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### 1.Guidelines

This manual is only applicable to the repair operation of OnePlus 15. All contents are owned by One Plus, and it is strictly forbidden to copy, modify or reprint without authorization. Please read the manual carefully and strictly follow the instructions for maintenance service. If you have any questions, please contact the official customer service of OnePlus.

#### 1.1 Warning ⚠

1. Please be sure to pay attention to the parts marked with "warning ⚠ ". Improper handling may cause fire, personal injury or other hazards.
2. Battery safety instructions:

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Always handle the built-in battery in accordance with the prescribed guidelines! Improper handling may lead to accidents, such as leakage, bulging and other serious incidents that could endanger personal and property safety.

- ( 1 ) It is forbidden to use heating equipment such as hot air gun or hot air drum to directly heat the battery;
- ( 2 ) It is forbidden to use sharp objects and tools, directly contact the battery surface and remove auxiliary materials on the battery surface;
- ( 3 ) The battery wrapped with easy-tear tape must have the easy-tear tape replaced with a new one after disassembly. It is forbidden to reuse the easy-tear tape;
- ( 4 ) It is forbidden to reuse the deformed, damaged and non-sticky battery double-sided adhesive tape and handle position;
- ( 5 ) It is forbidden to mix the battery with any other items and it must be stored separately;
- ( 6 ) Check the appearance of the battery, and prohibit the use of batteries with puncture, bulge leakage or serious deformation;
- ( 7 ) When installing the battery, it is necessary to ensure that there are no foreign objects on the surface of the battery and inside the battery compartment;

3. If you need to replace a damaged screen, be sure to take appropriate protective measures, such as wearing safety goggles and puncture-resistant gloves. In addition, it is recommended to use non-slip mat to secure the mobile phone during operation to prevent further damage caused by accidental sliding. At the same time, be careful to avoid broken particles from falling inside the device during operation.

## 1.2 Caution

1.2.1. Please pay attention to the parts marked with " Caution". Be careful when operating. Improper handling may result in data loss, hardware damage, or other damage.

1.2.2. Maintenance and calibration must be carried out in strict accordance with this guideline.

1.2.3. Only use the materials listed in the bill of material for repair service.

1.2.4. All parts shall be installed in place according to the requirements.

1.2.5. Electrostatic discharge is the major cause of damage to sensitive components of electronic products. Please strictly follow the electrostatic protection requirements in the appendix during operation.

1.2.6. Professional repairers must have the technical capability to repair smartphones and have purchased relevant insurance, which covers the liabilities arising from their business activities.

1.2.7. Please dial “\*##588#\*##” to view the battery management system information, including:

- (i)date of manufacturing of the battery;
- (ii)date of first use of the battery after the set-up of the device by the first user;
- (iii)number of full charge/discharge cycles (reference: rated capacity);

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(iv) measured state of health (remaining full charge capacity relative to the rated capacity in %).

1.2.8. The following charging methods will have an adverse effect on battery life:

- (i) Frequent charging
- (ii) Charging for a long time when the battery is high
- (iii) Charging in a high temperature environment

1.2.9. When wireless connection functions such as WiFi and Bluetooth are turned off, the short standby current can be reduced by about 20%, which is beneficial to extend the battery endurance and life.

1.2.10. The following features have a positive impact on battery life:

- (i) Smart charging, which is automatically turned on
- (ii) High-power charging limit, which you can turn on in Settings-Battery options

1.2.11. For environmental reasons this package does not include a charger. This device can be powered with most USB power adapters and a cable with USB Type-C plug.

**Note:** OnePlus shall not be liable for any property damage, personal injury or other safety problems resulting from failure to follow the repair and maintenance instructions. OnePlus' liability under applicable product liability laws remains unaffected. Repairs conducted by unauthorized service providers may affect the warranty of the entire device. Please refer to the official warranty policy for more details.

## 2. General Repair Information

2.1 Please pay attention to ESD protection requirements and wear ESD anti-static ring.

2.2 It is recommended to wear anti-static gloves to avoid oil stains and fingerprints.

2.3 Protect the display screen, camera and camera lens with protective film to prevent dust and scratching.

2.4 The appearance must be cleaned with dust-free cloth, anti-static brush and appropriate organic solvent (including but not limited to alcohol or isopropyl alcohol). Do not use other items (such as erasers) to clean, as they may scratch the surface coating, leading to oxidation and corrosion.

2.5 If the welded mechanical components (excluding shield cover and shield frame components) are defect, they cannot be repaired and must be replaced.

2.6 Please use the original spare parts.

2.7 It is necessary to use equipment provided by OnePlus to test whether the phone is functioning properly. For example, if a customer reports an issue with the charging function, please use the original OnePlus adapter for testing to ensure the accuracy of the test results.

2.8 If you have any questions regarding the repair services for this product, please contact the official OnePlus customer service at <https://service.oneplus.com/>.

