SAMSUNG

REPAIR GUIDE

SM-A556B

English. Rev.1.0

www.samsung.com

Table of Contents

Usage Notices

Software Update

Quality Test

Calibrations

Exploded View and Parts List

Disassembly and Assembly

Usage Notices

All functionality, features, specifications, and other device information provided in this document, including but not limited to, benefits, design, pricing, components, performance, availability, and capabilities of the device are subject to change without notice. Samsung reserves the right to alter this document or the device described herein at any time, without obligation to provide notification of such changes.

Precautions for Repair

Samsung is not liable for any damage or defect determined to be caused by repair by a non-authorized carrier, self repair or non-professional repair of the device. Samsung is not liable for any resulting damage to the device, or any injury or other device safety issue caused by any attempt to repair the device which does not follow these repair and maintenance instructions.

Any damage to the device or defect caused by an attempt to repair the device by any person other than a Samsung certified carrier will not be covered by the warranty.

- Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.
- Use only high quality screwdrivers when servicing devices. Low quality screwdrivers can easily damage the heads of screws.
- Always use genuine replacement parts. Third-party replacement parts may not function properly and could cause a fire or injury.
- Some parts, such as sensors (laser AF/proximity/fingerprint), the rear camera, the TSP (touch panel), speakers, and other components, may need calibration to guarantee their performance after repair.
- The performance of the device's water and dust resistance cannot be guaranteed when it is repaired by the user or another unskilled worker.
- If you need to access the failure data of your device or need to get a more detailed diagnosis, visit a Samsung Service Center.
- If you need to replace unsold parts, visit a Samsung Service Center and receive further instruction.
- Before conducting repairs, remember to make backup copies of all important data stored in the device.

- Make sure to wear the appropriate safety equipment before carrying out repairs. Samsung is not responsible for injuries that may occur because of not wearing the proper safety equipment. Refer to Tools for Disassembly and Assembly for a list of tools that you will need for assembling and disassembling the device.
- Repair the device in a safe place.
- Before repairing the device, make sure the device is turned off. To turn off the device, press the Volume Down button and the Side button at the same time, or open the notification panel and tap the Power icon.
- If the device is damaged, emits smoke, or if you smell something burning, stop using the device immediately and contact Samsung.
- It is recommended to use safety equipment such as glasses, gloves, and a mask when repairing the device.
- Be careful not to damage the device when removing the back cover.
- Before assembly, ensure that there are no screws or foreign objects around the battery.
- During assembly, check if there are any abnormalities before reattaching the back cover, and be careful not to damage the battery by hitting or denting it. If the battery is damaged, visit a Samsung Service Center.
- Do not place the device directly into a microwave and heat it.
- Before repairing your device, make sure its battery is fully discharged.
- Visit www.samsung.com to view the device information, related material, and safety information.

ESD (Electrostatic Discharge) Precautions

It is the sudden flow of electricity between two electrically charged objects caused by contact, an electrical short, or dielectric breakdown. ESD can cause negative effects on mobile devices, especially electrical parts.

- It is recommended to use ESD safety (Anti-static) equipment such as an anti-static wrist strap and gloves, and an ESD safe mat when repairing the device.
- Increase the airflow to the work area to decrease the chance of accidental static electricity discharges, as the potential for static electricity discharge may be increased in low-humidity environments, such as air-conditioned rooms.

Instructional Icons

Warning: situations that could cause injury to yourself or others

Caution: situations that could cause damage to your device or other equipment

Notice: notes, usage tips, or additional information

Software Update

Updating Software through FOTA

Update your device's software through the firmware over-the-air (FOTA) service. You can also schedule software updates.

Launch the **Settings** app and tap **Software update** → **Download and install**.

- **Install now**: Install updates.
- **Schedule install**: Set the time to install updates automatically.

- You may incur additional charges when updating the software through a mobile network.
- If the latest software has been downloaded to the device, these options will not appear.

Software Update Failure

If your device becomes disconnected from a network before the update is complete, the update may fail. Reconnect to a network and complete the update.

Updating Software through Smart Switch

You can use Smart Switch to update your device's software to the latest version. You must download the desktop version of the Smart Switch app from www.samsung.com/smartswitch.

- This feature may not be supported on some devices or computers.
- Limitations apply. Visit www.samsung.com/smartswitch for details. Samsung takes copyright seriously.

1. On the computer, visit www.samsung.com/smartswitch to download Smart Switch.
2. On the computer, launch **Smart Switch**.
3. Connect your device to the computer using the device's USB cable.
4. Click **Update**.

5 Read the on-screen instructions and click **Continue**.

6 Read the precautions about the update and click **OK**.

7 Read and agree to the terms and conditions.
The update will start.

Recovering from a Software Update Failure

If a software update is interrupted because of an error on your device or computer, your device may fail to operate normally. If this occurs, you can perform a factory data reset on your device for emergency recovery.

Before performing the factory data reset, remember to make backup copies of all important data stored in the device. Samsung is not responsible for the loss of data stored in the device.

1 Disconnect your device from the computer and launch **Smart Switch** again on the computer.

2 Click ⋮ → **Emergency Software Recovery and Reset**.
The device list will appear.

3 Click the device that experienced a software update error and click **Device reset** → **OK**.
The device will perform a factory data reset.

Recovering on Another Computer

If the emergency recovery process continues to fail on the computer where the software update failed, you can repair your device on another computer using the recovery code. This will include a factory data reset of your device.

- Before performing the factory data reset, remember to make backup copies of all important data stored in the device. Samsung is not responsible for the loss of data stored in the device.
- The recovery code can be found only on the computer where the software update has failed.

