Pixel 9

Repair manual

Version 1.1

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

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

Use caution if you engage in repair.

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

Welcome!

We're 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 and 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	July, 2024	First release
V1.1	August, 2024	1. Correct figure. P115 2. Add screw part numbers. P66 3. Correct GPN from G250-01791-00 to G250-07191-00. P68 4. Correct GPN from G250-070240-00 to G250-07024-00. P74 5. Correct GPN from G945-00945-00 to G949-00975-00. P105 6. Correct GPN from G250-07191-00 to G250-07204-00. P114 7. Revise area need to apply AP111. P155, P163, P175, P242, P244 8. Add flam FSS flex installation specifications and change the picture. P237, P238 9. Revise the films need to remove. P169 10. Add more detail about heating. P53 11. Change back down to Face down. P107 12. Revise MLB spring check picture. P188 13. Modify the assembly method. P194, P221 14. Revise heating adhesive condition. P131, P154, P157, P240 15. Revise clean residue area and note. P131, P132 16. Add more detail about note. P132 17. Revise mark opening pick length. P51 18. Revise disassemble direction. P45 19. Fix pictures to solve the mirrored problem when download PowerPoint. 20. Remove laser module statement. P7 21. Changed the wording for better understanding. P13 22. Add the assemble clip picture. P133 23. Revise attach the P-sensor rubber NG picture note. P193 24. Add more detail about assemble the mmWave module. P222 25. Add more detail about remove BG sub film. P246 26. Revise mic1, mic2 and mic3 troubleshooting. P256, P257, P258

Pixel 9 repair manual

Precautions

Important: Before you begin

Be careful if you engage in repair

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

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

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

Always ensure that screws are securely fastened.

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

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

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

Caution: Pixel 9 contains a class 1 laser module

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

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

Important: Before you begin

Caution:
Part handling – glass

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

Tools and fixtures

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

Caution:

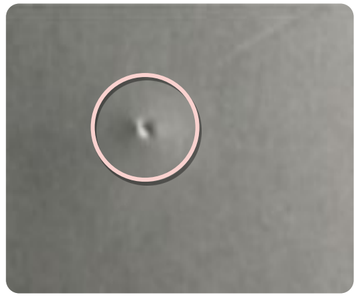
- We *don't* recommend that you perform repairs without the specified tools and fixtures.
- Improper use of tools and fixtures may result in injury to yourself, the user of the device or others, as well as damage to the product, tools, fixtures, replacement parts, or other spare parts.

Important: Before you disassemble the device

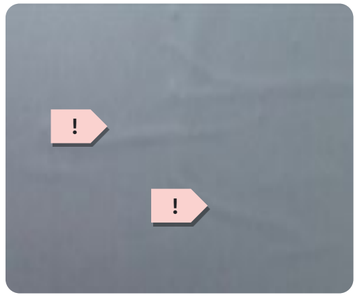
- Disconnect the device from all power sources before any disassembly.
- Make sure that the battery is fully discharged before any disassembly.
- If the phone battery shows signs of swelling or damage, or if the phone feels hot or emits a strong odor, *don't* attempt disassembly. Please reach out to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

Caution ⚠

Unacceptable battery conditions

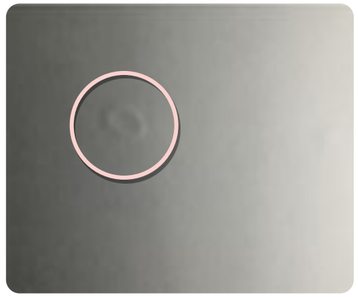


Pouch damage

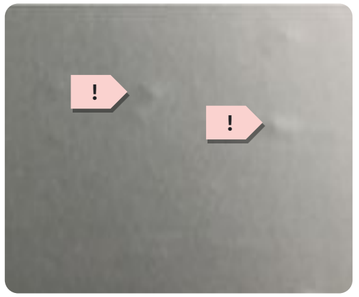


Line protrusion

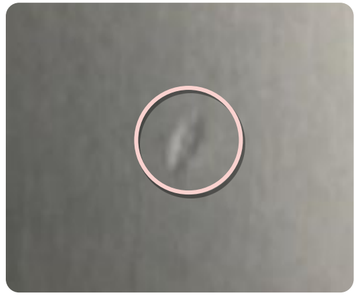
Scratch



Contamination mark

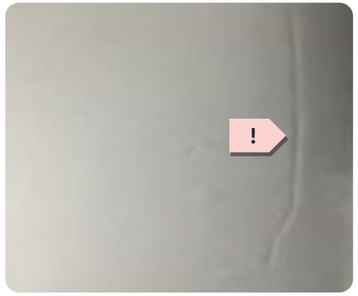


Dot protrusion

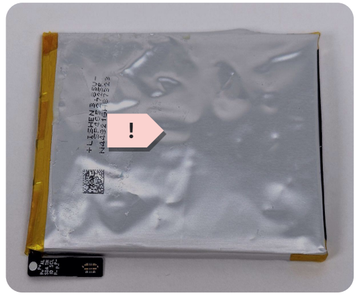


Dent

Bubbling



Imprinted line



Swelling or electrolyte leakage

Pixel 9 repair manual

Introduction

Expanded view

Screw map

Screen calibration

ESD protection

Liquid damage indicators

Turn the Pixel on or off

Tools and fixtures

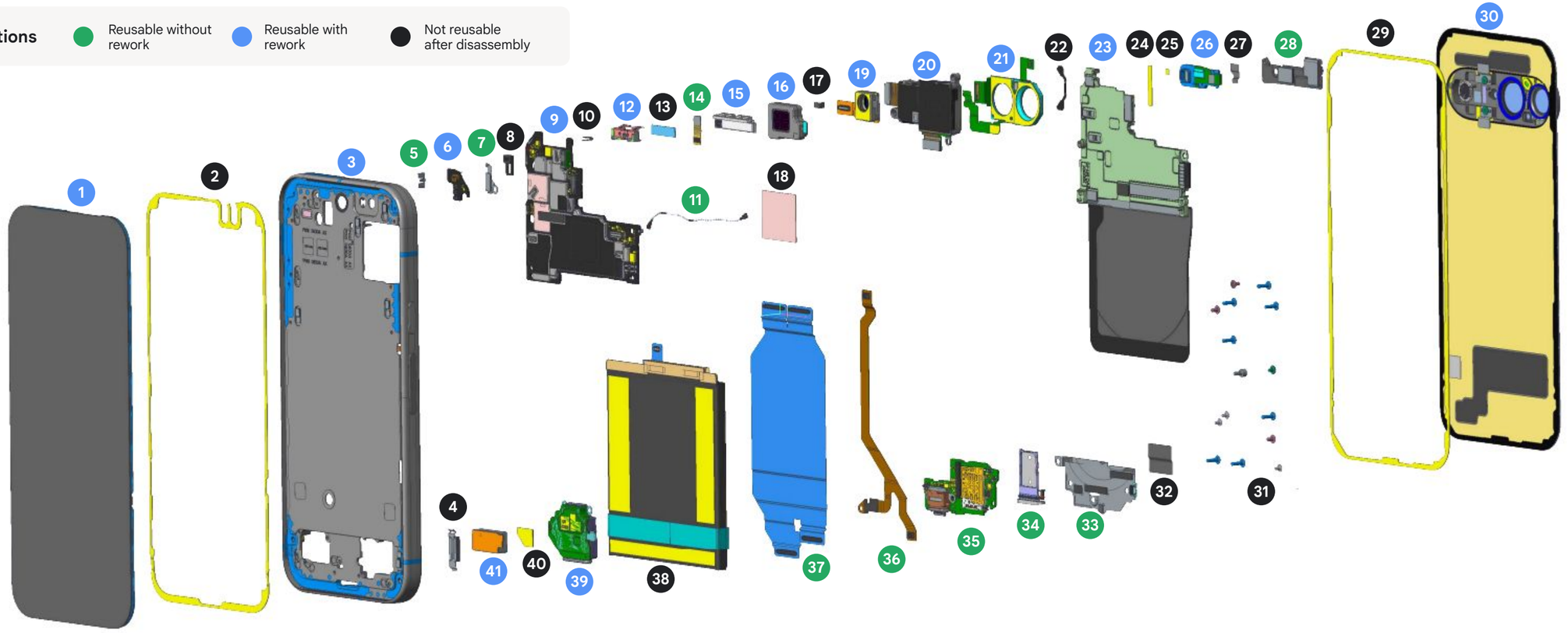
Replacement parts

Glossary

Pixel 9: Expanded view

Reuse indications

- Reusable without rework
- Reusable with rework
- Not reusable after disassembly



Pixel 9 Part ID

1	Display module	8	P-sensor foam	15	mmWave module	22	Flam left tape	29	BG adhesive	36	RJ flex
2	Display adhesive	9	Logic board	16	Top speaker	23	NFC/WLC cowling	30	BG Sub	37	DJ flex
3	Enclosure	10	FCAM FoF	17	Top speaker FoF	24	Adhesive BG SC	31	Screw	38	Battery
4	Display cowling	11	Cable	18	TIM SOC	25	Adhesive flam FSS	32	DJ flex tape	39	Bottom speaker
5	Speaker clip	12	Heatsink-mmWave	19	FCAM	26	Flam FSS flex	33	CLB cowling	40	Vibrator pad
6	ANT4 board	13	mmWave tim	20	RCAM	27	FSS flex tape	34	SIM tray	41	Vibrator
7	ANT4 cowling	14	mmWave flex	21	LDAF flex	28	Top cowling	35	Chin board		

Screw map

These are the screws used in the Pixel 9:

Screw G250-07204-00	Screw G250-07189-00	Screw G250-07197-00	Screw G250-07191-00	Screw G250-07322-00
				

- No hidden

- Hidden

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, always replace with a new screw

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

Pixel touch screen calibration process*

[*Required for all Pixel 1 - Pixel 8 Pro devices, which includes Pixel Fold] Pixel 9, Pixel 9 Pro, and Pixel 9 Pro XL don’t require UDFPS calibration

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) can 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

Repairs should be carried out on an ESD mat with the technician wearing a grounded ESD strap.

Avoid static buildup

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

Protective bags

All ESD-sensitive parts should be packed in metalized protective bags during shipping.

Avoid touching pins

Users should avoid touching pins with ESD-safe tools to handle components.

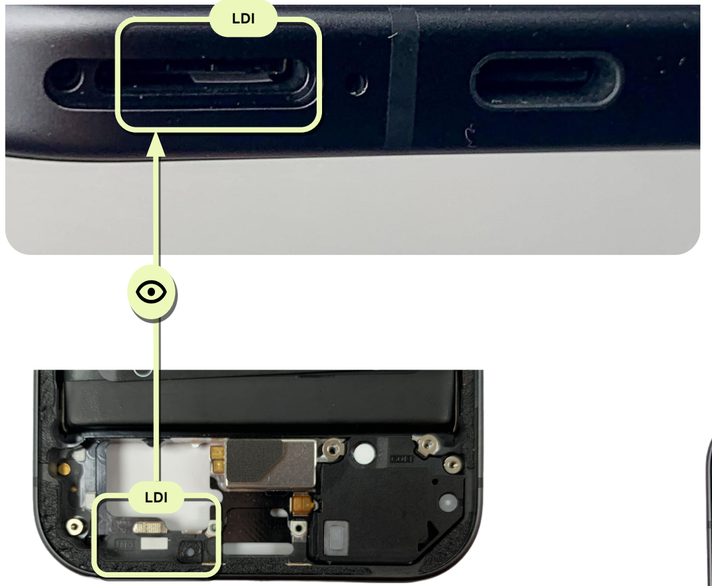
Did you know?

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 is ESD.

Liquid damage indicators

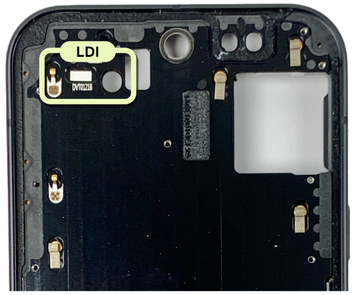
Liquid damage indicators (LDI) are strips that change colors when a phone is exposed to water or other liquids.

- Exposure to liquids may lead to device malfunction, such as overheating or short circuits.
- There are **three** LDIs on this device.
- If either indicator has turned red, the device is exposed to liquid.



In the SIM card tray slot (on the enclosure) visible without disassembling the device.

On the NFC/WLC cowling.



On the enclosure (CG side), near the charge port.

Turn the Pixel on or off

Turn the power on or off

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

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

Turn the screen off and back on

- To turn the screen on and off while the phone is turned on, press the power button once.

Tip: On some Pixel phones, you can see the time and some other information even when the screen is off. Learn which Pixel phones and how to turn **Always show time and info** off or on.

Restart (reboot)

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

Tools and fixtures

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

Note that some tools and fixtures require maintenance and calibration before you perform repairs.

Caution:

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

Tools and fixtures

Google-approved fixtures: Pixel 9

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

Universal press fixture

G940-00733-00

Universal disassembly fixture V3-base

G940-00873-00

Alternate part numbers: G980-14551-00, G940-00734-00

Spare universal device clip #1

G940-00876-00

Universal press plate 12 mm

G940-00736-00

Universal holder

G940-00834-00

Universal base 12 mm

G940-00833-01

Universal holder limiting block

G940-00835-00

Universal supporting rubber

G940-00804-00

Pixel 9 BG press rubber

G940-00798-00

Pixel 9 CG press rubber

G940-00799-00

Pixel 9 battery press rubber

G940-00797-00

Tools and fixtures

Common tools

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

ESD wristband

ESD mat

ESD spudger

Plastic

ESD tweezers

Plastic

Opening pick

Plastic

Large suction cup

Approximately 5 cm diameter

Screwdriver

Hex shank torx plus bit 3

Adjustable torque screwdriver

Hex shank torx plus bit 3

SIM card ejection pin

Heat plate

Absorption-bulb

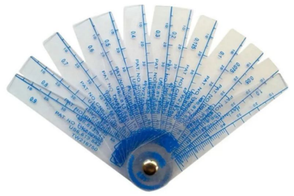
Small suction cup

Tools and fixtures

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.

Feeler gauge



Screwdriver

1/4 inch, tip size 2.5 mm

Tools and fixtures

Consumables

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

IPA

3M AP111 primer

Sankol lubricant CFD 409Z_v2

Anti-static ESD gloves

Finger cots

Dust-free cotton swabs

Dust-free cloth

Protective film

Tools and fixtures

Safety equipment

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

Safety glasses

Heat resistant protective gloves

Cut resistant protective gloves

Nitrile or lint-free gloves

Replacement parts

Important notice about replacement parts

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

Caution:

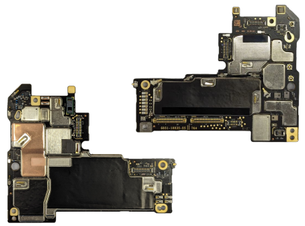
Use of replacement parts other than Google-authorized replacement parts, such as aftermarket batteries, may impact device safety, reliability and performance.

Replacement parts

Reuse indications

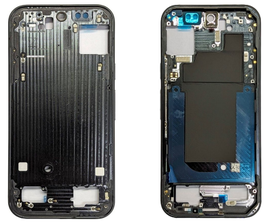
- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Logic board
Multiple part numbers



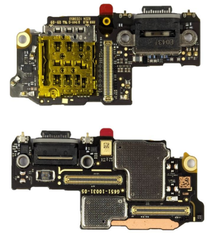
Display module
G949-00947-00

Enclosure
Multiple part numbers



BG sub
Multiple part numbers

Chin board
G949-00968-00



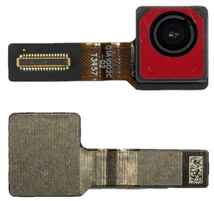
LDAF flex
G949-00969-00

Flam FSS flex
G949-00970-00

NFC/WLC cowling - mmWave
G949-00971-00

NFC/WLC cowling - sub6
G949-00972-00

FCAM
G949-00973-00



RCAM
G949-00974-00

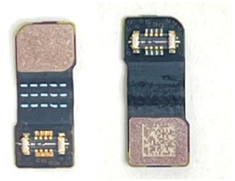
Battery
G949-00975-00

Replacement parts

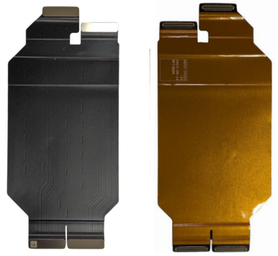
Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

ANT4 board
G949-00976-00

mmWave flex
G949-00977-00



DJ flex
G949-01096-00



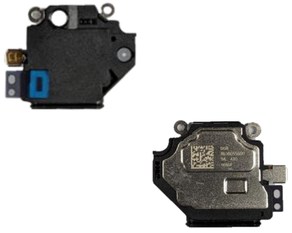
Display adhesive
G806-12940-00

BG adhesive
G806-12941-00

mmWave module
G345-01511-04

Top speaker
G863-00553-00

Bottom speaker
G863-00556-00



Heatsink mmWave
G730-07918-00

RJ flex
G652-10223-04

Vibrator
G710-05528-01

SIM tray
Multiple part numbers

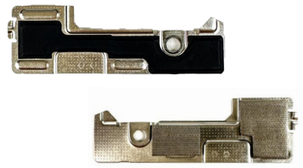
Replacement parts

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

mmWave TIM
G806-10331-00

Cable
G821-00952-00

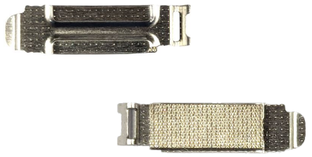
Top cowling
G730-07841-02



CLB cowling
G730-08341-25

ANT4 cowling
G730-08356-01

Display cowling
G730-08475-06



Top speaker clip
G853-02284-00

Top speaker FoF
G806-11577-00

FoF
G806-11578-00

P-sensor foam
G806-10419-05

Vibrator pad
G806-10332-01

TIM SOC
G806-10386-00

Replacement parts

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Screw
G250-07191-00

Screw
G250-07189-00

Screw
G250-07197-00

Screw
G250-07204-00

Screw
G250-07322-00

DJ flex tape
G806-11965-01

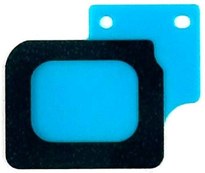
Adhesive BG SC
G806-12554-02

FSS flex tape
G806-12859-01

Adhesive flam FSS
G806-11817-01

Flam left tape
G806-12858-01

Top SPK PSA
G806-11891-01



Mic3 mesh
G806-11713-01

Replacement parts

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

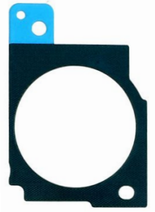
Bottom speaker adhesive
G806-12793-00

FCAM adhesive
G806-12811-00

Vibrator adhesive
G806-13155-00

LDAF CPSA main
G806-13190-00

LDAF CPSA UW
G806-13191-00



Flam Flex CPSA
G806-13194-00

Mic2 mesh
G806-12734-01

Glossary

Glossary

Acronym or 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.
FPC	**Flexible Printed Circuit** A type of low profile and flexible printed circuit.
OLED	**Organic Light-Emitting Diode (OLED)** A type of flat panel display with an OLED to show images.
mmWave	**Millimeter Wave** The radio waves used to build a 5G network, that provides fast and reliable mobile data.
Sub6	**Sub-6GHz** Refers to mid and low-frequency bands under 6GHz.
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, LDI

Glossary

Acronym or term	Definition
Display module	The OLED, glass cover, 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: MLB, Main logic board, Main board, PCBA
Microphone	The component used to capture 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)
Back glass	The glass cover, and sometimes other components such as the flashlight. Also known as: Back cover, Bottom case, Back glass, Rear cover

Glossary

Acronym or term	Definition
Camera	Camera modules include the front camera and the rear cameras. Also known as: CAM, FCAM, RCAM
Pressure sensitive adhesive	The adhesive that is used to bond enclosure and display module, battery and enclosure, or other parts. Also known as: PSA
UDFPS	Under display FingerPrint Sensor Also known as: Fingerprint sensor

Glossary

Acronym or term	Definition
ASP	Authorized Service Provider
FRP	Factory Reset protection
FDR	Factory Data Reset
SUR	Same Unit Repair
RTV	Return To Vendor
WIC	Walk In Center
SBOM	Service Bill of Materials

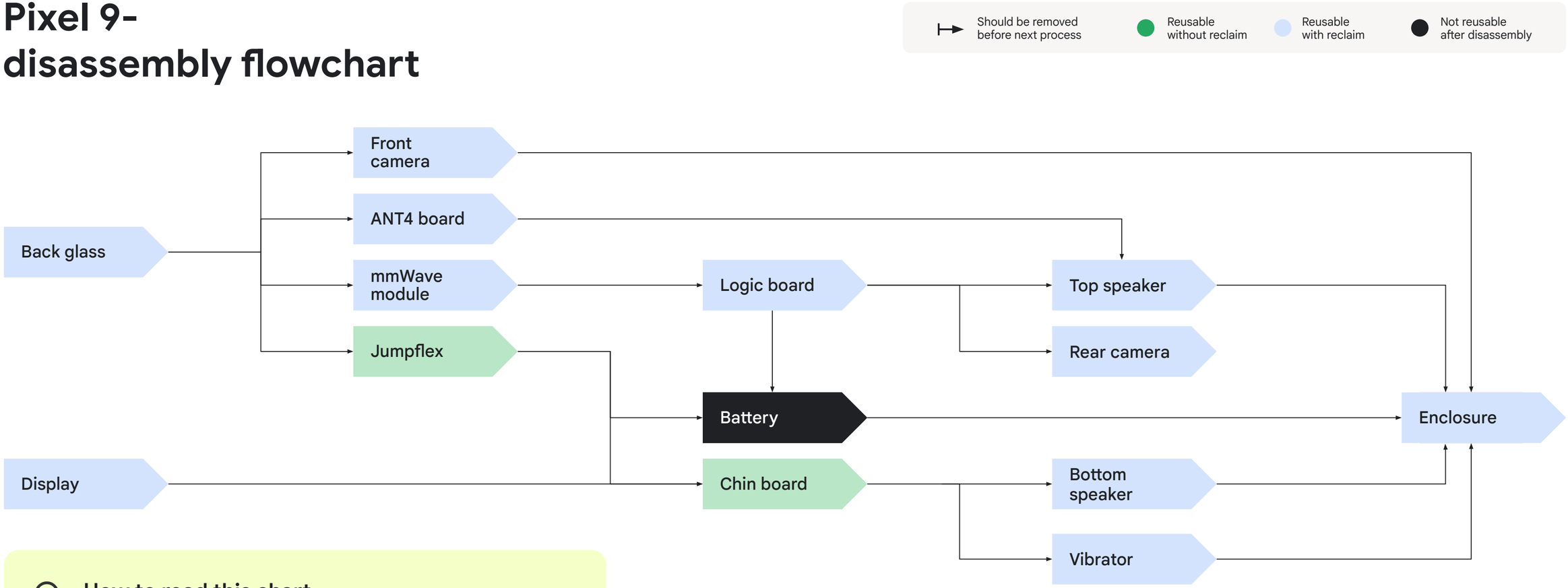
Pixel 9 repair manual

Repair flows

Disassembly order

Assembly order

Pixel 9- disassembly flowchart



How to read this chart

To replace the battery:
Remove the jumpflex, back glass then the battery.

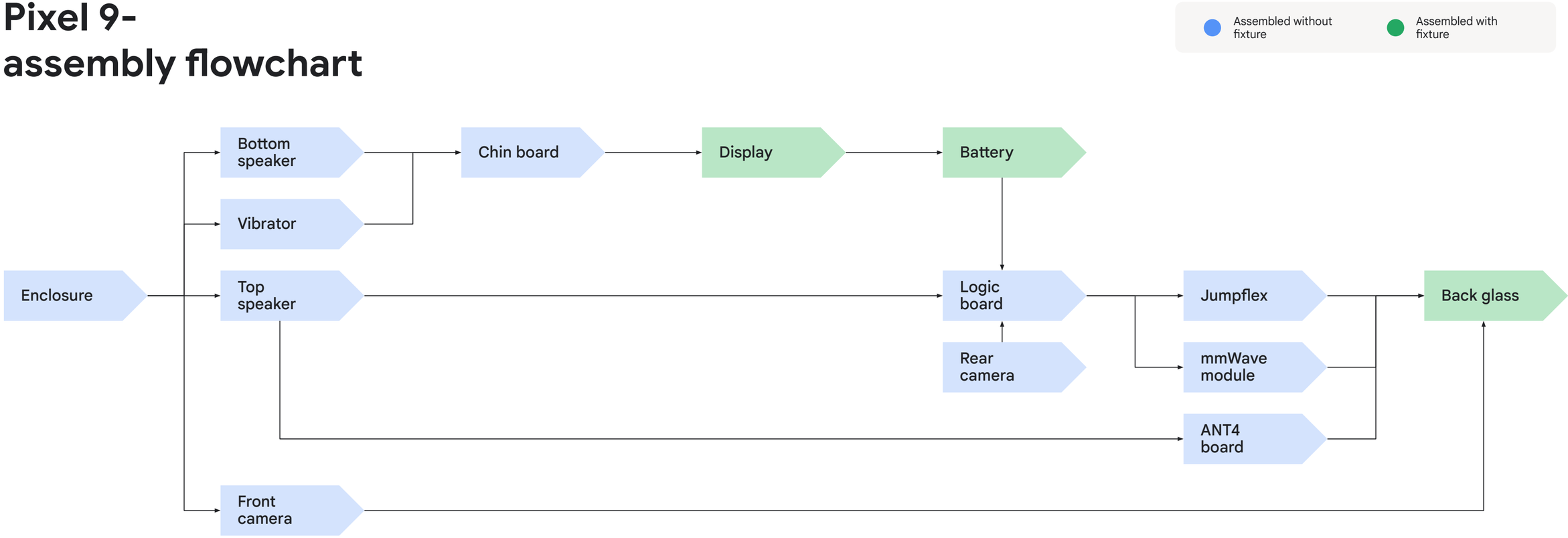
To remove the logic board:
Remove the mmWave module, jumpflex, back glass then the logic board.

To remove the chin board:
Remove the display, back glass, jumpflex, then the chin board.

Use caution

The **display should** be removed before disassembly of the **chin board, bottom speaker, and vibrator**.

Pixel 9- assembly flowchart



How to read this chart

To reinstall the battery:
Install the battery, jumpflex, then the back glass.

To reinstall the logic board:
Install the logic board, mmWave module, jumpflex, then the back glass.

To reinstall the chin board:
Install the chin board, display, jumpflex, then the back glass.

Pixel 9 repair manual

Disassembly

Display

BG sub

mmWave module

Jumpflex

Logic board

Rear camera

Front camera

ANT4 board

Top speaker

Battery

Chin board

Bottom speaker

Vibrator

Enclosure

Disassembly instructions

Display

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

Use caution

Use safety gloves to handle damaged back glass as splinters during removal could cause injury.

Apply protective film to broken glass before removal.

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

Prerequisites

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

Tools

- Heat plate
- Universal disassembly fixture V3
- Pixel universal base
- Pixel universal holder
- Pixel universal holder limiting block
- Pixel universal press plate 12 mm
- Pixel universal press fixture
- Suction bulb
- Small suction cup
- Opening pick
- ESD tweezers
- ESD spudger
- 3M AP111 primer
- Dust-free cotton swabs
- IPA and cloth

Required parts

Display

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

Reuse indications

- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Display module

G949-00947-00

Display cowling

G730-08475-06

Display adhesive

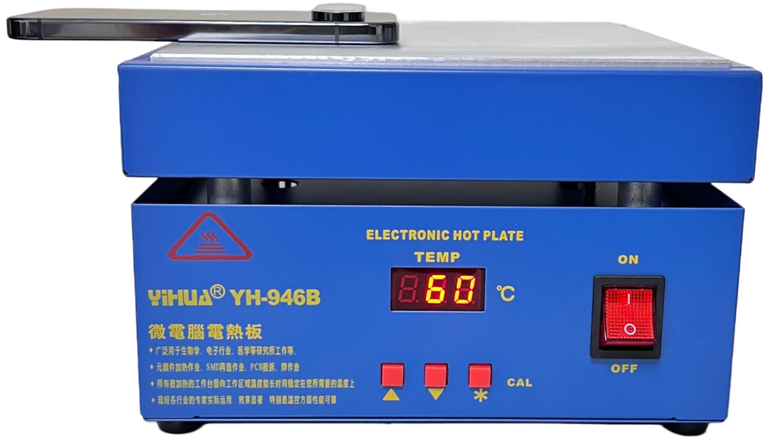
G806-12940-00

Soften the adhesive

Set the heat plate to **140°F (60°C)**, and place the phone face down on the heat plate for **10 minutes** to soften the adhesive.