### 3. Component Disassembly Diagram

#### 3.1 Product appearance diagram

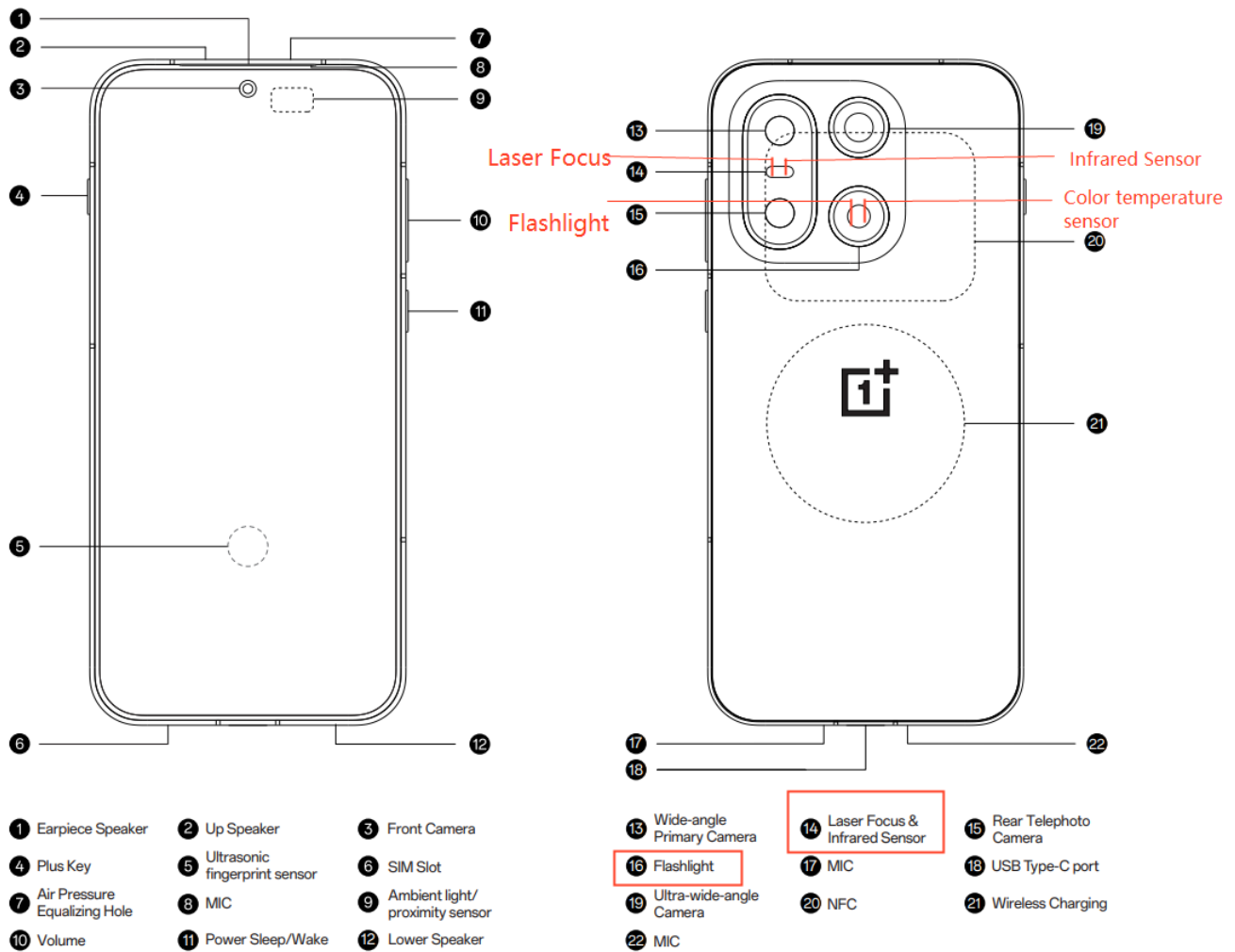


Figure 3-1-1

### 3.2 Component Exploded View Diagram

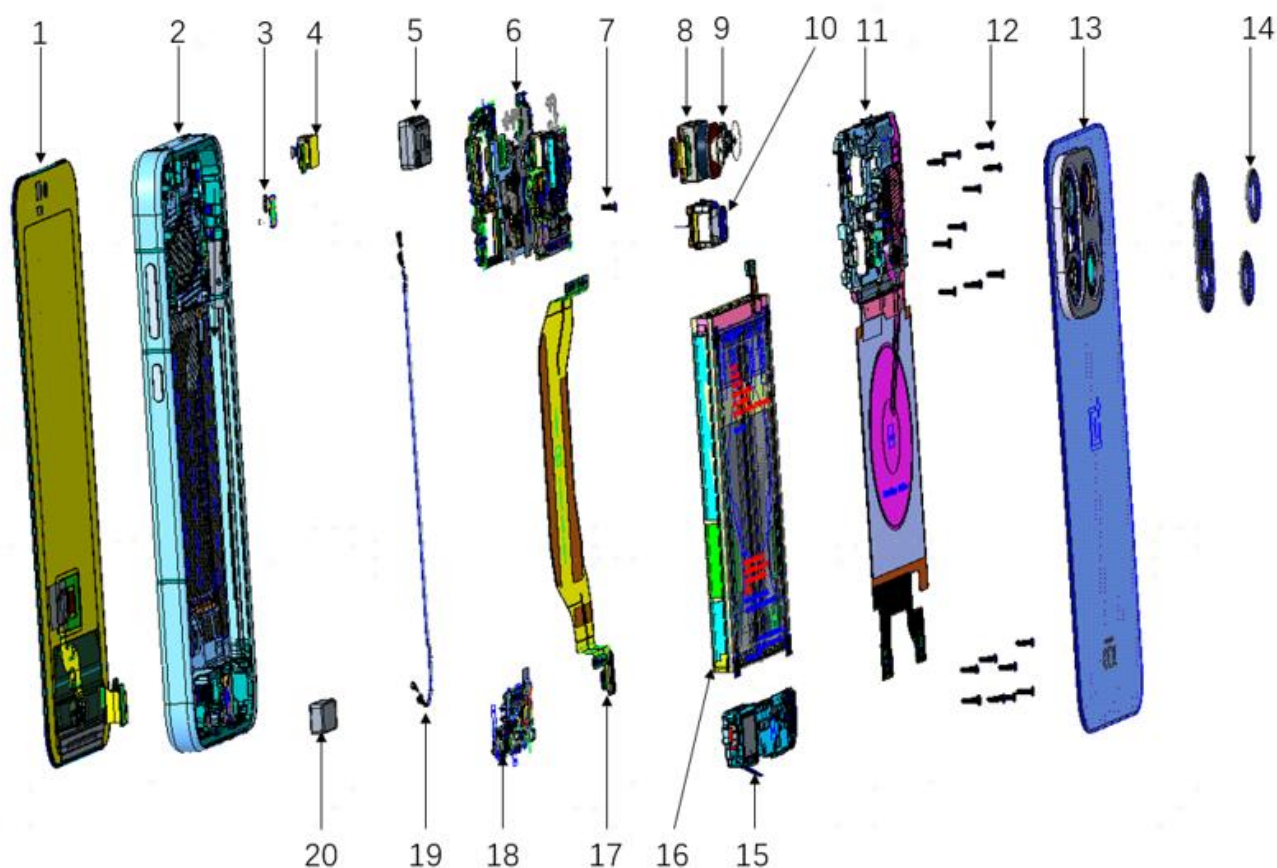



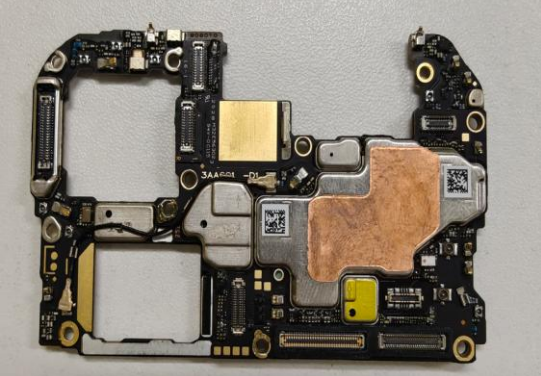



Figure 3-2-1

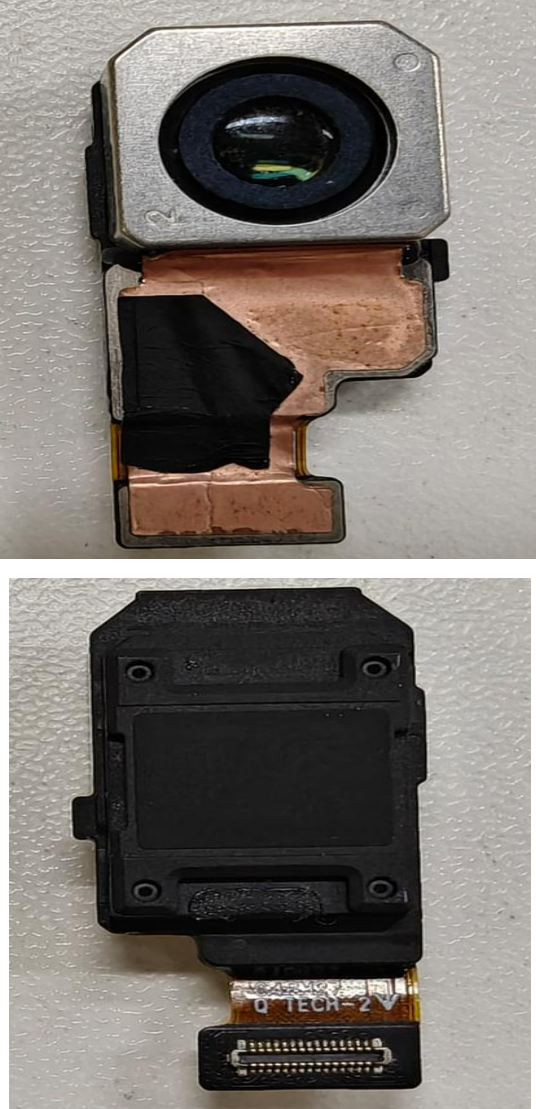
### 3.3 Material list corresponding to explosion diagram

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
1+2	Display assembly		<b>1. display assembly 1 PCS</b> Auxiliary materials:




Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * <i>(In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)</i>
			<p>2.18907 - ML/pcs LF 3500 Thermal Conductive Gel 0.05 ml</p> <p>3.Battery pull tape-Left" 1pcs</p> <p>4.ape Battery pull tape-Right" 1pcs</p> <p>5.After-sales maintenance materials 1pcs</p> <p>6.AA601 Battery cover PET film Glass plate On 1pcs</p> <p>7.AA601 Battery cover PET film Glass plate Lower 1pcs</p> <p>8.AA601 Battery cover</p> <p>StructuralDoubleFacedAdhesiveTape 1pcs</p> <p>9.AA601 Telephoto fixed back adhesive double faced adhesive tape 1pcs</p>
5	Upper speaker		<p>1. Upper speaker 1 PCS</p> <p>Auxiliary materials:</p> <p>2.18907 - ML/pcs LF 3500 Thermal Conductive Gel 0.05 ml</p> <p>3.AA601 Battery cover PET film Glass plate On 1pcs</p> <p>4.AA601 Battery cover PET film Glass plate Lower 1pcs</p> <p>5.AA601 Battery cover</p> <p>StructuralDoubleFacedAdhesiveTape 1pcs</p> <p>9.AA601 Telephoto fixed back adhesive double faced adhesive tape 1pcs</p>



Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * <i>(In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)</i>
4	Front camera assembly		1. front camera assembly 1 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
6	Mainboard		1. Mainboard Component 1 PCS Auxiliary materials: 2.18907 - ML/pcs LF 3500 Thermal Conductive Gel 0.05 ml 3.AA601 Battery cover PET film Glass plate On 1pcs 4.AA601 Battery cover PET film Glass plate Lower 1pcs



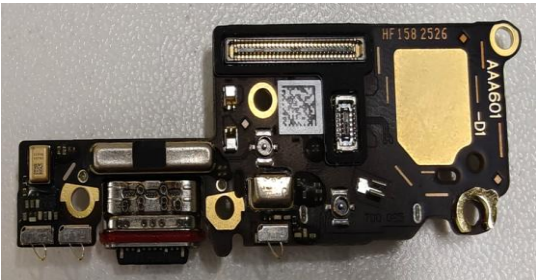
Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component *  (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
			5.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs 6.AA601 Telephoto fixed back adhesive double faced adhesive tape 1pcs
	Shell Bracket		1. Shell Bracket 1 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
9	Rear Ultra Wide-Angle camera assembly (referred to as the wide-angle camera later)		1. Rear Ultra Wide-Angle camera assembly 1 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs



Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component *  (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
10	Rear Telephoto camera assembly		<p>1. Rear Telephoto camera assembly 1 PCS</p> <p>Auxiliary materials:</p> <p>2.AA601 Battery cover PET film Glass plate On 1pcs</p> <p>3.AA601 Battery cover PET film Glass plate Lower 1pcs</p> <p>4.AA601 Battery cover</p> <p>StructuralDoubleFacedAdhesiveTape 1pcs</p> <p>5.AA601 Telephoto fixed back adhesive double faced adhesive tape 1pcs</p>

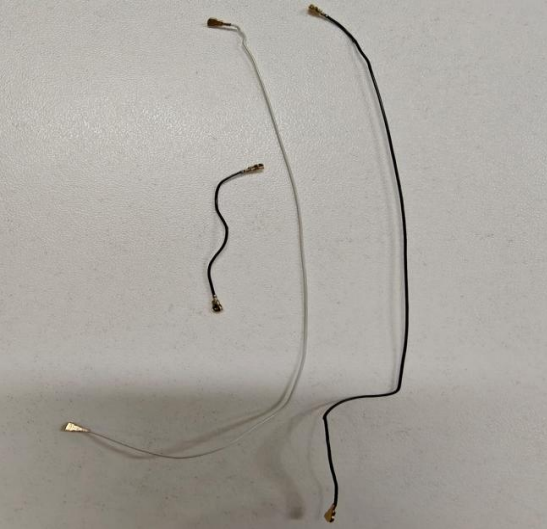
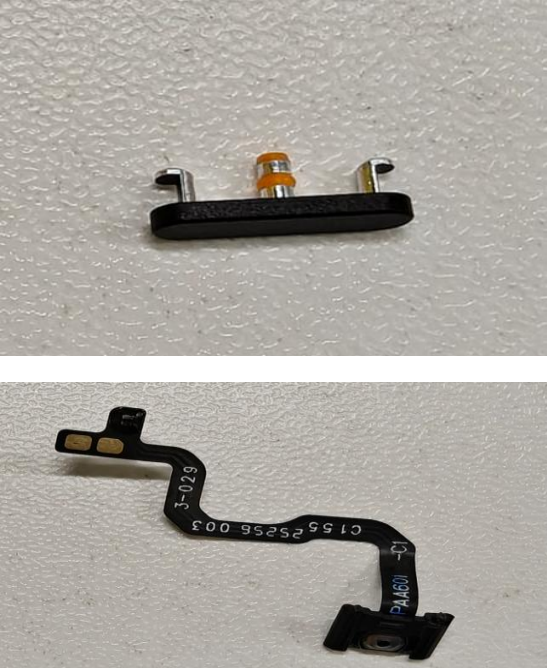

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * <i>(In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)</i>
8	Rear Wide-Angle main camera assembly (referred to as the main camera later)		<p>1. rear wide-angle main camera assembly 1 PCS</p> <p>Auxiliary materials:</p> <p>2. AA601 Battery cover PET film Glass plate On 1pcs</p> <p>3. AA601 Battery cover PET film Glass plate Lower 1pcs</p> <p>4. AA601 Battery cover</p> <p>StructuralDoubleFacedAdhesiveTape 1pcs</p>

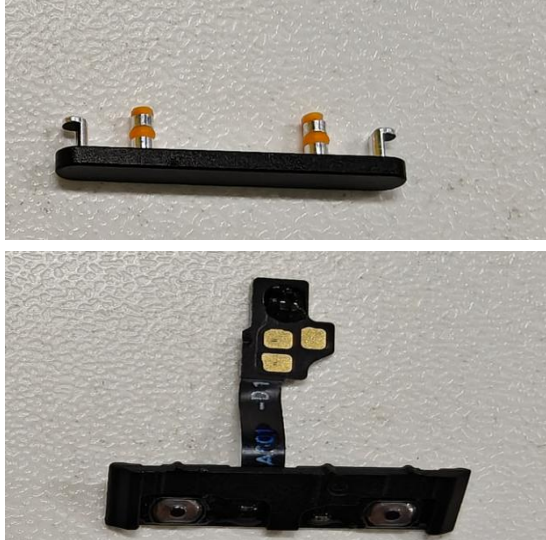

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component *  (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
11	Mainboard Bracket		1. Mainboard Bracket 1PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
7	1 # screw (1 PCS)		1 # screw , 1 PCS, 2 # screw , 18 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
12	2 # screw (18 PCS)		1 # screw , 1 PCS, 2 # screw , 18 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs

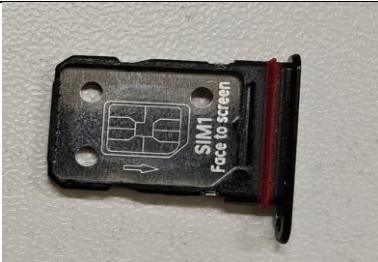
Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component *  (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
13	Back cover		1.Back cover 1PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
15	Bottom speaker		1. Bottom speaker 1 PCS Auxiliary materials: 2.AA601 Battery cover PET film Glass plate On 1pcs 3.AA601 Battery cover PET film Glass plate Lower 1pcs 4.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
16	Battery		<p>1. Battery 1 PCS Auxiliary materials:</p> <p>2. Battery pull tape-Left" 1pcs 3.ape Battery pull tape-Right" 1pcs 4.After-sales maintenance materials 1pcs 5.AA601 Battery cover PET film Glass plate On 1pcs 6.AA601 Battery cover PET film Glass plate Lower 1pcs 7.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs</p>
17	C board component		<p>1. FPC assembly of C board 1 PCS Auxiliary materials:</p> <p>2. Battery pull tape-Left" 1pcs 3.ape Battery pull tape-Right" 1pcs 4.After-sales maintenance materials 1pcs 5.AA601 Battery cover PET film Glass plate On 1pcs 6.AA601 Battery cover PET film Glass plate Lower 1pcs 7.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs</p>
18	Sub-board assembly (including external audio connector, external charging port and		<p>Note: the subboard assembly includes external audio connector, external charging port and main microphone. It is cannot be disassembled.</p> <p>1. <b>Sub-board assembly</b> 1PCS Auxiliary materials:</p> <p>2. Battery pull tape-Left" 1pcs 3.ape Battery pull tape-Right" 1pcs 4.After-sales maintenance materials 1pcs 5.AA601 Battery cover PET film Glass plate On</p>

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
	main microphone)		1pcs 6.AA601 Battery cover PET film Glass plate Lower 1pcs 7.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs
20	Vibration Motor		1. <b>Vibration Motor</b> 1PCS Auxiliary materials: 2.Battery pull tape-Left" 1pcs 3.ape Battery pull tape-Right" 1pcs 4.After-sales maintenance materials 1pcs 5.AA601 Battery cover PET film Glass plate On 1pcs 6.AA601 Battery cover PET film Glass plate Lower 1pcs 7.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs

Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
19	RF cable (3 pcs)		<p>1. RF connection cable (41.5mm 3.2.08.4823, black with a diameter of 0.5mm)            RF connection cable (147mm 3.2.08.4821, diameter 0.5mm, white)            RF connection cable (143.5mm 3.2.08.4822 φ 0.5mm black)            Auxiliary materials:            2. Battery pull tape-Left" 1pcs            3. ape Battery pull tape-Right" 1pcs            4. After-sales maintenance materials 1pcs            5. AA601 Battery cover PET film Glass plate On 1pcs            6. AA601 Battery cover PET film Glass plate Lower 1pcs            7. AA601 Battery cover            StructuralDoubleFacedAdhesiveTape 1pcs</p>
	Volume keys and FPC		<p>Notice: Button bracket, 2PCS each for Plus Key, volume key, and power button, A total of 6 pieces, as shown in the picture below.</p>  <p>1. Power button /            Volume button / Plus Key and FPC 1 PCS            Auxiliary materials:</p>







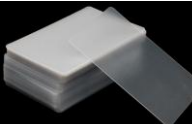




Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component *  (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
/	Volume keys and FPC		2.18907 - ML/pcs LF 3500 Thermal Conductive Gel 0.05 ml 3.Battery pull tape-Left" 1pcs 4.ape Battery pull tape-Right" 1pcs 5.After-sales maintenance materials 1pcs 6.AA601 Battery cover PET film Glass plate On 1pcs 7.AA601 Battery cover PET film Glass plate Lower 1pcs 8.AA601 Battery cover StructuralDoubleFacedAdhesiveTape 1pcs 9.AA601 Telephoto fixed back adhesive double faced adhesive tape 1pcs
/	Plus Key and FPC		
/	Charger	/	CPH2747: For environmental reasons this package does not include a charger. This device can be powered with most USB power


Number in the figure	Material Name (Component)	Physical Image	Materials Required for Replacing This Component * (In addition to replacing the component, the relevant auxiliary materials must also be replaced. If two or more components are replaced at the same time, only one set of the same auxiliary material is required)
			adapters and a cable with USB Type-C plug
2	SIM tray		

Note: This table is only used for physical comparison of accessories and annotation of component names, not for material preparation.

## 4 Disassembly steps

### 4.1 List of Disassembly/Assembly Tools (hereinafter referred to as the "tool list")

No.	Tool	Image	Description	Remark
1#	Anti-static wrist strap		Prevents electrostatic damage	Either of the two meets the requirements; please feel free to select one.
				
2#	Heating tool		Tool for disassembling the back cover and other parts	Either of the two meets the requirements; please feel free to select one.
				
3#	Suction Cup		Tool for disassembling the back cover and other parts	Either of the two meets the requirements; please feel free to select one.
				
4#	Disassembly card		Tool for disassembling the back cover and other parts	Either of the two meets the requirements; please feel free to select one.
				
5#	ESD tweezers		Tool for handling connectors, cables, and other parts (Round Tip)	Either of the two meets the requirements; please feel free to select one.
				
6#	Screwdriver			Either of the two meets the

			Tools for removing and installing screws(Cross, diameter 1.6mm)	requirements; please feel free to select one.
7#	Button bracket disassembling tool	 	Tool for disassembling button bracket	Either of the two meets the requirements; please feel free to select one.

## 4.2 Preparation

4.2.1 **Caution:** to avoid data loss, please back up personal data (such as SMS, photos, videos, contacts, etc.) from your phone to computers or other external storage devices.

4.2.2 Before disassembling, the device must be powered off. The default method to power off is to simultaneously press and hold the power button and the volume up button, then slide to "Shut Down."

## 4.3 Disassembly process

Contents	Illustration	Notes
Remove the SIM tray		Remove the SIM tray



用拆机片从电池盖四边划一圈，拆卸方法：点胶胶性强需用手托住电池盖。从下往上缓慢拆下电池盖  
 slide disassembly card around the battery cover to slice the adhesive. Hold the battery cover to prevent the strong adhesive from resealing, then lift it up from the lower to the upper side and remove it gently



**Note: Please take out the SIM tray according to the relevant instructions;**

1. Then put mobile phone into No. 2 tool in the tool list for heating, set 85 ° C and heat for 5-8min.

**By using alternative heating equipment, please operate according to the corresponding instructions;**



2. use No. 3 tool in the Tool list to absorb the battery cover, and slowly pull it up to separate the double-sided adhesive tape; Then draw a circle around the bottom of battery cover with No. 4 tool in Tool list.

**Please note that at the red box position, it is prohibited to use the disassembly piece to cut it (due to the presence of FPC/spring pieces on the side to prevent damage and breakage)**

3. Remove the battery cover slowly from bottom to top.

4. Take out the entire machine and slowly remove the battery cover by holding it with your hand

5. According to the diagram, clean the residual adhesive on the battery cover, motherboard bracket, and speaker bracket, and clean the PET sheet

Attention: When not replacing the battery cover, it is necessary to reattach the PET sheet and apply adhesive,

If replacing the battery cover assembly, there is no need to stick PET sheets because the battery cover assembly has PET sheets on it.

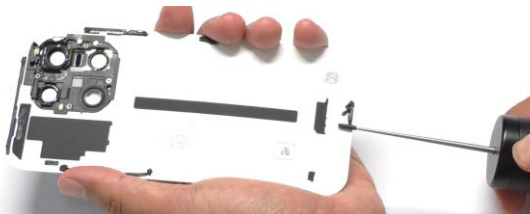
Use No. 6 tool in the Tool list to clean up the residual glue on the mainboard bracket,


**Warning: Do not touch the battery to prevent damage.**

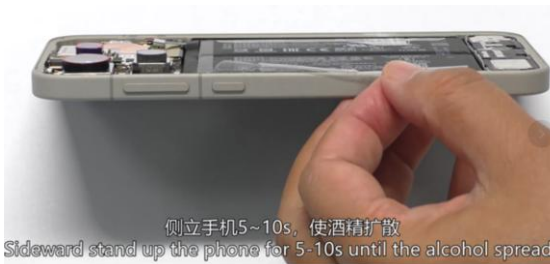
Remove the back cover



取出手机，用手托住电池盖缓慢拆出  
 Take out the device, hold the battery cover with your hand and slowly remove it



<p>Remove the Mainboard Bracket</p>		<p><b>Note:</b> Please take out the SIM tray according to the instructions, remove the back cover assembly and 2 # screw (only remove 10PCS in the figure);</p> <p>1. Then use No. 5 tool in the Tool list to tear off two graphite sheets (as indicated by the red arrow).</p>  <p>2. Remove the BTB buckle of the flash FPC and then take out the motherboard bracket (Note: There is a flash FPC connected to the motherboard below the motherboard bracket)</p>
<p>Remove the Battery (recommended to be operated by professional repairers)</p>	<p>用塑料注射器在拉手贴位置的上下两端注入0.2mL酒精 Pull up the battery pull tape, inject about 0.2mL alcohol by plastic syringe</p>	<p><b>WARNING: Make sure to follow the prescribed guidelines when handling built-in batteries! Improper handling may lead to accidents, such as leakage, bulging and other serious incidents that could endanger personal and property safety. Do not use sharp objects and tools to directly contact the battery surface and remove auxiliary materials on the battery surface; It is forbidden to use the hot-air gun or other heating equipment to directly heat the battery.</b></p> <p><b>Note:</b> Please take out the SIM tray according to the instructions, then remove the back cover and the mainboard bracket.</p> <p>1. Remove the battery connector, tear open the easily torn paper, 2. Drop 0.2 ml of organic solvent (such as</p>



侧立手机5~10s, 使酒精扩散  
Sideward stand up the phone for 5-10s until the alcohol spreads



手机平放, 斜拉拉手贴, 缓缓斜拉让电池与易撕纸分离  
Lay the phone flat, pull the battery handle diagonally, and pull the battery away from the battery pull tape slowly



撕除电池易撕纸  
Tear off battery pull-tape

alcohol or isopropyl alcohol) into each pull tab position (as indicated by the red lines).

3. Place the phone on its side for 5-10s, and let organic solvent dissolve the double-sided adhesive tape, which is convenient for quick disassembly.
4. Follow steps 1 and 3 for the other side of easy-tear tape.

5. place the phone flat, and pull both handle stickers (as indicated by the three arrow directions) to separate the battery from the easy-tear tape;

**Warning: Do not forcefully remove the battery when it is found to be tightly adhered during disassembly and drop two drops of organic solvent.**

**Caution: Do not pull the battery up directly from one side to avoid distortion of the battery (the battery is reusable if it has no faults).**

6. Hold both handle stickers (as indicated by the red box) with both hands at the same time, and slowly pull them up to completely separate the battery from the easy-tear tape;

7. Remove both handle stickers.

8. Remove the battery easy-tear tape.

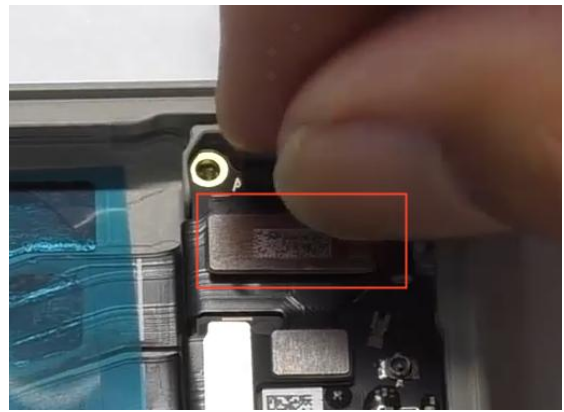
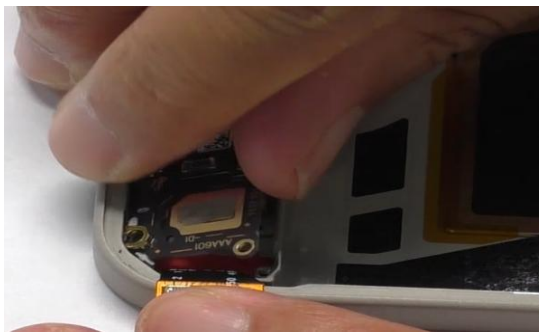
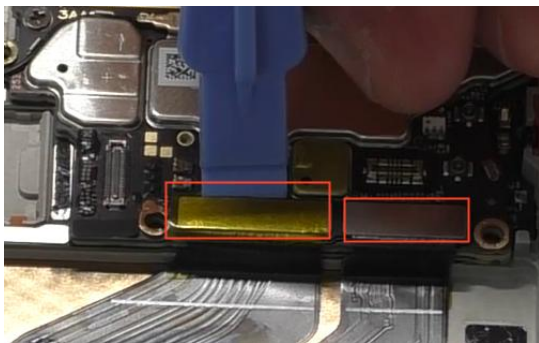
**Caution: after the battery is removed, it must be checked for any punctures, dents, leaks, or other defects. If any issues are found, the battery should be replaced.**

<p>Remove the rear telephoto camera assembly (recommended to be operated by professional repairers)</p>		<p><b>Note: Please take out the SIM tray according to the instructions, remove the back cover and the mainboard bracket.</b></p> <ol style="list-style-type: none"> <li>1. Remove the BTB buckle of the telephoto camera, then slowly tear off the BTB copper foil on the motherboard end, and take out the telephoto camera;</li> <li>2. Attention: Remove the 2PCS double-sided adhesive tape that fixes the telephoto camera (which may be present on both the screen assembly and the telephoto camera).</li> </ol>
<p>Remove the rear wide-angle camera assembly (recommended to be operated by professional repairers)</p>		<p><b>Note: Please take out the SIM tray according to the instructions, then remove the back cover and the mainboard bracket.</b></p> <ol style="list-style-type: none"> <li>1. Then use No. 5 tool in the Tool list to peel off the graphite sheet (as indicated by the red arrow) from wide-angle camera.</li> <li>2. Open the BTB buckle (as indicated by the red arrow) and slowly pull it up to take out the wide-angle camera.</li> </ol>