1 On the computer where the software update has failed, launch **Smart Switch**.

2 Click ⋮ → **Emergency Software Recovery and Reset**.

3 On the devices list, click the device that failed to update the software and check the recovery code.

4 On another computer, launch **Smart Switch**.

5 Click ⋮ → **Emergency Software Recovery and Reset** → **Emergency code recovery**.

6 Enter the recovery code and click **OK**.

7 Follow the on-screen instructions to put your device into recovery mode and complete the emergency recovery.

Performing a Factory Data Reset

The factory data reset restores the device's default settings. This erases all data, including files and downloaded apps, from the device.

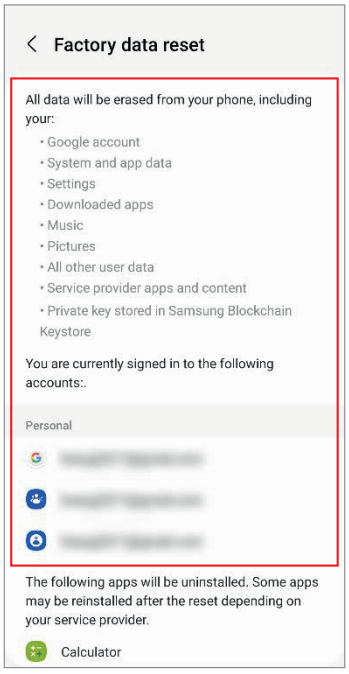
Before performing the factory data reset, remember to make backup copies of all important data stored in the device. Samsung is not responsible for the loss of data stored in the device.

Make sure your device's battery level is sufficient, as losing power during a factory reset may result in system problems.

1 Launch the **Settings** app and tap **General management** → **Reset** → **Factory data reset**.

2 Read the on-screen instructions and check which account you are signed in with.

If your device is signed in to your Google account, log out of your Google account. If you do not log out of your Google account, logging in to another account after the factory data reset will not be possible, because your device will be locked.



3 Tap **Reset** → **Delete all**.
All data will be deleted when rebooting.

During a factory data reset, the device may repeat rebooting and the logo may be displayed for a long time.

Quality Test

Quality Test Using the Samsung Members App

It is recommended to evaluate your device through the Samsung Members app after it has been repaired to guarantee its performance. If the test results show any abnormalities or that another malfunction has occurred because of the repair, visit a Samsung Service Center to receive further instruction. Any malfunctions caused by your repair may incur additional repair charges.

- The Samsung Members app is subject to update without any prior notice.
- To use this feature, you must sign in to your Samsung account.
- Some features may not be available depending on the carrier or model.

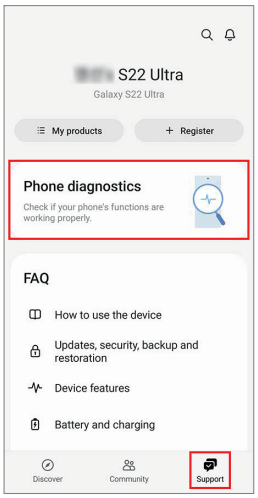
Device Diagnostics

1 Launch the **Samsung Members** app.

If you do not have the app, download it from the **Galaxy Store** or **Play Store**.

2 Tap **Support** → **Phone diagnostics**.

The diagnostics screen will appear and you can check the test status and items.

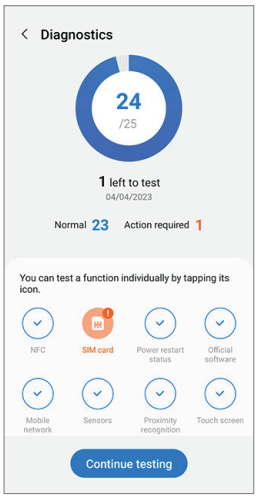


3 Tap **Test all**.

The device performs a test on all items.

When the test is finished, you can check the test results.

- Tick mark: Working normally
- Exclamation mark: Needs further inspection

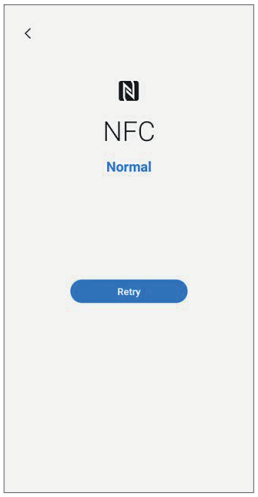


- The test proceeds automatically, but you may need to follow the on-screen instructions depending on the test item. Keep an eye on the screen during testing to ensure smooth progress.
- If the exclamation mark appears on any test items after finishing the test, tap them to find the solutions. If the problem persists, visit a Samsung Service Center.

Test Items

NFC

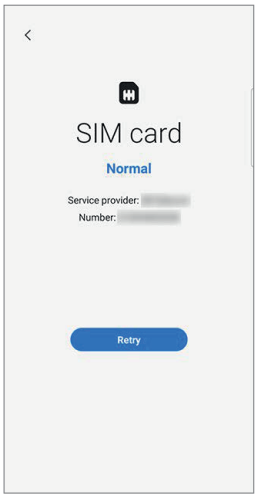
- Function: Check whether your device can read near field communication (NFC) tags that contain information about products.
- Provided information
  - Status: View whether the feature is working normally.



SIM card

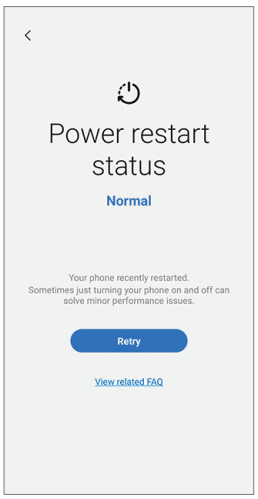
- Function: Check whether the SIM card is working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Service provider: View the carrier.
  - Number: View the phone number.

If the test result is not **Normal**, remove the SIM card from the SIM card tray and replace it. If possible, try again with another SIM card.



