

Repair Manual

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Notes

All functions, features, specifications and other device information provided in this document, including but not limited to the device's advantages, design, price, components, performance, availability and functionality, are subject to subsequent changes without further notice. Xiaomi reserves the right to modify this document or the device described herein at any time without obligation to provide notice of such changes.

Repair Precautions

Xiaomi is not responsible for any damage or defects caused by repairs by unauthorized service providers, self-repairs, or repairs by non-professionals. Xiaomi is not responsible for damage to the device, personal injury, or other device safety issues caused by attempts to repair the device without following these repair and maintenance instructions.

Damage or defects caused by attempts to repair the device by anyone other than a Xiaomi-certified service provider are not covered by the warranty.

- Because most electronic components are sensitive to electromagnetic forces, use a demagnetizing tool designed for minor electronic repairs.
- When repairing the device, use a high-quality screwdriver. Avoid damaging the screw heads with inferior screwdrivers.
- Always use OEM (Original Equipment Manufacturer) replacement parts. Using third-party replacement parts may not work properly and may cause fire or personal injury.
- Certain parts, such as sensors (laser autofocus/proximity/fingerprint sensors), rear cameras, TSP (touch screen), speakers, and other components, may require calibration to guarantee their performance after repair.
- If your device is waterproof and dustproof, its waterproof and dustproof performance is not guaranteed if it is repaired by you or other non-professional workers.
- If you need to access the device's fault data or require a more detailed diagnosis, please visit a Xiaomi Service Center.
- If you need to replace an unsold part, please visit the Xiaomi Service Center and get further guidance.
- Before repairing, be sure to back up all important data stored in the device to avoid data loss.

Before performing repairs, be sure to wear appropriate safety equipment.

Xiaomi is not responsible for any injuries that may occur as a result of not wearing appropriate safety equipment. Please read the Disassembly and Assembly Tools carefully, understand the list of tools required to assemble and disassemble the device.

- Always repair the device in a safe place.
- Before repairing the device, make sure the device is turned off.
- If the device If the device is damaged, emits smoke, or if you smell something burning, stop using the device immediately and contact Xiaomi.
- It is recommended to wear safety equipment such as glasses, gloves, and masks when repairing the device.
- When removing the back cover, be careful not to damage the device.
- Before assembly, make sure there are no screws or foreign objects around the battery.
- During assembly, check for any abnormalities before reinstalling the back cover, and be careful not to hit or damage the battery. If the battery is damaged, please go to a Xiaomi Service Center.
- Do not heat the device directly in a microwave.
- Before repairing the device, make sure the battery is fully discharged.
- You can visit (<https://spare-parts.mi.com/>) to view device information, related materials and safety information.

ESD (Electrostatic Discharge) Precautions

Electrostatic discharge is the sudden flow of electricity between two charged objects due to contact, short circuit, or dielectric breakdown. ESD can negatively affect mobile devices, especially electronic components.

- It is recommended to use ESD-safe (antistatic) equipment, such as antistatic wrist straps and gloves, and ESD-safe mats when repairing devices.
- Increase airflow in the work area to reduce the possibility of accidental electrostatic discharge, which may increase in low humidity environments (such as air-conditioned rooms).

OTA Upgrade

You can check system updates by clicking on the system version number in the phone settings. If the system needs to be upgraded, you can click on the details to view the update log to understand the details of the upgrade and decide whether to update the system version based on your actual situation.

