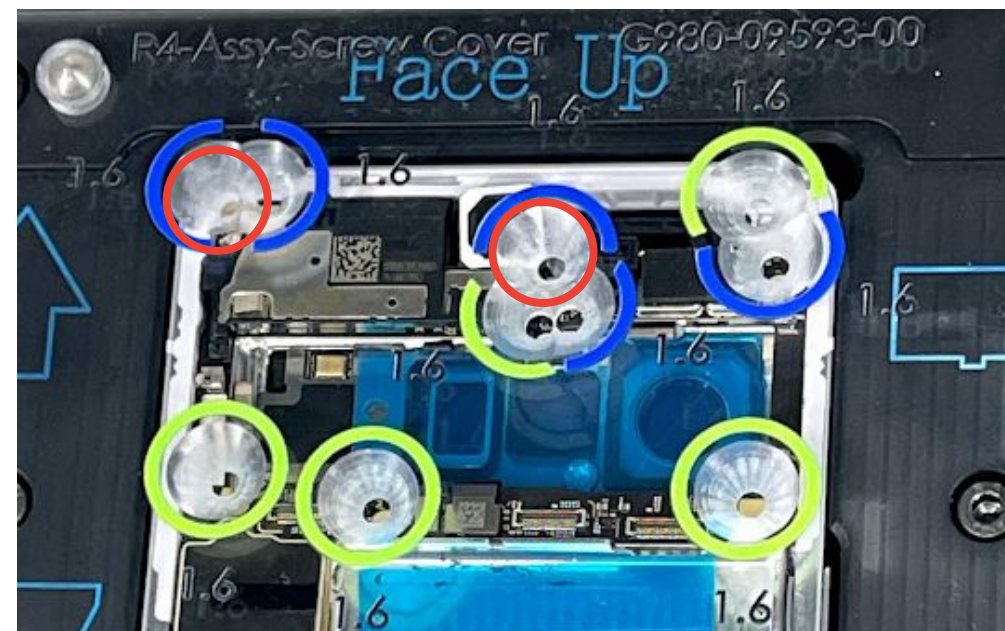
### 03. Insert top speaker



- Insert it into the **Top speaker** slot on the **Enclosure** at an angle of about 10°, making sure to fit it completely.
- Hand press it accordingly

Part: G863-00396-01 (Top speaker)

### 04. Fasten top speaker



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Tighten the **2 Top speaker screws** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 6 Pro Screw cover**.  
*Torque force: 1.2 ± 0.03kgf-cm*

Part: G250-05752-00 (Screw)

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

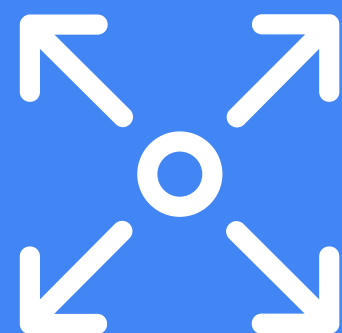
Battery

Logic board

Mic1 Bracket

Bottom speaker





Disassembly instructions

# Front camera



# Front camera replacement

The **Front camera** is not fastened to the enclosure, it is simply connected to the **Logic board**.

Front camera

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)
- [Rear camera](#)
- [Top speaker](#)

## Tools

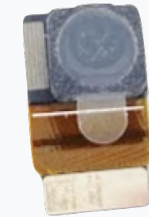


Universal Fish line  
ESD tweezers

## Parts



G949-00226-01  
Front camera



### Caution!

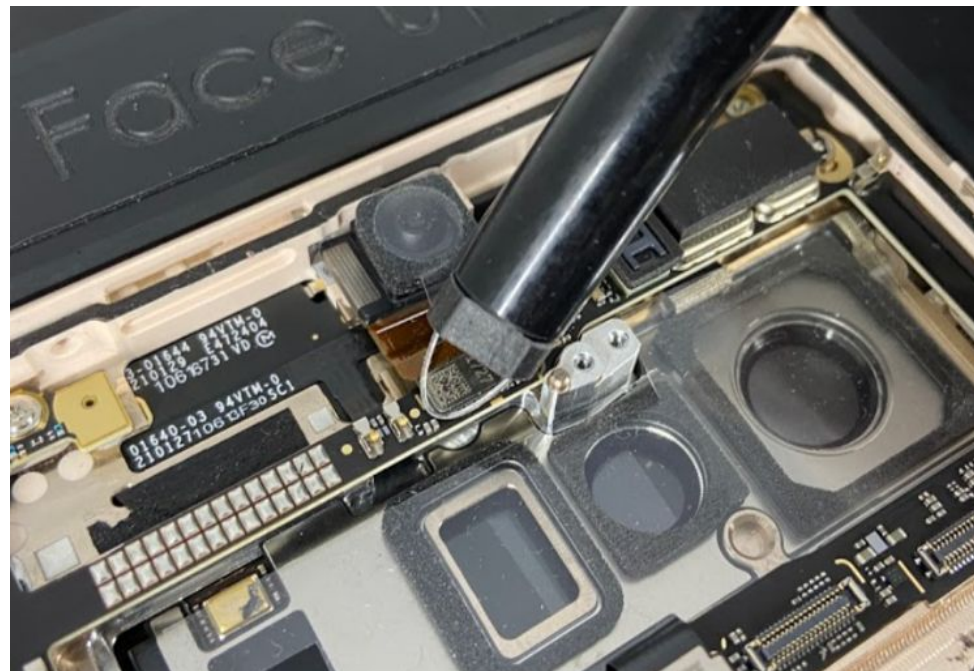
Review all [safety precautions](#) before beginning work.







## 01. Loosen the connector



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

**Part:** G949-00226-01 (Front camera)

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



Front camera

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker



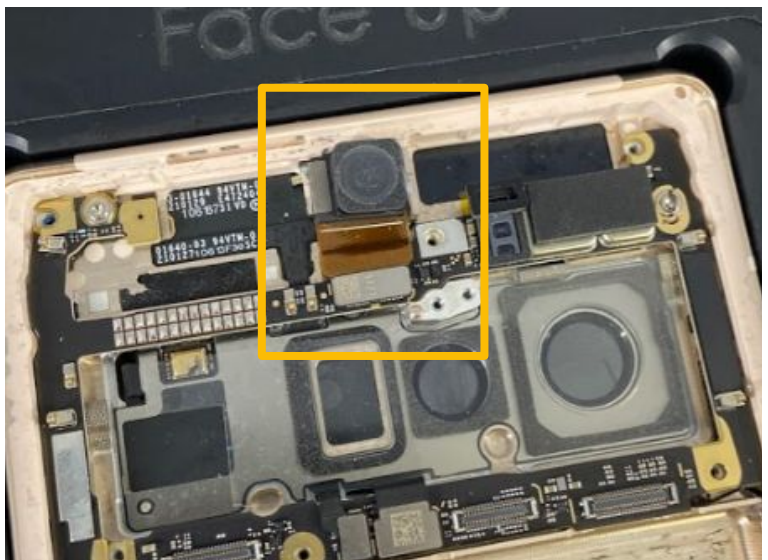


Assembly instructions

# Front camera



## 01. Attach front camera



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

**Part:** G949-00226-01 (Front camera)





Disassembly instructions

# Battery



# Battery replacement

Battery

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)

## Tools



Heat plate  
Universal disassembly fixture & Universal Device Clips  
Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
Pixel 6 Pro Press cover  
Universal press fixture  
ESD tweezers  
Feeler gauge  
Universal adsorption bulb  
3M AP111 Primer  
Table C-Clamp

## Parts



G730-06300-01  
Battery



### Caution!

Review all [safety precautions](#) before beginning work.





## 01. Soften glue

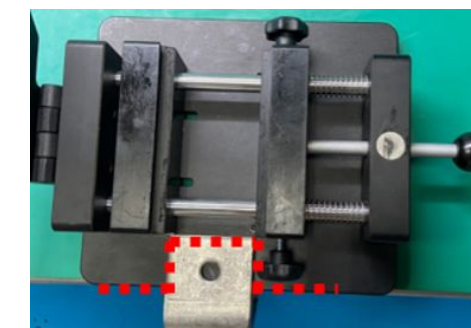


- Place the device flat on the **Heat plate** and set to 158°F/70 °C for 10 mins to soften the **Battery** adhesive equally.

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



## 02. 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.

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker





### 03. Secure device



- Use the **Universal disassembly fixture & Universal Device Clips** 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.

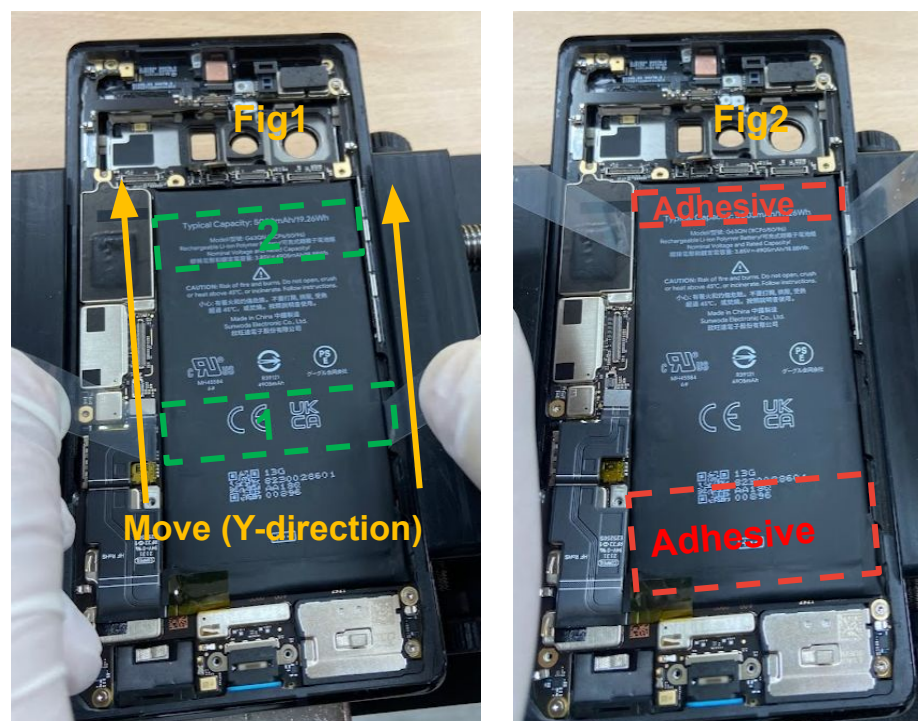
### 04. Lift pull jacket



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




### 05. Move pull jacket in Y-direction




### 06. Pull Up in Z-direction



- 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 areas (Fig 2,red dot lines) is smaller on the top side. It may be easier to pull from here.
- Part: G730-06300-01 (Battery)

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

- 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). 







## 07. Remove battery



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

**Part:** G730-06300-01 (Battery)

Keep small screws and sharp objects away from the **Battery**.  
Do not reuse the part





## 01. Soften glue



- Place the device flat on the **Heat plate** and set to 158°F/70 °C for 10 mins to soften the **Battery adhesive** equally.

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



## 02. Lift up pull jacket



- With the device in the **Pixel 6 Pro Enclosure holder**.
- Lift the pull jacket using **ESD tweezers**.