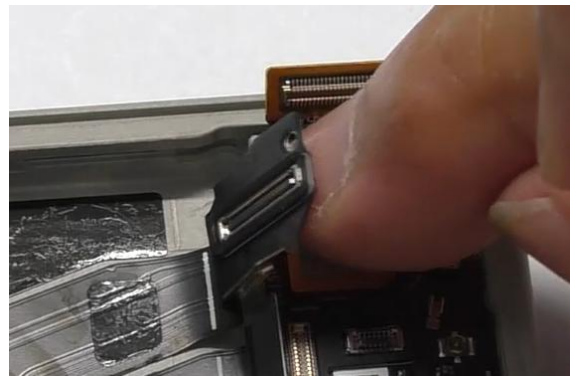
<p>Remove the rear main camera assembly (recommended to be operated by professional repairers)</p>		<p><b>Note: Please take out the SIM tray, then remove the back cover and the mainboard bracket according to the instructions.</b></p> <ol style="list-style-type: none"> <li>1. gently pry open the corner of the main camera BTB shield cover (as indicated by the red arrow) with No. 5 tool in the Tool List, and then carefully lift out the main camera BTB shield cover.</li> <li>2. Open the BTB buckle (as indicated by the red arrow).</li> <li>3. Grip the camera BTB with No. 5 tool in the Tool list and slowly pull it up to take out the main camera.</li> </ol> <p><b>Caution: When removing the main camera shield cover (material name: shell bracket), gently lift it up, do not forcefully remove it.</b></p>
<p>Remove the battery compartment foam</p>		<p><b>Note: Please take out the SIM tray, remove the back cover, the mainboard bracket and the battery according to the instructions.</b></p> <ol style="list-style-type: none"> <li>1. Grip the foam 1PCS on the right side of the battery compartment with No. 5 tool in the Tool list and tear it off.</li> <li>2. Grip the foam 1PCS at the bottom of the battery compartment and tear it off.</li> </ol>

	<p>撕下电池仓右侧和底部泡棉 Remove the foam on the right side and bottom side of battery compartment</p>	
<p>Remove the bottom speaker (recommended to be operated by professional repairers)</p>	<p>拆扬声器BOX Remove the speaker BOX</p>	<p><b>Note: Please take out the SIM tray, remove the rear cover assembly and 2# screws (only 8PCS in the figure) according to the instructions.</b></p> <p>Then gently pry open the speaker box from the speaker position (as indicated by the arrow).</p>
<p>Remove the FPC assembly of C board/RF/the small board(including external audio connector, external</p>		<p>Note: Please take out the SIM tray, remove the rear cover assembly, the battery and bottom speaker according to the instructions.</p> <ol style="list-style-type: none"> <li>1.First, remove the battery FPC protective PI film (yellow high-temperature adhesive paper)</li> <li>2. Remove the black/white RF cable</li> </ol> <p><b>Remove the C board</b></p> <ol style="list-style-type: none"> <li>1.remove the BTB buckle from the screen</li> </ol>

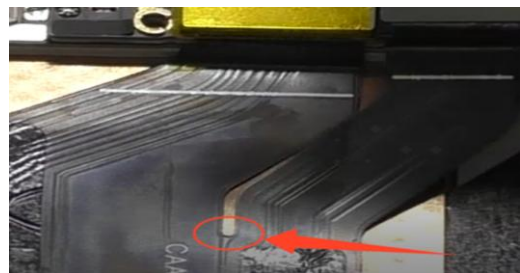
charging port and main microphone)



2. Remove 2PCS of the C-board BTB buckle on the small board end (as shown in the red box), and slowly remove the PFC of the screen BTB seat (on the C-board)








3. remove 2PCS of the C-board BTB buckle from the motherboard end, while pulling on the C-board branch and slowly removing the C-board (note: there is a risk of tearing at the branch port of the C-board).



Remove the double-sided tape from the C board  
**Disassemble the small board**

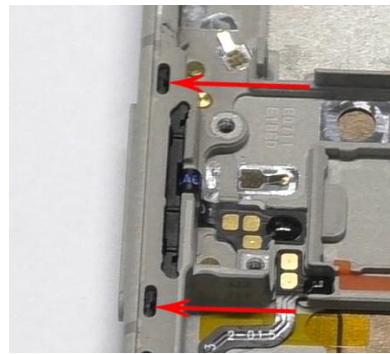
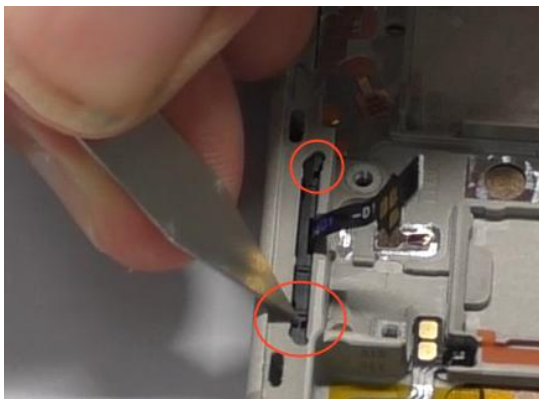
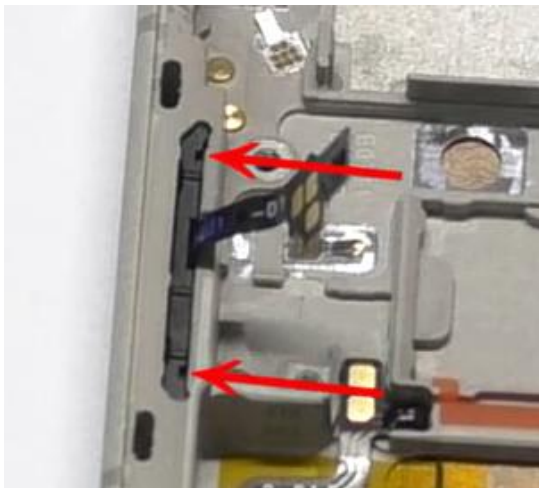
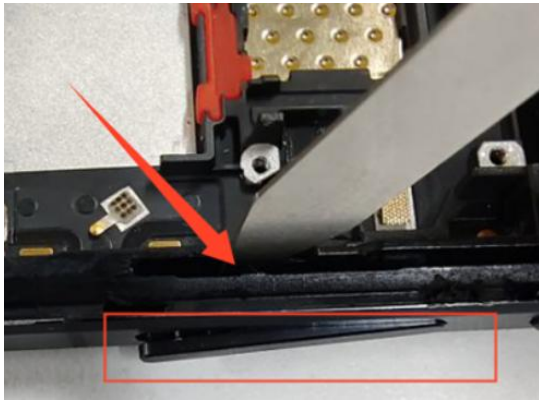
Gently push down from the top and remove the small board, being careful not to scratch the BTB screen

<p>Remove the motor assembly</p>		<p><b>Note: Please take out the SIM tray, remove the rear cover assembly, the bottom speaker and the sub-board assembly/RF cables according to the instructions.</b></p> <p>1. Then clamp the motor from its corner (as indicated by the red arrow) with No. 5 tool in Tool list. Do not disassemble it forcefully to prevent excessive force from damaging the screen (with holes at the bottom).</p> <p>2. Lift up to separate the motor from the double-sided adhesive tape of the motor and finally take out the motor.</p> <p><b>Caution: If the double-sided tape is firmly attached, a small amount of organic solvent (including but not limited to alcohol or isopropyl alcohol) can be applied to help disassembly.</b></p>
<p>Remove the front camera assembly (recommended to be operated by professional repairers)</p>		<p><b>Note: Please take out the SIM tray, remove the back cover and the Mainboard Bracket according to the instructions;</b></p> <p>1. Then use No. 5 tool in the Tool list to tear off the front camera graphite sheet (as indicated by the red arrow).</p> <p>2. Use plastic tweezers to remove the front BTB buckle from the corner of BTB (as indicated by the red arrow).</p> <p>3. Use the plastic tweezers to lift the camera BTB, and slowly pull up to take out the front camera.</p> <p><b>Attention: If the double-sided adhesive tape of the front camera conductive cloth is damaged, it needs to be replaced with a new one</b></p>

<p>Remove the mainboard</p>		<p>Note: Please take out the SIM tray, remove the back cover, the mainboard bracket, the front camera assembly and all the 3 rear cameras according to the instructions.</p> <ol style="list-style-type: none"> <li>1. Then remove the 1 PCS screws 1# on the mainboard with No. 6 tool in the Tool list.</li> <li>2. Grip the bottom of the mainboard (at the circled position) and gently lift it upwards to remove the mainboard.</li> </ol>
		<p>[Remove thermal gel from mainboard]</p> <ol style="list-style-type: none"> <li>1. Wrap the disassembly tool with dust-free cloth and clean up the thermal gel on the mainboard.</li> </ol>
		<p>[Remove the thermal gel from the screen assembly]</p> <ol style="list-style-type: none"> <li>1. Gently clean the thermal gel on the screen assembly.</li> </ol> <p><b>Caution: Clean the thermal gel (as indicated by the red box) on the screen assembly and wipe it gently, otherwise the screen will be damaged if wiped too hard.</b></p>
		

<p>Remove upper speaker (recommended to be operated by professional repairers)</p>		<p><b>Note: Please take out the SIM tray, remove the back cover, the mainboard bracket, the front camera assembly, all the 3 rear cameras and the mainboard according to the instructions.</b></p> <ol style="list-style-type: none"> <li>1. Use tool No. 5# to detach the receiver FPC at the disassembly point (as indicated by the red arrow). The bottom has double-sided tape.</li> <li>2. At the disassembly point on the bottom of the receiver (as indicated by the red arrow), gently lift upward to separate the receiver from the bottom double-sided adhesive tape. (<b>Caution</b> : do not forcefully disassemble the receiver to prevent damage to the screen)</li> <li>3. Remove the double-sided adhesive tape (as indicated by the red arrow) from the bottom of the receiver and the bottom of the FPC.</li> </ol>
<p>Remove the volume button And volume keys FPC (recommended to be</p>		<p><b>Note: Please take out the SIM tray, remove the back cover, the Mainboard Bracket, the front camera assembly, all the 3 rear cameras and the mainboard according to the instructions.</b></p> <ol style="list-style-type: none"> <li>1. Use tool No. 7# from the Tool List to insert into the holes at the bottom of the two black volume button brackets (as indicated by the red arrow), and gently lift up the volume button brackets, 2 pieces. (The button brackets can be reused.)</li> </ol>

operated by  
professional  
repairers)



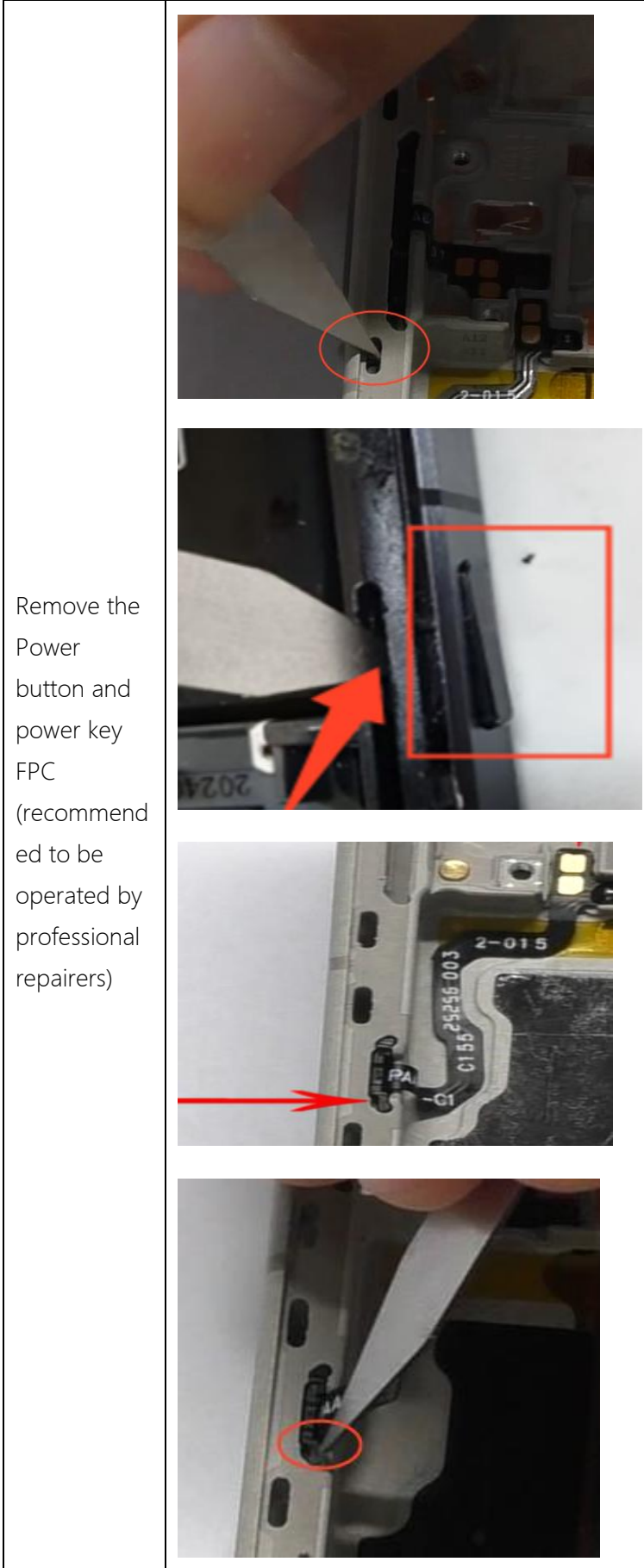
2. Finally, use No. 5# tool to push out the volume button.

