Pixel 7 Pro

Repair Manual

Version 3

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

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

⚠️

Use caution if engaging in repair.

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

Welcome!
We are here to help.

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

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

support.google.com

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

Precautions

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

Repair flows

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

Disassembly

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

Assembly

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

Troubleshooting & Testing

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

Glossary

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

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Revision History

Version	Date	Change Description
V1.0	Aug 25th 2022	First release
V1.1	Sep 21th 2022	1. Change the Coaxial cable picture. @P.34 @P.134 2. Add callout : Make sure removing the EVA sponge when using the Enclosure Holder (G980-12121-00). @P.25 3. Change the Typo GPN from G806-0539-01 to G806-03591-01. @P.134 @P.140 4. Cable Map : change the wording from "assemble: to "disassemble" of the sentence "Prepare to disassemble them from ANT1 & ANT4 Board & Logic Board." @P.136 5. Top speaker change from "OPTIONAL to Remove" to "…Removed before Next Process". @P.44 6. Correct the Prerequisites sequence for the battery. @P.123 7. Modify display disassembly method and trim check. @P.51~54 8. Cancel the tool for Universal Disassembly ESD pick @P.26 9. Change the Midframe Screw Qty from 7 to 8. @P.78 10. Add the callout for the thermal rework. @P.83 11. Add the Note for exceptional case for coaxial cable reuse while only changing either Ant1 board or Ant4 board. @P.155

Revision History

Version	Date	Change Description
V2.0	Nov 3rd, 2022	1. Add the callout "slide the USB side thoroughly"and "Don't insert ESD Universal Disassembly ESD stick into device to avoid insert between glass to Fig.5" @P.53 (yellow highlight for this version change) 2. Add the callout "pry between the display and the enclosure, to avoid insert between display and trim." Change the way to slide the right and left side of the display. @P.55 (yellow highlight for this version change) 3. Mic protective liner (G806-03591-01) usage from "3" to "2". @P.38 Remove "Paste the Mic protective liner on the Top Speaker." @P.112 4. Add the tool for Universal Disassembly ESD pick. @P.27 @P.55 5. Change the sequence for dipping with proper amount IPA before closing the lid. @P.52 (yellow highlight for this version change)
V2.1	Feb, 2023	1. This is Only applying to when there is" Sidekey damage". Add replacement parts: sidekey GPN:G949-00361-00. @P.37 @P.172 Disassemble the Sidekey @P.177 Assemble the Sidekey @P.180

Revision History

Version	Date	Change Description
V2.2	July, 2023	1. Add Volume Button Failure Add Replacement part @P.37 in Disassembly @P.177, Assembly @P.187, Troubleshooting@P.208~P.209. 2. Add visually check the Spring. @P.108 3. Modify the Fig4 arrow to indicate the glass @P.54 4. Modify the LCD to OLED @P.41~42 5. Add the caution for bending FPC. @P.61 6. Add the caution avoiding scratching the outside of the display flex against the midframe. @P.67~68 7. Modify the Troubleshooting for Mic3 @P.192
V3	**June 2024**	1. **Removed proprietary references** 2. **Added disclaimers** 3. **Updated tools and fixtures names and part numbers**

Precautions

Important: Before you begin

Be careful if engaging in repair

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

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

Ensure no additional screws or small parts are left in the device after assembly.

Always ensure that screws are securely fastened.

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

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

- Fully discharge device battery before attempting repair.

- Never bend, dent, puncture, or use tools to pry the battery.

- Store batteries in the replacement part packaging as soon as possible after removal to prevent damage.

- If a battery begins to vent, immediately cover in sand or use gloves and tongs to place battery in a fire safe.

- Take care to prevent shorting of battery terminals or damaging the battery, as fire or overheating could result.

- Dispose of the battery in a manner in accordance with local regulations.

Caution:
Pixel 7 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

Caution:
Part handling – Glass

- Wear protective gloves and safety glasses when handling damaged parts.

- Use protective film when removing damaged parts.

- Once removed, immediately store the damaged part in the replacement part packaging to prevent injury.

Tools
and fixtures

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

Caution:

- We don't recommend performing repairs without the specified tools and fixtures.

- Improper use of tools and fixtures may result in injury to yourself, the user of the device or other third parties, as well as damage to the product, tools, fixtures, replacement parts and/or other spare parts.

Important:
Before Disassembling
the Device

- Disconnect the device from all power sources before any disassembly.

- Make sure the battery is fully discharged before any disassembly.

- If the phone battery shows signs of swelling or damage, or if the phone feels hot or emits strong odor, don't attempt disassembly. Please reach out to Google customer support.

- Take care not to expose the phone or its components to liquids once disassembled.
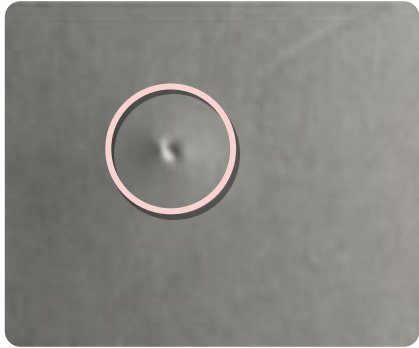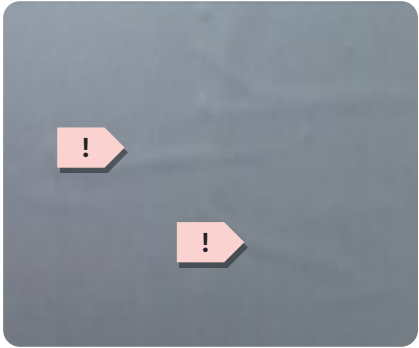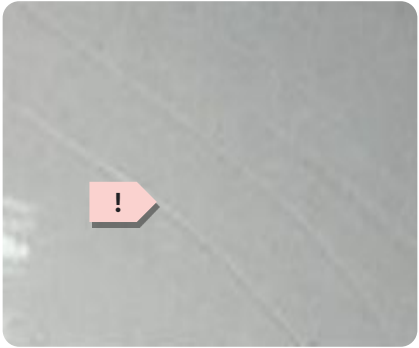
Caution ⚠

Examples of unacceptable battery conditions - Not suitable for repair*
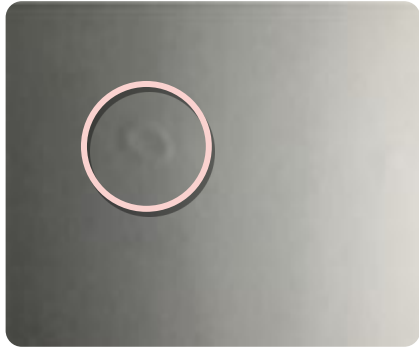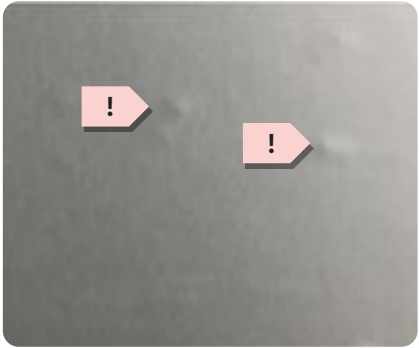

Pouch damage

Line protrusion

Scratch

Contamination marking
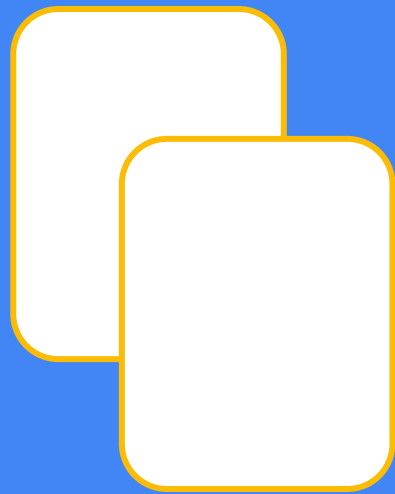

Dot protrusion

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.
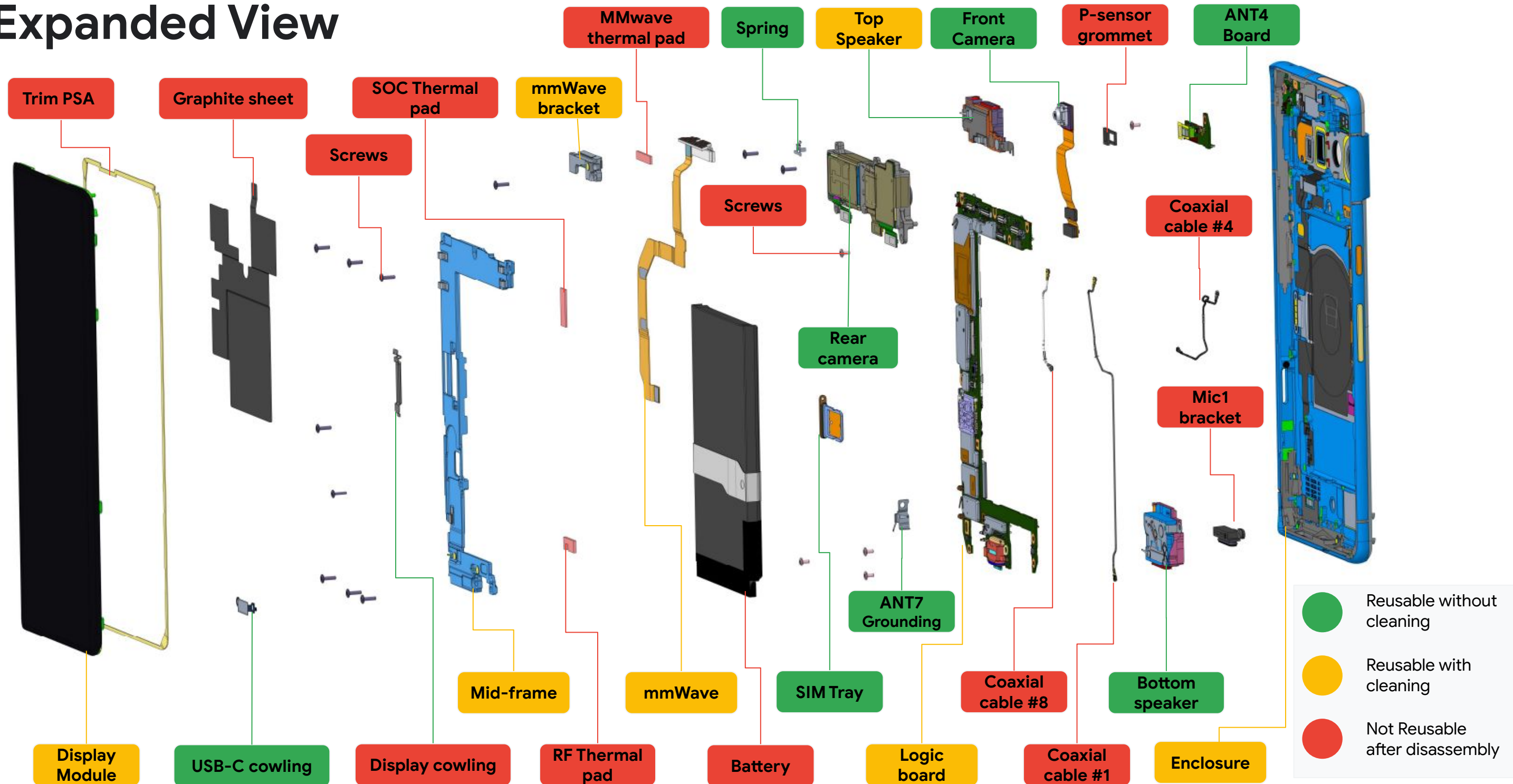
Introduction

Expanded View

Trim PSA

Graphite sheet

SOC Thermal pad

Screws

mmWave bracket

MMwave thermal pad

Spring

Top Speaker

Front Camera

P-sensor grommet

ANT4 Board

Screws

Coaxial cable #4

Rear camera

Mic1 bracket

ANT7 Grounding

Display Module

USB-C cowling

Display cowling

RF Thermal pad

Mid-frame

mmWave

Battery

SIM Tray

Logic board

Coaxial cable #8

Coaxial cable #1

Bottom speaker

Enclosure

🟢 Reusable without cleaning

🟡 Reusable with cleaning

🔴 Not Reusable after disassembly

Pixel touch screen calibration process
For the Pixel 7 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.

Protective bags

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

Avoid touching pins

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

Did you know?

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

Screw Map

Screw
G250-06333-00

Screw
G250-05753-00

⚠️ **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.
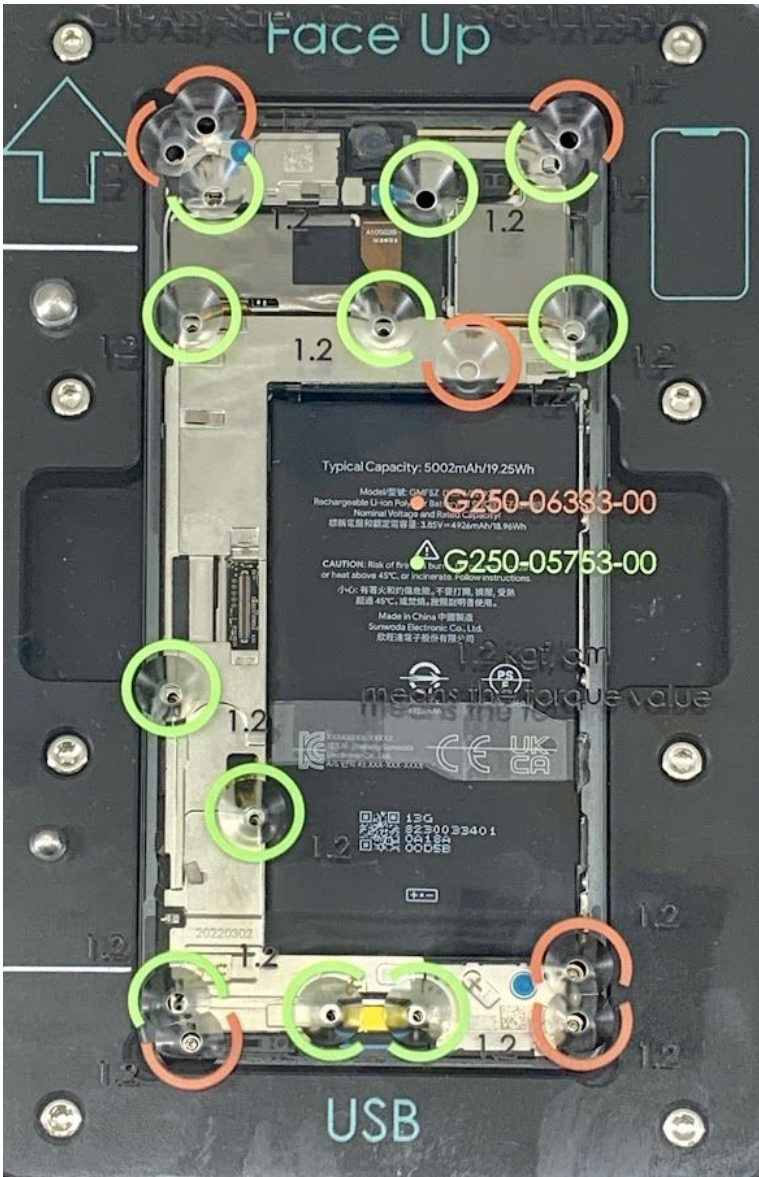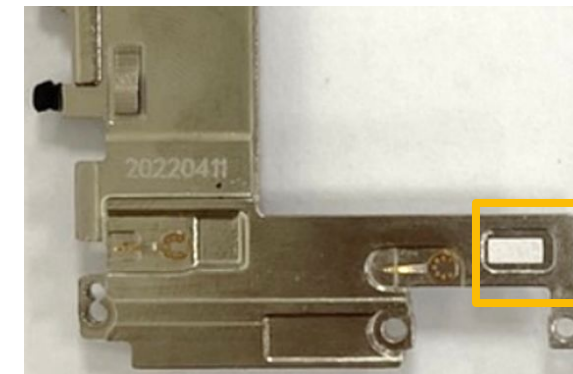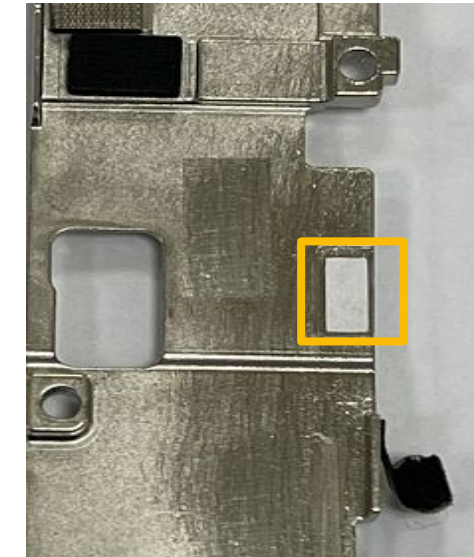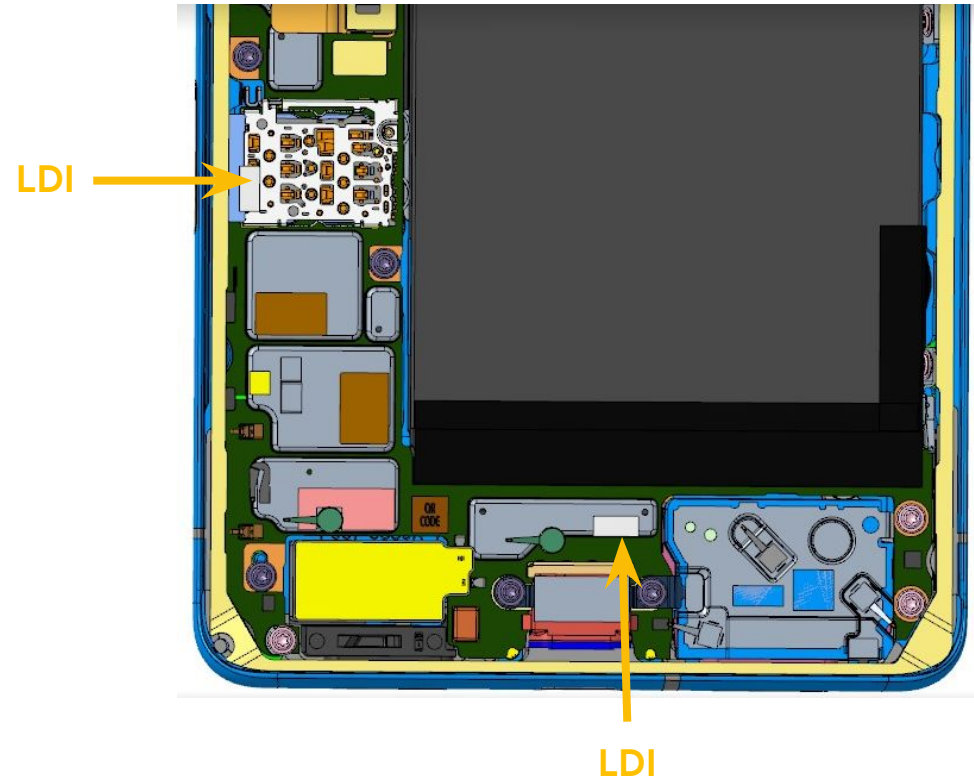
Liquid Damage Indicators

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.

LDI

LDI

- In the SIM card slot, on the mid-frame (visible without disassembling the device).

- Another on mid-frame (disassemble to inspect).

Tools and Fixtures

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

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

⚠️ **Caution:**

- 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 7 Pro

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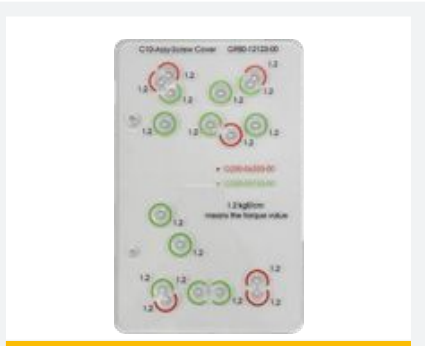

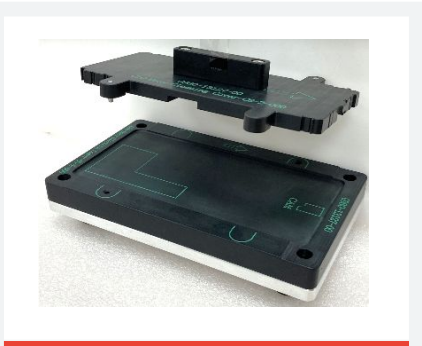Pixel 7 Pro Enclosure
Holder
G940-00913-00

Pixel 7 Pro Enclosure PSA
Align & CG Press Cover
G940-00914-00

Pixel 7 Pro Screw Cover
G940-00915-00

Pixel 7 Pro Battery
Press
G940-00916-00

Pixel 7 Pro Cleaning
Cover CG
G940-00917-00

Pixel 7 Pro Cleaning
Cover Enclosure
G940-00918-00

Google-approved fixtures

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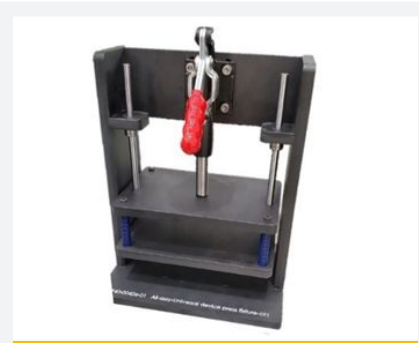

Universal Disassembly
Fixture
G940-00873-00

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

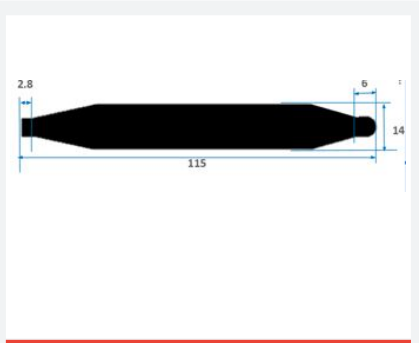
Universal adsorption
bulb
G940-00780-00

Universal Press Fixture
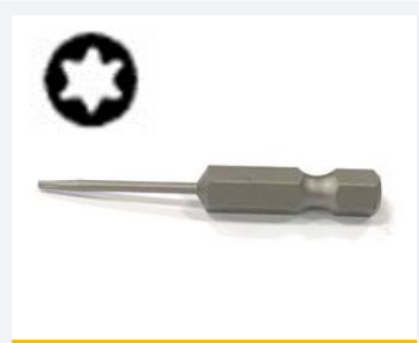
G940-00733-00

Universal Scraper
G940-00784-00

Upper : SIM TRAY EJECTOR
Lower : CONNECT DSSY

Universal Fish line tool
G940-00779-00

Universal Disassembly
ESD stick
G940-00782-00

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

Universal Cap Removal
G940-00923-00

Universal Disassembly
ESD pick
G940-00783-00

Universal Protective
Film
G940-00786-00

Universal Coaxial Cable
Tool
G940-00781-00

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	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
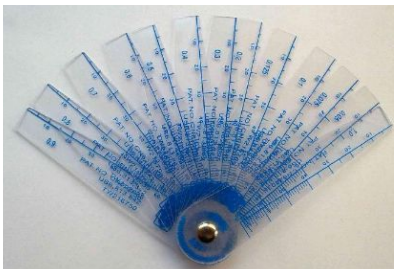
Feeler gauge	Deglue Machine	Fishing Line (Thickness 0.4mm, 13.9kg/30lb)

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.

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.
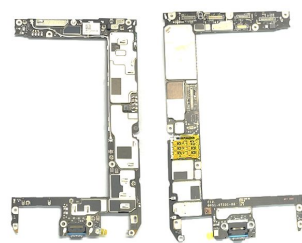
Replacement parts

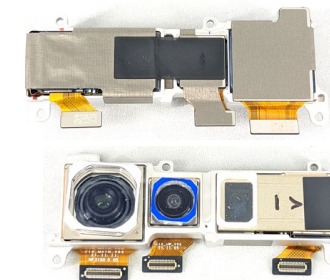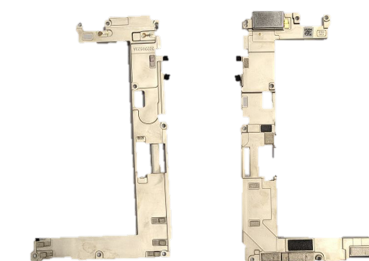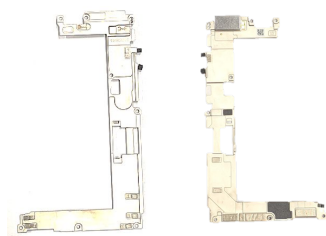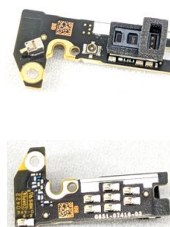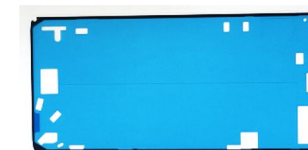|		
Logic board Multiple Part Numbers	**Display module** Multiple Part Numbers	**Enclosure** Multiple Part Numbers
Front camera G949-00298-01	**Rear camera** G949-00299-01	**Mid-frame_mmWave** G949-00300-01
Mid-frame_sub6 G949-00301-01	**mmWave module** G949-00302-01	**Ant4 Board** G949-00303-01
Battery G949-00304-01	**Display cowling** G730-06100-01	**Trim PSA** G806-06898-03

Replacement parts

● Reusable without cleaning	● Reusable with cleaning	● Not Reusable after disassembly

Sim Tray
Multiple Part Numbers
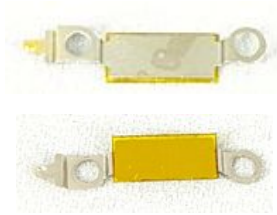
USB-C cowling
G853-01223-01

Top Speaker
G863-00403-04
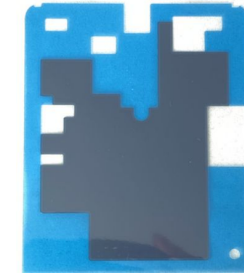
Graphite sheets
G864-00520-01
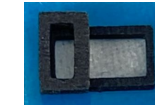
P-sensor grommet
G806-06257-03

Screw
G250-05753-00

Screw
G250-06333-00

Bottom Speaker
G863-00402-03

Mic1 Bracket
G730-06101-13
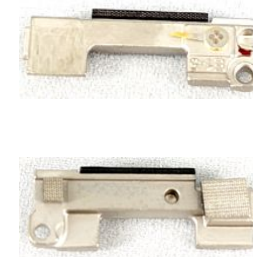
MMwave bracket
G730-06099-11

sub6 bracket
G730-06099-12
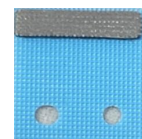
mmWave thermal pad
G806-06083-01

Replacement parts

Spring
G853-01244-01

FOAM Sub-6
G806-06182-01
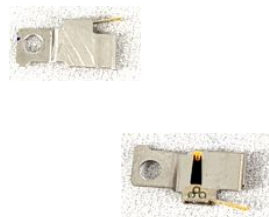
ANT7 Grounding
G853-01233-02
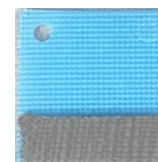
SOC thermal pad
G806-06020-01

RF thermal pad
G806-04615-11

Coaxial cable #1
G821-00811-53

Coaxial cable #4
G821-00812-01

Coaxial cable #8
G821-00814-50

Replacement parts

● Reusable without cleaning   ● Reusable with cleaning   ● Not Reusable after disassembly
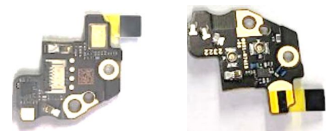
Ant1 Board
G949-00347-00
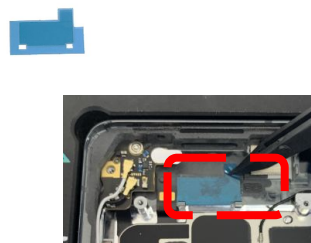
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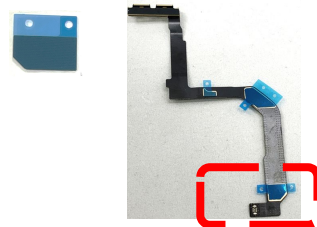
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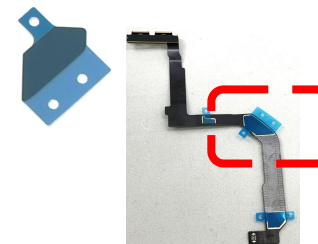
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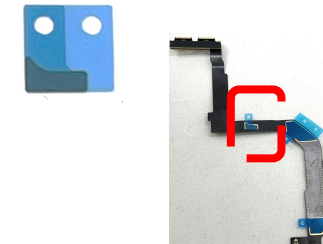
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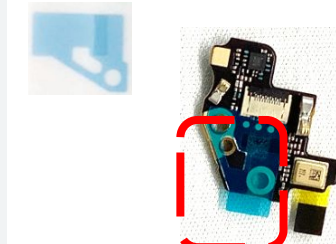
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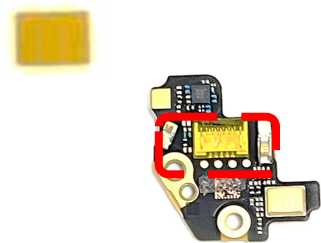
KAPTON
G806-06364-01
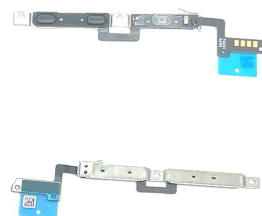
Sidekey
G949-00361-00

Volume button
Multiple Part Numbers

Replacement parts
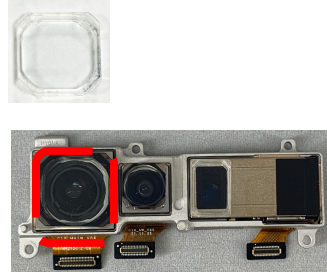
RCAM Cap
G852-02350-01
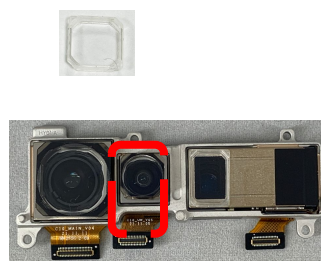
RCAM UW Cap
G852-02270-01
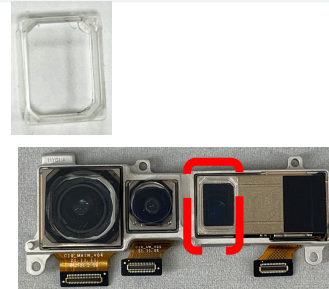
RCAM Tele Cap
G852-01898-01

FCAM Cap
G852-02360-01
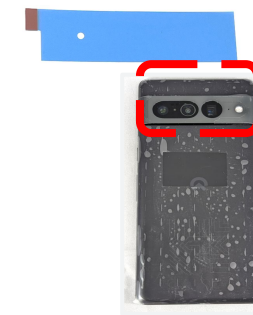
Visor film
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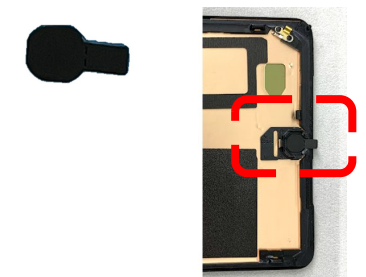
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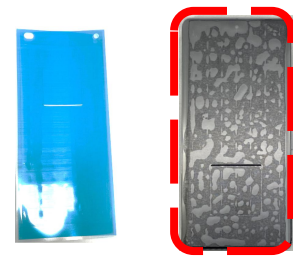
G_liner_Service
G806-07705-01
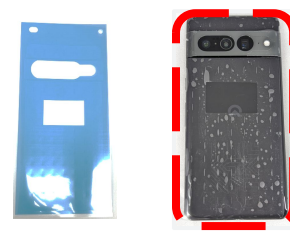
BG film
G806-07706-01
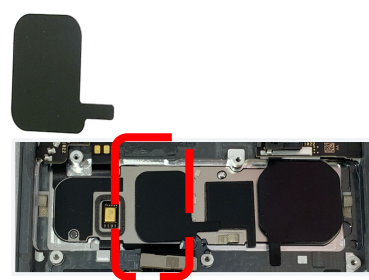
RCAM liner tele
G806-07707-01
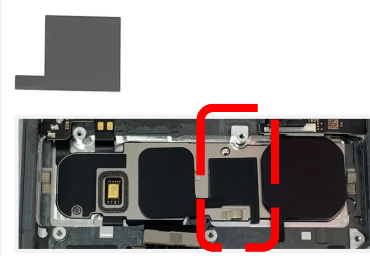
RCAM liner UW
G806-07708-01
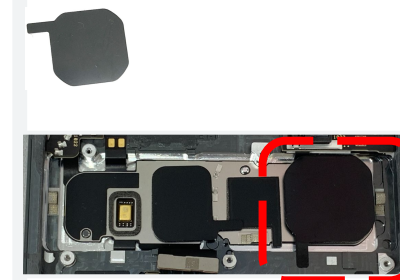
RCAM liner
G806-07709-01
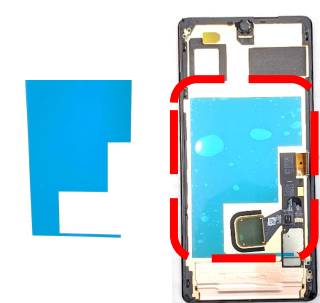
copper protective film
G806-07710-01

Replacement parts

Mic protective liner
G806-03591-01

Repair flows

Pixel 7 Pro Disassembly flowchart

Disassembly flowchart

Display → Graphite sheets

Mid-frame → mmWave

Rear camera → Top speaker, Front camera, Battery*

Logic board → Bottom speaker, Mic 1 bracket

Enclosure

Legend:
- Remove before the Next Process
- **OPTIONAL** to Remove
- Reusable without rework
- Reusable with rework
- Not Reusable after disassembly
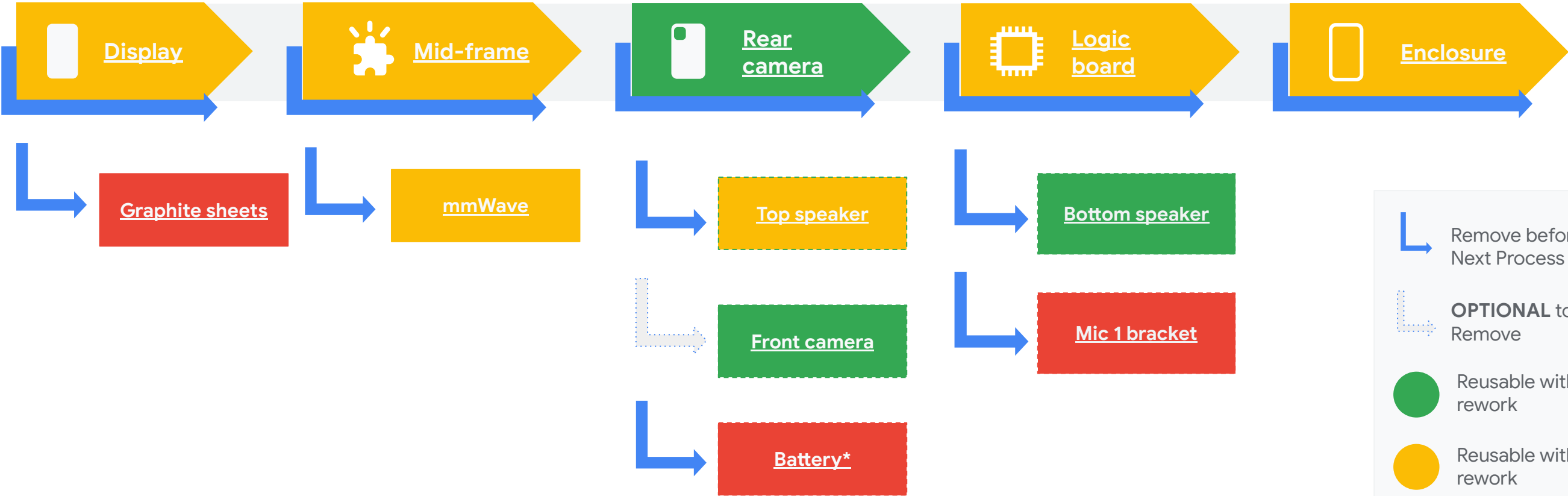
***Note: Rear camera/Battery are in the same layer. They can be removed independently.**

How to read this chart…

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

Pixel 7 Pro Assembly flowchart

Assembly flowchart

Enclosure → Logic board → Battery → Display

Enclosure	Logic board	Battery
Bottom speaker	Front camera	mmWave
Mic1 bracket	Top speaker	Mid-frame
	Rear camera	Graphite sheets
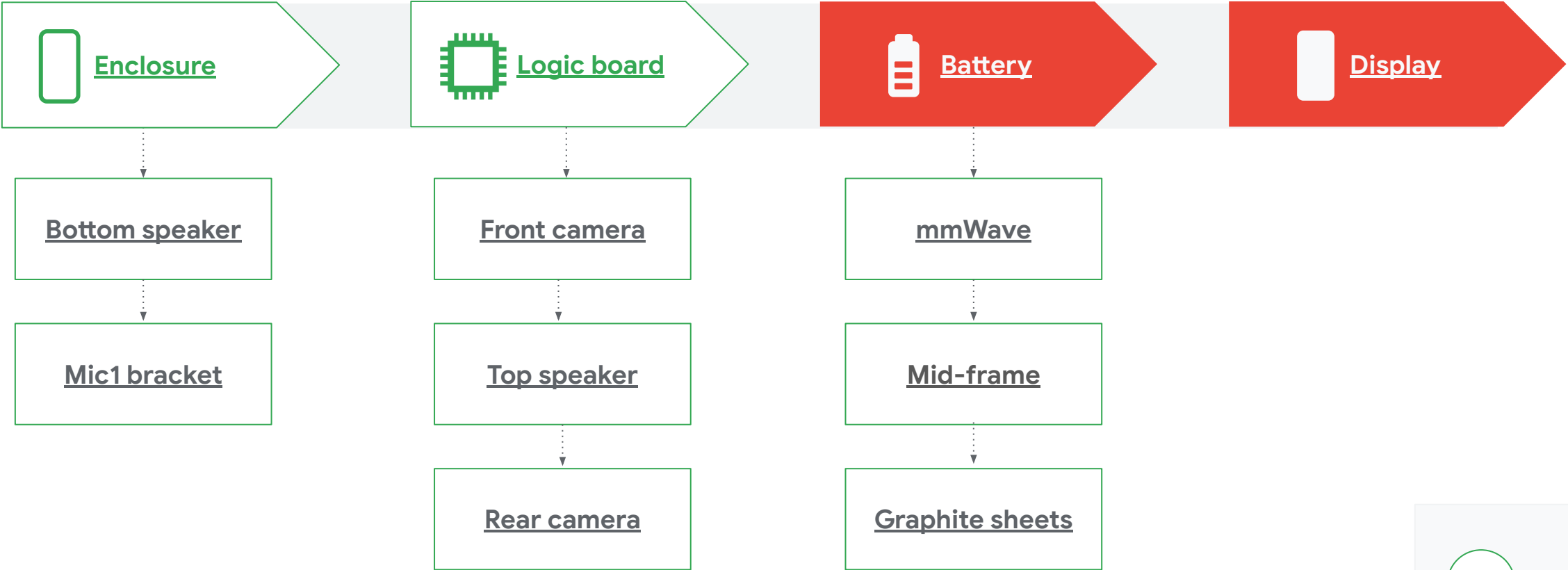
○ Assembled without fixture

● Assembled with fixture

How to read this chart...

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

Disassembly instructions

Display

Display replacement

Prerequisites

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

Tools

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

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

Display replacement - Cont.

Parts

G949-00290-01
Display

G806-07705-01
CG_liner_Service
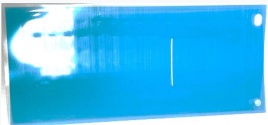
G806-07706-01
BG film
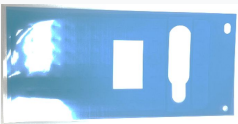
G730-06100-01
Display Cowling

G806-07704-01
FCAM film

G852-02360-01
FCAM CAP

G806-07710-01
CG_copper_protective
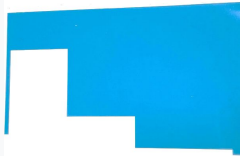
G806-06898-03
Trim PSA
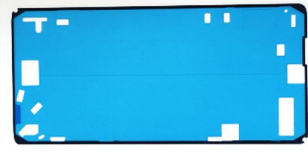
G806-07703-01
Visor film
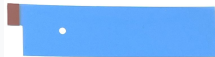
⚠️ **Caution!**
Use **safety gloves** to handle damaged displays as some splinter during removal and could cause injury. Apply **protective film** to broken glass before removal. Review all **safety precautions** before beginning work.

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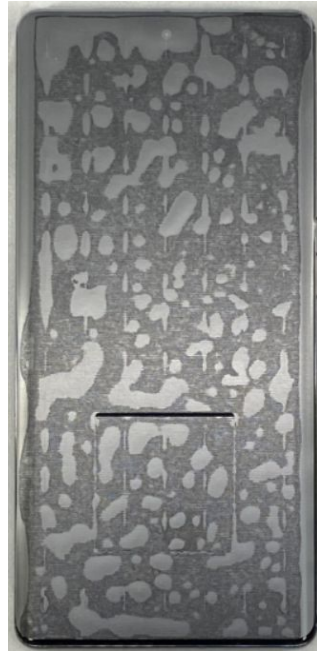
- Make sure the device is turned off before disassembling.
- Cover the **Display module** with protective film.

Part: G949-00290-01 (Display module), G806-07705-01 (CG_liner_Service)

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

Cover the Back Glass

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

Part: G806-07706-01 (BG film)

G806-07703-01 (Visor film)

Display → Graphic sheet → Mid-frame → mmWave → Rear camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Soften the adhesive

Where snaps are

Front

Back

- **Display** face to the **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. ⚠️
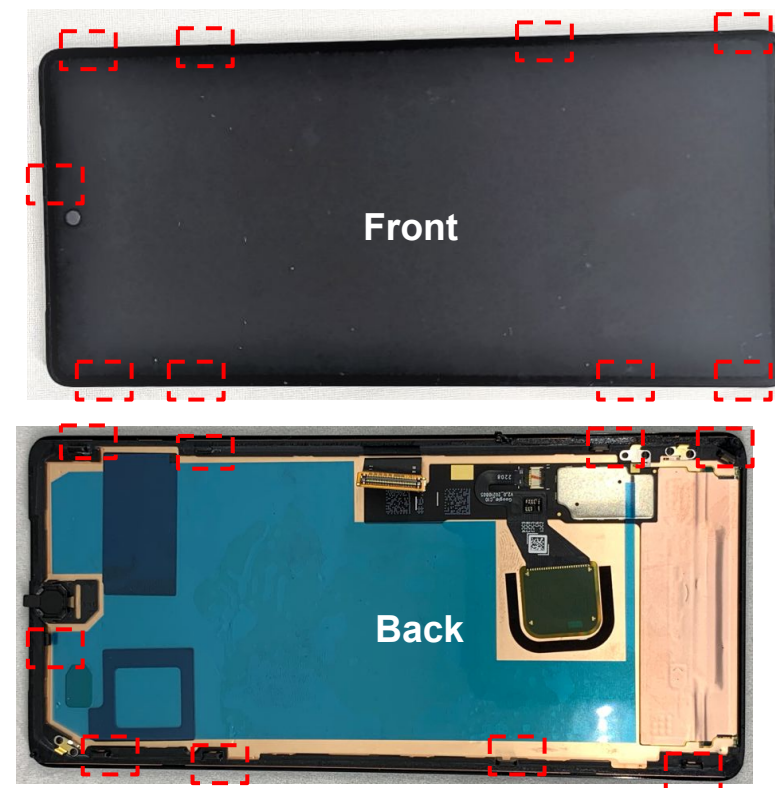
- <u>Before removing the **Display module**</u>, be aware that there are 9 snaps underneath. (Refer to the relative position)
- Avoid damaging the snaps during the disassembly process.