Use caution

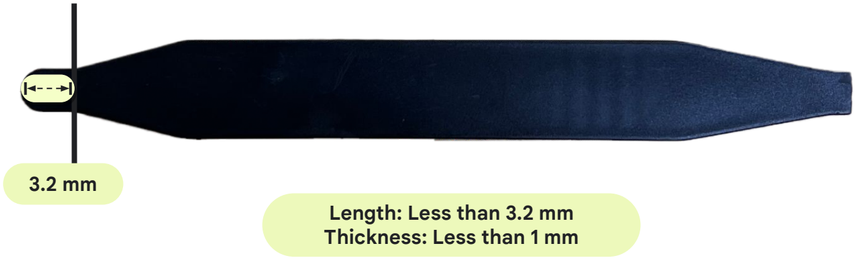
Heat plate is a hot surface. Use caution as it could cause burns.



Mark the ESD spudger

- Use the **ESD spudger** to separate the **display** from the **enclosure**.
  If inserted too deep, the spudger could damage your device.
- Measure 3.2 mm from the tip and mark the **ESD spudger** with a permanent mark. It should be distinguished because the width of the surrounding adhesive is different.

> ⚠ **Use caution**
>
> Follow the steps to mark your ESD spudger and prevent damage.



Use the fixture

- Fix the suction cup on the **rightmost** position as shown in Fig 1.
- Place the device on the holder of **universal disassembly fixture V3**, phone visor touching the edge of the fixture as shown in Fig 2.

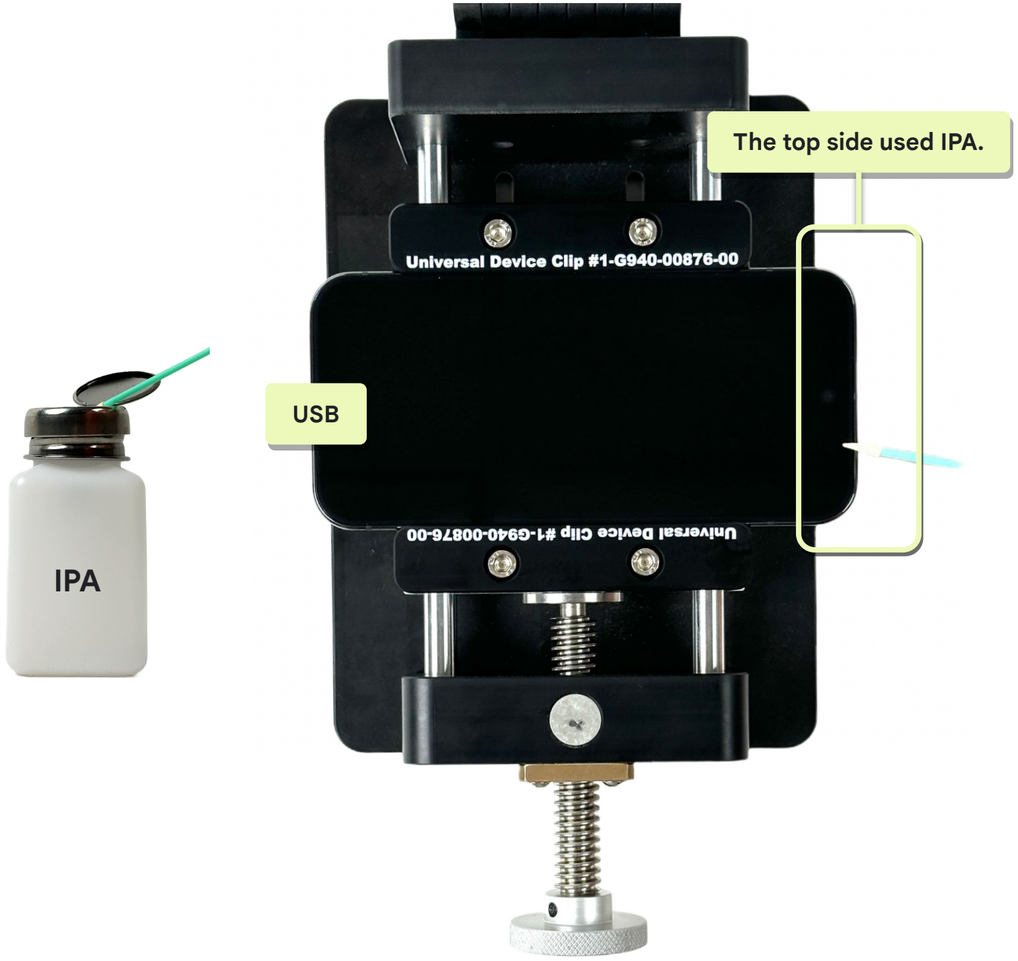
> **Note**
>
> Remove the display front protective film to allow the suction cup to attach to the display.
>
> There's a groove which can help to avoid pressing the power button accidentally.

Fig 1

Fig 2

Prepare for the disassembly

Before you close the lid, dampen proper amount **IPA** with a **Dust-free cotton swab** to the gap between the **display** and the **enclosure** on the **top side**.

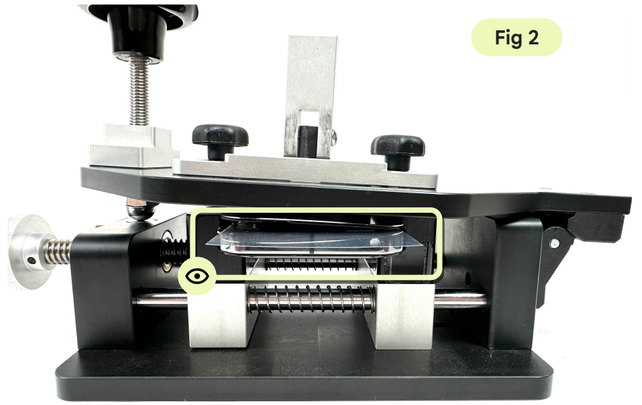


Separate the display

- Close the lid and lift up the suction cup as shown in Fig 1.
- Slowly rotate the knob to separate the **display module** from the **enclosure**.
- When there's a gap on the **top side**, use the **ESD spudger** with a proper of amount **IPA** to cut the **adhesive** off.
- Insert a release liner to prevent the adhesive from sticking back as shown in Fig 2.

Fig 1

Fig 2



Use caution

Use safety gloves to handle the damaged display as splinters during removal could cause injury.

Apply protective film to broken glass before removal.

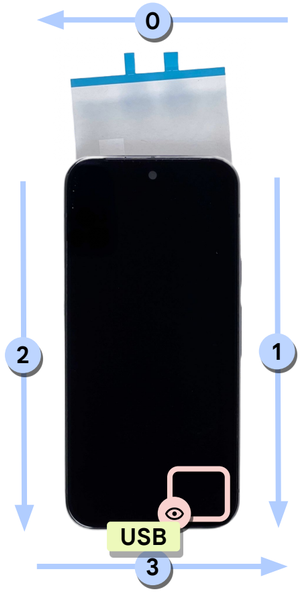
Review all **safety precautions** before you begin work.

Separate the display adhesive

- Take the device out of the **universal disassembly fixture V3**.
- Manually slide in the sequence with **a proper amount of IPA**:

  0 (top side) ➜ 1 (right side) ➜ 2 (left side) ➜ 3 (bottom side) with the **ESD spudger**.
- Make sure that the **ESD spudger** is inserted no further than 3.2 mm.
- Make sure that the **ESD spudger** is placed along with the **enclosure side** as shown in Fig 2.
- Pry at an angle ~45 degree to avoid insertion between **display** and **trim** as shown in Fig 3.

Fig 1



Disassemble sequence:
0 (in the fixture) ➜ **1** ➜ **2** ➜ **3**

Fig 2

Apply in left and right side

Fig 3

Apply in bottom side

Use caution

Avoid to damage around display component and enclosure spring areas as shown in Fig 1.

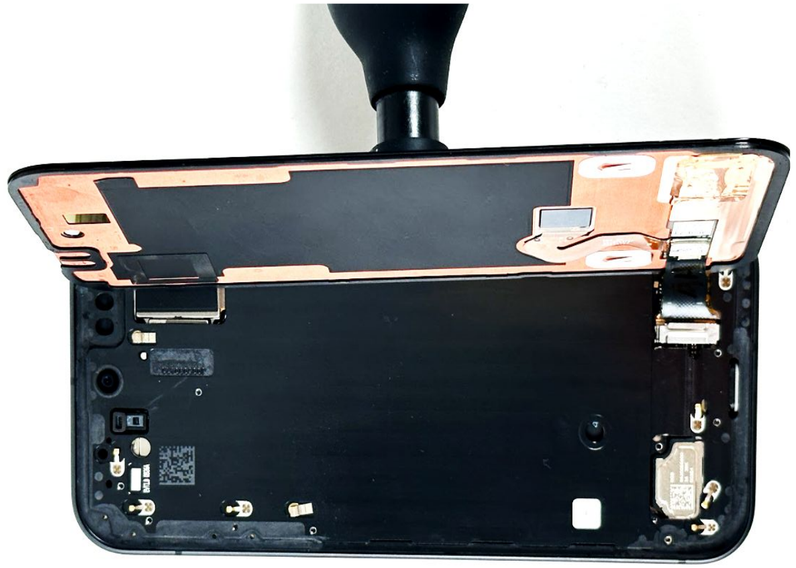
Note

***Don't* remove the release liner to prevent the adhesive from sticking back.**

Prop the display

- Use the **adsorption-bulb** to hold the **display**.
- Avoid touching the **copper foil**.

> **Note**
>
> Be careful not to stretch the display flex to prevent damage.
>
> Also be careful not to touch the spring during the process.

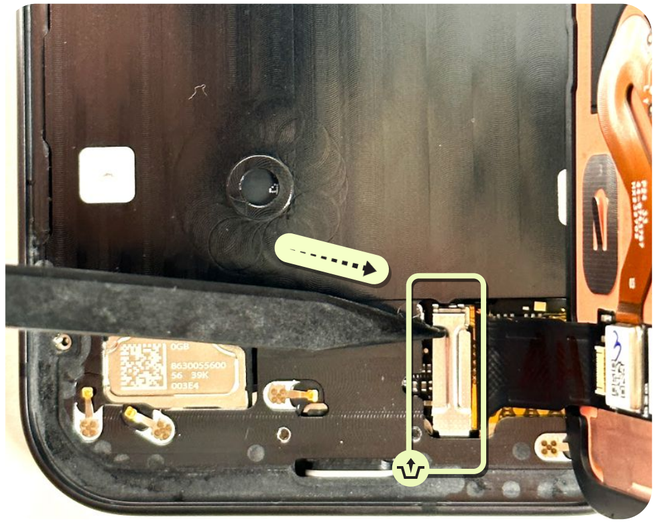


Trim separate.

Remove the display cowling

Loosen and remove the **display cowling** with the **ESD spudger**.

Part: G730-08475-06 (Display cowling)



> **Note**
>
> ***Don't* reuse the part.**

Disconnect the display

- Detach the **display connector** with the **ESD spudger**.
- Remove the **display module**.

Part: G949-00947-00 (Display Module)

Note

Use the **ESD spudger** to avoid damage to the components.

Disassembly instructions

BG sub

If you reuse the BG sub, ensure that any thermal paste or adhesive residue is completely removed.

Use caution

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

Prerequisites

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

Tools

- Universal disassembly fixture V3
- Pixel universal base
- Pixel universal holder
- Pixel universal holder limiting block
- Pixel 9 CG press rubber
- Pixel 9 BG press rubber
- Pixel universal press plate 12 mm
- Pixel universal press fixture
- Suction bulb
- Small suction cup
- Opening pick
- ESD spudger
- ESD tweezers
- 3M AP111 primer
- Dust-free cotton swabs
- IPA and cloth

Required parts

BG sub

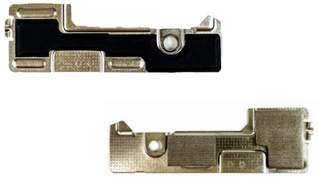
Here's the list of parts for the BG sub disassembly:

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

BG sub
Multiple part numbers

BG adhesive
G806-12941-00

Top cowling
G730-07841-02



NFC/WLC cowling - mmWave
G949-00971-00

NFC/WLC cowling - Sub6
G949-00972-00

Screw
G250-07204-00

Screw
G250-07197-00

Mic2 mesh
G806-12734-01

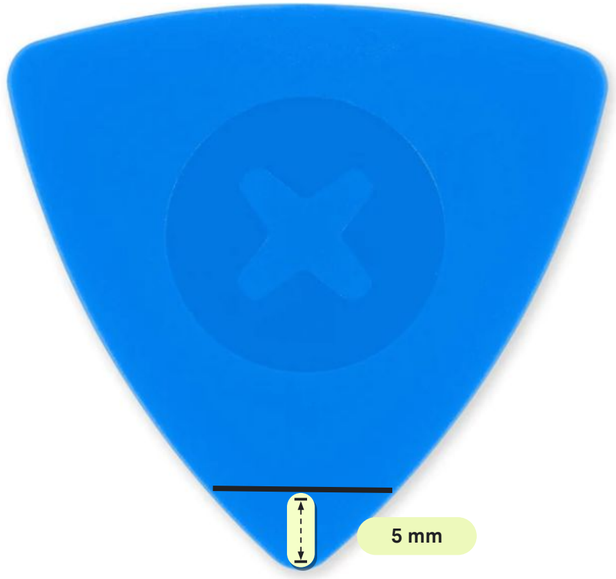
Adhesive BG SC
G806-12554-02

Adhesive flam FSS
G806-11817-01

Flam left tape
G806-12858-01

Mark the opening picks

- Use **opening picks** to separate the **BG** from the **enclosure**. If inserted too far, a pick can damage your device.
- Measure 5 mm from the tip and mark the opening pick with a permanent mark. It should be distinguished because the width of the surrounding adhesive is different.



Length: Less than 5 mm
Thickness: Less than 1 mm

Use Caution

Follow the step to mark your pick and prevent damage.

Thicker Opening pick may lead to Back Glass crack.

Apply the small suction cup

- Position the **small suction cup** on the USB side.

> ⚠ **Use caution**
>
> Be careful around power key area to avoid damage to the spring.

Separate the BG

- Hold the device with one hand and pull up the **small suction cup** with another hand strongly until a gap forms between the **BG** and the **enclosure**.
- Insert the **opening picks** into the gap.

Note

If you've trouble to create a gap, heat 60°C/10 minutes BG side on heat plate and try again.

Separate the BG adhesive

- Manually slide **clockwise** in the sequence:
  1 (bottom side) ➜ 2 (left side) ➜ 3 (top side) ➜ 4 (right side) with an opening pick.
- Make sure that the **opening pick** is inserted no further than 5 mm.

Remove the screw

Remove the **top cowling screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

***Don't* reuse the parts.**

Remove the top cowling

Remove the **top cowling** with **ESD tweezers**.

Part: G730-07841-02 (Top cowling)

Remove the NFC/WLC cowling

Remove **five NFC/WLC cowling screws** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw*4)

Part: G250-07197-00 (Screw *1)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

***Don't* reuse the parts.**

Remove the NFC/WLC cowling

- Loosen the **FSS flex** with **ESD tweezers** from the **NFC/WLC cowling** as shown in Fig 1**.**
- Remove the **NFC/WLC cowling** with **ESD tweezers** from right screw hole as shown in Fig 2.

Part: G949-00971-00 (NFC/WLC cowling - mmWave)

Part: G949-00972-00 (NFC/WLC cowling - Sub6)

Fig 1

Fig 2

Finished! Need assembly instructions? ➜

Disconnect the battery

Detach the **battery connector** from the **logic board** with the **ESD spudger**.

Note

Use the **ESD spudger** to avoid damage to the components.

Disassembly instructions

mmWave module

mmWave are the radio waves used to build a 5G network, that provides fast and reliable mobile data with low latency for the latest devices.

Use caution

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

Prerequisites

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

- **BG sub**

Tools

Torx plus 3IP screwdriver

ESD spudger

ESD tweezers

Required parts

mmWave module

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Here's the list of parts for the mmWave module disassembly:

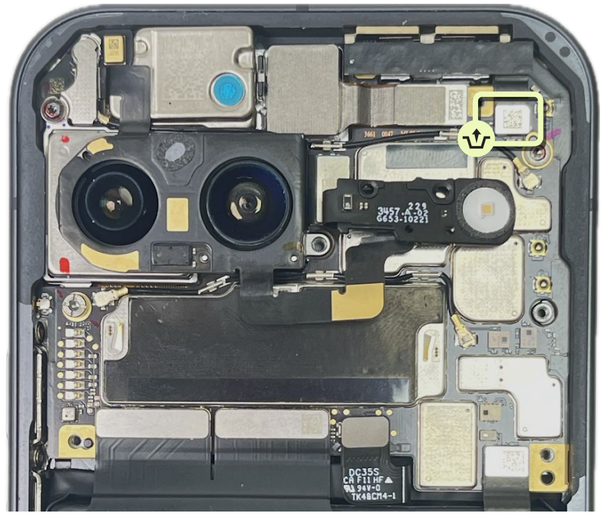
mmWave module
G345-01511-04

mmWave flex
G949-00977-00

mmWave TIM
G806-10331-00

Disconnect the mmWave flex

Detach the **mmWave flex connector** from the **logic board** with the **ESD spudger**.



Note

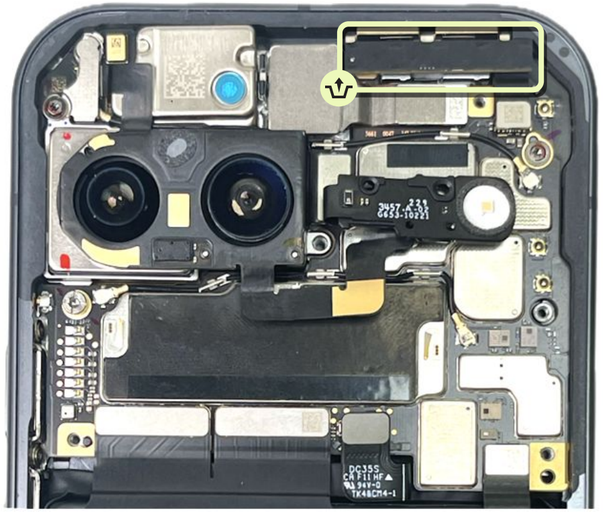
This step is only present in the mmWave SKU.

Use the **ESD spudger** to avoid damage to the components.

Remove the mmWave module

Remove the **mmWave module** with **ESD tweezers**.

Part: G345-01511-04 (mmWave module)

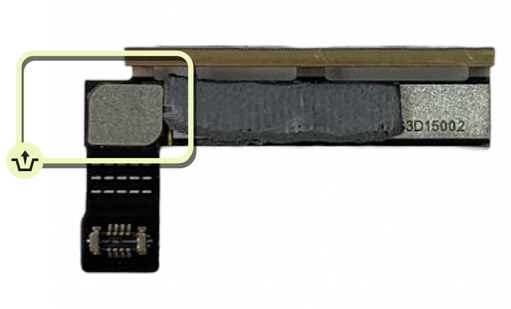


Finished! Need assembly instructions? ➜

Remove the mmWave flex

Detach the **mmWave flex** from the **mmWave module** with the **ESD spudger**.

Part: G949-00977-00 (mmWave flex)



Note

This step is only present in the mmWave SKU.

Use caution

This step only applies to when there's either mmWave module damage.

Disassembly instructions

Jumpflex

Jumpflex connects the logic board to the chin board.
Jumpflex includes the DJ flex and the RJ flex.

Use caution

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

Prerequisites

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

- **BG sub**

Tools

Torx plus 3IP screwdriver

ESD spudger

ESD tweezers

Required parts

Jumpflex

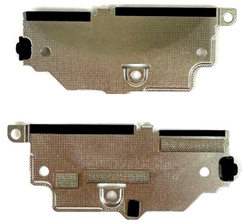
Here's the list of parts for the jumpflex disassembly:

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

DJ flex tape
G806-11965-01

DJ flex
G949-01096-00

CLB cowling
G730-08341-25



Screw
G250-07189-00

Screw
G250-07191-00

Screw
G250-07204-00

RJ flex
G652-10223-04

Remove the DJ flex tape

Remove the **DJ flex tape** with **ESD tweezers**.

Part: G806-11965-01 (DJ flex tape)

Note

Don't **reuse the parts.**

Remove the screw

Remove **two CLB cowling screws** with the **torx plus 3IP screwdriver**.

Part: G250-07191-00 (Screw)

Part: G250-07204-00 (Screw)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

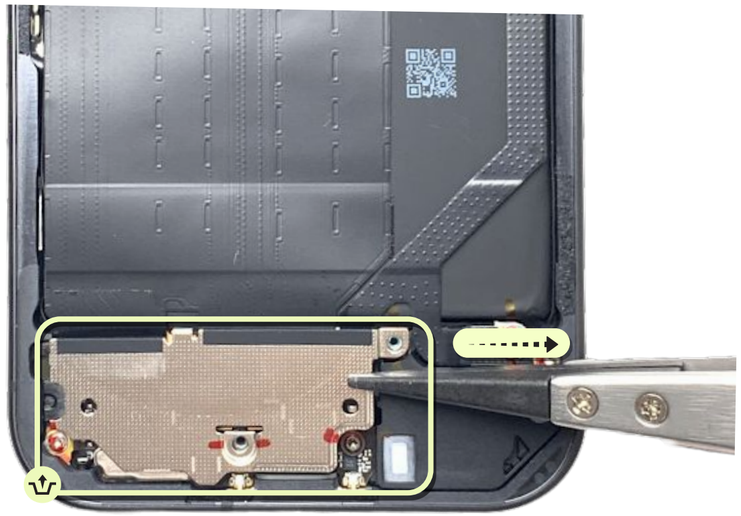
Note

***Don't* reuse the parts.**

Remove the CLB cowling

Remove the **CLB cowling** with **ESD tweezers** from the right.

Part: G730-08341-25 (CLB cowling)



Remove the DJ flex

- Detach **four DJ flex connectors** from the **logic board** and the **chin board** with the **ESD spudger**.
- Remove the **DJ flex**.

Part: G949-01096-00 (DJ flex)

Note

Use the **ESD spudger** to avoid damage to the components.

Remove the screws

Remove **two RJ flex screws** with the **torx plus 3IP screwdriver**.

Part: G250-07189-00 *2 (Screw)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

***Don't* reuse the parts.**

Finished! Need assembly instructions? ➜

Remove the RJ flex

- Detach **two RJ flex connectors** from the **logic board** and the **chin board** with the **ESD spudger**.
- Remove the **RJ flex**.

Part: G652-10223-04 (RJ flex)

Note

Use the **ESD spudger** to avoid damage to the components.

Disassembly instructions

Logic board

The logic board consists of the memory, storage, processor, and communication components such as the Wi-Fi and the mmWave.

Use caution

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

Prerequisites

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

- **BG sub**
- **mmWave**
- **Jumpflex**

Tools

Torx Plus 3IP screwdriver

ESD spudger

ESD tweezers

IPA and cloth

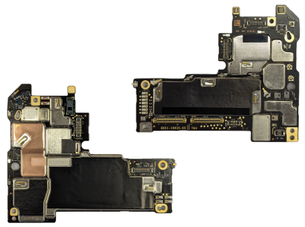
Required parts

Logic board

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

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Logic board
Multiple part numbers



ANT4 cowling
G730-08356-01

Cable
G821-00952-00

Screw
G250-07024-00

P-sensor foam
G806-10419-05

TIM SOC
G806-10386-00

Disconnect the front camera

Detach the **front camera** from the **logic board** with the **ESD spudger**.

Remove the screws

Remove the **ANT4 cowling screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

***Don't* reuse the parts.**

Remove the ANT4 cowling

Remove the **ANT4 cowling** with **ESD tweezers**.

Part: G730-08356-01 (ANT4 cowling)

Disconnect the LDAF flex

Detach the **LDAF flex connector** from the **ANT4 board** with the **ESD spudger**.

Note

Use the **ESD spudger** to avoid damage to the components.

Remove the cable

- Loosen the **cable** from the **ANT4 board** and the **logic board** with the **ESD spudger**.
- Remove the **cable**.

Part: G821-00952-00 (Cable)

Remove the screw

- Remove the **logic board screw** with the **torx plus 3IP screwdriver**.
- Remove the **logic board screw** with a **standoff 2.5 mm screwdriver.**

Part: G250-07191-00 (Screw)

Part: G250-07322-00 (Screw)

Use caution

Be careful when you use the screwdriver. *Don't* damage the adjacent battery.

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

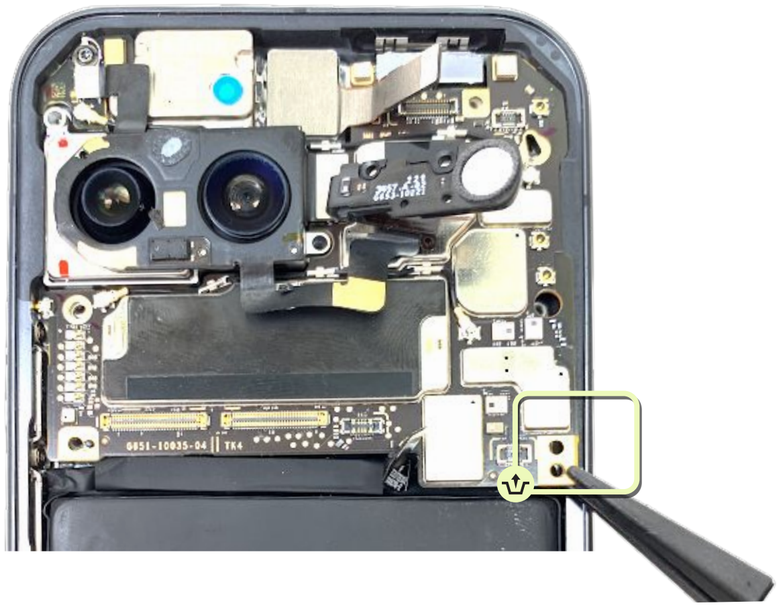
Note

***Don't* reuse the parts.**

Remove the logic board

Remove the **logic board** with the **ESD spudger** and **ESD tweezers** from the screw hole.

Part: Multiple part numbers (Logic board)



Use caution

Be careful to avoid damage to the components on the logic board.

Note

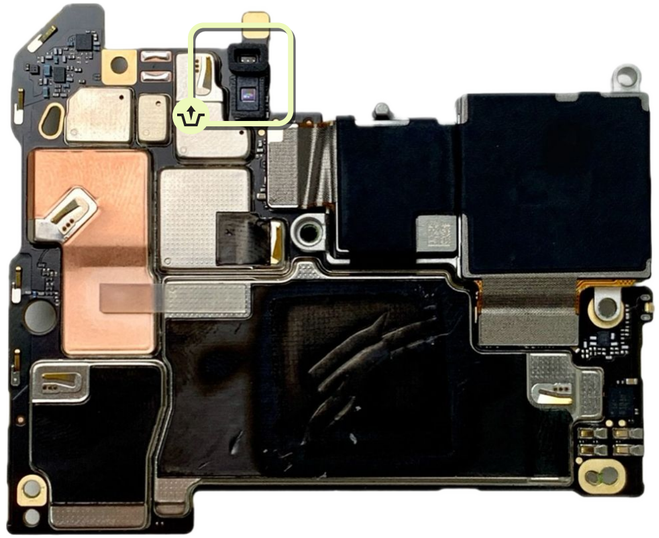
Don't wear gloves when you handle the logic board.