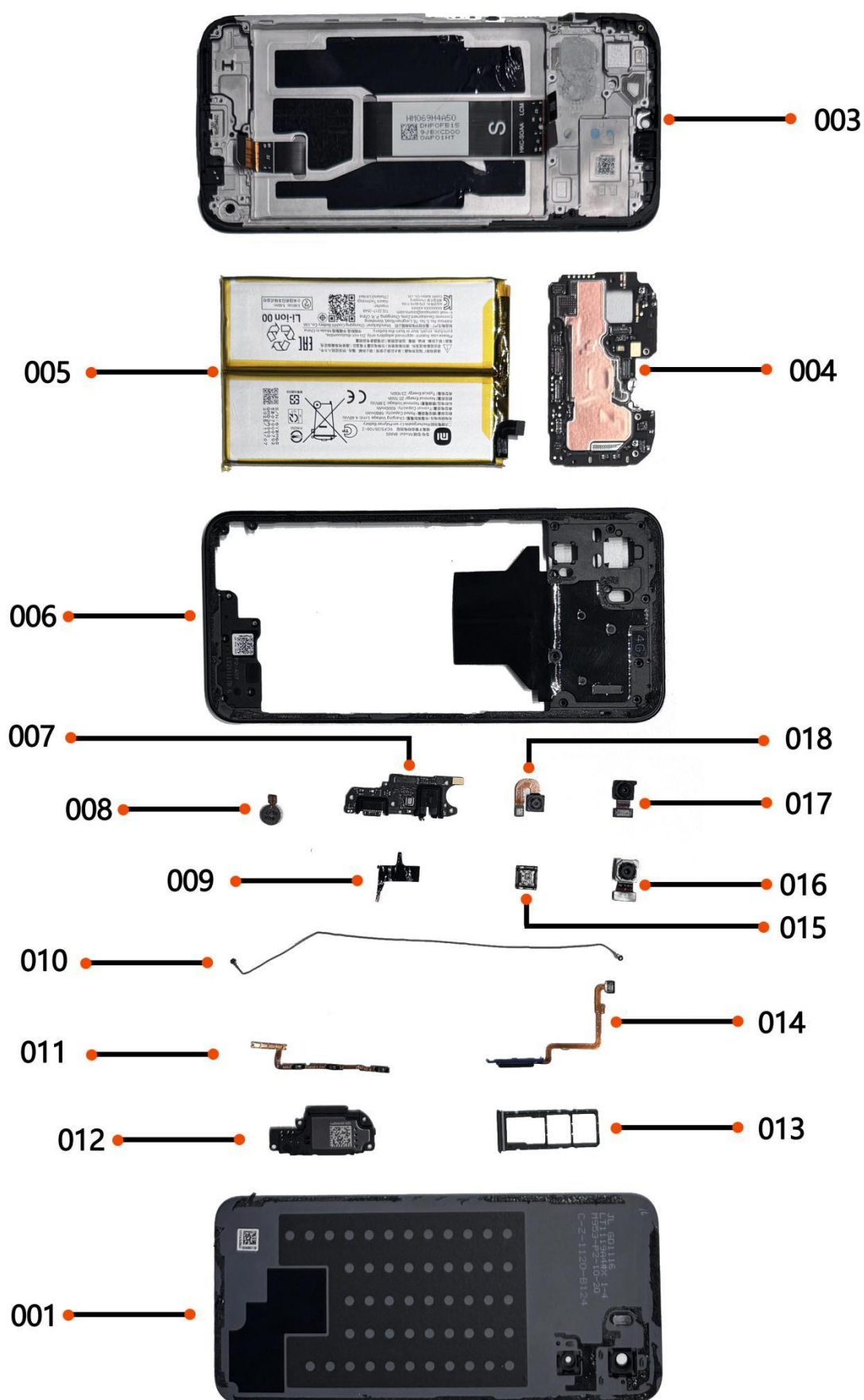
Icon Description

-  **Warning:** Situations that could cause harm to yourself or others;
-  **Caution:** Situations that may cause damage to your device or other equipment;
-  **Tip:** Notes, usage tips, or other information;
-  **Customers:** If you are the customer, please refer to the precautions/operations under this icon;
-  **Professional authorized repairer:** If you are the professional authorized repairer, please refer to the precautions/operations under this icon.

Materials and List

Materials

Materials and List



List

Serial number	Name
001	Battery Cover Assy
002	Screw
003	Middle Frame Module
004	Mainboard Assy
005	Battery
006	Flash Lampshade
007	Sub-Board Assy
008	Vibrator
009	Copper Foil of the Camera-Front
010	Coaxial Cable
011	FPC Assy-Side Key
012	Speaker Assy
013	SIM Card Tray
014	Fingerprint Module
015	Top Speaker Assy
016	Camera-Rear-Main
017	Camera-Front
018	Camera-Rear-Ultra Wide Angle

Tools and Materials

Tools

 When disassembling and assembling the phone, please be sure to wear protective equipment to prevent injury.

Tool Name	Diagram	Details	Target users
Safety Goggles		Prevent accidents during repair (protective equipment).	 
Safety Gloves (ESD safe, cut-resistant)		Prevent accidents during repair (protective equipment).	 
Safety Mask		Prevent accidents during repair (protective equipment).	 
Anti-static Wrist Strap		Prevent static electricity from damaging the device (recommended).	 

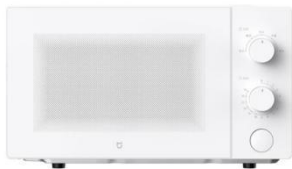
Tool Preparation

Tool Name	Diagram	Details	Target users
ESD Safe Mat		Prevent static electricity from damaging the device (recommended).	 
Ejection Pin		Used to remove the SIM card tray (necessary tool).	 
Phillips Screwdriver		Used to remove screws (necessary tool).	 
Plastic Pry Bar		For removing wiring harness connections and other components (necessary tool).	 
Suction Cup		Used for disassembling and assembling the back cover and screen (necessary tool);  If your display is cracked, the suction cup may not stick properly and be careful not to get cut by the broken pieces.	 