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Use fixture

Fig 1

visor contact the edge of the fixture

Fig 2

Fig 3

Fig 4

USB side

Groove

Place power key inside the groove
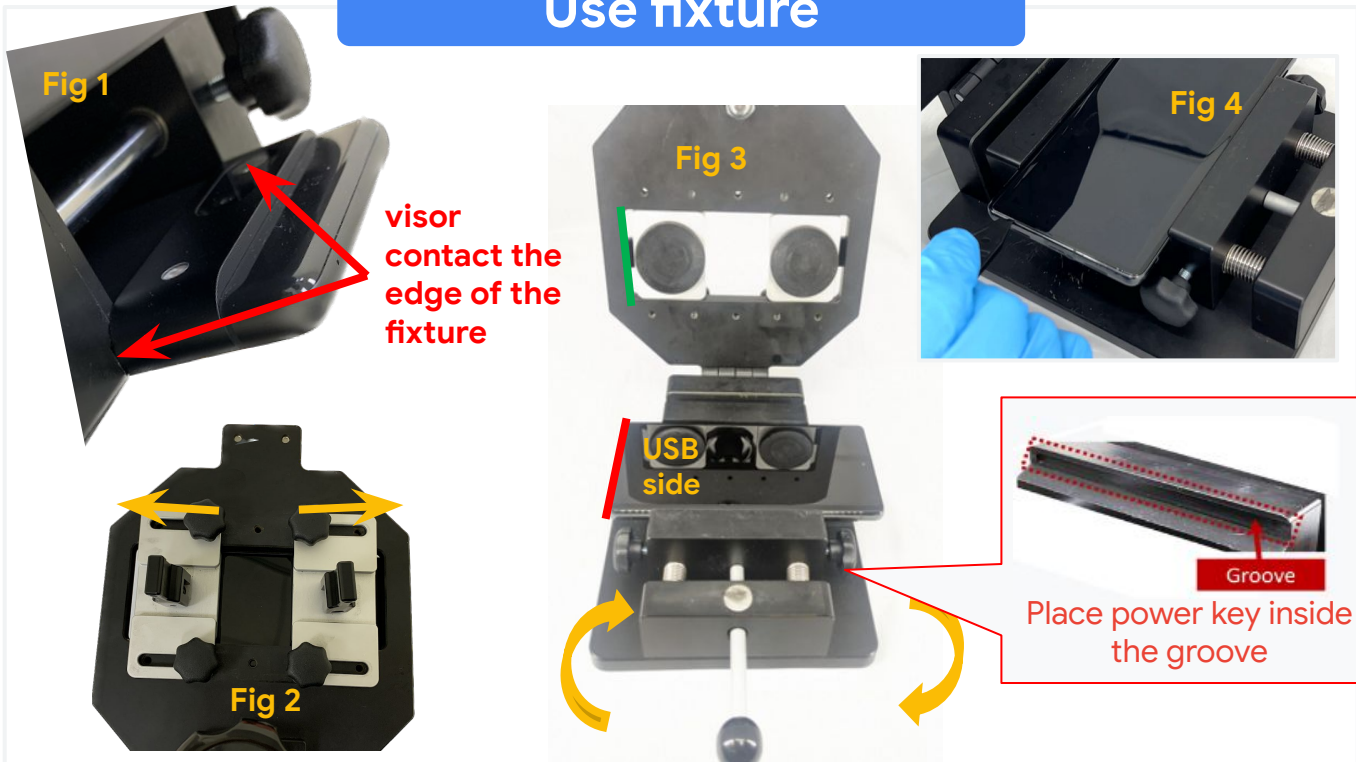
- Place the device on the holder of **Universal disassembly fixture with Universal Device Clips,** phone visor contact the edge of the fixture, in **Fig1.** And adjust these two suction cups to the end, in **Fig2.**
- Adjust the position of the **Display module** (the red line) to align with the edge of the left suction cup (the green line), in **Fig3.**
- Before closing the lid, dip the **ESD Universal Disassembly ESD stick** with proper amount **IPA** to the gap between the display and the Enclosure, in **Fig1.(only USB side)**, in **Fig4.**
- Fix the device and lock with the screws.

Remove the Display front protective film to allow the suction cups attach to the display.

There is a groove which can help to avoid pressing the power button accidentally.

Cover fixture
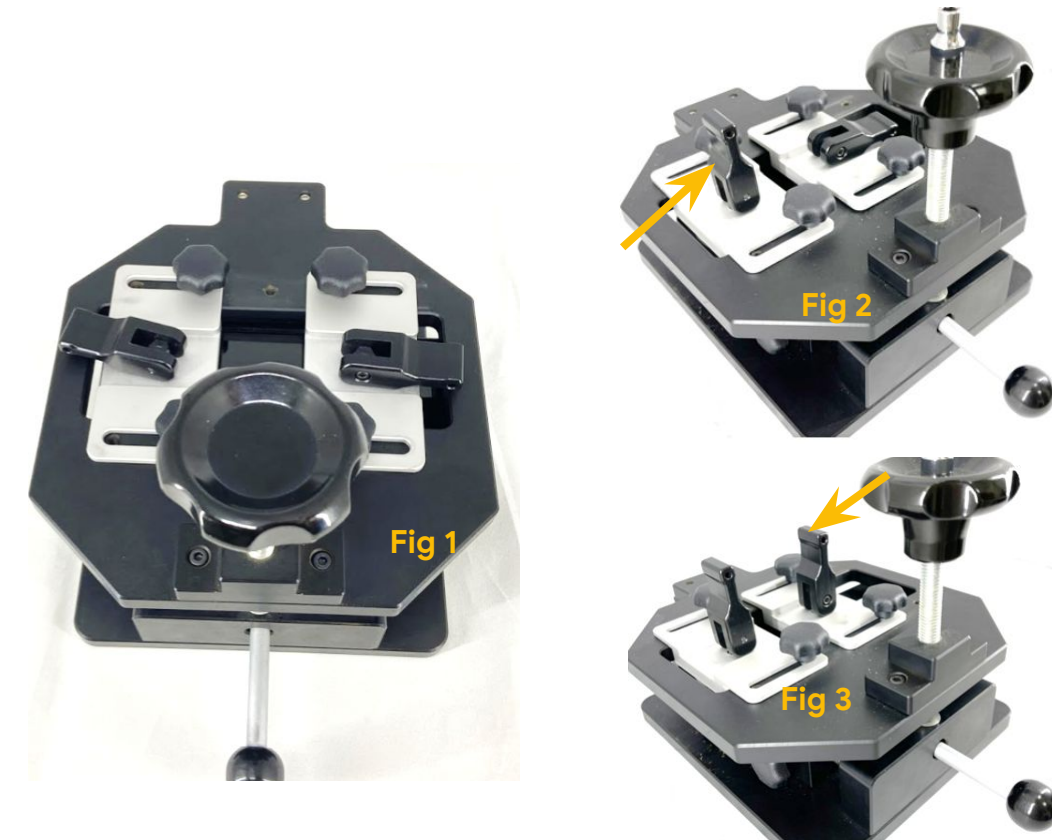
Fig 1

Fig 2

Fig 3

- Release the lid and align the 2 suction cups underneath with the display**(Fig1)**

- Lift up the two suction cups **(Fig2, Fig3)**.

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

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Use fixture

Fig 1

As long as there's a gap, Insert the ESD Universal Disassembly ESD stick to slide.
(If it cannot be easily slid, you can slowly rotate the fixture, but the gap should be less than 5mm)
It is recommended to thoroughly from point A to B

Point B

Point A

Fig 2

5   6

4   USB side   1

3   2

Disassemble Sequence:
1(In Fixture)
→2→3→4→5→6(Out of fixture)

Fig 3

USB side

Do not remove the release liner

Fig 4

→ glass
→ display
→ trim

OK   NG   NG
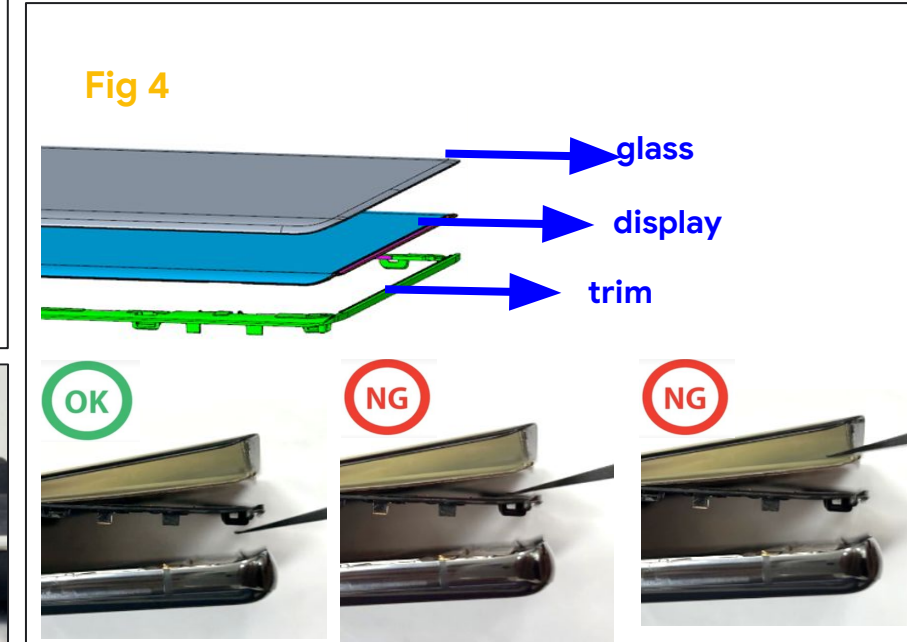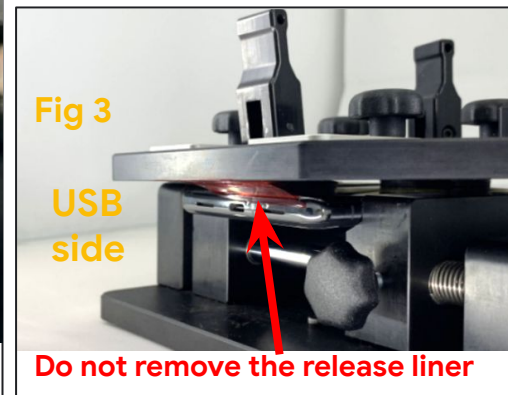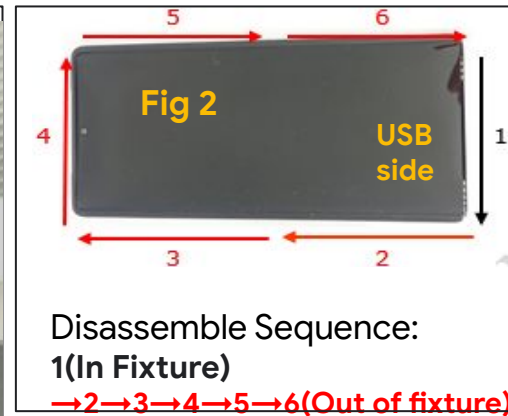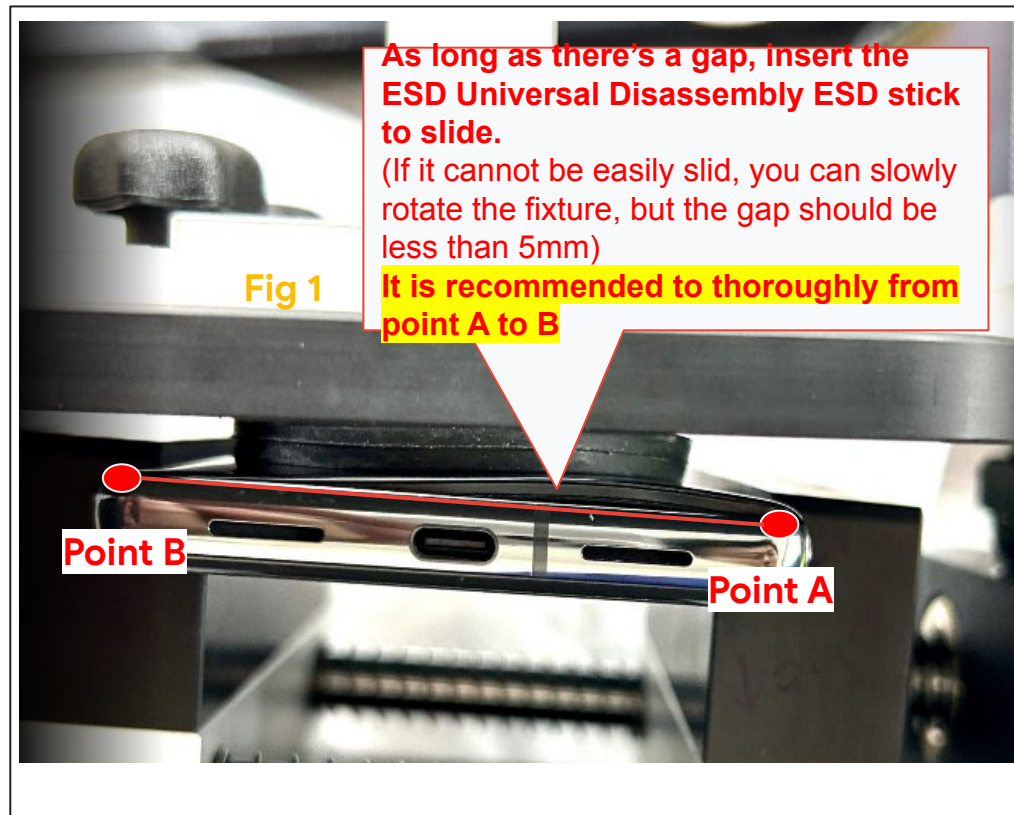
- Slowly rotate the knob to separate the **Display module** from the **Enclosure**. Dip the **ESD Universal Disassembly ESD stick** with proper amount **IPA.** In **Fig1**, as long as there's a gap**(gap <=5mm)**, insert the **ESD Universal Disassembly ESD stick** to slide the **sequence 1 (USB side, Fig2)** thoroughly**.** As they separated from the **USB side**, insert the release liner to prevent the adhesive from sticking back, in **Fig3.**

Be careful not to push the ESD Universal Disassembly ESD stick beyond the adhesive surface to avoid damaging the screen, battery, or any other internal components.
Don't insert ESD Universal Disassembly ESD stick beyond recommended distance into device. This is to avoid inserting tools between glass, display and trim. Refer to the NG and OK picture, in **Fig4.**

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Open the lid

- Release the suction cup, and open the lid.

- Do not remove the release liner from the device.

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

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Separate Top/Right/Left edge

Fig 1

With this head

2.8

115

14

Fig 2

Fig 3

Fig 4

USB side

1

5   6

4

3   2

Disassemble Sequence:
1(In Fixture)
→2→3→4→5→6(Out of fixture)

Fig 5

Fig 6

3.5

Fig 7

(OK)

with the angle

Fig 9

(NG)

Fig 8

3.5

5Wh

電池組
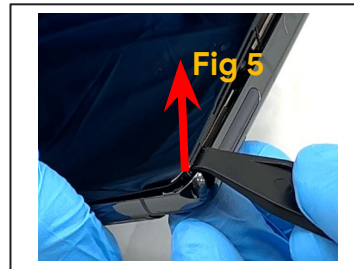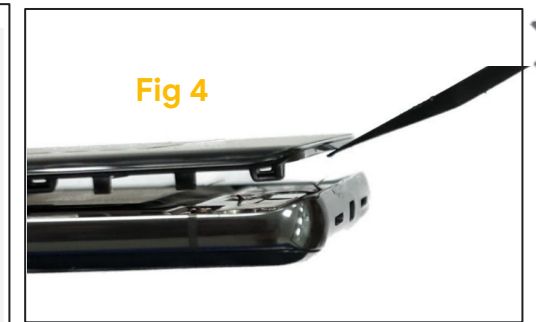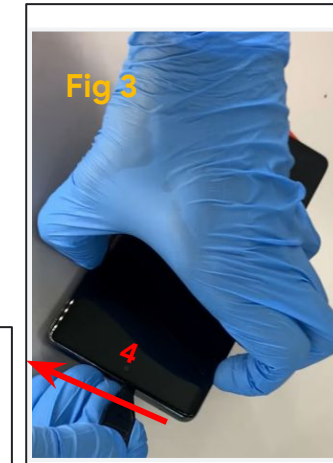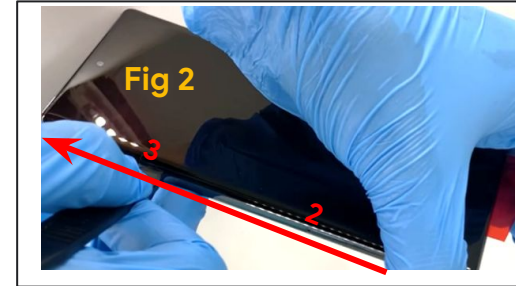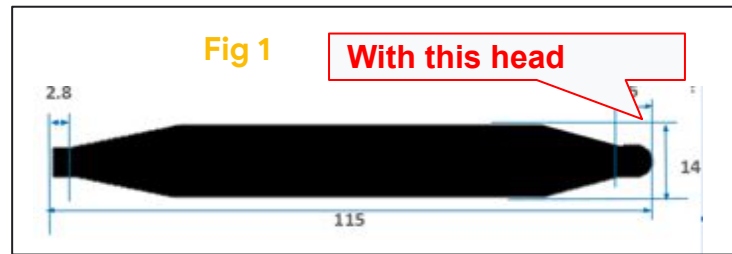
- Manually slide the sequence 2→ 3 →4→ 5 →6 around the left side →top side → right side. (Clockwise)
- Dip the **ESD Universal Disassembly ESD stick(use the corner head, Fig1)** with proper amount **IPA** with sequence 2→ 3 →4**, in Fig2~3,** Pry like **Fig4**, to avoid insert between display and trim.
- In **Fig5**, from sequence 4 to sequence 5 (Around Right Corner position), slide to the stopper, then **pry up.**
- In **Fig7**, slide the Right side(sequence 5→ 6) with **Universal Disassembly ESD pick(3.5mm, flat surface face to you, Fig6) with the angle to slide, to avoid to damage the spring, Fig8.** Not slide it horizontally, in **Fig9.**

Watch out position of the trim(snap), and the FCAM, sidekey spring, ANT7 spring, pull out the ESD Universal Disassembly ESD stick. Pay attention to control the depth of insertion and prohibit the use of alcohol at this time to avoid proactive contamination. ⚠️

| 📱 Display | ▦ Graphic sheet | 📶 Mid-frame | 📶 mmWave | 📱 Rear camera | 🔊 Top Speaker | 📱 Front Camera | 🔋 Battery | ▢ Logic board | 🔊 Bottom Speaker | 🎤 Mic1 Bracket |

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Check the trim
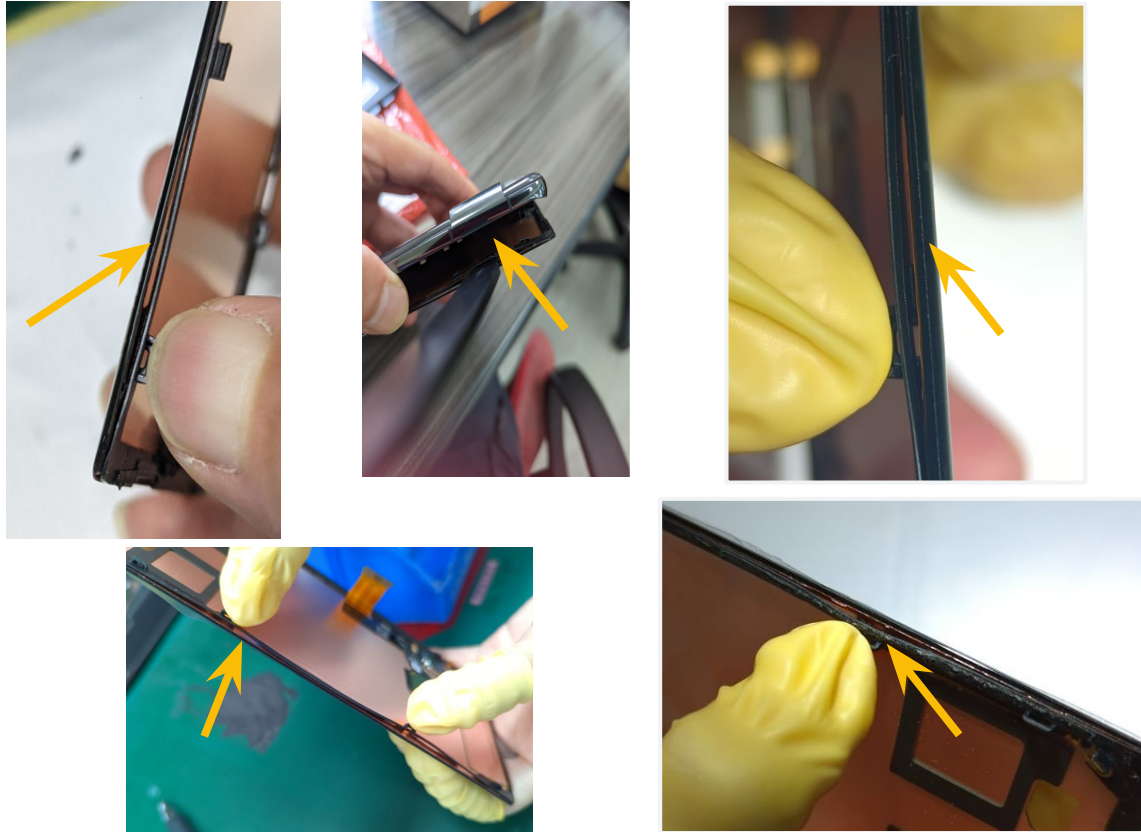
Hold the Display

- Check the trim ([snap location](#)). If the trim separated from the display, scrap them.

- Some NG photos are for the references.
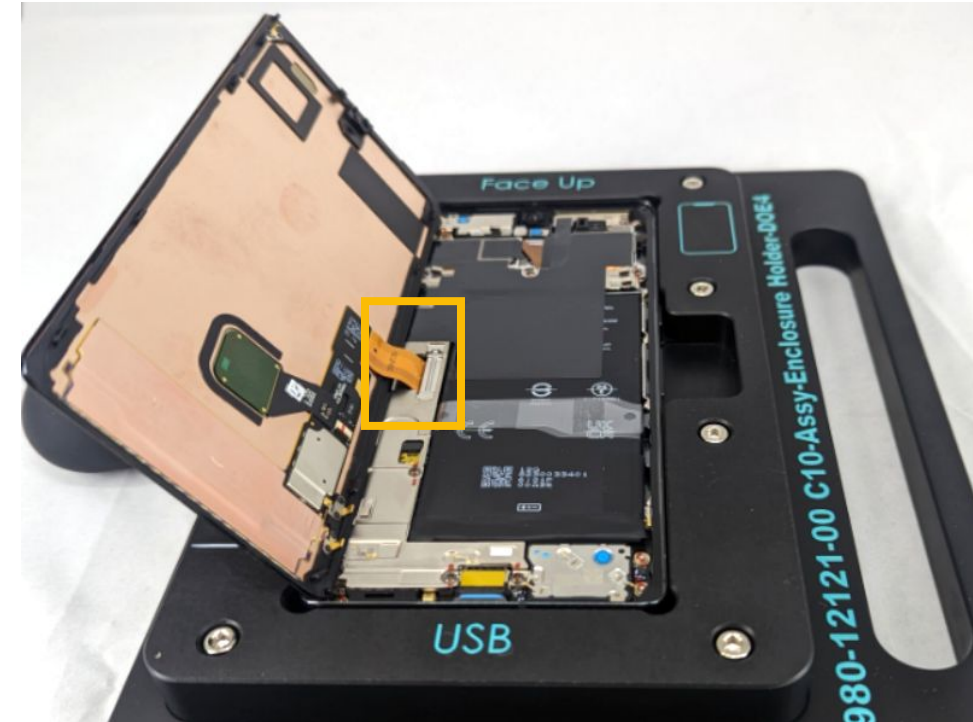
- Once the device is open, use the **Universal adsorption bulb** to hold the display.

- Avoid touching the copper foil.

Be careful not to stretch the display flex, to prevent part damage.

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   44
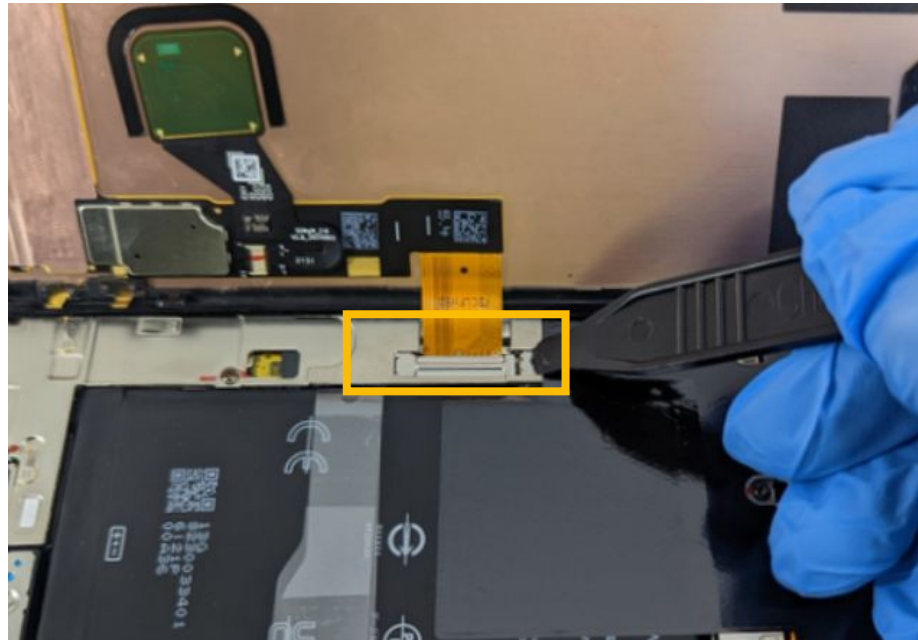
Remove cowling

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

Part: G730-06100-01 (Display Cowling)

Do not reuse the part

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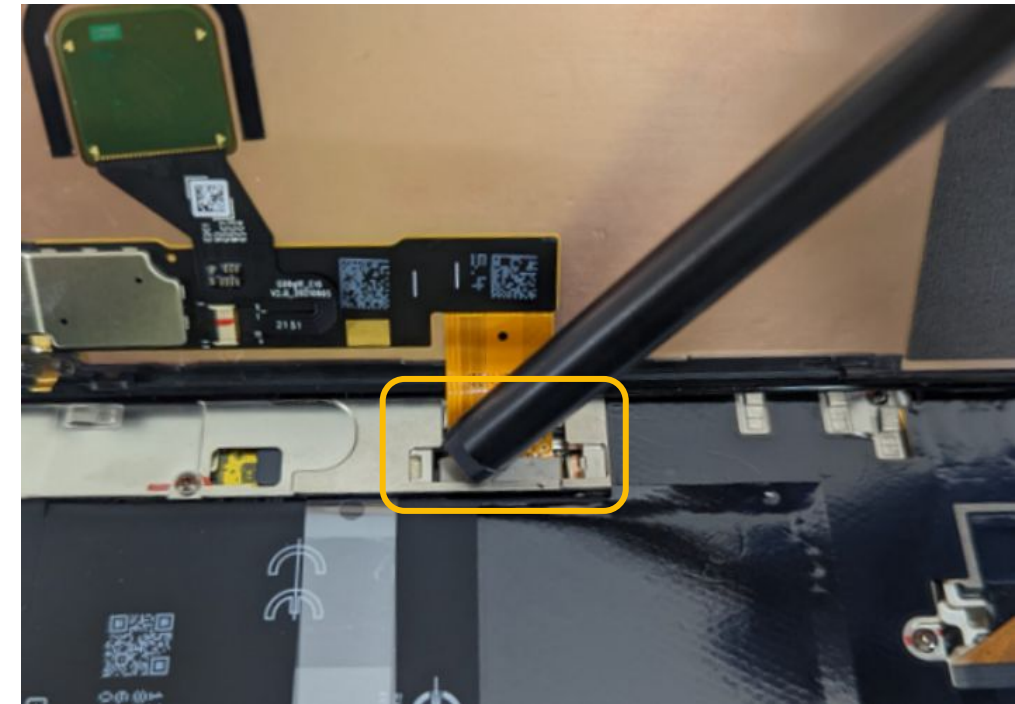
- Loosen the display connector with the **Universal Fish line tool**.
- Remove the **Display module**.

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

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Camera protection

Tab toward this direction

Face Up

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

Part: G806-07704-01 (FCAM Film)

G852-02360-01 (FCAM Cap)

Adhere foil film

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

Part: G806-07710-01 (copper protective film)

Apply the copper protective film only in the case of reusing a good screen. No need to apply one to a damaged screen that will be replaced.

Display → Graphic sheet → Mid-frame → mmWave → Rear camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Assembly instructions

Display

Re-using the Display with fixture

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

Re-using the Display

Solution-2
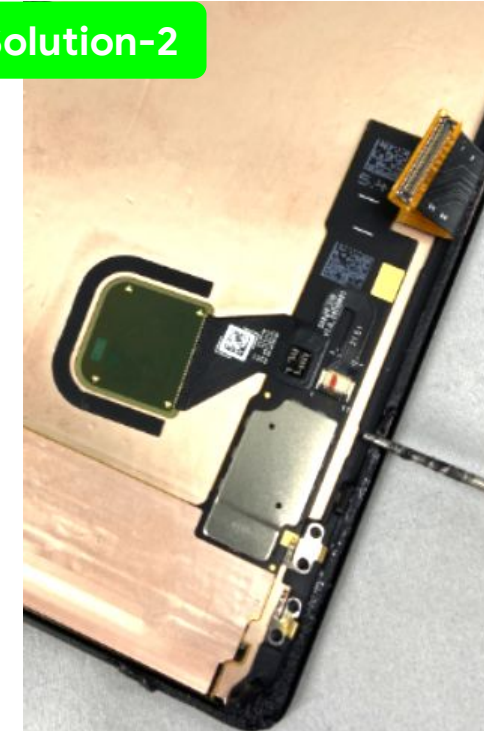
When bending the FPC, avoid creasing or damaging the FPC.
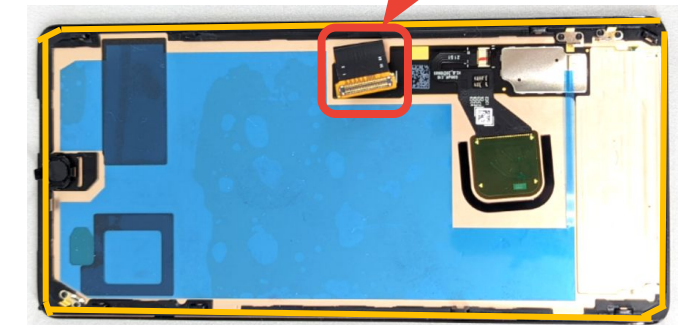
- Use the **Universal adsorption bulb** to place the **Display** in **Pixel 7 Pro Cleaning Cover CG** and place the cover.
- Use a **Deglue Machine** to clean the residual glue out of the **Display**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

- 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 yellow-highlight is where the residual adhesive exists.

Caution!
Review all safety precautions before beginning work.

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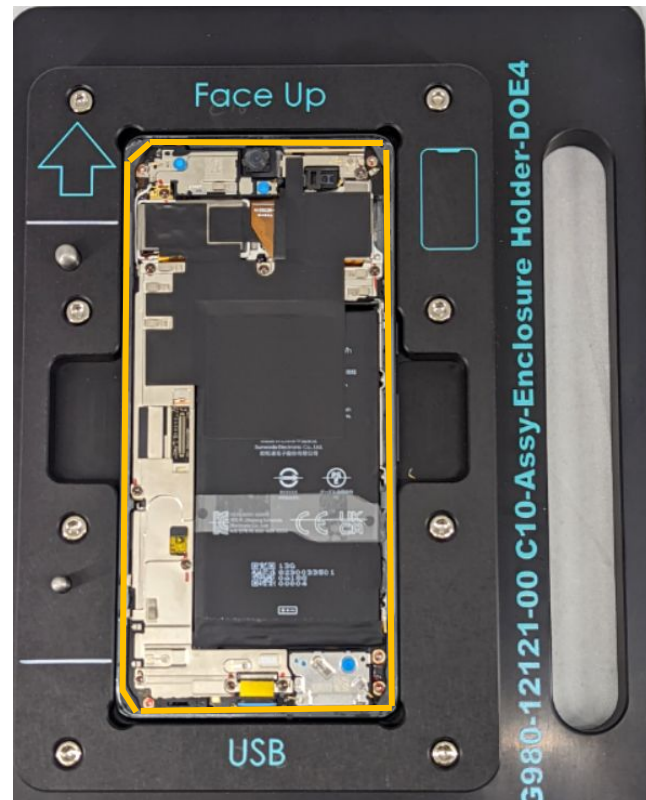
- Apply **IPA** around the edges of the **Enclosure** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.
- Apply **3M 111 Primer** around the edges of the **Enclosure** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

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

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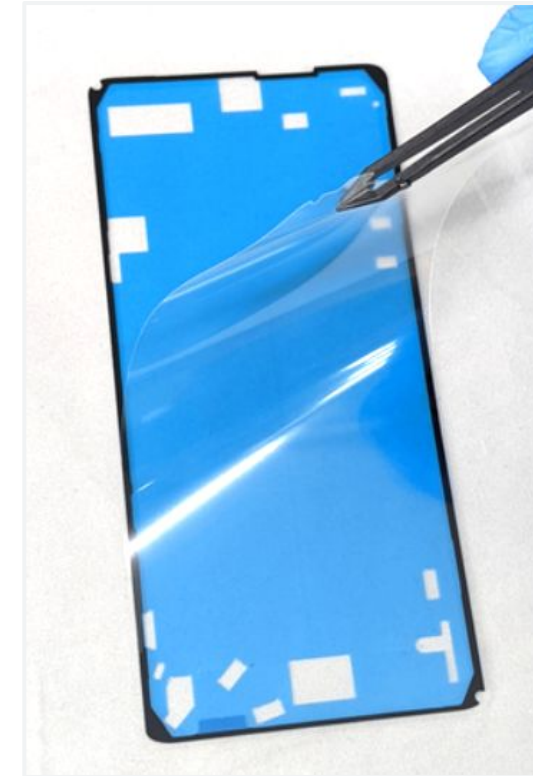
- Slowly remove the liner from the **adhesive** with **ESD tweezers**.

Part: G806-06898-03 (Adhesive)

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

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

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Adhesive alignment

Align by the two alignment posts
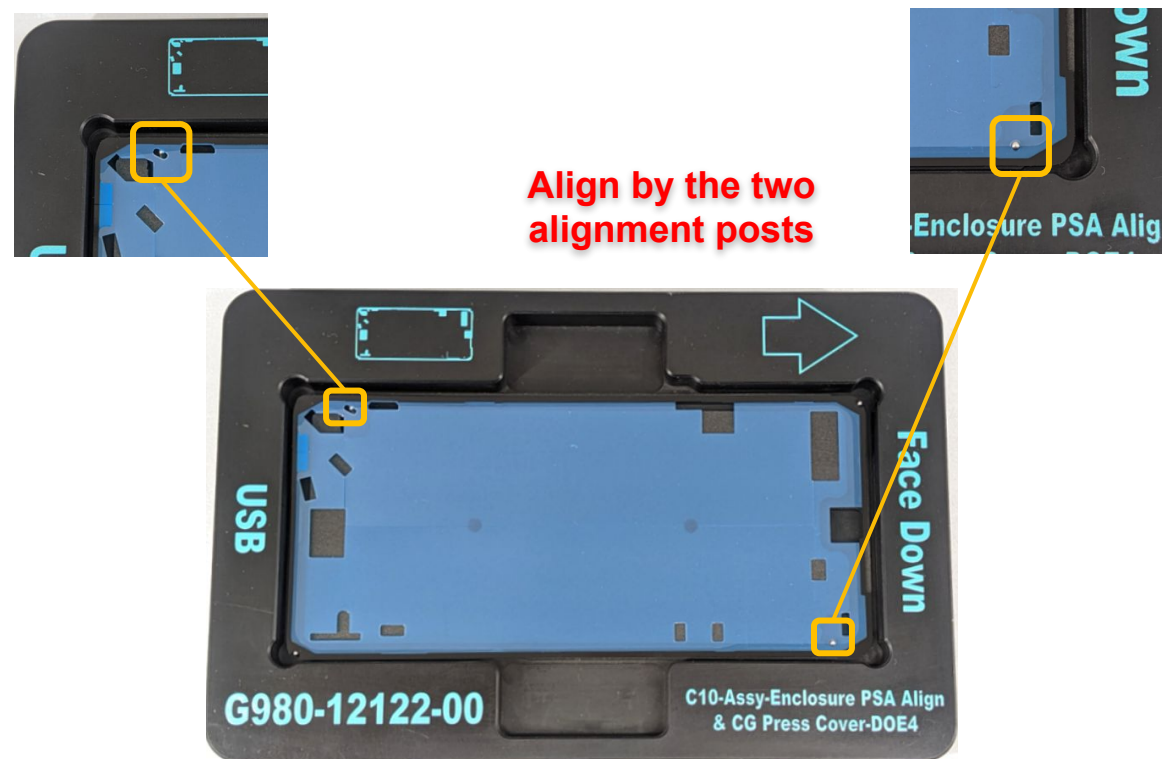
- Place the **adhesive** in the **Pixel 7 Pro Enclosure PSA Align & CG Press Cover** with the ESD tweezers.

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

Enclosure to adhesive

OK   NG   NG

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

Place it vertically.

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page 50

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 to avoid damage.

Remove Enclosure

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

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

Adhesive to enclosure

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

Remove the liner (1st layer)

1st layer liner
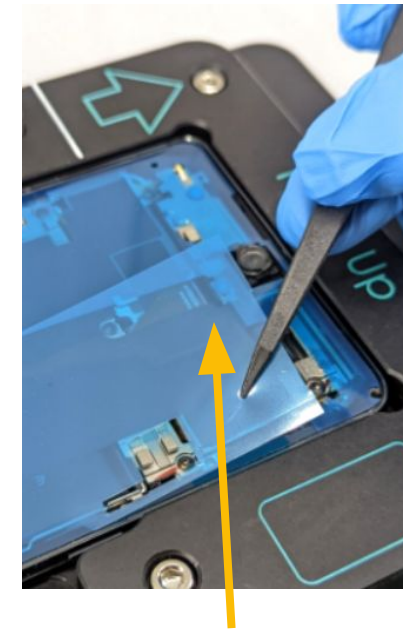
2nd layer liner

Pick the tab here.
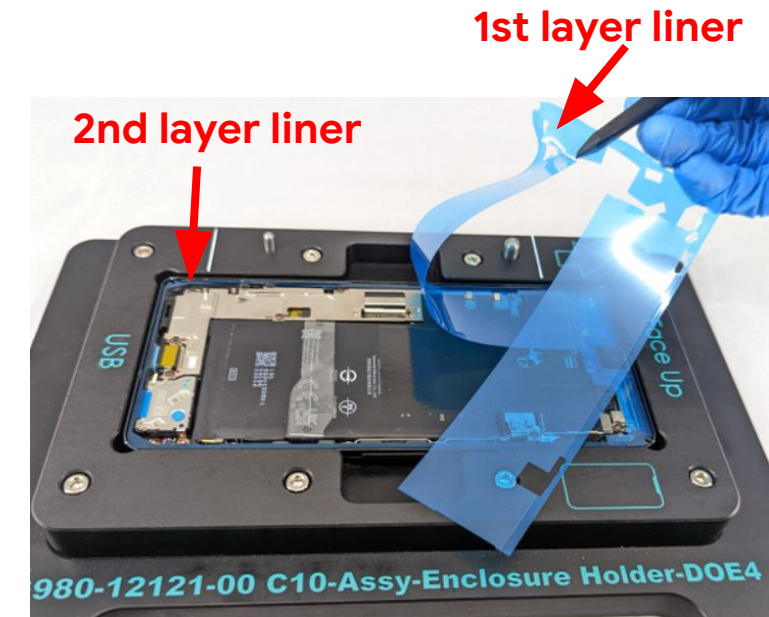
- Slowly pull the liner to avoid lifting the adhesive, with the pull tab as the figure shown.

- *Do not remove the 2nd layer of the liner yet.*

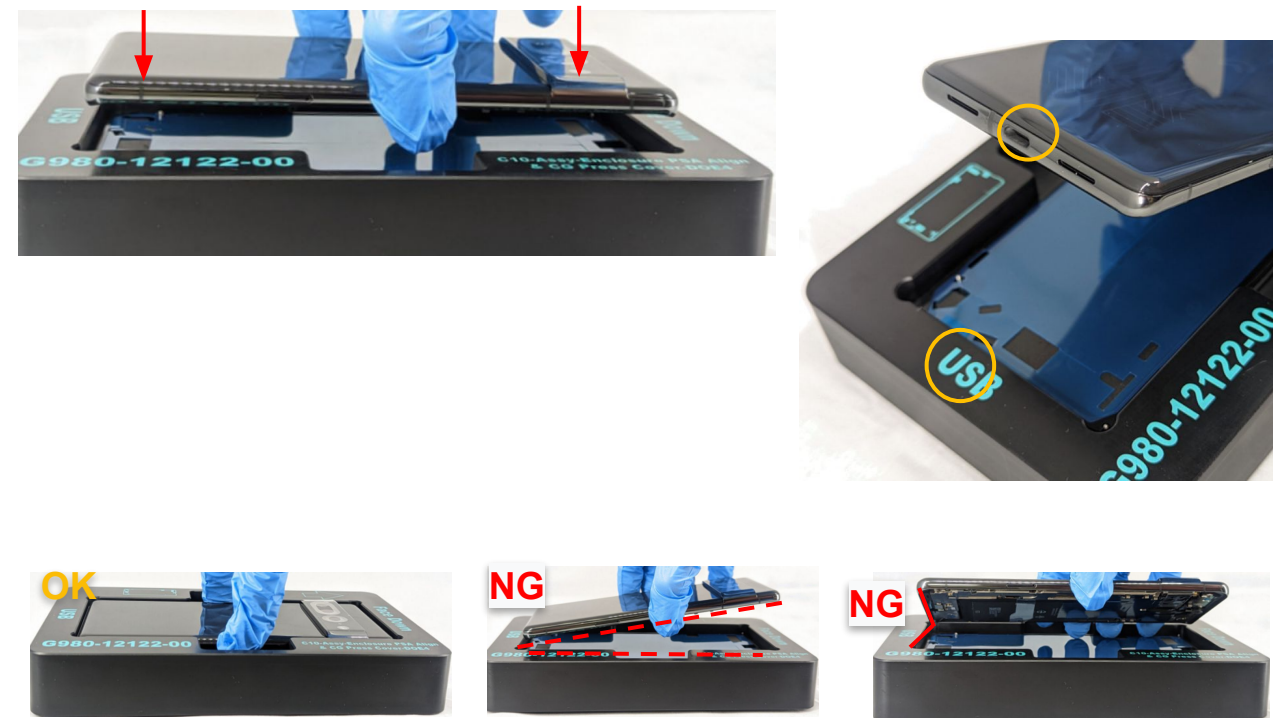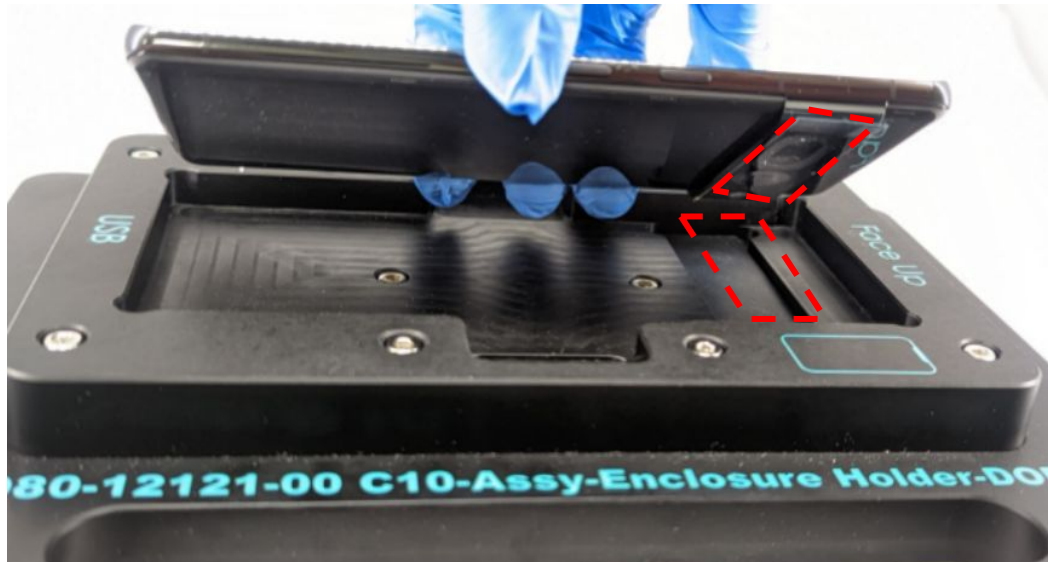| Display	Graphic sheet	Mid-frame	mmWave	Rear Camera	Top Speaker	Front Camera	Battery	Logic board	Bottom Speaker	Mic1 Bracket

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Apply primer on display

- Apply **IPA** around the edges of the **Display module** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.
- Apply **3M 111 Primer** (yellow line area) around the edges of the **Display module** using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over the display during primer application to prevent particles stick to the device.