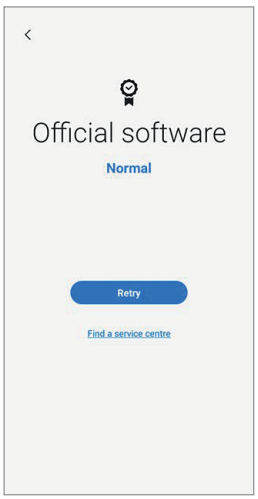
Power restart status

- Function: Check your device's restart history.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.
  - History: View your device's restart history.



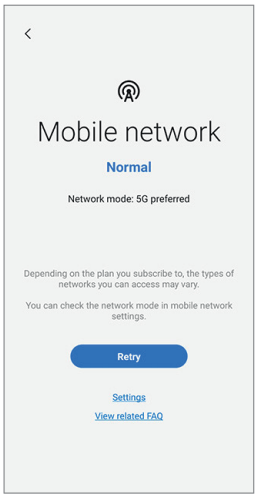
Official software

- Function: Check whether the software is working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Service information: View the Samsung Service Center location.



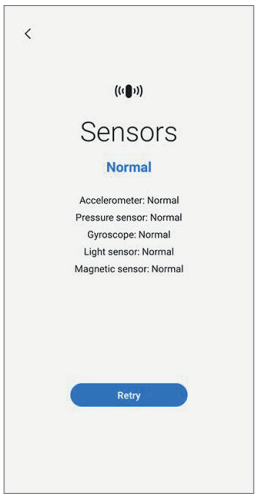
Mobile network

- Function: Check whether your mobile network is working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Settings: Configure your mobile network settings.
  - FAQ: View frequently asked questions.



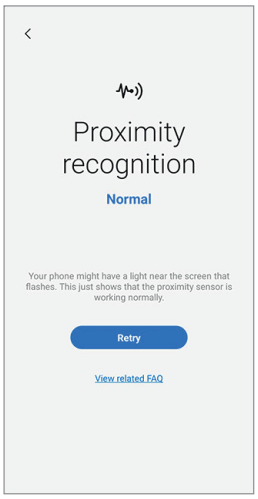
Sensors

- Function: Check whether the sensors are working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Sensor types: View the status of each sensor.



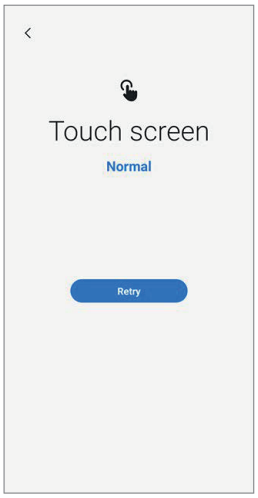
Proximity recognition

- Function: Check whether the proximity recognition feature is working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.



Touch screen

- Function: Check whether the touchscreen is working normally.
- Provided information
  - Status: View whether the feature is working normally.

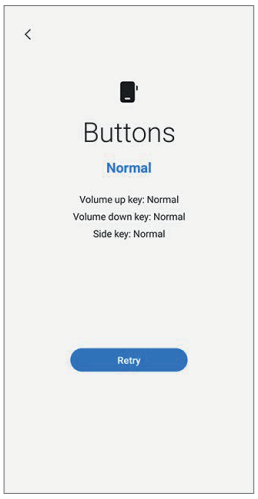


Buttons

- Function: Check whether the buttons are working normally.
- How to check:

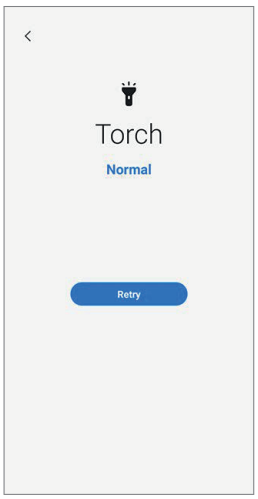
  Press the buttons by following the directions on the screen.
- Provided information
  - Status: View whether the feature is working normally.
  - Button types: View the status of each button.

Make sure that the buttons are not contaminated to get more accurate test results.



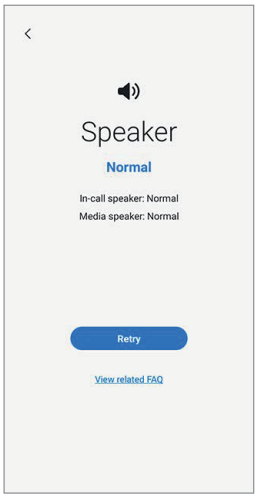
Torch

- Function: Check whether the torch is working normally.
- Provided information
  - Status: View whether the feature is working normally.



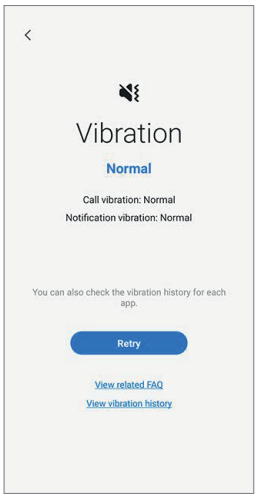
Speaker

- Function: Check whether the speakers are working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Speaker types: View the status of each speaker.
  - FAQ: View frequently asked questions.



Vibration

- Function: Check whether the vibration feature is working normally.
- Provided information
  - Status: View whether the feature is working normally.
  - Vibration types: View the status of each type of vibration.
  - FAQ: View frequently asked questions.
  - History: View the vibration history.