Tool Preparation

Tool Name	Diagram	Details	Target users
ESD Safe Tweezers		Used for disassembly and assembly of small parts (necessary tool);  Please do not use metal tweezers to avoid scratching the device and damaging it with static electricity.	 
Plastic Pry Tool		Used to remove the battery cover and other parts (necessary tool);  Other sturdy sheets can be used instead (plastic sheets);  Please do not use metal sheets or blades to avoid damaging the device.	 

Tool Preparation

Tool Name	Diagram	Details	Target users
Heating Bag		Used to heat when removing the back cover (necessary tool);  Use the tabs as handles when heating to avoid burns.	
Micro-wave Oven		For heating the Heating Bag (necessary tool).	
Adhesive Backing Fixing Tool		Used to position the adhesive when sticking the battery cover.	
Battery Cover Assembly Press Device		Used when pressing the battery cover to evenly distribute the pressure on the battery cover.	

Tool Preparation

Tool Name	Diagram	Details	Target users
Heating Platform		When removing the battery cover, heat the adhesive on the battery cover to make it easier to separate the battery cover from the device.	
Crimping Tool		Used when pressing the battery cover, so that the pressure can be precisely controlled.	
Air Tightness Tester		Used to detect the air tightness of mobile phones;  If the phone is dustproof and waterproof, the air tightness of the phone needs to be tested after assembly.	

Consumables (adhesives and other materials)

- 💡 Consumables may vary depending on the repair parts, country, region or repair provider.
The content in the table is for reference only.

Name	Diagram	Details	Target users
Battery Cover Adhesive		Used when attaching the battery cover to the device.	 
Battery		Used when replacing the battery.	 
Front Cover Display Module		Used when replacing the screen.	 

Disassembly

Before disassembly

- Make sure your phone data is backed up to prevent loss of important data.
- Disconnect the device from the power source and turn it off.
- Wear an anti-static wrist strap and connect it to a grounded ESD safety mat.
- The composition of the product may vary by country, region, or repairer.

1. Remove the SIM Card Tray:

Insert the ejection pin into the hole of the SIM Card Tray to loosen the tray and pull out the tray gently from the tray slot.



 When removing the SIM Card Tray, it is recommended to use your hands or plastic tweezers to avoid scratching the appearance.

 For the assembly method of the SIM Card Tray, please refer to the subsequent assembly tutorial in the manual.

2. Heating up the Phone:

 If you are the customer, please refer to the following method:

-  • It is possible for the device or battery to be damaged by heat.
 - Do not heat the device in a microwave. Doing so could cause an explosion.
-  • Follow the heating bag's instructions for heating. The recommended time for heating the bag is 50 seconds in a 1000W microwave and 70 seconds in a 700W microwave. (Correct temperature for use: 55-65 °C.)
 - Be careful not to damage the device through excessive heat. (It is recommended to disassemble the device in an area with a temperature gauge.)

(1) Heat the Heating Bag in the microwave for 2-5 minutes until it reaches about 70 degrees Celsius.



 The heating time needs to be adjusted according to the power of your microwave.

Disassembly and Assembly

(2) Take the Heating Bag out of the microwave.



 Use the label as a handle when removing the Heating Bag to avoid burns.

(3) Place the phone on the Heating Bag and heat it for about 1-2 minutes.



Disassembly and Assembly

 If you are a professional authorized repairer, please refer to the following method:

(1) Use a heating platform and wait for it to heat up to about 70 degrees Celsius.



(2) Place the phone on the heating platform and continue heating for 1-2 minutes.



 Please heat the device within the specified temperature and time, otherwise it may be damaged or affect subsequent operations.

3. Remove the Battery Cover Assy:

Use a plastic pry tool to slowly separate the Battery Cover Assy from the device.



- Use the Plastic Pry Tool to slide along the left edge of the device to cut the glue, leaving the Plastic Pry Tool on the left edge side when finished to prevent the adhesive from resealing.
- If it's difficult to create a gap, reheat to further soften the adhesive. When reheating, do not reheat for more than 30 seconds.



- As the Battery Cover Assy may be damaged by excessive force, be careful not to damage the Battery Cover Assy.
- Do not insert the Plastic Pry Tool too deeply into the device as the internal circuitry may be damaged.



Anti-shattering of glass/ceramic back cover:

- Avoid pressing hard on the center of the back cover when separating (especially for curved screen models) to prevent glass cracking due to stress concentration.
- If the back cover is broken, fix the fragments with tape before operation to avoid scratching your fingers or dropping them into the device.

4. Remove the Screws:

(1) Use a needle screwdriver to remove the screws.



 Check the number of screws that have been removed and keep them in a safe place to ensure that no unassembled screws are left inside the device during the assembly process.

5. Disconnect the Cables:

(1) Disconnect the Battery cables.



-  • For your safety, always disconnect the battery connector first.
- Be careful not to damage the battery.