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

Logic board

Mic1 Bracket

Bottom speaker





### 03. Move pull jacket in Y-direction



### 04. Pull Up in Z-direction



- 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 areas (Fig 2,red dot lines) is smaller on the top side. It may be easier to pull from here.
- Part: G730-06300-01 (Battery)

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



- One person should press down.
- 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).





## 05. Remove battery



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

**Part:** G730-06300-01 (Battery)

Keep small screws and sharp objects away from the **Battery**.  
Do not reuse the part



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

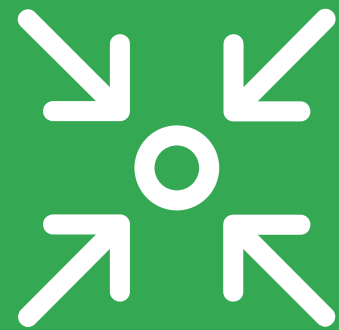
**Battery**

Logic board

Mic1 Bracket

Bottom speaker



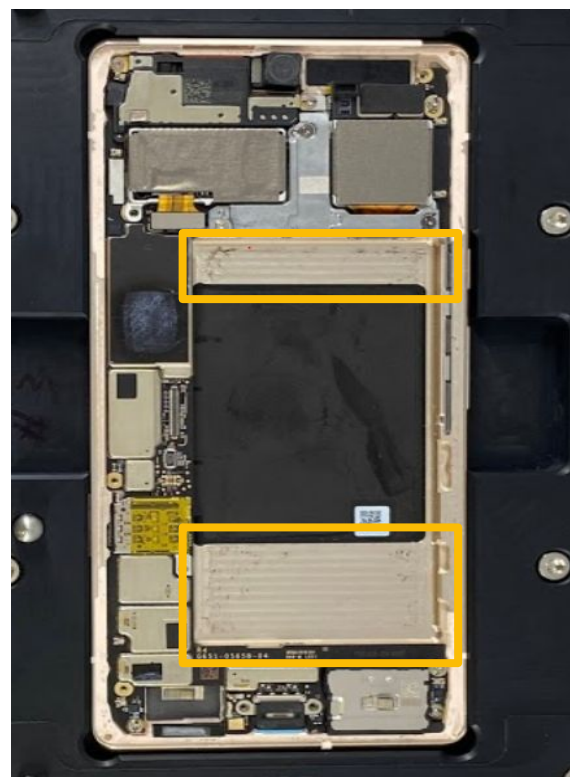


Assembly instructions

# Battery



## 01. Clean enclosure



- Before installation, remove any debris/loose screws from the **Enclosure**. **Ensure Battery cosmetic checks are completed.**
- Tear off the two battery liners.
- Apply **3M AP111 Primer** to the **Battery** adhesive area as shown.

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



## 02. Align battery



- Place a **0.9mm Feeler gauge** against the wall.

### 03. Align battery



Fig1.

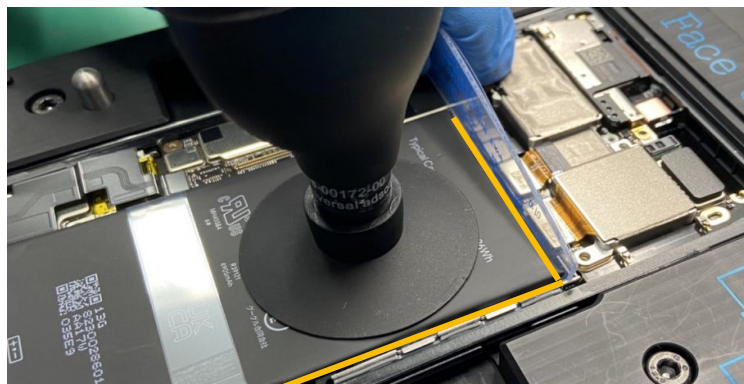
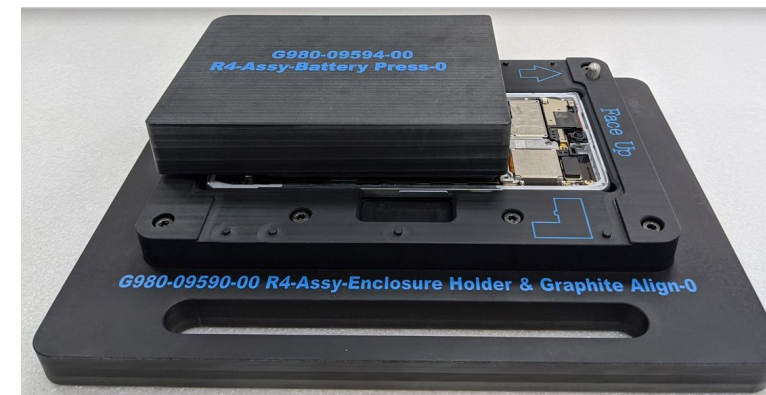


Fig2.

- 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.**)

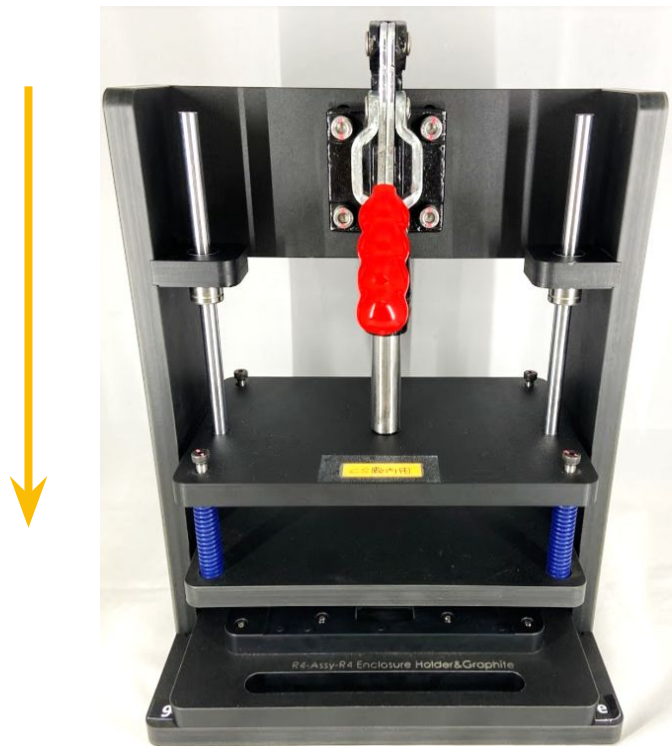
Part: G730-06300-01 (Battery)

### 04. Prepare to press



- Remove the **0.9mm Feeler gauge** and **Universal adsorption bulb**.
- Place the **Pixel 6 Pro Assembly Battery Press** on the **Pixel 6 Pro Enclosure holder**.

05. Press together in fixture

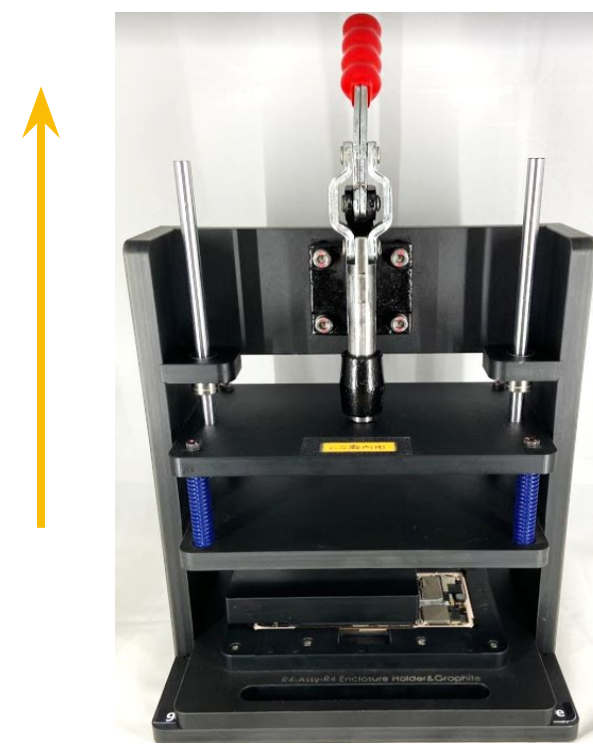


- Place the **Pixel 6 Pro Enclosure holder** in the **Universal press fixture**.
- Press the handle down for 10 seconds.

Pinch point. Keeps hands clear during operation.



06. Press together in fixture



- Return the handle to the original position and remove the **Pixel 6 Pro Enclosure holder**.





Disassembly instructions

# Logic board



# Logic board replacement

Logic board

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)
- [Rear camera](#)
- [Top speaker](#)
- [Front camera](#)
- [Battery](#)

## Tools



Pixel 6 Pro Assembly Enclosure Holder & Graphite Align  
 Pixel 6 Pro Screw cover  
 Universal Fish line  
 Torx Plus 3IP screwdriver  
 ESD stick  
 IPA and cloth  
 Sankol lubricant CFD 409Z\_V2  
 Dust-free Cotton swabs

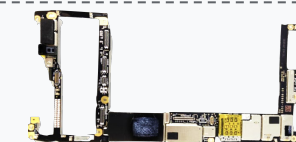
## Parts



G852-02165-11  
 SIM tray



G949-00190-01  
 Logic board



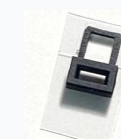
G250-05752-00  
 5 x Screws



G806-03591-01  
 Mic protective liner



G806-04783-13  
 P-sensor grommet



### Caution!

Review all [safety precautions](#) before beginning work.



## 01. Remove SIM tray



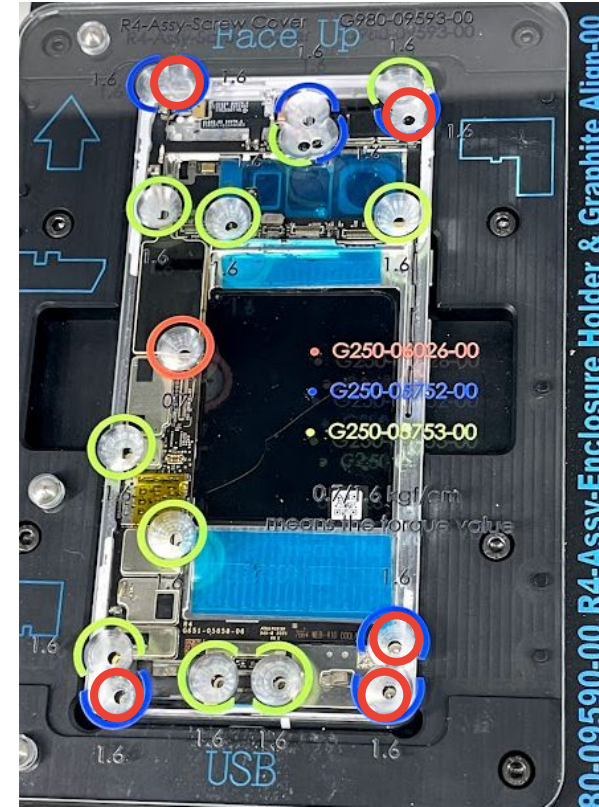
- Remove the **SIM tray** with a **Universal Fish line tool**.