Part: G949-00290-01 (Display module)

- -

When applying IPA & AP111 primer to the CG module, pay attention to avoid touching copper and sponge areas (as shown above red figure). Once **Primer** has been applied, complete assembly in 25 mins. ⚠️
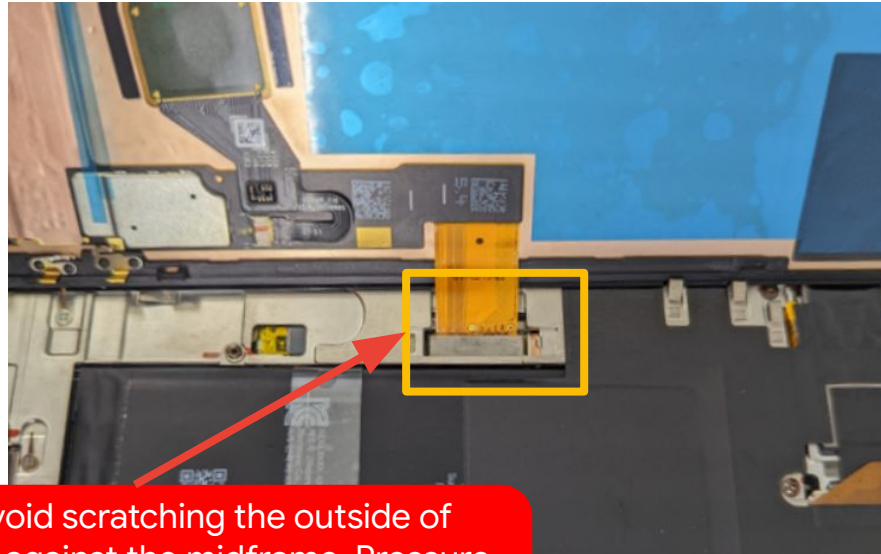
Aligning display module
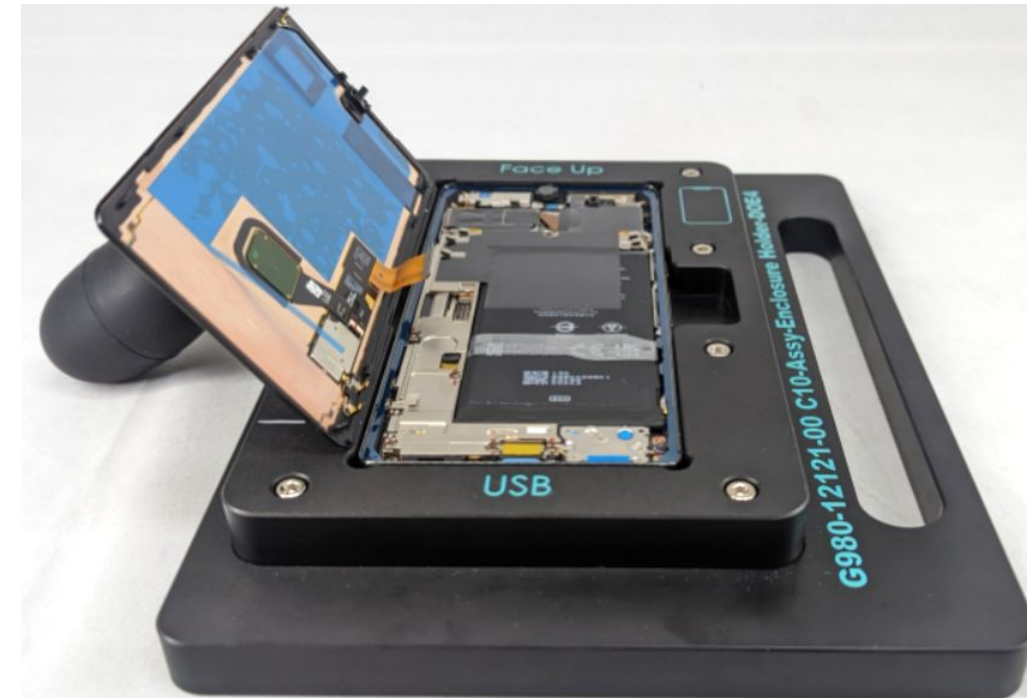
- Before attaching the **Display module**, visually check the spring.

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

- -

The step to attach the display, **Do not** damage/deform the spring. ⚠️

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Connect display module

Be careful to avoid scratching the outside of the display flex against the midframe. Pressure should be applied straight downward on the connector, not against any part of the flex.

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

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

Check display

- Remove the **Universal adsorption bulb** and **display protective film**.

- Power on to check if the device is working properly, Power off device after checking.

Do not touch the TP until it turns to shipping mode since touch panel self calibration is in progress. Follow the instruction below: **Calibration Note**

Display Graphic sheet Mid-frame mmWave Rear Camera Top Speaker Front Camera Battery Logic board Bottom Speaker Mic1 Bracket

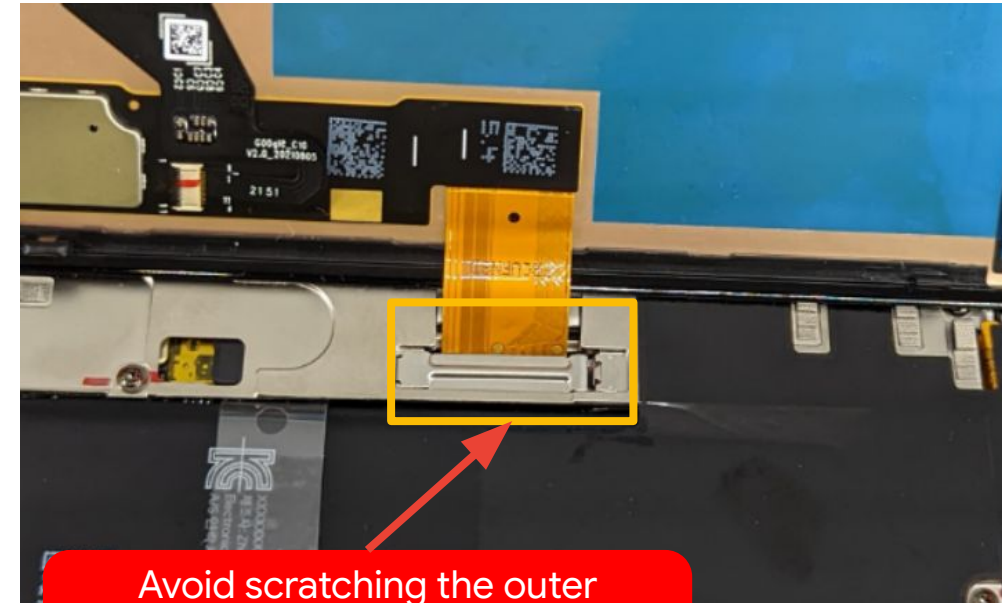Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   54

Install UDFPS Calibration

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

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

Attach display cowling

Avoid scratching the outer surface of the flex against the midframe.

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

Part: G730-06100-01 (Display cowling)

Make sure the trim snaps do not contact the adhesive. ⚠️

Display ▸ Graphic sheet ▸ Mid-frame ▸ mmWave ▸ Rear Camera ▸ Top Speaker ▸ Front Camera ▸ Battery ▸ Logic board ▸ Bottom Speaker ▸ Mic1 Bracket
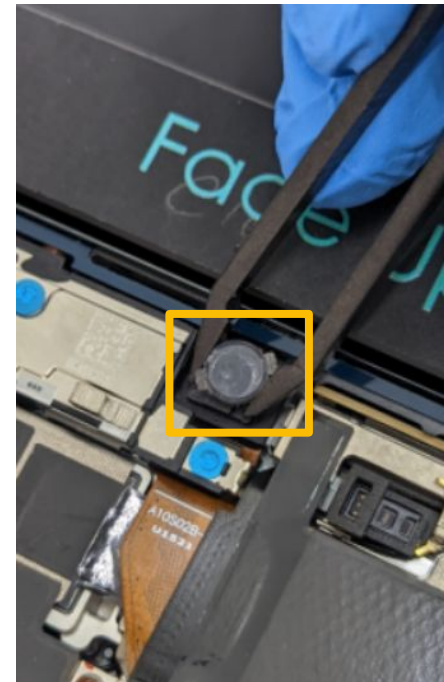
Remove liner

Remove film/cap

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

Part: G806-07710-01 (copper protective film)

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

Part: G806-07704-01 (FCAM Film)
G852-02360-01 (FCAM Cap)

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Remove liner

Fix down display

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

- Align the **Display module** on the **Enclosure vertically**.

- Remove from the **Holder** and press around the display bezel with both hands.

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

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Place in holder

- Place the device in the **Pixel 7 Pro Enclosure Holder** and place the **Press cover** on top.
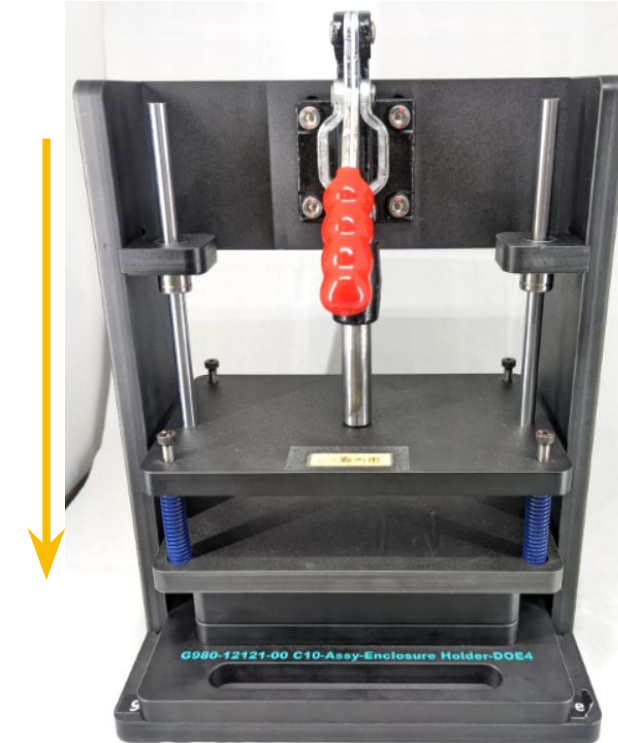
- Place it in the **Universal press fixture** and press the handle down for 30 seconds.

- Push back the handle to the original position and remove the device.

- Proceed with post repair testing.

Pinch point. Keeps hands clear during operation.

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket
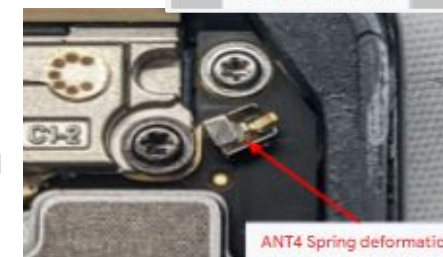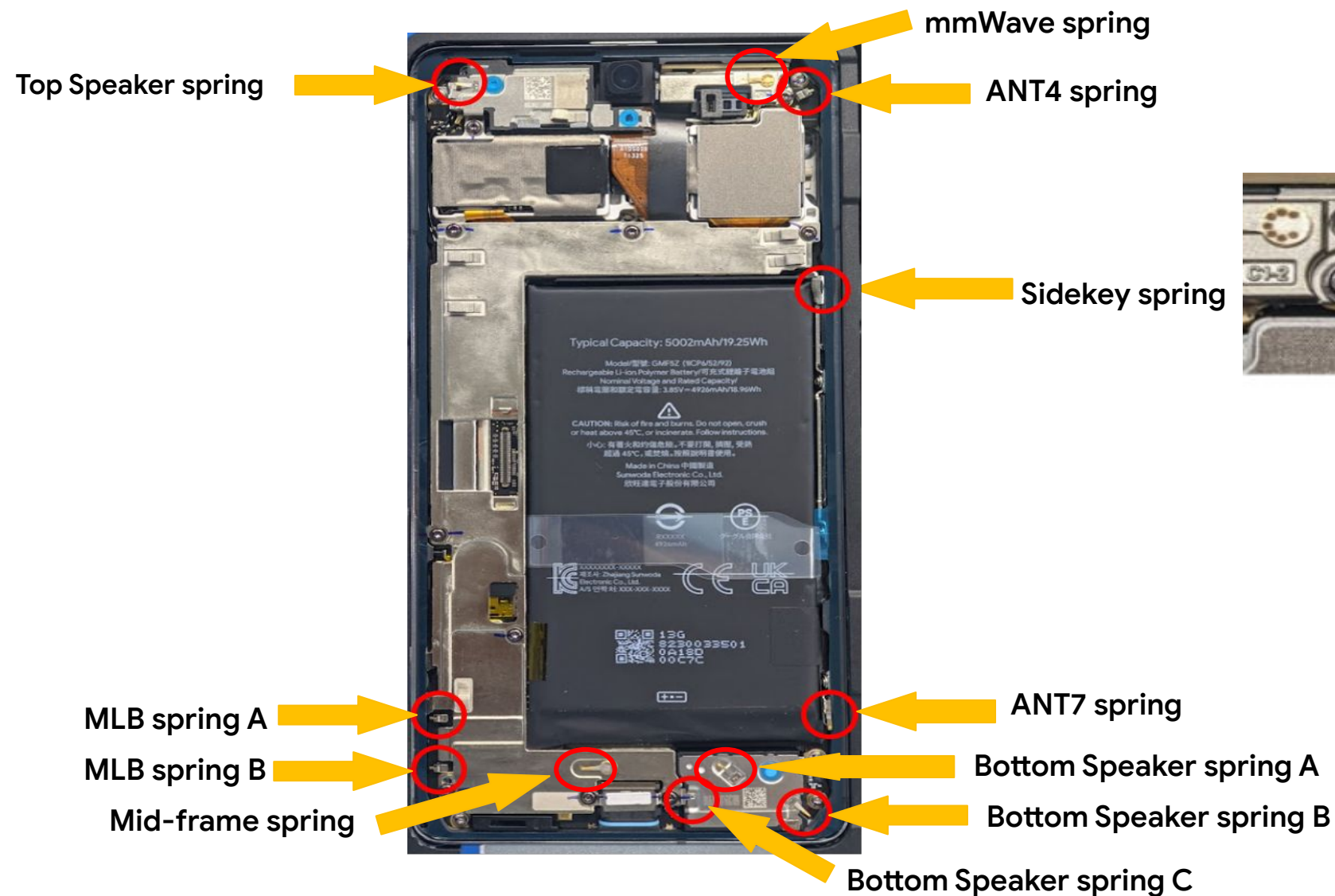
Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   58

Disassembly instructions

Graphite sheets

Graphite sheets replacement

Prerequisites

Remove the following items first:

- Display module

Tools

Pixel 7 Pro Enclosure Holder
ESD Tweezers
Universal scraper

Parts

G864-00520-01
Graphite sheets

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

Graphite removal

Lift from here

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

  Part: G864-00520-01 (Graphite sheet)

Be careful not to puncture the battery while using the tweezers. Do not reuse the part. ⚠️

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Assembly instructions
Graphite sheets

Check the spring

Graphite sheets

Semi-complete Spring

Top Speaker spring

mmWave spring

ANT4 spring

Sidekey spring

MLB spring A

MLB spring B

Mid-frame spring

ANT7 spring

Bottom Speaker spring A

Bottom Speaker spring B

Bottom Speaker spring C

- Visually check the spring before attaching the graphite.

Apply graphite sheet

Adhere graphite sheet
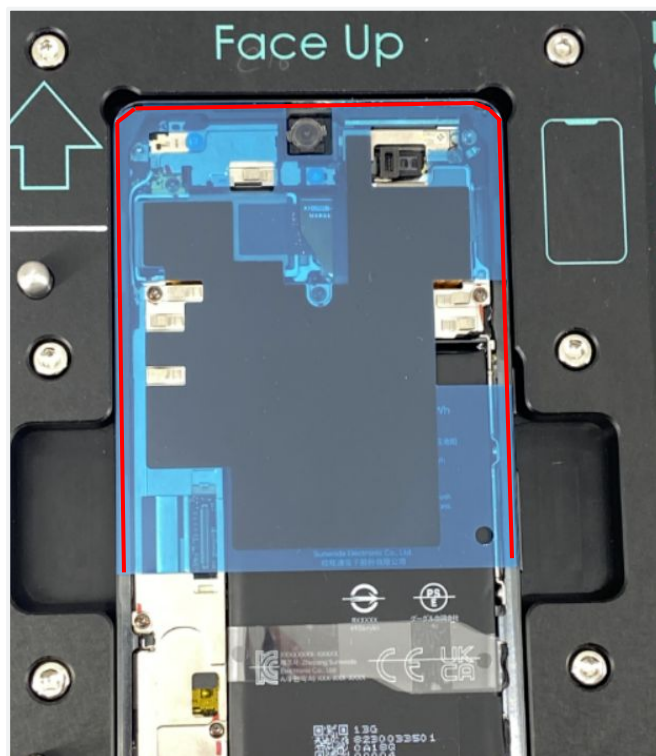
- With the device in the **Pixel 7 Pro Enclosure Holder**, place the **Graphite sheet**, align by the outline of **Enclosure**.

Part: G864-00520-01 (Graphite sheet)
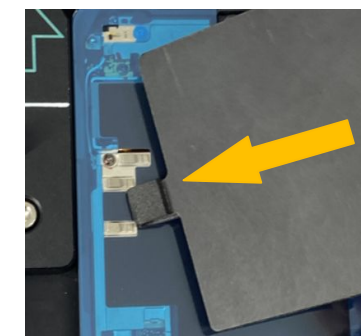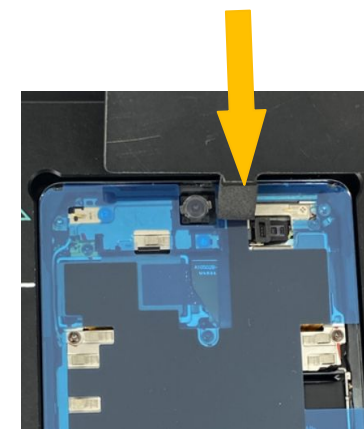
- Use the **Universal Scraper** and roll the **top side of graphite sheet**. Ensure there are no air pockets. Use the smaller scraper where needed. Use extra care when applying pressure to the battery area.

- Continue to roll over the remaining sheet.

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

⚠️

Caution!
Review all safety precautions before beginning work.

Adhere graphite sheet
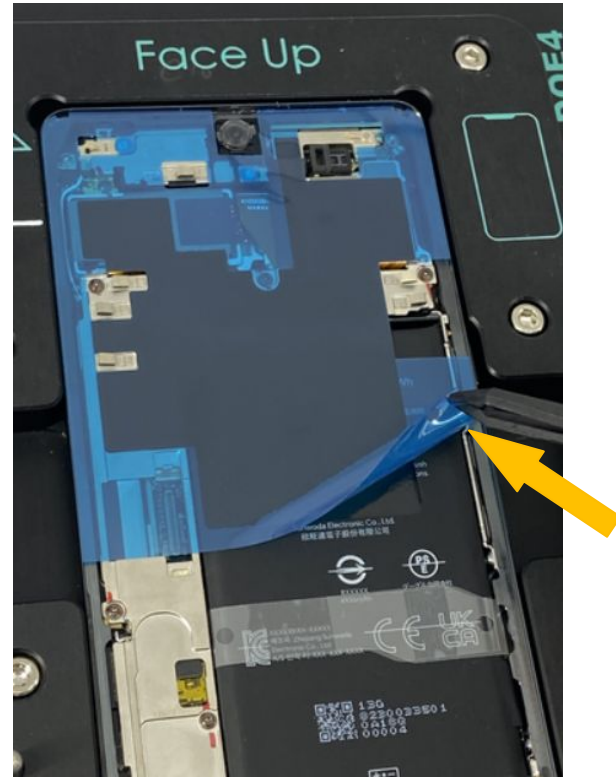
- Remove the release liner with the **ESD tweezers**.

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

Display | **Graphic sheet** | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 l Page 65

Disassembly instructions

Mid-frame

Mid-frame replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets

Tools

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

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

Mid-frame replacement- Cont.

Parts

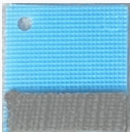G853-01223-01
USB-C Cowling
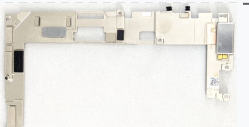
G949-00300-01
Mid-frame_mmWave
G949-00301-01
Mid-frame_Sub-6
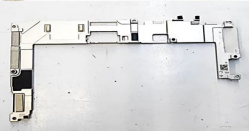
G250-05753-00
Screws *8

G806-06020-01
SOC thermal pad

G806-04615-11
RF thermal pad

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

Mid-frame difference

mmWave
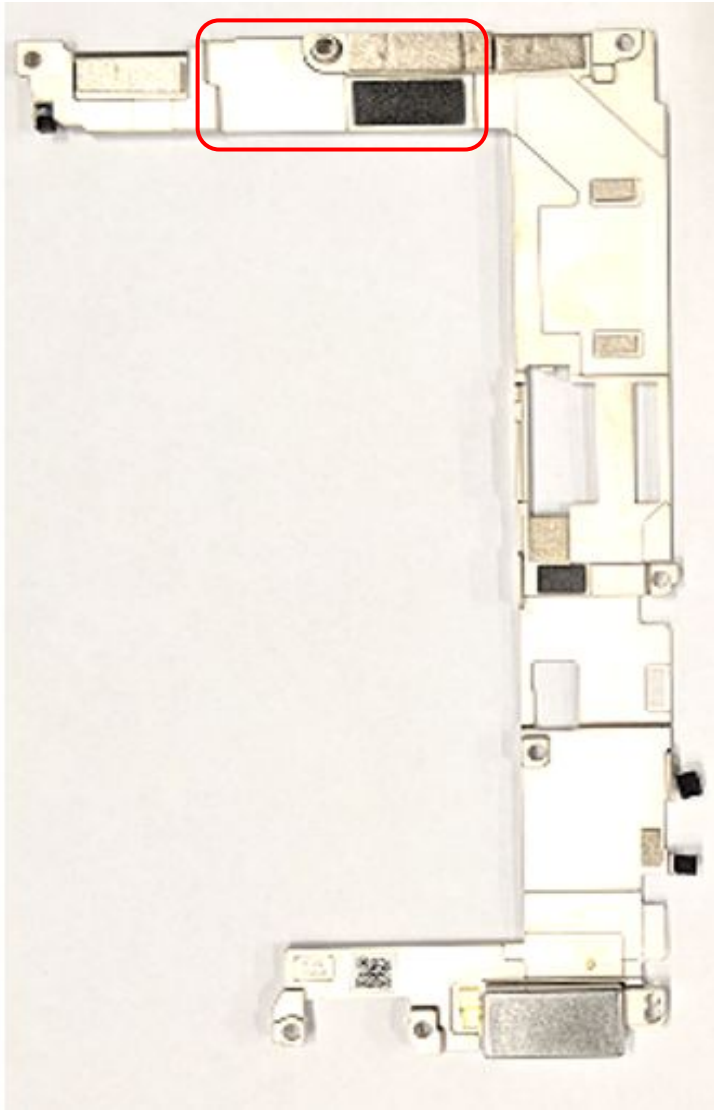
Sub6
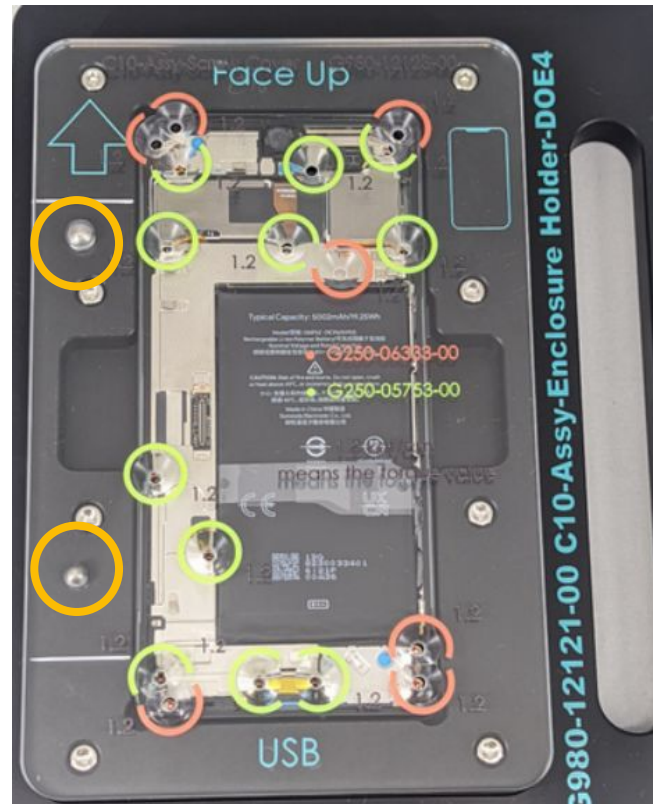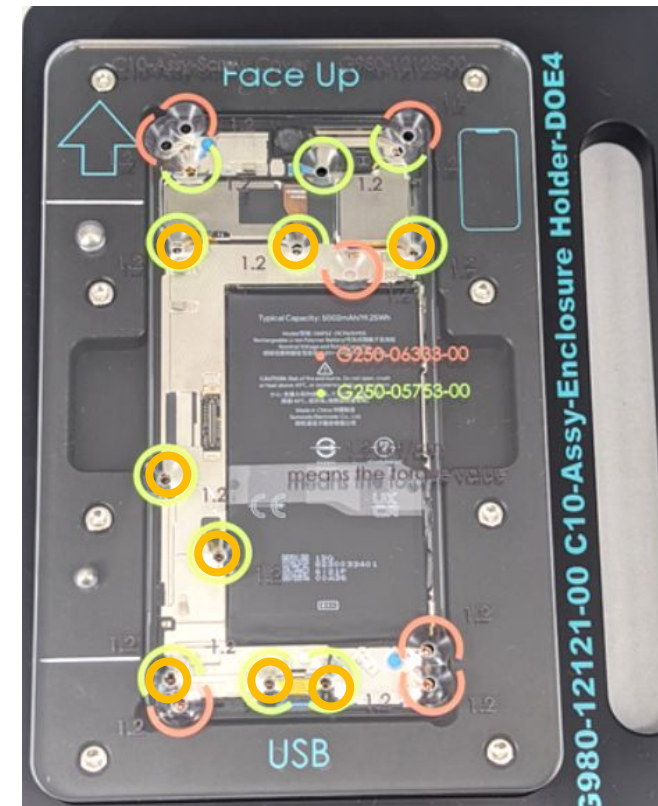
Screw cover

Remove screws

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

- Remove **8** Mid-frame **Screws** with a **Torx Plus 3IP screwdriver**.

- Then remove the **Pixel 7 Pro Screw Cover**.
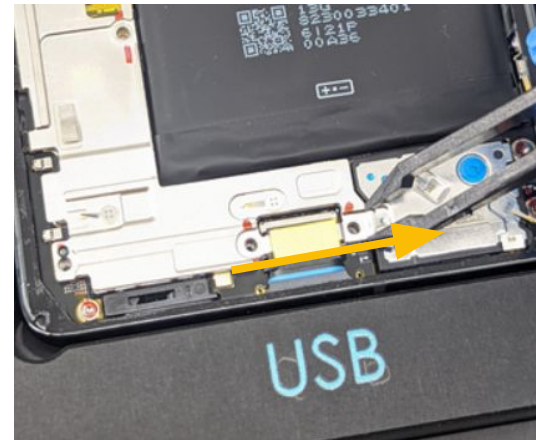
Part: G250-05753-00 *8 (Screw)

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

Display | Graphic sheet | **Mid-frame** | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Remove mid-frame

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

Part: G853-01223-01 (USB-C cowling)
Part: G949-00300-01 (Mid-frame_mmWave)
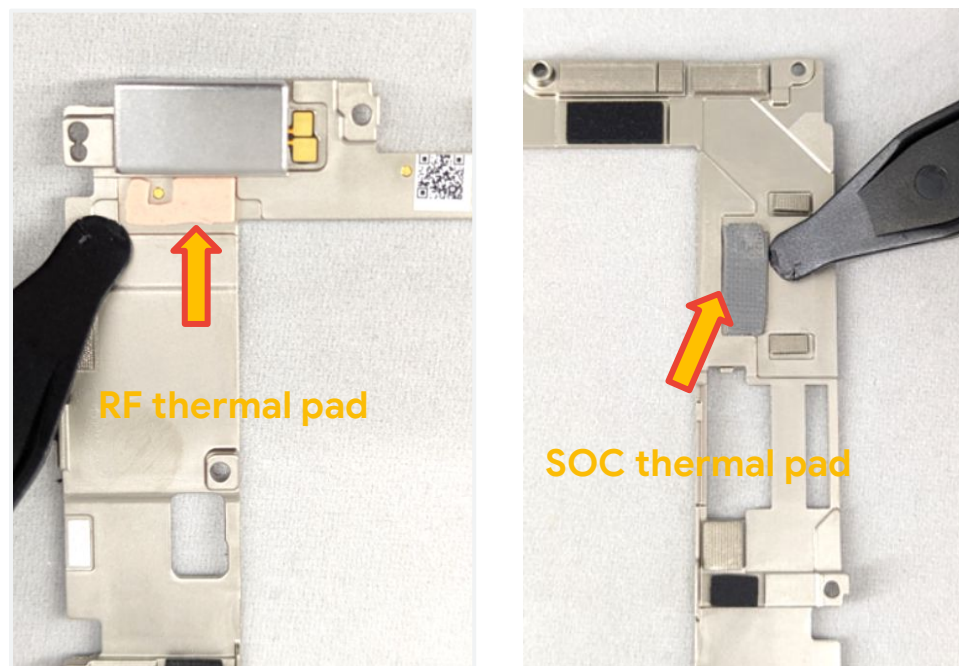**Part**: G949-00301-01 (Mid-frame_Sub-6)

Assembly instructions
Mid-frame

Re-using Mid-frame

RF thermal pad

SOC thermal pad

Apply thermal pads

Do not exceed the line before/after removing the liner

RF thermal pad

SOC thermal pad

- **Thermal pastes** may be left on the **Mid-frame**.

- Undamaged **thermal pads** can be reused. Damaged thermal pads should be replaced.

Part: G806-04615-11 (RF thermal pad)
Part: G806-06020-01 (SOC thermal pad)
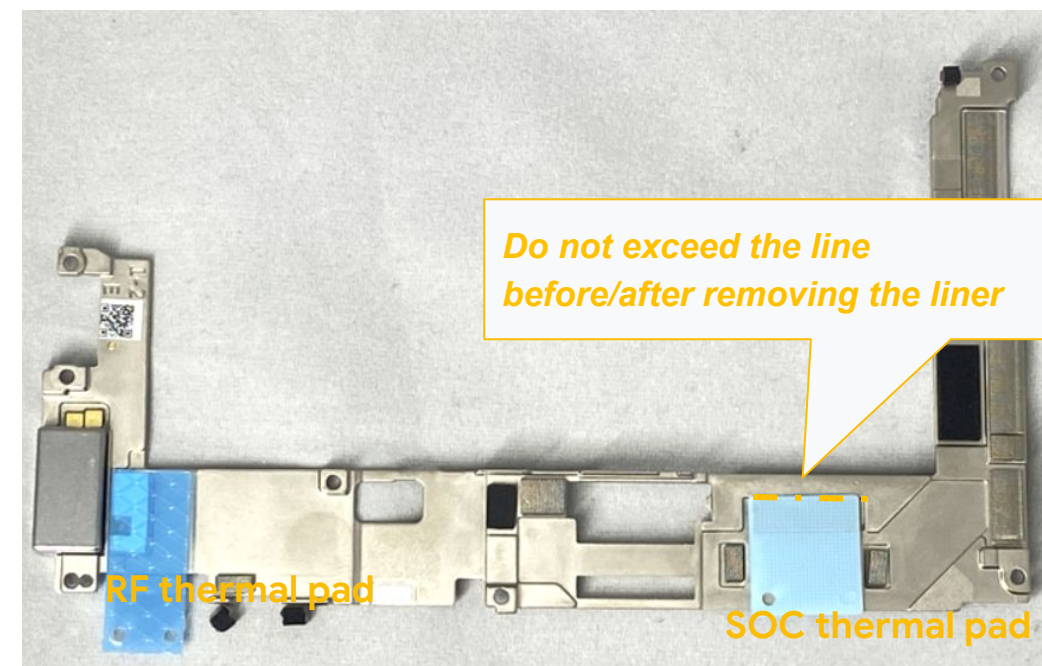
- Align the **thermal pads** by the outline on the **Mid-frame**.

Part: G806-04615-11 (RF thermal pad)
Part: G806-06020-01 (SOC thermal pad)

- -

This step is for new and reclaim Mid-frame.

Display → Graphic sheet → **Mid-frame** → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Fitting the Mid-frame

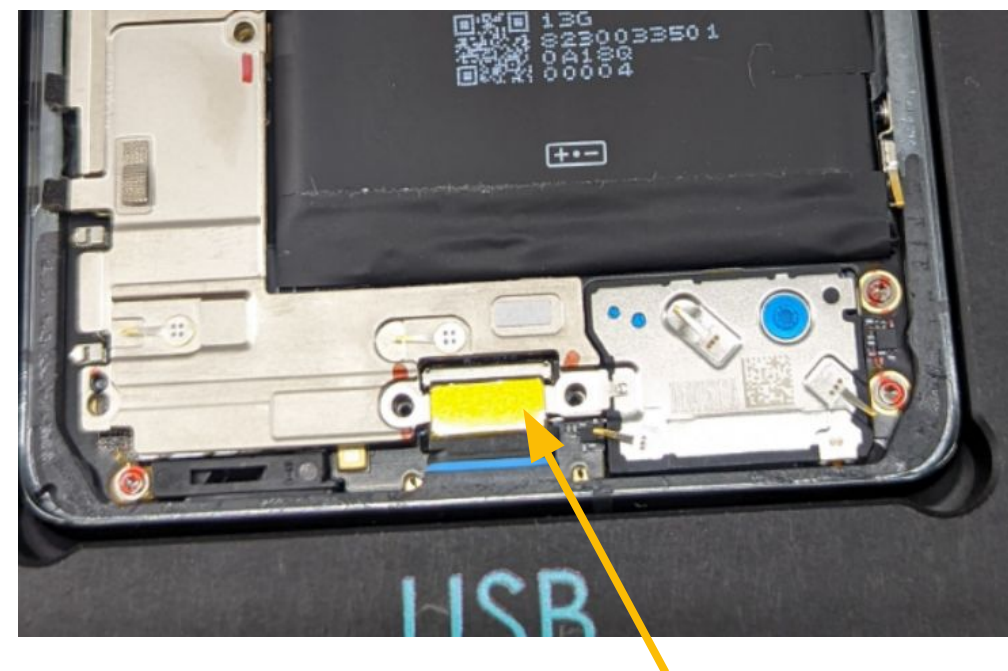Fig1

NG   Fig2

OK   Fig3

Fasten USB-C cowling

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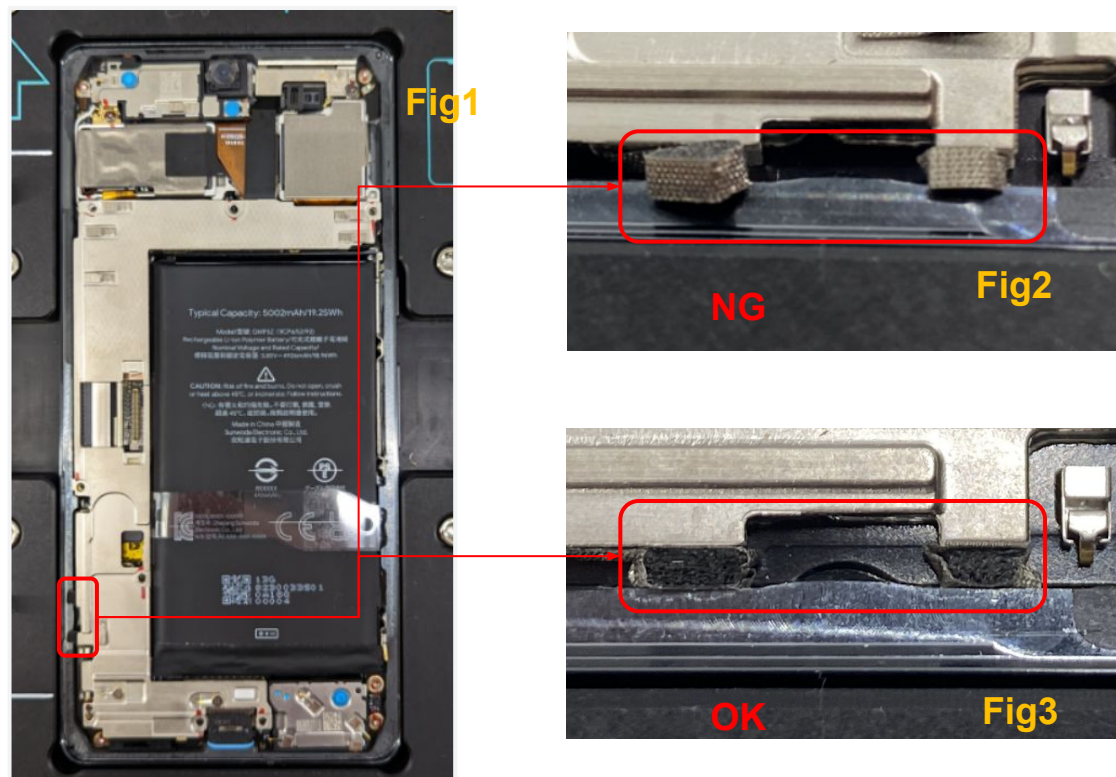
- Assemble the **Mid-frame** according to the positioning posts on the **Logic board**, *Fig1.*
- Check the sponge(the red rectangle in **Fig1** is the relative position). If the sponge is above the midframe(side-view) **Fig2,** press down like the **Fig3.**

Part: G949-00300-01 (Mid-frame_mmWave)
Part: G949-00301-01 (Mid-frame_Sub-6)

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

Part: G853-01223-01 (USB-C cowling)

Display | Graphic sheet | **Mid-frame** | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Fasten Mid-frame
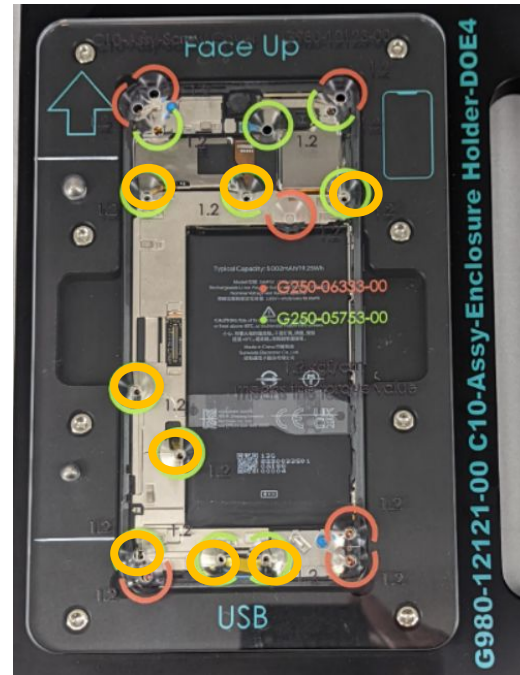
Check P-sensor foam is flat.

OK

NG

NG

- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder.**

- Tighten the **8 Screws** with a **Torx Plus 3IP screwdriver**, take out the **Pixel 7 Pro Screw Cover**.
  Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (Screw)

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

Display | Graphic sheet | **Mid-frame** | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Disassembly instructions

mmWave

mmWave replacement

mmWave

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Mid-frame

Tools

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

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

mmWave replacement

mmWave

Parts

G949-00302-01
mmWave flex

G730-06099-11
bracket mmWave
G730-06099-12
bracket sub-6

G250-05753-00
Screw

G806-06182-01
FOAM Sub-6

G806-06083-01
mmWave thermal pad
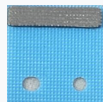
G806-07334-01
mmwave_flex_CPSA_1

G806-07335-01
mmwave_flex_CPSA_2
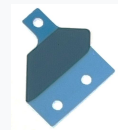
G806-07336-01
mmwave_flex_CPSA_3

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

mmWave

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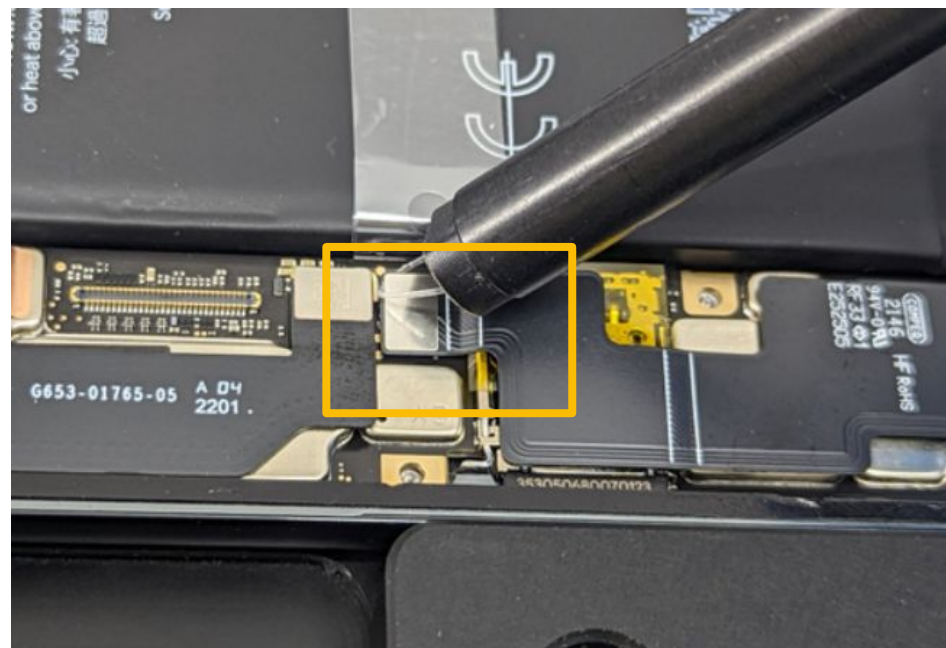
- Loosen the battery connector and disconnect the **Battery** from the **Logic board** with a **Universal Fish line tool**.

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

Disconnect 5G
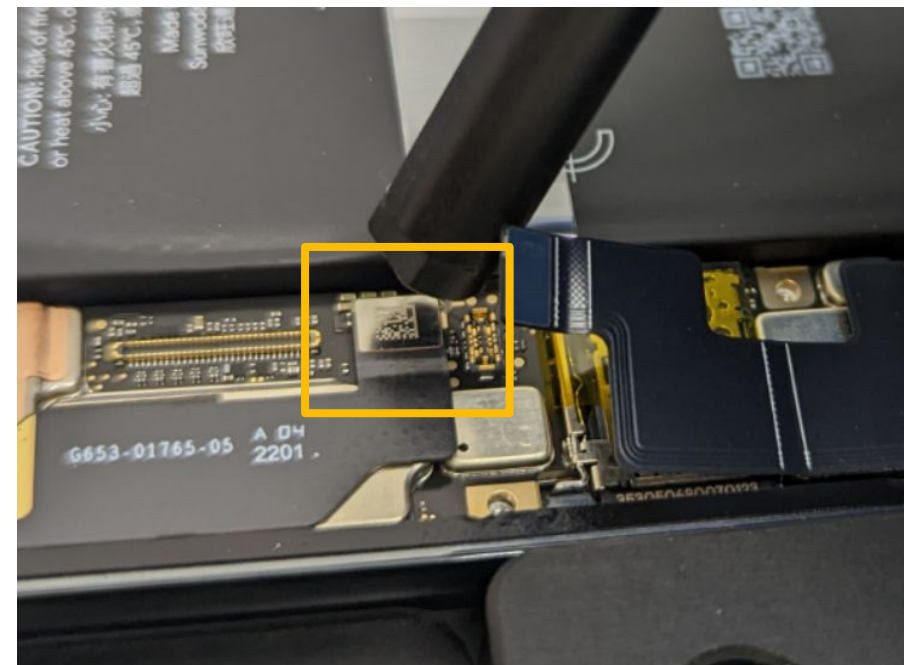
- Loosen the **mmWave connecto**r and disconnect from the **Logic board** with a **Universal Fish line tool**.