[Remove the volume key FPC]

1. Disassemble according to FPC disassembly position ( e.g. red arrow)



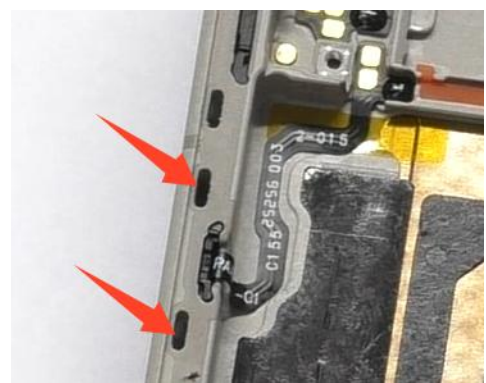
2. Then, according to the position of the red arrow, disassemble the volume key FPC bracket and take it out



Remove the Power button and power key FPC (recommended to be operated by professional repairers)

**Note: Please take out the SIM tray, remove the back cover, the Mainboard Bracket, the front camera assembly, all the 3 rear cameras and the mainboard according to the instructions.**

1. Use tool No. 7# from the Tool List to insert into the holes at the bottom of the two black volume button brackets (as indicated by the red arrow), and gently lift up the volume button brackets, 2 pieces. (The button brackets can be reused.)



2. Finally, use No. 5# tool to push out the power button.

[Remove the power key FPC]

1. Disassemble according to FPC disassembly position (e.g. red arrow)



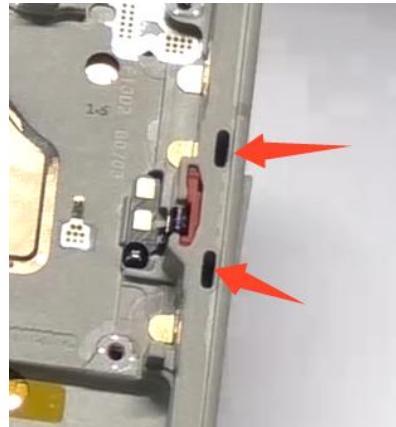
2. Then, according to the position of the red arrow, disassemble the volume key FPC bracket and take it out

Remove the Plus Key and FPC (recommended to be operated by professional repairers)



**Note: Please take out the SIM tray, remove the back cover, the Mainboard Bracket, the front camera assembly, all the 3 rear cameras and the mainboard according to the instructions.**

1. Use tool No. 7# from the Tool List to insert into the holes at the bottom of the two black volume button brackets (as indicated by the red arrow), and gently lift up the volume button brackets, 2 pieces. (The button brackets can be reused.)

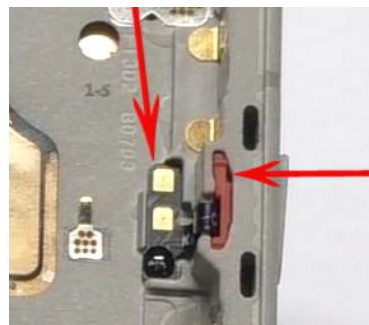


2 Use tool No. 5# from the Tool List to grip the alert slider bracket (as indicated by the red arrow), and gently remove it.

3. Gently push it inward from the outside of the alert slider (as marked by the red circle).

[Remove the Plus key FPC]

1. Disassemble according to FPC disassembly position ( e.g. red arrow)









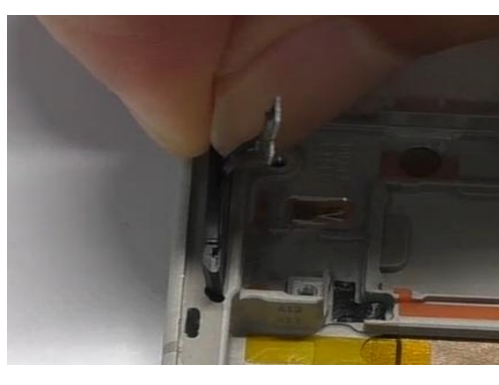
Remove the display assembly

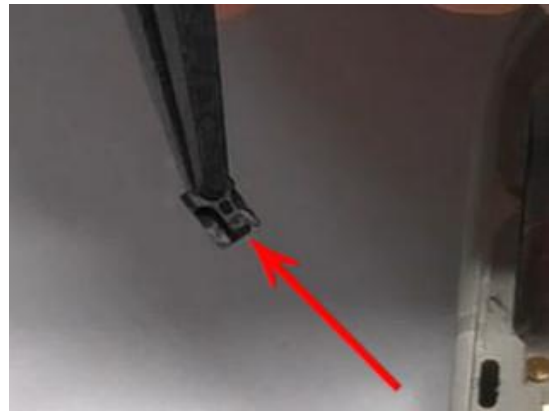


Note: Please take out the SIM tray and remove the back cover, the mainboard bracket, the front camera assembly, all the 3 rear cameras, the mainboard, the battery, the bottom speaker, the C board FPC, the sub-board, the motor assembly. Then, remove the screen assembly.

5. Assembly steps

Contents	Illustration	Notes
<p>Install the display assembly</p>		<p>Using the new screen assembly, remove all release-film from the screen.</p> <p>Note: After installing the main display assembly, please install the Mainboard, front camera assembly, rear main camera assembly, rear wide-angle camera assembly, rear telephoto camera assembly, battery, bottom speaker, C board FPC, sub-board assembly, mainboard bracket, back cover and SIM tray according to the instructions.</p>
<p>Install the Plus Key and FPC (recommended to be operated by professional repairers)</p>		<ol style="list-style-type: none"> <li>1. Install Plus Key PFC;</li> <li>2. Install Plus Key (No direction restriction);</li> <li>3. Install 2 PCS of pins and check the touch of the buttons at the same time;</li> </ol> <p><b>Attention direction: The arrow indicates a protrusion in the middle facing the inside of the screen</b></p>  <p>Note: After installing, please install the Mainboard, the front camera assembly, rear main camera assembly, rear wide-angle</p>

		<p>camera assembly, rear telephoto camera assembly, mainboard bracket, back cover and SIM tray according to the instructions.</p>
<p>Install the power Key and FPC (recommended to be operated by professional repairers)</p>	  	<ol style="list-style-type: none"> <li>1.Install power Key PFC;</li> <li>2.Install power Key (No direction restriction);</li> <li>3.Install 2 PCS of pins and check the touch of the buttons at the same time;</li> </ol> <p>Attention direction: The arrow indicates a protrusion in the middle facing the inside of the screen</p>  <p>Note: After installing , please install the Mainboard, the front camera assembly, rear main camera assembly, rear wide-angle camera assembly, rear telephoto camera assembly, mainboard bracket, back cover and SIM tray according to the instructions.</p>
<p>Install the volume Key and FPC (recommended to be operated by professional repairers)</p>		<ol style="list-style-type: none"> <li>1.Install volume Key PFC;</li> <li>2.Install volume Key (No direction restriction);</li> <li>3.Install 2 PCS of pins and check the touch of the buttons at the same time;</li> </ol> <p>Attention direction: The arrow indicates a protrusion in the middle facing the inside of the screen</p>



Note: After installing , please install the Mainboard, the front camera assembly, rear main camera assembly, rear wide-angle camera assembly, rear telephoto camera assembly, mainboard bracket, back cover and SIM tray according to the instructions.

Install the upper speaker  
(recommended to be operated by professional repairers)



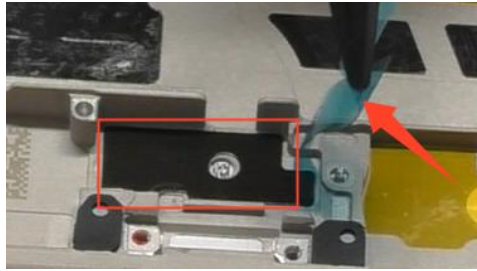
[ Install the receiver& upper speaker]  
1 Stick double-sided adhesive tape to the receiver (as indicated by the red arrow).

2. Remove the release film with plastic tweezers .

3 Use tool No. 5 from the Tools List to press the receiver FPC, ensuring it adheres tightly to the double-sided adhesive tape.

Note: After installing, please install the Mainboard, front camera assembly, rear main camera assembly, rear wide-angle camera assembly, rear telephoto camera assembly, mainboard bracket, back cover and SIM tray according to the instructions.

Install the motor assembly



1. After the motor double-sided adhesive tape is removed, paste new motor double-sided adhesive tape.  
Clamp the motor and put it into the motor slot (as shown in the red box).

2. Press the motor surface to ensure it fits tightly with the double-sided adhesive tape.  
Note: After installing, please install the battery, the bottom speaker, the mainboard bracket, back cover, and **sub-board assembly** and SIM tray according to the instructions.

Install the mainboard



1. Apply a M-shaped pattern of thermal gel gently at the metal position on the screen .  
**Caution: Do not apply force to press the metal area of the screen, as it may damage it.**



2. Hold the edge of the mainboard, insert it from the top, and press it flat to ensure it is properly aligned and assembled.  
3. Use a cross screwdriver to tighten the 1#, 1Pcs screws (as shown in the Blue circle) to secure the mainboard in place.

**Note:** After installing, please install the front camera assembly, rear main camera assembly, rear wide-angle camera assembly, rear telephoto camera assembly, mainboard bracket, back cover and SIM tray according to the instructions.

Install the front camera assembly (recommended to be operated by professional repairers)



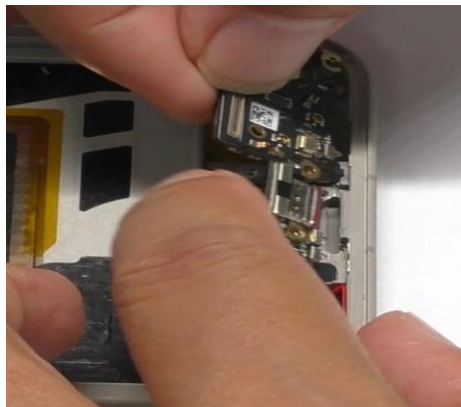
1. Use the NO. 5 tool from the Tools List to clamp the camera FPC. Gently insert it into the front camera slot (as shown in the red circle), then press the front camera by hand to ensure it is properly installed.

2. Install the camera BTB (as shown in the red circle).

3. Paste the new front camera graphite sheet and ensure it is flat.

Note: After installing ,please install the mainboard, the mainboard bracket, back cover and SIM tray

Install the sub-board assembly (including external audio connector, external charging port and main microphone)



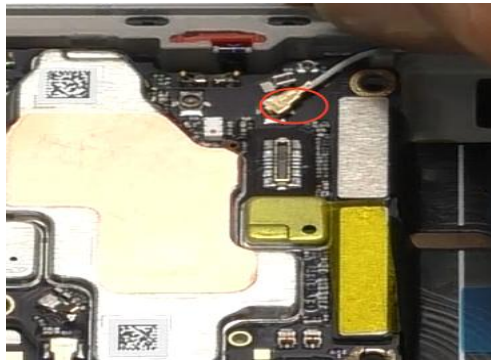
1. When installing the sub-board, Reset the SIM card push rod ( such as red arrow ) and push it into the hole.