Part: G852-02165-11 (SIM tray)

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



## 02. Remove screws



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Remove the **5 Logic board screws** with a **Torx Plus 3IP screwdriver**, remove the **Pixel 6 Pro Screw cover**.

Part: G250-05752-00 (Screw)  
Do not reuse the part



Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

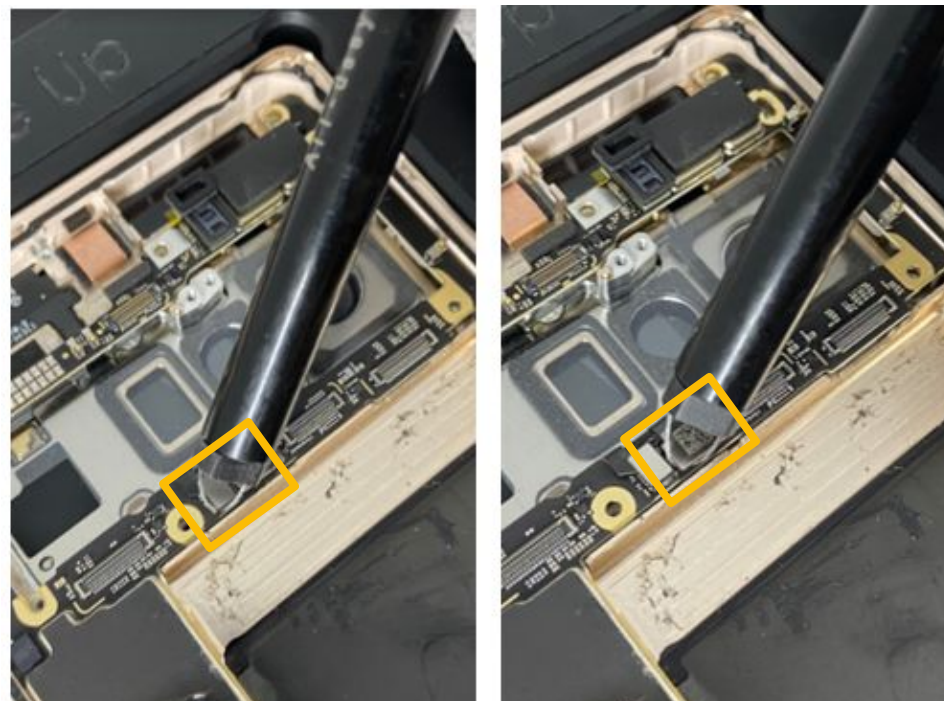
Logic board

Mic1 Bracket

Bottom speaker



### 03. Disconnect logic board

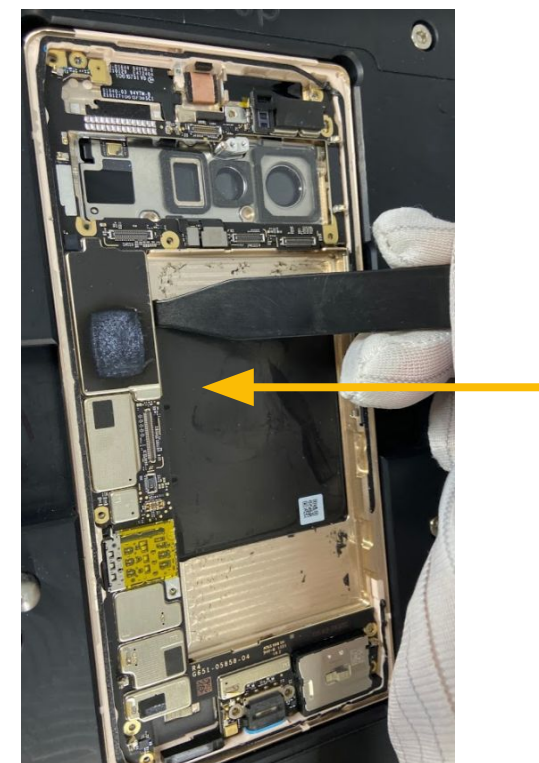


- Loosen and remove the 2 connectors as shown with a **Universal Fish line tool**.

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



### 04. Remove logic board



- Lift the **Logic board** from the area shown above.

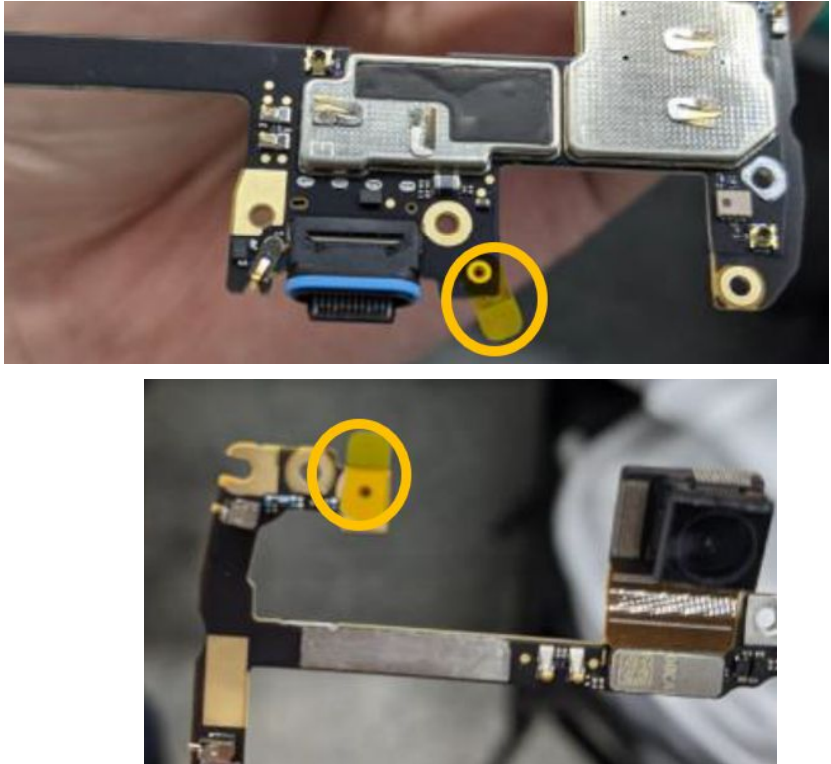
**Part:** G949-00190-01 (Logic board)

## 05. Remove logic board



- Hold the **Logic board** and remove it by sliding upwards towards the top edge.

## 06. Protective film

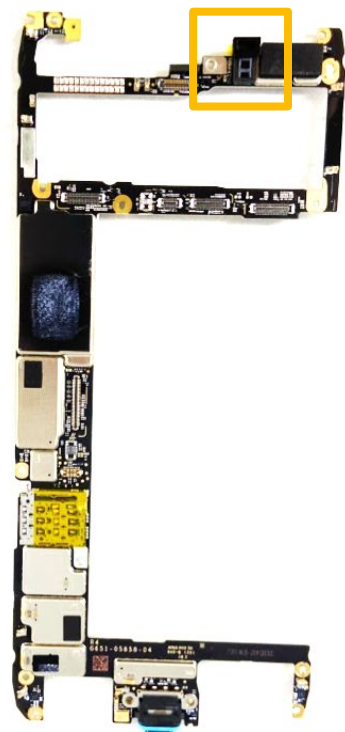


- Paste a protective film on the **Mic1 /Mic3** hole.

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



## 07. Remove P-sensor grommet



- Remove a **P-sensor grommet** on the **Logic board**.

**Part:** G806-04783-13 (P-sensor grommet)

---

This step is ONLY for the broken/damaged P-sensor grommet.