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

Display | Graphic sheet | Mid-frame | **mmWave** | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Remove Screws
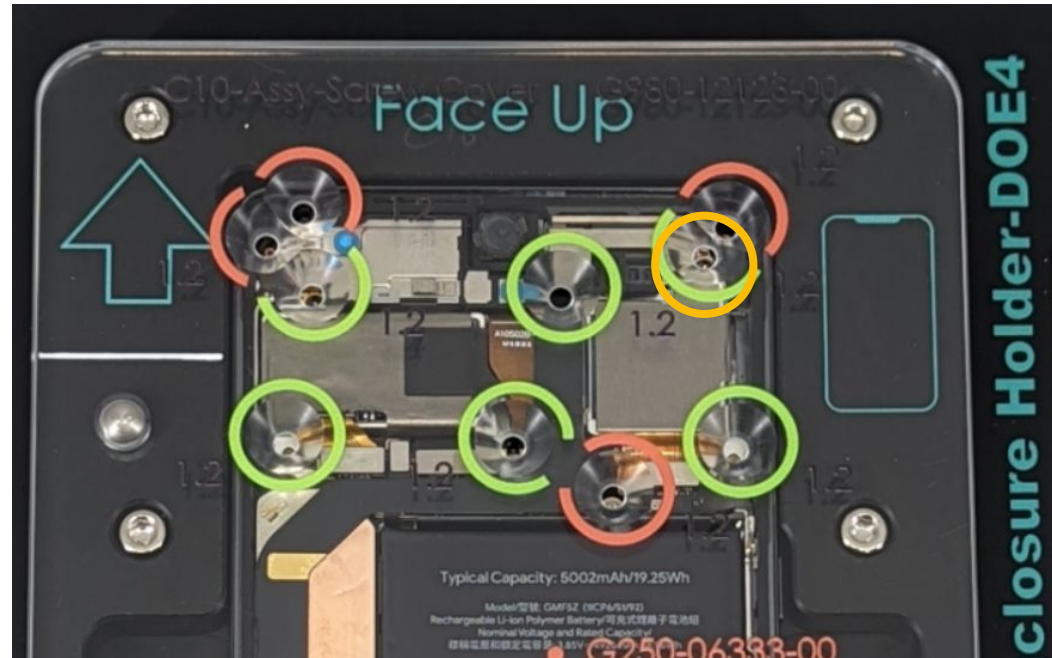
Remove bracket

- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

- Remove the **mmWave bracket** screw with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**.

Part: G250-05753-00 (Screw)
Do not reuse the part
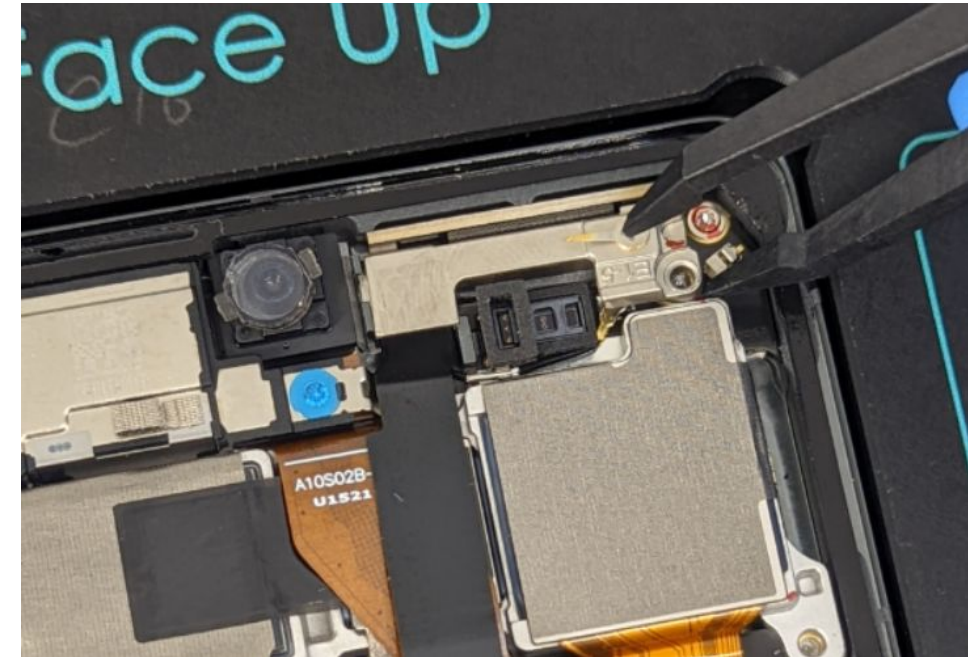
- Remove the **bracket** with an **ESD Tweezers**.

Part: G730-06099-11 (bracket mmWave)
Part: G730-06099-12 (bracket sub-6)

Display | Graphic sheet | Mid-frame | **mmWave** | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   80
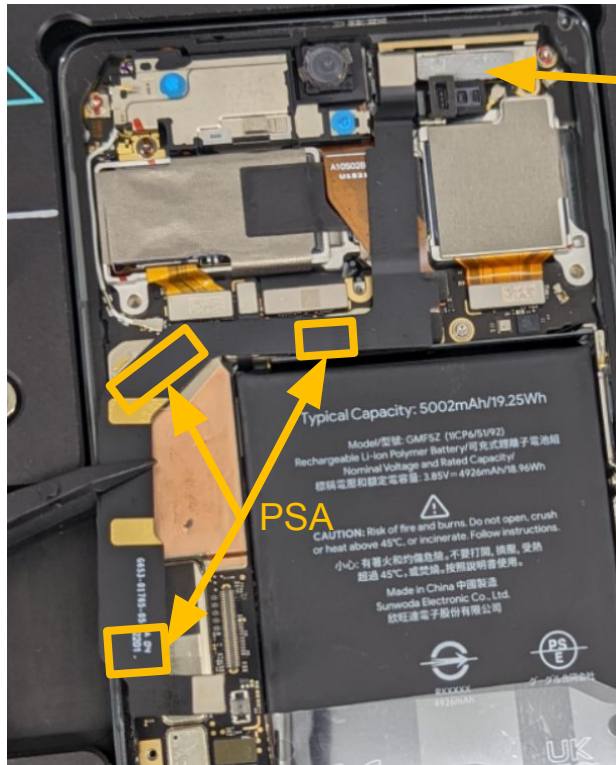
Remove mmWave flex

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

Part: G949-00302-01 (mmWave flex)

This step is only for mmWave Sku.

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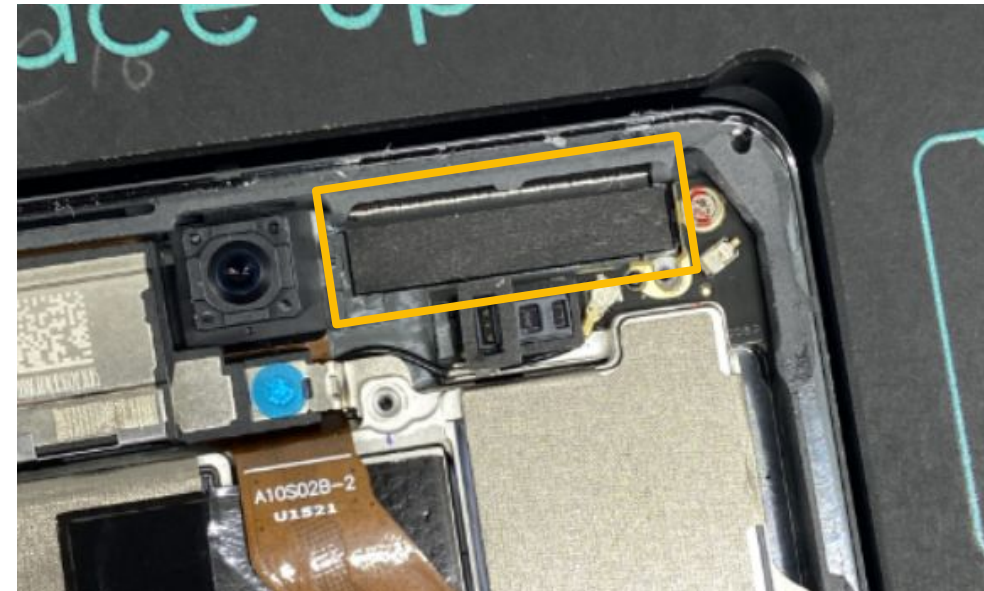
- Remove the **FOAM Sub-6** with an **ESD tweezers.**

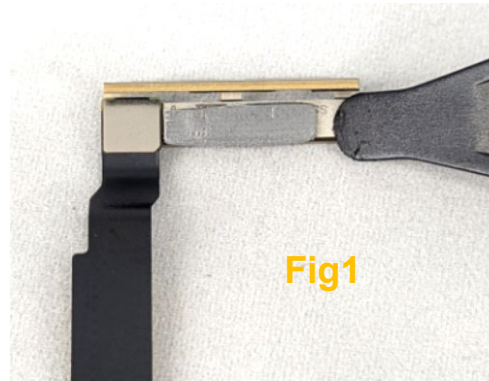**Part**: G806-06182-01 (Foam Sub-6)

This step is only for Sub-6 Sku.

Display → Graphic sheet → Mid-frame → **mmWave** → Rear camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Assembly instructions

mmWave

Re-using mmWave Bracket
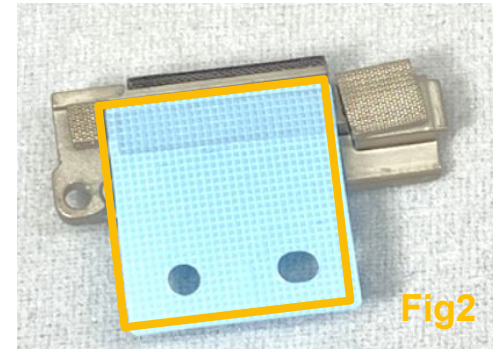
Fig1

Fig2

- Clean residue TIM from **mmWave Bracket** by the **Universal Disassembly ESD stick(Fig1).**
- Align the **mmWave thermal pad** to the **mmWave bracket** by the outline **(Fig2).**
  Part: G730-06099-11 (mmWave bracket)
  ~~G806-06083-01 (mmWave thermal pad)~~

This step is only for mmWave Sku.

Re-using mmWave flex

3

2

1

Fig1

Fig2

Fig3
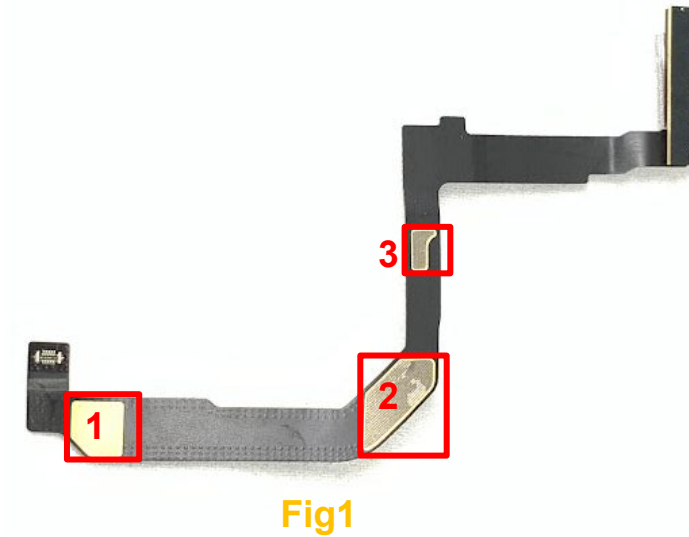
- Remove the adhesive *3 on **mmWave flex(Fig1)**, be careful NOT to poke the cable body**(Fig2 & 3)**.

  Part: G949-00302-01 (mmWave Flex)

This step is only for mmWave Sku.

Caution!
Review all safety precautions before beginning work.

Re-using mmWave flex
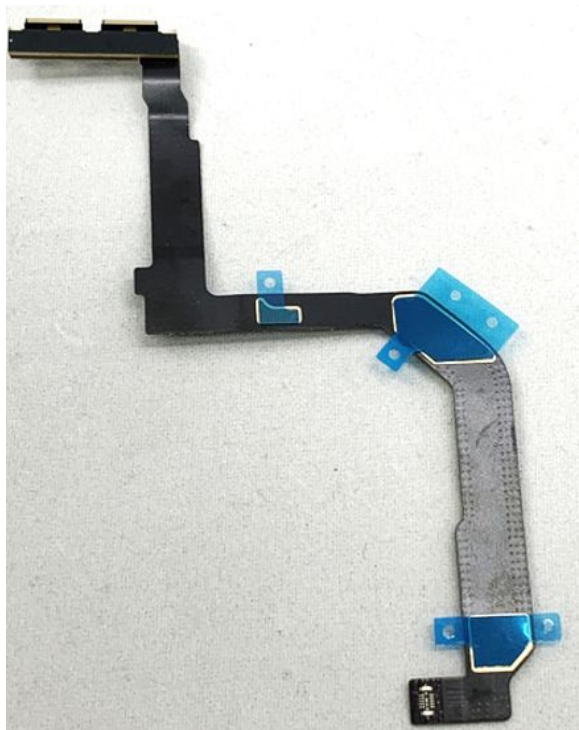
- Stick the CPSA *3 to the designated position.

  Part: G949-00302-01 (mmWave Flex)
  Part: G806-07334-01 (mmwave_flex_CPSA_1)
  Part: G806-07335-01 (mmwave_flex_CPSA_2)
  Part: G806-07336-01 (mmwave_flex_CPSA_3)

This step is only for mmWave Sku.

Assemble mmWave flex
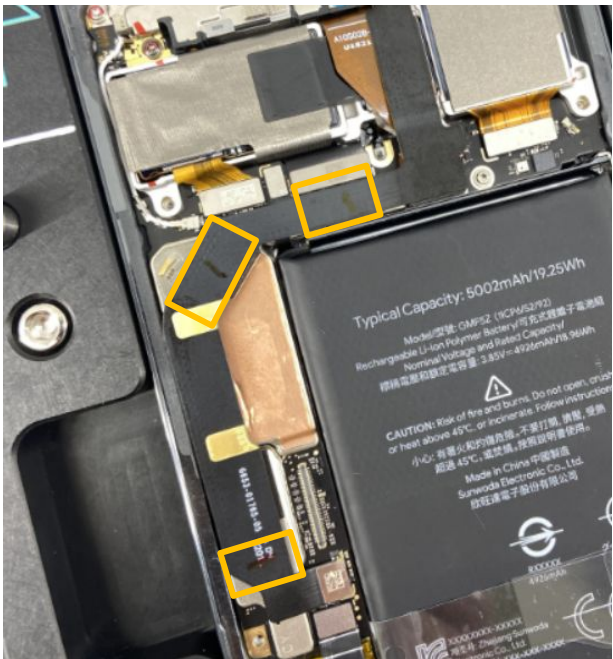
- Tear off the **CPSA*3**. Insert **mmWave Assy module** into the **Enclosure**.
- Align flex according to the outline, and press down with the **CPSA area** with **Universal Disassembly ESD stick.**
  Part: G949-00302-01 (mmWave Flex)

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** | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Assemble Sub-6 Foam

matte side
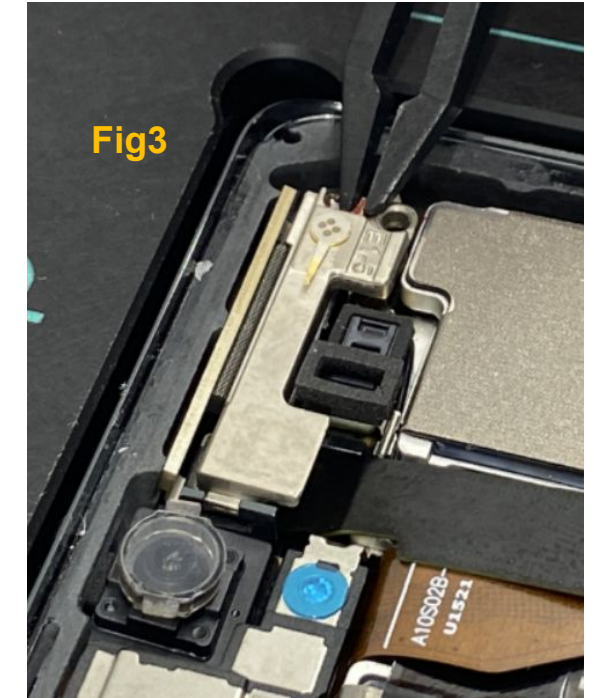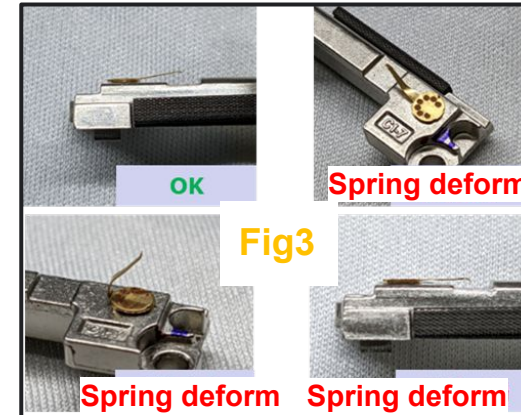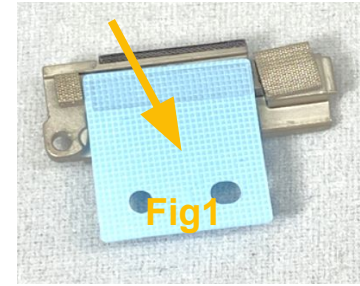(not glossy side)
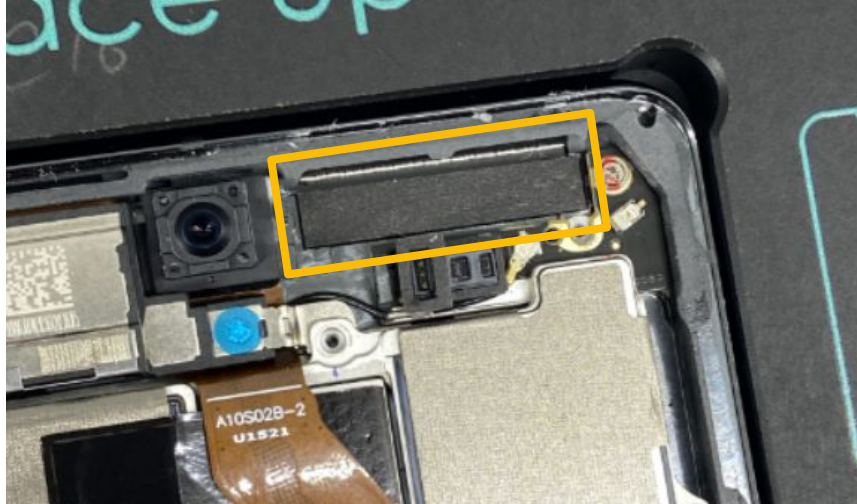
glossy side

- Insert **Foam Sub-6** into the **Enclosure**.
- Place the **Foam Sub-6** <u>matte side toward yourself</u>, Not the glossy side.

Part: G806-06182-01 (Foam Sub-6)

This step is only for Sub-6 Sku.

Insert Bracket

Fig1

OK   Spring deform

Fig3

Spring deform   Spring deform

Fig3

- Tear off the blue liner before assembling the bracket. **(Fig1)**
- Visually check the spring status. **(Fig2)**
- Insert the **bracket** at an angle. **(Fig3)**

Part: G730-06099-11 (bracket mmWave)
Part: G730-06099-12 (bracket sub-6)

This step(tear off the blue liner) is only for mmWave Sku.

mmWave

Display | Graphic sheet | Mid-frame | **mmWave** | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   85
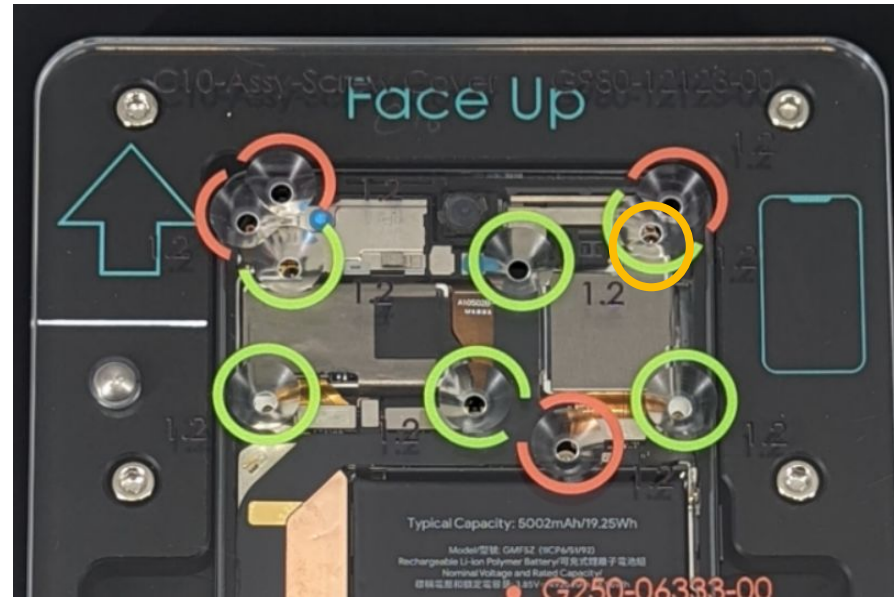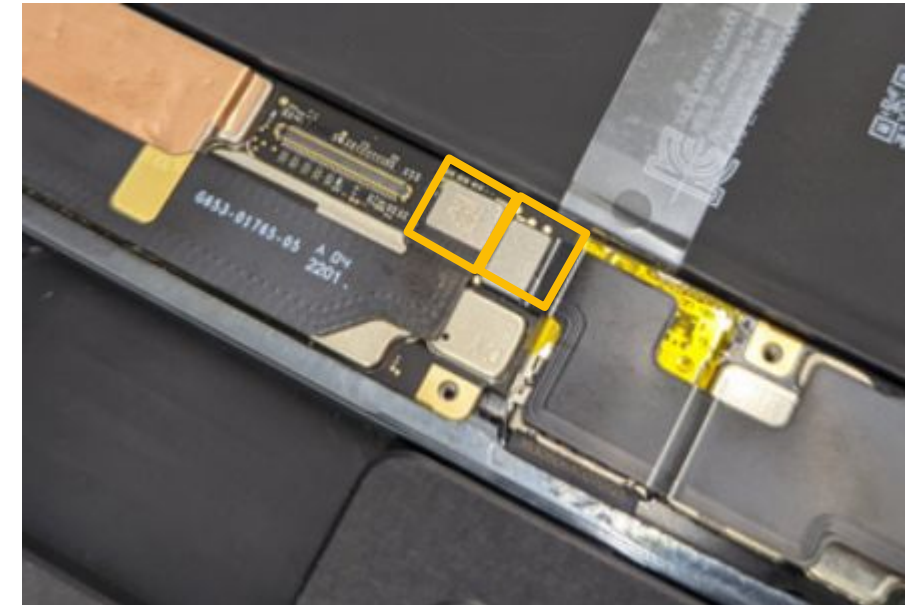
Fasten mmWave bracket

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

Torque force : 1.2 ± 0.03kgf-cm

Part: G250-05753-00 (screw)

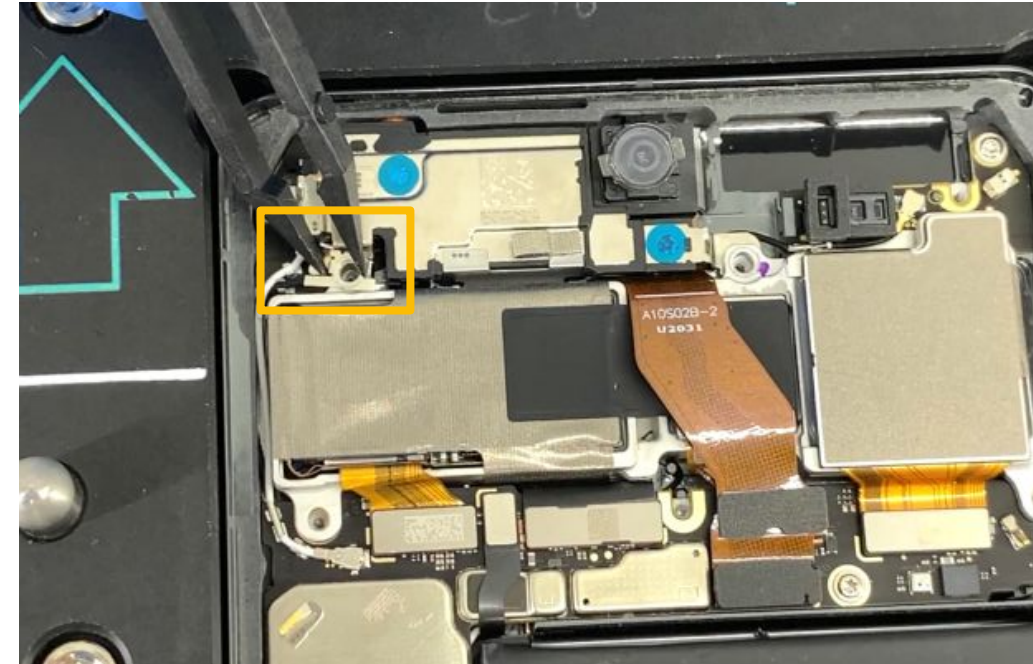## Connect to Logic board

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

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

Display | Graphic sheet | Mid-frame | **mmWave** | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Pixel 7 Pro Repair Manual v3 ©Google 2024 I Page   86

Disassembly instructions

Rear camera

Rear camera replacement

Prerequisites

Remove the following items first:

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

Tools

C0 Enclosure Holder
Pixel 7 Pro Screw Cover
Torx plus 3IP screwdriver
ESD tweezers
Universal Disassembly ESD stick
Universal Fish line tool
Ionizing air fan

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

Rear camera replacement- Cont.

Parts

G949-00299-01 Rear camera	
G250-05753-0 Screw * 2	
G853-01244-01 Spring	
G852-02350-01 RCAM Cap	
G852-02270-01 RCAM UW Cap	

G852-01898-01 RCAM Tele Cap	
G806-07707-01 RCAM liner tele	
G806-07708-01 RCAM liner UW	
G806-07709-01 RCAM liner	

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

Remove screws

Remove front cam connector
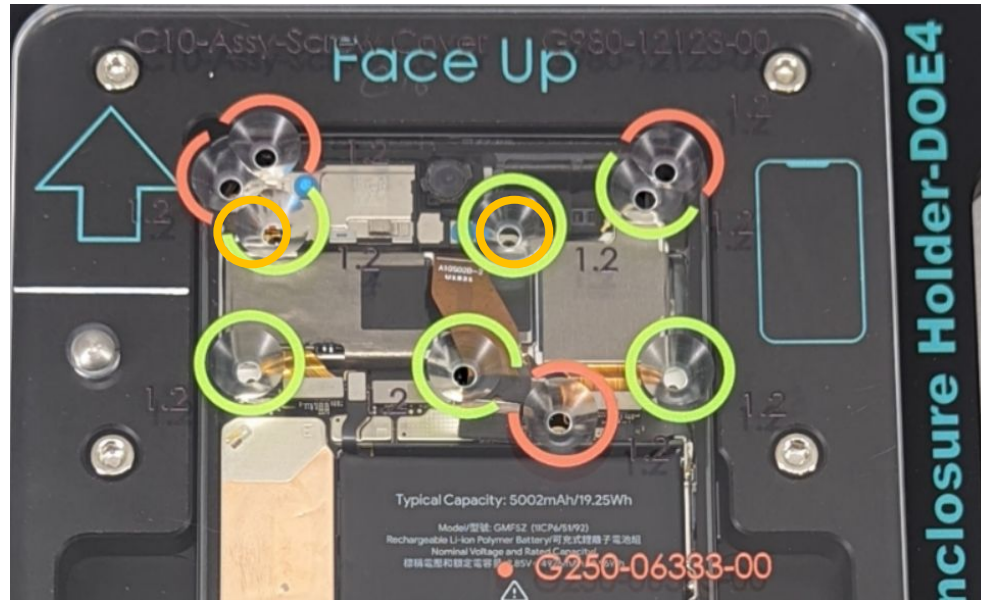
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

- Remove the **two Rear camera screws** with a **Torx Plus 3IP screwdriver**, remove the **Pixel 7 Pro Screw Cover**.

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

- Remove the **Spring** with **ESD tweezers**.

Part: G853-01244-01 (Spring)

Spring is very small and may fall out during screw removal.

Display → Graphic sheet → Mid-frame → mmWave → **Rear camera** → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Disconnect Front cam

Disconnect Rear cam

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

Using the **Universal Fish line tool** avoids damage the components.
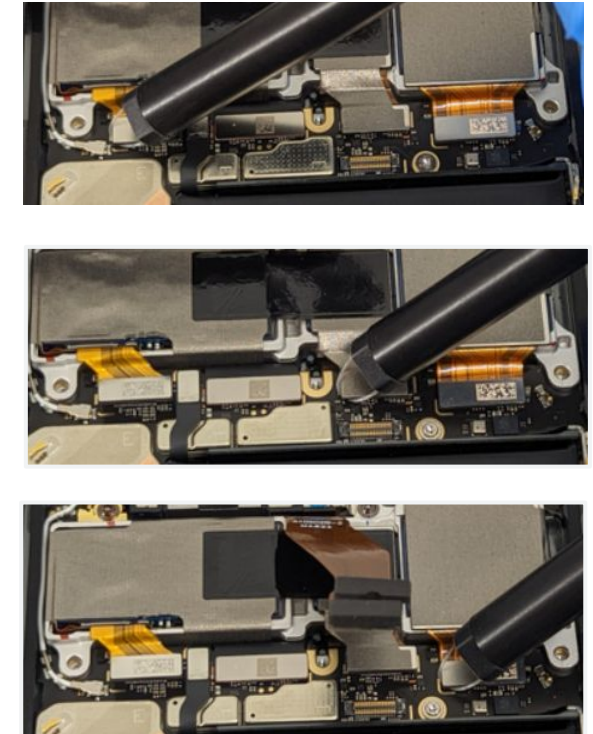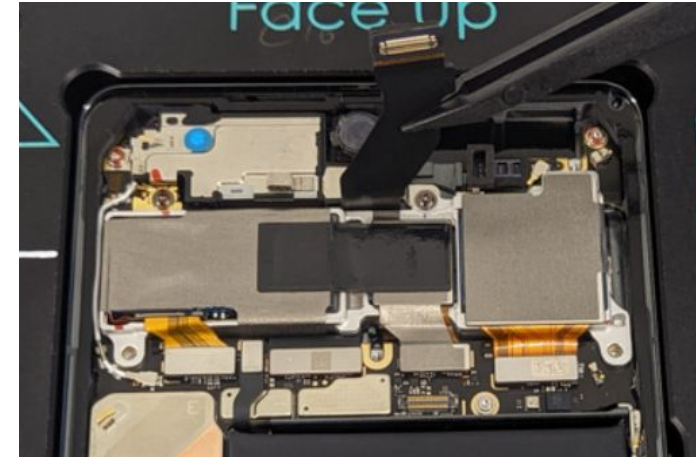
- Because the RCAM is underneath the FCAM, kindly lift the FCAM first.
- Loosen 3 **Rear camera** connectors and disconnect from the **Logic board** with a **Universal Fish line tool**.

Part: G949-00299-01 (Rear camera)

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

Display → Graphic sheet → Mid-frame → mmWave → **Rear camera** → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

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Camera protection

G852-02350-01   G852-02270-01   G852-01898-01

Enclosure protection

G806-07708-01

G806-07707-01   G806-07709-01
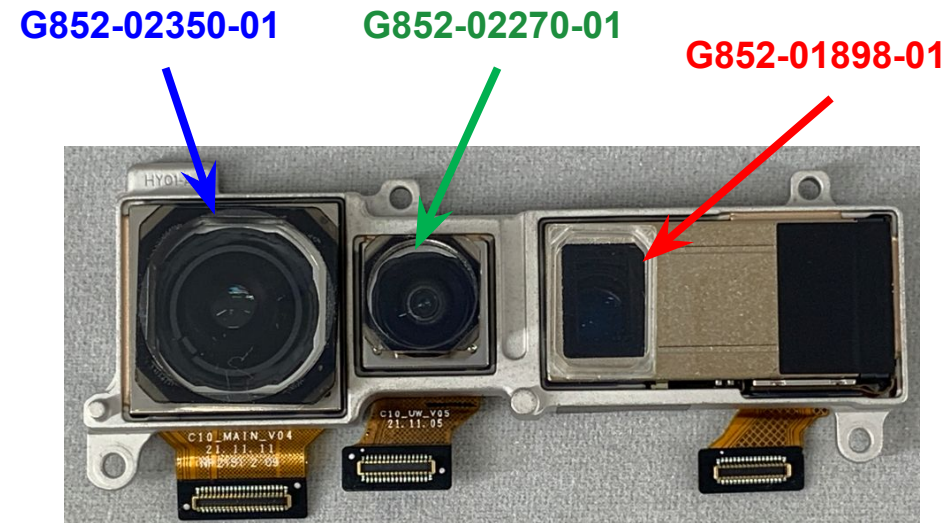
- Apply **3 RCAM Caps** over the **Rear camera**.

Part: G852-02350-01 (RCAM Cap)
Part: G852-02270-01 (RCAM UW Cap)
Part: G852-01898-01 (RCAM tele Cap)
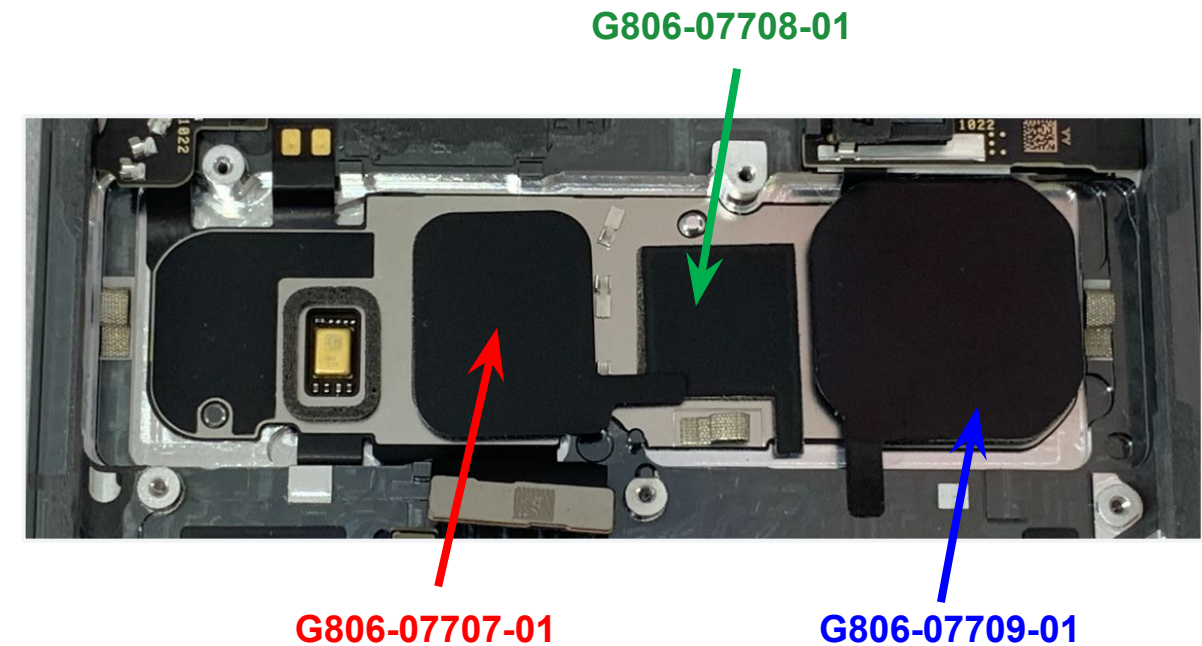
- -

Ensure that the environment is clean for this process. ⚠️

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

Part: G806-07707-01 (RCAM liner tele)
Part: G806-07708-01 (RCAM liner UW), G806-07709-01 (RCAM liner)

- -

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

Display | Graphic sheet | Mid-frame | mmWave | **Rear camera** | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Assembly instructions

Rear camera

Prepare rear camera

G852-02350-01 **G852-02270-01** **G852-01898-01**
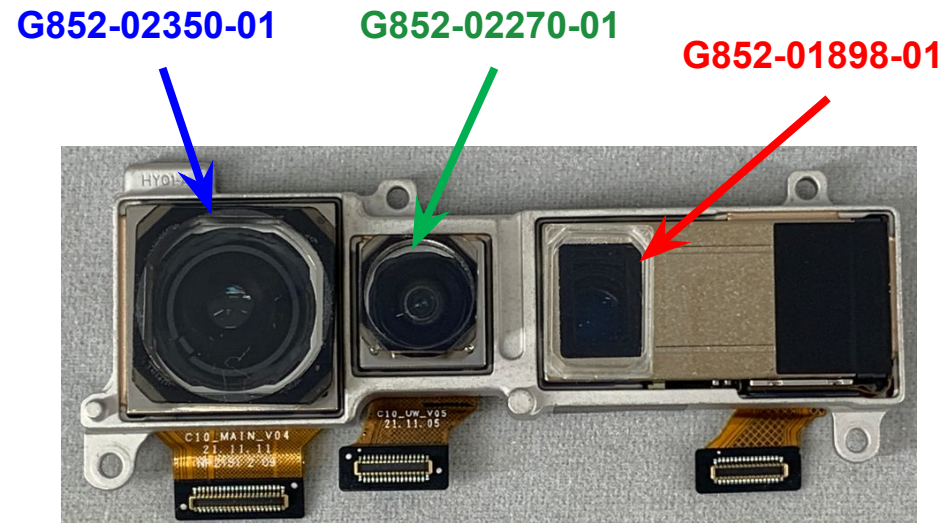
- Remove the **3 protective caps** from the **Rear camera**. Blow it by **ionizing air Fan**.

Part: G852-02350-01 (RCAM Cap)
Part: G852-02270-01 (RCAM UW Cap)
Part: G852-01898-01 (RCAM tele Cap)

Ensure that the environment is clean for this process. ⚠️

Remove liner

G806-07708-01

G806-07707-01 **G806-07709-01**

- Kindly lift the Front Camera Flex.
- Remove the **3 Rear camera liners** from the **Enclosure** with **ESD tweezers.** Blow it by **ionizing air Fan**.

Part: G806-07707-01 (RCAM liner tele)
Part: G806-07708-01 (RCAM liner UW)
Part: G806-07709-01 (RCAM liner)

Ensure that the environment is clean for this process. ⚠️

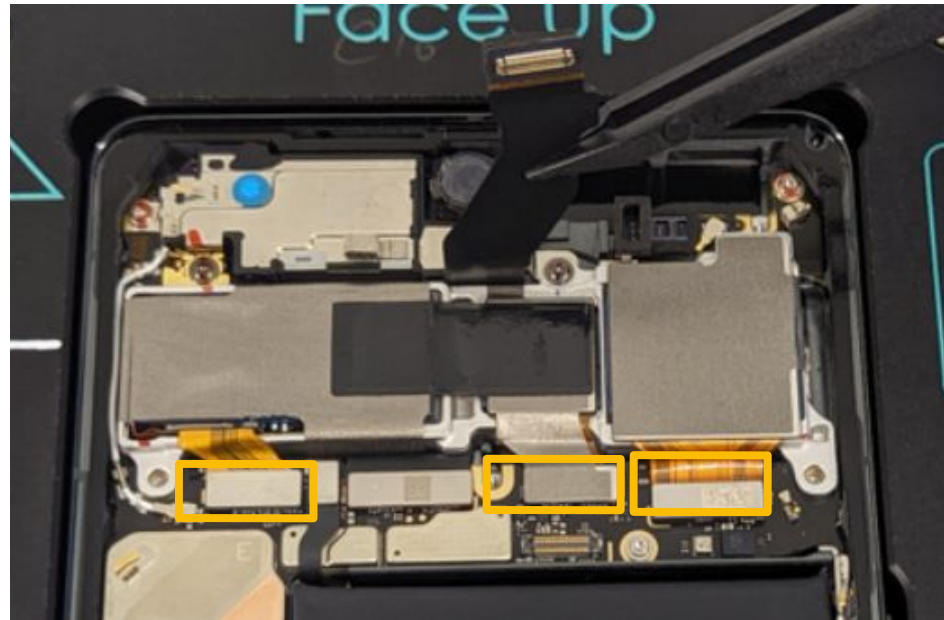Display → Graphic sheet → Mid-frame → mmWave → **Rear Camera** → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

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

Assemble rear camera

Fig1

Fig2

- Kindly lift the Front Camera Flex. Place the **Rear camera** into position, keeping it aligned with the lenses in the enclosure. **(Fig1)**

- Restore the Front Camera Flex.

  Part: G949-00299-01 (Rear camera)

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

Fasten Screws

Fig1

Fig2 OK — No sharp edge   NG — Sharp metal edge   NG — Sharp metal edge
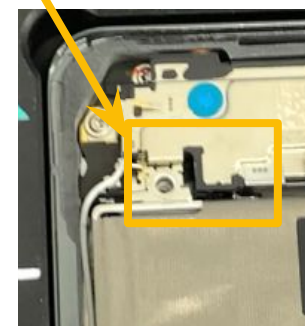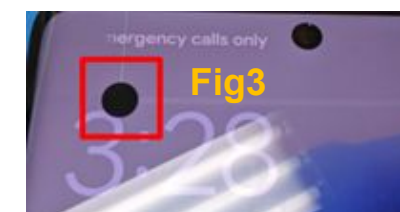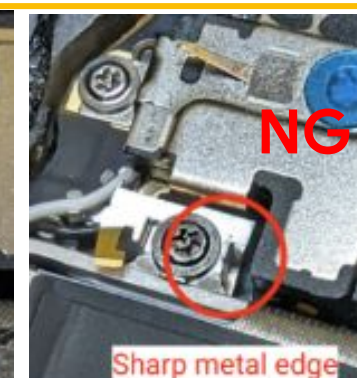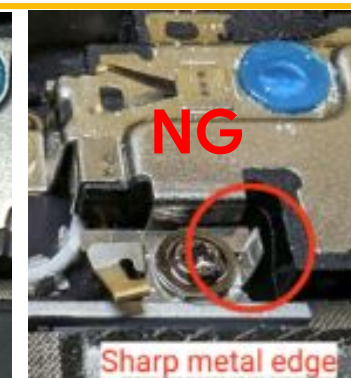
Fig3

Fig4
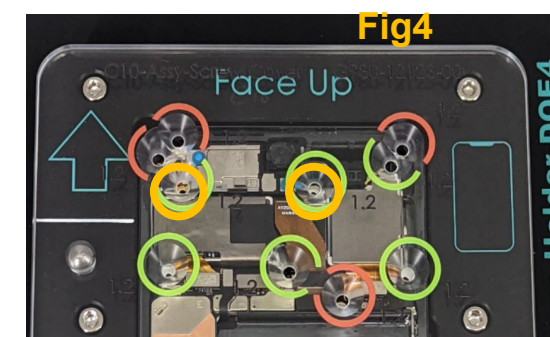
- Attach the **Spring** with **ESD tweezers** as the **Fig1** shows.
- Visually check the **Spring** as the **Fig2** shows. **Do not allow any the "Sharp metal edges"**. Sharp edges in this location may cause the screen to not perform as intended. See **Fig3**.
- Fasten the **2 RCAM screws** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**. as the **Fig4** shows.
  Torque force：1.2 ± 0.03kgf-cm
  Part: G853-01244-01 (Spring)，G250-05753-00 (Screw)

Ensure that the environment is clean for this process.