Finished! Need assembly instructions? ➜

Remove the P-sensor foam

Remove the **P-sensor foam** from the **logic board**.

Part: G806-10419-05 (P-sensor foam)



Note

Don't reuse the part.

Note that this step is only to replace the P-sensor foam if it's deformed.

Disassembly instructions

Rear camera

This generation allows you to replace a separate rear camera.

Use caution

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

Prerequisites

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

- **BG sub**
- **mmWave module**
- **Jumpflex**
- **Logic board**

Tools

ESD spudger

ESD tweezers

IPA and cloth

Required parts

Rear camera

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

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Rear camera
G949-00974-00

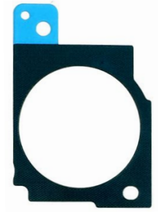
LDAF flex
G949-00969-00

Flam FSS flex
G949-00970-00

FSS flex tape
G806-12859-01

LDAF CPSA main
G806-13190-00

LDAF CPSA UW
G806-13191-00



Flam flex CPSA
G806-13194-00

Disconnect the rear camera

- Detach the **two rear camera connectors** from the **logic board** with the **ESD spudger** as shown in Fig 1.
- Detach the **LDAF connector** from the **logic board** with the **ESD spudger** as shown in Fig 2.

> **Note**
>
> Use the Pixel fish line tool to avoid damage to the components.

Fig 1

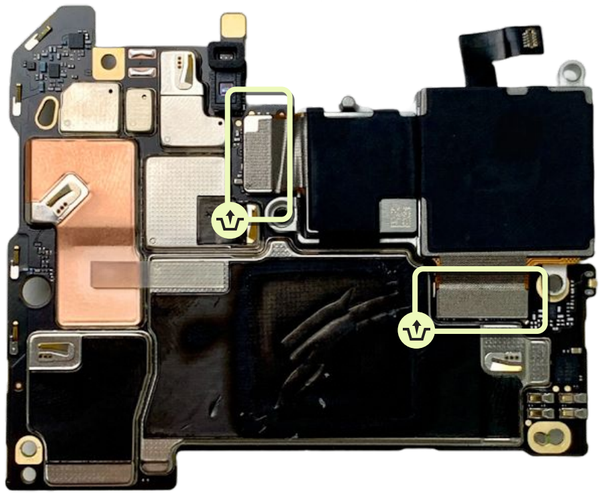
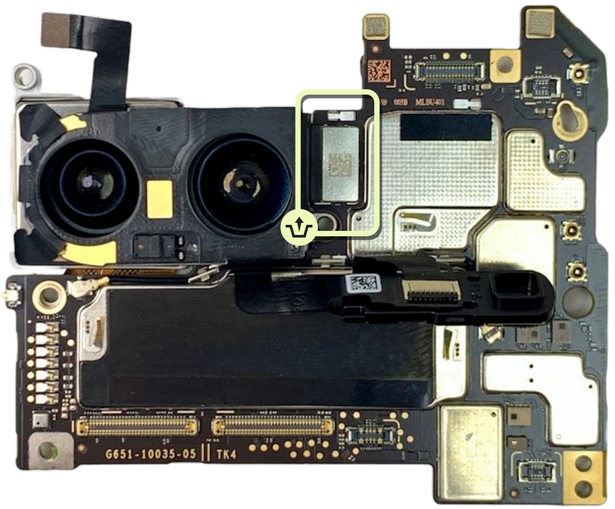


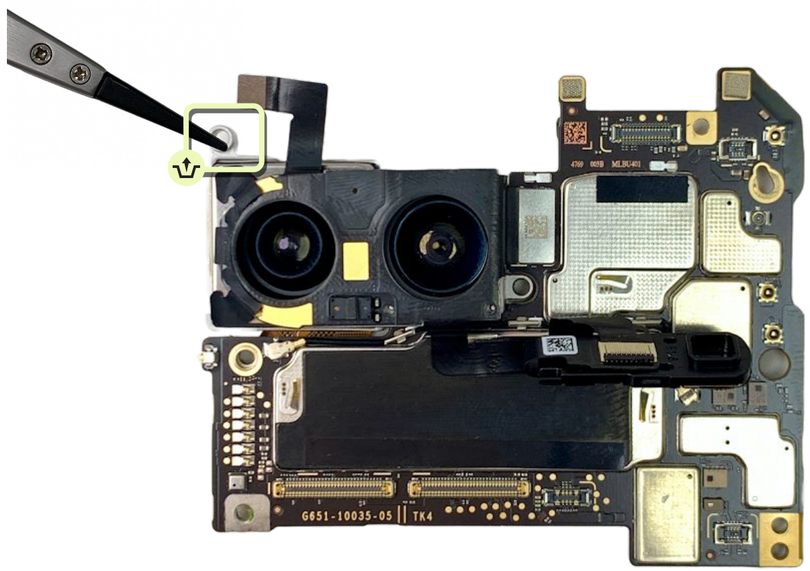
Fig 2



Remove the rear camera

Remove the **rear camera** with **ESD tweezers** from the **bracket hole**.

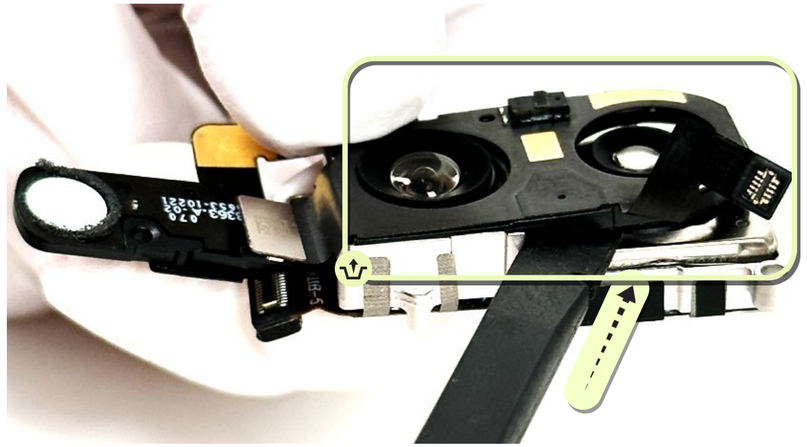
Part: G949-00974-00 (Rear camera)



Remove the LDAF

- There's a gap between the **rear camera** and the **LDAF**.
- Remove the **LDAF** with the **ESD spudger**.

Part: G949-00969-00 (LDAF flex)



Finished! Need assembly instructions? ➜

Remove the FSS flex

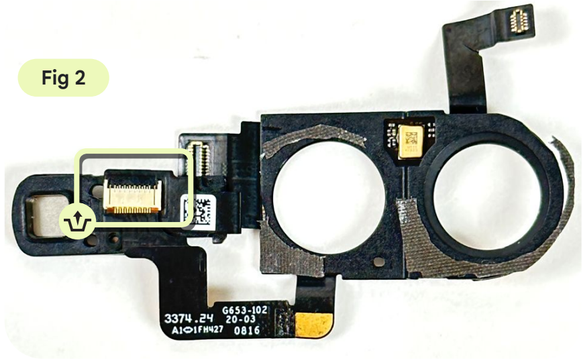
- Tear off the **FSS flex tape** from the **FSS flex** as shown in Fig 1.
- Lift up ZIF lid to unlock and remove the **LDAF flex** then press down the ZIF lid to lock gently as shown in Fig 2.
- Remove the **flam FSS flex** with **ESD tweezers**.

Part: G806-12859-01 (FSS flex tape)

Part: G949-00970-00 (Flam FSS flex)

Fig 1

Fig 2



Disassembly instructions

Front camera

The front camera isn’t fastened to the enclosure, it's simply connected to the logic board.

Use caution

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

Prerequisites

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

- **BG sub**

Tools

ESD spudger

ESD tweezers

IPA and cloth

Required parts

Front camera

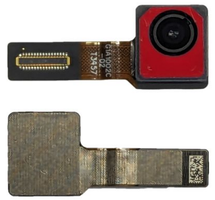
Here's the list of parts for the front camera disassembly:

Reuse indications

- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Front camera

G949-00973-00



FCAM adhesive

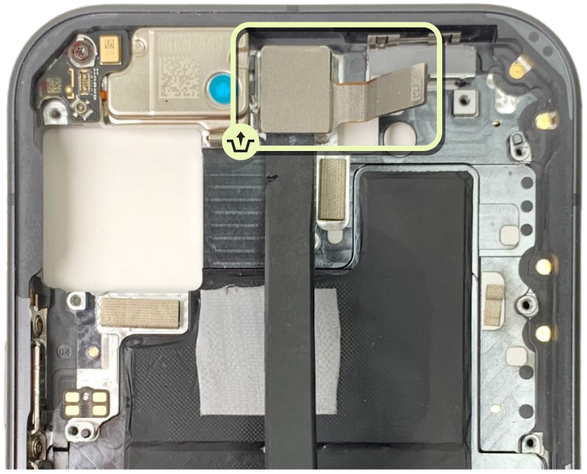
G806-12811-00

Finished! Need assembly instructions? ➜

Remove the front camera

Remove the **front camera** with the **ESD spudger**.

Part: G949-00973-00 (Front camera)



Use caution

Be careful to avoid touching the **front camera lens**.

Disassembly instructions

ANT4 board

Use caution

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

Prerequisites

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

- **BG sub**

Tools

Torx Plus 3IP screwdriver

ESD tweezers

ESD spudger

Required parts

ANT4 board

Here's the list of parts for the ANT4 board disassembly:

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

ANT4 board
G949-00976-00

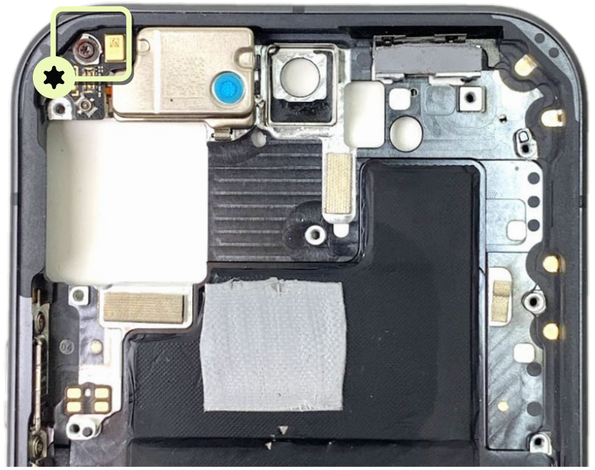
Screw
G250-07204-00

Mic3 mesh
G806-11713-01

Remove the screw

Remove the **ANT4 board screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)



Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

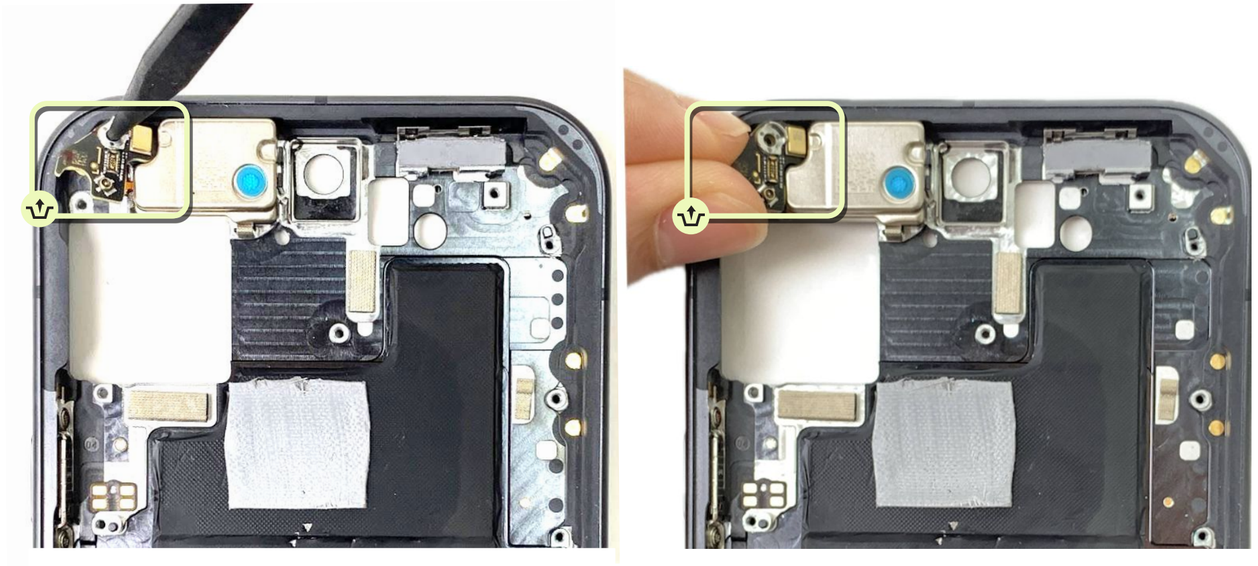
***Don't* reuse the parts.**

Finished! Need assembly instructions? ➜

Remove the ANT4 board

Loosen the **ANT4 board** with the **ESD spudger** and **remove by hand.**

Part: G949-00976-00 (ANT4 board)



Note

Use the **ESD spudger** to avoid damage to the components.

Don't wear gloves when you handle the **ANT4 board**.

Disassembly instructions

Top speaker

The top speaker is used both as an ear speaker to make calls and a second loudspeaker for music and video playback.

Use caution

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

Prerequisites

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

- **BG sub**
- **mmWave module**
- **Jumpflex**
- **Logic board**
- **ANT4 board**

Tools

ESD spudger

ESD tweezers

IPA and cloth

Required parts

Top speaker

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

Reuse indications

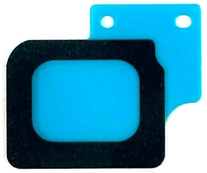
- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Top speaker
G863-00553-00

Top speaker FoF
G806-11577-00

FoF
G806-11578-00

Top SPK PSA
G806-11891-01

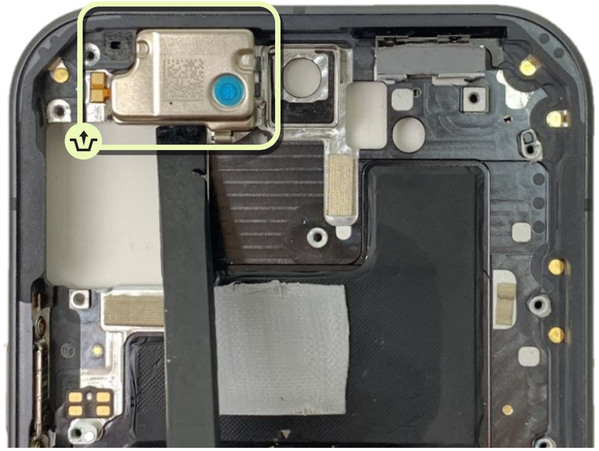


Top speaker clip
G853-02284-00

Remove the top speaker

Insert the **ESD Spudger** underneath the **top speaker** and remove it.

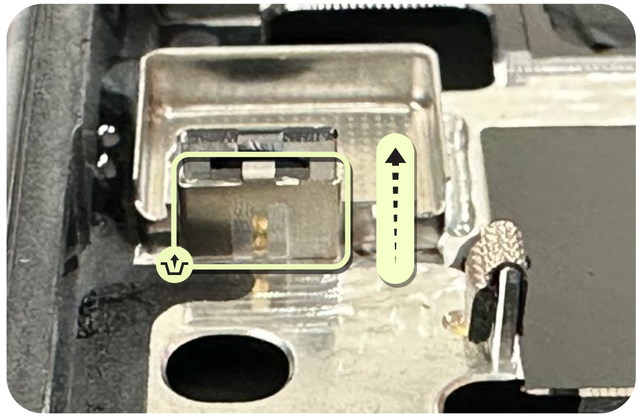
Part: G863-00553-00 (Top speaker)



Remove the top speaker clip

Remove the **top speaker clip** with the **ESD tweezers**.

Part: G853-02284-00 (Top speaker clip)



Finished! Need assembly instructions? ➜

Remove the FoF and the top speaker FoF

Remove the **FoF** and the **top speaker FoF** with the **ESD spudger** as shown in Fig 1 and Fig 2.

Part: G806-11578-00 (FoF)

Part: G806-11577-00 (Top speaker FoF)

Note

Don't reuse the part.

This step is only to replace the FoF and the top speaker FoF if they're deformed.

Fig 1

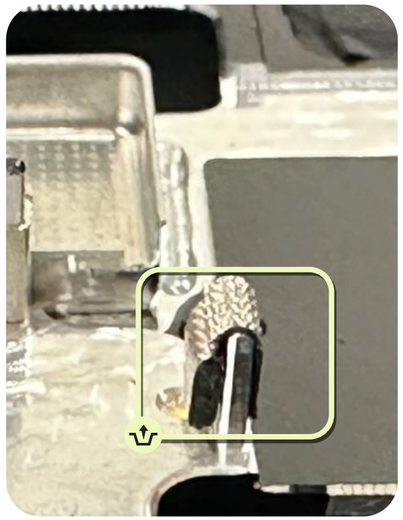
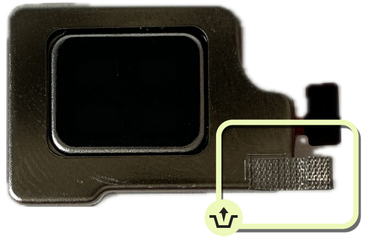


Fig 2



Disassembly instructions

Battery

Use caution

Use caution if you engage in repair.

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

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

Confirm before you proceed

- The battery is fully discharged.
- Inspect the battery if the phone battery shows signs of swelling or damage, or if the phone feels hot or emits a strong odor, *don't* attempt disassembly.
- Take care not to expose the phone or its components to liquids after disassembly.

Disassembly instructions

Battery

It's recommended to use the universal disassembly fixture V3 to fasten the device to remove the battery by pull jacket.
If you use other methods, it may damage the device.

Use caution

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

Prerequisites

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

- **BG sub**
- **mmWave module**
- **Jumpflex**
- **Logic board**

Tools

- Heat plate
- Universal disassembly fixture V3
- Pixel universal base
- Pixel universal holder
- Pixel universal holder limiting block
- Pixel universal supporting rubber
- Pixel universal press plate 12 mm
- Pixel universal press fixture
- Pixel 9 Pro battery press rubber
- Suction bulb
- Small suction cup
- 3M AP111 primer
- Dust-free cotton swabs
- Finger cots
- IPA and cloth

Required parts

Battery

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

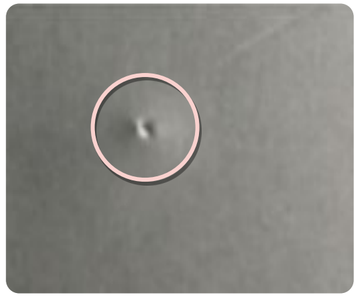
Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Battery

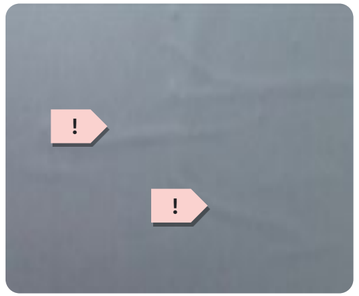
G949-00975-00

Caution ⚠

Unacceptable battery conditions

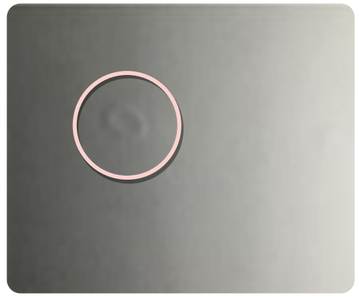


Pouch damage

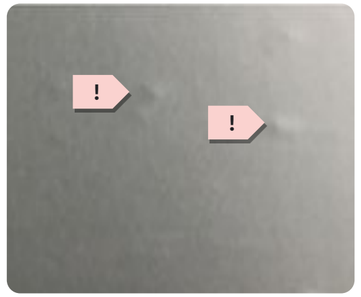


Line protrusion

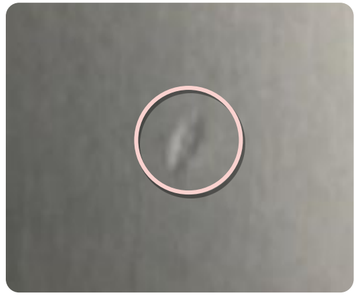
Scratch



Contamination mark

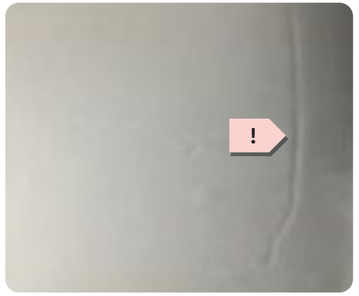


Dot protrusion

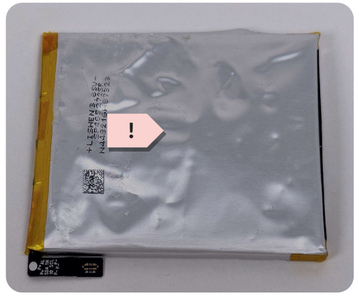


Dent

Bubbling



Imprinted line



Swelling or electrolyte leakage

The pull jacket and the adhesive location

The **indicated area** is where the **pull jacket** and the **adhesive** are located.

Part: G949-00975-00 (Battery)

Unstick the pull jacket

Unstick the **pull jacket** in a sequence with **ESD tweezers**.

Soften the glue

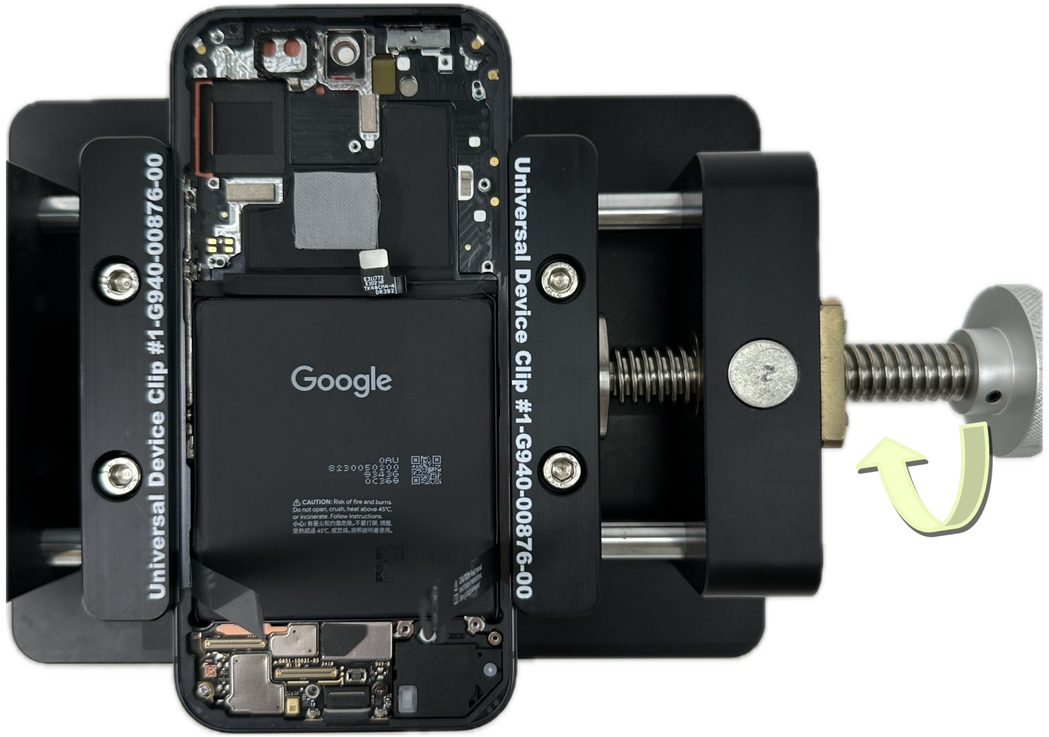
Place the device face down on the **heat plate** set to **158°F (70°C) for 10 minutes** to soften the **battery** adhesive evenly.

Use caution

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

Secure the device

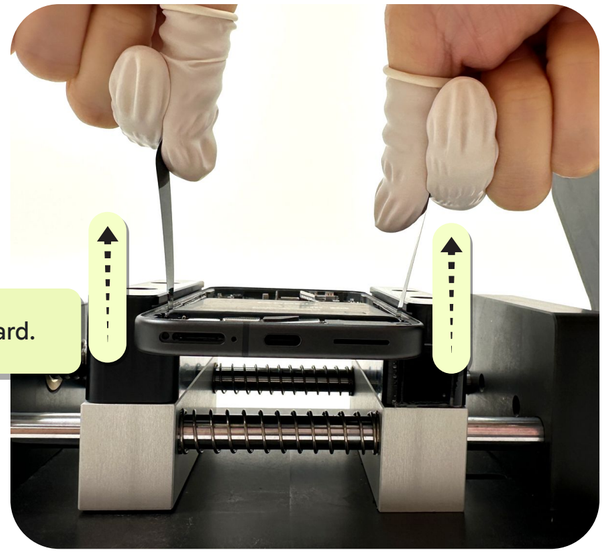
- Place the device on the **fixture** and adjust so that the device is centered.
- Turn the handle clockwise to lock the device in position.



Lift the battery

- Wear the **ESD finger cots** to increase friction to prevent the pull jacket from slipping.
- Pull both sides of the jacket perpendicularly to remove the **battery**.
- Gently remove the **battery** and store it safely.

Part: G949-00975-00 (Battery)



Use caution

The battery is easier to remove if you lift the **battery** as soon as the device leaves the heat plate before adhesive curing.

Keep small screws and sharp objects away from the **battery**.

***Don't* reuse the part.**

Finished! Need assembly instructions? ➜

Clean the residue

- Clean any residue in the **battery** area with the **ESD spudger**.
- Apply **IPA** with a **dust-free cloth**.

Note

Clean residue after you remove the **battery** immediately as it's easier to clean it.

Disassembly instructions

Chin board

The chin board communicates with the components such as the display, USB port, and SIM card.
Be aware that a replacement SIM tray may not have the IMEI number present.

Use caution

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

Prerequisites

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

- **Display**
- **BG sub**
- **Jumpflex**

Tools

Torx Plus 3IP screwdriver

ESD spudger

ESD tweezers

SIM card ejection pin

Required parts

Reuse indications

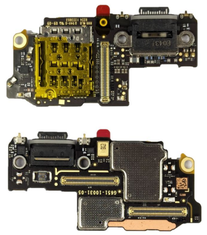
- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Chin board

Here's the list of parts for the chin board disassembly:

Chin board

G949-00968-00



SIM tray

Multiple part numbers

Screw

G250-07189-00

Screw

G250-07191-00

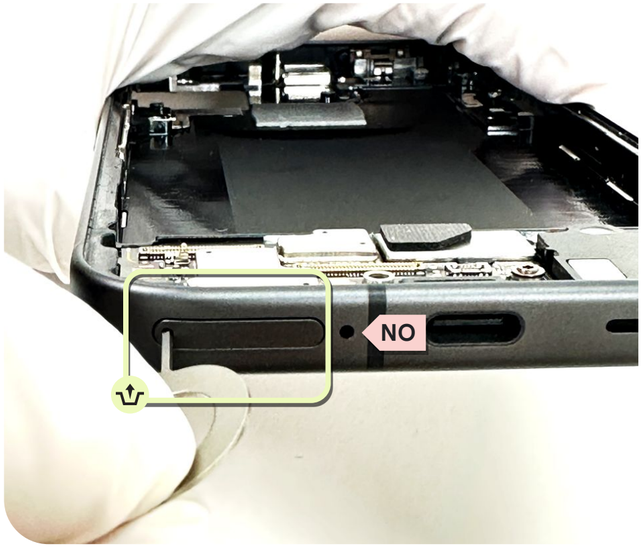
Remove the SIM tray

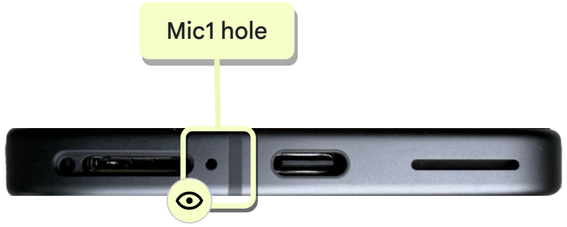
Remove the **SIM tray** with the **SIM card ejection pin**.