Assembly instructions

# Logic board



### Logic Board check

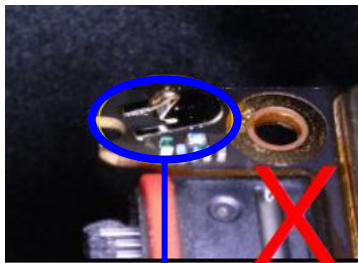
NG



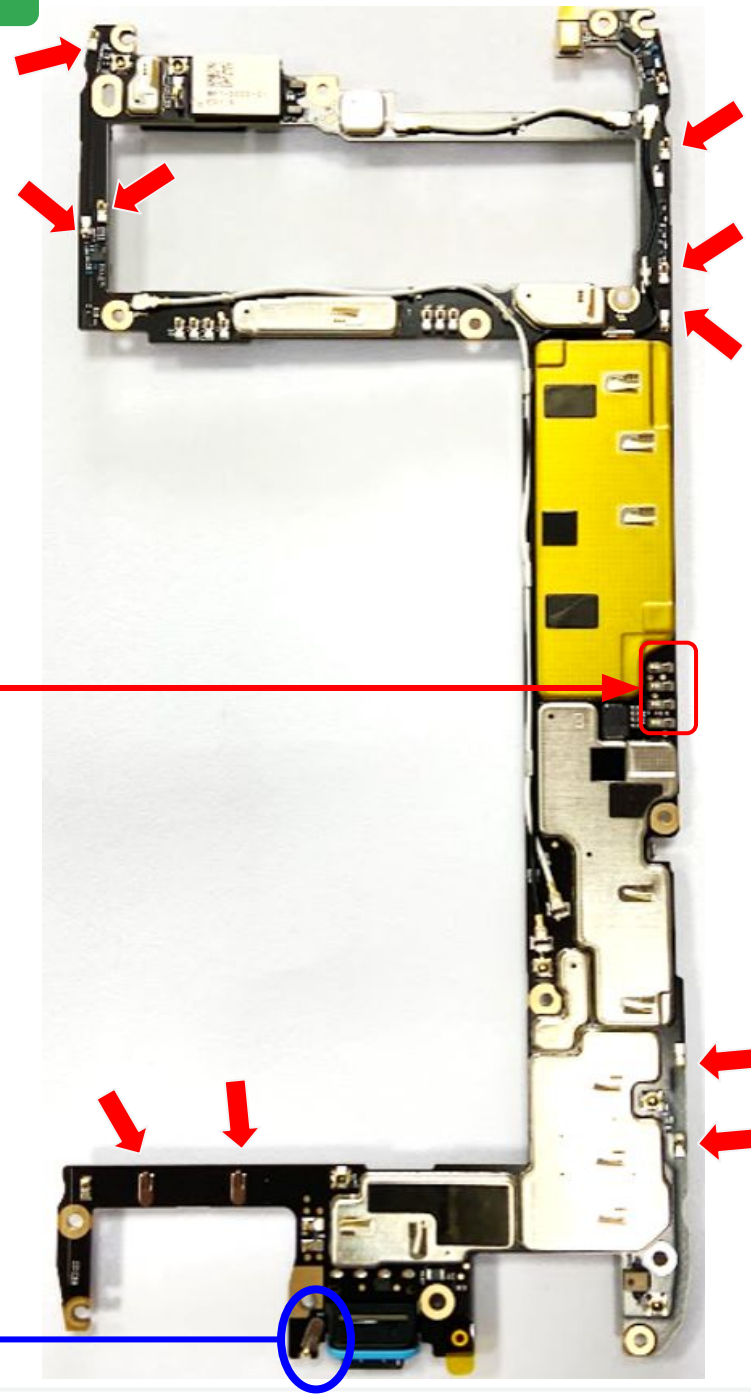
OK



NG



OK



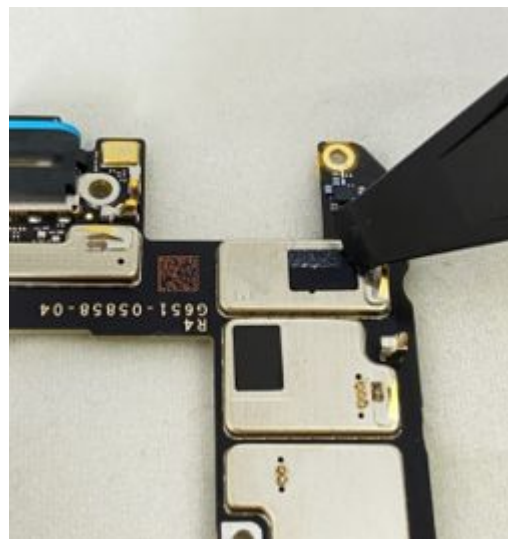
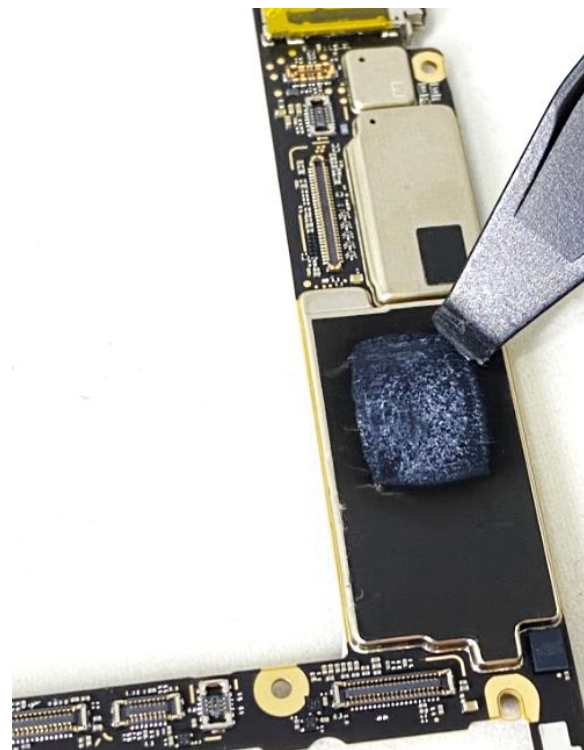
Before assembly the MLB, check each spring deformed or not. And pay **EXTRA ATTENTION** to the springs areas during assembly to avoid damaging them.







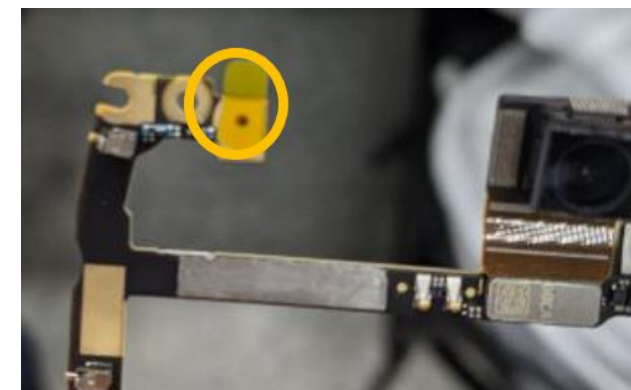
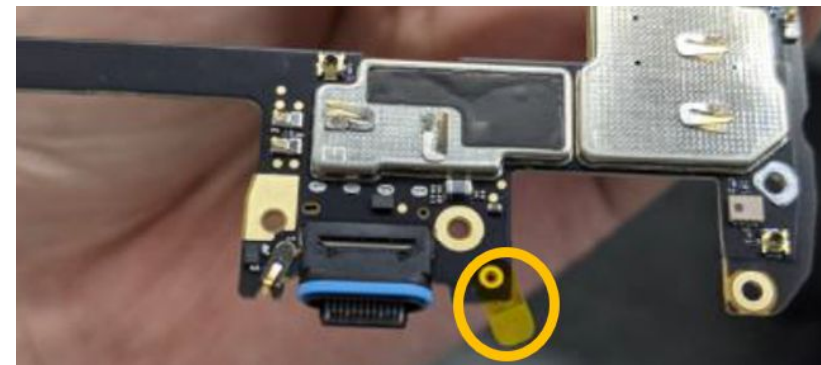
## 01. Re-using a logic board



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

Part: G949-00190-01 (Logic board)

## 02. Remove protective film



- Peel off the **Mic1** yellow mylar from the **Logic board**.
- Remove the **Mic3** protective film from the **Logic board**.

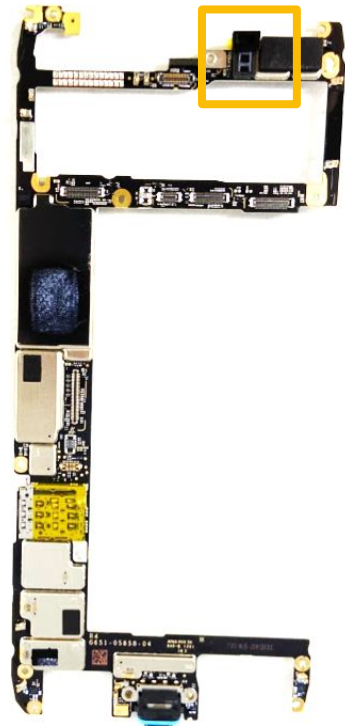
Part: G806-03591-01 (Mic protective liner)

Do not reuse the part





### 03. P-sensor grommet attach

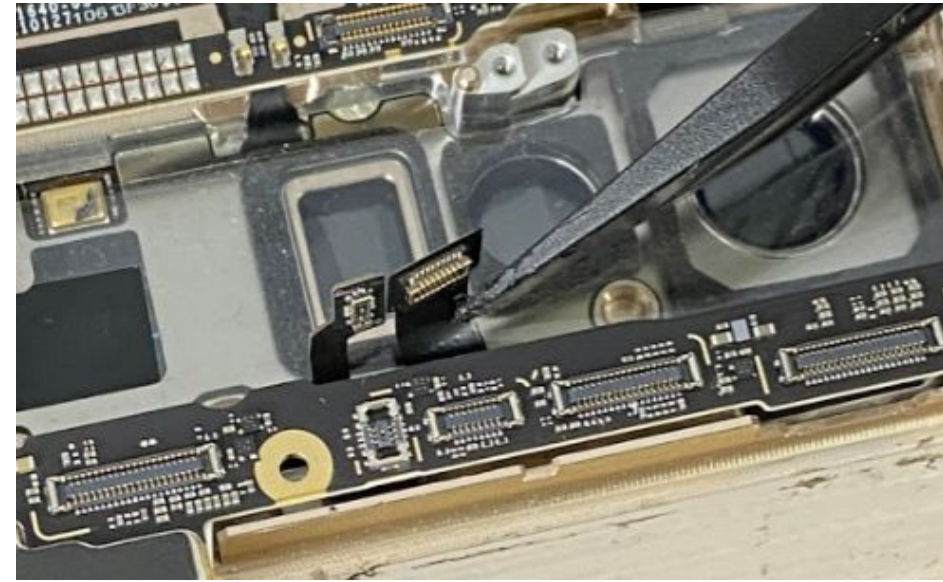


OK



NG: cover the sensor area

### 04. Lift the connectors



- Apply a **P-sensor grommet** on the **Logic board**.  
Part: G806-04783-13 (P-sensor grommet)

This step is only for new logic boards or rework the P-sensor grommet.

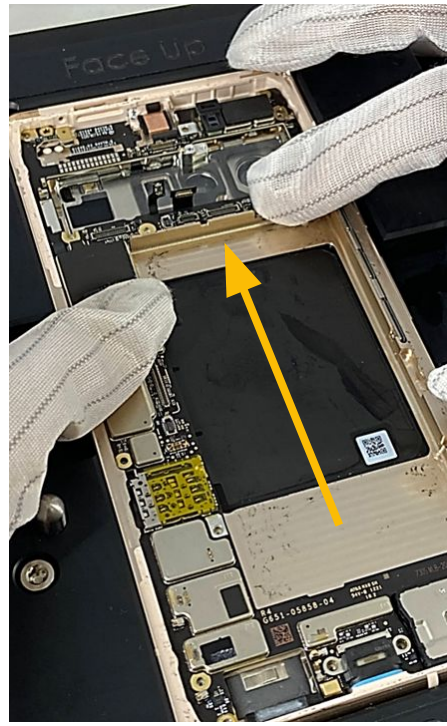


- Lift the two connectors in the **Enclosure** with an **ESD stick** to avoid trapping them under the **Logic board**.

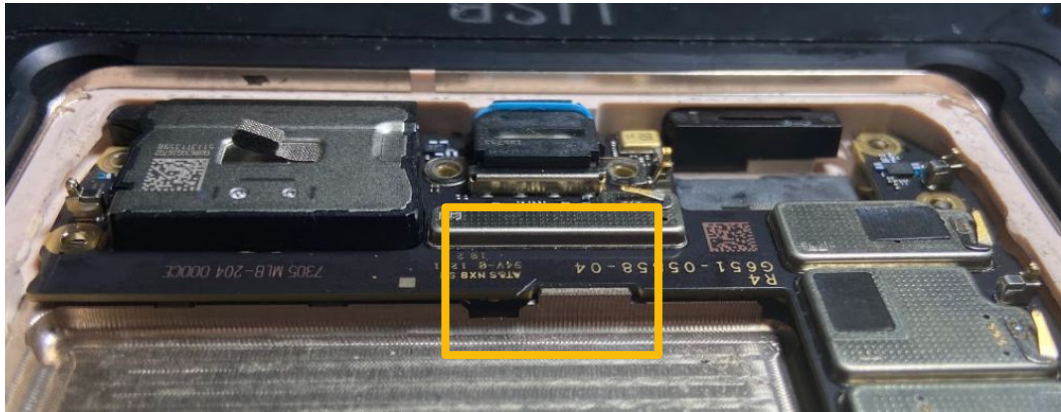
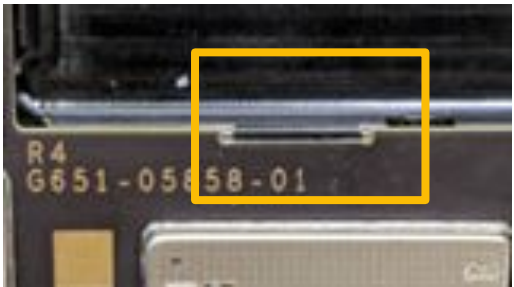




### 05. Align logic board



### 06. Check seating



- Push downwards towards the USB-C socket and then straight down to push the **Logic board** into the retaining wall.

- Press down and push MLB under the wall.
- The **Logic board** should sit under the retaining wall, as shown above.