(3) Disconnect the Main FPC Assy from the Mainboard Assy.



(4) Disconnect the Front Cover Display Module from the Mainboard Assy.



 Please disconnect the interface in parallel during operation to avoid tilting and pulling, which may cause damage to the interface.

6. Remove the Camera Assy:

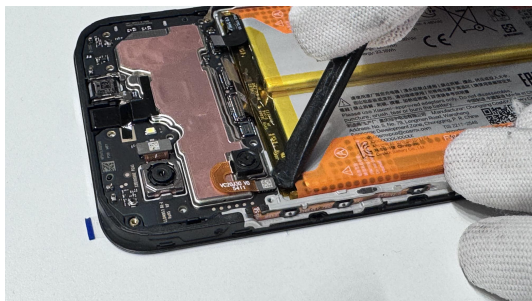
(1) Uncover the Copper Foil of the Camera-Rear-Ultra Wide Angle.



-  • Do not touch the camera lens directly during operation to avoid scratching the lens.
- Please be careful to avoid damaging the Copper Foil.

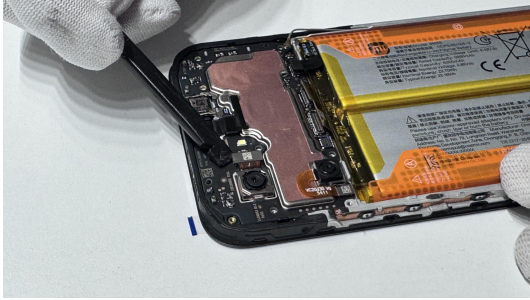
 You can use special alcohol to help tear off the Copper Foil.

(2) Disconnect the Camera-Rear-Ultra Wide Angle from the device and remove it.



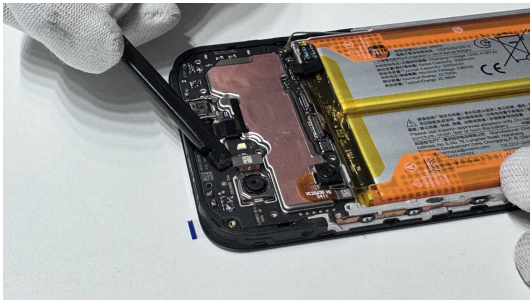
 Do not touch the camera lens directly during operation to avoid scratching the lens.

(3) Uncover the Copper Foil of the Camera-Rear-Main.



- Do not touch the camera lens directly during operation to avoid scratching the lens.
 - Please be careful to avoid damaging the Copper Foil.
- 💡 You can use special alcohol to help tear off the Copper Foil.

(4) Disconnect the Camera-Rear-Main from the device and remove it.



- Do not touch the camera lens directly during operation to avoid scratching the lens.

(5) Uncover the Copper Foil of the Camera-Front.



- Do not touch the camera lens directly during operation to avoid scratching the lens.
 - Please be careful to avoid damaging the Copper Foil.
- 💡 You can use special alcohol to help tear off the Copper Foil.

(6) Disconnect the Camera-Front from the device and remove it.



 Do not touch the camera lens directly during operation to avoid scratching the lens.

-  • Do not touch the camera lens directly during operation to avoid scratching the lens.
- The camera lens and sensor are very precise. Finger grease or dust will affect the image quality. Wear gloves or hold with a dust-free cloth when operating.
- If you need to clean the lens, use special lens paper or cotton swab dipped in a small amount of anhydrous alcohol to gently wipe it. Do not use paper towels or hard objects to scratch it.
- The camera is usually connected to the motherboard via an FPC cable. You need to disconnect the cable interface before disassembly.
- Use tweezers to gently lift the pressure plate before pulling out the cable. Do not pull the cable directly.
- If the cable is stuck to the motherboard, use a Plastic Pry Bar to gently lift it up to avoid breaking the cable.

7. Disconnect the Coaxial Cables:

(1) Disconnect the Coaxial Cable-Blue from the Mainboard Assy, then remove the Coaxial Cable-Blue from the cable slot.



Be careful not to damage the wiring harness interface and surrounding components during operation.

💡 You can use the flat side of a Plastic pry bar to gently pry up the connector.

- (2) Disconnect the other end of the Coaxial Cable-Blue from the Mainboard Assy and remove it.



Be careful not to damage the wiring harness interface and surrounding components during operation.

💡 You can use the flat side of a Plastic pry bar to gently pry up the connector.

8. Remove the Mainboard Assy:

Remove the Mainboard Assy from the device.



💡 Carefully lift the Mainboard Assy with tweezers and remove the Mainboard Assy, being careful not to damage the PBA board.

- Do not touch the Mainboard Assy directly with metal tools to avoid scratching the Mainboard Assy and static damage.
- Use moderate force when holding components with tweezers to avoid squeezing small components such as capacitors and resistors.