Display | Graphic sheet | Mid-frame | mmWave | **Rear Camera** | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Buckle rear camera

Buckle front camera

- Attach the 3 rear camera connectors to the **Logic board**, applying pressure evenly across the connectors to ensure they are fully engaged. Viewing from different angles to assist the alignment.

Check every connector is attached fully to the **Logic board**.
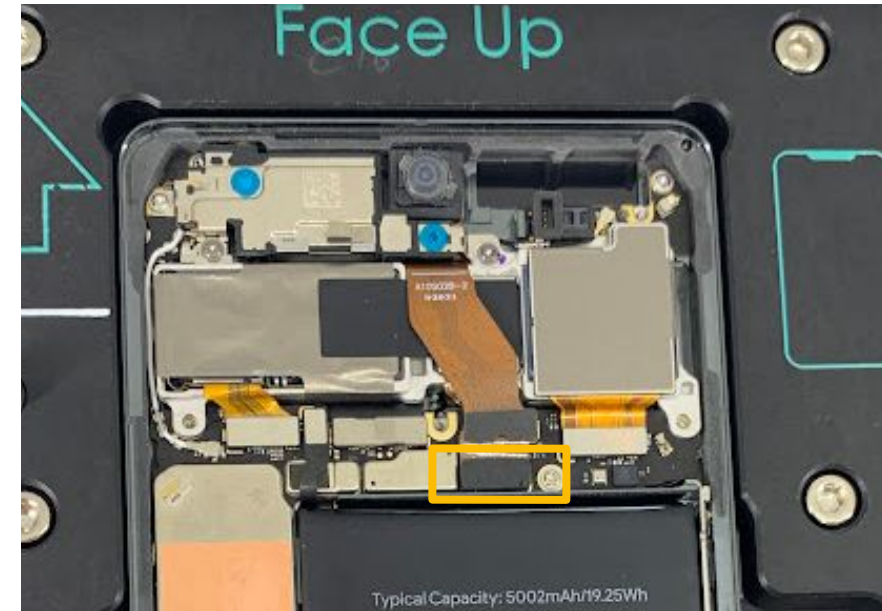
- Attach the front camera connector to the **Logic board**, applying pressure evenly across the connectors to ensure they are fully engaged. Viewing from different angles to assist the alignment.

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

Display | Graphic sheet | Mid-frame | mmWave | **Rear Camera** | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Disassembly instructions

Top speaker

Top speaker replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Mid-frame
- mmWave
- Rear camera

Tools

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

Parts

G863-00403-04
Top Speaker

G250-06333-00
Screws

G806-03591-01
Mic protective liner

G806-06207-01
Top spk Adhesive

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

Remove screws

Remove Top Speaker

Fig1

Fig2
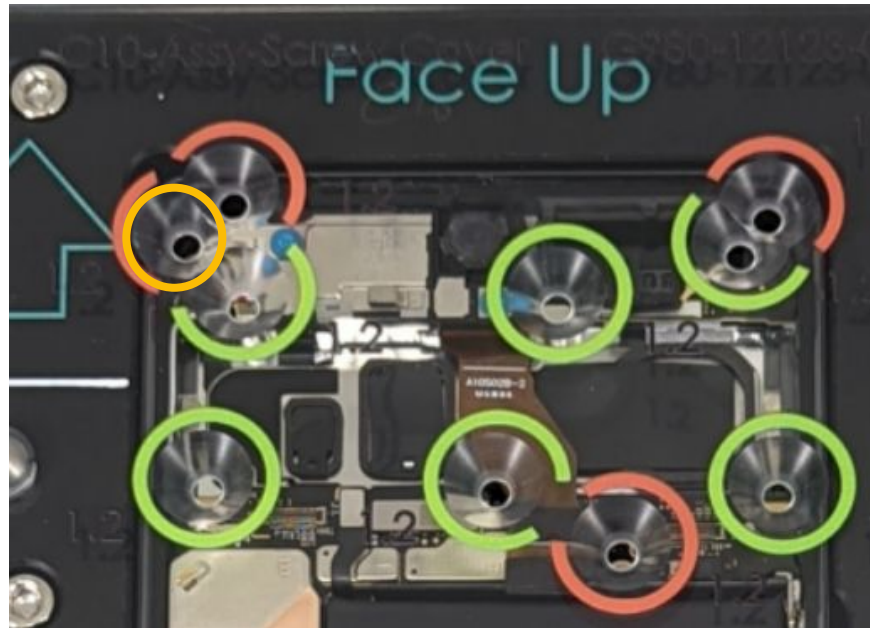
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.
- Remove the **Top speaker screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**.

~~**Part:** G250-06333-00 (Screw)~~ -
Do not reuse the part
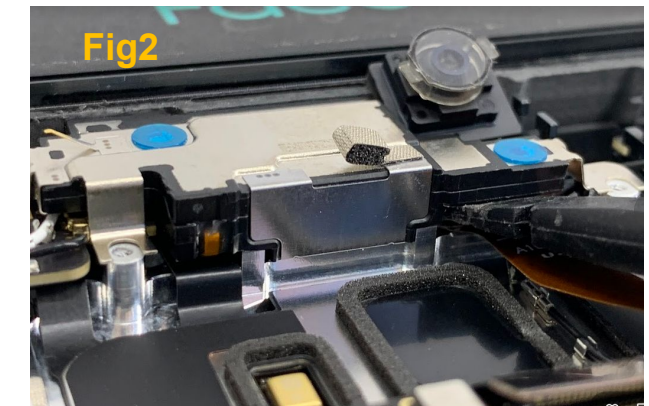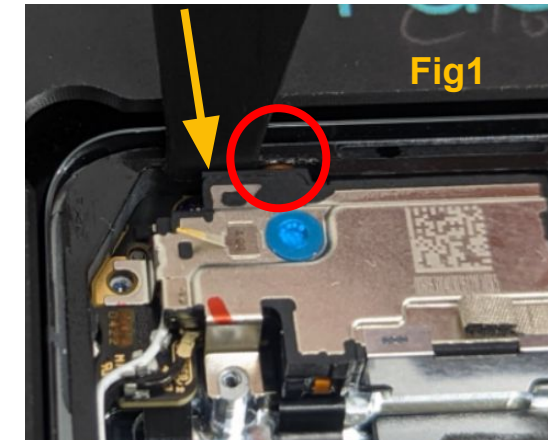
- Since the **Top Speaker** is adhered by adhesive, follow the steps below:
  - Pry it in the direction shown in the **Fig1** for 3 to 5 times. Be careful not to move to the right to avoid hitting the red rubber ring (circle shown).
  - Remove the **Top speaker** with an **Universal Disassembly ESD stick. (Fig2)**

Part: G863-00403-04 (Top speaker)

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | **Top Speaker** | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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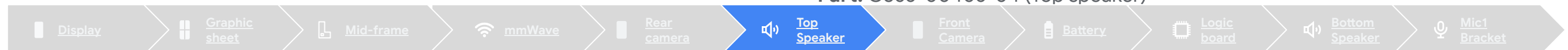
Protective film

- Paste the **Mic protective liner** on Mic3 hole of the ANT1.

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

Display Graphic sheet Mid-frame mmWave Rear camera **Top Speaker** Front Camera Battery Logic board Bottom Speaker Mic1 Bracket

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Assembly instructions
Top speaker

Repaste Top speaker PSA

Fig1.

Fig2.

Fig3.
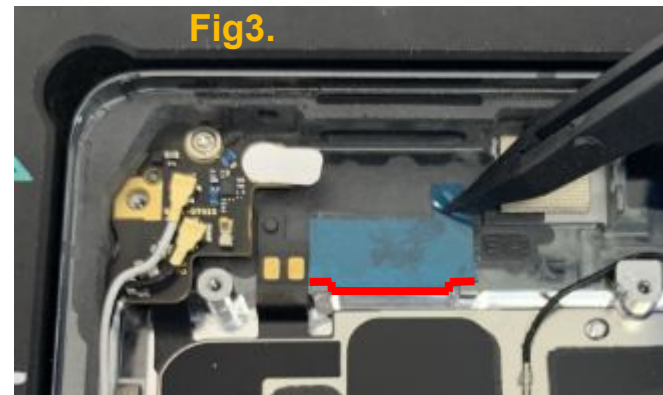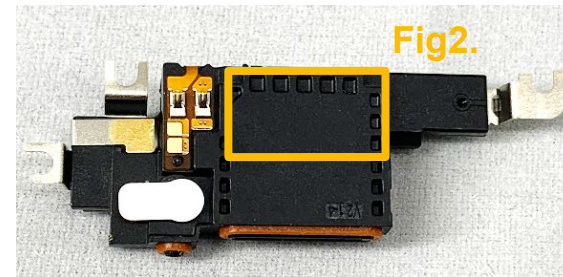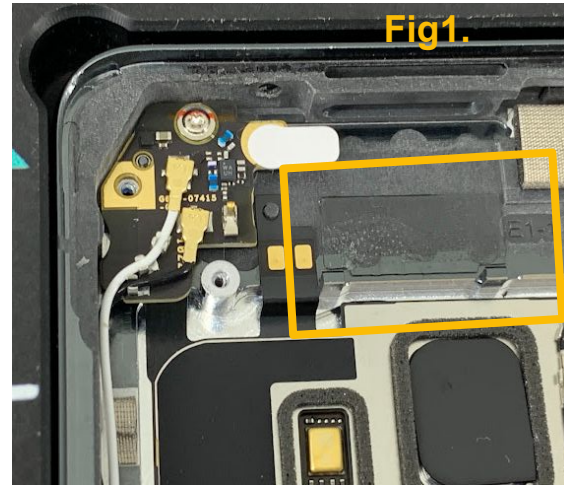
- Clean any residue in the **Top speaker area** with an **Universal Disassembly ESD stick**. Apply **IPA** with a cloth afterward. **(Fig1, Fig2)**
- Take the **Top speaker Adhesive** and attach it to the empty slot(red aligned line) of the speaker flatten the left and right of the PSA. **(Fig3)**
- Press it by Universal Disassembly ESD stick slightly.

Part: G806-06207-01 (Top speaker Adhesive)

Remove the liners

Fig1.
NG spring deformed
OK
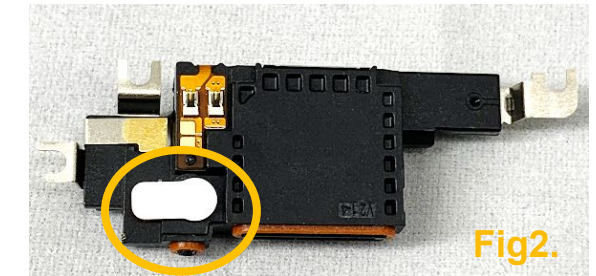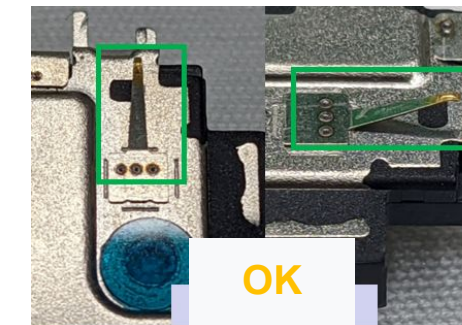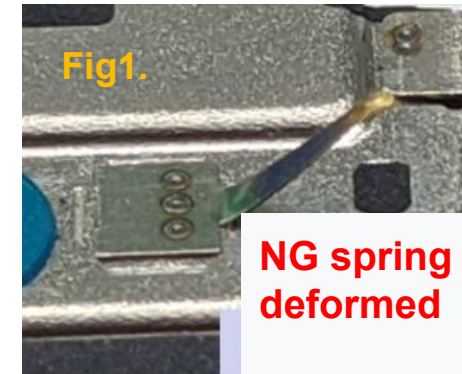
Fig2.

Fig3.

- Check the spring if it's deformed. **(Fig1)**
- Remove the **2 Mic protective liners**. **(Fig2 & Fig3)**
- Remove the **Top speaker PSA liner** from the **Enclosure**. **(Fig3)**

Part: G863-00403-04 (Top speaker), G806-03591-01 (Mic protective liner)*2

Do not reuse the part

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → **Top Speaker** → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Caution!
Review all safety precautions before beginning work.

Insert top speaker

Fig1

Fig2

- Insert it into the **Top speaker** slot on the **Enclosure** at an angle of about 10~15°, making sure to fit it completely. **(Fig2)**
- Hand press it accordingly with **Universal Disassembly ESD stick**. **(Fig3)**

Part: G863-00403-04 (Top speaker)

Make sure the speaker goes under the enclosure rim.

Fasten top speaker
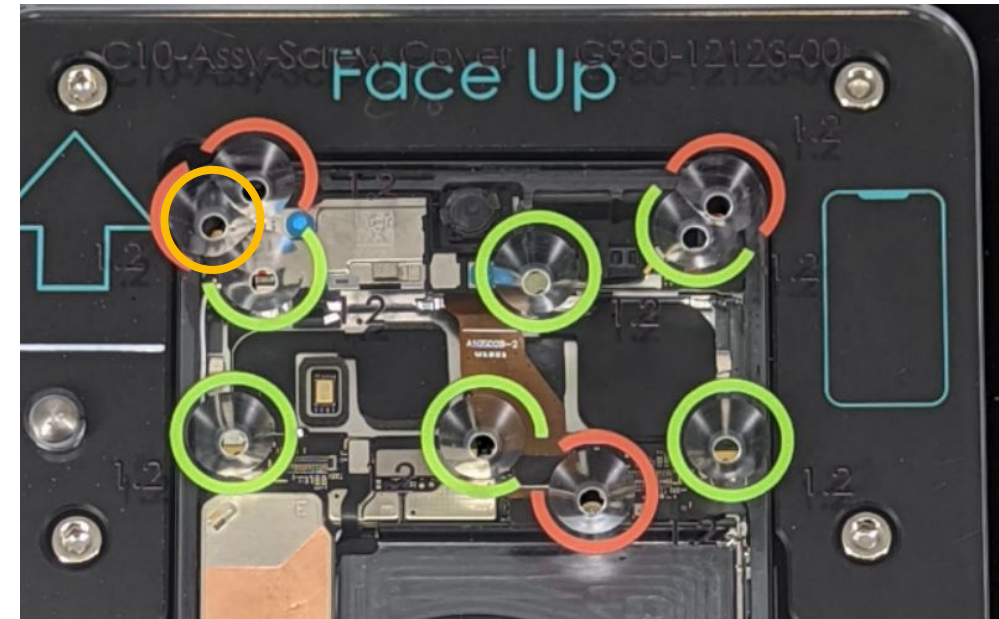
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

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

Part: G250-06333-00 (Screw)

Display › Graphic sheet › Mid-frame › mmWave › Rear Camera › **Top Speaker** › Front Camera › Battery › Logic board › Bottom Speaker › Mic1 Bracket
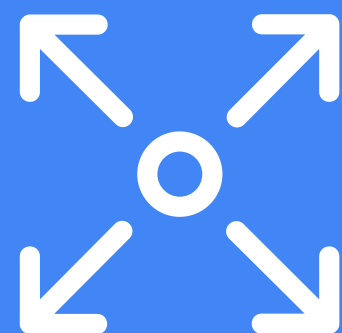
Disassembly instructions

Front camera

Front camera replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Mid-frame
- mmWave
- Rear camera
- Top speaker

Tools

Pixel 7 Pro Enclosure Holder

ESD tweezers

Parts

G949-00298-01
Front camera

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

Remove the FCAM
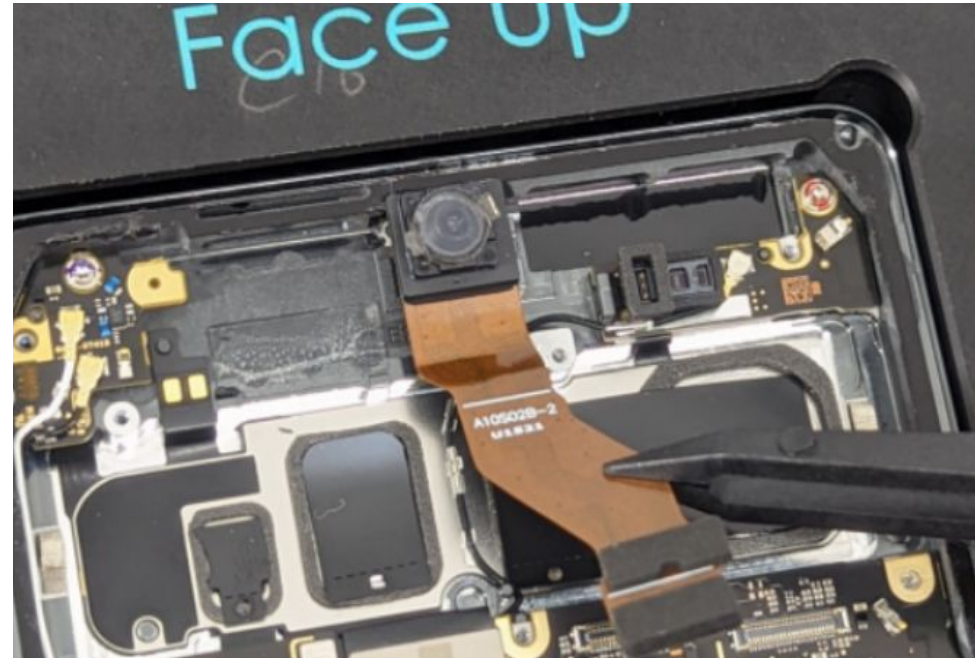
- Remove the **Front camera**.

Part: G949-00298-01 (Front camera)

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

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | **Front Camera** | Battery | Logic board | Bottom Speaker | Mic1 Bracket

Assembly instructions

Front camera

Attach front camera
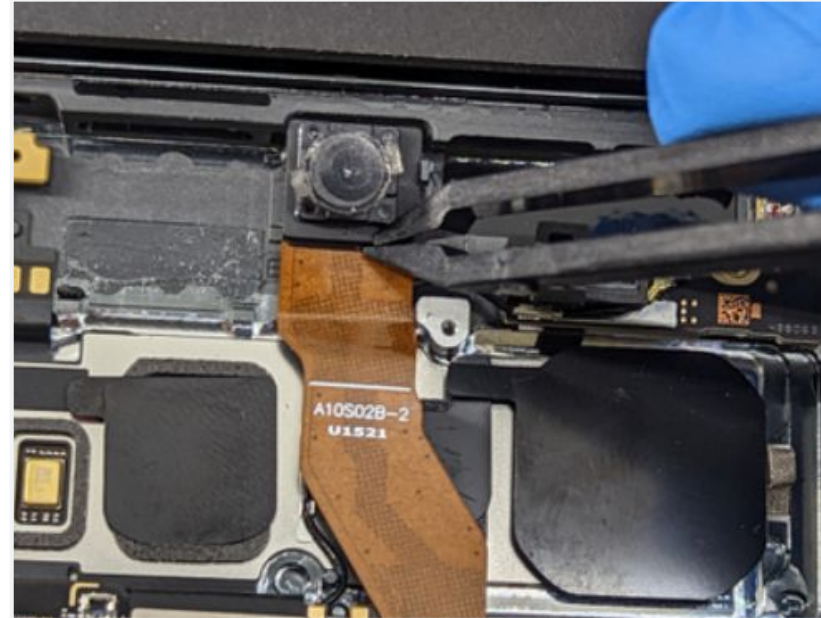
- Pick up the **Front camera** with **ESD tweezers**.

- Don't connect the FCAM connector here.

Part: G949-00298-01 (Front camera)

Disassembly instructions

Battery

Battery replacement

Prerequisites

Remove the following items first:

- Display module
- Graphite sheets
- Mid-frame

Tools

Heat plate

Universal disassembly fixture &

Universal Device Clips

Pixel 7 Pro Enclosure Holder

Pixel 7 Pro Battery Press

Universal press fixture

ESD tweezers

Feeler gauge

Universal adsorption bulb

3M AP111 Primer

Table C-Clamp

Parts

G949-00304-01
Battery

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

Lift pull jacket

Move pull jacket in Y-direction

Fig1 Fig2
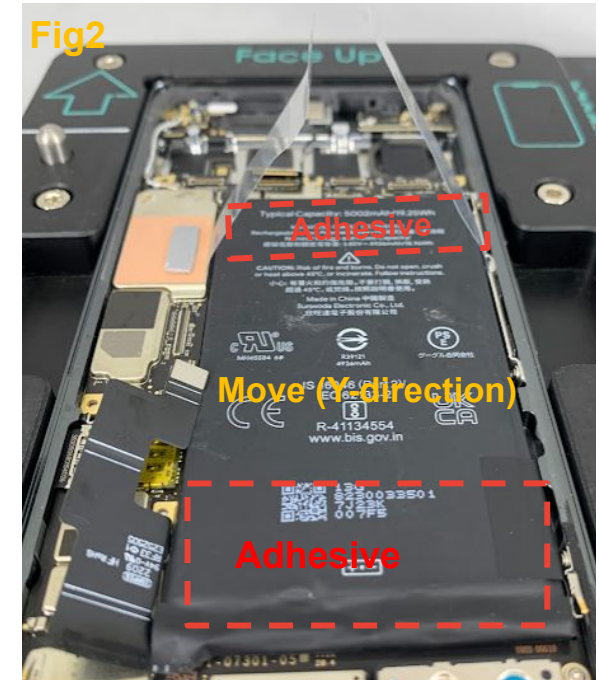
- Lift the pull jacket using **ESD tweezers**.

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

  Part: G949-00304-01 (Battery)

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

Display Graphic sheet Mid-frame mmWave Rear camera Top Speaker Front Camera **Battery** Logic board Bottom Speaker Mic1 Bracket

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Soften glue
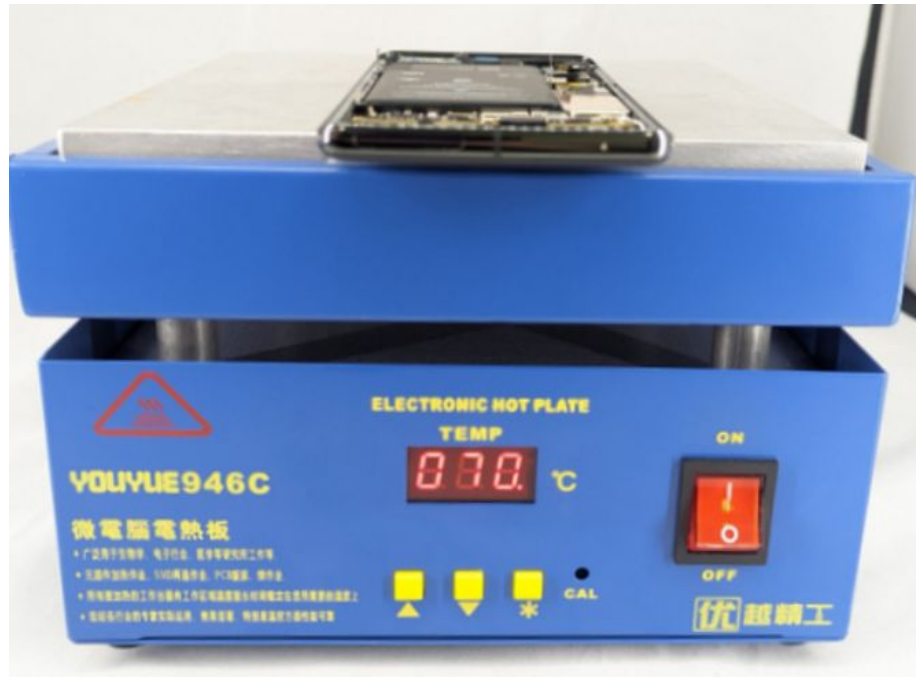
Clamp fixture

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

Heating plate is a Hot Surface. Use caution as it could cause burns. ⚠️
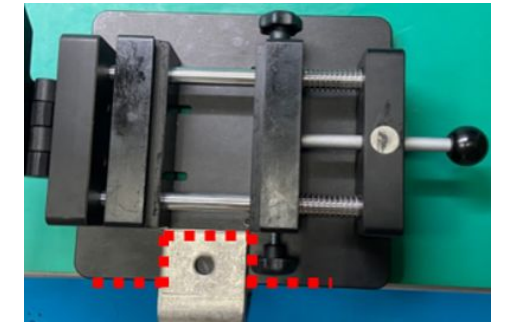
- Place the **Universal disassembly fixture & Universal Device Clips** on the desk and fasten down with the clamp.
- Align the **Table C-Clamp** with the fixture using the dotted line. And make sure it's as tight as possible.

The table should be sturdy.

Display   Graphic sheet   Mid-frame   mmWave   Rear camera   Top Speaker   Front Camera   **Battery**   Logic board   Bottom Speaker   Mic1 Bracket

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Secure the device

Pull Up in Z-direction

Pull Up (Z-direction)

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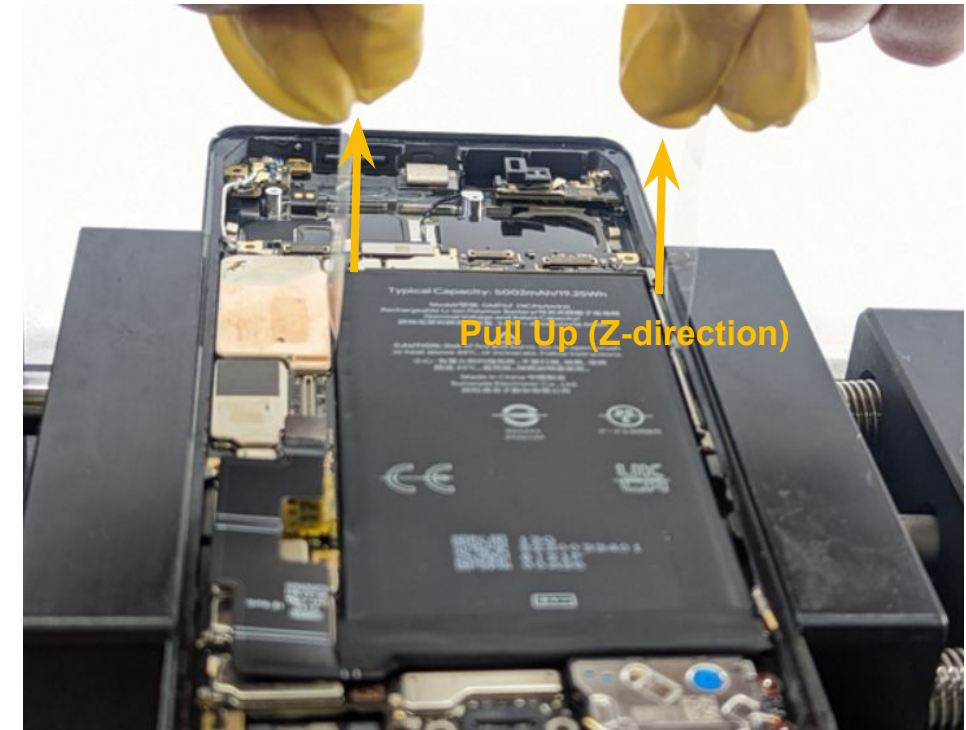
- **Wear the finger cot to increase the friction to avoid the pull jacket slip away.** Pull up jacket both sides together in (vertical-direction) to remove the **Battery**.

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

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | **Battery** | Logic board | Bottom Speaker | Mic1 Bracket

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Remove battery

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

Part: G949-00304-01 (Battery)

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

Display ‣ Graphic sheet ‣ Mid-frame ‣ mmWave ‣ Rear camera ‣ Top Speaker ‣ Front Camera ‣ **Battery** ‣ Logic board ‣ Bottom Speaker ‣ Mic1 Bracket

Assembly instructions

Battery

Clean enclosure

Align battery

Location A

Location B

- Before installation, remove any debris/loose screws from the **Enclosure**. Tear off the two battery liners. Ensure **Battery** cosmetic checks are completed.

- Apply **IPA** around the edges of the **Battery** figure shown using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

- Apply **3M 111 Primer** (per product instructions) around the edges of the **Battery** figure shown using a **Dust-free Cotton swabs**. Use an **Ionizing air fan** to blow over.

Once Primer has been applied, complete assembly in 25 mins.
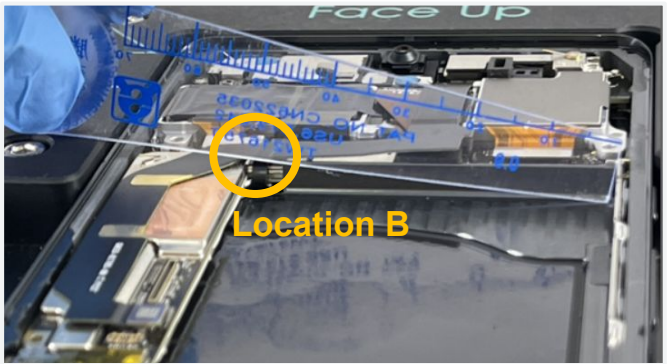
- Place **0.9mm Feeler gauge** against the wall (contact the Location A and B accordingly).

Do not skip this step.
The battery spacing is critical for product performance.
Use extra care to align correctly.

Caution!
Review all safety precautions before beginning work.

Align battery

Fig1.

Fig2.

Prepare to press
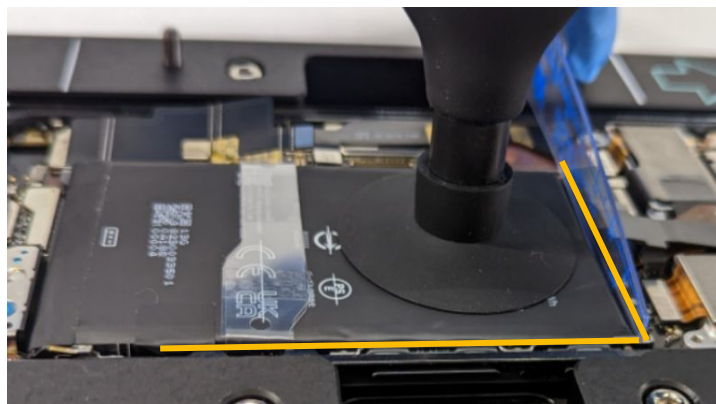
- Use the **Universal adsorption bulb** to pick up the **Battery** and remove the adhesive liner.

- Align the **Battery** at the corners as the figure circles.**(Fig1.)**

- Gently press the **Battery** down with the **Universal adsorption bulb** by the alignment line. **(Fig2.)**

Part: G949-00304-01 (Battery)
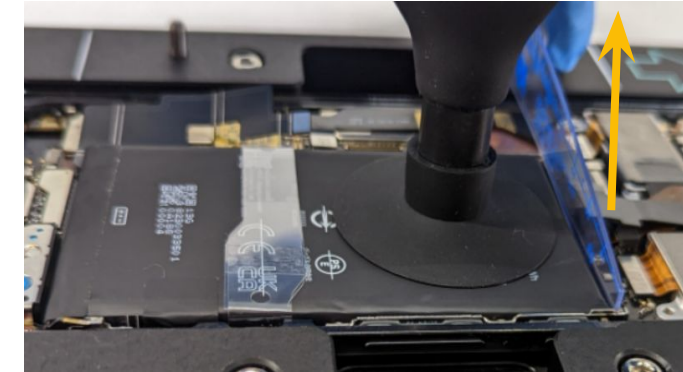
- Remove the **0.9mm Feeler gauge** and **Universal adsorption bulb.**

- Place the **Pixel 7 Pro Battery Press** on the **Pixel 7 Pro Enclosure Holder**.

| Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket |

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Press together in fixture

Press together in fixture
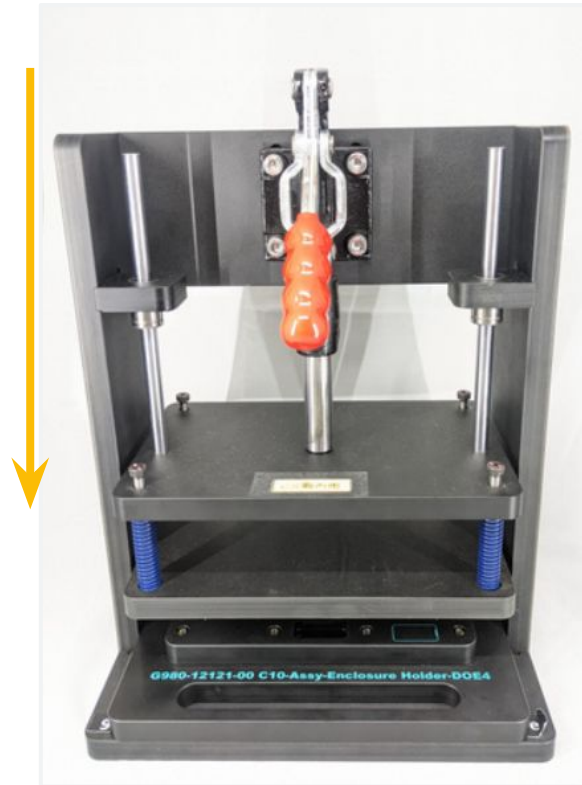
- Place the **Pixel 7 Pro Enclosure Holder** in the **Universal press fixture.**

- Press the handle down for 10 seconds.

Pinch point. Keeps hands clear during operation. ⚠️
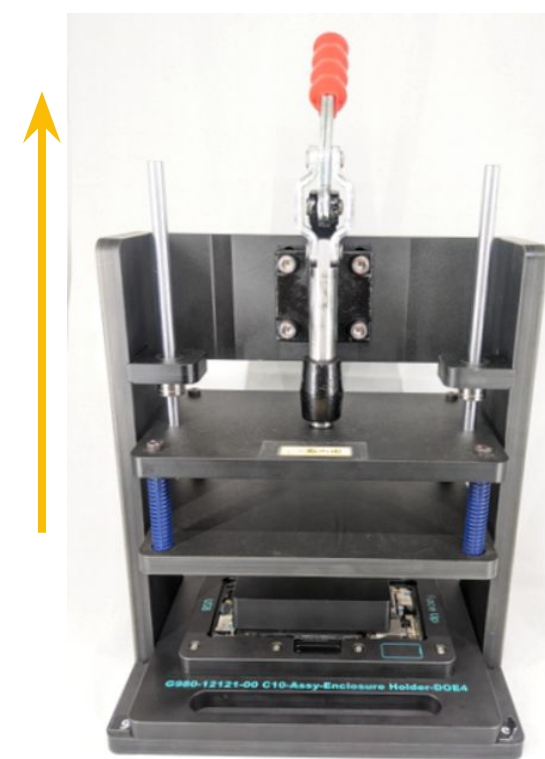
- Return the handle to the original position and remove the **Pixel 7 Pro Enclosure Holder**.

Pinch point. Keeps hands clear during operation. ⚠️

Display ▸ Graphic sheet ▸ Mid-frame ▸ mmWave ▸ Rear Camera ▸ Top Speaker ▸ Front Camera ▸ **Battery** ▸ Logic board ▸ Bottom Speaker ▸ Mic1 Bracket

Disassembly instructions

Logic board

Logic board replacement

Prerequisites

Remove the following items first:

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

Tools

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

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

Logic board replacement- Cont.

Parts

Multiple Part Numbers
Logic board
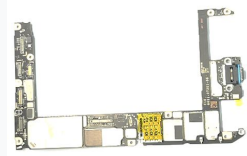
G250-06333-00
Screw *4

G853-01233-02
ANT7 Grounding

Multiple Part Numbers
Sim Tray

G806-03591-01
Mic protective liner

G821-00814-50 Coaxial cable #8 (White)

G821-00812-01 Coaxial cable #4 (Black)

G821-00811-53 Coaxial cable #1 (Black)

Caution!
Review all **safety precautions** before beginning work.
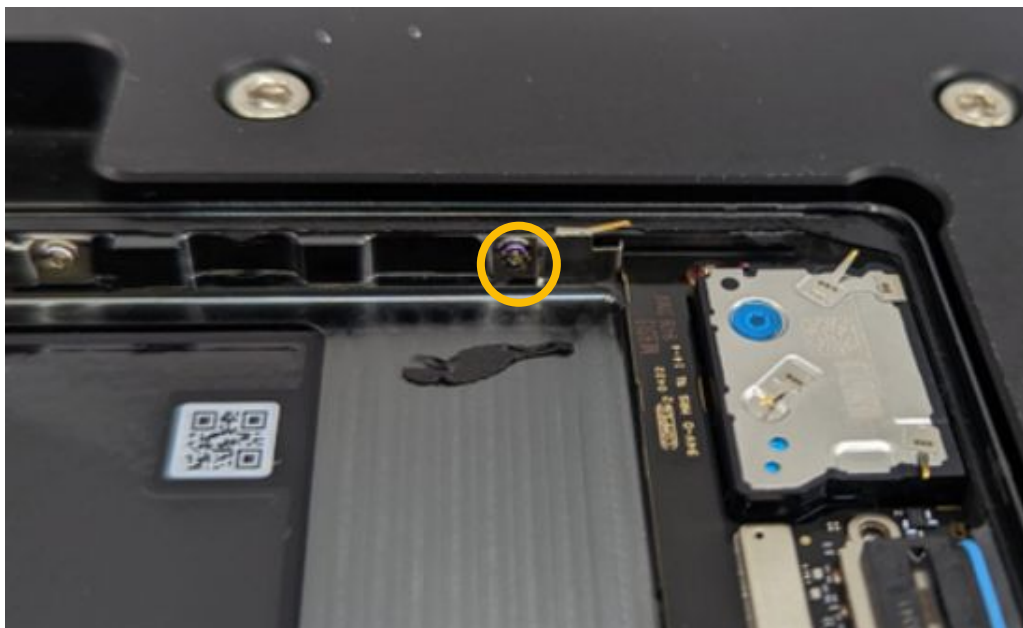
Remove the screw

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

Part: G250-06333-00 (Screw)

Do not reuse the part.

Remove the ANT7

- Remove the **ANT7 Grounding** with a **ESD Tweezers.**

Part: G853-01233-02 (ANT7 Grounding)

Display ⟩ Graphic sheet ⟩ Mid-frame ⟩ mmWave ⟩ Rear camera ⟩ Top Speaker ⟩ Front Camera ⟩ Battery ⟩ **Logic board** ⟩ Bottom Speaker ⟩ Mic1 Bracket

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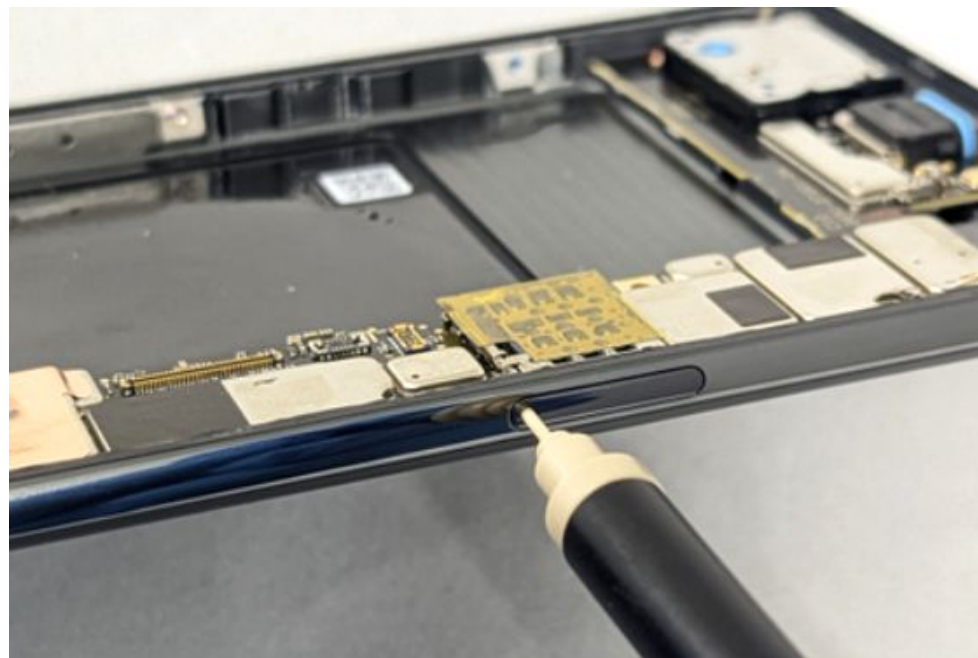
Remove SIM tray

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

Part: [Multiple Part Numbers](#) (SIM tray)

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

Cable Maps

ANT1 Board

Coaxial Cable#4

ANT4 Board

Coaxial Cable#1 (black one)

Coaxial Cable#8 (white one)

ANT4 coaxial cable into the clip

ANT4 coaxial cable bypass alignment post
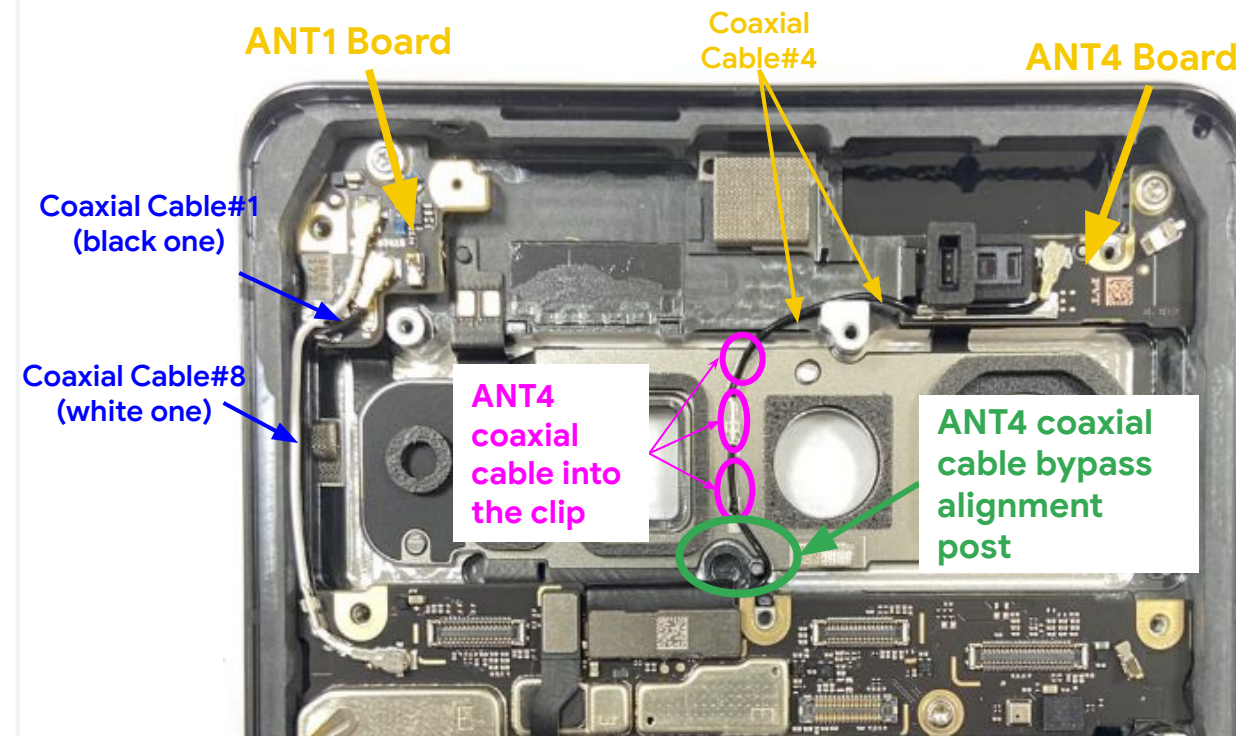
- Before removing **coaxial cables,** there are **three coaxial cables** routing in **ANT1 & ANT4 Board**. Ready to disassemble them from **ANT1 & ANT4 Board & Logic Board.**

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket

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Disconnect the Cable
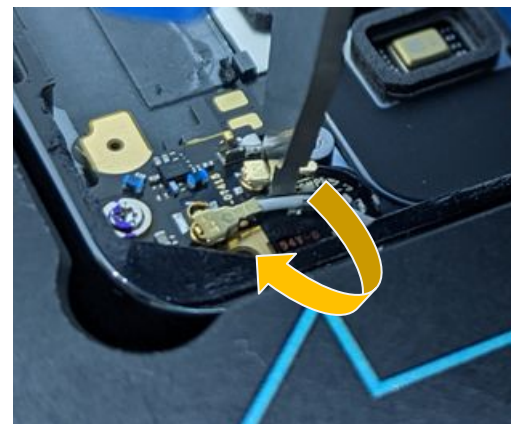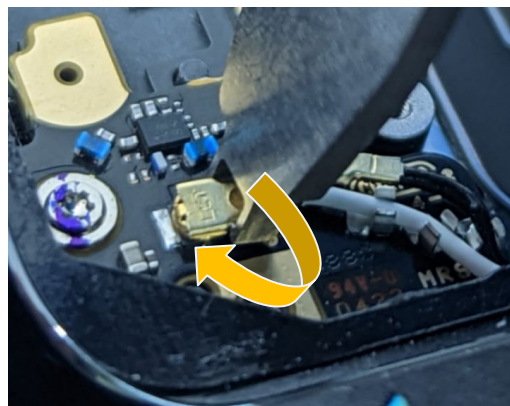
- Fasten the head and twist it to unbuckle the head of **coaxial cable #8** from the **ANT1 Board** with the **Universal Coaxial Cable Tool.**
- Fasten the head and twist it to unbuckle the head of **coaxial cable #1** from the **ANT1 Board** with the **Universal Coaxial Cable Tool.**

This head to unbuckle the head.