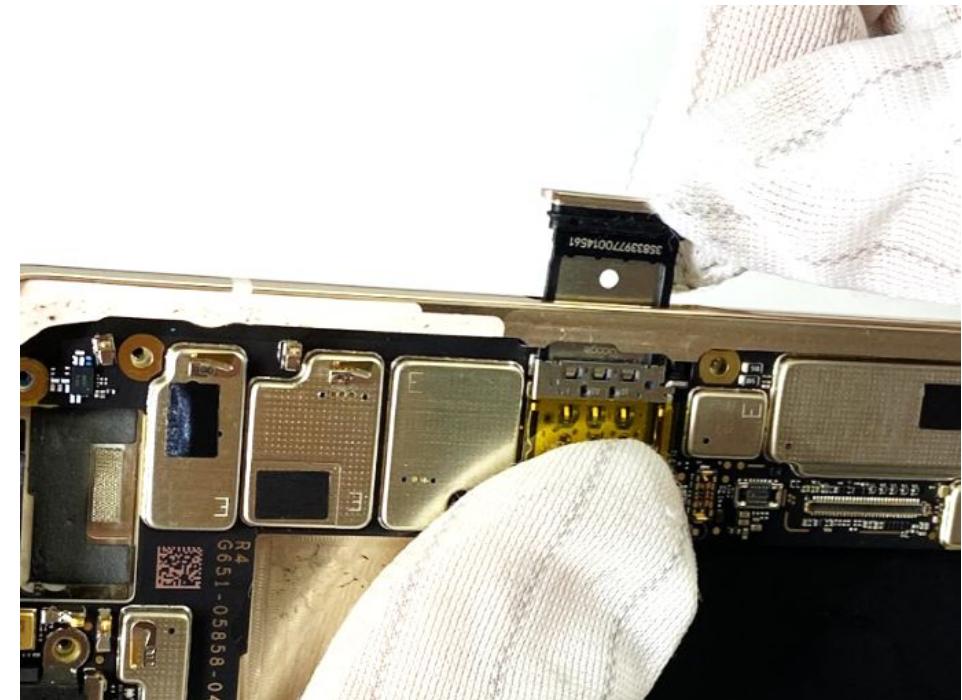
## 07. SIM tray



- Apply **Sankol lubricant CFD 409Z\_V2** to the rubber of the **SIM tray** with a dust-free cotton swab.

Part: G852-02165-11 (SIM tray)

## 08. Insert SIM tray



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

Part: G852-02165-11 (SIM tray)

Display

Graphic sheet

Mid-frame

mmWave

Upper mid-frame

Rear camera

Top Speaker

Front camera

Battery

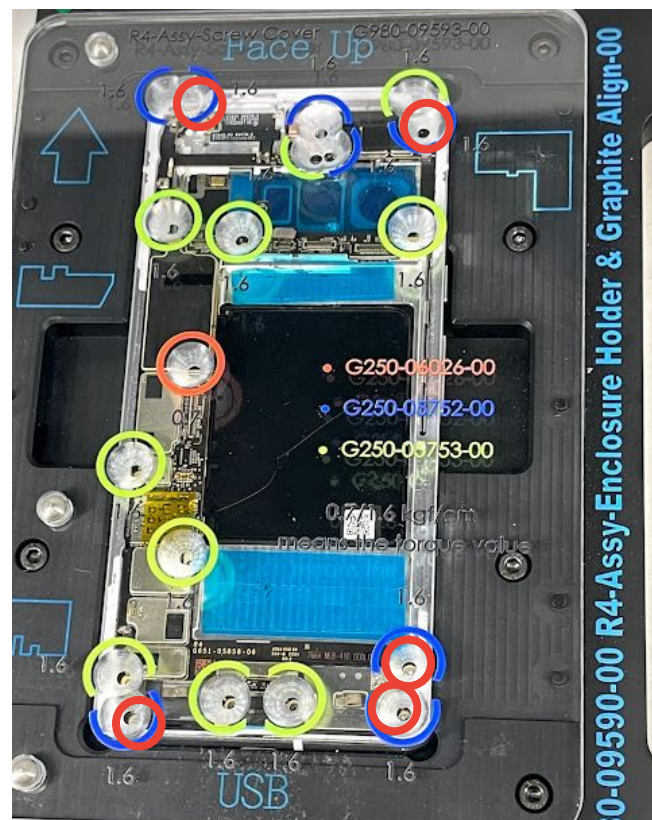
Logic board

Mic1 Bracket

Bottom speaker



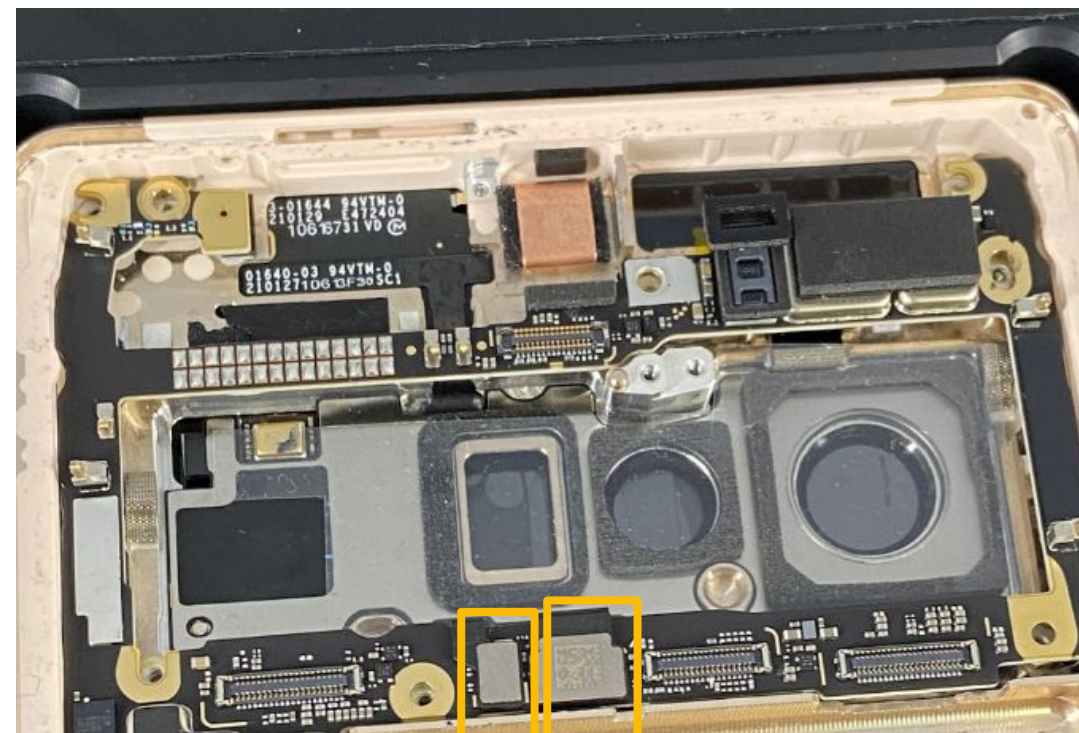
## 09. Screw in logic board



- Place the **Pixel 6 Pro Screw cover** on the **Pixel 6 Pro Enclosure holder**.
- Tighten the 5 screws with a **Torx Plus (3IP) screwdriver**, as shown. **Torque force:  $1.2 \pm 0.03\text{kgf-cm}$**
- Remove the **Pixel 6 Pro Screw cover**.

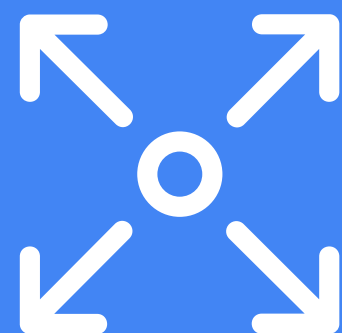
Part: G250-05752-00 (Screw)

## 10. Attach connectors



UWB flex / FLAM flex

- Attach the 2 connectors from the **Enclosure** to the **Logic board**.



Disassembly instructions

# Mic1 Bracket



# Mic 1 replacement

Mic1 Bracket

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)
- [Battery](#)
- [Front and rear camera](#)
- [Top speaker](#)
- [Logic board](#)

## Tools



ESD stick  
ESD tweezers  
Sankol lubricant CFD 409Z\_V2  
Dust-free Cotton swabs

## Parts



G730-06000-51  
Mic1 bracket



### Caution!

Review all [safety precautions](#) before beginning work.





## 01. Remove mic



- Remove the **Mic1 bracket** with an **ESD Stick**.

**Part:** G730-06000-51 (Mic1 bracket)

Do not reuse the part





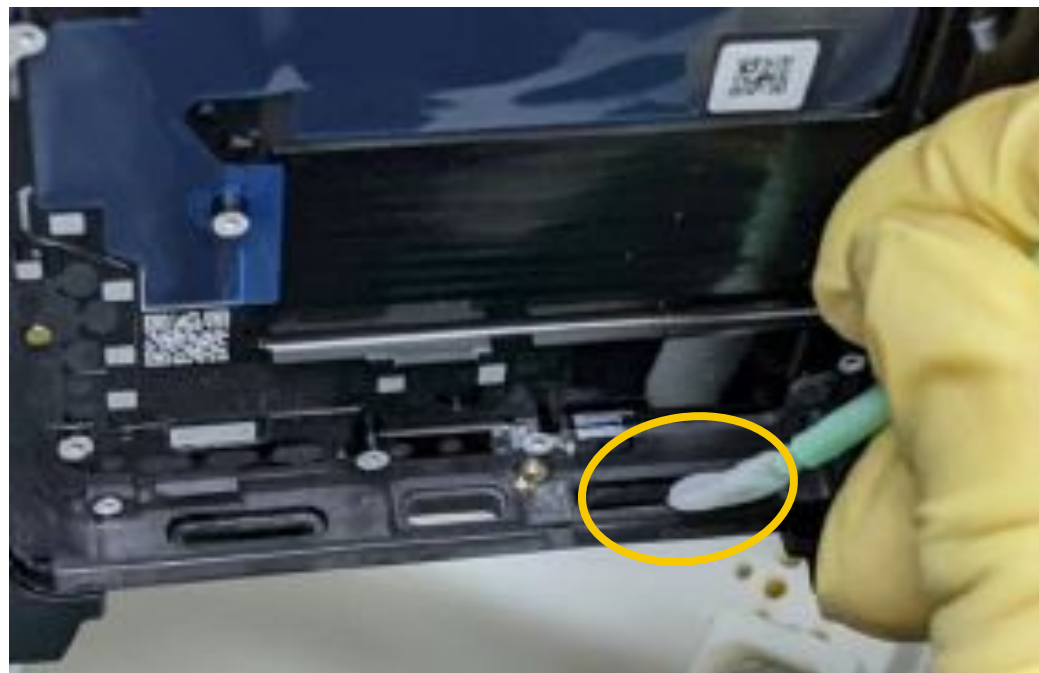


Assembly instructions

# Mic1 Bracket



## 01. Seal the area



- Apply **Sankol lubricant CFD 409Z\_V2** with a **dust-free cotton swab** around the mic grill.

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



## 02. Remove release film



- Remove the **Mic1 bracket** pre-folded release film, in the direction shown.