💡 For Mainboard Assy assembly methods, please refer to the subsequent assembly

tutorials in the manual.

9. Remove the Top Speaker Assy:



 Do not use metal tweezers or other hard tools as they may scratch the device.

10. Remove the FPC Assy-Side Key:

(1) Use tweezers to peel off the PET Film-Isolating Cable then lift the FPC Assy-Side Key.



 You can use special alcohol to help tear off the PET Film-Isolating Cable.

(2) Remove the side key from the device.



 Use ESD Safe Tweezers to cut the adhesive between the Holder-Side Key FPC and the device. Use ESD Safe Tweezers to press one side of the Holder-Side Key FPC in the slot to lift up the other side of the Holder-Side Key FPC. Then use ESD Safe Tweezers to remove the Holder-Side Key FPC.

 Do not use metal tweezers or other hard tools as they may scratch the device.

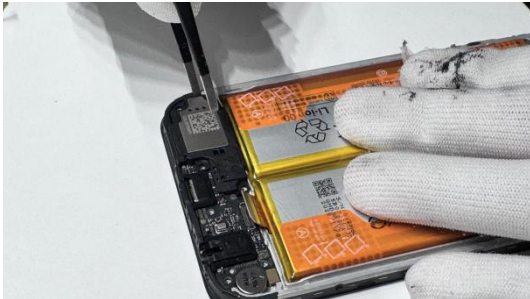
11. Remove the Speaker Assy:

(1) Unscrew the screws of the Speaker Assy.



 Check the number of screws that have been removed and keep them in a safe place to ensure that no unassembled screws are left inside the device during the assembly process.

(2) Lift the Speaker Assy, remove the Antenna Board Assy from the back of the Speaker Assy.



 • Pay attention to the clips around the Speaker Assy during operation. Make sure the clips are completely separated before proceeding to the next step to avoid damaging the Speaker Assy.

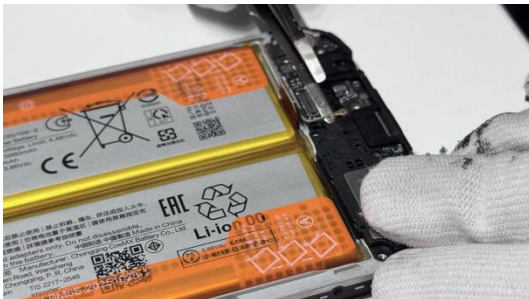
- Use moderate force when holding components with tweezers to avoid squeezing small components such as capacitors and resistors.

(3) Remove the Coaxial Cable-White from the cable slot of the Speaker Assy; then remove the Speaker Assy.



12. Remove the Antenna Board Assy:

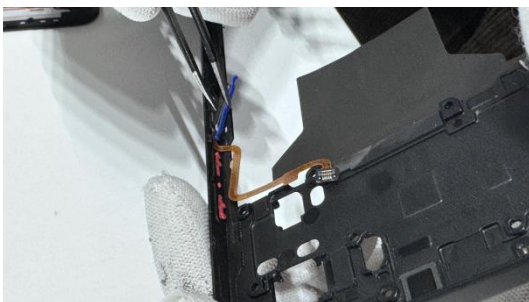
Disconnect the Antenna Board Assy from the Coaxial Cable-White and remove the Antenna Board Assy.



-  Do not pull the cable directly when disconnecting to avoid breaking it.
- Be careful not to break the Coaxial Cable-White.

13. Remove the Fingerprint Module:

Disconnect the Fingerprint Module from the Sub-Board Assy, and then remove the Fingerprint Module from the device.



-  Please disconnect the interface in parallel during operation to avoid tilting and pulling, which may cause damage to the interface.

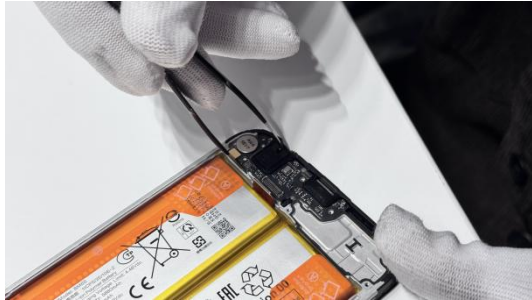
14. Remove the Sub-Board Assy:

(1) Disconnect the Main FPC Assy from the Sub-Board Assy.



i Please disconnect the interface in parallel during operation to avoid tilting and pulling, which may cause damage to the interface.

(2) Remove the Sub-Board Assy from the device.



i Pay attention to the clips around the Sub-Board Assy during operation. Make sure the clips are completely separated before proceeding to the next step to avoid damaging the Sub-Board Assy.

(3) Remove the Vibrator from the device.



i Please do not use metal tweezers or other hard tools to avoid scratching the device.