Part: Multiple part numbers (SIM tray)

Use caution

Be careful to avoid scratching the enclosure.



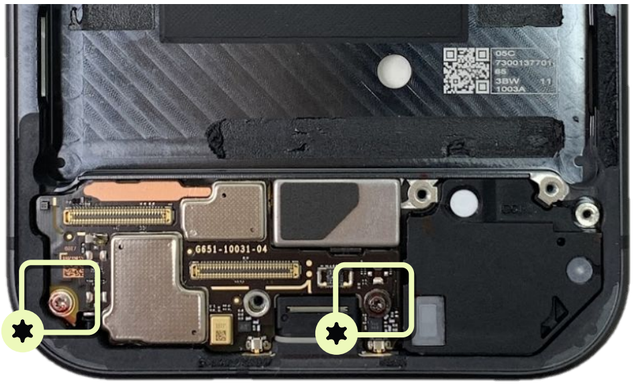


Remove the screws

Remove **two chin board screws** with the **torx plus 3IP screwdriver**.

Part: G250-07189-00 (Screw)

Part: G250-07204-00 (Screw)



Note

***Don't* reuse the part.**

Finished! Need assembly instructions? ➜

Remove the chin board

Push the **chin board** by hand from the CG side and remove the **chin board**.

Part: G949-00968-00 (Chin board)

Use caution

Be careful to avoid damage to the components on the chin board.

Note

Don't wear gloves when you handle the chin board.

Disassembly instructions

Bottom speaker

The **bottom speaker** is adhered to the **enclosure**.
Be careful not to damage the speaker membrane.

Use caution

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

Prerequisites

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

- **Display**
- **BG sub**
- **Jumpflex**
- **Chin board**

Tools

ESD spudger

ESD tweezers

Dust-free cotton swabs

IPA and cloth

Sankol lubricant CFD 409Z_V2

Required parts

Bottom speaker

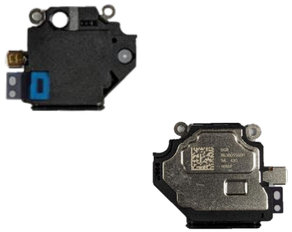
Here's the list of parts for the bottom speaker disassembly:

Reuse indications

- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Bottom speaker

G863-00556-00



Bottom speaker adhesive

G806-12793-00

Finished! Need assembly instructions? ➜

Remove the bottom speaker

Push the **bottom speaker** by hand from the CG side and remove it.

Part: G863-00556-00 (Bottom speaker)

Disassembly instructions

Vibrator

The vibrator is adhered to the enclosure.
If it's removed, replace it with a new PSA and conductive tape.

Use caution

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

Prerequisites

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

- **Display**
- **BG sub**
- **Jumpflex**
- **Chin board**

Tools

ESD spudger

Dust-free cotton swabs

Sankol lubricant CFD 409Z_V2

Required parts

Vibrator

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

Reuse indications — Reusable without reclaim | Reusable with reclaim | Not reusable after disassembly

Vibrator
G710-05528-01

Vibrator pad
G806-10332-01

Vibrator adhesive
G806-13155-00

Soften the glue

Place the device face down on the **heat plate** set to **158°F (70°C) for 2 minutes** to soften the **vibrator adhesive** evenly.

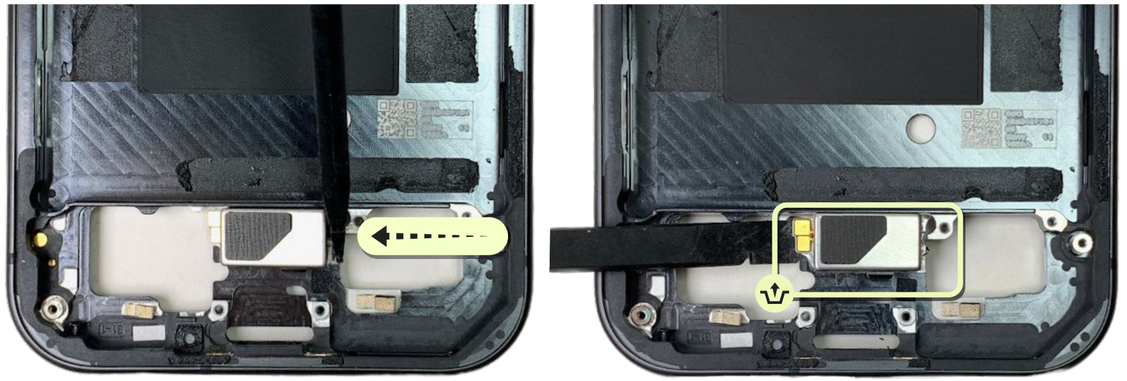
Use caution

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

Remove the vibrator

- Insert the **ESD spudger** to move the **vibrator** to the left.
- Insert the **ESD spudger** under the left end to lift the **vibrator** and remove it.

Part: G710-05528-01 (Vibrator)



Finished! Need assembly instructions? ➜

Remove the vibrator pad

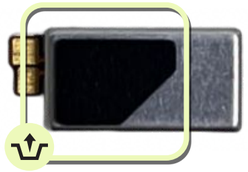
Remove the **vibrator pad** with the **ESD spudger**.

Part: G806-10332-01 (Vibrator pad)

Note

Don't reuse the part.

Note that this step is only to replace the vibrator foam if it's deformed.



Disassembly instructions

Enclosure

If you reuse the enclosure, ensure that any thermal paste or adhesive residue is completely removed.

Use caution

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

Prerequisites

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

- **Display**
- **BG sub**
- **mmWave module**
- **Jumpflex**
- **ANT4 board**
- **Logic board**
- **Rear camera**
- **Front camera**
- **Top speaker**
- **Battery**
- **Chin board**
- **Bottom speaker**
- **Vibrator**

Tools

Dust-free cotton swabs

IPA and cloth

Required parts

Enclosure

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

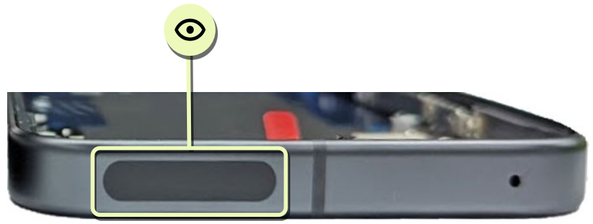
Reuse indications

- Reusable without reclaim
- Reusable with reclaim
- Not reusable after disassembly

Enclosure

Multiple part numbers

Enclosure difference



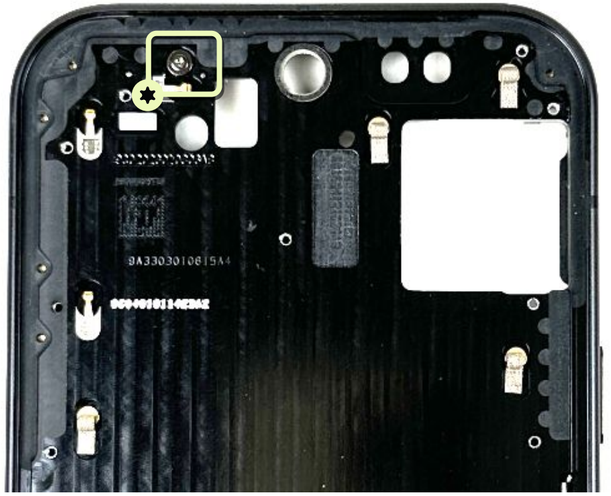
mmWave

Sub6

Remove the screw

Remove the **mmWave heatsink screw** with the **torx plus 3IP screwdriver**.

Part: G250-07191-00 (Screw)



Use caution

Be careful when you use the screwdriver.
***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

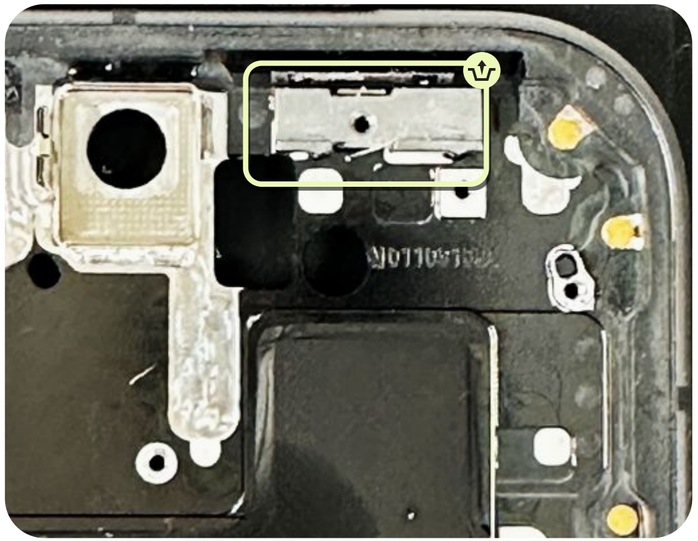
***Don't* reuse the parts.**

Finished! Need assembly instructions? ➜

Remove the mmWave heatsink

Remove the **mmWave heatsink** with **ESD tweezers**.

Part: G730-07918-00 (mmWave heatsink)



Pixel 9 repair manual

Assembly

Enclosure

Bottom speaker

Vibrator

Chin board

Display

Battery

Top speaker

Rear camera

Logic board

ANT4 board

Front camera

mmWave module

Jumpflex

BG sub

Assembly instructions

Enclosure

Reuse the enclosure

- Inspect the **enclosure** for adhesive residue.
- It's recommended to carefully and slowly peel off the adhesive in one piece by hand.
- Use the **ESD spudger** to clean the residue glue off the **enclosure**.
- Clean any **SOC TIM** residue from the **enclosure** with the **ESD spudger**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: Multiple part numbers (Enclosure)

Use caution

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

Note

Place the device on a **heat plate** at 140°F (60°C) for remove adhesive easily.

Don't heat more than 10 mins.

If **SOC TIM** is undamaged and not moved, it can be reused.

Assemble the mmWave heatsink

- Clean any **mmWave TIM** residue from the **mmWave heatsink** with the **ESD spudger** as shown as Fig 1.
- Assemble the **mmWave heatsink** to the **enclosure**, and align the two holes as shown in Fig 2.
- Hold the **mmWave heatsink** by hand as shown in Fig 3.
- Fasten the **heatsink screw** with the **torx plus 3IP screwdriver** from the **CG side** as shown in Fig 4.

Part: G730-07918-00 (mmWave heatsink)

Part: G250-07191-00 (Screw)

Note

This step is only present in the mmWave SKU, don't assemble this part in sub6.

Torque force: 1.0 ± 0.03 kgf-cm

Fig 1

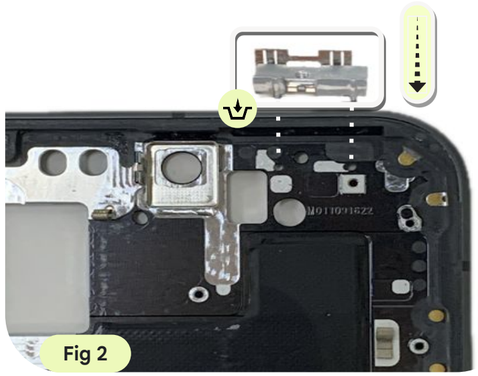


Fig 2

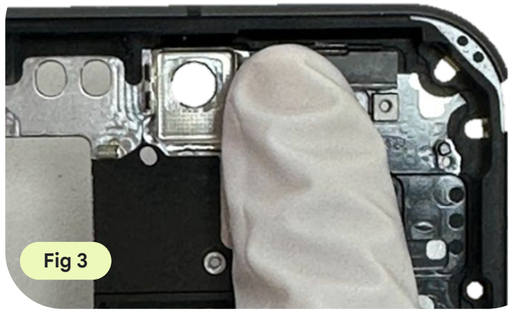


Fig 3

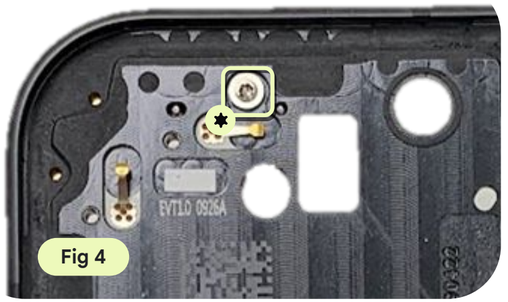


Fig 4

Assemble the top speaker clip

Assemble the **top speaker clip** to the **enclosure** with **ESD tweezers**.

Part: G853-02284-00 (Top speaker clip)

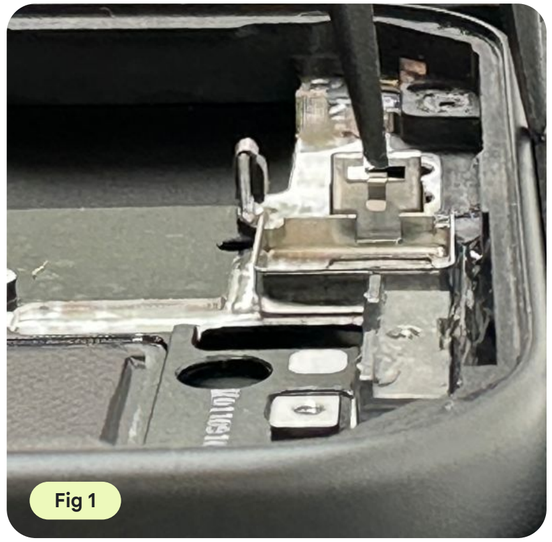


Fig 1

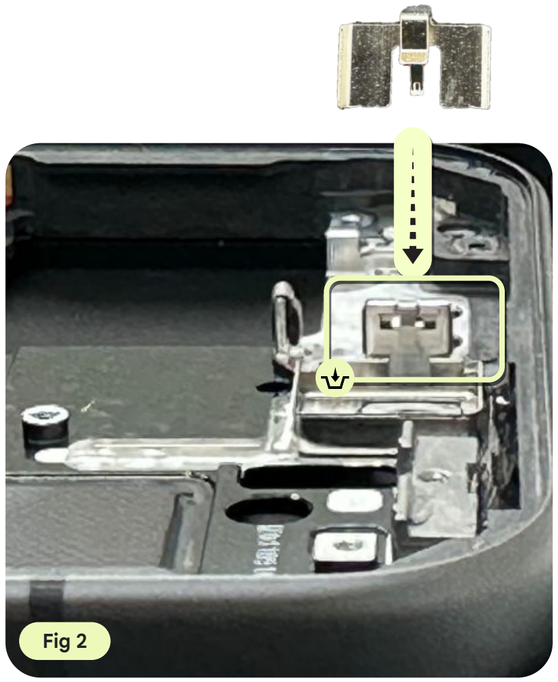


Fig 2

Assembly instructions

Bottom speaker

Clean the enclosure

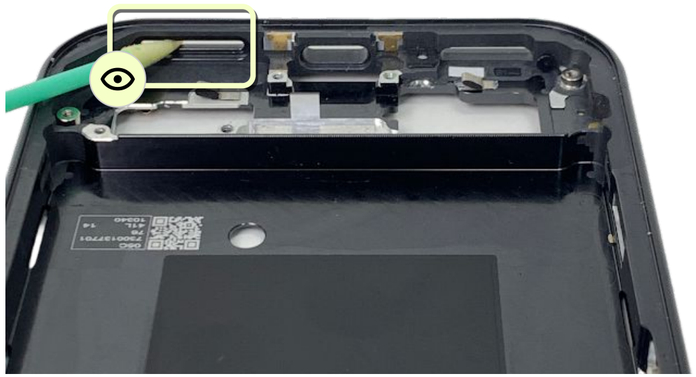
- Clean the residue on the **bottom speaker pad** area of the **enclosure** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: Multiple part numbers (Enclosure)

Lubricate the area

Apply **Sankol lubricant CFD 409Z_V2** with a **dust-free cotton swab** around the **bottom speaker slot**.

Part: Multiple part numbers (Enclosure)



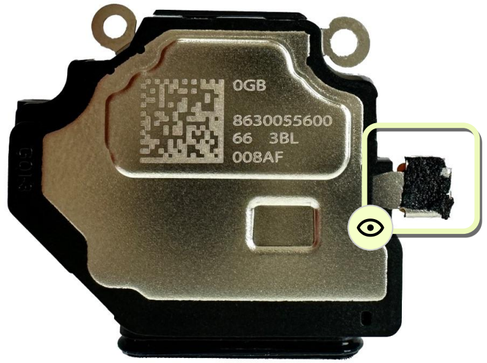
Note

Bend the **dust-free cotton swab** to go inside the slot for thorough application.

Reuse the bottom speaker

- Clean the residue on the **bottom speaker** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G863-00556-00 (Bottom speaker)

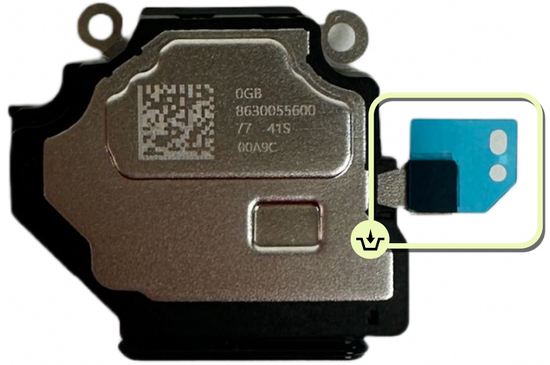


Attach the bottom speaker adhesive

Attach **bottom speaker adhesive** to the **bottom speaker pad** with ESD tweezers.

Part: G806-12793-00 (Bottom speaker adhesive)

Part: G863-00556-00 (Bottom speaker)



Assemble the bottom speaker

- Tear off the liner and slot the **bottom speaker** into the **enclosure** as shown in Fig 1.
- Insert the **bottom speaker** at an angle as shown in Fig 2.

Part: G863-00556-00 (Bottom speaker)

Note

Make sure that the bottom speaker goes under the enclosure rim.

Fig 1

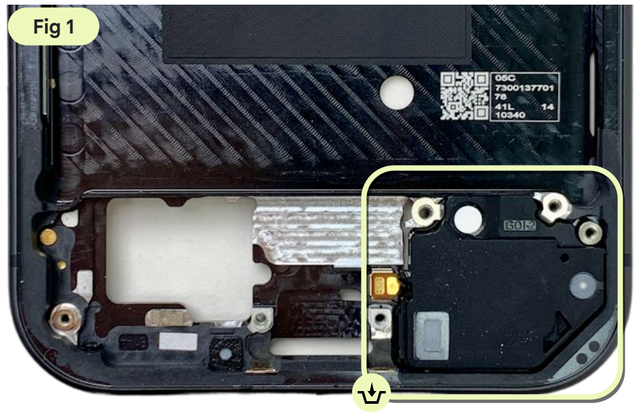


Fig 2

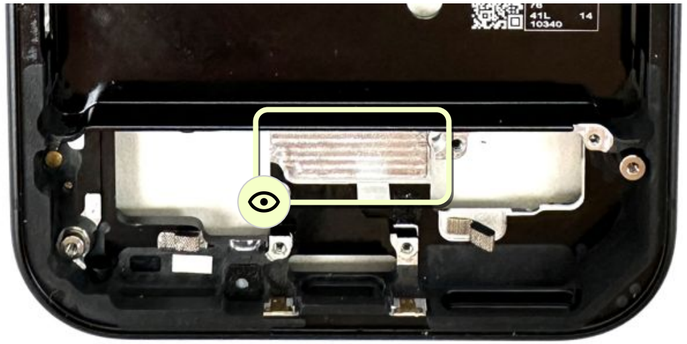
Assembly instructions

Vibrator

Clean the enclosure

- Clean the residue on the **vibrator** area of the **enclosure** with the **ESD spudger**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

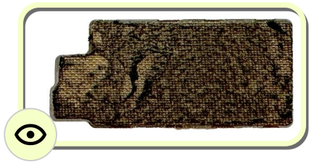
Part: Multiple part numbers (Enclosure)



Reuse the vibrator

- Clean the residue on the **vibrator** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface if needed.

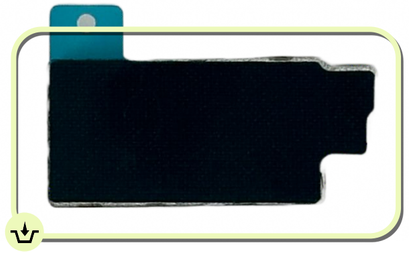
Part: G710-05528-01 (Vibrator)



Attach the vibrator adhesive

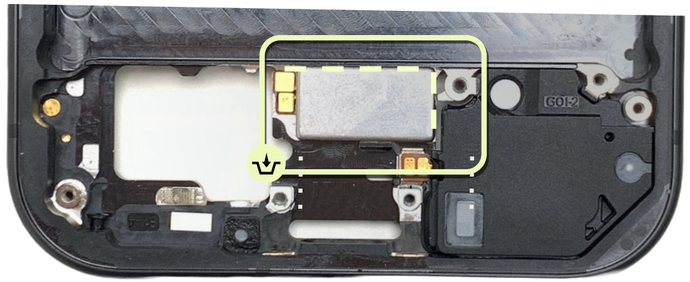
Attach the **vibrator adhesive** to the **vibrator** by the outline.

Part: G806-13155-00 (Vibrator adhesive)



Assemble the vibrator

- Tear off the adhesive liner.
- Align the **vibrator** with the outline and assemble the **vibrator** to the **enclosure**.
- Press for **5 seconds** manually.

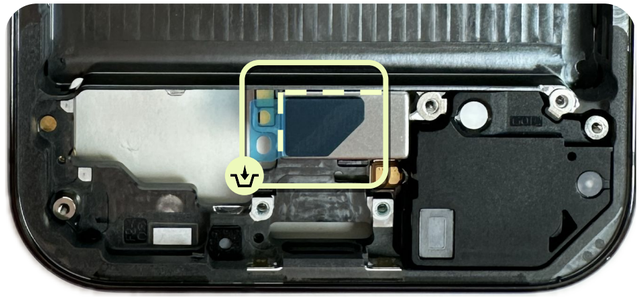


Part: G710-05528-01 (Vibrator)

Attach the vibrator pad

Attach the **vibrator pad** to the **vibrator**, and align the outline.

Part: G806-10332-01 (Vibrator pad)



Use caution

If the vibrator pad isn't damaged or broken, it can be reused.

Assembly instructions

Chin board

Check the chin board

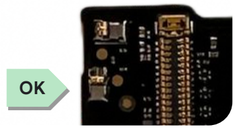
Use caution

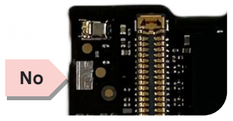
Before you assemble the MLB, check for spring deformation.

Pay **extra attention** to the springs during assembly to avoid damage to them.

General rules

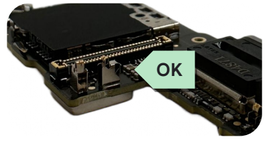
Bird view

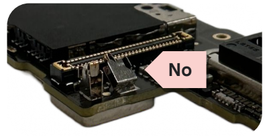




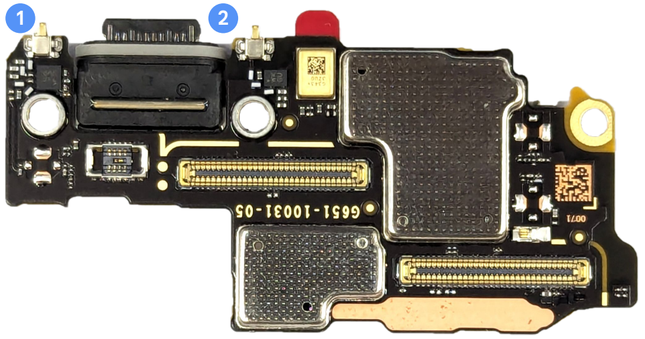
Missing

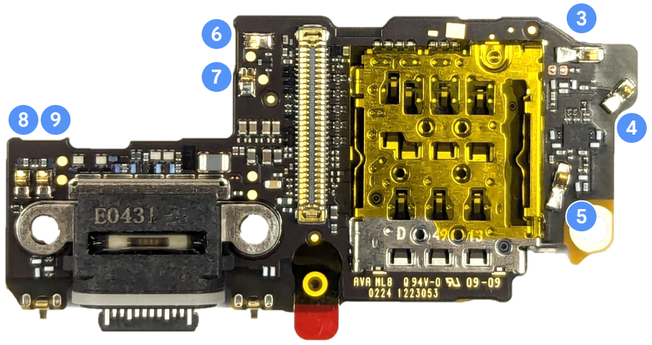
Side view





Broken





Assemble the chin board

- Peel off the **mic protective liner** before assembling **chin board** as shown in Fig 1.
- Assemble the **chin board** to the **enclosure** at an angle as shown in Fig 2.

Part: G949-00968-00 (Chin board)

Use caution

Be careful to avoid damage to the components on the **chin board**.

Make sure that **all liners** are removed when you replace it with a new **enclosure** or a **chin board**.

Note

Don't wear gloves when you handle the **chin board**.

Only need to remove the mic protective liner when replace the new **chin board**.

Fig 1

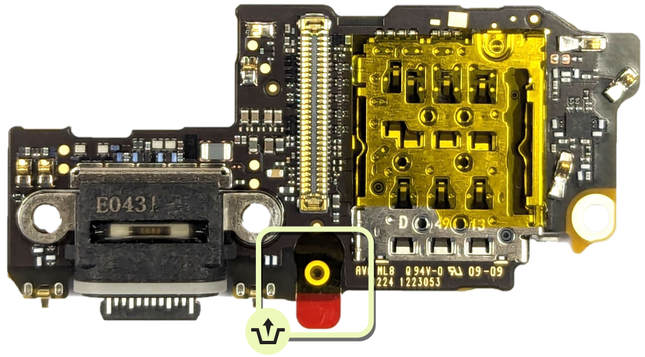
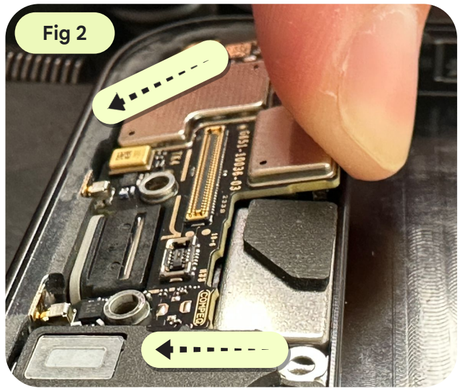
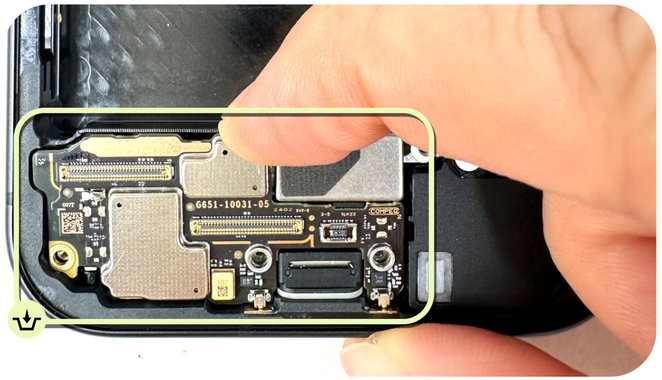


Fig 2





Check the seating

- Press the **chin board** down. It should sit against the retaining wall as shown in Fig 1 and Fig 2.
- Make sure that the **two springs** are in contact with the metal sheet from the **enclosure** as shown in Fig 3.