**Part:** G730-06000-51 (Mic1 bracket)



### 03. Insert new mic 1

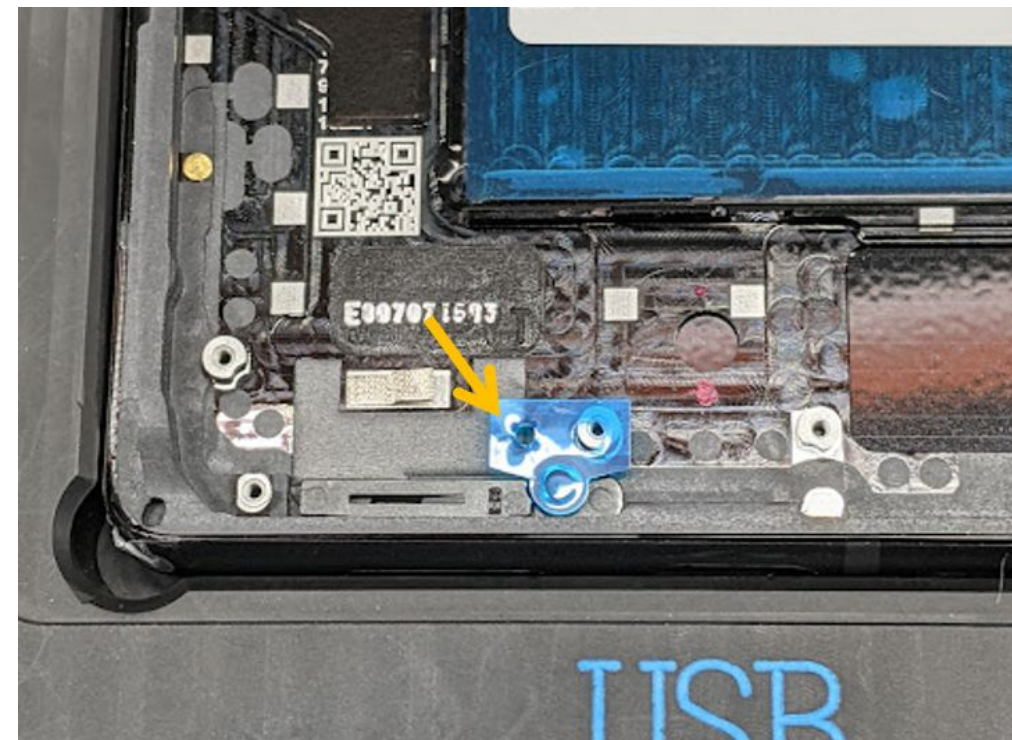


- Tear off the liner and insert the **Mic1 bracket**.
- Ensure it is snapped past the **Enclosure rim**.
- Press for 3 seconds with an **ESD stick**.

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



### 04. Remove release liner



- Use **ESD tweezers** to tear off the release liner on the **Mic1 bracket**.



Disassembly instructions

# Bottom speaker



# Bottom speaker replacement

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame](#)
- [mmWave](#)
- [Upper mid-frame](#)
- [Battery](#)
- [Front and rear camera](#)
- [Top speaker](#)
- [Logic board](#)

## Tools



ESD stick

## Parts



G863-00367-03  
Bottom speaker



### Caution!

Review all [safety precautions](#) before beginning work.



## 01. Remove speaker



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

**Part:** G863-00367-03 (Bottom speaker)



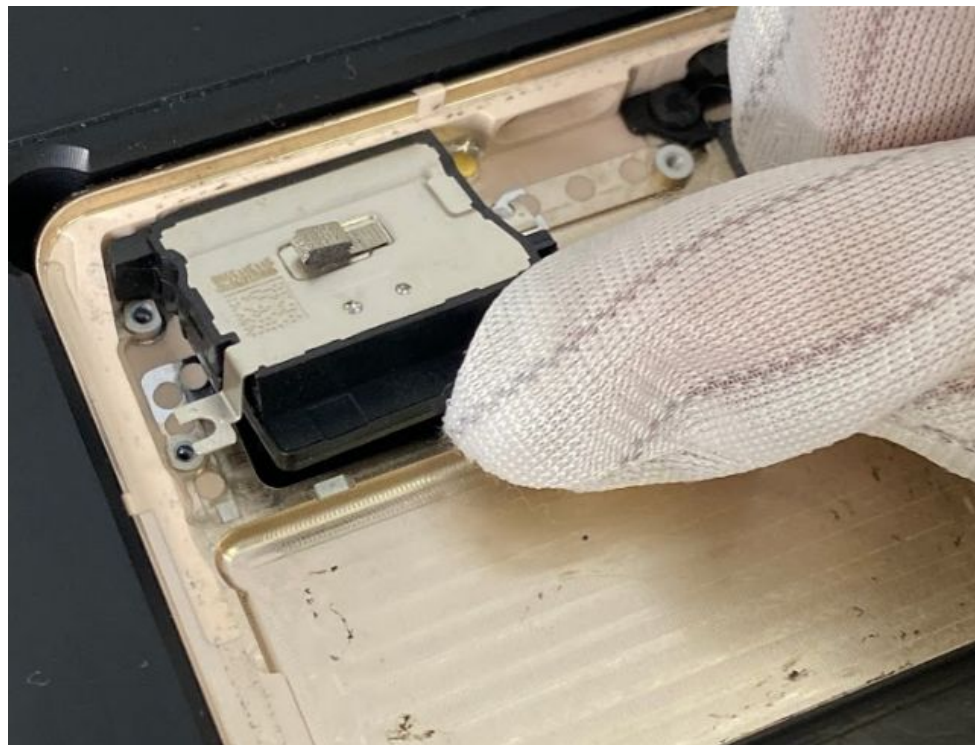


Assembly instructions

# Bottom speaker



## 01. Insert speaker



- Insert the **Bottom speaker** at an angle to slot into the **Enclosure**.

**Part:** G863-00367-03 (Bottom speaker)

Make sure the speaker goes under the enclosure rim.







Disassembly instructions

# Enclosure



# Enclosure replacement

## Prerequisites



Remove the following items first:

- [Display module](#)
- [Graphite sheets](#)
- [Mid-frame and mmWave](#)
- [Upper mid-frame](#)
- [Battery](#)
- [Front and rear camera](#)
- [Top speaker](#)
- [Logic board](#)
- [Mic and bottom speaker](#)

## Tools



ESD stick  
Dust-free Cotton swabs  
IPA and cloth

## Parts



G949-00220-01  
Enclosure



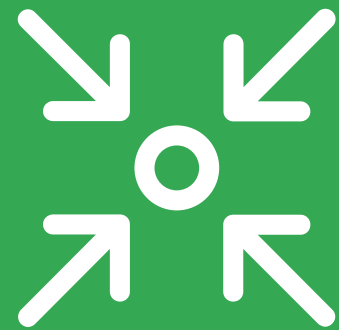
G806-05716-02

Top Spk PSA



### Caution!

Review all [safety precautions](#) before beginning work.



Assembly instructions

# Enclosure



## 01. Re-using the Enclosure

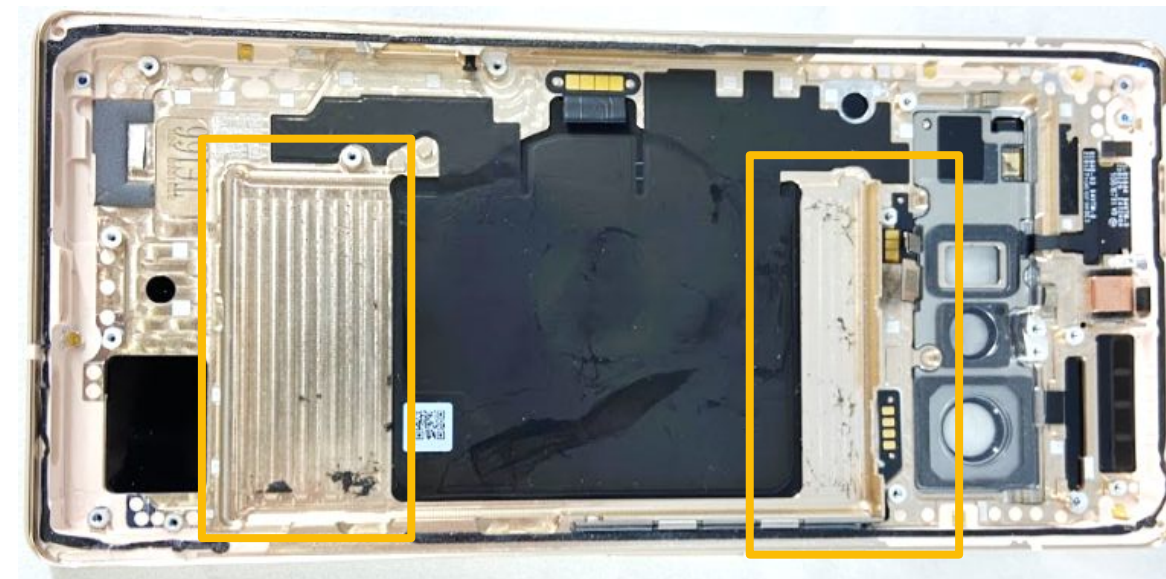


- Use an **ESD stick** to clean the residual glue out of the **Enclosure**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

The highlight is where the residual adhesive exists.



## 02. Clean battery area



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

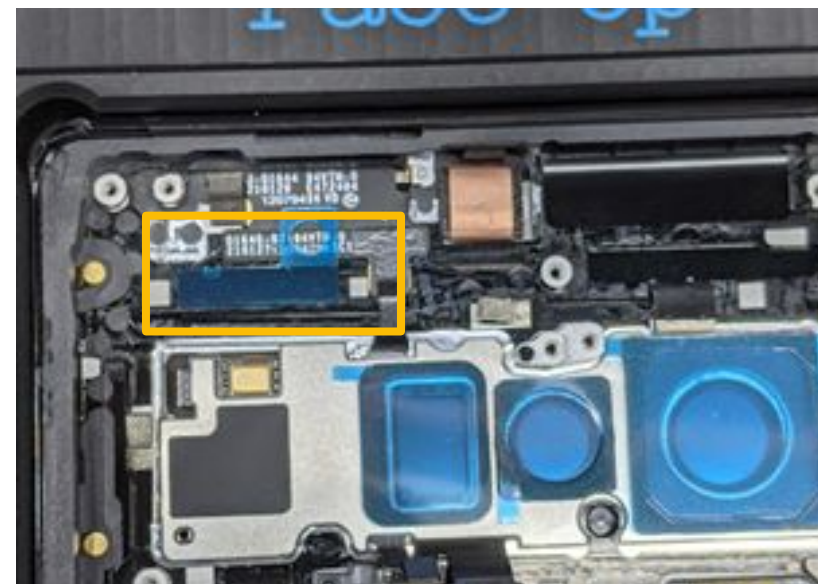


### 03. Clean top area



- Clean any residue in the **Top speaker** area with an **ESD stick**.
- Apply **IPA** with a cloth afterward.

### 04. Repaste Top speaker PSA



- Take the **Top speaker PSA** and attach it to the empty slot of the speaker flatten the left and right sides of the PSA.
- Press it by Universal ESD Stick slightly.

**Part:** G806-05716-02 (Top Spk PSA)





### 03. Clean top area



- Clean any residue in the **Top speaker** area with an **ESD stick**.
- Apply **IPA** with a cloth afterward.