15. Remove the Battery:

(1) Tear off the Easy Release Adhesive.



(2) Remove the Battery and tear off the remaining Easy Release Adhesive on the device.



 Be careful not to damage the battery.

 You can use special alcohol to help remove the adhesive, or use the microwave to heat the heating bags, then heat the device before removing it.

Assembly

 Before reassembly, please confirm the following:

- Thoroughly remove any residual adhesive.
- Prepare the screws and new adhesive required for the device.
- Wear an anti-static wrist strap and connect it to a grounded ESD safe mat.
- Do not leave any unassembled screws inside the device. Leaving screws inside the device may damage internal components such as the battery. Please be extremely careful during assembly.
- The composition of the product may vary by country, region, or repairer.

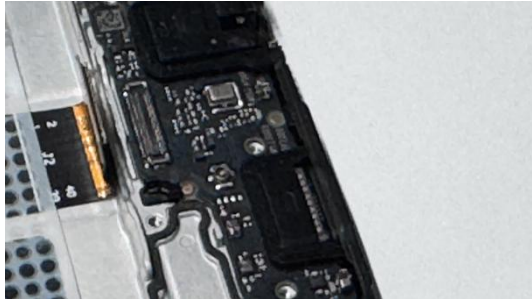
1. Assemble the Vibrator:



 Do not use metal tweezers or other hard tools as they may scratch the device.

2. Assemble the Sub-Board Assy:

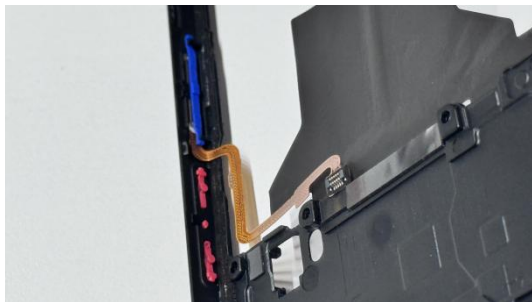
Place the Sub-Board Assy in the correct position. Press the Sub-Board Assy gently to ensure it is properly installed.



- Please check the components underneath when installing the Sub-Board Assy. If the components underneath are not properly installed, the Sub-Board Assy may not be properly installed.
- Please make sure that all the clips are locked into place, otherwise it will affect the subsequent installation.

3. Assemble the Fingerprint Module:

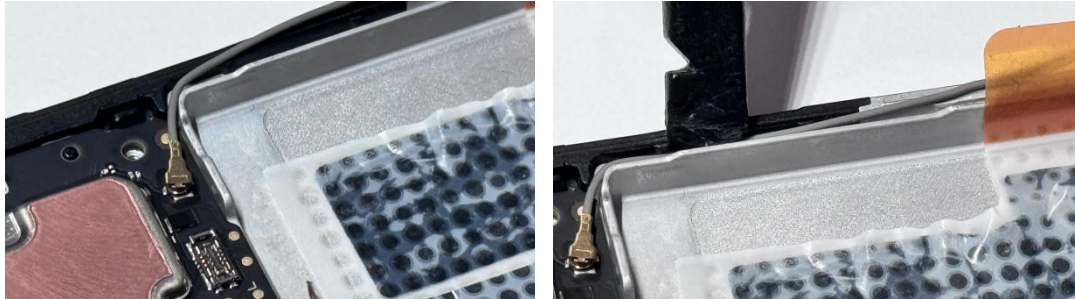
Place the Fingerprint Module in the correct position and connect it to the Sub-Board Assy.



- You can press the wiring harness interface with your fingers. If you can clearly feel a "click" sound, it means the interface is connected in place.

4. Assemble the Coaxial Cable:

- (1) Connect the Coaxial Cable-Black to the Sub-Board Assy, and arrange the Coaxial Cable-Black into the cable slot.



5. Assemble the Speaker Assy:

- (1) Place the Speaker Assy into the correct position of the device, press gently to ensure it is installed in place.



 Please make sure that all the clips are locked into place, otherwise it will affect the subsequent assembly.

6. Assemble the Top Speaker Assy:

- (1) Install the rear camera frame into place.



- (2) Place the Top Speaker Assy into the correct position on the device, and gently press it to

make sure it is securely in place.



- During the subsequent installation, pay attention to whether the receiver cable is lifted up and do not squeeze the receiver cable.
- Use moderate force when holding components with tweezers to avoid squeezing small components such as capacitors and resistors.

7. Assemble the FPC Assy-Side Key:

(1) Place the FPC Assy-Side Key into the correct position, press to ensure it clicks into place.