2. while aligning the USB interface with the USB port. Install the board at an angle from the bottom into the small board slot. Finally, press the buckle position.

Note: After installing the **sub-board**, please install **the battery** ,the bottom speaker, the

		<p>mainboard bracket, back cover and SIM tray according to the instructions.</p>
<p>Install the C board FPC</p>		<ol style="list-style-type: none"> <li>1. Apply double-sided adhesive tape to the C-board FPC;</li> <li>2. Install the C board and attach it tightly to the FPC;</li> </ol> <p>Pay attention to the BTB socket on the C-board end of the screen, and ensure that it is fully attached according to the positioning line and hole to prevent screen distortion</p> <ol style="list-style-type: none"> <li>3. Button the BTB button on the screen</li> </ol> <p>Note: After installing the C board FPC, please install the battery, the bottom speaker, the mainboard bracket, back cover and SIM tray as per the instructions.</p>
<p>Install the RF cables</p>		<p>[Install white RF cable]</p> <ol style="list-style-type: none"> <li>1. Install white RF cable and insert the RF cable into the cable tray (as shown in the red circle)</li> </ol>



2. Then install it on the RF (BTB) socket on the mainboard (as shown in the red circle).

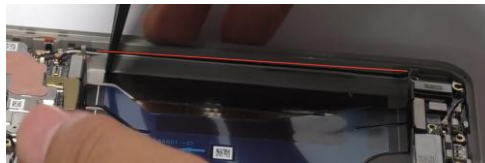


[Installing black RF cable]

1. install the black RF cable into the cable groove of the sub-board (as shown by the red circle).



2. Then install it onto the RF (BTB) socket on the mainboard (as shown in the red circle).



3. Install both the white and black RF cables into the FR cable grooves (as shown by the red lines).

4. Install the Battery compartment foam



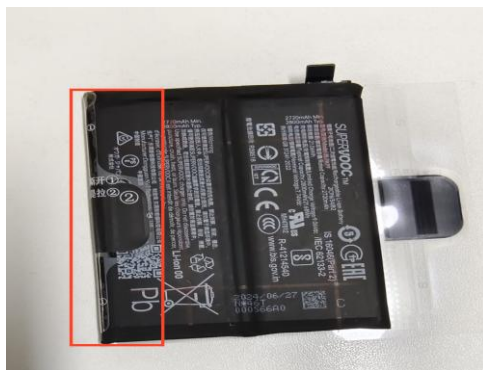
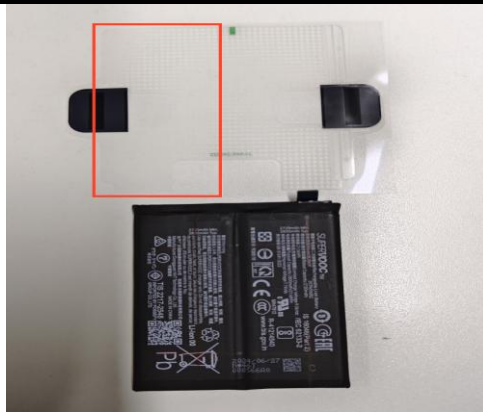
5. Attach battery FPC protective PI film, as indicated by the arrow (As indicated by the red arrow)

Note: After installing the RF cables, please install the battery, the sub-board assembly, the bottom speaker, the mainboard bracket, back cover and SIM tray according to the instructions.

<p>Install the speaker (recommended to be operated by professional repairers)</p>		<ol style="list-style-type: none"> <li>1. Clamp the speaker and install it at an angle from the bottom (as shown by the red Arrow) into the speaker slot. Finally, press it into place to secure the latch.</li> <li>2. Stick foam at the bottom of the battery compartment (note the white area indicated by the arrow and stick it on the FPC end)</li> </ol> <p><b>NOTE: After installing the speakers, please follow the instructions to install the mainboard bracket, back cover and SIM tray</b></p>
<p>Install ultra wide angle camera (recommended to be operated by professional repairers)</p>		<ol style="list-style-type: none"> <li>1. Install an ultra wide angle camera;</li> <li>2. Flatten the ultra wide angle BTB copper foil onto the shielding cover. (Note that if the copper foil is damaged/wrinkled, replace it with a new one)</li> </ol> <p><b>Note: After installing the rear wide-angle camera assembly, please install the mainboard bracket, back cover and SIM tray</b></p>
<p>Install the rear main camera assembly (recommended to be operated by professional repairers)</p>		<ol style="list-style-type: none"> <li>1. First check if the copper foil is damaged/wrinkled, then install the wide-angle camera</li> </ol>

		<p>2. Latch the camera BTB connector into place.</p> <p>3. Use plastic tweezers to hold the main camera BTB shield cover, then align it and latch it into place.</p> <p><b>Note: After installing the rear main camera assembly, please install the mainboard bracket, back cover and SIM tray.</b></p>
<p>Install the Rear telephoto camera assembly (recommended to be operated by professional repairers)</p>		<p>1. Apply double-sided adhesive tape for pre fixing the telephoto lens (must be replaced if removed), and remove the release film;</p> <p>2. Check if the pre fixed double-sided tape at the telephoto camera is removed. If it is not removed, it will affect the shooting effect, and then install the telephoto camera;</p> <p>3. Flatten the ultra wide angle BTB copper foil onto the shielding cover. (Note that if the copper foil is damaged/wrinkled, replace it with a new one)</p> <p><b>Note: After installing the rear telephoto camera assembly, please install the mainboard bracket, back cover and SIM tray.</b></p>

Install the battery  
(recommended  
to be operated  
by professional  
repairers)



**WARNING:** Always follow the prescribed guidelines when handling built-in batteries! Improper handling may lead to accidents, such as leakage, bulging and other major risks endangering personal and property safety.

1 After disassembly, a new easy-tear tape must be used. It is prohibited to reuse the easy-tear tape.

2 It is forbidden to reuse the deformed, damaged and non-sticky battery double-sided adhesive tape and handle position.

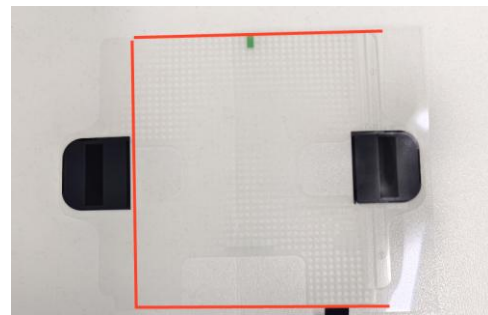
3 Check the appearance of the battery, and do not use batteries that are punctured, swollen, leaking, or severely deformed.

4 When installing the battery, ensure that there are no foreign objects on the battery surface or inside the battery compartment.

1. Use a new easy-to-tear tape for battery, and properly wrap the battery according to steps 1-5 as shown in the diagram.



(1) Tear off the release paper, with the adhesive side facing up, and place the easy-tear tape flat on the workbench.

(2) Align the adhesive strip of easy-tear tape with the edge of battery, and match the opening edge of easy-tear tape with the edge of battery handle position.



	<p>扣电池BTB扣，装上电池并压好 Buckle the battery BTB button, install the battery and press it</p> <p>扣电池BTB扣，装上电池并压好 Buckle the battery BTB button, install the battery and press it</p>	<p>(3) Hold one side of the easy-tear tape and tear off the release paper from the other side of the easy-tear tape.</p> <p>(4) Tear off the release paper from the other side of the easy-tear tape.</p> <p>(5) Wrap the easy-tear tape around both sides of the battery, then press the easy-tear tape flat to remove any air bubbles.</p> <p>2. Insert the battery into the battery compartment and latch the BTB connector into place (as indicated by the red arrow).</p> <p><b>Caution: Check whether there are any foreign objects in the battery compartment.</b></p> <p>3. Finally, press the battery firmly with your palm to ensure it is fully adhered to the double-sided tape.</p> <p>NOTE: After installing the battery, follow the instructions to Install the mainboard bracket, the back cover and SIM tray.</p>
<p>Install the mainboard bracket</p>	<p>先装上闪光灯FPC的BTB扣，然后缓慢从顶端插入主板主板支架</p>	<p>1. First, fasten the BTB buckle of the flash FPC(As in red box position)</p> <p>2.Then slowly insert from the top and install the motherboard bracket;</p>

	<p>从上往下将石墨片每平贴好 Flatten the graphite sheet from top to bottom</p> <p>1# 2#</p> <p>打螺丝 (2#, 18pcs) Install the screws (2#, 18pcs)</p>	<p>3. Flatten and stick the graphite sheet from top to bottom;</p> <p>4. Screw in (2 #, 18PCS)</p> <p>NOTE: After installing the mainboard bracket, follow the instructions to Install the back cover and SIM tray.</p>
<p>Install the back cover</p>	<p>贴电池盖双面胶, 撕除大面离型膜</p> <p>贴电池盖PET片 (上), 撕除离型膜</p> <p>撕除电池盖背胶离型膜</p>	<ol style="list-style-type: none"> <li>1. Apply double-sided tape to the battery cover and remove the large release film;</li> <li>2. Attach the battery cover PET sheet (top) and remove the release film;</li> <li>3. Attach the battery cover PET sheet (bottom) and remove the release film;</li> </ol> <p>If replacing the battery cover assembly, there is no need to apply double-sided adhesive tape/PET sheet (top)/PET sheet (bottom) to the battery cover</p> <p>Because the battery cover assembly already includes them.</p> <ol style="list-style-type: none"> <li>4. Remove the small release film from the double-sided adhesive of the battery cover;</li> </ol>



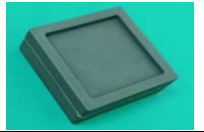



	 <p>安装电池盖并压好 Install the battery cover and press it tightly</p>	<p>NOTE: After installing the battery cover assembly, follow the instructions to install the SIM tray.</p>
<p>Install the SIM tray</p>	 <p>装卡托 Install the SIM bracket</p>	<p>Install the SIM card tray and then power on to check the functionality.</p>


## 6 Calibration after repair

### 6.1 Calibration Scene

**6.1.1** In order to ensure the normal operation of mobile phone, calibration must be carried out after disassembly. Failure to calibrate may cause issues such as the inability to blur in portrait mode or affect the blur effect.