## 05. Check the Pad

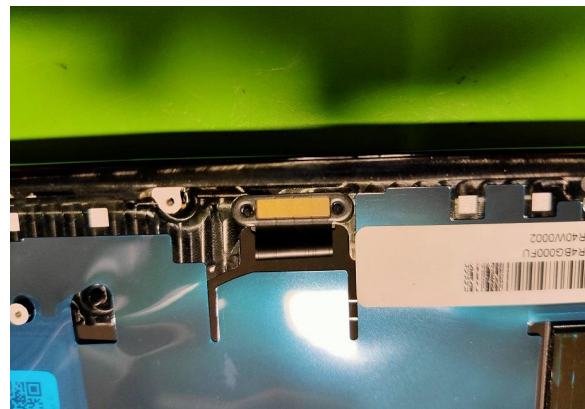


Fig I (OK)



Fig II (NG)

- Visually check the **WC&NFC flex pad**, make sure it is not covered/obstructed by the graphite sheet or other components, and the flex holes are aligned to pins on the enclosure (Fig I)
- If you see flex lift up like Fig II, please adhere the flex back as Fig I.

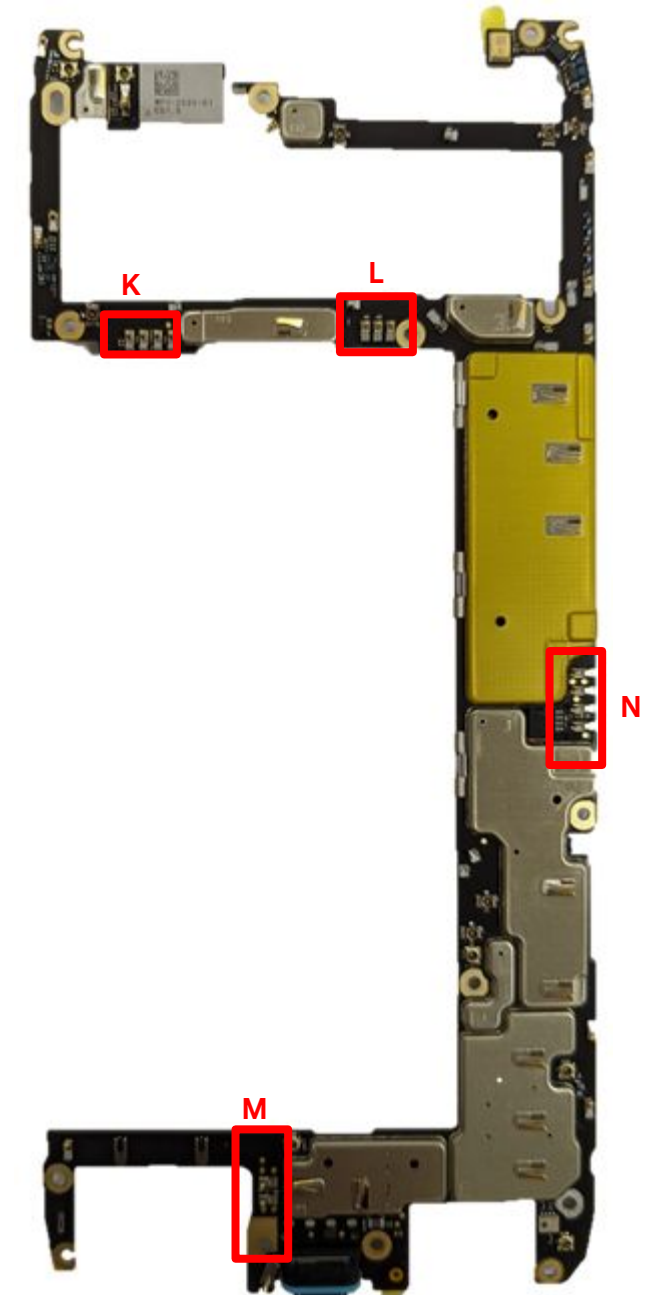
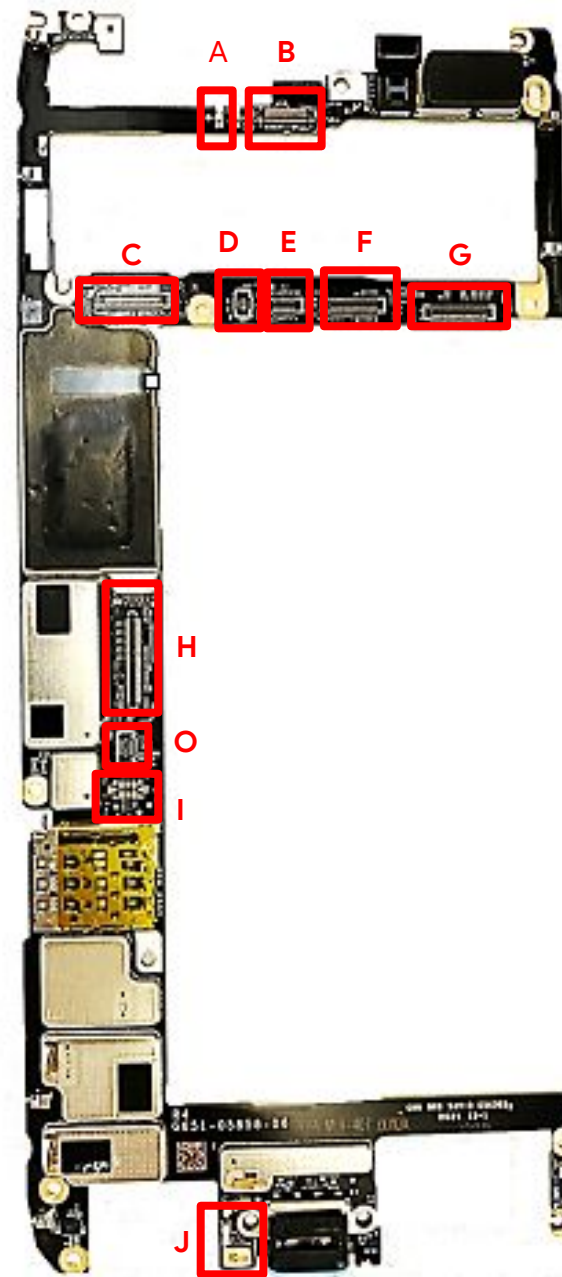


# Troubleshooting


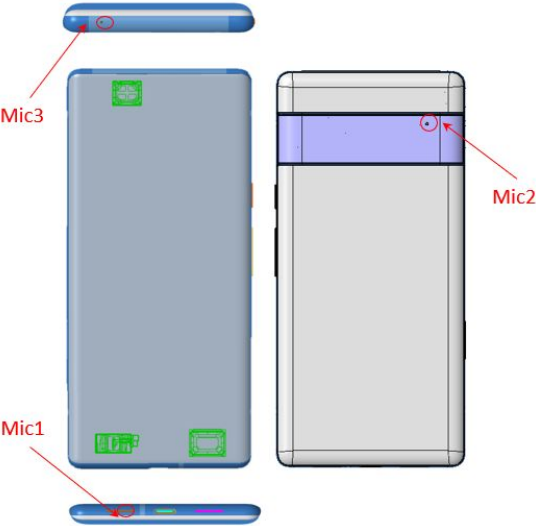

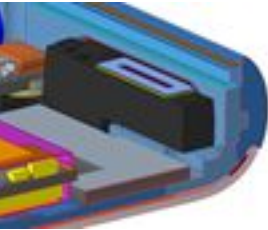
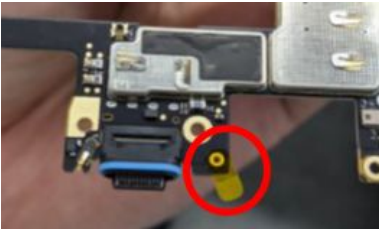
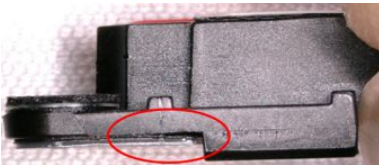


# Connectors Location

Location & Description	
A	Top SPK Pad
B	Front camera connector
C	Tele camera connector
D	UWB connector
E	Flam connector
F	UW camera connector
G	Rear camera connector
H	Display connector
I	Battery connector
J	Vibrator Pad
K	Button connector
L	Flash LED connector
M	Bottom SPK Pad
N	WLC&NFC Pad
O	mmWave connector


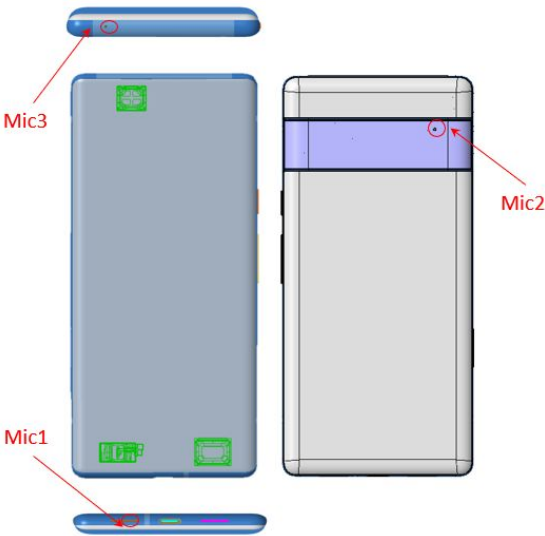


# Mic1

Symptom	Potential Root Cause	Procedure	
 <p>T010: Mic 1 - no sound T011: Mic 1 - low sound T012: Mic 1 - distorted sound</p> 	Mesh not clean	<ul style="list-style-type: none"> <li>Use a microscope and check the mesh for damage or blockage. <b>(Fig1)</b></li> <li>Clean the mesh and test audio.</li> </ul>	 <p><b>(Fig1)</b></p>
	Assembly Problem	<ul style="list-style-type: none"> <li>Disassemble the device, check Mic1 bracket is fully seated. <b>(Fig2)</b></li> <li>Check if the MLB mic1 liner is removed. <b>(Fig3)</b> If not, go to the next step.</li> <li>Test audio again.</li> </ul>	  <p><b>(Fig2)</b>      <b>(Fig3)</b></p>
	Component issue	<ul style="list-style-type: none"> <li>Check the <b>Mic1 bracket</b> to check if there is a little delamination at the PET corner at the bottom. <b>(Fig4)</b></li> <li>Use a good <b>mic1 bracket</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>mic1 bracket</u></li> </ul>  <p><b>(Fig4)</b></p>




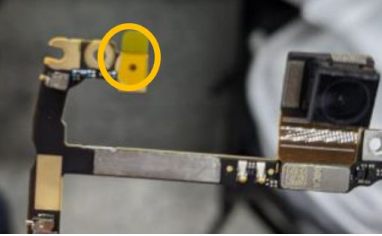
# Mic2

Symptom	Potential Root Cause	Procedure	
 <p>T013: Mic 2 - no sound T014: Mic 2 - low sound T015: Mic 2 - distorted sound</p>	Connectivity issue	<ul style="list-style-type: none"> <li>• Check if connectivity between <b>Flam connector</b> and <b>Logic board</b> are normal.</li> <li>• If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>• Use a good <b>Enclosure</b> and <b>Logic board</b> to cross check with original ones.</li> <li>• Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li>• <u>Logic board</u></li> <li>• <u>Enclosure</u></li> </ul>