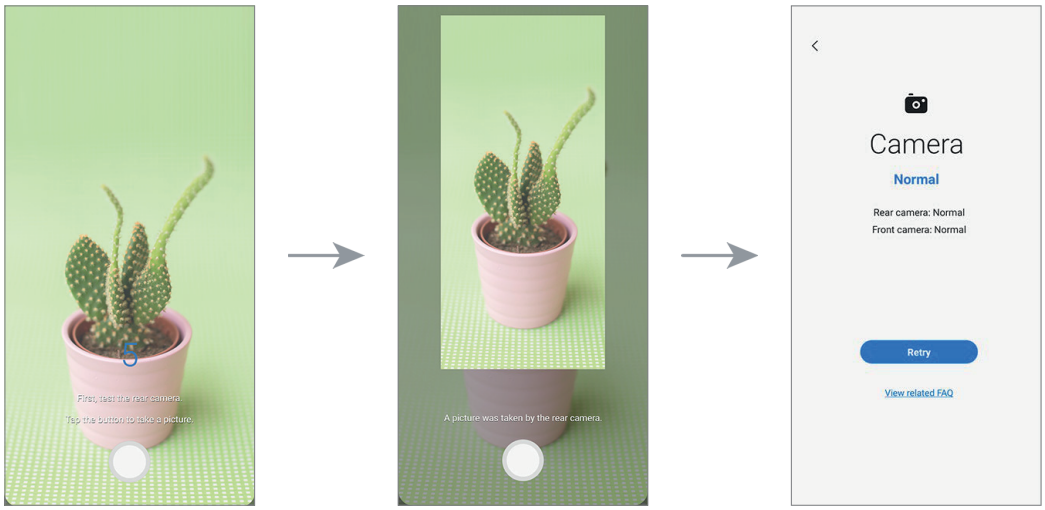
Camera

- Function: Check whether the rear and front cameras are working normally.
- How to check:

  Tap the camera button to test the rear and front cameras.

  The picture that was taken will be displayed to check the quality of the pictures.
- Provided information
  - Status: View the status whether the feature is working normally.
  - Camera types: View the status of each camera.
  - FAQ: View frequently asked questions.

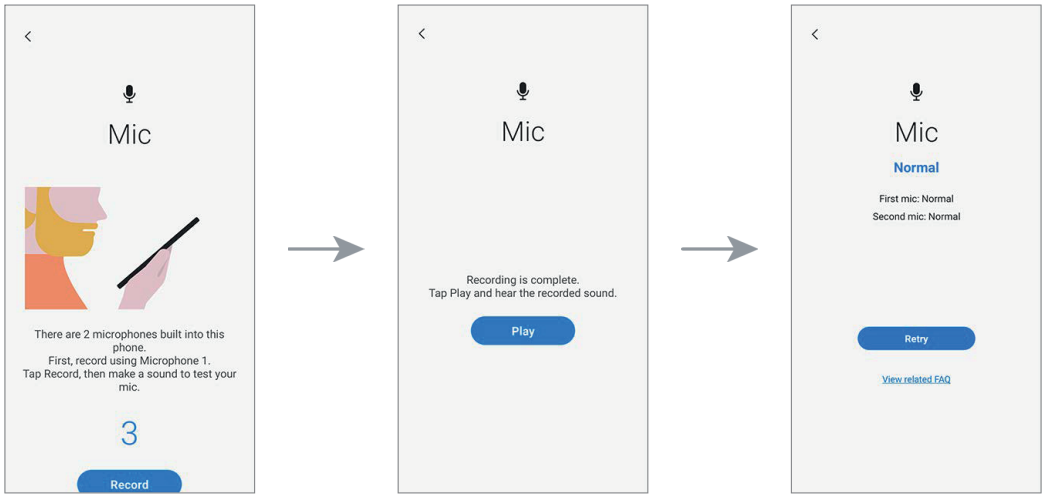
To test this more accurately, check if the camera is obstructed by foreign objects, the case, or protective film.



Mic

- Function: Check whether the microphone is working normally.
- How to check:
  1) Tap **Record** and say something for the recording.
  2) When the recording is finished, tap **Play** and select a button according to the question.
- Provided information
  - Status: View whether the feature is working properly.
  - Mic types: View the status of each mic.
  - FAQ: View frequently asked questions.

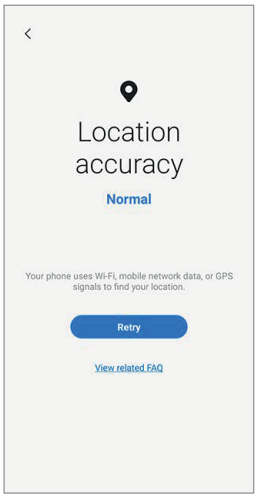
- The number of tests may vary depending on the model.
- If you cannot hear anything after recording, check whether the media volume is turned up.



Location accuracy

- Function: Check whether the location accuracy is working normally.
- How to check:

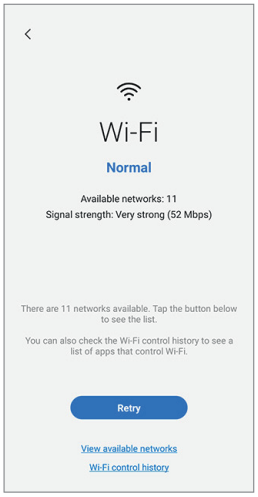
  Tap **Start**.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.



The results might be more accurate when you test outside.

Wi-Fi

- Function: Check whether Wi-Fi can search for Wi-Fi routers.
- Provided information
  - Status: View whether the feature is working normally.
  - Available networks: View the number of available networks.
  - Signal strength: View the signal strength of the connected Wi-Fi router.
  - Networks: View available networks.
  - History: View the Wi-Fi control history.

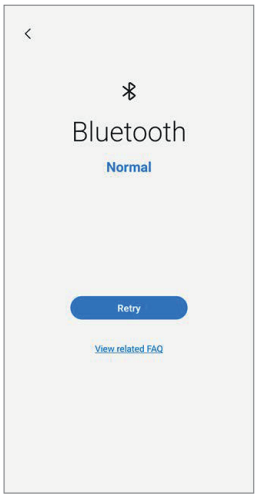


To test this feature, the Wi-Fi feature must be activated.

Bluetooth

- Purpose: Check whether Bluetooth can search for other Bluetooth devices.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.

To test this feature, the Bluetooth feature must be activated.