Fig 1

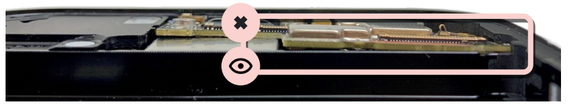


Fig 2

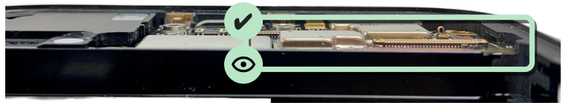
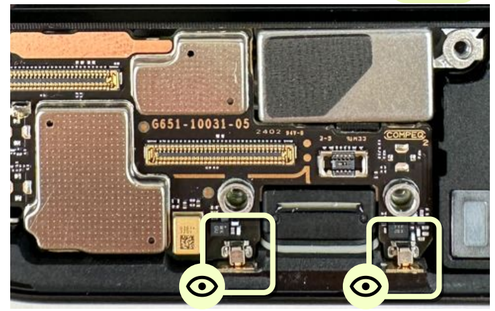


Fig 3



Insert the SIM tray

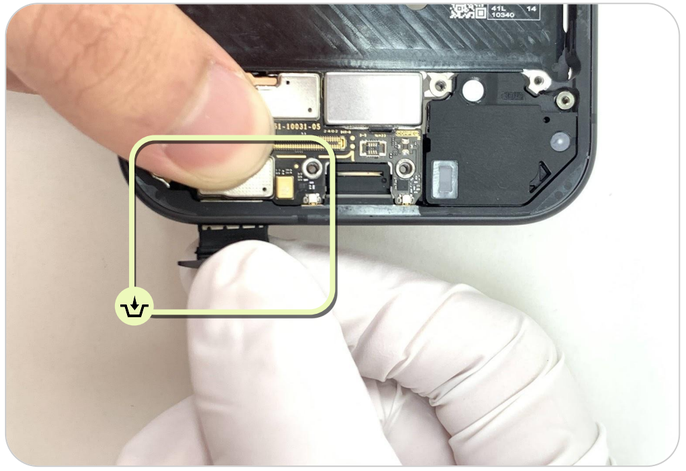
Lightly hold the **chin board** and insert the **SIM tray**.

Use caution

Be careful to avoid damage to the components on the chin board.

Note

Don't wear gloves when you handle the chin board.

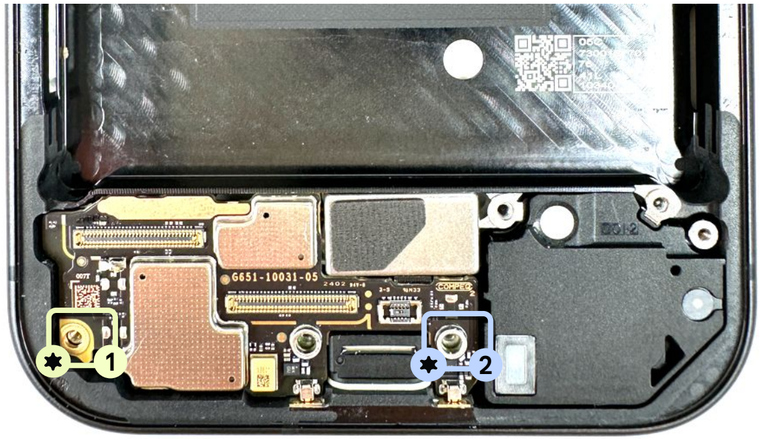


Fasten the screws

Fasten the **two chin board screws** in a sequence with the **torx plus 3IP screwdriver**.

Part: G250-07189-00 (Screw)

Part: G250-07204-00 (Screw)



1: G250-07189-00

2: G250-07204-00

Use caution

Be careful when you use the screwdriver.

Incorrect use of the screwdriver could cause injury to you or others or the product.

Note

Torque force: 1.5 ± 0.03 kgf-cm

Assembly instructions

Display

Check the enclosure

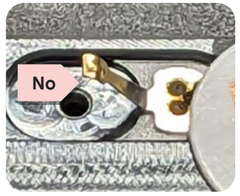
Use caution

Before you assemble the display, check for the **enclosure's springs** and the **FoF** deformation.

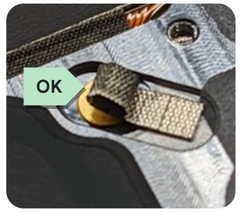
Pay **extra attention** to the springs during assembly to avoid damage to them.

General rules

Spring



FoF



Reuse the enclosure

- Inspect the **enclosure** for adhesive residue.
- It's recommended to carefully and slowly peel off the adhesive by hand in one piece.
  Use the **ESD spudger** to clean it.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: Multiple part numbers (Enclosure)

Use caution

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

Note

Place the device on a **heat plate** at 140°F (60°C) for remove adhesive easily.

Don't heat more than 10 mins.

Apply the primer on the enclosure

- Apply **IPA** around the edges of the **enclosure** with a **dust-free cotton swab**.
- Apply **3M 111 primer** around the edges of the **enclosure** with a **dust-free cotton swab** for one round.

Part: Multiple part numbers (Enclosure)

Use caution

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

Assembly instructions

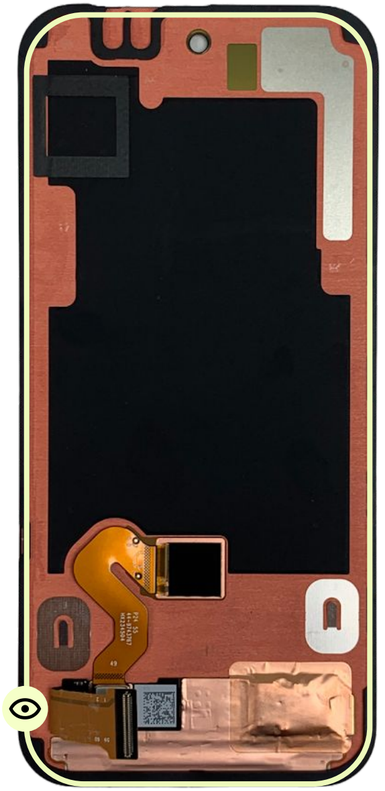
Display

Solution 1: Reuse the display

Reuse the display

- Inspect the **display** for adhesive residue.
- It's recommended to carefully and slowly peel off the adhesive by hand in one piece.
  Use the **ESD spudger** to clean it.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G949-00947-00 (Display module)



Use caution

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

Note

Place the device on a **heat plate** at 140°F (60°C) for remove adhesive easily.

Don't heat more than 10 mins.

Solution 1: Re-using Display

Remove Liner

Slowly remove the **liner** from the **display adhesive**.

Part: G806-12940-00 (Display adhesive)

Use caution

Don't touch the **adhesive**.

If it gets dirty, change for another one.

Solution 1: Re-using Display

Align Adhesive

Place the **adhesive** according to the outline of the **enclosure**.

Use caution

Don't touch the **adhesive**.

If it gets dirty, change for another one.

Pay **extra attention** to the springs during assembly to avoid damage to them.

Note

Make sure that the **adhesive** fits in the **enclosure** as shown in Fig 2.

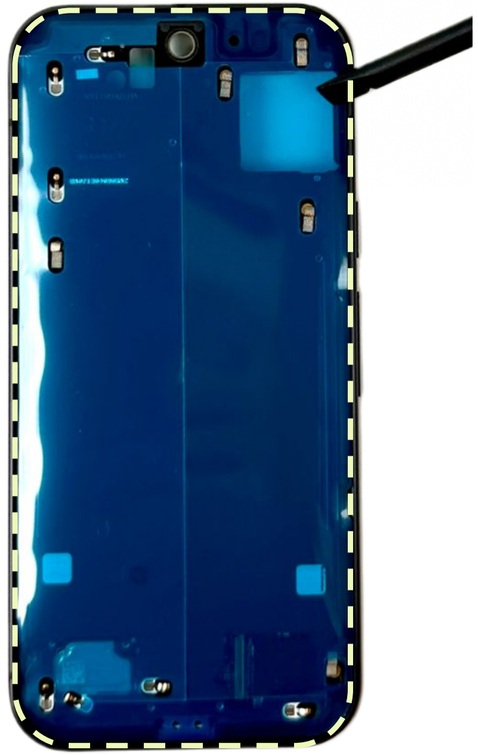
Fig 1

Fig 2

Solution 1: Re-using Display

Activate the adhesive (first time)

Gently press around the edges with the **ESD spudger** to enhance the bond between the **enclosure** and the **adhesive**.



Solution 1: Re-using Display

Remove Liner (first layer)

Pull the tab carefully to remove the **first layer**.
Avoid lifting the adhesive.

Use caution

***Don't* remove the second layer of the liner.**

Solution 1: Re-using Display

Activate the adhesive (second time)

Gently press around the edges with the **ESD spudger** to enhance the bond between the **enclosure** and the **adhesive**.

Solution 1: Reuse the display

Apply the primer on the display

- Apply **IPA** around the edges of the **display module** with a **dust-free cotton swab**.
- Apply **3M 111 primer** around the edges of the **display module** with a **dust-free cotton swab** for one round.

Part: G949-00947-00 (Display module)

Use caution

When you apply IPA and AP111 primer to the display module, avoid touching the copper and the sponge areas.

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

Solution 1: Reuse the display

Connect the display

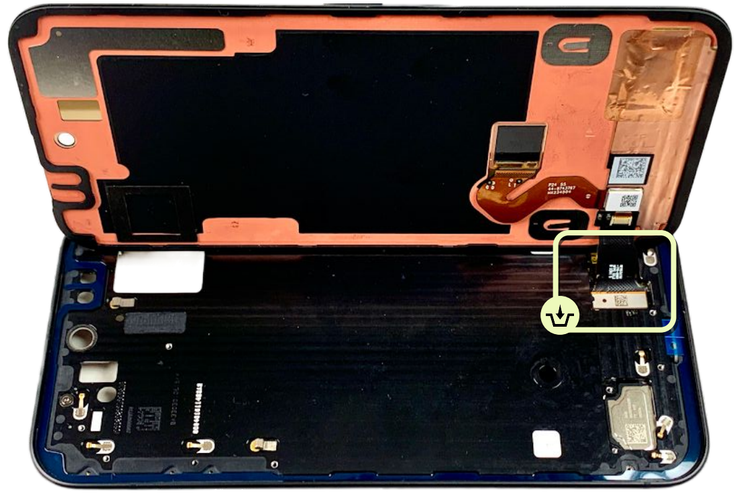
- Use the **suction bulb** to prop up the **display module**.
- Connect the **display flex** to the **chin board** by applying even pressure across the connector to ensure it's fully engaged.

Use caution

Pressure should be applied straight downward on the connector, not against any part of the flex.

Note

Avoid damage to the springs especially near where the display contacts the enclosure.

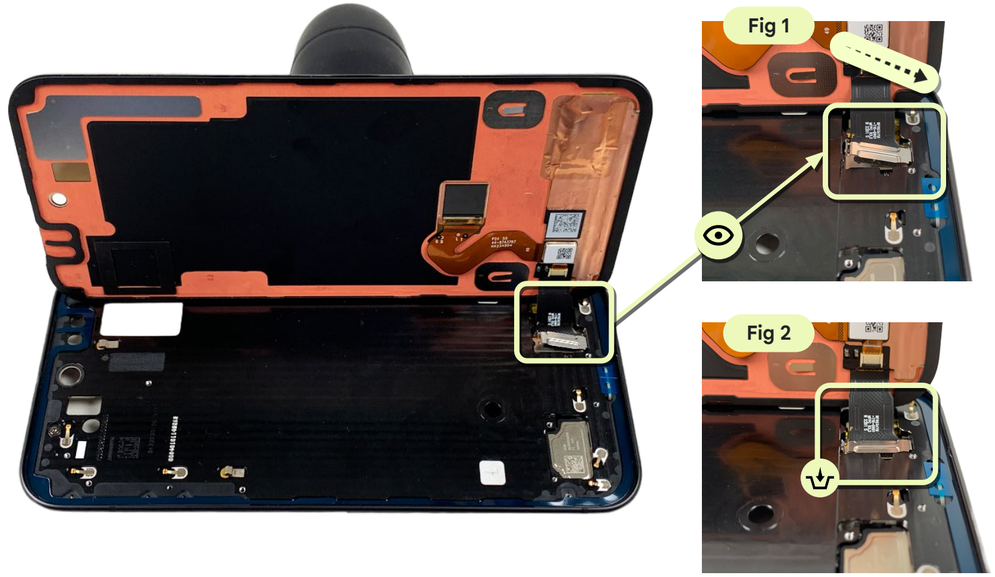


Solution 1: Reuse the display

Assemble the display cowling

- Insert a **display cowling** to the **right side** as shown in Fig 1.
- Assemble it thoroughly over the **connector** as shown in Fig 2.

Part: G730-08475-06 (Display cowling)



Solution 1: Reuse the display

Remove the liner

Carefully peel the **PSA liner** off with **ESD tweezers**.

Solution 1: Reuse the display

Attach the display

- Attach the **display module** onto the **enclosure** vertically.
- Press around the **display bezel** with both hands.

Use caution

Press the center of the top side first, followed by two longer sides and the bottom side.

When you only repair the **display**, ensure that you follow the press steps on the following two **pages**.

Assembly instructions

Display

Solution 2: Use a new display sub

Solution 2: Use a new display sub

Remove the film

Remove all the **films** on the **display module**.

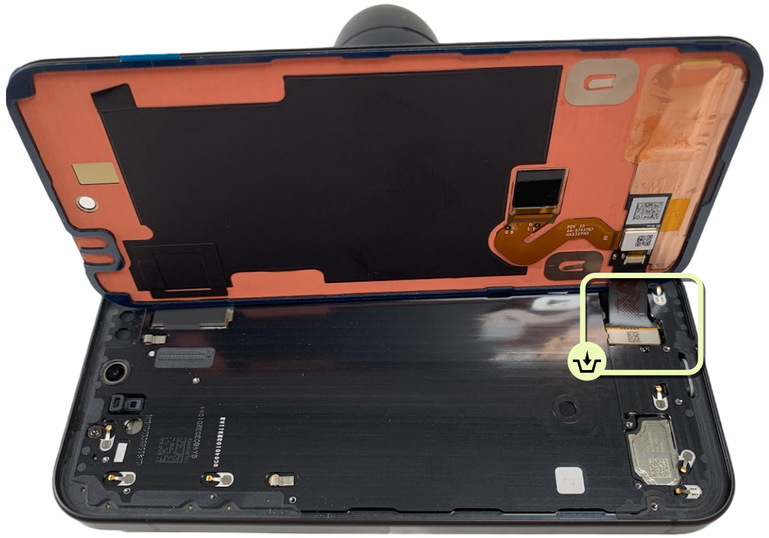
Use caution

Make sure that all the **films** are removed.

Solution 2: Use a new display sub

Connect the display

- Use the **suction bulb** to prop up the **display module**.
- Connect the **display flex** to the **chin board** by applying even pressure across the connector to ensure that it's fully engaged.



Use caution

Avoid scratching outside of the display flex against the **enclosure**.

Pressure should be applied straight downward on the connector, not against any part of the flex.

Note

Avoid damage to the springs especially near where the display contacts the enclosure.

Solution 2: Use a new display sub

Assemble the display cowling

- Insert a **display cowling** to the **right side** as shown in Fig 1.
- Assemble the **display cowling** thoroughly over the **connector** as shown in Fig 2.

Part: G730-08475-06 (Display cowling)

Use caution

Avoid scratching the outer surface of the flex against the **enclosure**.

Solution 2: Use a new display sub

Remove the liner

Carefully peel the **PSA liner off** with **ESD tweezers**.

Solution 2: Use a new display sub

Attach the display

- Attach the **display module** onto the **enclosure** vertically.
- Press around the **display bezel** with both hands.

Use caution

Press the center of the top side first, followed by the two longer sides and the bottom side.

When you only repair the **display**, ensure that you follow the press steps on the following two **pages**.

Assembly instructions

Battery

Apply the primer on the enclosure

- Before installation, remove any debris or loose screws from the **enclosure**.
- Apply **IPA** on the **enclosure** with a **dust-free cotton swab**.
- Apply the **3M 111 primer** (per product instructions) on the **enclosure** with a **dust-free cotton swab** for one time.

Part: Multiple part numbers (Enclosure)

Use caution

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

Align the battery

- Place the **0.15 mm feeler gauge** against the **right wall** to maintain the gap.
- Use a **suction bulb** to pick up the **battery** and remove the liner.
- Align the **battery** with the dashed lines.
- Gently press the **battery** down with the **suction bulb**.

Part: G949-00975-00 (Battery)

Use caution

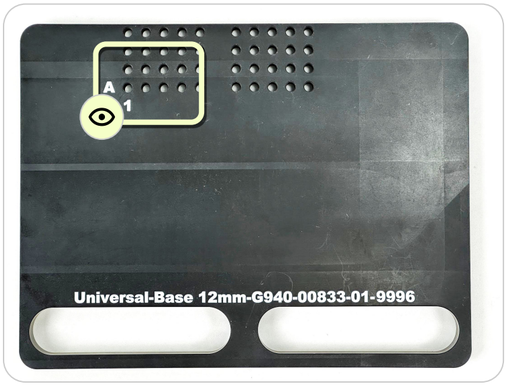
***Don't* skip this step.**

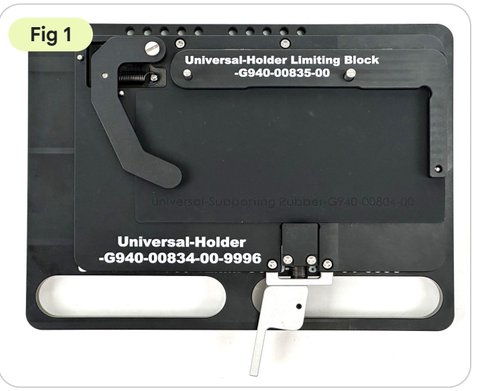
Battery spacing is critical for product performance.

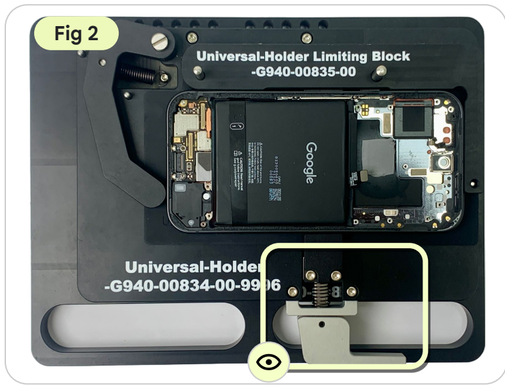
Use extra care to align correctly.

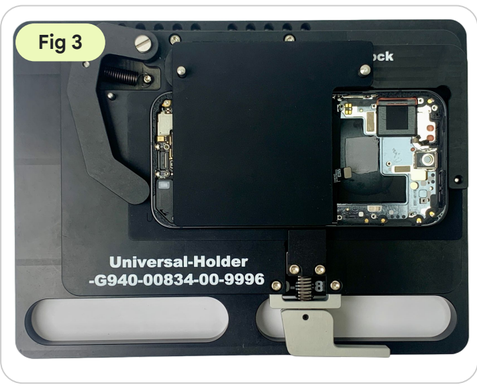
Prepare to press

- Place the **universal holder** in the **C4 position** on the **universal base.**
- Place the **universal supporting rubber** and the **universal holder limiting block** on the **universal holder** as shown in Fig 1.
- Place the **device** and **lock** it as shown in Fig 2.
- Place the **Pixel 9-battery press rubber** as shown in Fig 3.









Note

Make sure that the Pixel universal holder is in the right position. Ensure that the display is already assembled.

Prepare to press

- Place the **universal press plate 12 mm** on the **universal base** as shown in Fig 1.
- Place the stack in the **Pixel universal press fixture**.
- Press the handle down for **10 seconds**.
- Restore the handle to the original position and remove the device.

⚠ Use caution

Pinch point.

Keep hands clear during operation.

Fig 1

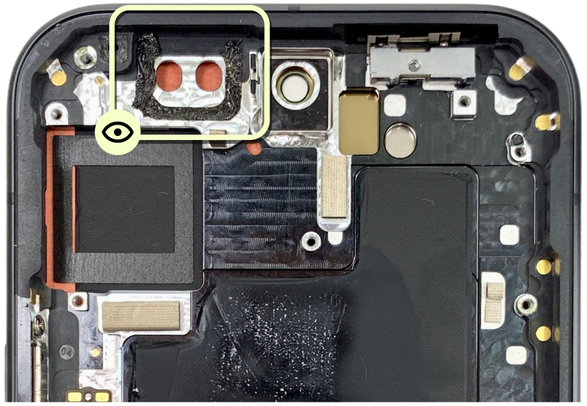
Assembly instructions

Top speaker

Clean the enclosure

- Clean the residue on the **enclosure** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

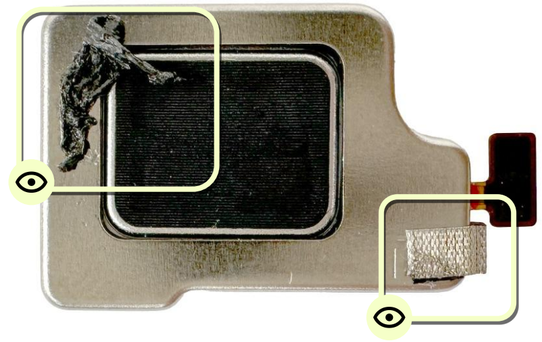
Part: Multiple part numbers (Enclosure)



Reuse the top speaker

- Clean the residue on the **top speaker** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

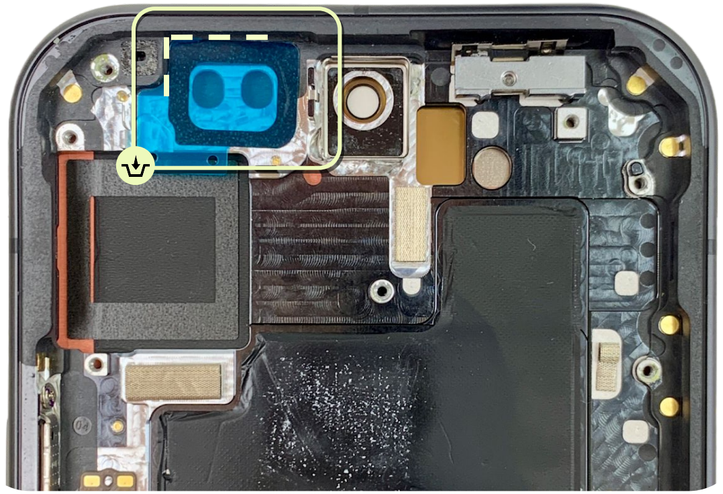
Part: G863-00553-00 (Top speaker)



Attach the top speaker PSA

Attach the **top speaker PSA** to the **enclosure** and align the dotted line with **ESD tweezers**.

Parts: G806-11891-01 (Top speaker PSA)



Attach the FoF

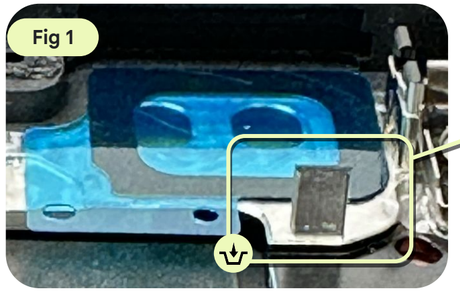
- Align from the **dashed line** as shown in Fig 1.
- Attach the **FoF** with **ESD tweezers** as shown in Fig 2.

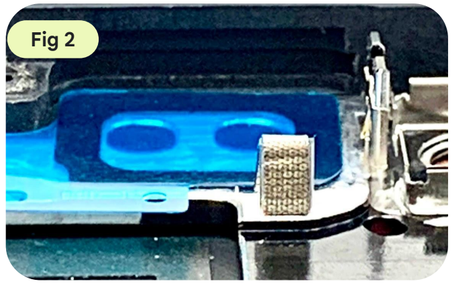
Parts: G806-11578-00 (FoF)

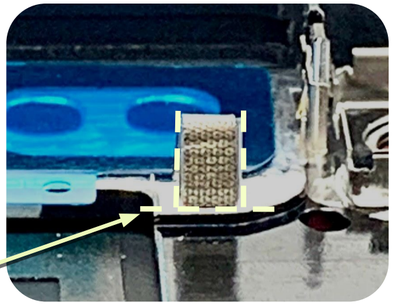
Note

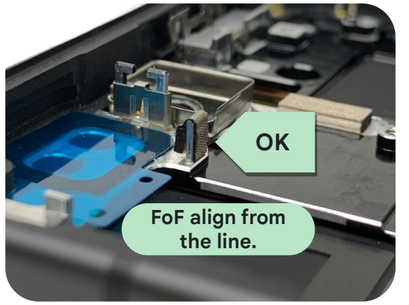
Undamaged **FoF** can be reused.

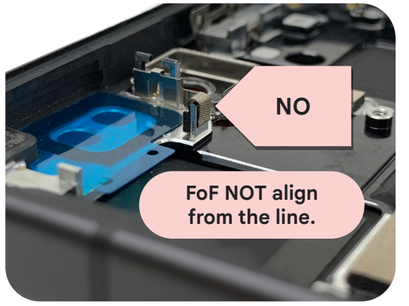
Otherwise, they may need to be replaced.







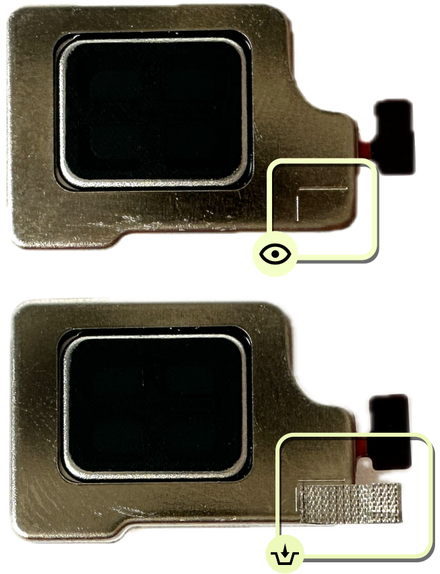




Attach the top speaker FoF

Stick the **top speaker FoF** to the designated position on the **top speaker** with **ESD tweezers.**

Part: G806-11577-00 (Top speaker FoF)



Note

Undamaged **top speaker FoF** can be reused.

Otherwise, they may need to be replaced.

Assemble the top speaker

- Tear off the liner and align the **top speaker** with the **dashed line** as shown in Fig 1.
- Insert the **top speaker** at an angle as shown in Fig 2.
- Press for **6 seconds** manually.

Parts: G863-00553-00 (Top speaker)

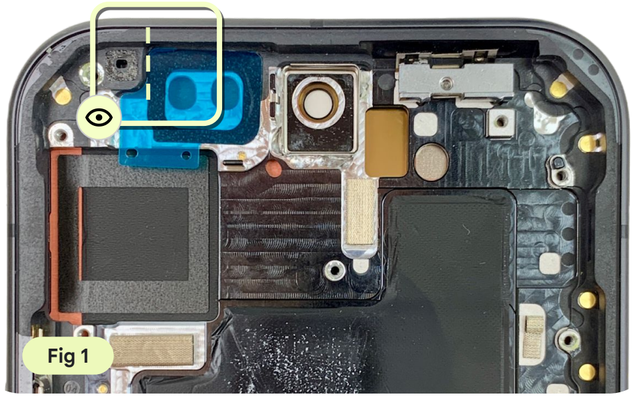
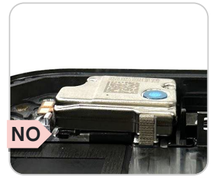


Fig 1

FoF adhered to the wall.

FoF broken.

Top speaker FoF is between the top speaker and the wall.



Top speaker FoF is under the top speaker.