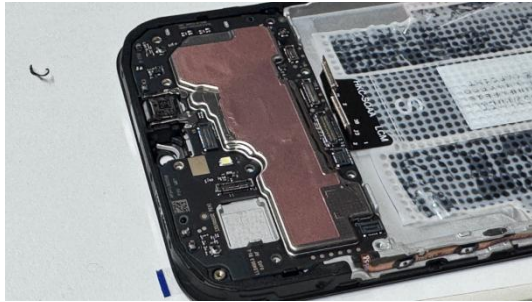
(2) Tidy up the cable to ensure it is installed in place.



During the subsequent installation process, you need to check whether the Side Key FPC harness is lifted up to avoid squeezing the harness during installation.

8. Assemble the Mainboard Assy:

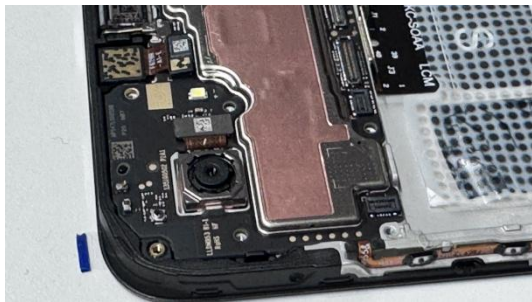
Place the Mainboard Assy into the device, press firmly to ensure it fits into place.



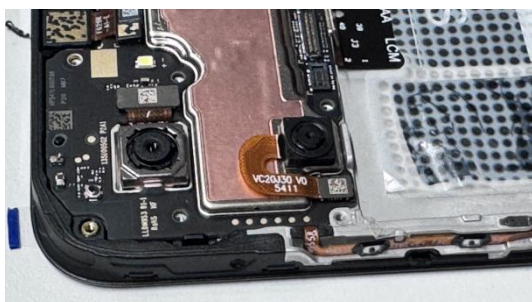
 Please make sure that all the clips are locked into place, otherwise it will affect the subsequent assembly.

9. Assemble the Camera Assy:

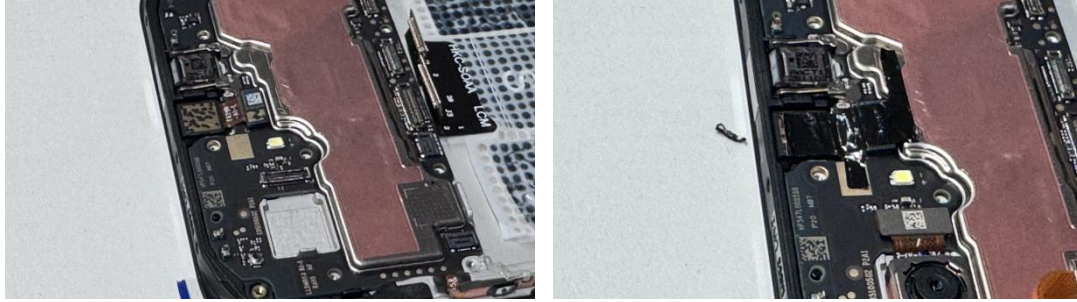
(1) Connect the Camera-Rear-Main to the Mainboard Assy and ensure the copper foil is properly attached.



(2) Connect the Camera-Rear-Ultra Wide Angle to the Mainboard Assy and ensure the copper foil is properly attached.



(3) Connect the Camera-Front to the Mainboard Assy, and ensure the copper foil of the Camera-Front is properly attached.



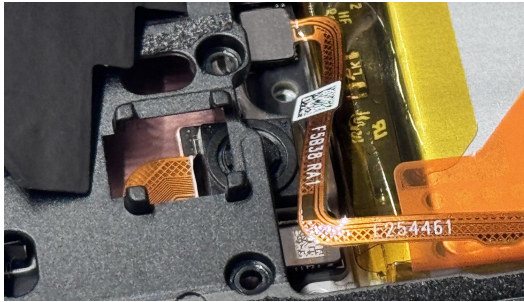
- Do not touch the camera lens directly during operation to avoid scratching the lens.
- Do not use hard tools during operation, as this may damage the Anti-interference Copper Foil.
- You can press the wiring harness interface with your fingers. If you can clearly feel a "click" sound, it means the interface is connected in place.
- Attach the Anti-interference Copper Foil. You can press lightly with your fingers to ensure it fits securely.

10. Connect the cables:

(1) Connect the Front Cover Display Module to the Mainboard Assy.

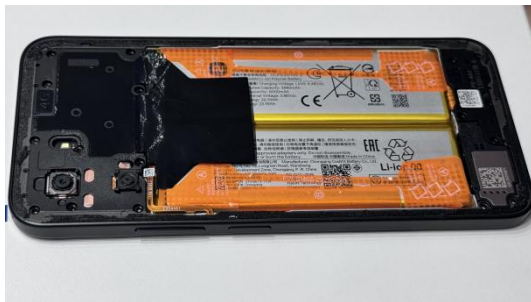


(2) Connect the Fingerprint FPC Assy to the Mainboard Assy.