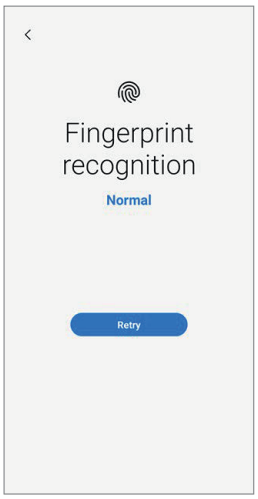


Fingerprint recognition

- Purpose: Check whether the fingerprint recognition sensor is working.
- How to check:

  Place your finger on the fingerprint recognition sensor.
- Provided information
  - Status: View whether the feature is working normally.

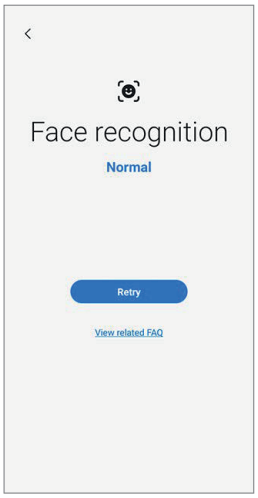
To test this feature, your fingerprint must be registered.



Face recognition

- Purpose: Check whether the face recognition sensor is working.
- How to check:

  Look at the screen.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.

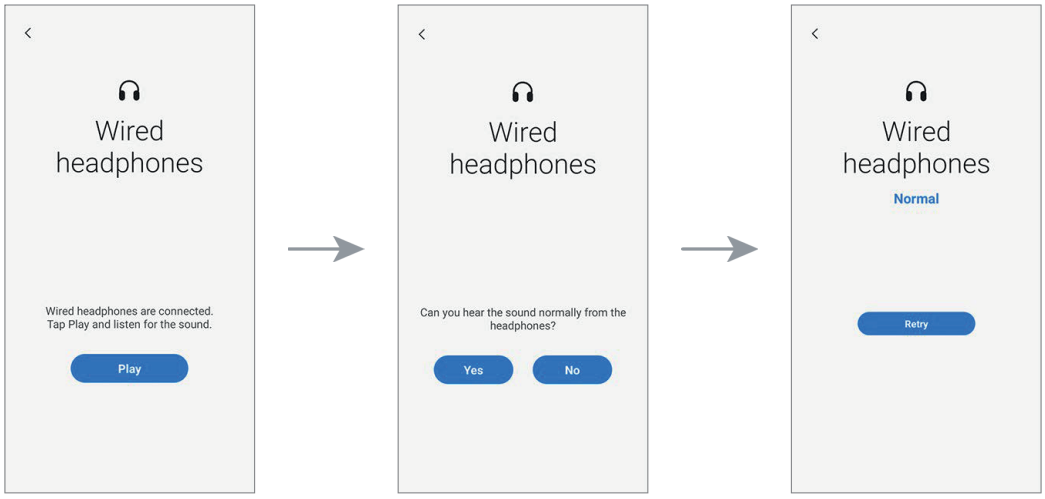


To test this feature, your face must be registered.

Wired headphones

- Purpose: Check whether the headphone jack recognizes the headphones normally.
- How to check:
  1) Connect headphones to your device.
  2) Tap **Play** and listen for the sound.
  3) Answer the question using the buttons.
- Provided information
  - Status: View whether the feature is working normally.

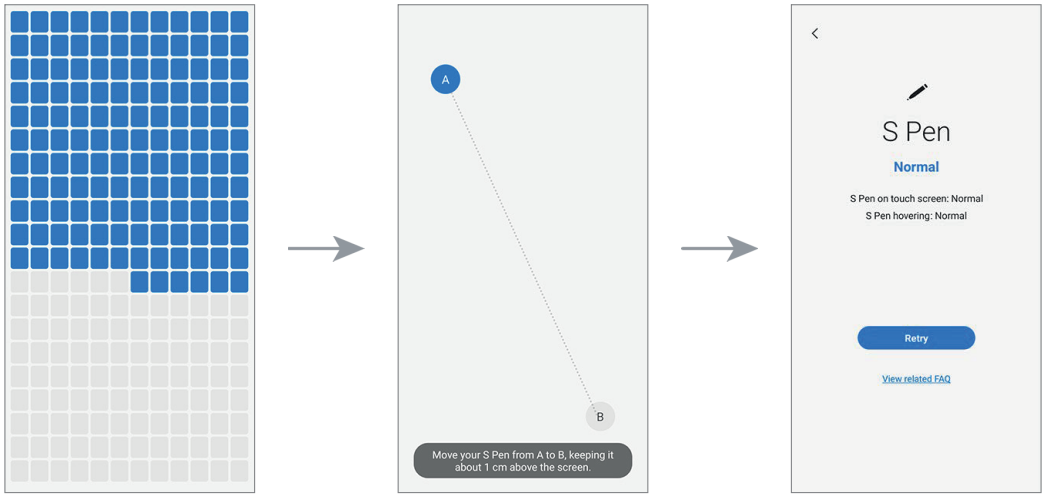
To test this feature, you must connect headphones.



S Pen

- Purpose: Check whether the S Pen is recognized in all areas of the touchscreen.
- How to check:
  1) Tap all the rectangles on the screen with the S Pen.
     The tapped or dragged rectangles will turn blue.
  2) Hover the S Pen over the screen and move from A to B.
     The blue circle will move along with the S Pen.
- Provided information
  - Status: View whether the feature is working normally.
  - S Pen features: View the status of S Pen features.
  - FAQ: View frequently asked questions.

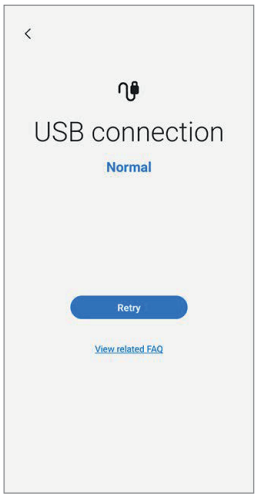
- Make sure that the screen is clean to get more accurate test results.
- This test is only available for the S Pen supported models.