540-00505-00 Coaxial Cable **Tool**

Disconnect the Cable

- Fasten the head and twist it to unbuckle the head of **coaxial cable #4** from the **ANT4 Board** with the Universal Coaxial Cable Tool.

This head to unbuckle the head.

540-00505-00 Coaxial Cable **Tool**

Display → Graphic sheet → Mid-frame → mmWave → Rear camera → Top Speaker → Front Camera → Battery → **Logic board** → Bottom Speaker → Mic1 Bracket
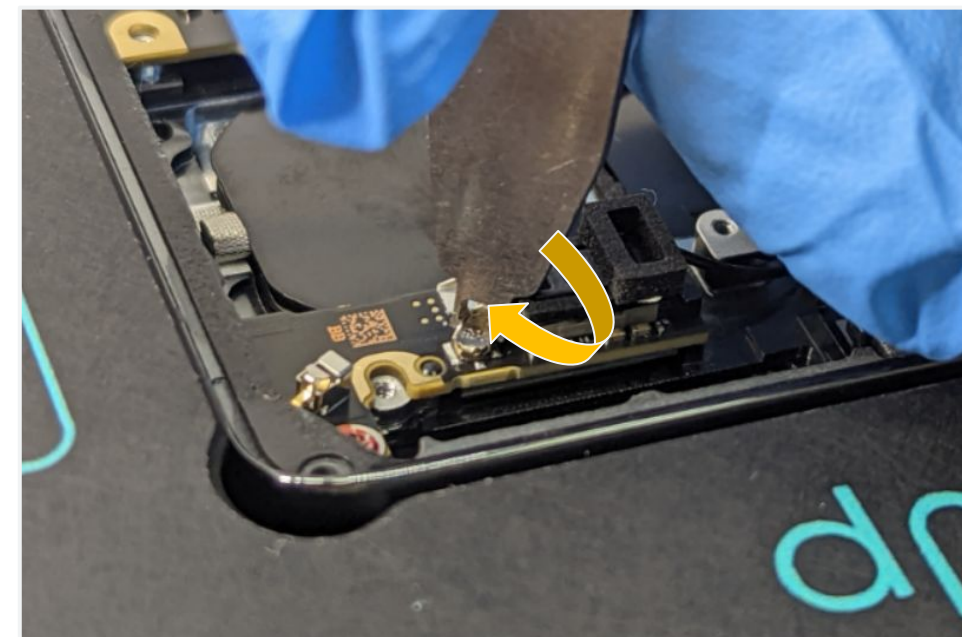
Logic board

Disconnect the Cable
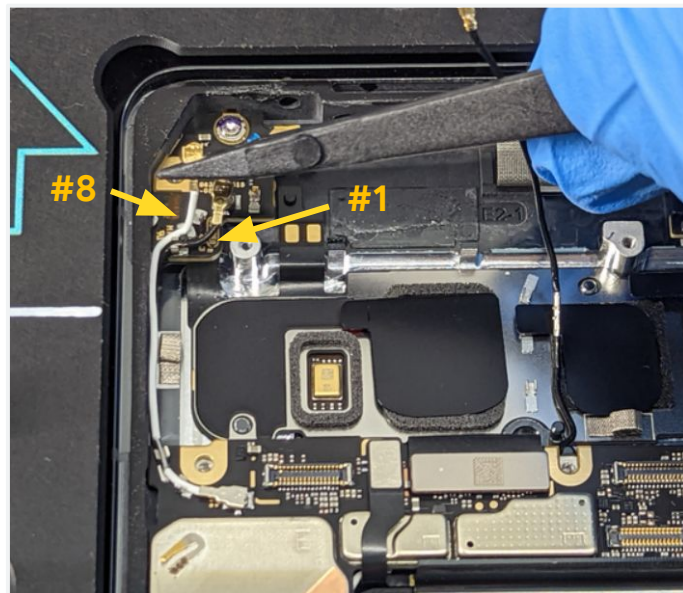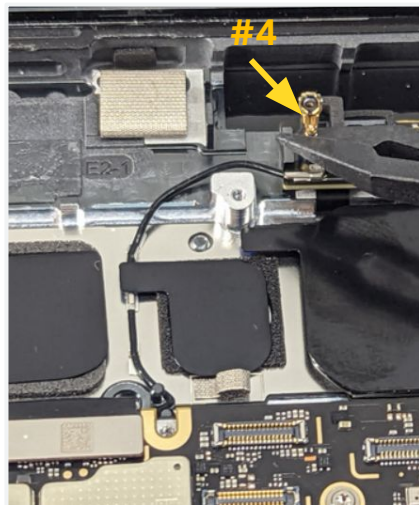
- Release the **3 coaxial cable (#4 #1 #8)** from the tunnel of the Enclosure.

Remove the screw
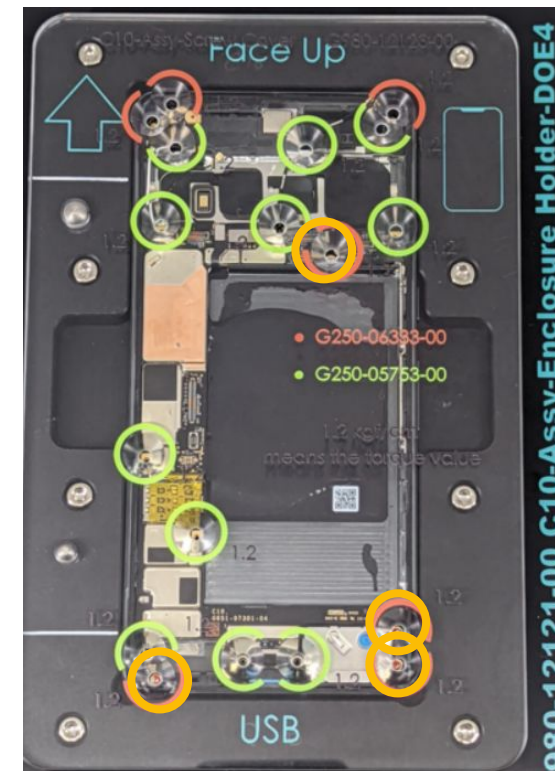
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

- Remove the **4 Logic board screws** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**.

Part: G250-06333-00 (Screw)
Do not reuse the part

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket

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Disconnect logic board

UWB

FLAM

Remove logic board

Face up

Face Up

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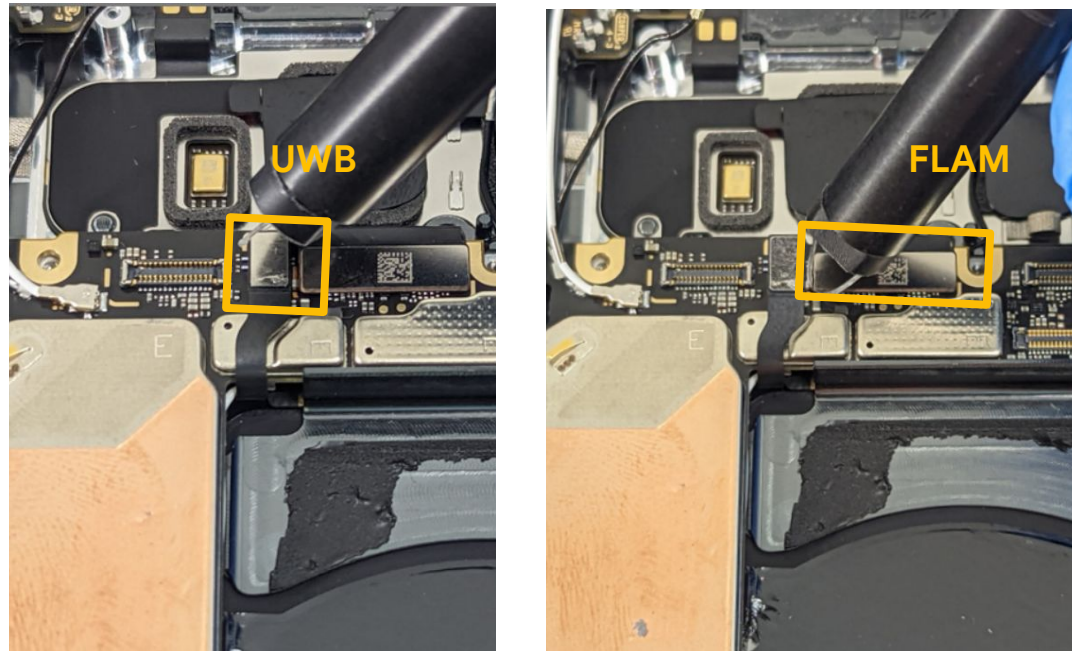
- Loosen and remove the **UWB and FLAM connector** as shown with a **Universal Fish line tool**.

Using the **Universal Fish line tool** avoids damage the components.
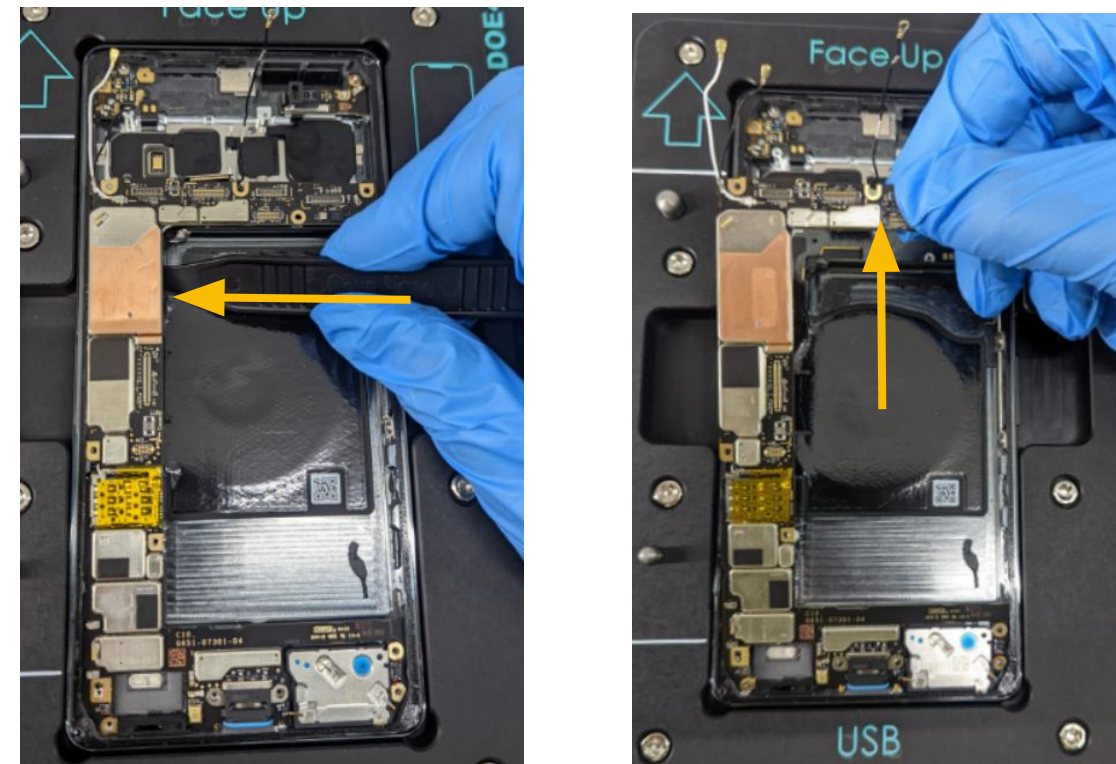
- Lift the **Logic board** from the <u>area shown by the arrow</u>.

Part: Multiple Part Numbers (Logic board)

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

Display Graphic sheet Mid-frame mmWave Rear camera Top Speaker Front Camera Battery **Logic board** Bottom Speaker Mic1 Bracket

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Protect the Mic1 hole
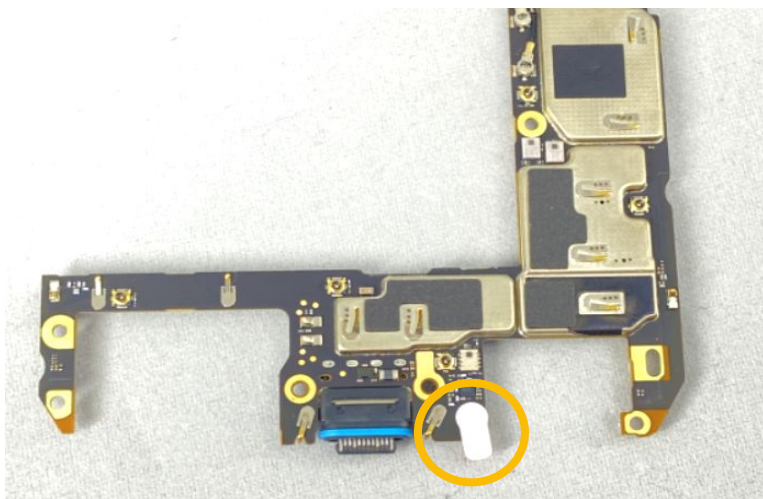
- Paste a protective film on the **Mic1** hole.

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

Disconnect the Cable
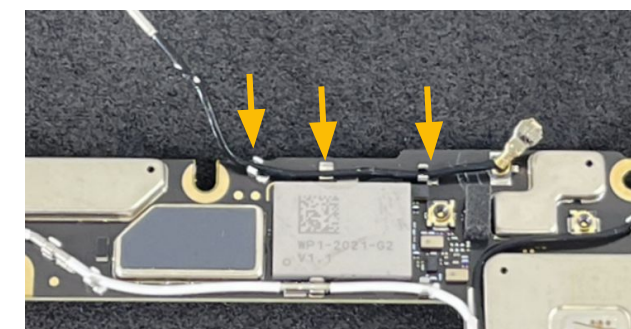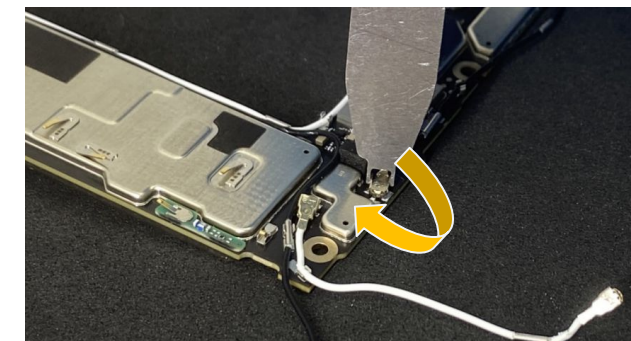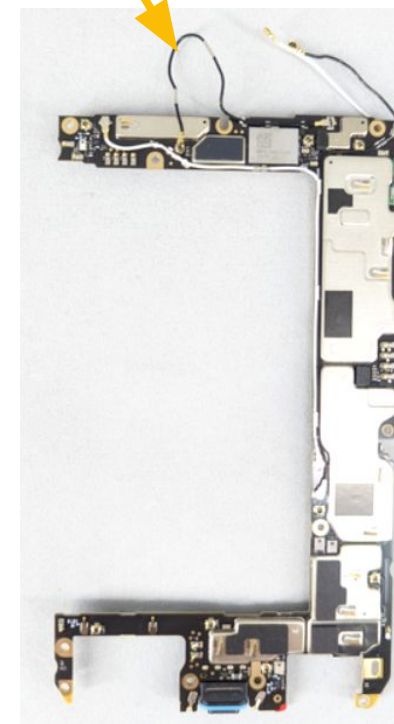
- **Coaxial cable #4** is shown by the arrow.
- Fasten the head and twist it to unbuckle the head of **coaxial cable #4** from the **Logic Board** with the Universal Coaxial Cable Tool.
- Release the **coaxial cable #4** from the tunnel of **Logic Board**.

Part: G821-00812-01 (Coaxial cable #4)

Do not reuse the part.
This head to unbuckle the head.
It is recommended to complete this step in EVA sponge.

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket

Disconnect the Cable

Disconnect the Cable
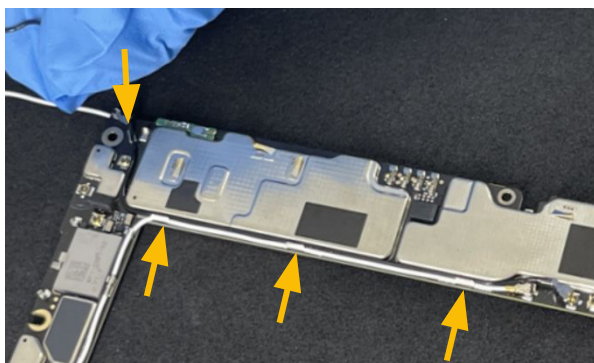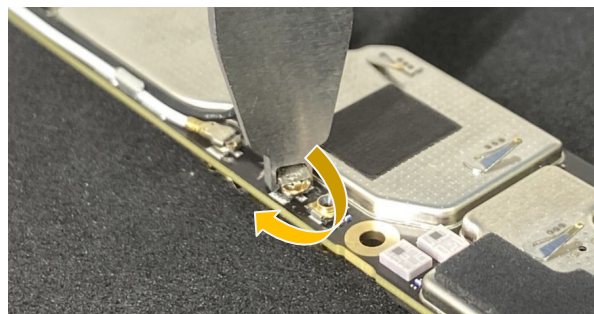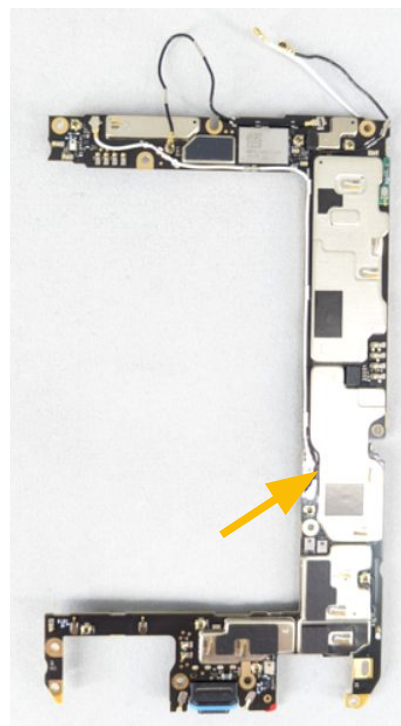
- **Coaxial cable #1(black one)** is <u>shown by the arrow</u>.
- Fasten the head and twist it to unbuckle the head of **coaxial cable #1** from the **Logic Board** with the Universal Coaxial Cable Tool.
- Release the **coaxial cable #1** from the tunnel of **Logic Board**.

Part: G821-00811-53 (Coaxial cable #1)
Do not reuse the part.
This head to unbuckle the head.
It is recommended to complete this step on an EVA sponge to avoid damage.
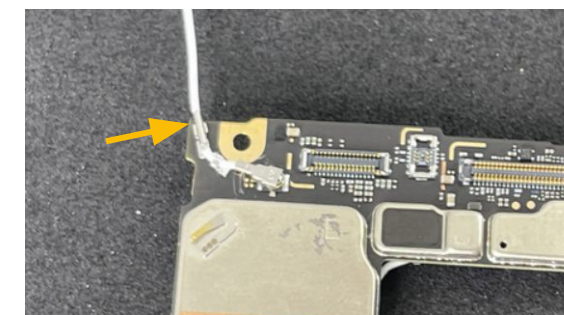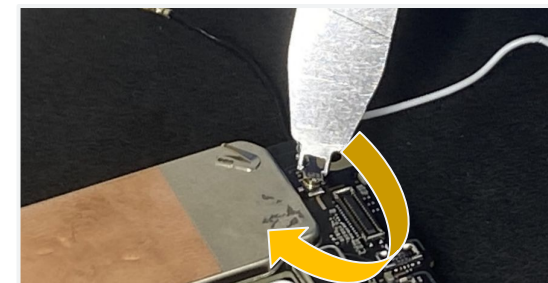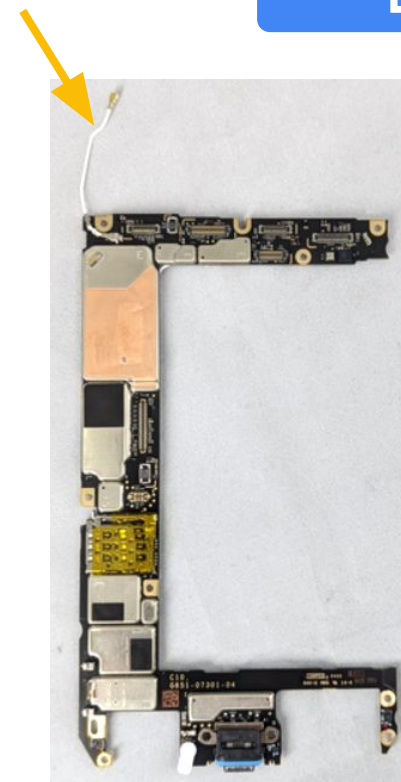
- **Coaxial cable #8(white one)** is <u>shown by the arrow</u>.
- Fasten the head and twist it to unbuckle the head of **coaxial cable #8** from the **Logic Board** with the Universal Coaxial Cable Tool.
- Release the **coaxial cable #8** from the tunnel of **Logic Board**.

Part: G821-00814-50 (Coaxial cable #8)
Do not reuse the part.
This head to unbuckle the head.
It is recommended to complete this step on an EVA sponge to avoid damage.

Display → Graphic sheet → Mid-frame → mmWave → Rear camera → Top Speaker → Front Camera → Battery → **Logic board** → Bottom Speaker → Mic1 Bracket

Assembly instructions

Logic board

Logic board

Generic Rule to check

NG   OK

bird view

NG   OK

bird view

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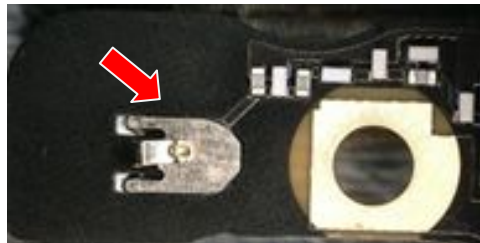
side view
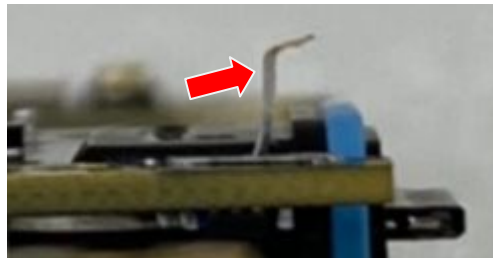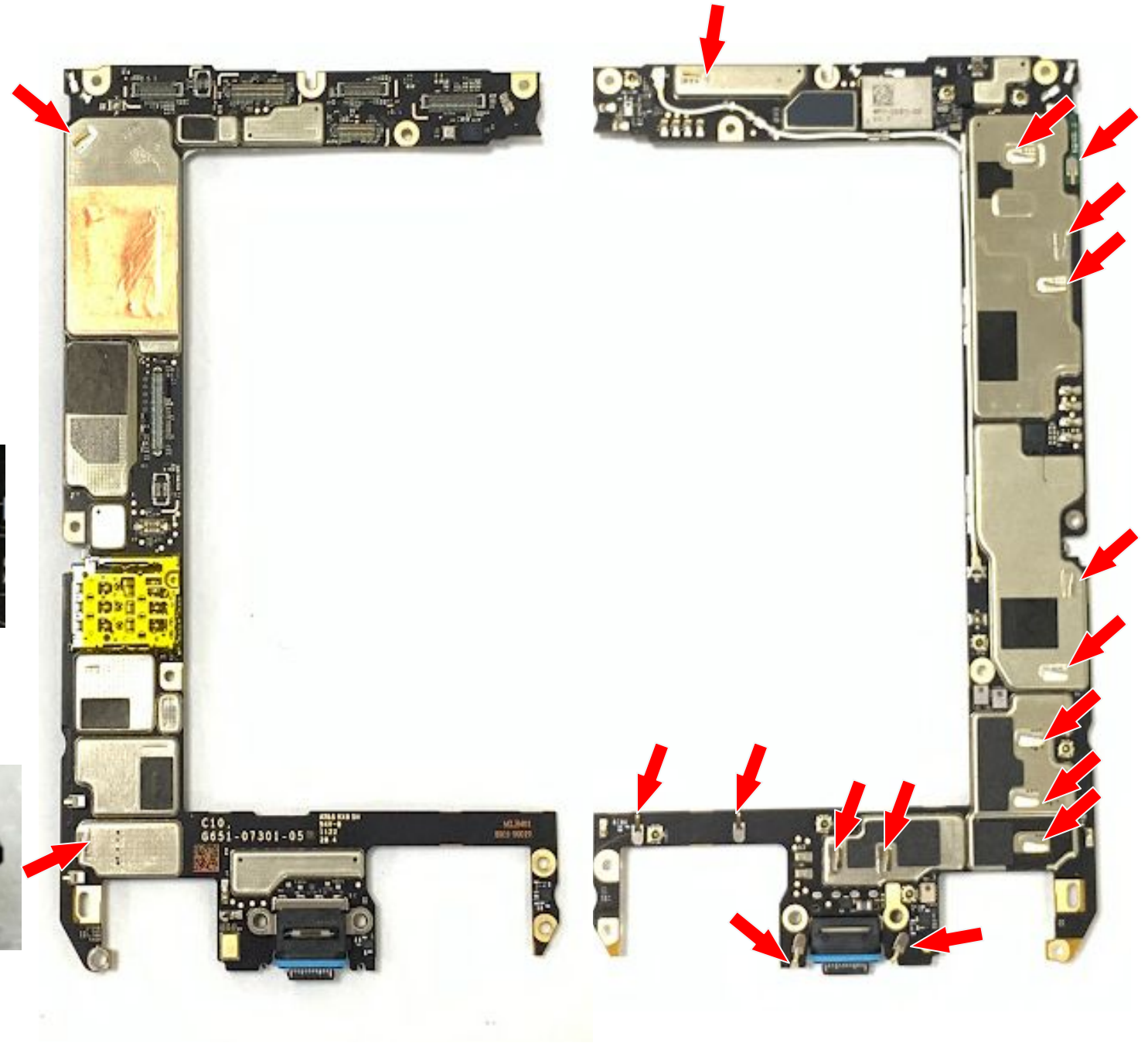
⚠️ Before assembly the MLB, check each spring deformed or not. And pay **EXTRA ATTENTION** to the springs areas during assembly to avoid damaging them.

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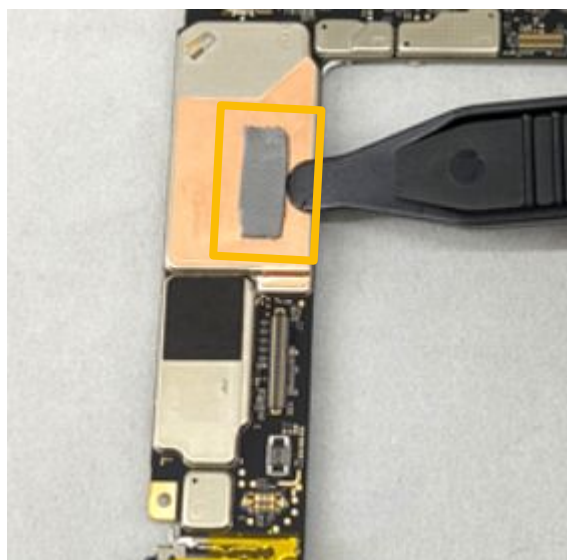
- Clean any thermal pad residual from the **Logic board** with an **Universal Disassembly ESD stick**.
- If there is any residue remaining, use a dust free cloth with **IPA** to gently clean the surface.

Part: **Multiple Part Numbers** (Logic board)

Buckle the Cable
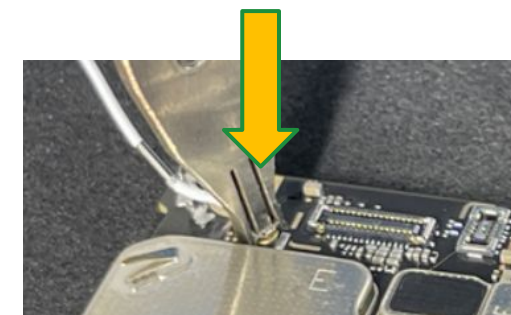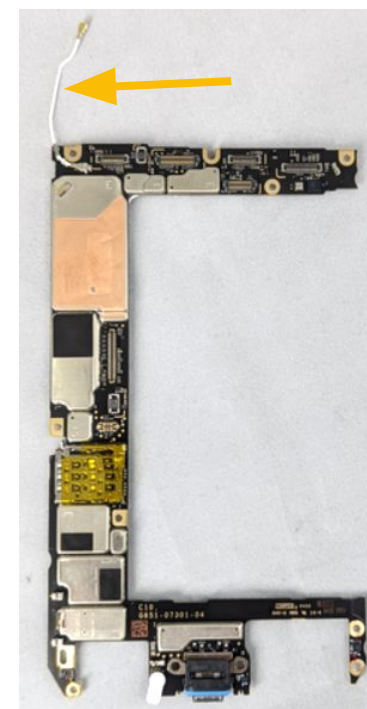
- Ready to buckle the **Coaxial cable #8** is shown by the arrow.
- Fasten it into the buckle the head of **Coaxial cable #8** to **Logic Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #8** to the tunnel of **Logic Board**.

Part: G821-00814-50 (Coaxial cable #8)

Do not reuse the part.
This head to unbuckle the head.
It is recommended to complete this step on an EVA sponge to avoid damage.

Caution!
Review all safety precautions before beginning work.

Buckle the Cable
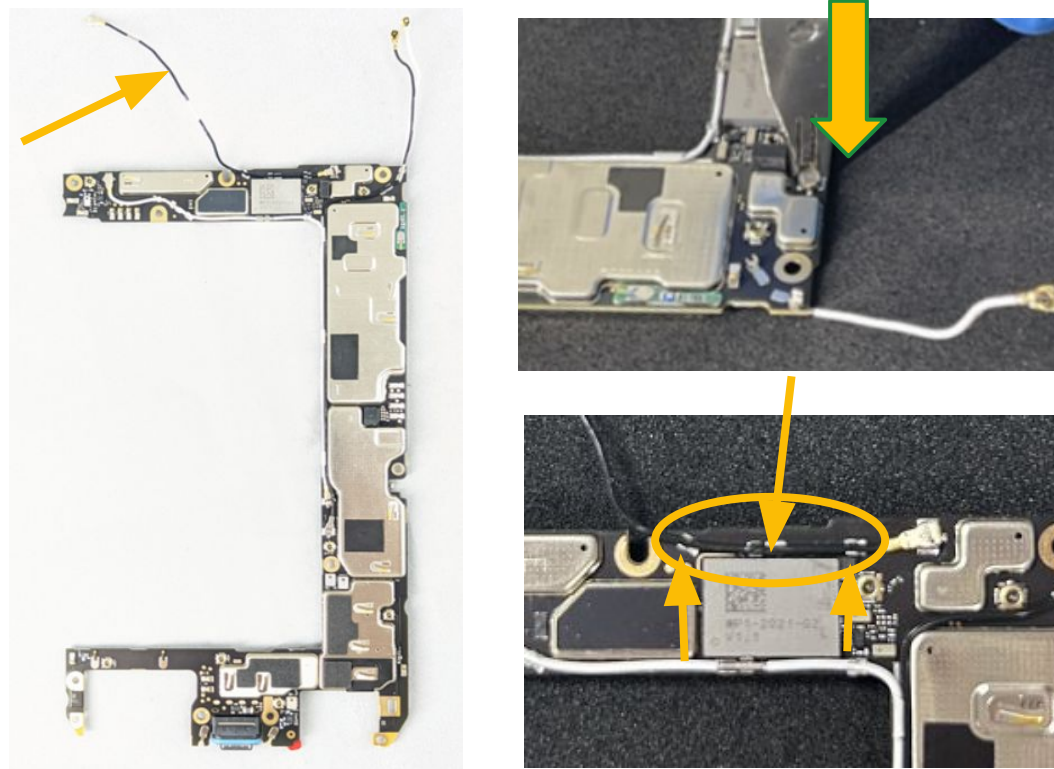
Buckle the Cable

- Ready to buckle the **Coaxial cable #4** is shown by the arrow.
- Fasten it into the buckle the head of **Coaxial cable #4** to **Logic Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #4** to the tunnel of **Logic Board**.

Part: G821-00812-01 (Coaxial cable #4)

This head to buckle the head. This step recommended to be done on an EVA sponge.
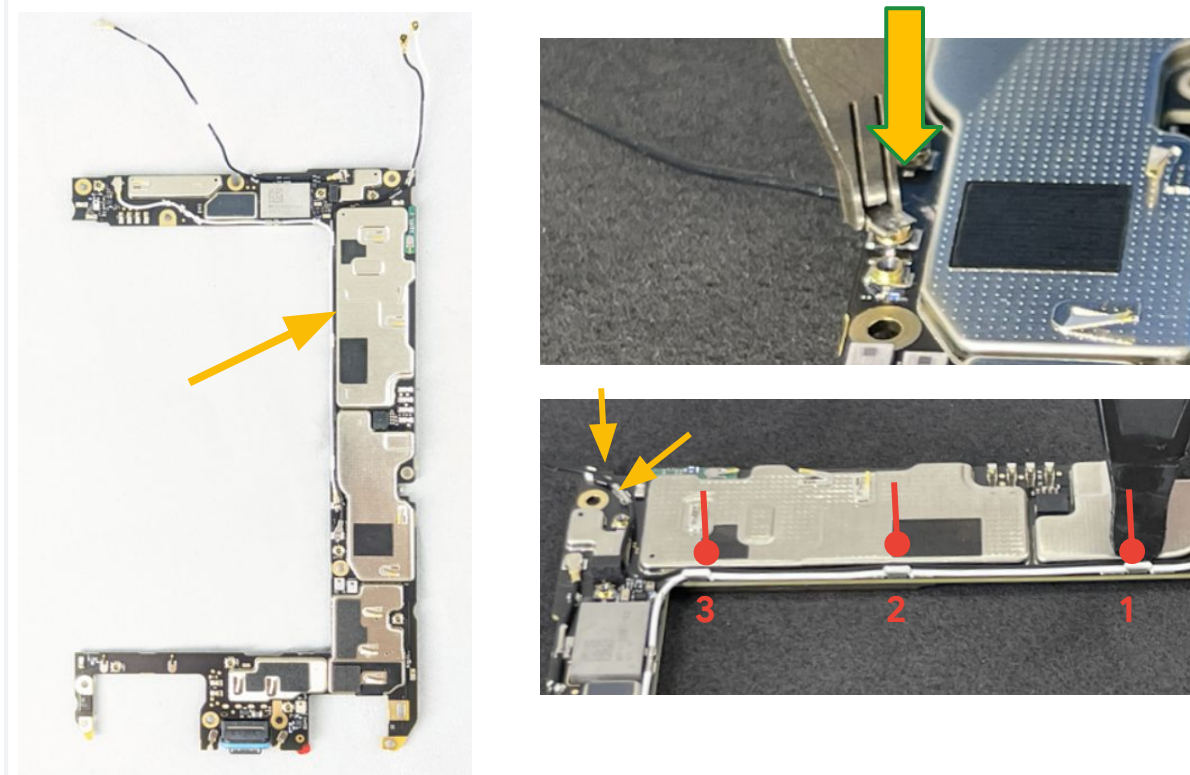
- Ready to buckle the **Coaxial cable #1** is shown by the arrow.
- Fasten it into the buckle the head of **Coaxial cable #1** to **Logic Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #1** to the tunnel of **Logic Board**.
- Press the 3 location as the Figure.

Part: G821-00811-53 (Coaxial cable #1)

This head to buckle the head. This step recommended to be done on an EVA sponge.

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → **Logic board** → Bottom Speaker → Mic1 Bracket

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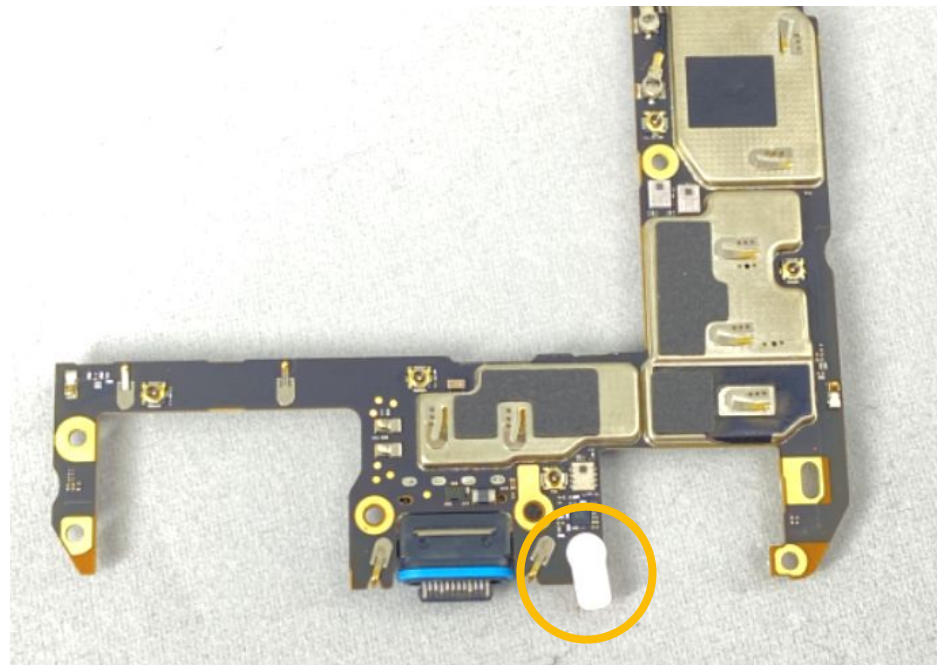
- Peel off the **Mic1** mylar from the **Logic board**.

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

Do not reuse the part

| Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket |

Lift the connectors

FLAM

UWB
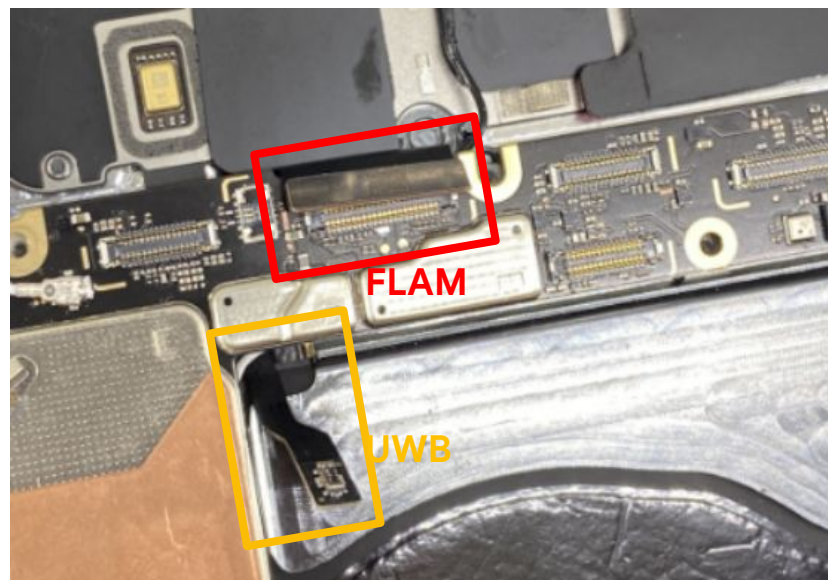
- Lift the **UWB and FLAM connector** in the **Enclosure** with an **Universal Disassembly ESD stick** to avoid trapping them under the **Logic board**.

Assemble Logic Board

Face Up   Face Up

Fig1   Fig2

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

Be careful to avoid damaging components on the **logic board**. Also avoid damaging the spring of the **Bottom Speaker**.

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | **Logic board** | Bottom Speaker | Mic1 Bracket

Logic board

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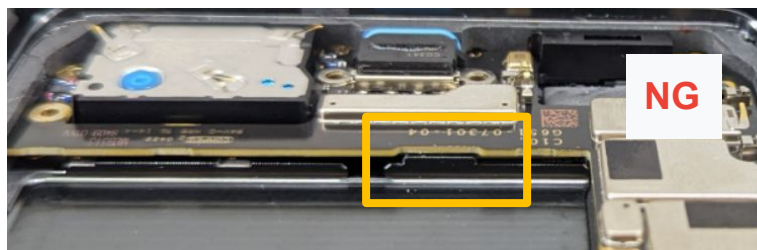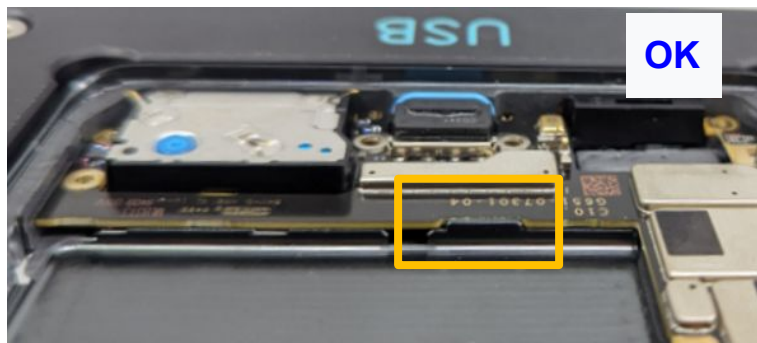
- Press down and push MLB under the wall.
- The **Logic board** should sit under the retaining wall, as shown above.

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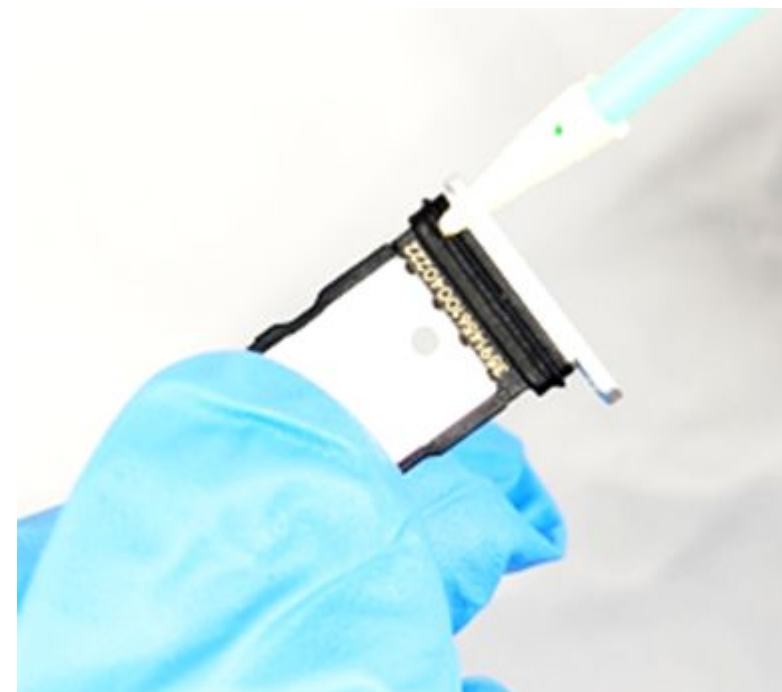
- Apply **Sankol lubricant CFD 409Z_V2** to the rubber of the **SIM tray** with a dust-free cotton swab.