# Mic3

Symptom	Potential Root Cause	Procedure	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Flam connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
<p>T016: Mic 3 - no sound T017: Mic 3- low sound T018: Mic 3 - distorted sound</p>	Assembly Problem	<ul style="list-style-type: none"> <li>Check if the MLB mic3 liner is removed. <b>(Fig1)</b> If not, go to the next step.</li> <li>Test audio again.</li> </ul>	 <b>(Fig1)</b>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Top Speaker</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Top Speaker</u></li> </ul>






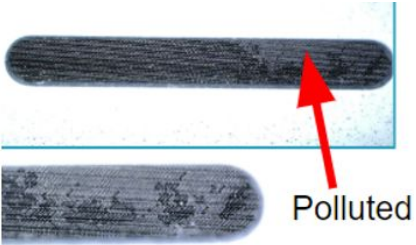
# Top Speaker

Symptom	Potential Root Cause	Procedure	
 <p>T019: Top Speaker no sound T020:Top Speaker low sound T021: Top Speaker distorted sound</p>	Mesh not clean	<ul style="list-style-type: none"> <li>Inspect <b>Top Speaker mesh</b> and a soft <b>ESD brush</b> to remove any debris.</li> <li>Test audio.</li> </ul>	
	Internal debris	<ul style="list-style-type: none"> <li>If sound quality is still poor, inspect the mesh and speaker with a <b>microscope</b>.</li> <li>Disassemble the device and inspect the speaker. Use an ionizing air fan to remove any debris and test audio.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Top SPK Pad</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>If sound quality is still poor, use a good <b>Top Speaker</b> and <b>Logic board</b> to cross check with original ones</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Top Speaker</u></li> </ul>






# Bottom Speaker

Symptom	Potential Root Cause	Procedure	
 <p>T023: Bottom Speaker no sound T024: Bottom Speaker low sound T025: Bottom Speaker distorted sound</p>	Mesh not clean	<ul style="list-style-type: none"> <li>Visually inspect the exterior of the phone check for a polluted mesh on the <b>Bottom Speaker</b> port. And use a soft <b>ESD brush</b> to remove any debris.</li> <li>Test audio.</li> </ul>	
	Internal debris	<ul style="list-style-type: none"> <li>If sound quality is still poor, inspect the mesh and speaker with a <b>microscope</b>.</li> <li>Disassemble the device and inspect the speaker. Use an ionizing air fan to remove any debris and test audio.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Bottom SPK Pad</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>If sound quality is still poor, use a good <b>Bottom Speaker</b> and <b>Logic board</b> to cross check with original ones</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Bottom Speaker</u></li> </ul>






# Display

Symptom	Potential Root Cause	Procedure	
 <p>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</p>	Damage	<ul style="list-style-type: none"> <li>Inspect display for damage and replace if necessary.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Display connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Dead pixels Distorted graphics Flickering Color issues	<ul style="list-style-type: none"> <li>Remove <b>Display module</b>, fit a replacement part without adhesive and test.</li> <li>If issue is resolved, apply adhesive and fit new <b>Display module</b>.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Display</u></li> </ul>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Display</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Display</u></li> </ul>





# Display


Symptom	Potential Root Cause	Procedure	
 <p>T044: Multi-touch poor response T045: Multi-touch no response T046: Multi-touch erratic response</p>	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Display connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Touch screen Fingerprint sensor	<ul style="list-style-type: none"> <li>Remove <b>Display module</b>, fit a replacement part <b>without adhesive</b> and test.</li> <li>If issue is resolved, apply adhesive and fit new <b>display module</b>.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Display</u></li> </ul>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Display</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Display</u></li> </ul>








# Vibrator

Symptom	Potential Root Cause	Procedure	
 T026: Vibrator failure	Connectivity issue	<ul style="list-style-type: none"><li>• Check connector between <b>Logic board</b> and the <b>Mid-frame</b>.</li><li>• Test vibrator again. Check the function by triage test.</li></ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"><li>• Use a good <b>Mid-frame</b> and <b>Logic board</b> to cross check with original ones.</li><li>• Replace the defective component.</li></ul>	<b>Disassembly</b> <ul style="list-style-type: none"><li>• <u>Logic board</u></li><li>• <u>Mid-frame</u></li></ul>






# Power

Symptom	Potential Root Cause	Procedure	
 <p>T001: Does not power on T002: Powers off suddenly</p>	Damage	<ul style="list-style-type: none"> <li>Inspect USB-C connector for debris preventing charging.</li> <li>Inspect device for damage.</li> <li>Inspect liquid damage indicators.</li> </ul>	
	Display	<ul style="list-style-type: none"> <li>Remove the <b>Display module</b> and seat a new one. Charge for 10 minutes to see if the device can power on.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><a href="#">Display</a></li> </ul>
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Battery connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<p><a href="#">Connectors Location</a></p>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Battery</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><a href="#">Logic board</a></li> <li><a href="#">Battery</a></li> </ul>






# Power

Symptom	Potential Root Cause	Procedure	
 <p>T053: Battery damage T054: Battery draining fast</p>	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Battery connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Battery</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Battery</u></li> </ul>






# Rear Camera

Symptom	Potential Root Cause	Procedure	
 <p>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</p>	Damage	<ul style="list-style-type: none"> <li>Inspect display and camera for damage.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Rear camera connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Image quality	<ul style="list-style-type: none"> <li>Remove <b>Display module</b>, connect a new <b>Rear camera</b> to test.</li> <li>If issue is resolved, proceed with <b>Rear camera</b> replacement and assemble device.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Rear Camera</u></li> </ul>
	No image	<ul style="list-style-type: none"> <li>If camera issue remains, replace <b>Logic board</b>.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> </ul>






# Front Camera

Symptom	Potential Root Cause	Procedure	
 <p>T071: Camera no preview T075: Camera Front Photo quality T076: Camera Front Video quality T078: Cannot switch between cameras T079: Camera damage</p>	Damage	<ul style="list-style-type: none"> <li>Inspect display and camera for damage.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Front camera connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Image quality	<ul style="list-style-type: none"> <li>Connect a new <b>Front camera</b> to test.</li> <li>If issue is resolved, proceed with <b>Front camera</b> replacement and assemble device.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Front Camera</u></li> </ul>
	No image	<ul style="list-style-type: none"> <li>If camera issue remains, replace <b>Logic board</b>.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> </ul>




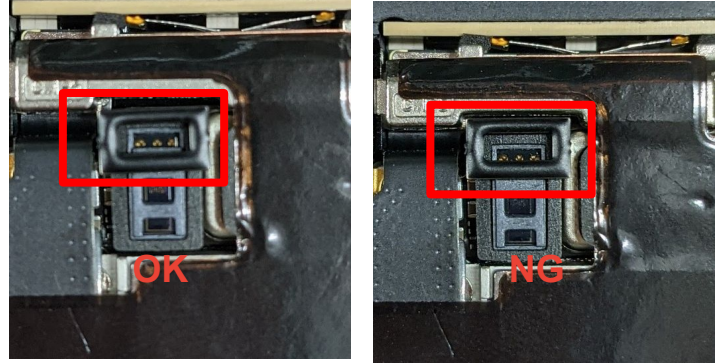


# mmWave

Symptom	Potential Root Cause	Procedure	
 T105: 5G_low_med_band_failure T106: 5G_high_band_failure	Connectivity issue	<ul style="list-style-type: none"> <li>Inspect <b>Mid-frame</b> and check <b>mmWave flex</b> is correctly seated.</li> <li>Check if connectivity between <b>mmWave connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>Connect a new <b>mmWave</b> to test.</li> <li>If issue is resolved, proceed with <b>mmWave</b> replacement and assemble device.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>mmWave</u></li> </ul>
		<ul style="list-style-type: none"> <li>If camera issue remains, replace <b>Logic board</b>.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> </ul>


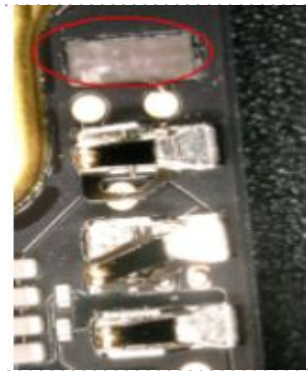


# Proximity sensor

Symptom	Potential Root Cause	Procedure	
 <p>T059: Proximity sensor failure</p>	Assembly issue	<ul style="list-style-type: none"> <li>Check P-sensor foam is posted flat or not.</li> </ul>	<p><b>Assembly</b></p> <ul style="list-style-type: none"> <li><u>P-sensor foam status</u></li> </ul> 
	Component issue	<ul style="list-style-type: none"> <li>Disassemble and check the appearance of Proximity sensor without abnormality.</li> <li>Use a good <b>P-sensor grommet to Logic board</b> to check.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board (P-sensor grommet)</u></li> </ul>



# Wireless Charge


Symptom	Potential Root Cause	Procedure	
 <p>T003: Wireless charging failure</p>	Connectivity issue	<ul style="list-style-type: none"> <li>Check the contact condition between WC and Pin contact pads. If there is no mark on the pin contact pads, it shows poor connectivity.</li> <li>If marks are observed, clean the contact pad and test again.</li> <li>Check if connectivity between <b>WLC&amp;NFC connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>Disassemble the main board and find that the J13002(<u>Connectors Location (N)</u> pad has fallen off.</li> </ul>	 <p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Enclosure</u></li> </ul>








# NFC

Symptom	Potential Root Cause	Procedure	
 <p>T051: NFC connectivity Issues</p>	Connectivity issue	<ul style="list-style-type: none"> <li>Check the contact condition between WC and Pin contact pads. If there is no mark on the pin contact pads, it shows poor connectivity.</li> <li>If marks are observed, clean the contact pad and test again.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>WLC&amp;NFC connector</b> and <b>Logic board</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	
		<ul style="list-style-type: none"> <li>Use a good <b>Enclosure</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Enclosure</u></li> </ul>





# UDFPS

Symptom	Potential Root Cause	Procedure	
 <p>T064: Fingerprint sensor failure</p>	Interference Issue	<ul style="list-style-type: none"> <li>Remove any screen protector prior to testing related to display function.</li> </ul>	
	Damage	<ul style="list-style-type: none"> <li>Inspect display for damage and replace if necessary.</li> </ul>	
	Connectivity issue	<ul style="list-style-type: none"> <li>Check if connectivity between <b>Display connector</b> and <b>Logic board</b> are normal.</li> <li>Check if connectivity between <b>Display flex connector</b> and <b>UDFPS</b> are normal.</li> <li>If they are not fully buckled, re-assemble and then retest.</li> </ul>	<u>Connectors Location</u>
	Component issue	<ul style="list-style-type: none"> <li>Use a good <b>Display</b> and <b>Logic board</b> to cross check with original ones.</li> <li>Replace the defective component.</li> </ul>	<p><b>Disassembly</b></p> <ul style="list-style-type: none"> <li><u>Logic board</u></li> <li><u>Display</u></li> </ul>





# Testing



# Software resources

Testing

Description	Documentation
Update or reinstall the software on Pixel devices	<a href="#">Link</a>





# Glossary



# Terminology and definitions

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





# Terminology and definitions

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





# Terminology and definitions

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







# 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