USB connection

- Purpose: Check whether the multipurpose jack recognizes the USB cable normally.
- How to check:

  Connect any USB cable to your device.
- Provided information
  - Status: View whether the feature is working normally.
  - FAQ: View frequently asked questions.

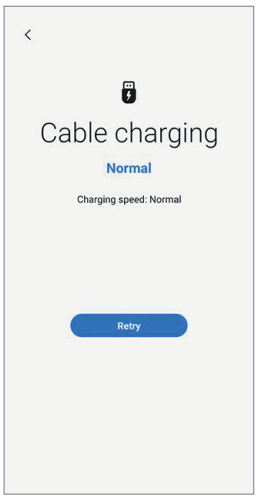


To test this feature, the USB cable must be connected to a computer.

Cable charging

- Purpose: Check whether the multipurpose jack recognizes the charger normally.
- How to check:

  Connect a charger to your device.
- Provided information
  - Status: View whether the feature is working normally.
  - Charging speed: View the charging speed according to the charger you connected.

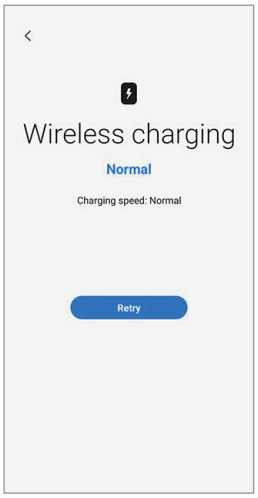


Use only Samsung-approved chargers.

Wireless charging

- Purpose: Check whether the wireless charging feature is working normally.
- How to check:

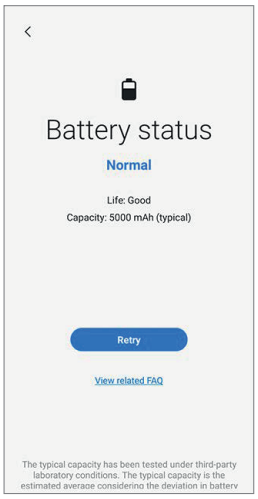
  Put your device on a wireless charger.
- Provided information
  - Status: View whether the feature is working normally.
  - Charging speed: View the charging speed according to the wireless charger you put your device on.



Use only Samsung-approved wireless chargers.

Battery status

- Function: Check the battery values and analysis.
- Provided information
  - Status: View whether the feature is working normally.
  - Life: View the remaining battery life (measured by comprehensive battery values).
  - Capacity: View the battery capacity.
  - FAQ: View frequently asked questions.



Calibrations

Calibrations

In order to guarantee the stable and correct performance of components or sensors, it is required to conduct calibrations through the **Self Repair Assistant** app after repair.

If the calibration results show any malfunctions, visit a Samsung Service Center for further action. Any malfunctions caused by your repair may incur additional repair charges.

In order to conduct the accurate calibrations after repair, visit a Samsung Service Center or website to buy calibration equipment if you do not have any.

Used Parts and Calibration Functions in Supported Models

The calibration functions are automatically conducted based on the selected parts.

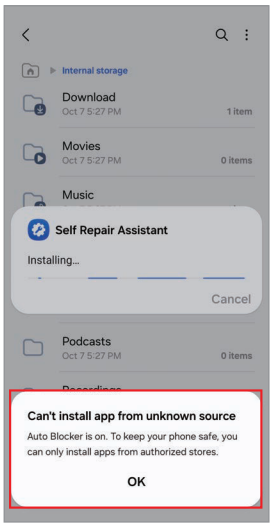
	Screen	Battery	Back Glass	Charging Port	Speaker
Optical Fingerprint Cal.	Yes	No	No	No	No
Range Sensor Cal.	Yes	Yes	Yes	Yes	Yes
Battery Cycle Resets.	No	Yes	No	No	No
Touch Screen Panel Cal.	Yes	No	No	No	No
Speaker Cal.	No	No	No	No	Yes
Under-display Camera Cal.	Yes	No	No	No	No
Digital Hall Sensor Cal.	Yes	No	No	No	No

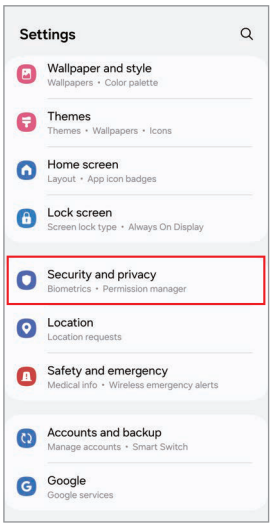
- Depending on the model, the screen module may include batteries. So when the screen module is replaced, the battery also has to be selected and a battery cycle reset must be performed.
- In the Fold models, touch screen panel calibration is performed for both the main and cover screens.
- Digital hall sensor calibration is only for the Fold and Flip models and under-display camera calibration is only for the Fold models.

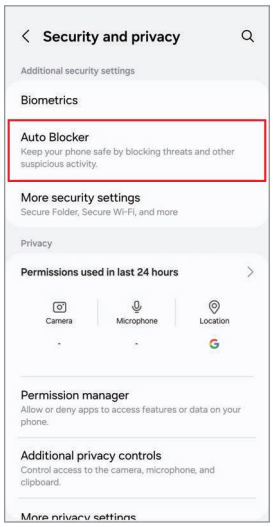
Using the Self Repair Assistant App

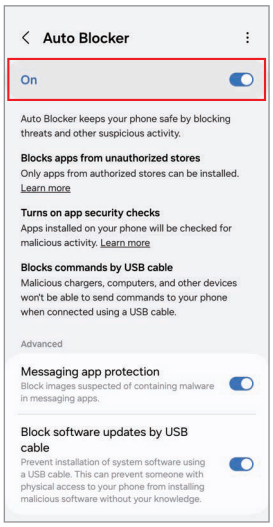
1 Download the **Self Repair Assistant** app from **Galaxy Store**.