Part: **Multiple Part Numbers** (SIM tray)

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Insert SIM tray

Hold SIM socket

Screw in logic board

Face Up

G250-06393-00
G250-05753-00

980-12121-00 C10-Assy-Enclosure Holder-DOE4

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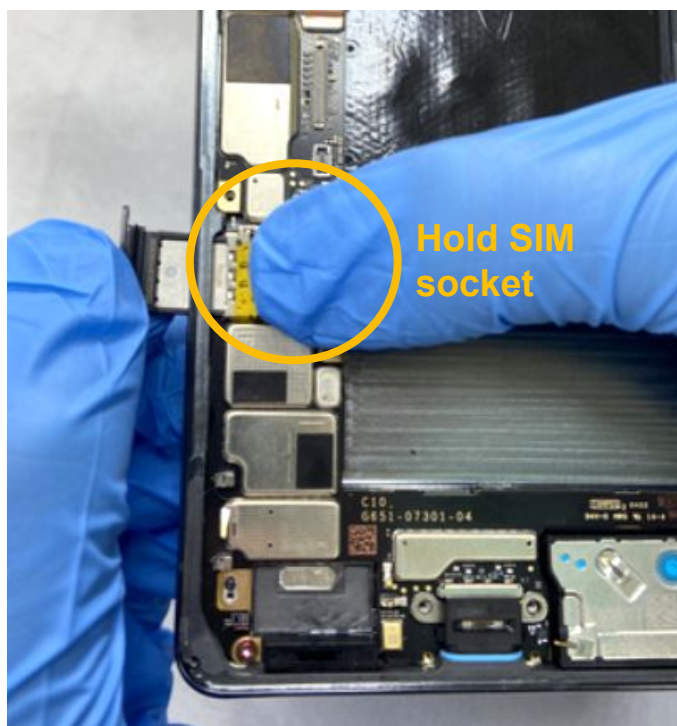
- Slightly hold the **Logic board** and insert the **SIM tray** with your right hand.

Part: **Multiple Part Numbers** (SIM tray)
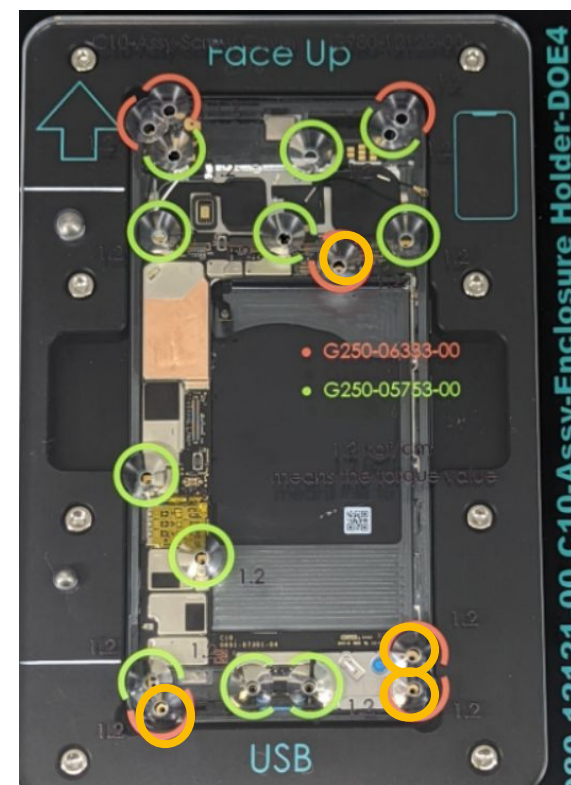
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

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

- Remove the **Pixel 7 Pro Screw Cover**.

Part: G250-06333-00 (Screw)

| Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket |

Cable Maps

ANT1 Board

Coaxial Cable#4

ANT4 Board

Coaxial Cable#1 (black one)

Coaxial Cable#8 (white one)

ANT4 coaxial cable into the clip

ANT4 coaxial cable bypass alignment post
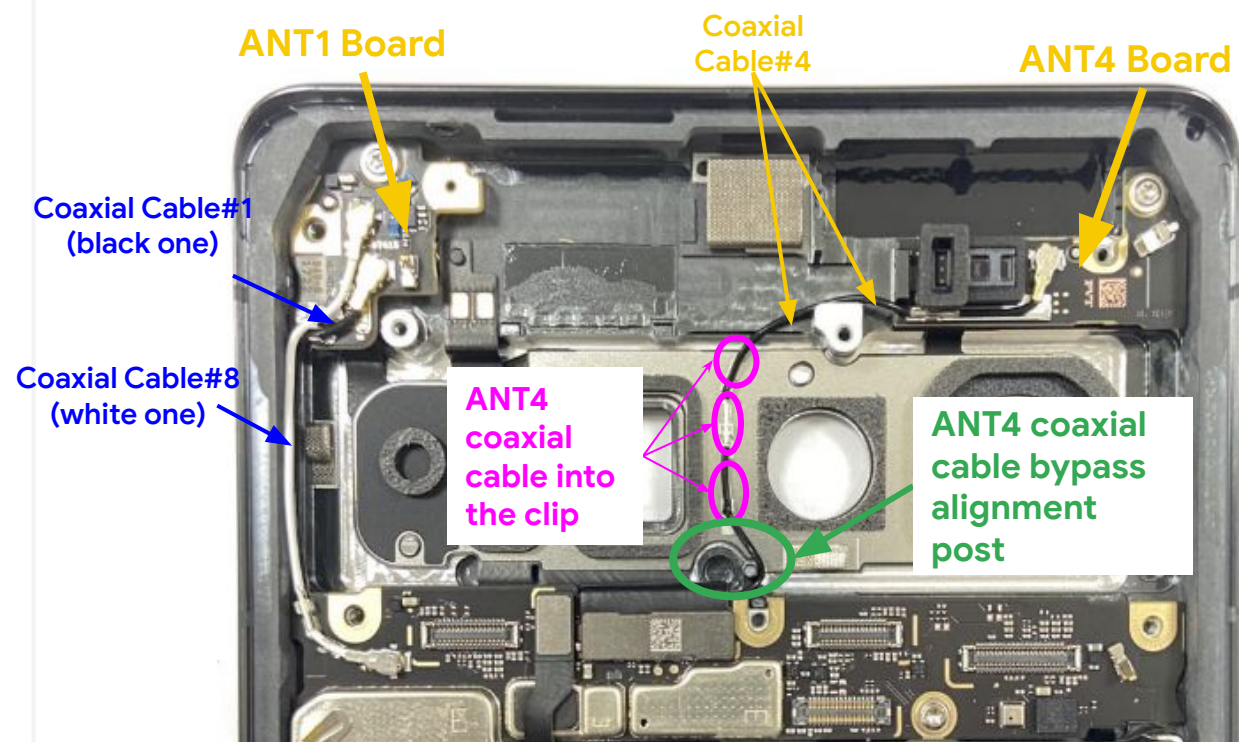
- There are **three coaxial cables** routing in **Logic Board**. Ready to assemble them to the **ANT1 & ANT4 Board.**

Buckle the Cable
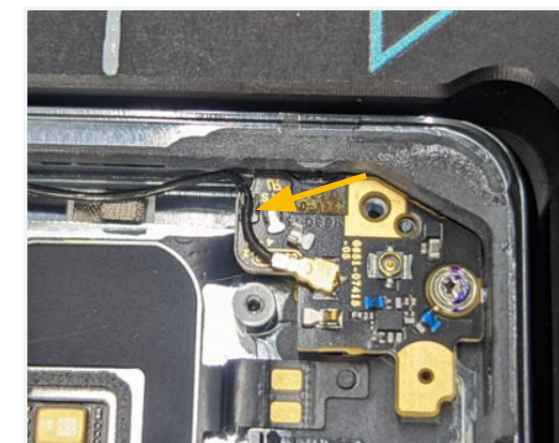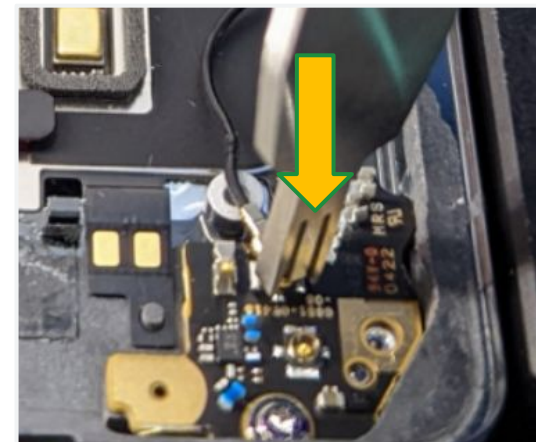
- Fasten it into the buckle the head of **Coaxial cable #1** to **ANT1 Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #1** to the tunnel of **ANT1 Board**.

Part: G821-00811-53 (Coaxial cable #1)

This head to buckle the head.

Connect the Cable

- Fasten it into the buckle the head of **Coaxial cable #8** to **ANT1 Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #8** to the tunnel of **ANT1 Board**.
- Make sure the **Coaxial cable #8** go straight like the red arrow in the picture.

Part: G821-00814-50 (Coaxial cable #8)

This head to buckle the head.

Buckle the Cable
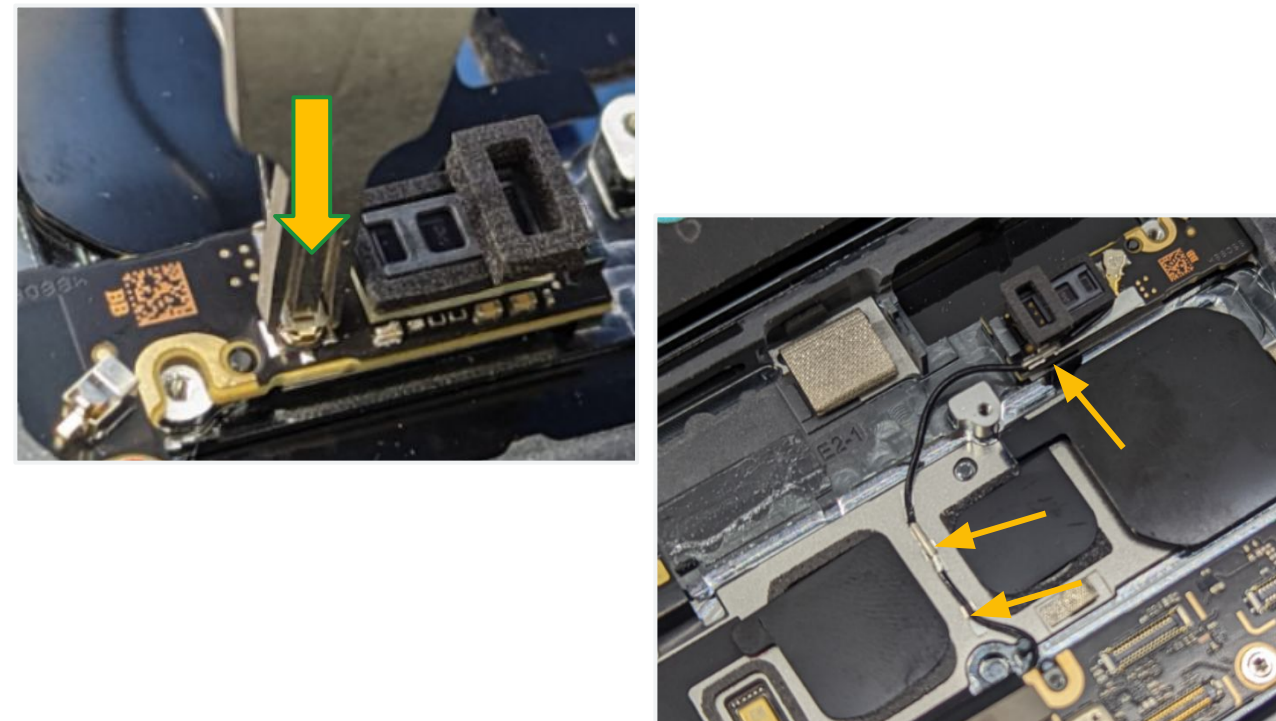
- Fasten it into the buckle the head of **Coaxial cable #4** to **ANT4 Board** with the **Universal Coaxial Cable Tool**.
- Assemble **Coaxial cable #4** to the tunnel of **ANT4 Board**.

Part: G821-00812-01 (Coaxial cable #4)

This head to buckle the head.

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → **Logic board** → Bottom Speaker → Mic1 Bracket

Attach connectors

UWB
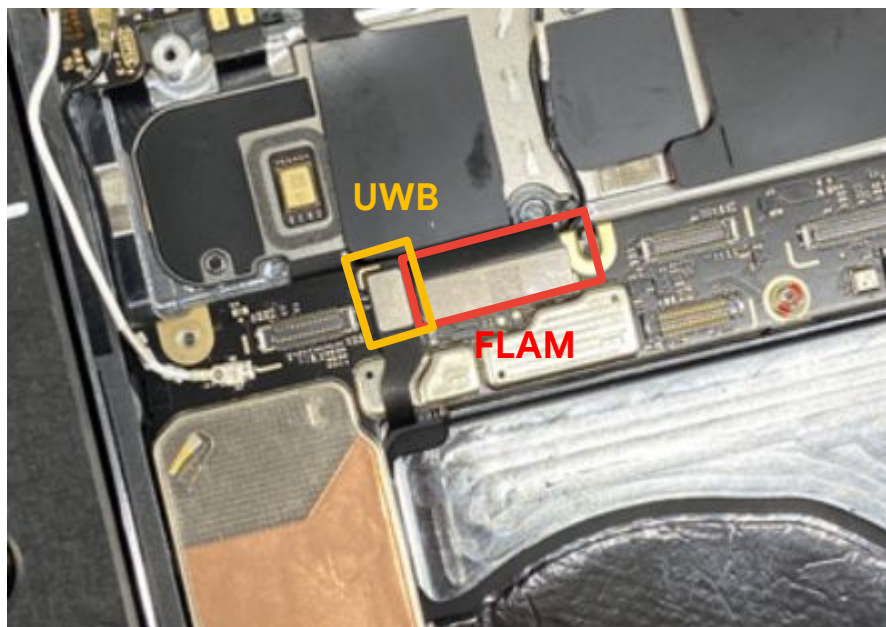
FLAM

- Attach the **UWB and FLAM connector** from the **Enclosure** to the **Logic board**.

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

Attach ANT7
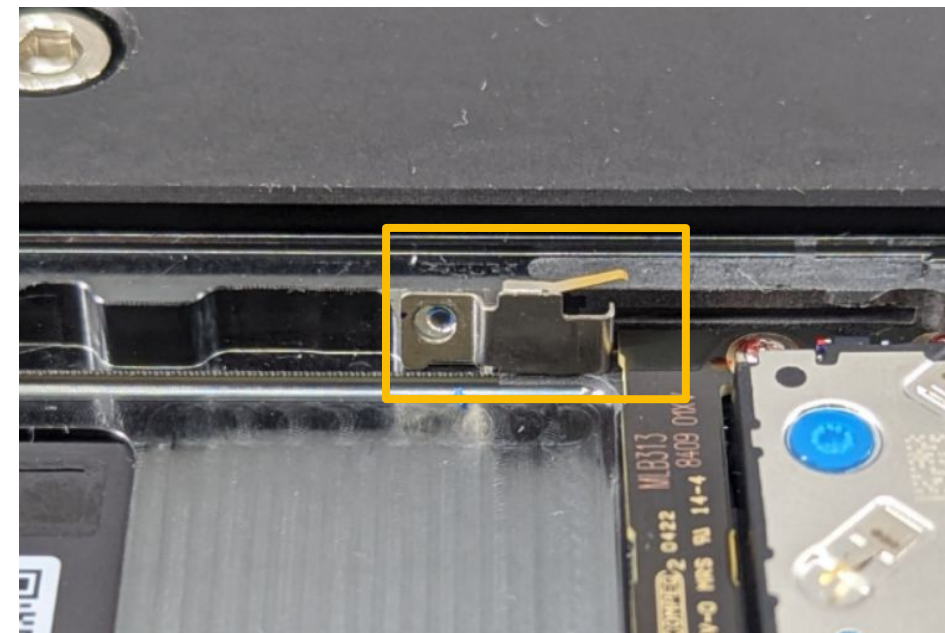
- Attach the **ANT7 Grounding** to the Enclosure.

Part: G853-01233-02 (ANT7 Grounding)

| Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket |
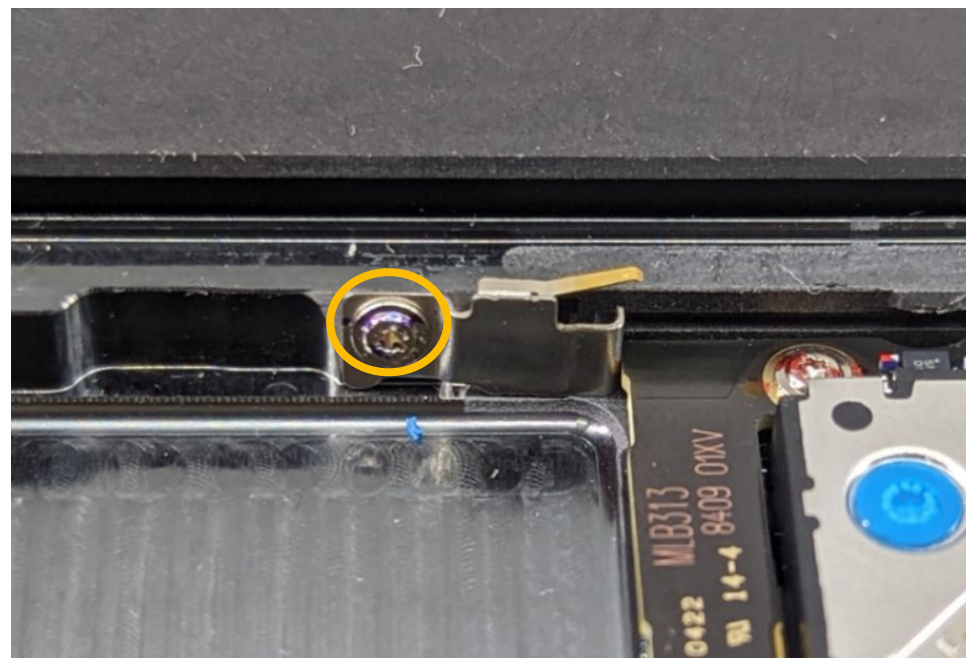
- Tighten **the screw** with a **Torx Plus (3IP) screwdriver**, as shown.

  Torque force : 1.2 ± 0.03kgf-cm

  Part: G250-06333-00 (Screw)

Display   Graphic sheet   Mid-frame   mmWave   Rear Camera   Top Speaker   Front Camera   Battery   **Logic board**   Bottom Speaker   Mic1 Bracket

Coaxial Cable check

Logic board

ANT8 coaxial cable into the clip

ANT8 coaxial cable end

ANT1 coaxial cable into the clip

ANT1 coaxial cable end

Flatten the coaxial line

ANT8 coaxial cable start

NG · OK · NG · OK

coaxial cable broken

NG · OK · Floating buckle NG · OK

NG · coaxial cable broken · Fall off NG
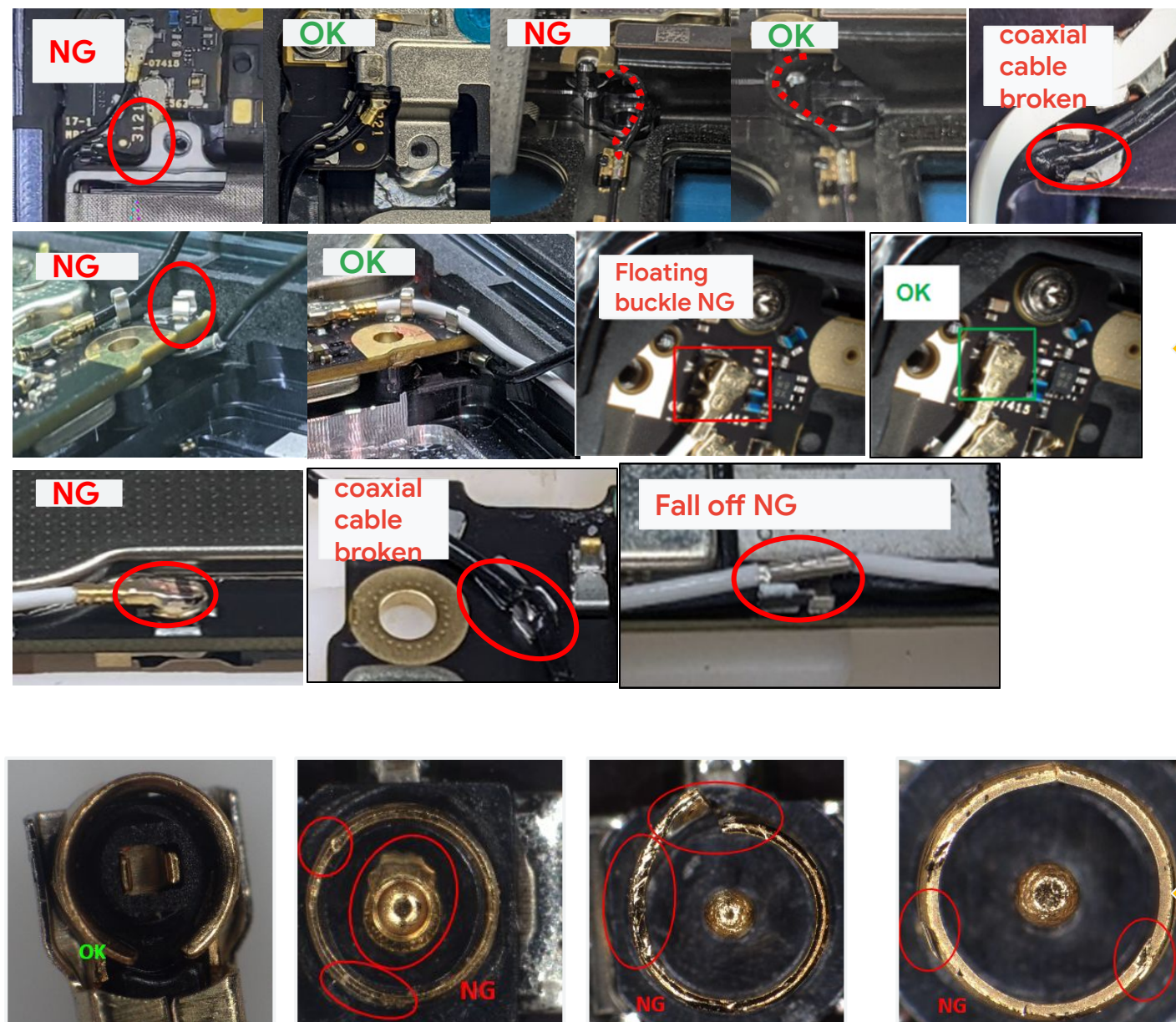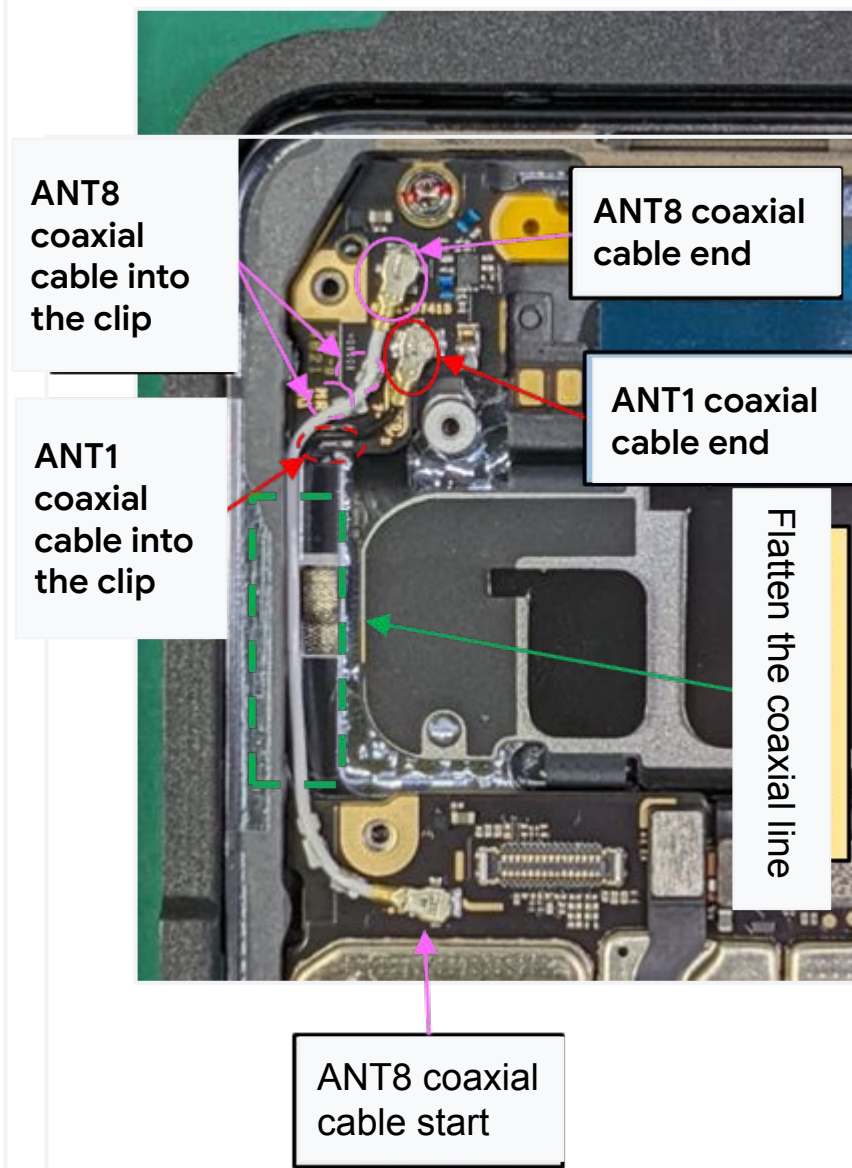
Cable Cosmetics Check

Cable Head Check

OK · NG · NG · NG

⚠️ Check each coaxial cable. Here are some examples for the references.

Note

Exceptional cases for coaxial cable reuse while only changing either Ant1 board or Ant4 board.
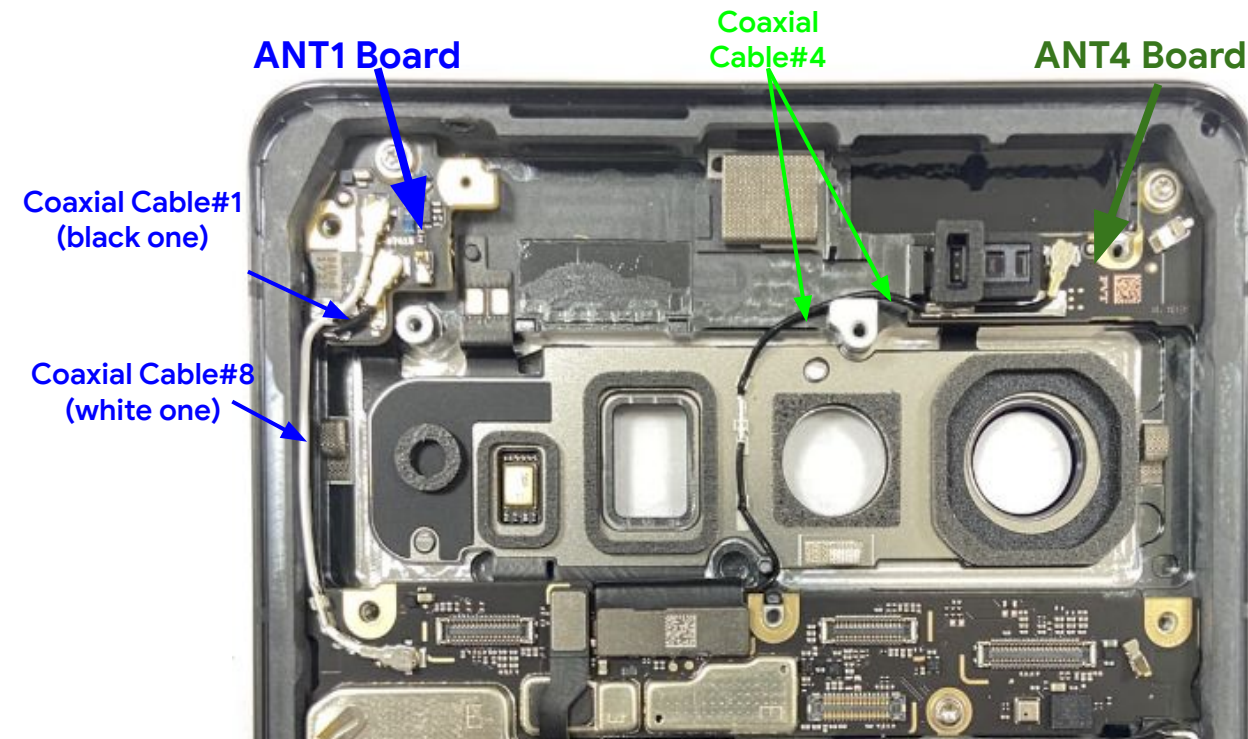
- If only changing either **Ant1 board** or **Ant4 board**, changing the coaxial cable is not needed.

- For example, changing **ANT1 board**, just unbuckle the head of **coaxial cable #1 and #8** from the **Ant1 board**. Reinstall the **ANT1 Board**. Then buckle the head of **coaxial cable #1 and #8** to the **Ant1 board**.

- For example, changing **ANT4 board**, just unbuckle the head of **coaxial cable #4** from the **Ant4 board**. Reinstall the **ANT4 Board**. Then buckle the head of **coaxial cable #4** to the **Ant4 board**.

⚠️ Once fastening it into the buckle the head of Coaxial cable to ANT4, visually check the head the coaxial cable. If the head is broken or damaged(link), it's necessary to change the new coaxial cable.

Disassembly instructions

Bottom speaker

Bottom speaker replacement

Prerequisites

Remove the following items first:

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

Tools

Pixel 7 Pro Enclosure Holder Universal Disassembly ESD stick

Parts

G863-00402-03 Bottom speaker

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

Remove Bottom speaker

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

Part: G863-00402-03 (Bottom speaker)

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | **Bottom Speaker** | Mic1 Bracket

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Assembly instructions

Bottom speaker

Attach bottom Speaker

- Assemble the **Bottom speaker** to slot into the **Enclosure**.

Part: G863-00402-03 (Bottom speaker)

Make sure the speaker goes under the enclosure rim.

Disassembly instructions

Mic1 Bracket

Mic 1 replacement

Prerequisites

Remove the following items first:

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

Tools

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

Parts

G730-06101-13

Mic1 bracket

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

Remove mic bracket

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

Part: G730-06101-13 (Mic1 bracket)

Do not reuse the part

Display   Graphic sheet   Mid-frame   mmWave   Rear camera   Top Speaker   Front Camera   Battery   Logic board   Bottom Speaker   Mic1 Bracket

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Assembly instructions
Mic1 Bracket

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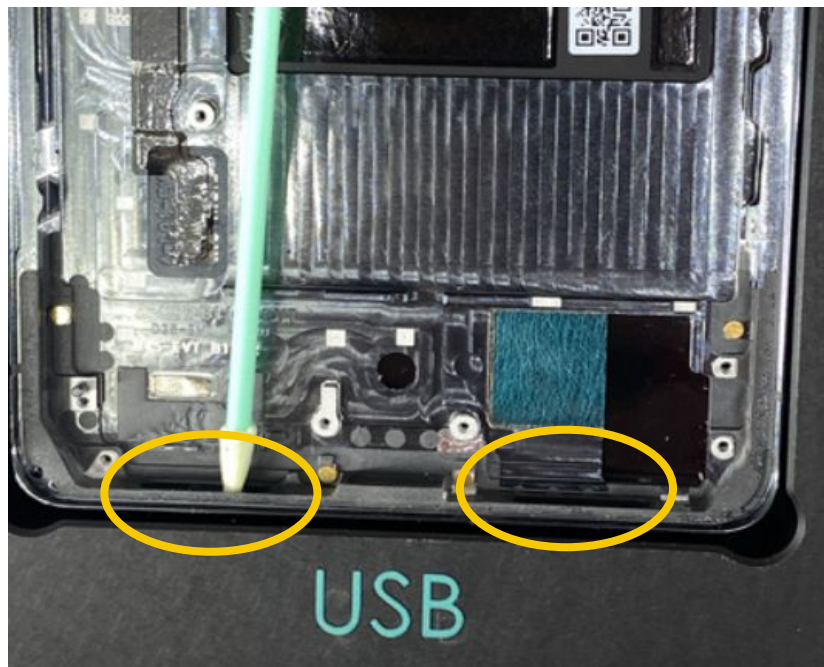
- Apply **Sankol lubricant CFD 409Z_V2** with a **dust-free cotton swab** around the mic grill and bot speaker.

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

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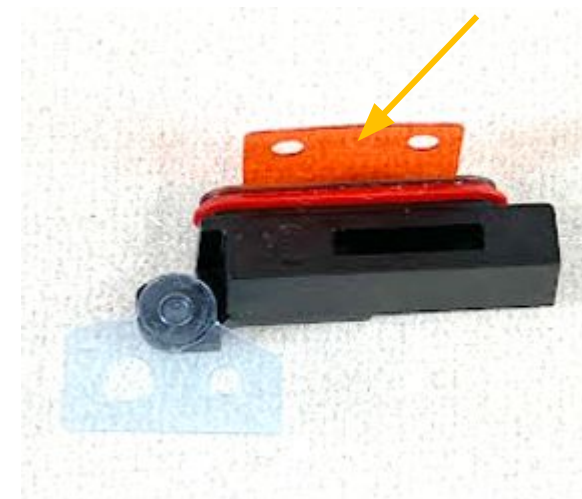
- Remove the **Mic1 bracket** pre-folded release films, in the direction shown.

Part: G730-06101-13 (Mic1 bracket)

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → **Mic1 Bracket**

Remove release liner

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

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

Insert new mic 1 bracket
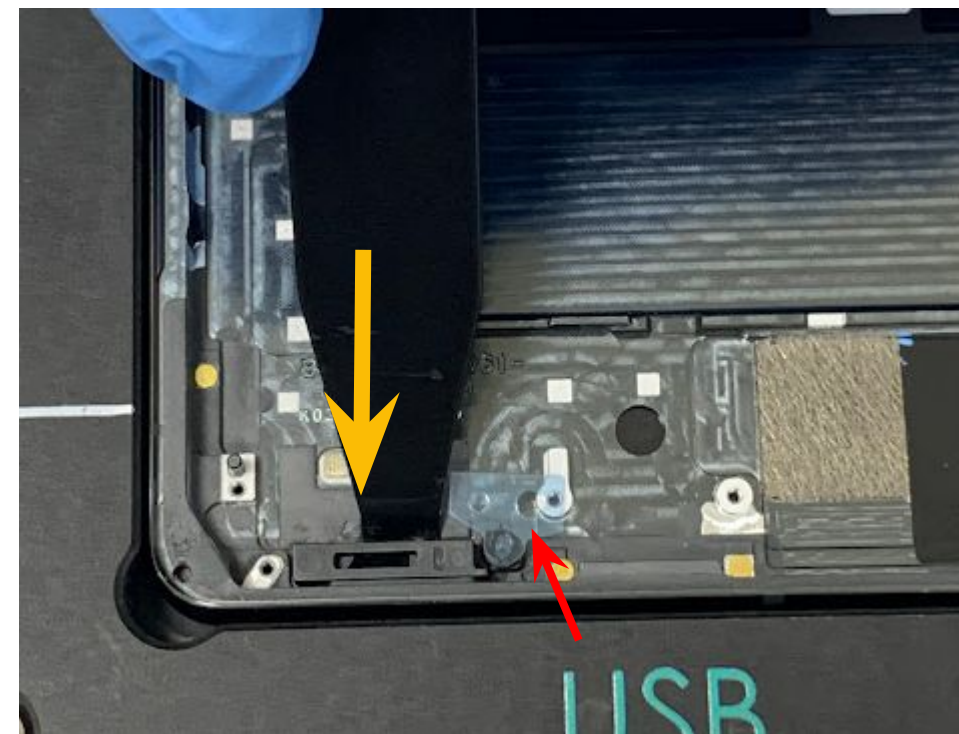
- Press for 3 seconds with an **Universal Disassembly ESD stick**.

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

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

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → **Mic1 Bracket**

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Disassembly instructions

Enclosure

Enclosure replacement

Prerequisites

Remove the following items first:

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

Tools

Pixel 7 Pro Enclosure Holder

Universal Fish line tool

Universal Disassembly ESD stick

Dust-free Cotton swabs

IPA and cloth

Deglue Machine

Pixel 7 Pro Cleaning Cover Enclosure

ESD tweezers

ESD Universal Disassembly ESD stick

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

Enclosure replacement- Cont.

Parts
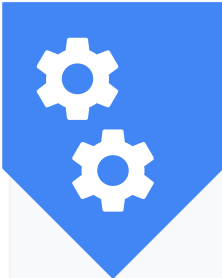
🔄 **Multiple Part Numbers**
Enclosure

G949-00303-01

ANT4

G250-06333-00

Screw * 4

G806-06257-03

P-sensor grommet
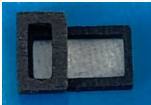
G949-00347-00

ANT1 Board

G806-06332-01

ANT1 Adhesive

G806-06364-01

Kapton

G949-00361-00

Sidekey

Multiple Part Numbers
Volume button

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

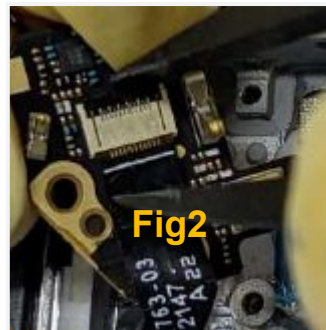## Remove the screw (ANT4)
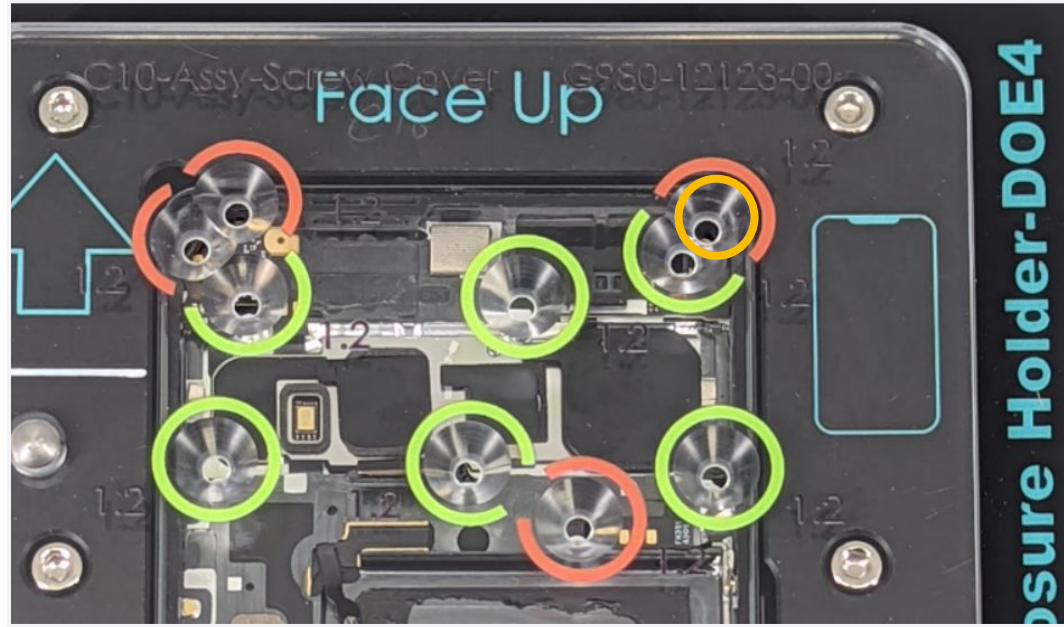
Remove the ANT4

- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

- Remove the **screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**.

Part: G250-06333-00 (Screw)
Do not reuse the part
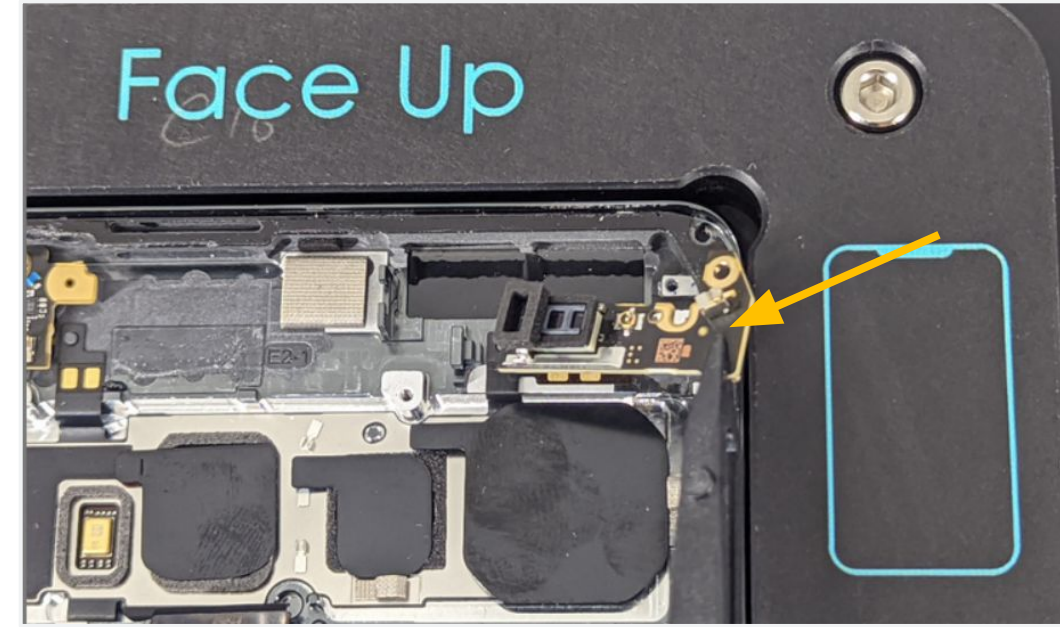
- Remove the **ANT4 Board** with a **ESD Tweezers**.

Part: G949-00303-01 (ANT4 Board)

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Remove the Psensor grommet
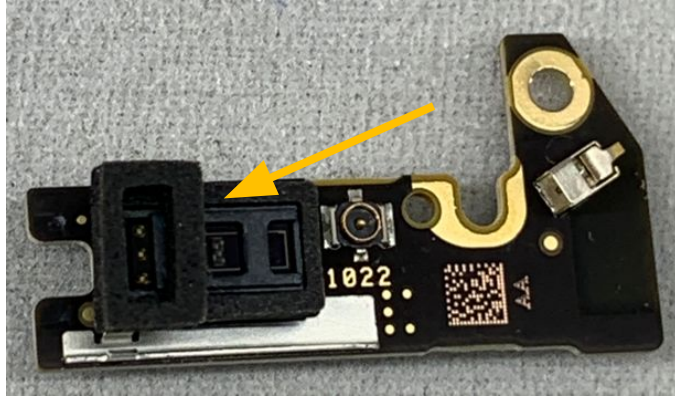
- Remove the **Psensor grommet** from **ANT4 board.**

Part: G806-06257-03 (Psensor grommet)

Do not reuse the part.
Note that this step is only for changing the Psensor grommet if it's deformed.

Remove the screw (ANT1)
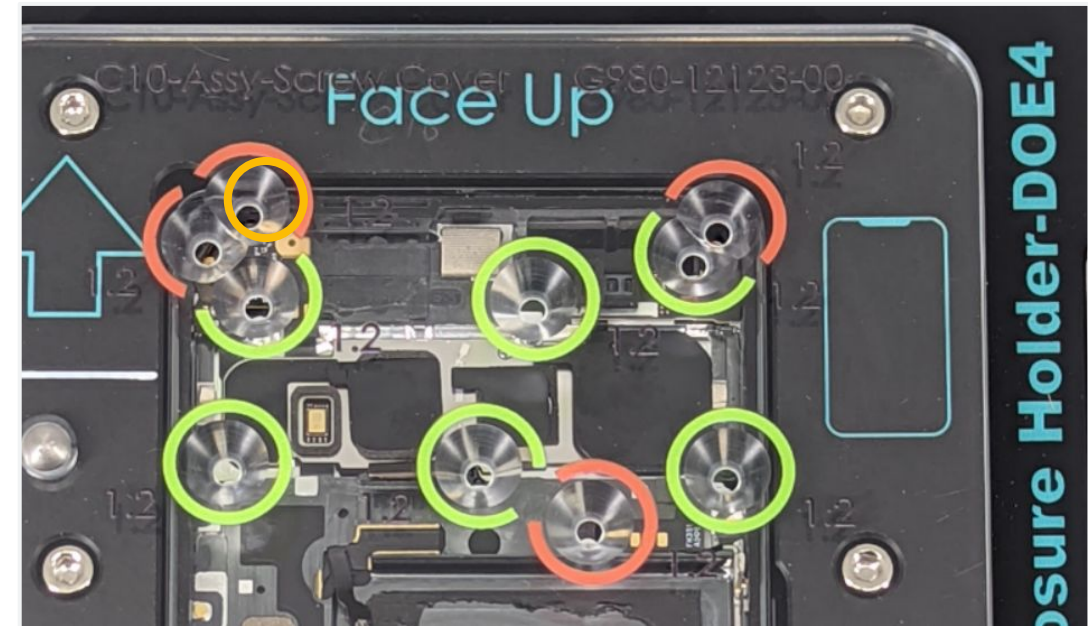
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**. Remove the **screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover**.