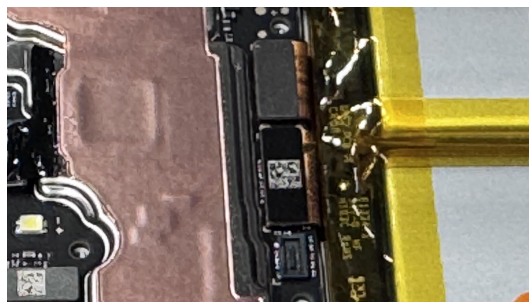
11. Assemble the Battery:

(1) Align it with the correct position on the phone, insert the Battery, and press gently to ensure a secure fit.

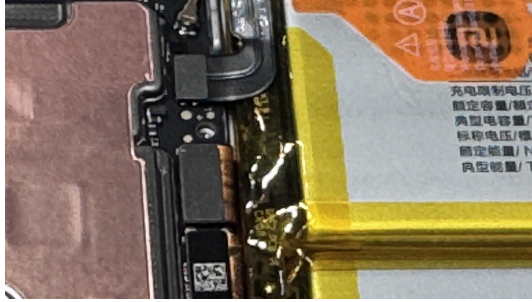


 Please try not to touch the surface of the Easy Release Adhesive to avoid contamination of the Easy Release Adhesive and affecting the adhesion effect.

(2) Connect the Battery to the Mainboard Assy.



(3) Install the BTB steel sheet into place.



12. Assemble the SIM Card Tray:



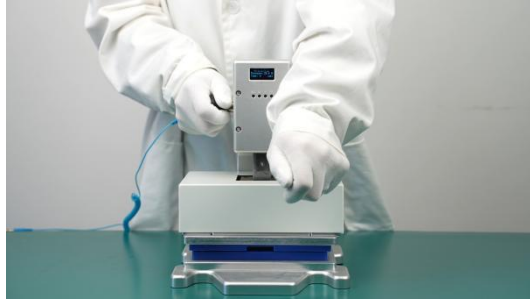
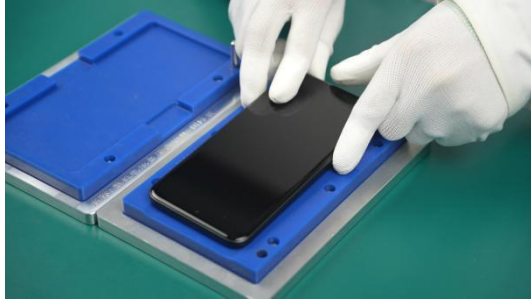
 Please do not use hard tools to install the SIM card tray to avoid scratching the device.

13. Crimp the Battery Cover Assy:

 If you are the customer, please press gently on a flat surface to ensure that the Battery Cover fits securely.

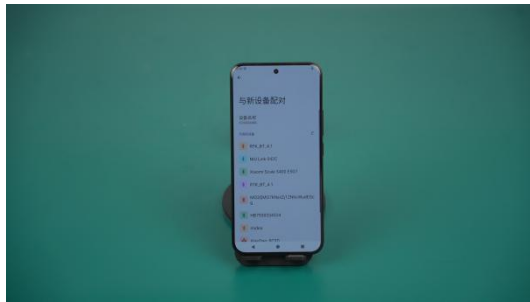
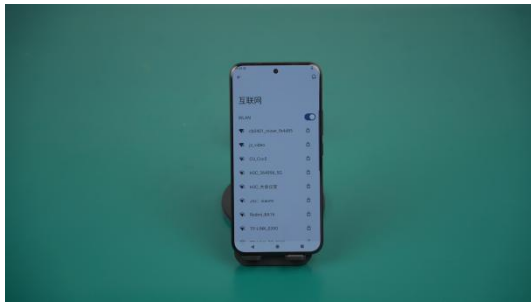


 If you are a professional authorized repairer, place the phone into the Battery cover assembly press device and press for 60 seconds using the Crimping tool.



14. Test phone functions:

Check whether the phone can be turned on normally, and test whether the phone's Wi-Fi, Bluetooth, sound, camera and other functions can be used normally. If all functions operate normally, the assembly is complete.



Calibration and Quality Inspection

To ensure proper assembly, it is recommended to calibrate and inspect the device after assembly. If any fault occurs during repair/assembly, calibration and inspection can help locate and identify the problem quickly. Please go to a Xiaomi Authorized Service Center for further assistance. Any fault caused by repair may incur additional repair costs.

Calibration

Please refer to the link for specific calibration methods.

https://cdn.shopify.com/s/files/1/0955/8360/0979/files/Mobile_phone_basic_function_test.pdf?v=1747878433

Quality Inspection

Please refer to the link for specific inspection methods.

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