For US devices, you need to install the APK file for the **Self Repair Assistant** app manually. However, if the **Auto Blocker** function which is provided from Android OS 14 (U OS) is turned on, you cannot install any APK files manually through the **My Files** app. In this case, launch the **Settings** app, tap **Security and privacy** → **Auto Blocker**, and then tap the switch to turn it off to install the **Self Repair Assistant** app.





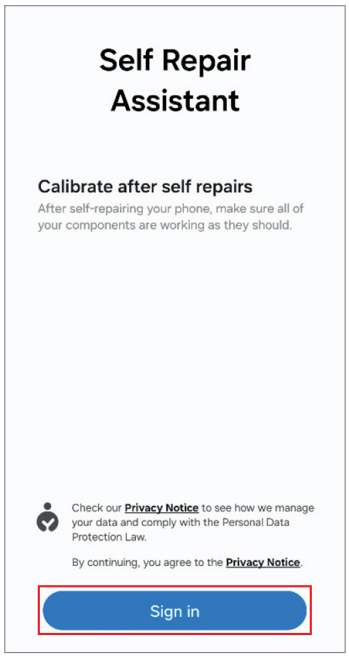


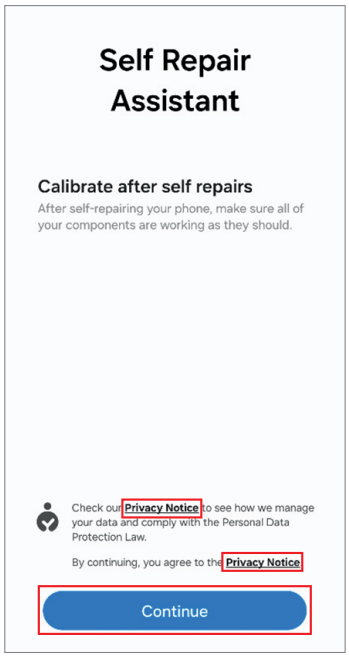


2 Launch the **Self Repair Assistant** app.

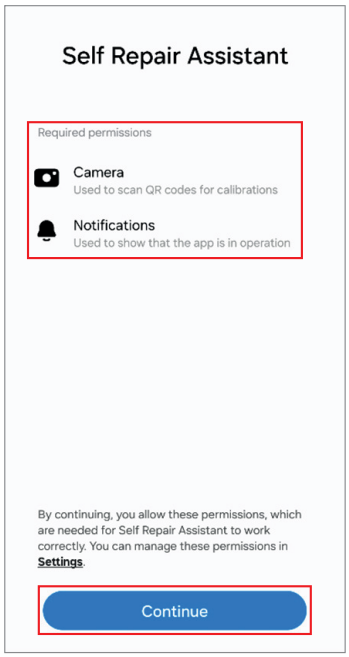
3 Read Privacy Notice and tap **Continue**.

- If you are not signed in to your Samsung account, a button will appear to sign in.
- If you select the link to read the full Privacy Notice, you will be directed to our site.



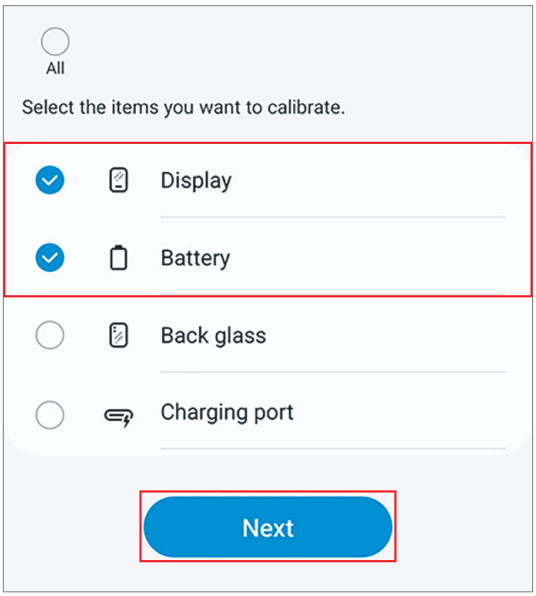


4 Check permissions and tap **Continue**.



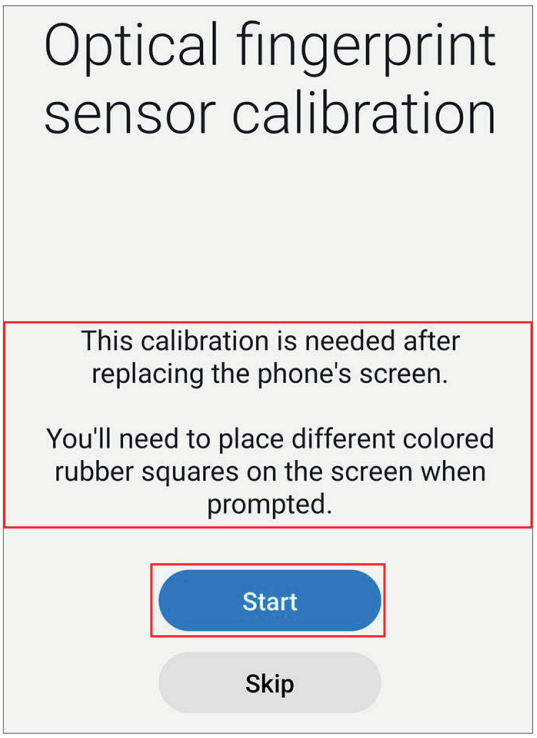
5 Select the part that you have replaced and tap **Next**.