Part: G250-06333-00 (Screw)

Do not reuse the part
Note that the Enclosure has the ANT1 board, this and next two steps is only for changing the ANT1 board if it's damaged.

Display   Graphic sheet   Mid-frame   mmWave   Rear camera   Top Speaker   Front Camera   Battery   Logic board   Bottom Speaker   Mic1 Bracket

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Remove the ANT1

Fig1

Fig2   Fig3

- Turn over the **ANT1 board,** and use **ESD Tweezers** to tear off the kapton from the position shown in **Fig1.**

- Use the **ESD Tweezers to** open the piano buckle (the black button is shown in **Fig2**), lift it up gently and forcefully, **Fig3**, and pay attention to check that the piano buckle does not fall off.

Part: G949-00347-00 (ANT1 Board) , G806-06364-01 (kapton)

Remove the ANT1
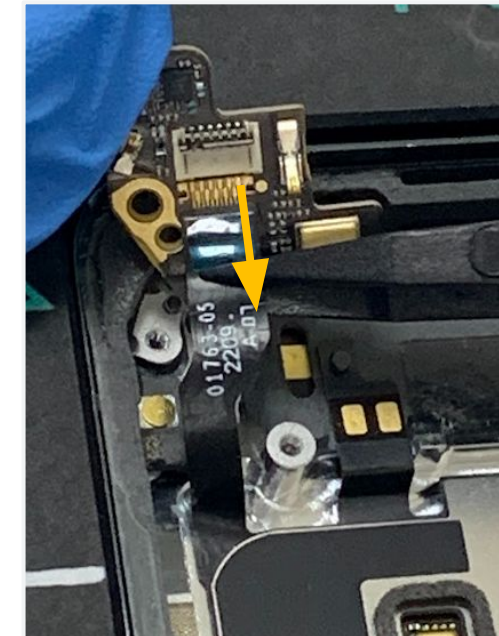
- Remove the **ANT1 Board** with a **ESD Tweezers.**

Part: G949-00347-00 (ANT1 Board)

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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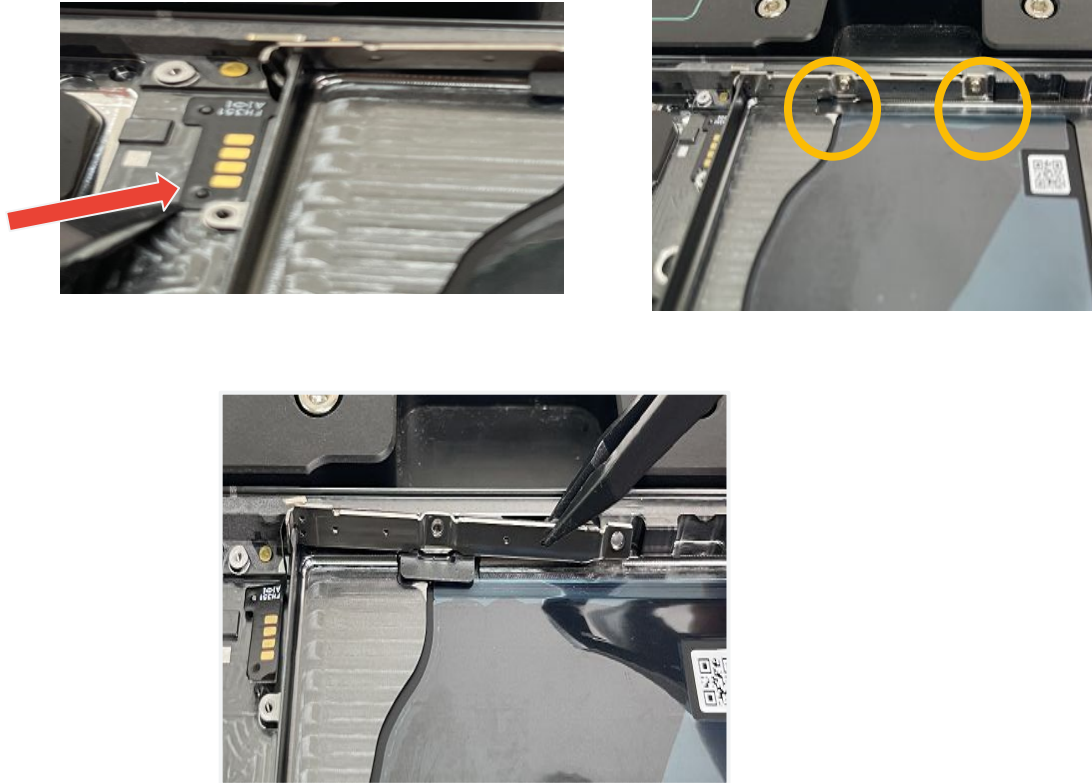
Remove Sidekey

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

Part: G949-00361-00 (Sidekey)
    G250-06333-00 (screw)

This step applies only when there is Sidekey damage.

Remove Sidekey adhesive

Before cleaning

After cleaning

- The **Sidekey adhesive** remains on the **Enclosure** and needs to be removed.
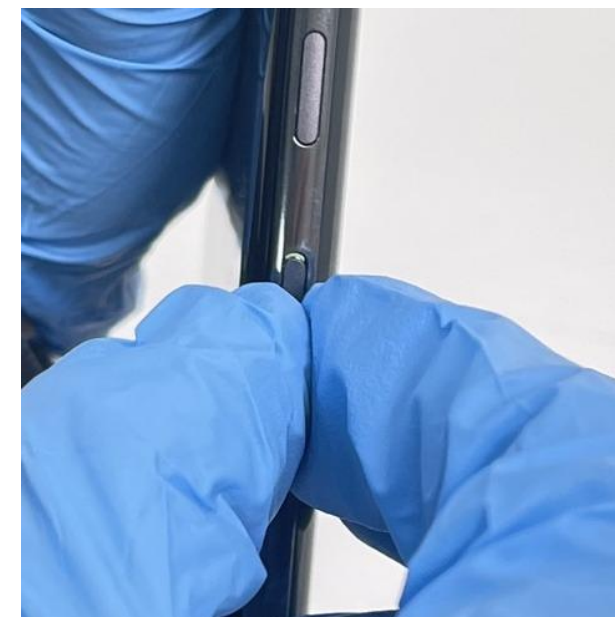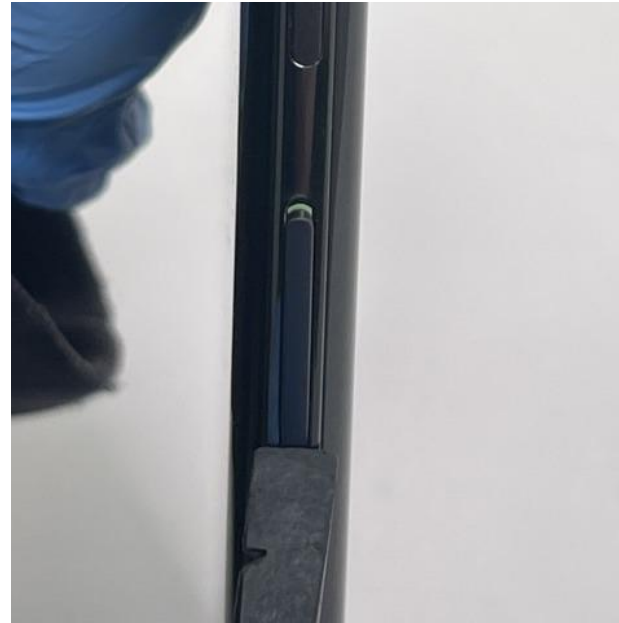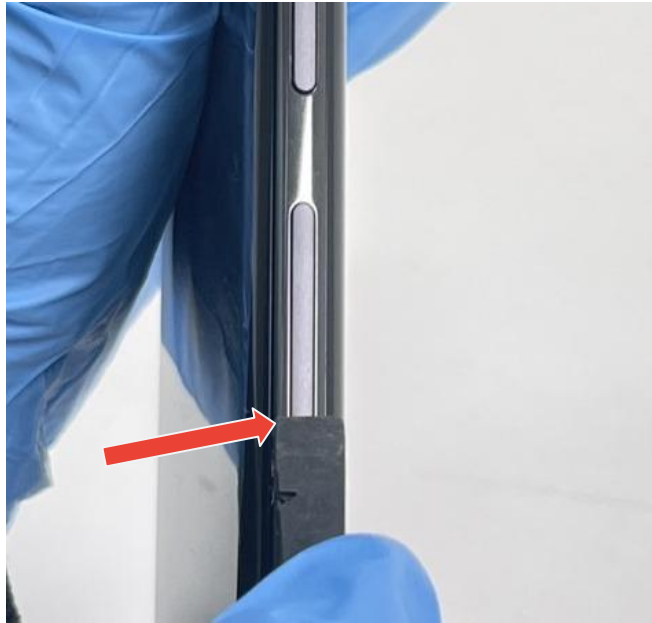
Display   Graphic sheet   Mid-frame   mmWave   Rear camera   Top Speaker   Front Camera   Battery   Logic board   Bottom Speaker   Mic1 Bracket

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Remove Volume Button

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

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

This step applies only when is a Volume Button issue.

⚠️

Display | Graphic sheet | Mid-frame | mmWave | Rear camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Assembly instructions
Enclosure

Enclosure

Re-using the Enclosure with fixture

Solution-1
Cleaning Cover - Enclosure

Re-using the Enclosure

Solution-2
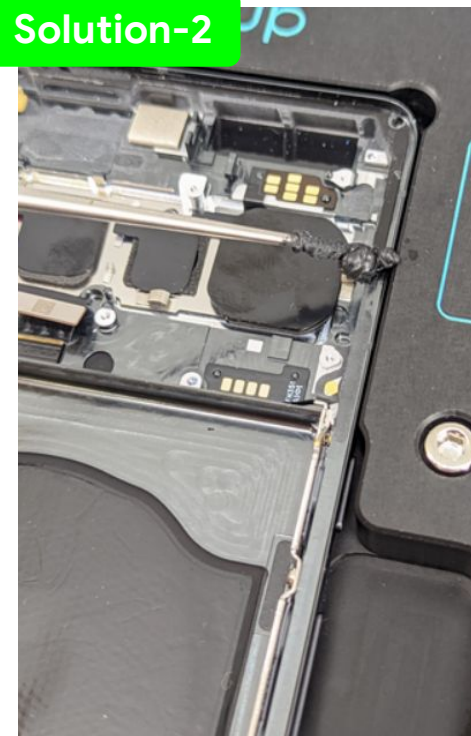
- Place the **Enclosure** in **Pixel 7 Pro Cleaning Cover Enclosure** to **Pixel 7 Pro Enclosure Holder.**
- Use an **Deglue Machine** to clean the residual glue out of the **Display**.
- If there is any residue remaining, use a dust free cloth with **IPA** to clean the surface.

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

The highlight is where the residual adhesive exists.

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

Caution!
Review all safety precautions before beginning work.

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Put Sidekey on the Enclosure

- Place the **Enclosure** to **Enclosure Holder**.
- Put **Sidekey** on the **Enclosure**. The button should be locked in place (like Figure red circle).
- **Part**: G949-00361-00 (Sidekey)

This step only applies when there is" Sidekey damage". ⚠️

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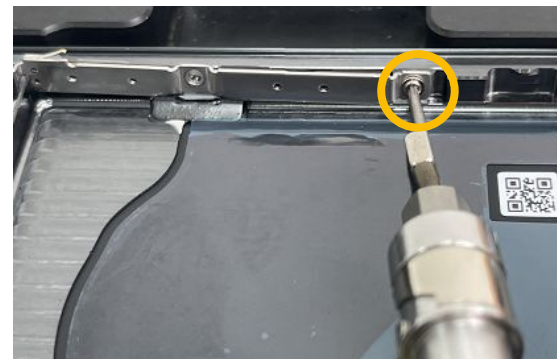
- Fasten the **two Sidekey screws** with a **Torx Plus 3IP screwdriver**.

Torque force : 1.2 ± 0.03kgf-cm

Part: G250-06333-00(screw)

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

Display   Graphic sheet   Mid-frame   mmWave   Rear Camera   Top Speaker   Front Camera   Battery   Logic board   Bottom Speaker   Mic1 Bracket

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Press the Sidekey

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

Align FPC

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

Display → Graphic sheet → Mid-frame → mmWave → Rear Camera → Top Speaker → Front Camera → Battery → Logic board → Bottom Speaker → Mic1 Bracket

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Clean battery area

- Clean any residue in the **Battery** area with an **Universal Disassembly ESD stick**.

- Apply **IPA** with a cloth afterward.

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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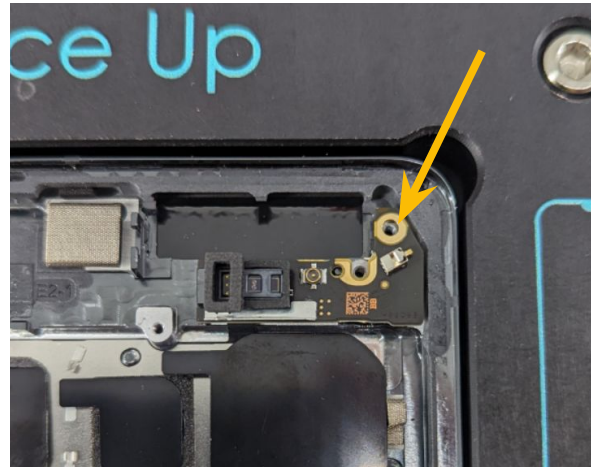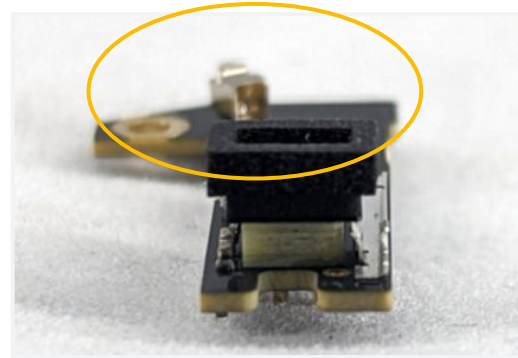
Assemble the ANT4

- Attach the **P-sensor grommet** to **ANT4 board.**
- Assemble the **ANT4 Board** slot on the **Enclosure**.

Part: G806-06257-03 (Psensor grommet), G949-00303-01 (ANT4 Board)

Make sure the ANT4 Board under the enclosure rim.

Check Psensor grommet

P-Sensor Deformation   Grommet Warped   Grommet Damaged
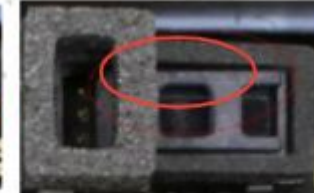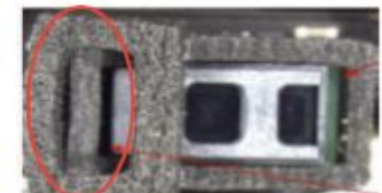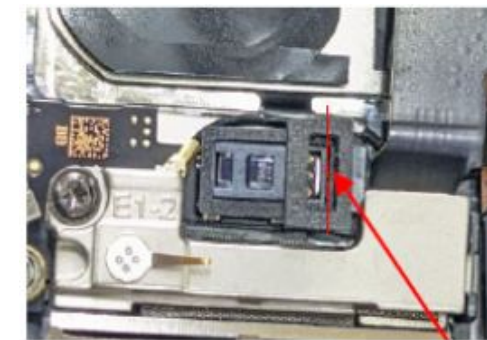
P-Sensor Foam Aligns P-Sensor Edges

- Check the Psensor grommet as the figure.

Part: G806-06257-03 (Psensor grommet)

Please skip this step, If not removing the P-sensor grommet from the ANT4 board,

Using a new groment(not to reuse old one) if replace new ANT4 board.

Screw in ANT4
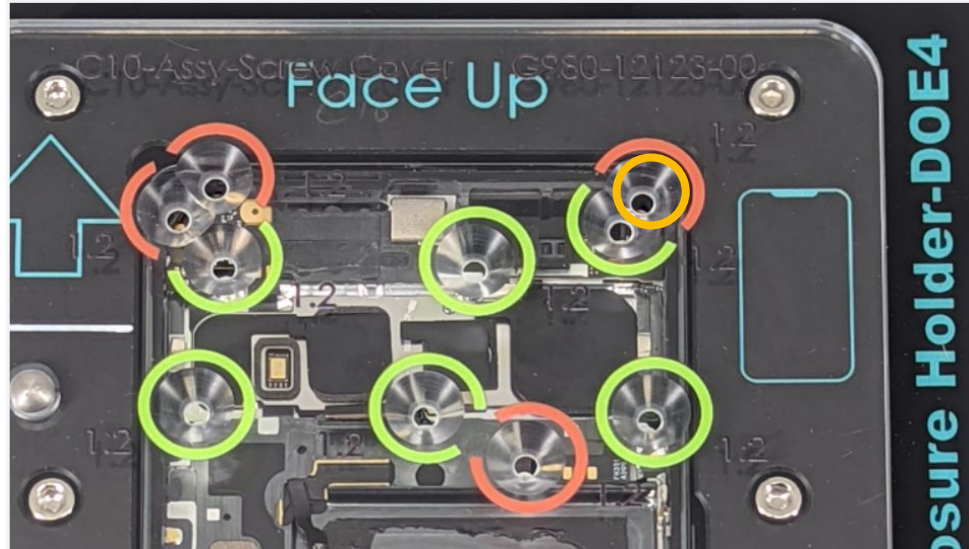
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**.

- Tighten the **ANT4 screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover.**

  Torque force : 1.2 ± 0.03kgf-cm

Part: G250-06333-00 (Screw)

Paste Ant1 Adhesive
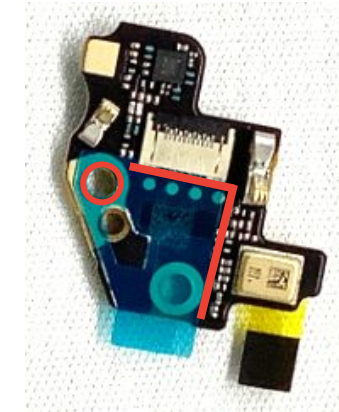
- Paste the **Ant1 Adhesive** according to the red alignment line , and column to **ANT1 board.**The release liner cannot be removed after sticking, as shown in Figure).

Part:G949-00347-00 (ANT1 Board), G806-06332-01 (ANT1 Adhesive)

Note that the Enclosure has the ANT1 board, this and next two steps is only for changing the ANT1 board if it's damaged.

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Assemble the ANT1

Fig1

Fig2

Fig3
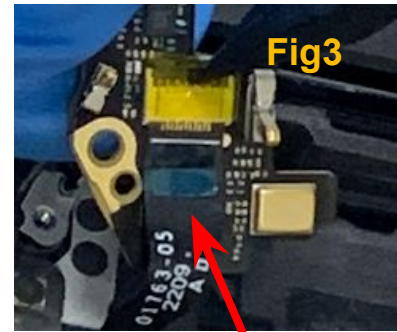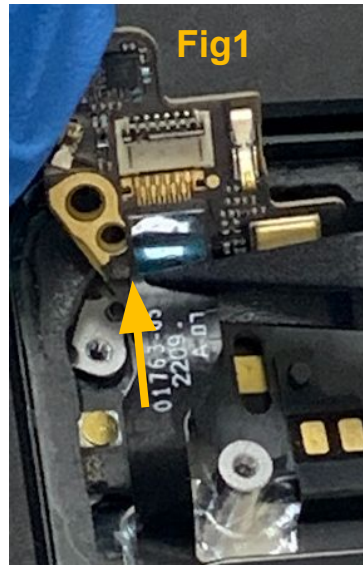
Note that pick up the ANT1 board slightly, do not press it on the middle frame to avoid collision.

Fig4

NG   OK
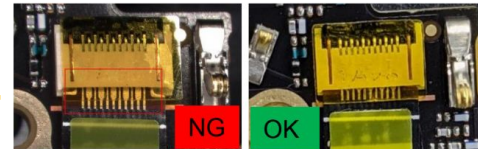
- Connect the **ANT1 Board** with a **ESD Tweezers**. **(Fig1).**
- Use the **ESD Tweezers** to close the piano buckle (the black button is shown, do it gently, **(Fig2)**
- Use **ESD Tweezers** to paste the **kapton** to the connector. **(Fig3),** refer to the **Fig4** for the flex location.

Part: G949-00347-00 (ANT1 Board) , G806-06364-01 (kapton)

Screw in ANT1

Press the ANT1 Board screw hole area with a ESD Tweezer

Face Up
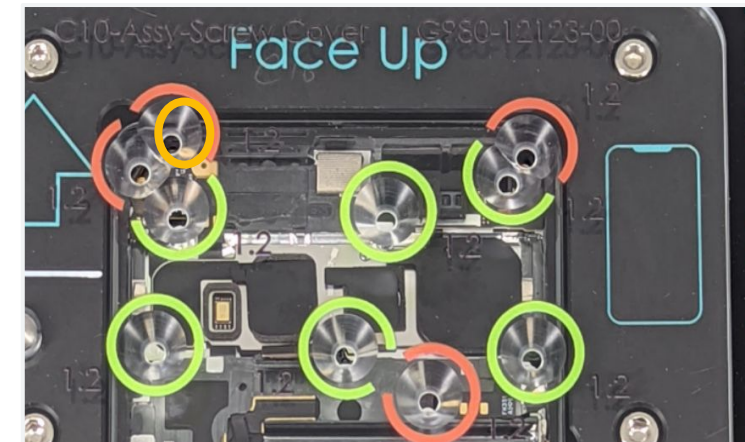
- Press the **ANT1 Board** screw hole area with a **ESD Tweezer** head to the **Enclosure**.
- Place the **Pixel 7 Pro Screw Cover** on the **Pixel 7 Pro Enclosure Holder**. Tighten the **ANT4 screw** with a **Torx Plus 3IP screwdriver**, then remove the **Pixel 7 Pro Screw Cover.** *Torque force : 1.2 ± 0.03kgf-cm*

Part: G250-06333-00 (Screw)

Make sure the ANT1 Board under the enclosure rim.

Display   Graphic sheet   Mid-frame   mmWave   Rear Camera   Top Speaker   Front Camera   Battery   Logic board   Bottom Speaker   Mic1 Bracket

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Check the Pad

ZOOM IN

NG

OK
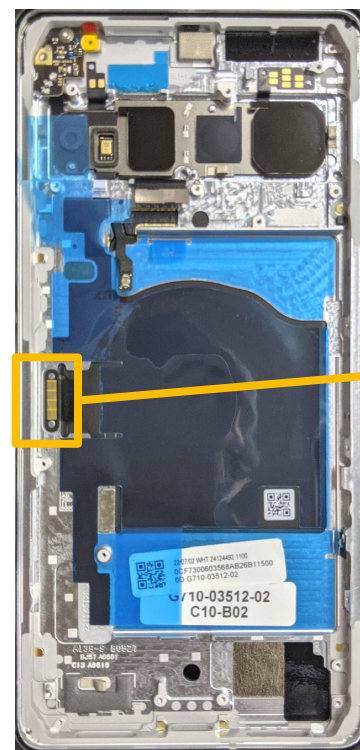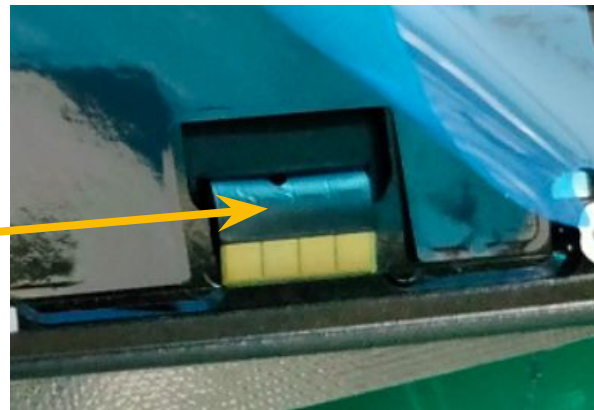
- Visually check the **WC & NFC Pad,** make sure it is not covered/obstructed by the graphite sheet or other components, and the Flex tail align on enclosure edge.

- If you see flex NG in right position like, please contact your google representative.
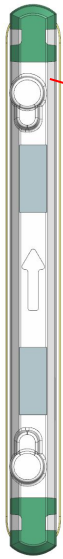
Enclosure

Ensure that the new volume key is oriented with the arrow pointing up toward the top of the device.
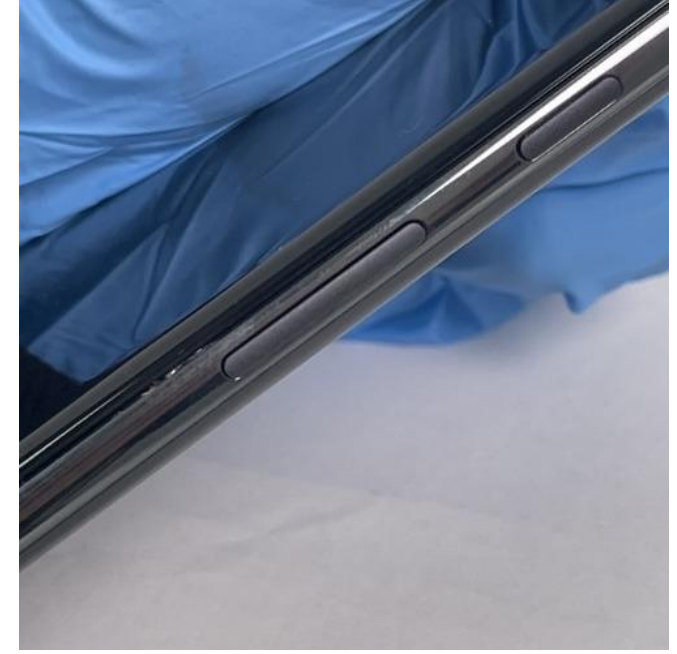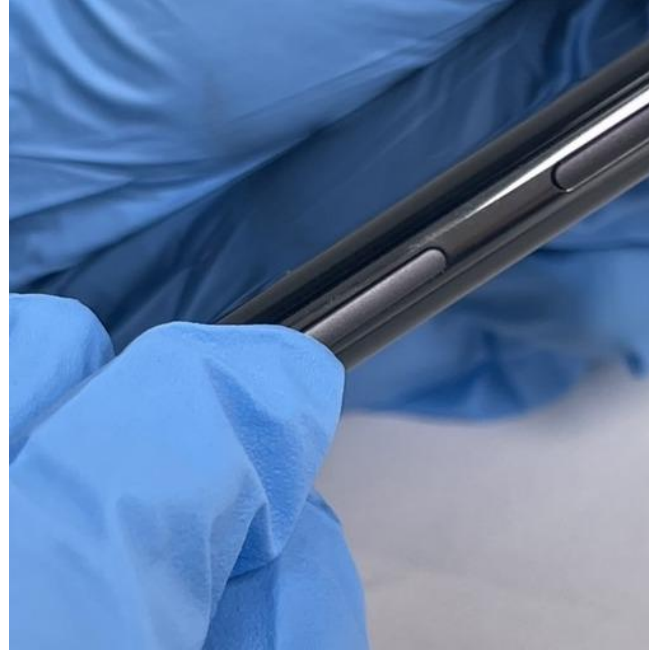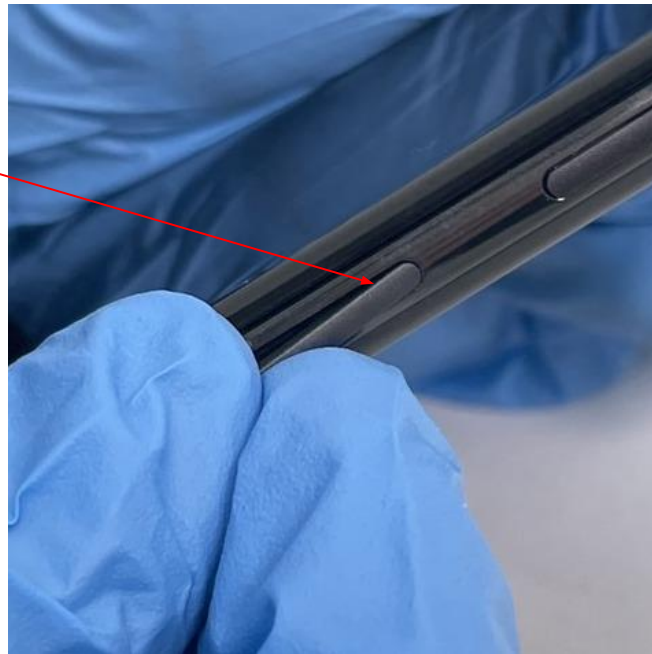
- Insert the new **volume button** into the **enclosure** at an angle until the top end is fully inserted.
- Press the bottom end of the key in until it is fully in place.
- Check if it can press each side of the **volume button** 20 times.

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

- -

This step only applies when there is" Volume Button issue". ⚠️

Display | Graphic sheet | Mid-frame | mmWave | Rear Camera | Top Speaker | Front Camera | Battery | Logic board | Bottom Speaker | Mic1 Bracket

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Troubleshooting

Connectors Location

Location & Description	
A	Tele camera connector
B	UWB connector
C	Flam board connector
D	UW camera connector
E	Main camera connector
F	Front camera connector
G	Display connector
H	Battery connector
I	USB Port
J	Sidekey pad
K	WC & NFC Pad
L	Bottom Speaker Pad
M	Vibrator pad
N	mmWave connector
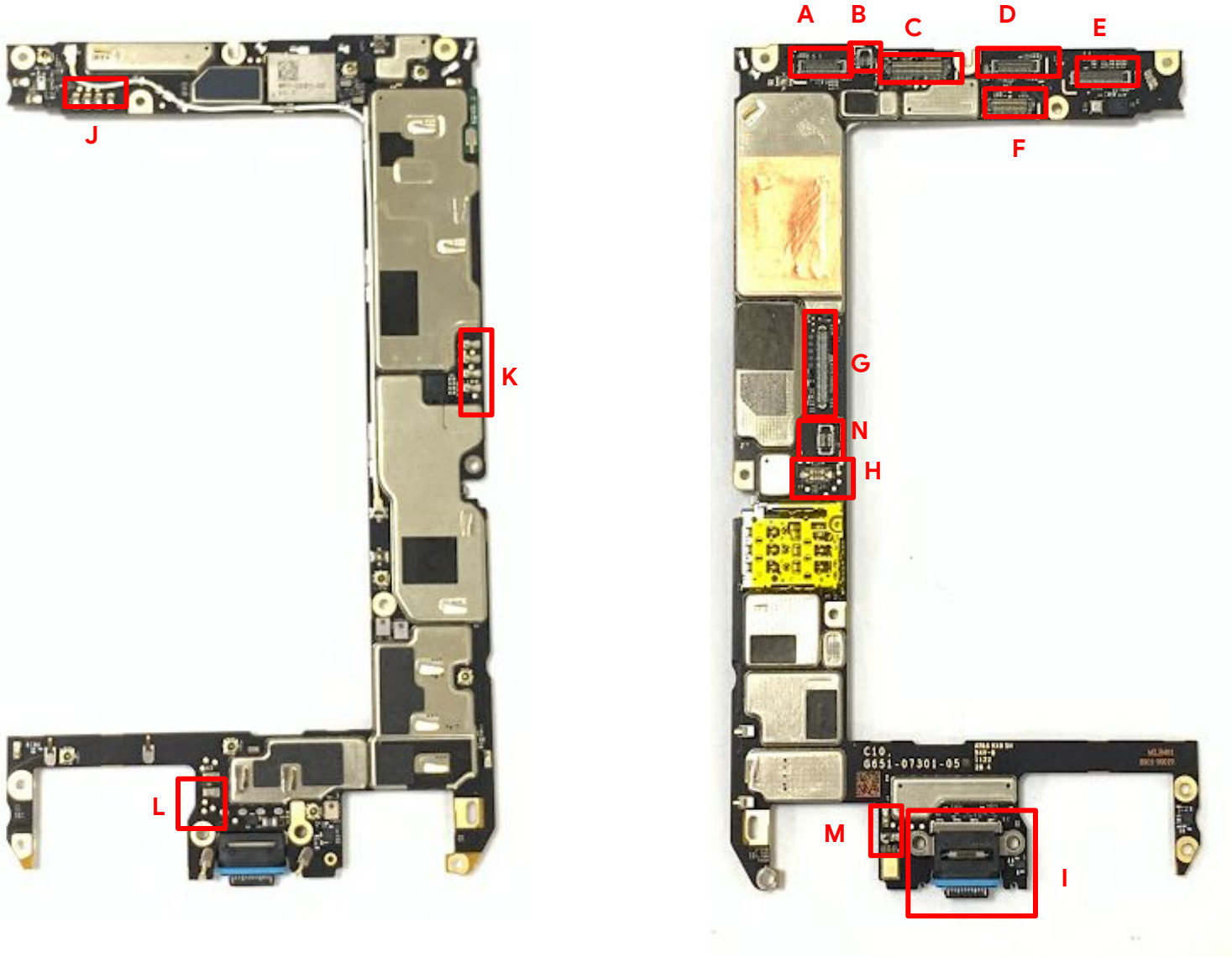
Caution!
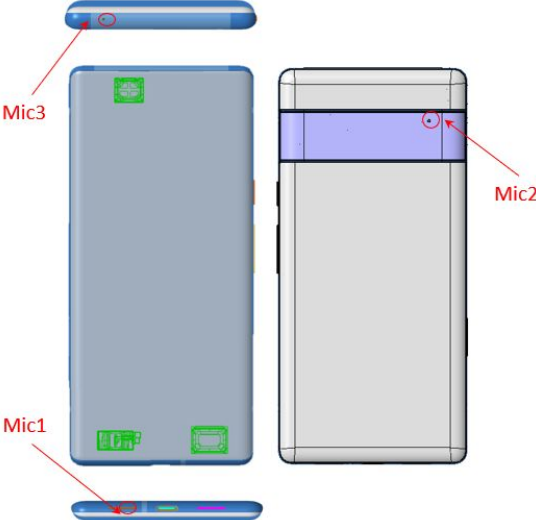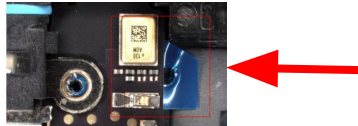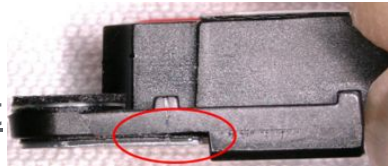
Review all safety precautions before beginning work.
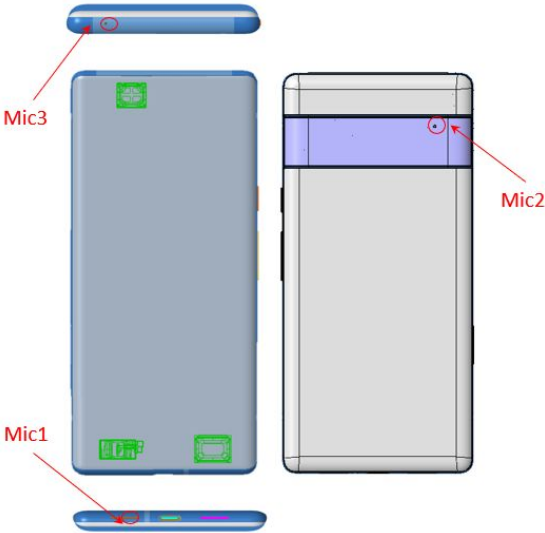
Mic1

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

Mic2
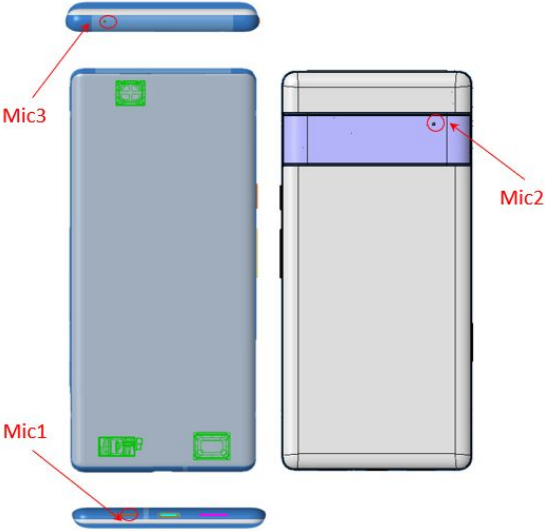
Symptom	Potential Root Cause	Procedure	
T013: Mic 2 - no sound T014: Mic 2 - low sound T015: Mic 2 - distorted sound	Connectivity issue	• Check if connectivity between **Flam board connector** and **Logic board** are normal. • If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Component issue	• Use a good **Enclosure** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

Mic3
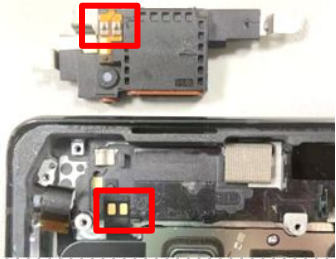
Symptom	Potential Root Cause	Procedure	
	Connectivity issue	• Check if connectivity between **Ant1 board** are normal. • If they are not fully buckled, re-assemble and then retest.	
T016: Mic 3 - no sound T017: Mic 3- low sound T018: Mic 3 - distorted sound	Assembly Problem	• Check if the two liner is removed **(Fig1).** If not, go to the next step. • Test audio again.	 **(Fig1)**
	Component issue	• Use a good **Ant1 Board** and **Logic board** to cross check with original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure(Ant1 Board)

Mic3
Mic2
Mic1

Top Speaker

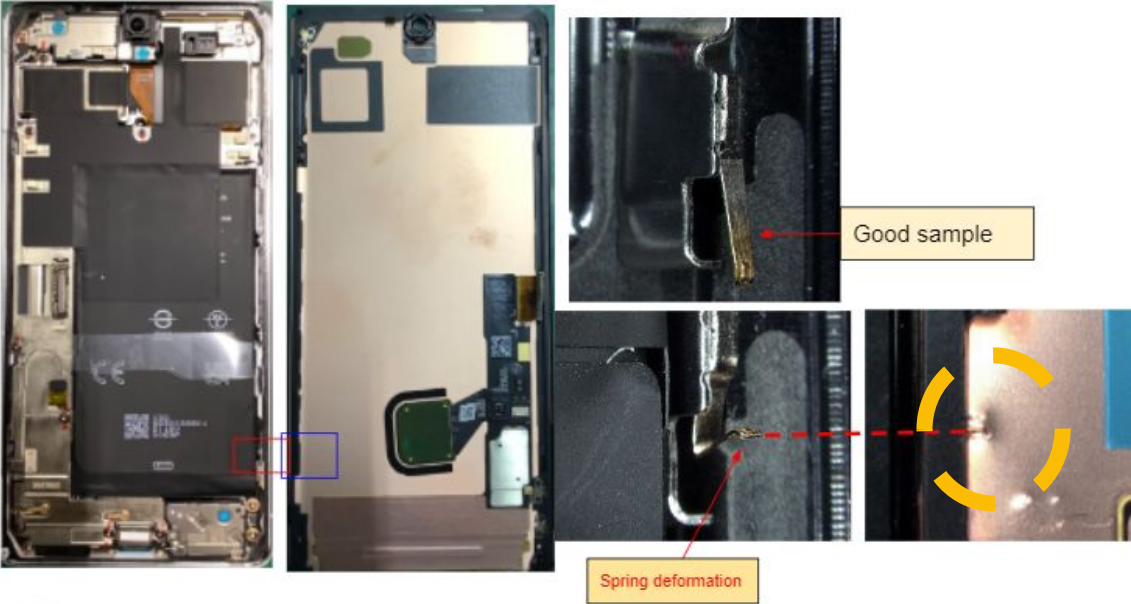| Symptom	Potential Root Cause	Procedure	
T019: Top Speaker no sound T020:Top Speaker low sound T021: Top Speaker distorted sound	Mesh not clean	• Inspect **Top Speaker mesh** and a soft **ESD brush** to remove any debris. • Test audio.	
	Internal debris	• If sound quality is still poor, inspect the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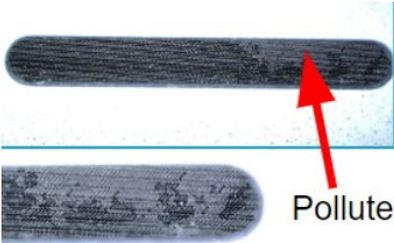
Bottom Speaker

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

Display

Symptom	Potential Root Cause	Procedure	
T027: Display blank T028: Display dead pixel, dark spots or foreign material T029: Display bright pixel, bright or colored spots T030: Display vertical or horizontal lines T031: Display black, white or colored screen T032: Display flickering/abnormal T033: Display image quality T034: Display color mura T035: Display light leakage T036: Display backlight issue T037: Display shadow T038: Display permanent burnin T039: Display temporary burnin	Damage	● Inspect display for damage and replace if necessary.	
	Connectivity issue	● Check if connectivity between **Display connector** and **Logic board** are normal. ● If they are not fully buckled, re-assemble and then retest.	Connectors Location
	Dead pixels Distorted graphics Flickering Color issues	● Remove **Display module**, fit a replacement part without adhesive and test. ● If issue is resolved, apply adhesive and fit new **Display module.**	**Disassembly** ● Display

Display - cont.

Symptom	Potential Root Cause	Procedure	
⬜ T027: Display blank T028: Display dead pixel, dark spots or foreign material T029: Display bright pixel, bright or colored spots T030: Display vertical or horizontal lines T031: Display black, white or colored screen T032: Display flickering/abnormal T033: Display image quality T034: Display color mura T035: Display light leakage T036: Display backlight issue T037: Display shadow T038: Display permanent burnin T039: Display temporary burnin	Dimple issues	● Remove **Display module**, to check the Display copper, like below Figure. 	**Disassembly** ● Display
	Component issue	● Use a good **Display** and **Logic board** to cross check with original ones. ● Replace the defective component.	**Disassembly** ● Logic board ● Display

Display

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

Vibrator

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

Power

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

Power

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

Rear Camera

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

Front Camera

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

mmWave

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

Proximity sensor

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

Wireless Charge

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

NFC

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

UDFPS

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

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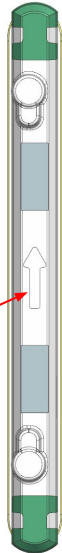
Symptom	Potential Root Cause	Procedure
T069:Volume button failure	Component issue	● Check if the **Volume key button** would fall off by pressing each side of the volume key 20 times. If it falls off, go to the **Assembly Instruction(Next Page)**. ● **Disassembly Instruction**: (1) Using an **ESD Universal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

Volume Up

Volume Down

Press the bottom of the tip firmly

Volume Button - cont.

Symptom	Potential Root Cause	Procedure
T069:Volume button failure	Component issue	• **Assembly Instruction:** (1) Insert the new **volume button** into the enclosure at an angle until the top end is fully inserted. (2) Press the bottom end of the key in until it is fully in place. Insert volume button into the enclosure. Ensure that the new volume key is oriented **with the arrow** pointing up toward the top of the device.
		• Quality Check : by pressing each side of the **volume button** 20 times. Volume Up / Volume Down

Testing

Software resources

Description	Documentation
Update or reinstall the software on Pixel devices	Link

Glossary

Terminology and definitions

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

Terminology and definitions

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

Terminology and definitions

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

Terminology and definitions

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