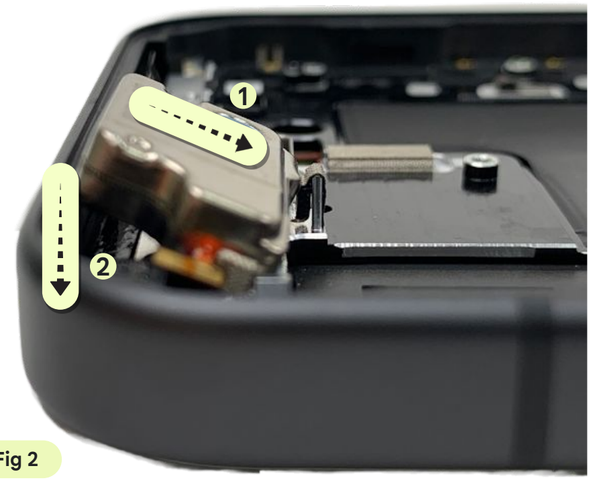


Fig 2

Use caution

Be careful not to damage the **FoF** during assembly.

Make sure that the **top speaker FoF** isn't under the **top speaker**.

Assembly instructions

Rear camera

Reuse the rear camera

- Clean the residue on the **rear camera** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G949-00974-00 (Rear camera)

Use caution

Be careful to avoid to touch the **rear camera lens**.

Check the logic board

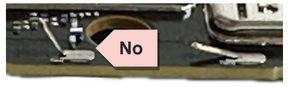
Use caution

Before you assemble the **rear camera**, check for spring deformation.

Pay **extra attention** to the springs during assembly to avoid damage to them.

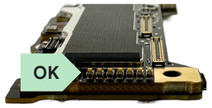
General rules

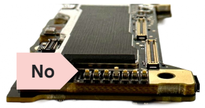
Springs



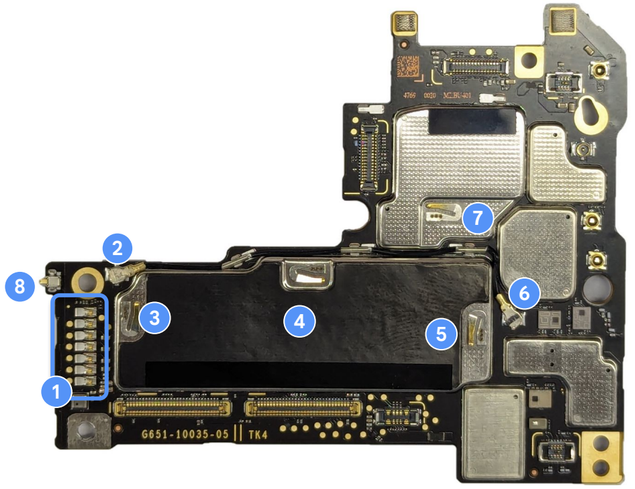
Deformation

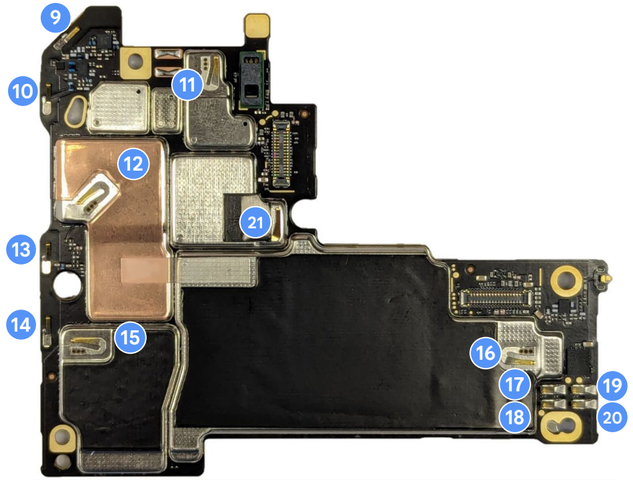
Pins





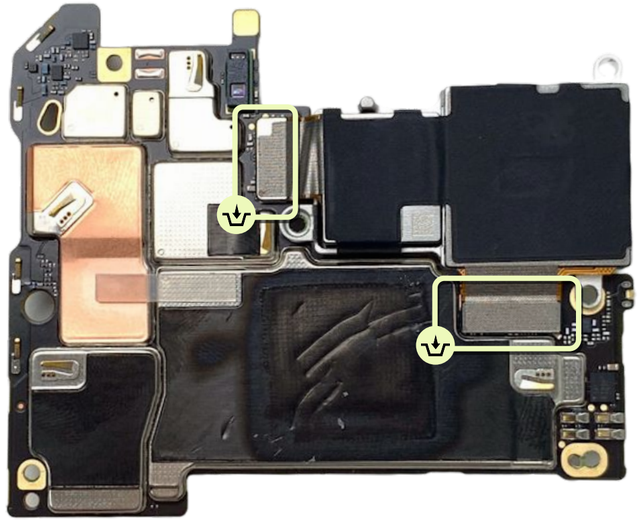
Deformation





Assemble the rear camera

- Assemble the **rear camera** straight to the **logic board**.
- Buckle the **two rear camera connectors** to the **logic board**.



Part: G949-00974-00 (Rear camera)

Part: Multiple part numbers (Logic board)

Note

Don't wear gloves when you handle the **logic board**.

Don't touch the **rear camera lens**.

Check that every connector is fully attached to the **logic board**.

Use caution

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

Assembly instructions

Logic board

Check the logic board

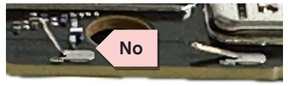
Use caution

Before you assemble the MLB, check for the spring deformation.

Pay **extra attention** to the springs during assembly to avoid damage to them.

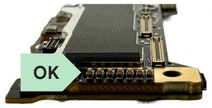
General rules

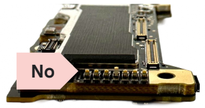
Springs



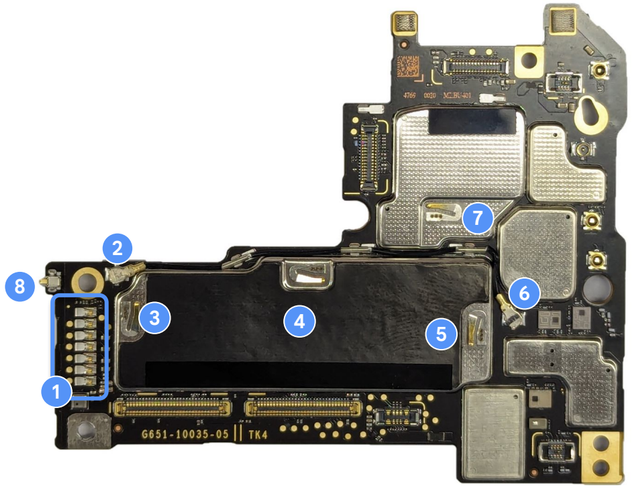
Deformation

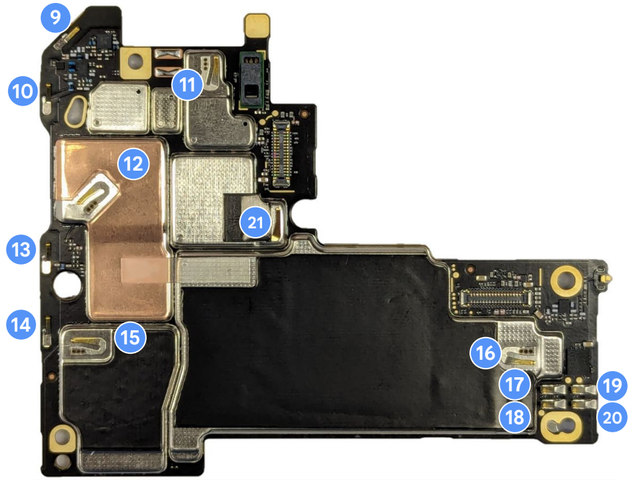
Pins





Deformation

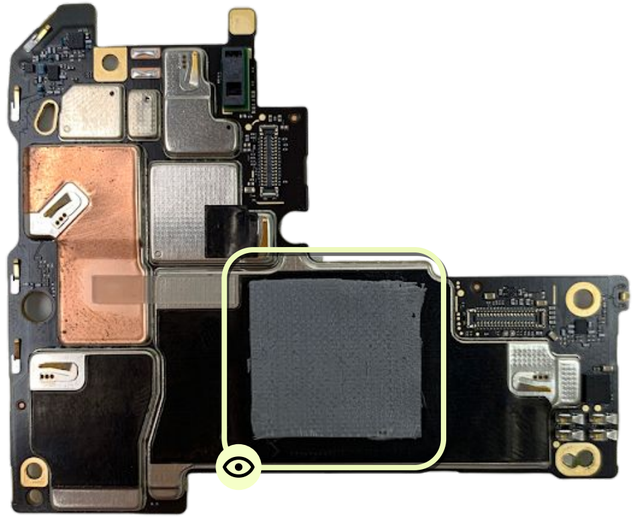




Reuse the logic board

- Clean any **thermal pad residue** from the **logic board** with the **ESD spudger**.
- If there's any residue, use a **dust-free cloth** with **IPA** to gently clean the surface.

Part: Multiple part number (Logic board)



Note

Undamaged **SOC TIM** can be reused.

Otherwise, they may need to be replaced.

Attach the P-sensor foam

Attach the **P-sensor foam** to **logic board** with **ESD tweezers**.

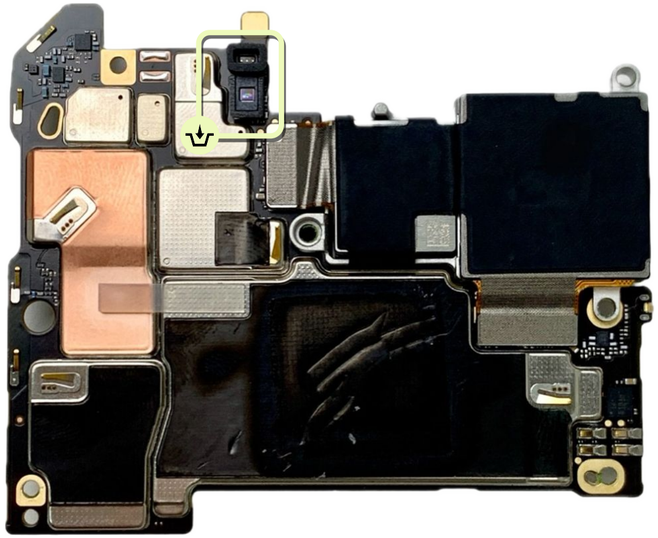
Part: G806-10419-05 (P-sensor foam)

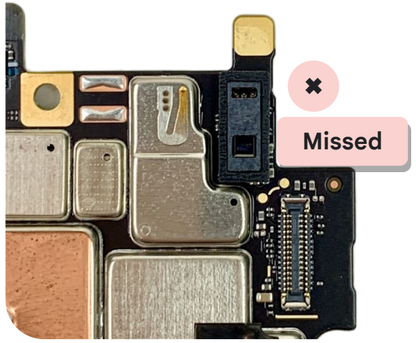
Use caution

Skip this step if the **P-sensor foam** isn't removed from the **logic board** during disassembly.

Use a new foam when you replace the **logic board**.

***Don't* reuse the old one.**

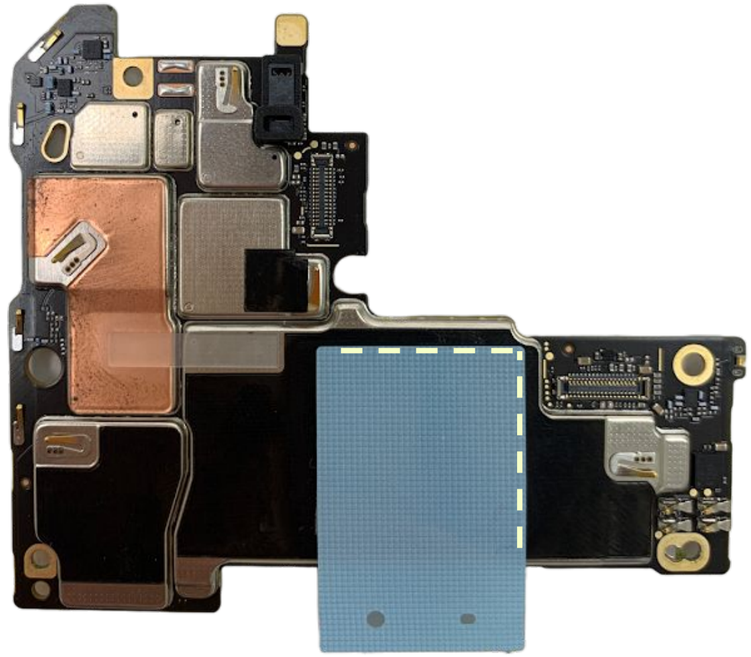




Apply the TIM SOC

Attach the **TIM SOC** to the **logic board and** align the dotted line with the **ESD tweezers** and light press **TIM SOC** by hand.

Part: G806-10386-00 (TIM SOC)



Use caution

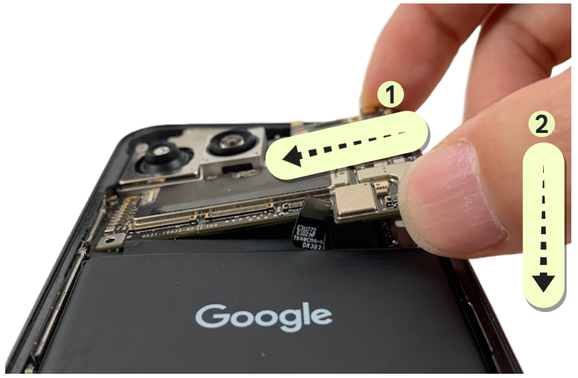
Don't exceed the line after you remove the liner.

Note

This step is only present for the new and reclaimed logic board.

Assemble the logic board

- Push the **logic board** to the left towards the **enclosure**.
- Push the **logic board** straight down to align it, and flush against the retaining wall.



Use caution

Be careful to avoid damage to the components on the logic board.

Note

Don't wear gloves when you handle the logic board.

Fasten the screws

- Fasten the **logic board screw** with the **torx plus 3IP screwdriver**.
- Fasten the **logic board screw** with a **standoff 2.5 mm screwdriver.**

Part: G250-07191-00 (Screw)

Part: G250-07322-00 (Screw)

1: G250-07191-00

2: G250-07322-00

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

Torque force: 1.8 ± 0.03 kgf-cm(1)

1.5 ± 0.03 kgf-cm(2)

Buckle the cable

Buckle the **cable connector** to the **logic board** with the **ESD spudger**.

Part: G821-00952-00 (Cable)

Note

Make sure that the connector is in the **right position**.

Check that every connector is fully attached to the **logic board**.

Assembly instructions

ANT4 board

Clean the Mic3 mesh

- Clean the residue on the **enclosure** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: Multiple part numbers (enclosure)

Reuse the ANT4 board

- Clean the residue on the **ANT4 board** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G949-00976-00 (ANT4 board)

Use caution

Be careful to avoid damage to the components on the ANT4 board.

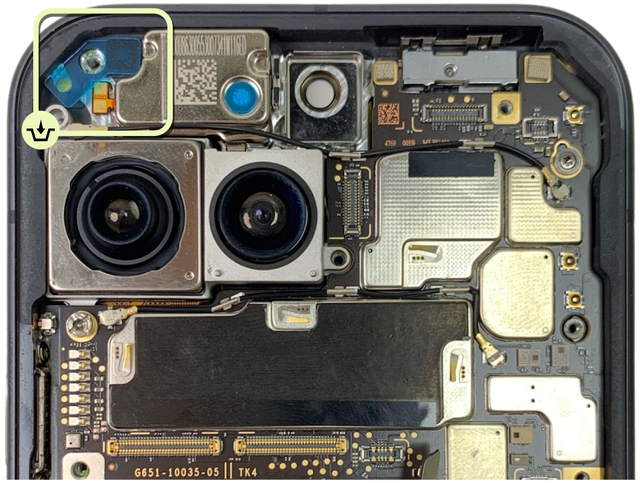
Note

Don't wear gloves when you handle the ANT4 board.

Attach the mic3 mesh

Attach the **mic3 mesh** to the **enclosure** with **ESD tweezers**.

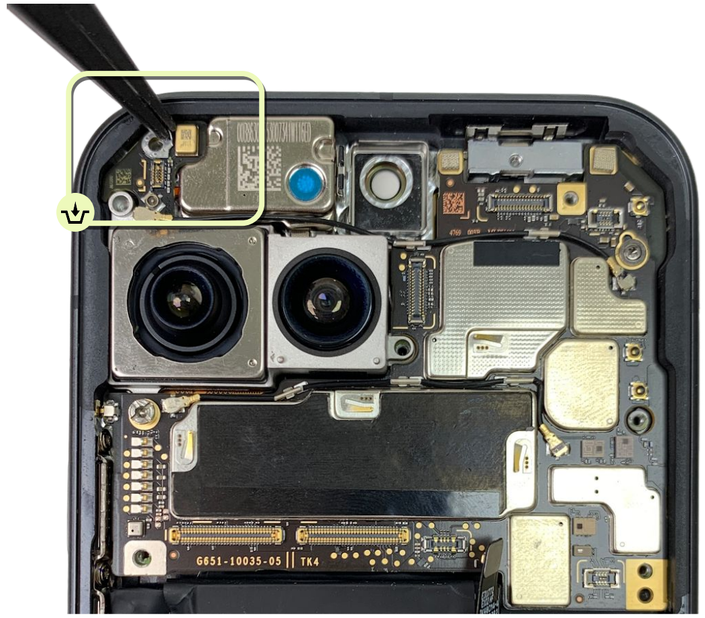
Part: G806-11713-01 (Mic3 mesh)



Assemble the ANT4 board

Assemble the **ANT4 board** to the **enclosure**.

Part: G949-00976-00 (ANT4 board)



Use caution

Make sure that the **mic3 mesh liner** is removed before assembly.

Be careful to avoid damage to the components on the **ANT4 board**.

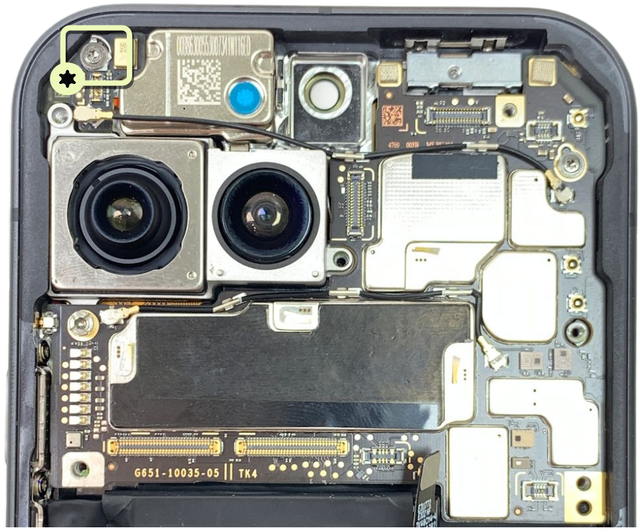
Note

Don't wear gloves when you handle the **ANT4 board**.

Fasten the screw

Fasten the **ANT4 board screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)



Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver can cause injury to you or others or damage to the battery or the product.

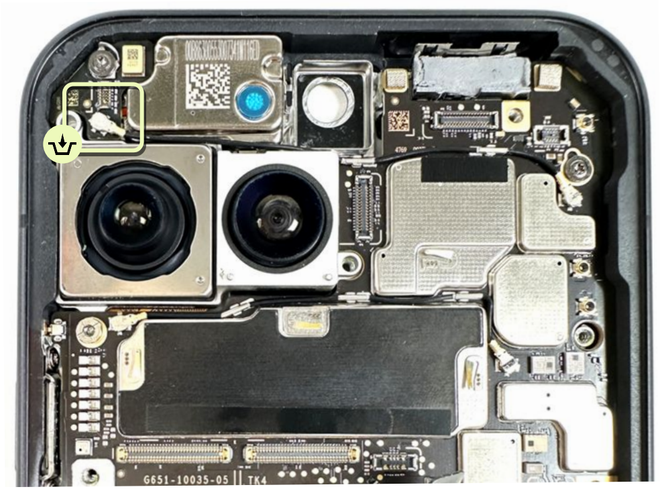
Note

Torque force: 1.5 ± 0.03 kgf-cm

Buckle the cable

Buckle the **ANT4 cable connector** to the **ANT4 board** with the **ESD spudger**.

Part: G821-00952-00 (Cable)



Reuse the LDAF flex

- Clean the residue on the **LDAF flex** with **ESD tweezers** as shown in Fig 1.
- Use a **dust-free cloth** with **IPA** to clean the surface if needed as shown in Fig 2.

Part: G949-00969-00 (LDAF flex)

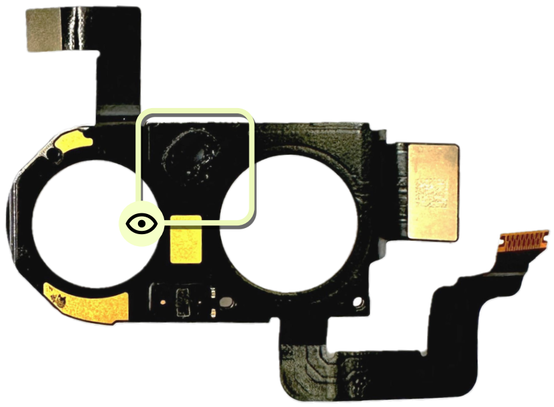


Fig 1

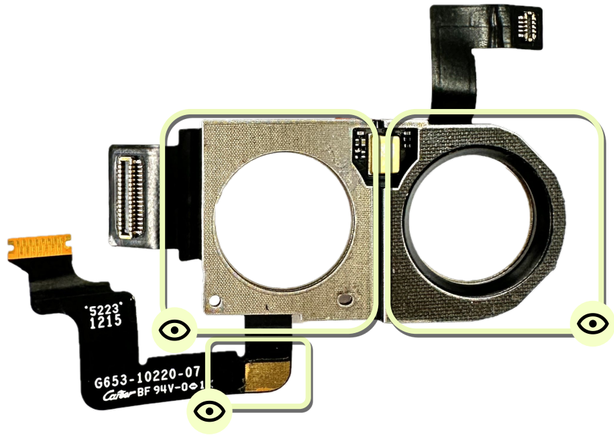
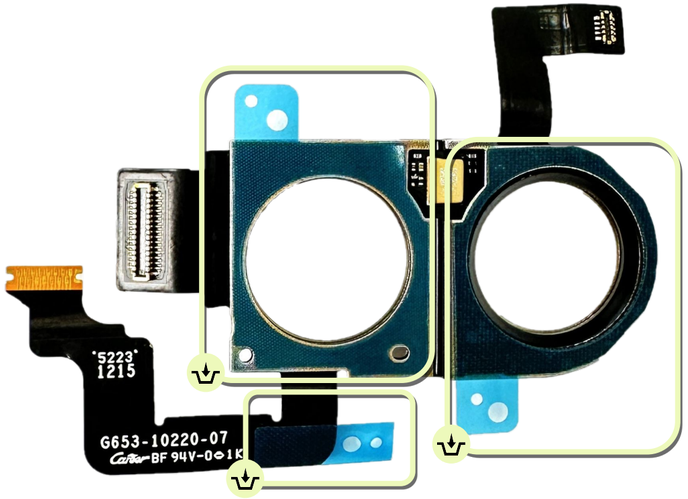


Fig 2

Attach the LDAF CPSA

Stick the **flam flex CPSA** to the designated position on the **LDAF flex** with **ESD tweezers.**



Part: G806-13190-00 (LDAF CPSA main)

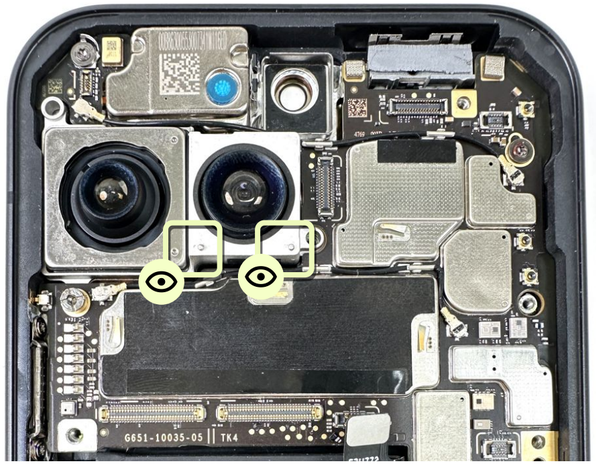
Part: G806-13191-00 (LDAF CPSA UW)

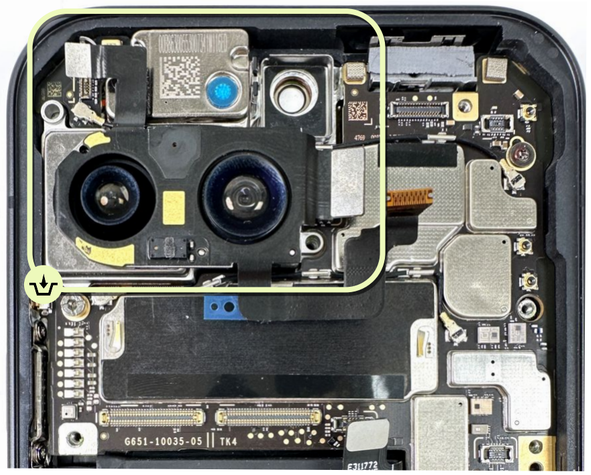
Part: G806-13194-00 (Flam flex CPSA)

Assemble the LDAF flex

Assemble the **LDAF** to the **designated position** on the **rear camera.**

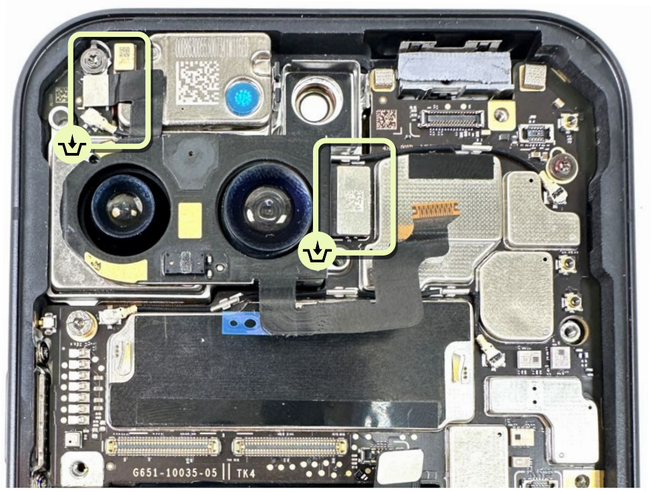
Part: G949-00969-00 (LDAF flex)





Buckle the LDAF

Buckle the **LDAF connectors** to the **logic board** and the **ANT4 board**.



Use caution

Be careful to avoid touching the **rear camera Lens**.

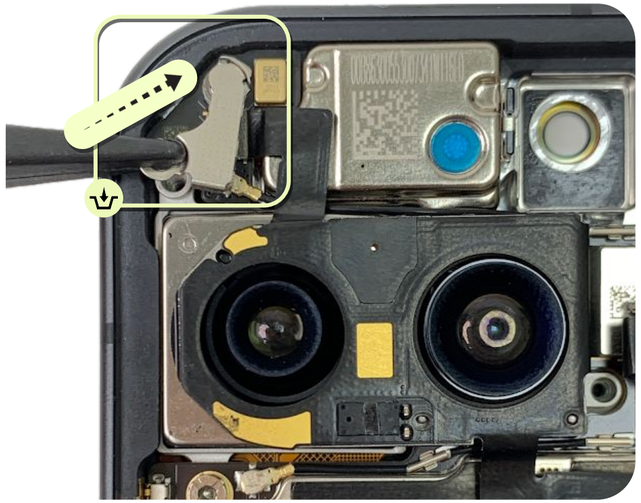
Note

Check that every **connector** is fully attached to the **logic board** and the **ANT4 board**.