#### 6.1.1 Calibration tools

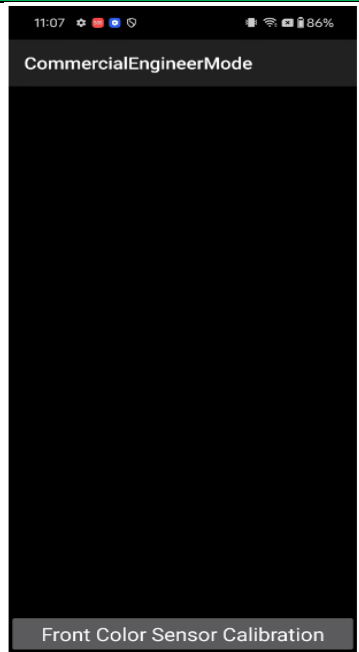
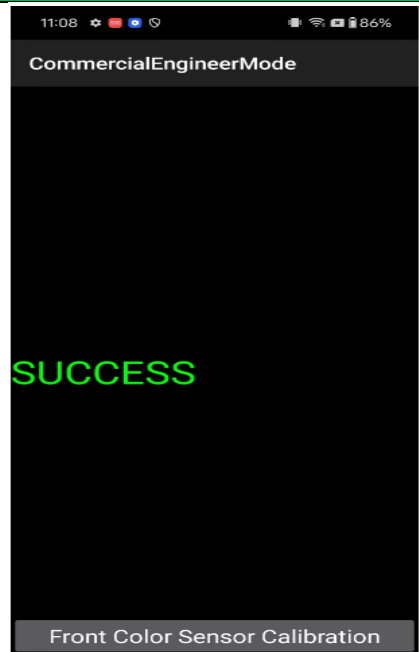
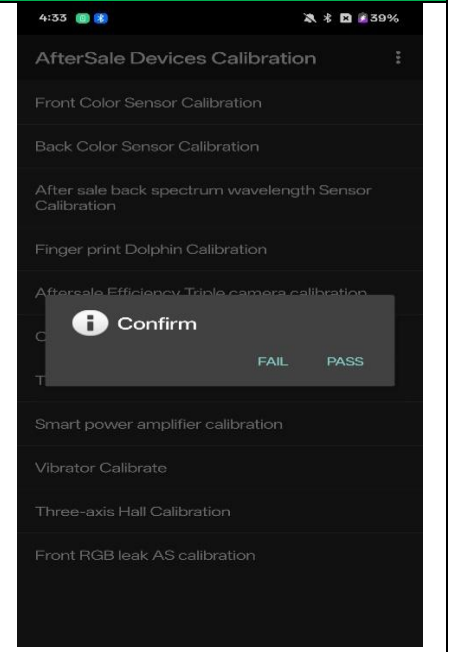
No.	Tool	Image	Description	Remark
1#	Fingerprint calibration fixed block		Tools for fingerprint calibration (Weight: 600g)	All four parts combined as a set.
	Flesh-colored rubber head		Tools for fingerprint calibration (30*30*12mm)	
	Black rubber head		Tools for fingerprint calibration (30*30*12mm)	
	Flesh striped rubber head		Tools for fingerprint calibration (18*18*12mm)	
	Optical Fingerprint Calibration Tool		Tools for optical fingerprint calibration	
2#	Camera calibration card		Tools for camera calibration, can be printed by user themselves	Printed version of the calibration card

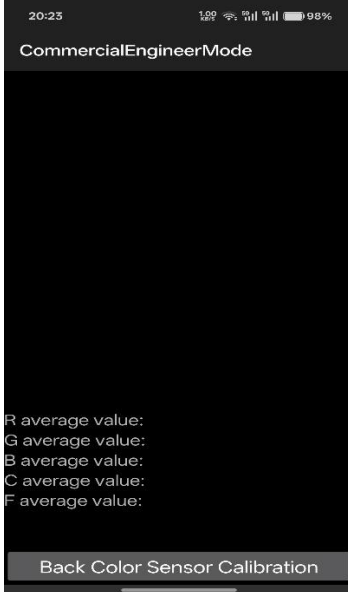

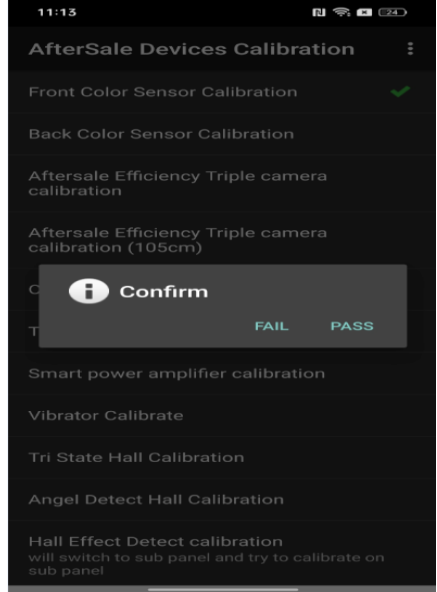

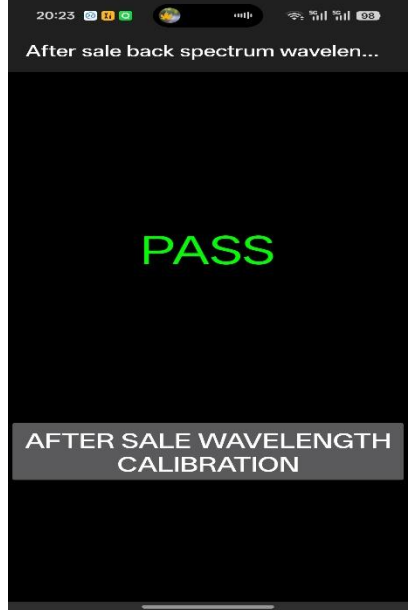
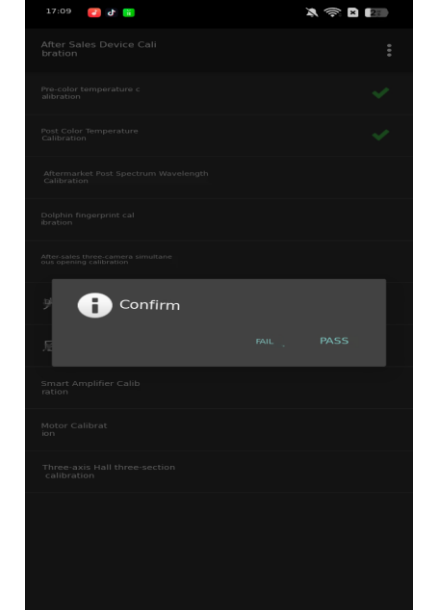
		 <p>Camera card(Original size)</p>		<p>Printing requirements: Keep the original size and do not scale it; keep the color uniform; keep it flat and avoid scratches when using it</p>
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## 6.2 Calibration mode

6.2.1 Input the \*#899# code in the phone dialer app to enter the engineering mode.

6.2.2 Click " after-sales device calibration" and enter password 6776 to enter the calibration interface.

Steps	<p>1. After entering the password, click " Pre-color temperature calibration" in the following interface;</p>	<p>2. If a 3000K/6000K standard light source is unavailable, calibration is not required; otherwise, calibration is necessary. Calibrate Success result, and return manually after calibration is completed</p>	<p>3. Click Pass to automatically enter the next item: post-color temperature calibration</p>
Picture			

Steps	4. Click " Post Color Temperature Calibration" on the following interface:	5. Calibrate the Success result and return it manually after calibration	6. After clicking Pass, automatically enter the next item: after-sales post-spectral wavelength calibration
Picture	 <p>R average value: G average value: B average value: C average value: F average value:</p> <p>Back Color Sensor Calibration</p>	 <p><b>SUCCESS</b></p> <p>R average value: 1019 G average value: 1059 B average value: 1179 C average value: 1019 F average value: 1001</p> <p>Back Color Sensor Calibration</p>	 <p>AfterSale Devices Calibration</p> <p>Front Color Sensor Calibration ✓ Back Color Sensor Calibration Aftersale Efficiency Triple camera calibration Aftersale Efficiency Triple camera calibration (105cm) <b>Confirm</b> FAIL PASS Smart power amplifier calibration Vibrator Calibrate Tri State Hall Calibration Angel Detect Hall Calibration Hall Effect Detect calibration will switch to sub panel and try to calibrate on sub panel</p>
Steps	7. Click " After-sales wavelength calibration" to start calibration;	8. Calibrate the PASS result and manually return it after calibration	9. Click Pass to automatically enter the next item: dolphin fingerprint calibration
Picture	 <p>After sale back spectrum wavelen...</p> <p>AFTER SALE WAVELENGTH CALIBRATION</p>	 <p>After sale back spectrum wavelen...</p> <p><b>PASS</b></p> <p>AFTER SALE WAVELENGTH CALIBRATION</p>	 <p>After Sales Device Calibration</p> <p>Pre-color temperature calibration ✓ Post Color Temperature Calibration ✓ Aftermarket Post Spectrum Wavelength Calibration Dolphin fingerprint calibration After sales (back) camera simulation and camera calibration <b>Confirm</b> FAIL PASS Smart Amplifier Calibration Motor Calibration Three-axis Hall three-section calibration</p>
Steps	10. Click " START" to start calibration	11. Click NEXT ( no need to place fingerprint head )	12. Click NEXT ( no need to place fingerprint head )

<p>Steps</p>	<p>13. The interface displays " Please restart after the test is completed", which means that the calibration is completed and automatically jumps to the next item</p>	<p>14. After sales, the three cameras are calibrated at the same time. After passing, return manually and automatically enter the next item</p>	<p>15. In the optical anti-shake - static calibration interface, click " Optical anti-shake - static calibration",</p>
<p>Picture</p>			
<p>Steps</p>	<p>16. Manually return after successful test</p>	<p>17. In the intelligent efficacy calibration interface, click " Calibration" to display PASS and automatically skip to the next step</p>	<p>18. In the motor calibration interface, click " Start Calibration", and vibration will appear after waiting for a few seconds</p>

<p>Picture</p>			
<p>Steps</p>	<p>19. Click PASS to enter the next item: after-sale calibration of front color temperature light leakage</p>	<p>20. In a dark environment (the upper half can be covered with a black anti-static bag/cardboard box),</p>	<p>21. click "Light Leakage Calibration" to display the current screen SNxxx. Manually return, click PASS to enter the next item: calibration of light sensing bottom current</p>
<p>Picture</p>	<p>Please ensure the device in a completely dark environment, don't cover the phone and then press calibration button</p>		<p>Please ensure the device in a completely dark environment, don't cover the phone and then press calibration button</p>
<p>Steps</p>	<p>22. In a dark environment (the upper part can be covered with a black anti-static bag/cardboard box),</p>	<p>23. Manually return and click PASS to automatically enter the next item: Delay calibration of light sensing screen</p>	<p>24. Under normal brightness conditions, Click " Screen Delay Calibration" PASS,</p>

	<p>click "Bottom Current Calibration". It will display "PASS" and the value will be within 300.</p>		
<p>Picture</p>			
<p>Steps</p>	<p>25. Manually return and automatically enter the next item " Calibration of characteristic value of light sensing screen"</p>	<p>26. In a dark environment (the upper part can be covered with a black anti-static bag/cardboard box), click "Bottom Current Calibration". It will display "PASS"</p>	<p>27. Test completion items, as shown in the figure below</p>
<p>Picture</p>	<p>Please ensure the device in a completely dark environment, don't cover the phone and then press calibration button</p>	<p>Please ensure the device in a completely dark environment, don't cover the phone and then press calibration button</p> <pre> R_MIN_0:0,G_MIN_0:1,B_MIN_0:16,W_MIN_0:17,R_MAX_0:10, G_MAX_0:155,B_MAX_0:71,W_MAX_0:127 R_MIN_1:45,G_MIN_1:52,B_MIN_1:38,W_MIN_1:65,R_MAX_1:2 62,G_MAX_1:267,B_MAX_1:145,W_MAX_1:278 R_MIN_2:153,G_MIN_2:153,B_MIN_2:92,W_MIN_2:132,R_MAX 2:468,G_MAX_2:412,B_MAX_2:232,W_MAX_2:472 R_MIN_3:219,G_MIN_3:244,B_MIN_3:117,W_MIN_3:215,R_MAX 3:695,G_MAX_3:690,B_MAX_3:372,W_MAX_3:642 R_MIN_4:125,G_MIN_4:189,B_MIN_4:97,W_MIN_4:155,R_MAX 4:691,G_MAX_4:726,B_MAX_4:390,W_MAX_4:646 R_MIN_5:125,G_MIN_5:171,B_MIN_5:94,W_MIN_5:152,R_MAX 5:755,G_MAX_5:795,B_MAX_5:425,W_MAX_5:712 R_MIN_6:398,G_MIN_6:552,B_MIN_6:266,W_MIN_6:455,R_M AX_6:1725,G_MAX_6:1894,B_MAX_6:1084,W_MAX_6:1731 R_MIN_7:0,G_MIN_7:0,B_MIN_7:0,W_MIN_7:0,R_MAX_7:1078 G_MAX_7:1419,B_MAX_7:1089,W_MAX_7:1386 R_MIN_8:0,G_MIN_8:0,B_MIN_8:0,W_MIN_8:0,R_MAX_8:0,G _MAX_8:0,B_MAX_8:714,W_MAX_8:0 R_MIN_9:0,G_MIN_9:0,B_MIN_9:0,W_MIN_9:0,R_MAX_9:0,G _MAX_9:0,B_MAX_9:0,W_MAX_9:0 R_MIN_10:0,G_MIN_10:0,B_MIN_10:0,W_MIN_10:0,R_MAX_10 0,G_MAX_10:0,B_MAX_10:0,W_MAX_10:0 R_MIN_11:0,G_MIN_11:0,B_MIN_11:0,W_MIN_11:0,R_MAX_11:0 G_MAX_11:0,B_MAX_11:0,W_MAX_11:0 R_MIN_12:0,G_MIN_12:0,B_MIN_12:0,W_MIN_12:0,R_MAX_12 0,G_MAX_12:0,B_MAX_12:0,W_MAX_12:0 R_MIN_13:0,G_MIN_13:0,B_MIN_13:0,W_MIN_13:0,R_MAX_13 0,G_MAX_13:0,B_MAX_13:0,W_MAX_13:0 R_MIN_14:0,G_MIN_14:0,B_MIN_14:0,W_MIN_14:0,R_MAX_14 0,G_MAX_14:0,B_MAX_14:0,W_MAX_14:0 R_MIN_15:0,G_MIN_15:0,B_MIN_15:0,W_MIN_15:0,R_MAX_15 0,G_MAX_15:0,B_MAX_15:0,W_MAX_15:0 R_MIN_16:0,G_MIN_16:0,B_MIN_16:0,W_MIN_16:0,R_MAX_16 0,G_MAX_16:0,B_MAX_16:0,W_MAX_16:0 </pre>	

Caution: After the calibration process is completed, the phone must be restarted for the calibration to take effect. Once restarted, proceed to the functionality test.