Assemble the ANT4 cowling

Assemble the **ANT4 cowling** with **ESD tweezers**.

Part: G730-08356-01 (ANT4 cowling)



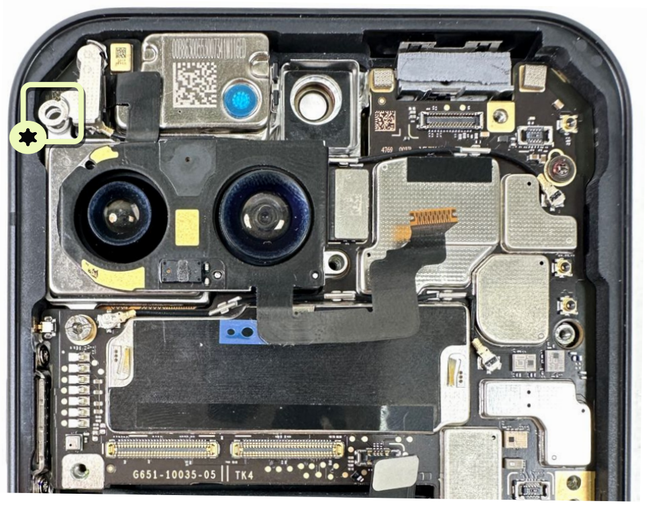
Note

Install the **ANT4 cowling** into the **hook**.

Fasten the screw

Fasten the **ANT4 cowling screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)



Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver can cause injury to you or others or damage to the battery or the product.

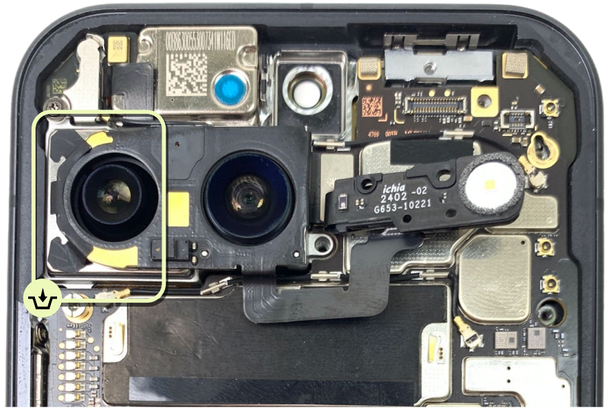
Note

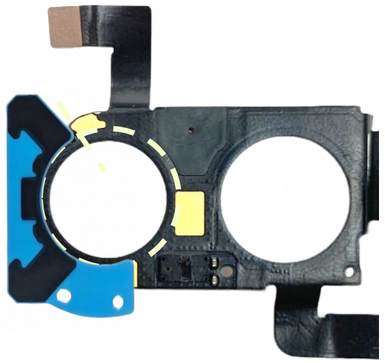
Torque force: 1.5 ± 0.03 kgf-cm

Attach the flam left tape

Stick the **flam left tape** on the **LDAF flex** and **the main camera,** align the dotted line with **ESD tweezers.**

Part: G806-12858-01 (Flam left tape)



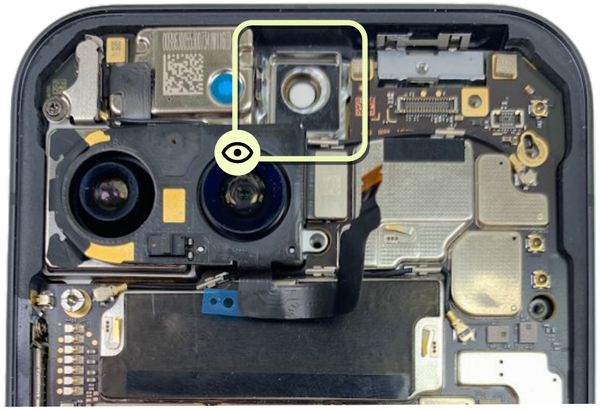


Assembly instructions

Front camera

Clean the enclosure

- Clean the residue on the **enclosure** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

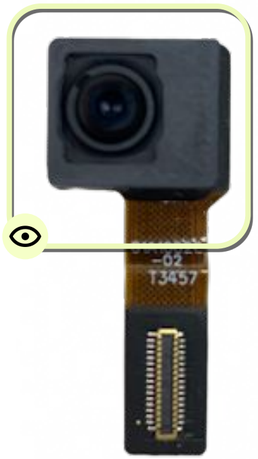


Part: Multiple part numbers (enclosure)

Reuse the front camera

- Clean the residue on the **front camera** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface if needed.

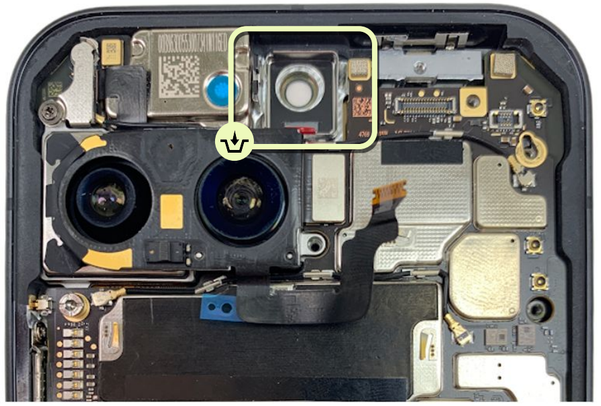
Part: G949-00973-00 (Front camera)



Attach the FCAM adhesive

- Attach the **FCAM adhesive** to the **enclosure** and align the outline with **ESD tweezers.**

Part: G806-12811-00 (FCAM adhesive)



Use caution

Ensure that the environment is clean for this process.

Note

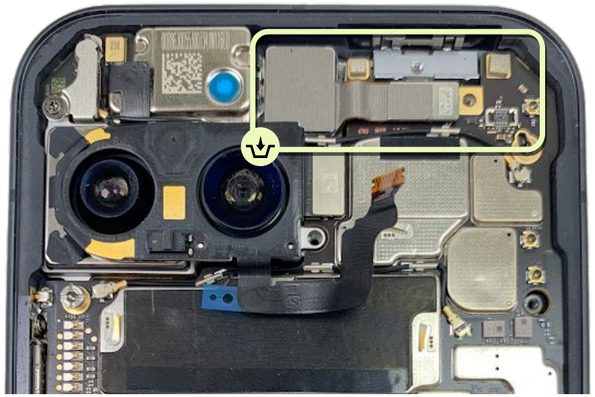
Undamaged **FCAM adhesive** can be reused.

Otherwise, they may need to be replaced.

Assemble the front camera

- Tear off the liner and assemble the **front camera** to the **enclosure**.
- Buckle the **FCAM connector** to the **logic board**.

Part: G949-00973-00(Front camera)



Use caution

Be careful to avoid touching the **front camera lens**.

Note

Check that the **connector** is fully attached to the **logic board**.

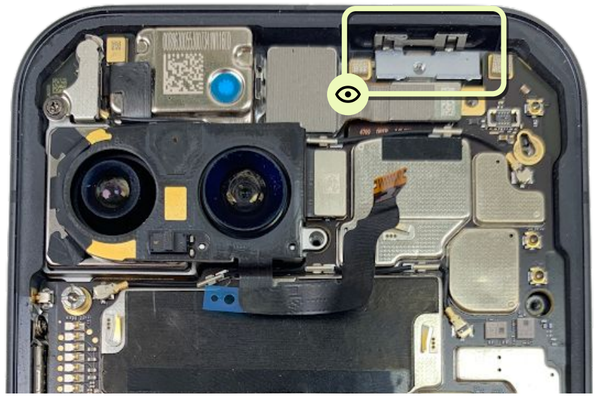
Assembly instructions

mmWave module

Clean the mmWave heatsink

- Clean any thermal pad residue from the **mmWave heatsink** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G730-07918-00 (mmWave heatsink)



Note

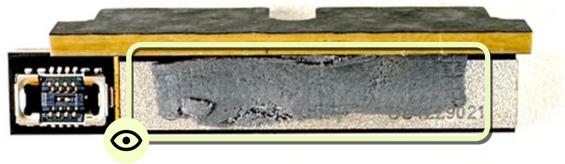
Undamaged **mmWave TIM** can be reused.

Otherwise, they may need to be replaced.

Reuse the mmWave module

- Clean the **mmWave TIM** residue on the **mmWave module** with the **ESD spudger**.
- Use a **dust-free cloth** with **IPA** to clean the where needed.

Part: G345-01511-04 (mmWave module)



Note

This step is only present in the mmWave SKU.

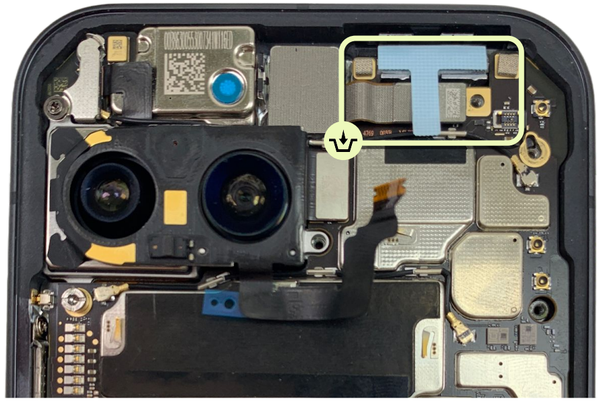
Assemble the mmWave flex

- Assemble the **mmWave flex** to the **mmWave module.**
- Buckle the **mmWave flex** to the **mmWave module**.

Part: G949-00977-00 (mmWave flex)

Apply the mmWave TIM

Align the **mmWave TIM** with outline on the **mmWave heatsink** and light press **mmWave TIM** by hand.



Part: G806-10331-00 (mmWave TIM)

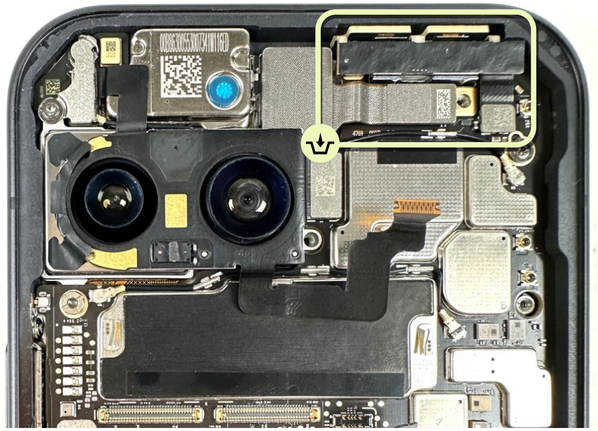
Note

This step is only present in the mmWave SKU.

Assemble the mmWave module

- Assemble the **mmWave module** and insert it into the dotted box(between heatsink metal and enclosure) .
- Buckle the **mmWave module connector** to the **logic board**.

Part: G345-01511-04 (mmWave module)



Note

This step is only present in the mmWave SKU.

Assembly instructions

Jumpflex

Assemble the DJ flex

Assemble and buckle **four DJ flex connectors** to the **logic board** and the **chin board** in a sequence.

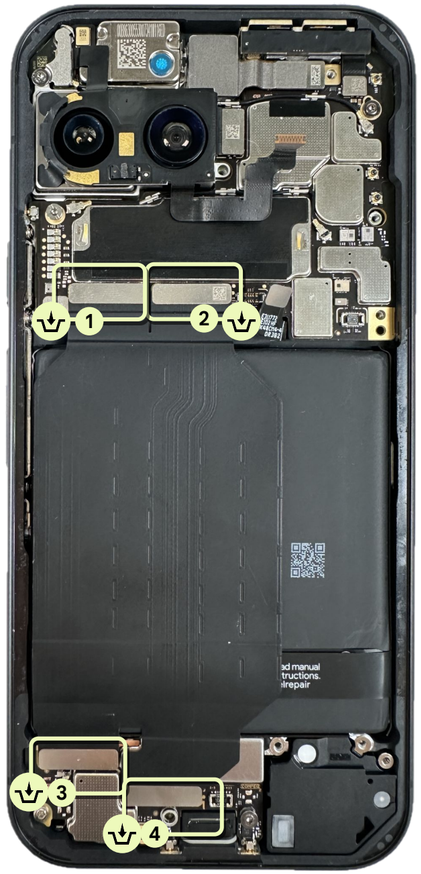
Part: G949-01096-00 (DJ flex)

Use caution

When you buckle the **third connector**, *don't* damage or deform the springs as shown in Fig 1.

Note

Check every **connector** is fully attached to the **logic board** and the **chin board**.



Assemble the RJ flex

Assemble and buckle **two RJ flex connectors** to the **logic board** and the **chin board** in a sequence.

Part: G652-10223-04 (RJ flex)

Note

Check every **connector** is fully attached to the **logic board** and the **chin board**.

Fasten the screw

Fasten **two RJ flex screws** in a sequence with the **torx plus 3IP screwdriver**.

Part: G250-07189-00*2 (Screw)

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

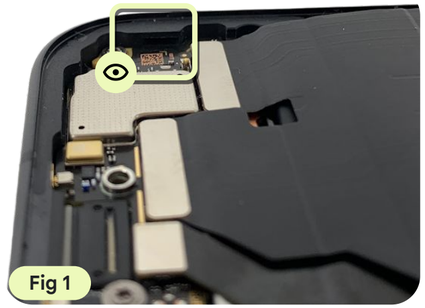
Note

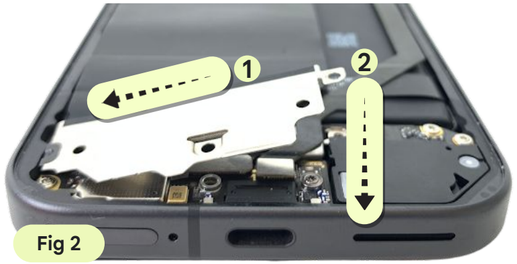
Torque force: 1.5 ± 0.03 kgf-cm

Assemble the CLB cowling

- There's a hook on the enclosure as shown in Fig 1.
- Assemble the **CLB cowling** into the **hook** at an angle as shown in Fig 2.

Part: G730-08341-25 (CLB cowling)



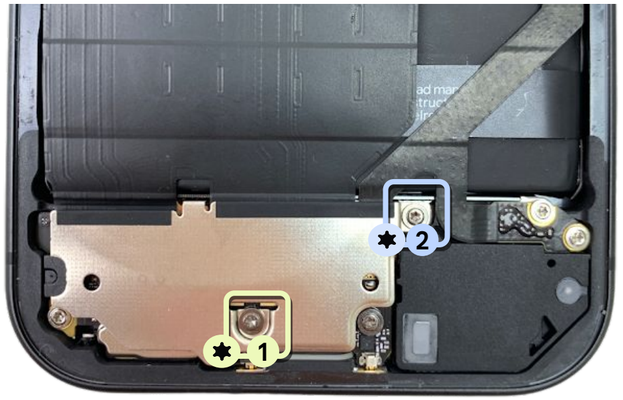


Fasten the screws

Fasten **two CLB cowling screws** in a sequence with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)

Part: G250-07191-00 (Screw)



1: G250-07204-00

2: G250-07191-00

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

Torque force: 1.8 ± 0.03 kgf-cm

Attach the DJ flex tape

- There's a **cutting line** on the **tape liner** as shown in Fig 1.
- Attach the **DJ flex tape** to the **CLB cowling** according to the **cutting line** on the liner.

Part: G806-11965-01 (DJ flex tape)

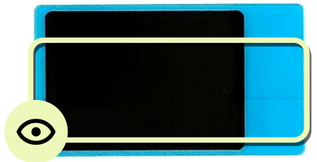
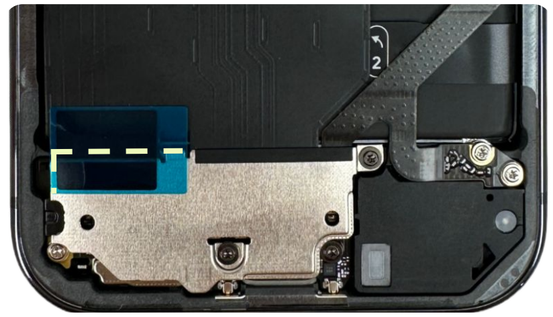


Fig 1



Buckle the battery connector

- Buckle the **battery connector** to the **logic board**.
- Power on to check if the device works properly, power off the device after you check it.

Note

Check every connector is fully attached to the logic board.

Clean the NFC/WLC cowling

- Clean any adhesive residue from the **NFC/WLC cowling - mmWave** with **ESD tweezers**.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: G949-00971-00 (NFC/WLC cowling - mmWave)

Part: G949-00972-00 (NFC/WLC cowling- Sub6)

Note

Undamaged **mmWave TIM** can be reused.

Otherwise, they may need to be replaced.

Assemble the adhesive flam FSS

Assemble the **adhesive flam FSS** with **ESD tweezers**.

Part: G806-11817-01 (Adhesive flam FSS)

Assemble the NFC/WLC cowling

Assemble the **NFC/WLC cowling** with **ESD tweezers**.

Part: G949-00971-00 (NFC/WLC cowling - mmWave)

Part: G949-00972-00 (NFC/WLC cowling- Sub6)

Fasten the screws

Fasten **five NFC/WLC cowling screws** in a sequence with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)

Part: G250-07197-00 (Screw)

G250-07204-00

G250-07197-00

Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

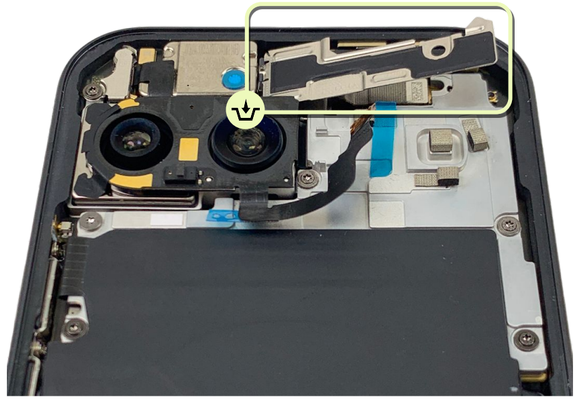
Note

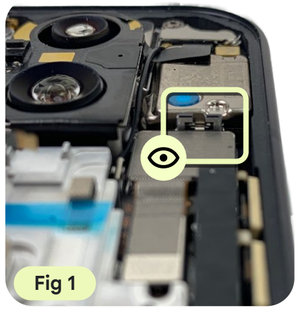
Torque force: 1.8 ± 0.03 kgf-cm

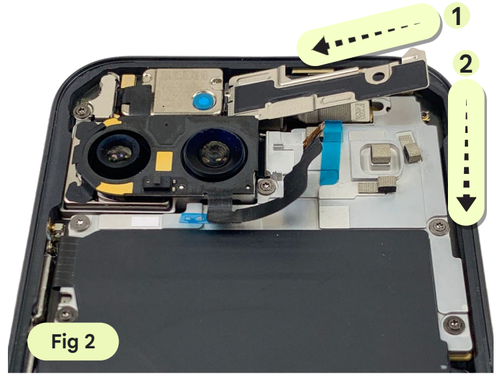
Assemble the top cowling

- There's a hook on the enclosure as shown in Fig 1.
- Assemble the **top cowling** into the **hook** at an angle as shown in Fig 2.

Part: G730-07841-02 (Top cowling)



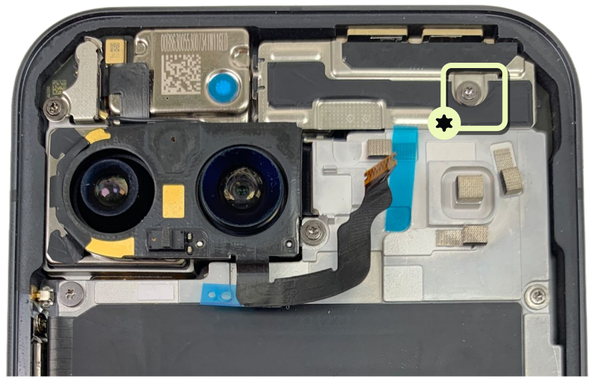




Fasten the screws

Fasten the **top cowling screw** with the **torx plus 3IP screwdriver**.

Part: G250-07204-00 (Screw)



Use caution

Be careful when you use the screwdriver.

***Don't* damage the adjacent battery.**

Incorrect use of the screwdriver could cause injury to you or others or damage to the battery or the product.

Note

Torque force: 1.8 ± 0.03 kgf-cm

Attach the FSS flex tape

- Lift up the ZIF lid to unlock and insert the **LDAF flex** then press down the ZIF lid to lock gently as shown in Fig 1.
- Stick the **FSS flex tape** on the ZIF connector to align the dotted line with **ESD tweezers** as shown in Fig 2.

Part: G949-00970-00 (Flam FSS flex)

Part: G806-12859-01 (FSS flex tape)


Fig 1

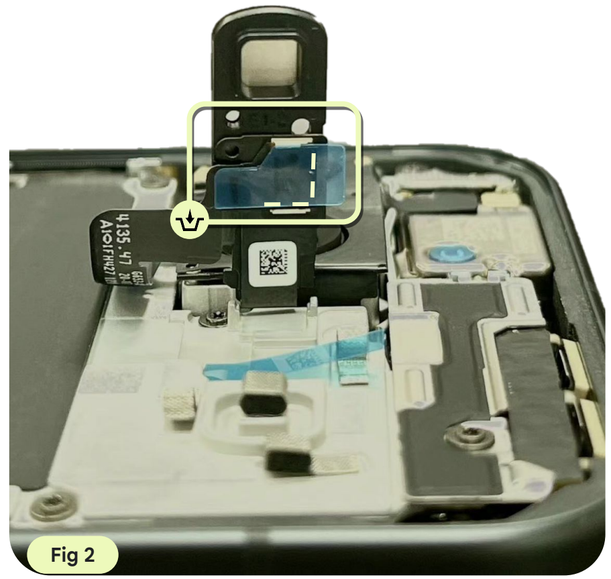
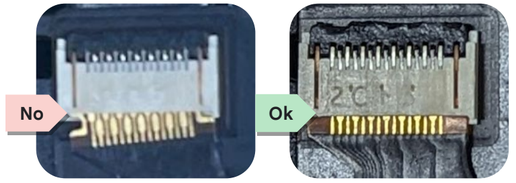


Fig 2



Use caution

Be careful not to damage the LDAF flex and the ZIF connector.

Assemble the flam FSS flex

- Tear off the liner as shown in Fig 1.
- Assemble the **flam FSS flex** to the **NFC/WLC cowling** and **flam FSS flex** should be aligned along with the rear camera as shown in Fig 2
- Press the No.2 adhesive area as shown in Fig 3.

Part: G949-00970-00 (Flam FSS flex)

Use caution

Be careful not to damage the LDAF flex and the ZIF connector.

Don’t assemble flam FSS flex overlap with NFC and doesn’t exceed the dotted line as shown in Fig 4.

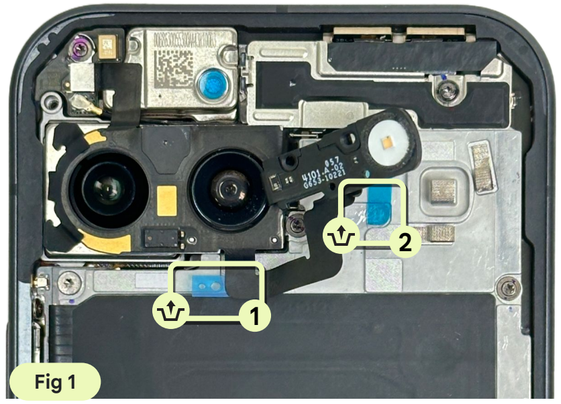


Fig 1

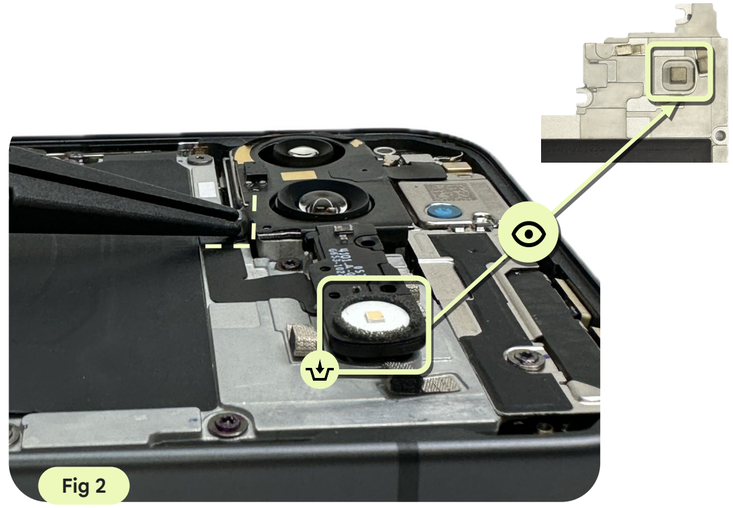


Fig 2


Fig 3

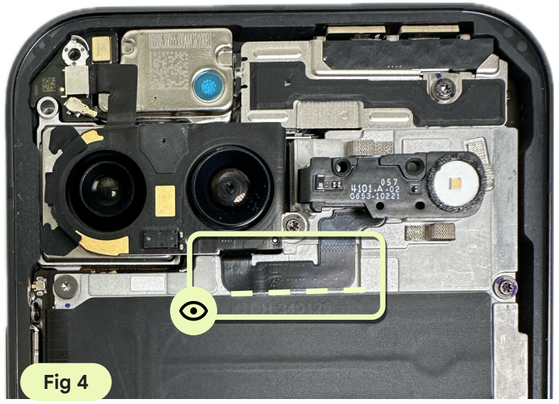


Fig 4

Assembly instructions

BG sub

Reuse the BG sub

- Inspect the **BG sub** for adhesive residue.
- It's recommended to carefully and slowly peel off the adhesive by hand in one piece.
  Use the **ESD spudger** to clean it.
- Use a **dust-free cloth** with **IPA** to clean the surface where needed.

Part: Multiple part numbers (BG sub)

Use caution

Be careful to avoid touching the **rear camera lens**.

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

Note

Place the device on a **heat plate** at 140°F (60°C) for remove adhesive easily.

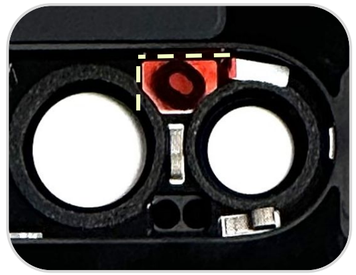
Don't heat more than 10 mins.

Mic2 mesh residues on the LDAF and the BG sub need to be reclaimed after you remove the BG sub.

Attach the mic2 mesh

- Attach the **mic2 mesh** to the **BG sub** to align the dotted line with **ESD tweezers**.
- **Mic2 mesh liner** align the dotted line with **ESD tweezers.**
- Remove the **mic2 mesh liner** before you assemble the **BG sub**.

Part: G806-12734-01 (Mic2 mesh)



Use caution

Make sure that the **mic2 mesh liner** is removed.

Apply the primer on the enclosure

- Apply **IPA** around the edges of the **enclosure** with a **dust-free cotton swab**.
- Apply **3M 111 primer** around the edges of the **enclosure** with a **dust-free cotton swab** for one round.