## 7. Fault diagnosis and functional test

### 7.1 General diagnosis of Phone Manager APP

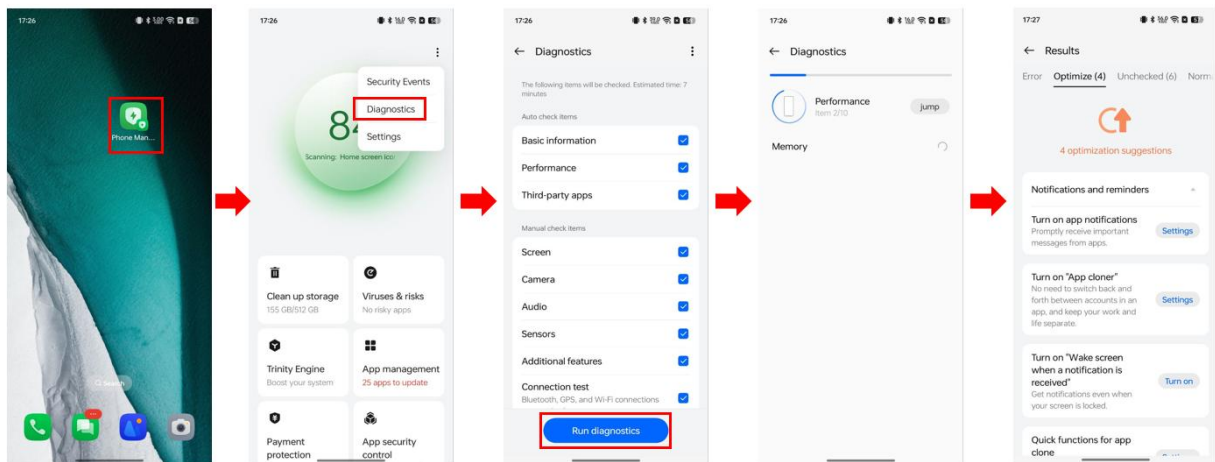
7.1.1 Function Description: general diagnosis provides basic information of your device, conducts hardware and related function checks and performs self-diagnostics to identify any potential faults. It also offers guidance and suggestions for troubleshooting any detected issues, helping you resolve device problems.

#### 7.1.2 Diagnostic function:

Basic functions of the device, such as abnormal detection of the camera, speaker, screen, main microphone, buttons and battery.

#### 7.1.3 Usage instructions:

**Start the Phone Manager App > Click the three-dot icon in the top right corner > Select diagnostics > Choose the items to be checked > Start the diagnosis > Follow the instructions to complete the checks.> View the diagnostics results.**



Entrance : Phone Manager

#### 7.1.4 How to view the historical diagnosis records:

**Start phone manager APP > Click the three-dot icon in the top right corner > Select diagnostics > Click the three-dot icon in the top right corner > Select records > Click any historical diagnostic record > View the detailed diagnosis results.**

## 7.2 Automatic Test in the engineering mode

7.2.1 Alternatively, you can also run the Automatic Test in the engineering mode. Test Path: Open the phone dialer app > Enter\*#899# > Select the automatic test.

Note: Once the corresponding test item is completed, a 'Confirm' dialog box will pop up. If the dialog box does not automatically pop up after the specified time, you need to press the 'Back' button to trigger the 'Confirm' dialog box. If there is a fault in the test, select 'FAIL'; if there are no issues, select 'PASS'.

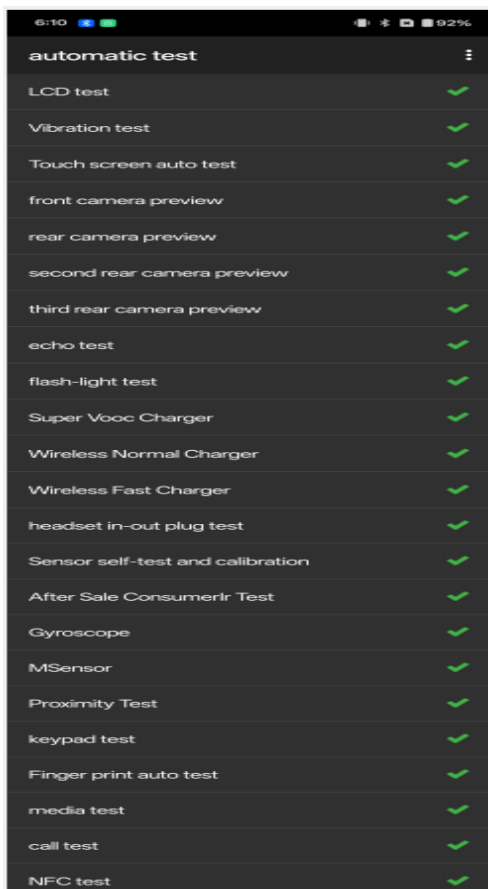
### 7.2.2 Test items and requirements

No.	Test Items	Test Requirements
1	LCD Test	Check whether there are any black spots, bright spots, horizontal lines, vertical lines, or color anomalies on the red, green, blue, white, black, gray, grayscale, and color interfaces. If none of the above issues are present, the function is good;
2	Vibration Test	Get ear close to check the vibration from the motor for 3 seconds. If the motor vibrates normally (No noises or weak vibration), the function is good;
3	Touch Screen Auto Test	If the interface shows "PASS" and jumps to the next test, the function is good;
4	Front Camera Preview	Align the camera with a white surface and a black surface separately. If there is no black dot, black line or flickering/blurred screen, the camera is good;
5	Rear camera preview	Align the rear camera with a white surface, a black surface, and a surface with text. If there is no black dot, black line or flickering/blurred screen, the camera is good;
6	Second rear camera preview	Align the second rear camera with a white surface, a black surface, and a surface with text separately. If there is no black dot, black line or flickering/blurred screen, the camera is good;
7	Third rear camera preview	Align the third rear camera with a white surface, a black surface, and a surface with text separately. If there is no black dot, black line or flickering/blurred screen, the camera is good;
8	Echo test	Click " Main MIC" to turn it gray. When testing the main MIC, blow air into the main MIC hole on the left side of USB interface. If there is sound from the receiver, the function is good. Click " Secondary MIC" to turn it gray. When testing the secondary MIC, blow air into the secondary MIC hole on the far-right side at the top. If there is sound from the receiver, the function is good.

No.	Test Items	Test Requirements
		<p>Click " ANCMIC" to turn it gray. When testing the ANCMIC MIC, blow air into the MIC hole on the camera lens. If there is sound from the receiver, the function is good.</p> <p>Click " Fourth MIC" to display gray. When testing the Fourth MIC, blow air into the MIC hole on the right side of USB port. If the receiver has sound, the function is good.</p> <p>Face the screen to determine the location of the MIC.</p> <p>Press the back button to enter the "Confirm" dialog box.</p>
9	Flashlight Test	Turn on the flashlight. If it turns on and there is no color distortion, the function is good; After 5 seconds, the 'Confirm' dialog box will appear.
10	Super VOOC Charger	Use the original OnePlus fast charging adapter and USB cable for testing. If it shows "PASS" and jumps to the next test automatically, the function is good;
11	Normal Wireless Charger	Use the wireless charging adapter for testing. If it shows "PASS" and jumps to the next test automatically, the function is good;
12	Fast Wireless Charger	Use the fast wireless charging adapter for testing. If it shows "PASS" and jumps to the next test automatically, the function is good;
13	Headset Insertion and Removal Test	Insert the headphones. If the headphones are detected upon insertion, the function is good;
14	Sensor Self-test and Calibration	Place the phone flat on the Workbench, then click the first calibration item. If all items display 'PASS' and the test automatically proceeds to the next item, , the function is good;
15	After-sales Infrared Remote Control	Use the camera preview to check if a red dot flashes from the infrared remote control opening at the top of the test device. If the red dot flashes, click 'PASS'; otherwise, click 'FAIL'.
16	Gyroscope	Hold the phone and draw the number '8' with it. If the test is successful and shows 'PASS', and the test automatically proceeds to the next item, the function is good;
17	MSensor	Shake the phone from the left to the right side. If the interface shows "PASS" and jumps to the next test, the function is good;
18	Proximity Test	Cover the light sensor hole (on the top right side of the screen), and the interface should turn green from black. If the interface shows "PASS" and jumps to the next test, the function is good;
19	Button test	Press the power button and volume buttons one by one. If there is no abnormal feeling (such as sticky buttons or keys lifting) and the interface jumps to the next test, the function is good;

No.	Test Items	Test Requirements
20	Fingerprint Auto Test	If the interface shows "PASS" and jumps to the next test, the function is good;
21	Media test	Click the '20-4K (-3dB) signal' to play sound for 5 seconds. If there is no silence, weak sound, noise, or distortion, and the interface shows 'PASS' and automatically jumps to the next test, the function is considered good.
22	Call test	Install an operator's SIM card, dial the voicemail number or any appropriate local number to establish a phone call. If the call can be performed normally and the receiver is without noises or low sound, the function is good;
23	NFC test	Connect the NFC card reader to the computer. After the phone automatically selects the SIM1 simulation (within 5s), bring the phone's rear camera area close to the NFC card reader. The card reader's signal light will change from red to green, accompanied by a beep sound.
24	Device Appearance	Visually inspect the device's appearance: back cover.

Note: After completing the 24 test items, the system will jump to the test results screen. If a test passes, a 'v' will appear on the corresponding item. If a test fails, an 'X' will be displayed and the corresponding component should be re-checked.



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## 8. Upgrade and reset the system software

### 8.1 OTA upgrade:

8.1.1 Go to Settings > About device > Tap the top version number to check for updates manually or enable 'Automatic Update overnight' in the options at the top right. Once enabled, the phone will automatically download the firmware package in a Wi-Fi environment and perform the update during idle hours at night. (If 'Automatic Update overnight' is turned off, no further prompts for night updates will be shown.)

8.1.2 In addition to the above path, you can also go to Settings > System & Updates > Software Update or enable 'Automatic Update overnight' in the options at the top right.

### 8.2. Reset software:

You can reset the software by performing a factory reset in the phone settings or recovery mode.

**Caution: Performing a factory reset will restore the phone to its original factory settings and permanently delete all personal data. Once any reset option is executed, it cannot be undone. Please back up your personal data to a computer or other external storage device in advance.**

8.2.1 Perform a factory reset in the settings: Go to Settings > System and Updates > Backup & reset > Reset Phone > Tap 'Erase All Data'.

8.2.2 Reset in recovery mode: After turning off the phone, simultaneously press and hold the power button and the volume down button for about 5 seconds to enter the Recovery mode. Select English, then choose 'Format data'. After entering the verification code, tap 'Format' (all data will be erased).

## 9 Appendix



1. Wire connection and electronic board diagram

3AA601-0.pdf

2. ESD protection requirements:



ESDPrecautionV1.020241115\_1632446762348.pdf



Camera  
Chart.pdf

3. Camera calibration diagram :