Part: Multiple part numbers (enclosure)

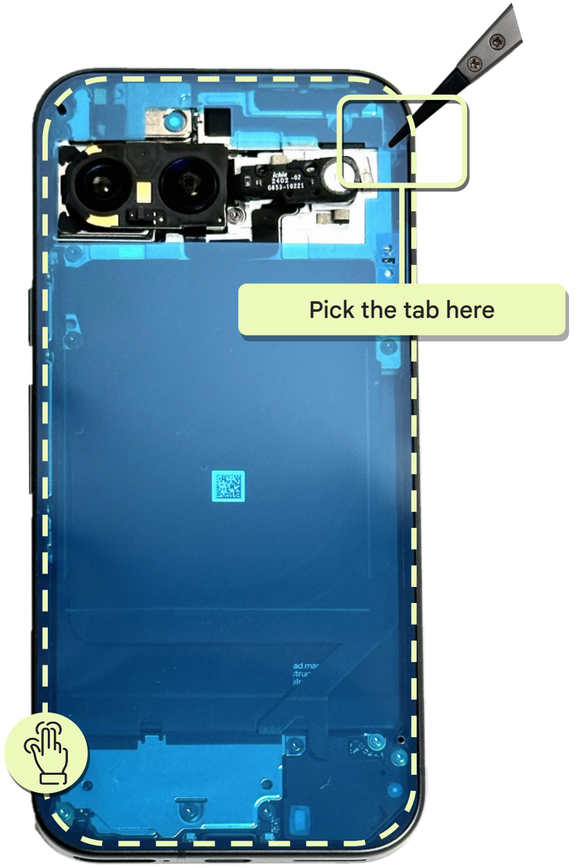
Use caution

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

Align the adhesive

- Attach the **adhesive** to the **enclosure** and align the outline.
- Gently press the **adhesive** area with the **ESD spudger** to enhance the bond between the **enclosure** and the **adhesive**.
- Pull the tab carefully to remove the **first layer,** then press the **adhesive** area for a second.
  Avoid lifting the adhesive.

Part: G806-12941-00 (BG adhesive)



Use caution

Don't touch the **adhesive**.

If it gets dirty, change to another one.

Apply the primer on the BG sub

- Apply **IPA** around the edges of the **BG sub** with a **dust-free cotton swab**.
- Apply **3M 111 primer** around the edges of the **BG sub** with a **dust-free cotton swab** for one round.

Part: Multiple part numbers (BG sub)

Use caution

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

Attach the adhesive BG SC

- Assemble the **adhesive BG SC** with **ESD tweezers**.
- **Align** the **adhesive BG SC** to the dotted line with **ESD tweezers**.

Part: G806-12554-02 (Adhesive BG SC)

Use caution

Pressure should be applied straight downward on the connector, not against any part of the flex.

Note

Avoid damage to the springs especially near where the BG sub contacts the enclosure.

Remove the film

Remove all the **films** on the the **BG sub**.

Use caution

Make sure that all the **films** are removed.

There are **five films** in the group two.

Note

If you reuse the **BG sub,** you can skip this step.

Attach the BG sub

- Attach the **BG sub** onto the **enclosure** vertically.
- Press around the **BG bezel** with both hands.

Part: Multiple part numbers (BG sub)

Note

Press the center of the top side first, followed by two longer sides and the bottom side.

***Don't* press the RCAM area (visor) during the process.**

Prepare to press

- Place the **Pixel universal holder** in the **B1 position** on the **universal base.**
- Place the **Pixel 9 CG press rubber** and the **Pixel universal holder limiting block** on the **Pixel universal holder** in a sequence as shown in Fig 1.
- Place the **device** and **lock** it as shown in Fig 2.
- Place the **Pixel 9 BG press rubber** as shown in Fig 3.

> **Note**
>
> Make sure that the Pixel universal holder is in the right position.

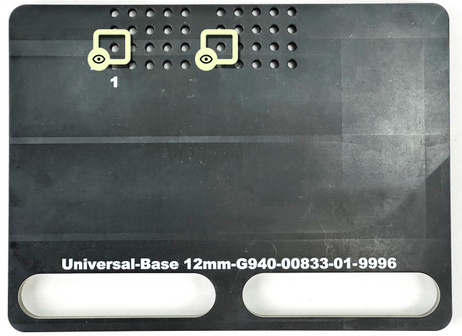


Fig 1

Fig 2

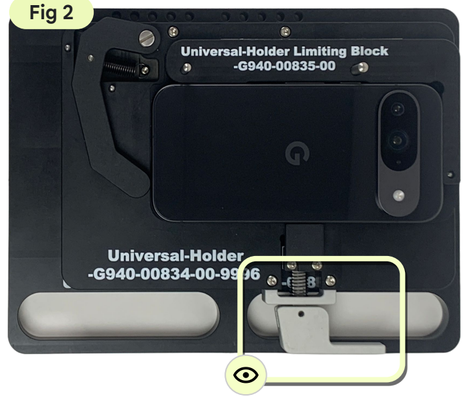
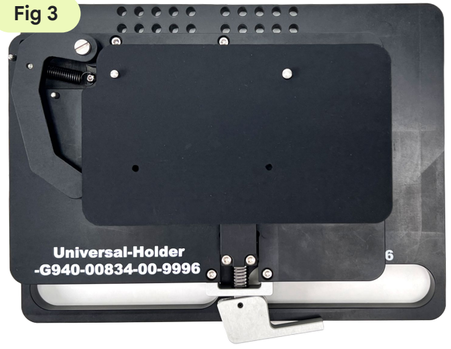


Fig 3



Prepare to press

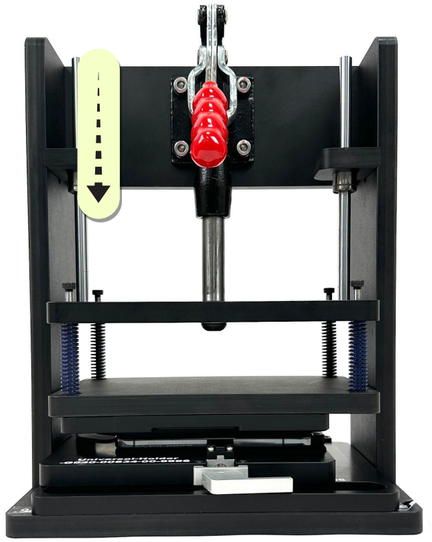
- Place the **universal press plate 12 mm** on the **universal base** as shown in Fig 1.
- Place the stack in the **Pixel universal press fixture**.
- Press the handle down for **30 seconds**.
- Restore the handle to the original position and remove the device.

Use caution

Pinch point.

Keep hands clear during operation.

Fig 1

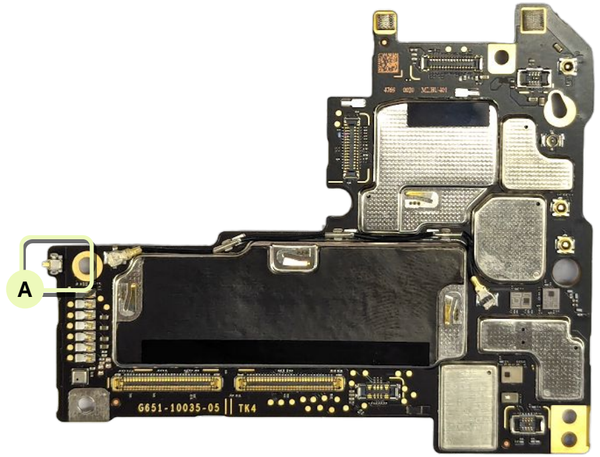


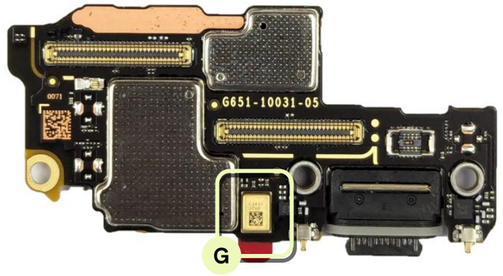
Pixel 9 repair manual

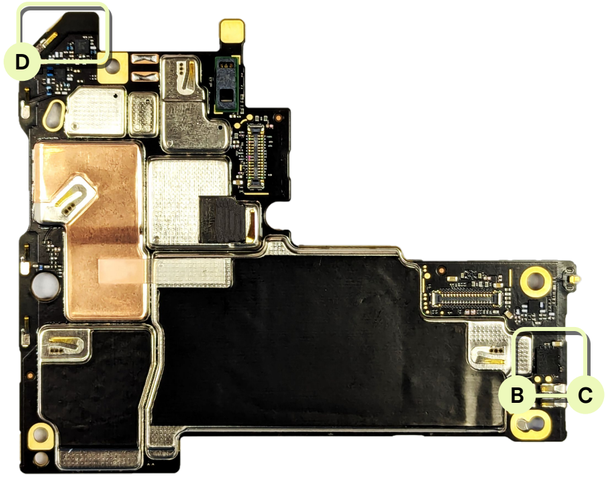
Troubleshooting

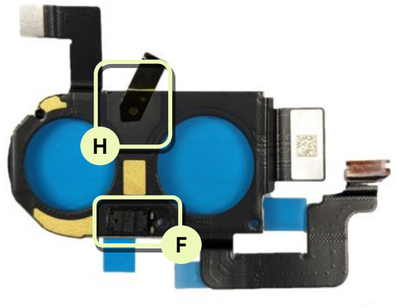
Sensor and key feature location

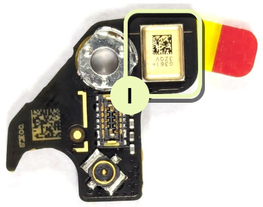
Location	Description
A	Barometer
B	Gyroscope
C	Accelerometer
D	Magnetic
E	Rainbow
F	LDAF
G	Mic1
H	Mic2
I	Mic3





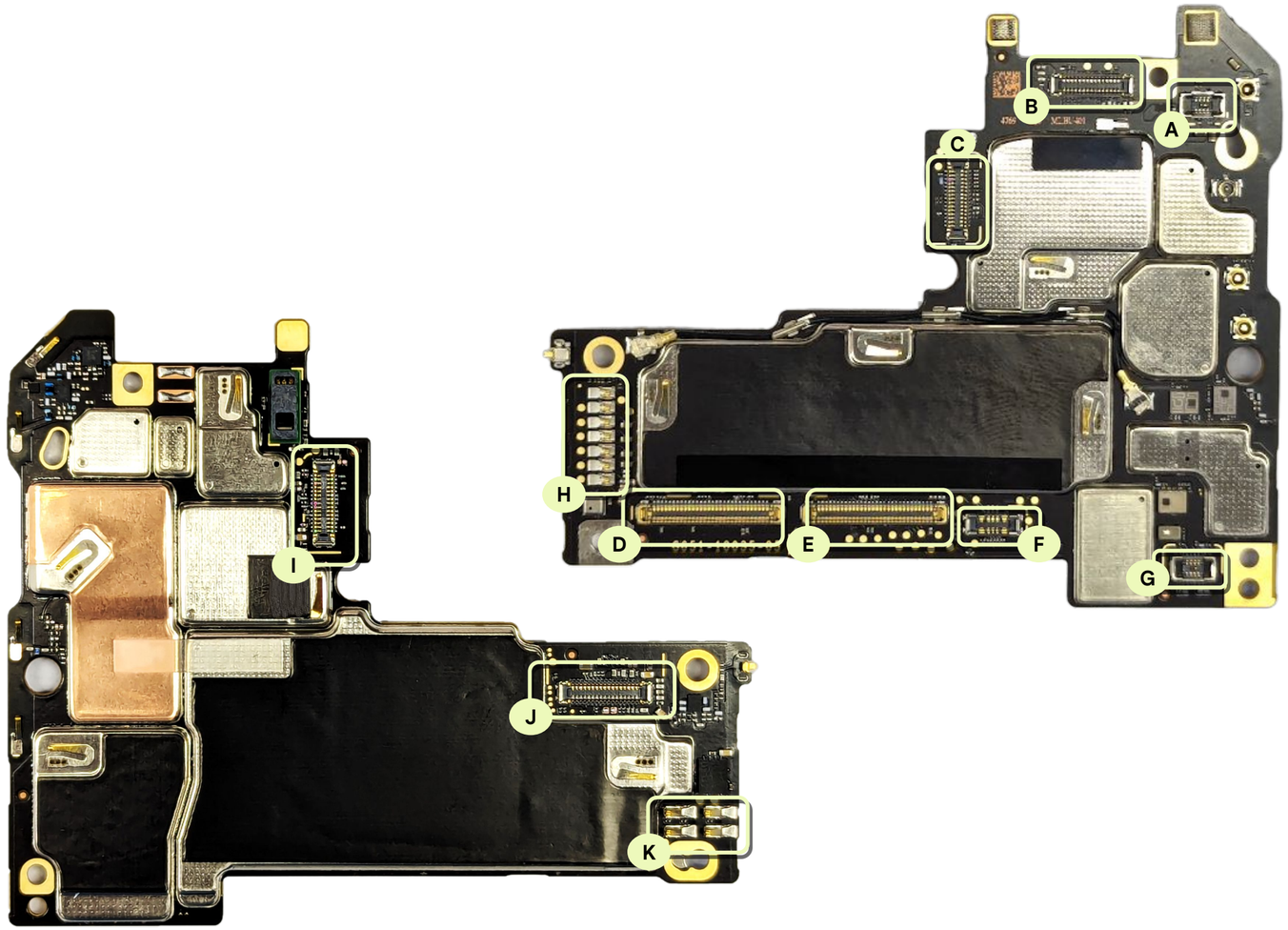






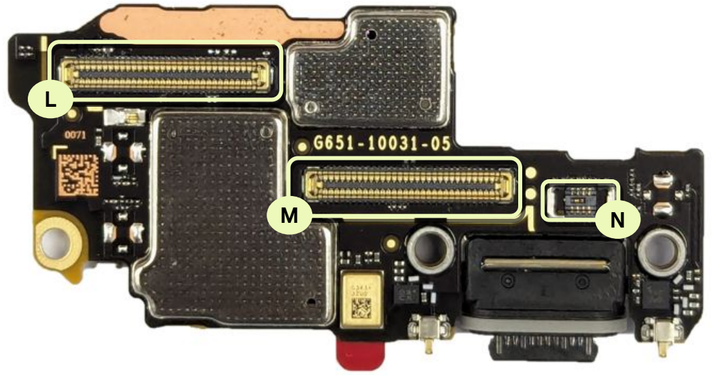
Connectors location

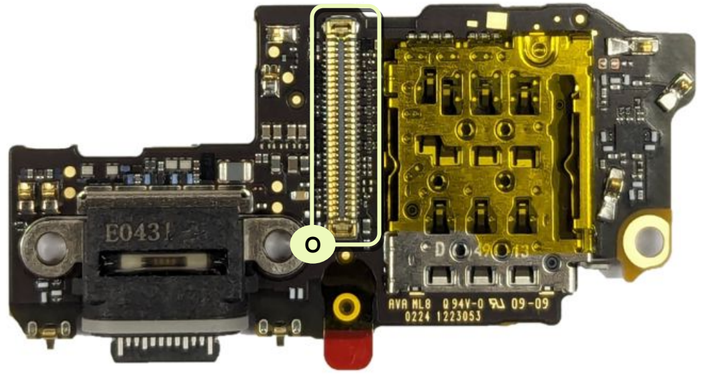
Location & Description	
A	mmWave connector
B	Front Camera connector
C	LDAF Flex connector
D	DJ flex connector
E	DJ flex connector
F	Battery connector
G	RJ flex connector
H	WLC/ NFC Pad
I	Rear Camera Main connector
J	Rear Camera UW connector
K	Sidekey Pad



Connectors location

Location and description	
L	DJ flex connector
M	DJ flex connector
N	RJ flex connector
O	Display connector
P	LDAF flex connector
Q	Top speaker connector





Power

Symptom	Potential root cause	Procedure	
 **T001:** Doesn’t power on **T002:** Powers off suddenly **T004:** Wired charging failure **T053:** Battery damage **T054:** Battery draining fast **T055:** Device overheats	Damage	• Inspect **USB-C connector** for debris preventing charging. • Inspect device for damage. • Inspect **liquid damage indicators (LDI)**.	
	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	• Remove the **DJ cowling**, check if the connectivity between the **battery connector** and the **logic board** are normal. If they’re not fully buckled, reassemble and then retest.	**Connectors location**
	Component issue	• Use a good **battery** and **logic board** to cross check with the original the ones. • Replace the defective component.	**Disassembly** • Battery • Logic board

Wireless charge

Symptom	Potential root cause	Procedure	
 **T003:** Wireless charging failure	Connectivity issue	• Check the contact condition between the **NFC/WLC cowling** and the **pin contact pad**. If there's no mark on the **pin contact pad**, it shows poor connectivity. • If marks are observed, clean the **contact pad** and test again.	**Connectors location**
	Component issue	• Use a good **NFC/WLC cowling** and **logic board** to cross check with the original ones. • Replace the defective component.	**Disassembly** • NFC/WLC cowling • Logic board

Mic1

Symptom	Potential root cause	Procedure
T010: Mic1 no sound **T011:** Mic1 low sound **T012:** Mic1 distorted sound	Mesh not clean	• Use a **microscope** and check the mesh for damage or blockage as shown in Fig 1. • Clean the mesh and test audio.
	Assembly problem	• Check if the **chin board** and the **enclosure mic1 liner** are removed as shown in Fig 2. If it's removed, go to the next step. • Test audio again.
	Component issue	• Use a good **chin board** and **enclosure** to cross check with original ones. • Replace the defective component.

1. Mic1
2. Mic2
3. Mic3

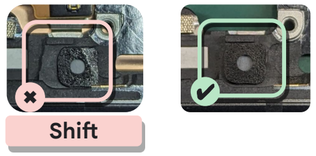


Fig 1

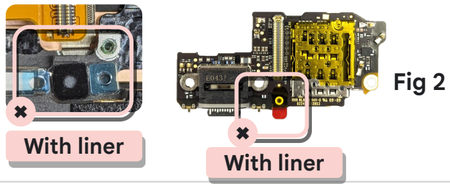


Fig 2

Disassembly

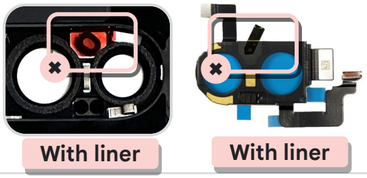
- Chin board
- Enclosure

Mic2

Symptom	Potential root cause	Procedure
T013: Mic2 no sound **T014:** Mic2 low sound **T015:** Mic2 distorted sound	Connectivity issue	• Check if the connectivity between the **LDAF** and the **logic board** is normal. • If they aren't fully buckled, reassemble and then retest.
	Assembly problem	• Check if the **BG mic2 mesh liner** and the **LDAF mic2 liner** is removed. If they're removed, go to the next step. • Test audio again.
	Component issue	• Use a good **LDAF** and **logic board** to cross check with the original ones. • Replace the defective component.

1. Mic1
2. Mic2
3. Mic3

Connectors location



Disassembly

- Mic2 mesh
- LDAF
- Logic board

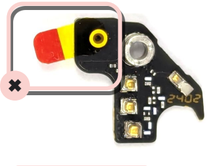
Mic3

Symptom	Potential root cause	Procedure
T016: Mic3 - no sound **T017:** Mic3 - low sound **T018:** Mic3 - distorted sound	Connectivity issue	• Check if the connectivity between the **LDAF, ANT4 board** and **logic board** are normal. • If they aren't fully buckled, reassemble and then retest.
	Assembly problem	• Check if the **enclosure mic3 mesh liner** and the **ANT4 board** mic3 liner are removed. If they're removed, go to the next step. • Test audio again.
	Component issue	• Inspect whether the mic3 component is damaged. • Use a good **ANT4 board**, **LDAF** and **logic board** to cross check with the original ones. • Replace the defective component.

1. Mic1
2. Mic2
3. Mic3

Connectors location

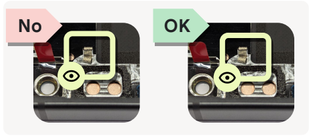

With liner


With liner

Disassembly

- LDAF
- ANT4 board
- Logic board

Top speaker

Symptom	Potential root cause	Procedure	
	Damage	• Inspect whether the **top speaker pad** is broken or being squeezed.	
	Internal debris	• Disassemble the device and inspect the **top speaker**.	
T019: Top speaker no sound **T020:** Top speaker low sound **T021:** Top speaker distorted sound	Connectivity issue	• Check the contact condition between the **top speaker** and the **ANT4 board pin contact pad**. If there's no mark on the **pin contact pad**, it shows poor connectivity. • If marks are observed, clean the **pin contact pad** and test again.	**Connectors location**
	Component issue	• If the sound quality is still poor, use a good **top speaker** and **ANT4 board** to cross check with the original ones • Replace the defective component.	**Disassembly** • Top speaker • ANT4 board

Bottom speaker

Symptom	Potential root cause	Procedure
T023: Bottom speaker no sound **T024:** Bottom speaker low sound **T025:** Bottom speaker distorted sound	Mesh problem	• Visually inspect the exterior of the phone to check for a polluted mesh on the **bottom speaker port**. Use a soft **ESD brush** to remove any debris. • Test audio.
	Internal debris	• If the sound quality is still poor, inspect the mesh and the **bottom speaker** with a **microscope**. • Disassemble the device and inspect the **bottom speaker**.
	Connectivity issue	• Check the contact condition between the **bottom speaker** and the **chin board pin contact pad**. If there's no mark on the **pin contact pad**, it shows poor connectivity. • If marks are observed, clean the **pin contact pad** and test again.
	Component issue	• If the sound quality is still poor, use a good **bottom speaker** and **chin board** to cross check with the original ones • Replace the defective component.

Connectors location

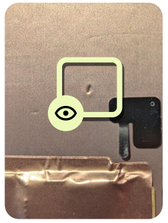
Disassembly

- Bottom speaker
- Chin board

Vibrator

Symptom	Potential root cause	Procedure	
 **T026:** Vibrator failure	Connectivity issue	• Check the contact condition between the **virator pad** and the **chin board pin contact pad**. If there's no mark on the **pin contact cad**, it shows poor connectivity. • If marks are observed, clean the **pin contact pad** and test again. • Test **vibrator** again. Check the function by triage test.	**Connectors location**
	Component issue	• Use a good **vibrator** and **chin board** to cross check with the original ones. • Replace the defective component.	**Disassembly** • Vibrator • Chin board

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 or 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 the display for damage and replace if necessary. 
	Connectivity issue	• Check if the connectivity between the **display connector** and the **chin board** is normal. • If they aren't fully buckled, reassemble and then retest. **Connectors location**
	Dead pixels Distorted graphics Flickering Color issues	• Remove the **display module**, fit a replacement part without **adhesive** and test. • If the issue is resolved, apply adhesive and fit a new **display module**. **Disassembly** • Display

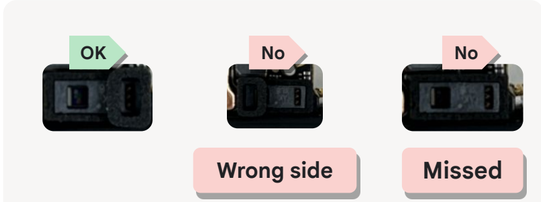
Display-cont.

Symptom	Potential root cause	Procedure
 **T040:** Display single crack **T041:** Display multiple cracks **T043:** Display cosmetic defects **T044:** Multi-touch poor response **T045:** Multi-touch no response **T046:** Multi-touch erratic response	Touch screen Fingerprint sensor	• Remove the **display module**, then fit a replacement part without adhesive and test. • If the issue is resolved, apply **adhesive** and fit a new **display module**. **Disassembly** • Display
	Component issue	• Use a good display and **chin board** to cross check with the original ones. • Replace the defective component. **Disassembly** • Display • Chin board

NFC

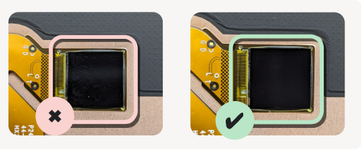
Symptom	Potential root cause	Procedure	
 **T051:** NFC connectivity issues	Connectivity issue	• Check the contact condition between the **NFC/WLC** and the **logic board pin contact pad**. If there's no mark on the **pin contact pad**, it shows poor connectivity. • If marks are observed, clean the **pin contact pad** and test again.	**Connectors location**
	Component issue	• Use a good **enclosure** and **logic board** to cross check with the original ones. • Replace the defective component.	**Disassembly** • Logic board • Enclosure

Proximity sensor

Symptom	Potential root cause	Procedure
T059: Proximity sensor failure	Assembly issue	Check the **P-sensor foam** is posted flat or not. **Assembly** • P-sensor foam status 
	Component issue	• Disassemble and check the appearance of the **P-sensor foam** without abnormality. • Use a good **P-sensor foam** on the **logic board** to cross check with the original ones. • Replace the defective component. **Disassembly** • Logic board • P-sensor foam

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 the **display** for damage and replace if necessary. • Inspect the **UDFPS area**. If it's dirty, clean it with a **dust-free cloth.**
	Connectivity issue	• Check if the connectivity between the **display connector** and the **chin board** is normal. • If they aren't fully buckled, reassemble and then retest.
	Component issue	• Use a good **display** and **chin board** to cross check with the original ones. • Replace the defective component.



Connectors location

Disassembly

- Display
- Chin board

Flam FSS flex

Symptom	Potential root cause	Procedure	
 **T077:** Camera flash not working **T099:** Rainbow Sensor defect	Connectivity issue	• Check if the connectivity between the **Flam FSS flex connector, LDAF connector** and the **logic board** is normal. • If they aren't fully buckled, reassemble and then retest.	**Connectors location**
	Component issue	• Use a good Flam FSS flex, LDAF and logic board to cross check with the original ones. • Replace the defective component.	**Disassembly** • Flam FSS flex • LDAF • Logic board

Rear camera

Symptom	Potential root cause	Procedure	
 **T072:** Camera AR failure **T073:** Camera rear photo quality **T074:** Camera rear video quality **T077:** Camera flash not working **T078:** Can't 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 the **camera lens area** for damage. • Check the function by triage test. • Disassemble the device to check whether the **camera connector** is seated properly. Power on the unit and check whether the **camera** fails again.	
	Connectivity issue	• Check if the connectivity between the **rear camera connector** and the **logic board** is normal. • If they aren’t fully buckled, reassemble and then retest.	**Connectors location**
	Component issue	• Use a good **rear camera** and **logic board** to cross check with the original ones. • Replace the defective component.	**Disassembly** • Rear camera • Logic board

Front camera

Symptom	Potential root cause	Procedure
 **T075:** Camera front photo quality **T076:** Camera front video quality **T078:** Can’t switch between cameras **T079:** Camera damage **T110:** FCAM crashes **T113:** FCAM no preview	Damage	Inspect the display and the **front camera** for damage.
	Connectivity issue	• Check if the connectivity between the **front camera connector** and the **logic board** is normal. • If they aren’t fully buckled, reassemble and then retest. **Connectors location**
	Component issue	• Use a good **front camera** and **logic board** to cross check with the original ones. • Replace the defective component. **Disassembly** • Front camera • Logic board

USB-C

Symptom	Potential root cause	Procedure	
 **T083:** USB-C port corrosion **T084:** USB-C port damage **T085:** USB-C failure	Damage	• Inspect the **USB-C connector** for debris preventing charging. • Inspect device for damage. • Inspect **liquid damage indicators (LDI)**.	
	Connectivity issue	• Check if the connectivity between the **jumpflex connector** and the **chin board** is normal. If they aren't fully buckled, reassemble and then retest. • Check if connectivity between the **jumpflex connector** and the **logic board** are normal. If they aren't fully buckled, reassemble and then retest.	**Connectors location**
	Component issue	• Use a good **jumpflex** and **chin board** to cross check with the original ones. • Replace the defective component. • Use a good **jumpflex** and **logic board** to cross check with the original ones. • Replace the defective component.	**Disassembly** • Jumpflex • Chin board • Logic board

mmWave module

Symptom	Potential root cause	Procedure	
	Damage	• Inspect the **mmWave module** for damage.	
T105: 5G_low_med_band_failure **T106:** 5G_high_band_failure	Connectivity issue	• Check if the connectivity between the **mmWave connector** and the **logic board** is normal. • If they aren't fully buckled, reassemble and then retest.	**Connectors location**
	Component issue	• Connect a new **mmWave module** to test. • If the issue is resolved, proceed with the **mmWave module** replacement and assemble the device. • If the **mmWave module** issue remains, replace the **logic board**.	**Disassembly** • mmWave module • Logic board

Pixel 9 repair manual

Testing

Software tools

Description	Documentation
Update or reinstall the software on Pixel devices	pixelrepair.withgoogle.com