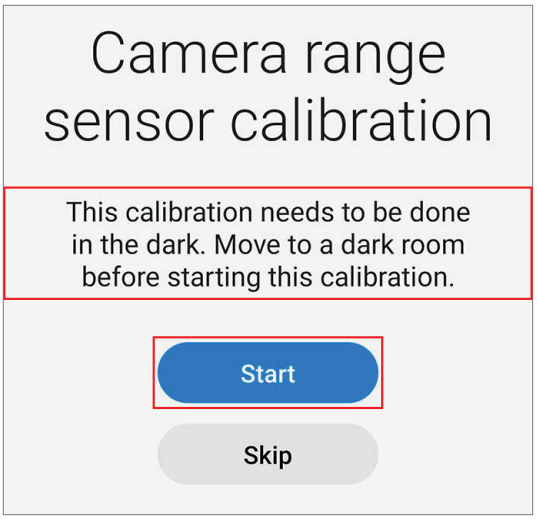
- The required calibrations will be conducted automatically.
- If the device does not have certain components or sensors associated with the part that has been replaced, relative calibration will be skipped automatically.



6 Read the on-screen instructions and tap **Start**.

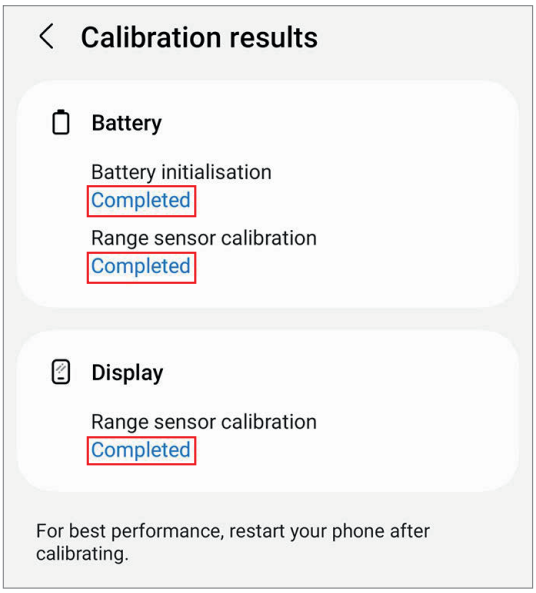
Refer to Optical Fingerprint Sensor Calibration, Resetting the Battery Cycle Count, Range Sensor Calibration, Touch Screen Panel Calibration, Speaker Calibration, Under-display Camera Calibration (Fold Models Only), and Digital Hall Sensor Calibration (Fold and Flip Models Only) for more information.



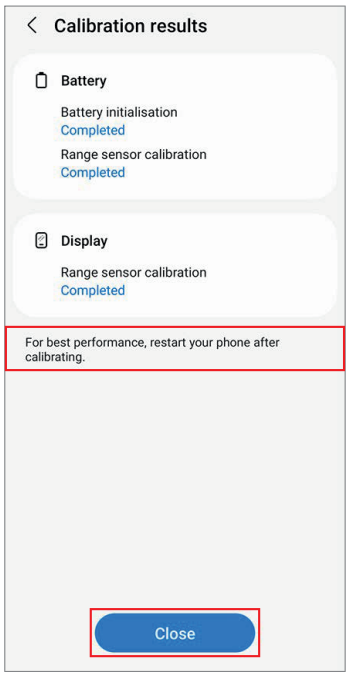


7 Check the results of each calibration item.

- **Completed**: Calibration was done normally.
- **Failed**: Calibration failed.
- **Skipped**: Calibration was skipped.



8 On the calibration results page, tap **Close** to close the app.
Restart your device to finish calibrating.



Optical Fingerprint Sensor Calibration

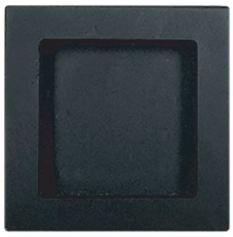
Whenever the screen is replaced, the optical fingerprint sensor must be calibrated to guarantee optimized fingerprint sensor performance for devices that have it.

Optical fingerprint sensor calibration is available through the **Self Repair Assistant** app.

- This feature may not be available depending on the model. The availability of this feature can be automatically checked in the Self Repair Assistant app, so please follow the guidance of the Self Repair Assistant app.
- Three rubbers (the white calibration box, the black calibration box, and the 3D fingerprint dummy rubber) are required to start this calibration.

White calibration box

Black calibration box

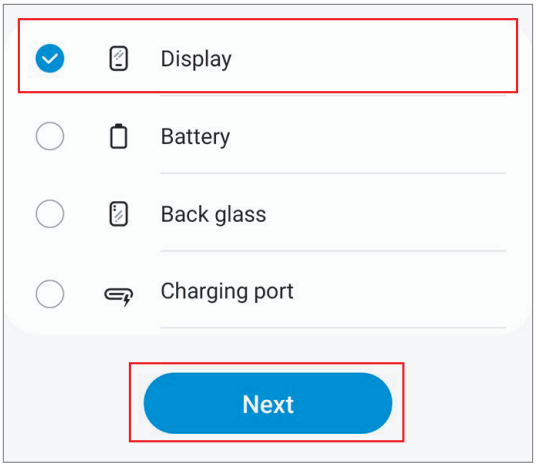


3D fingerprint dummy rubber

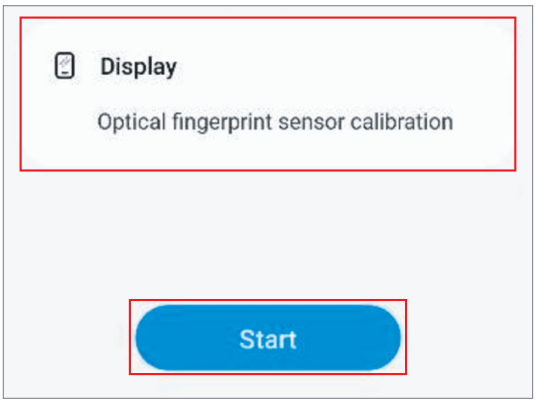
1 Launch the **Self Repair Assistant** app.

2 Tap **Display** → **Next**.

- The required calibration or test items will be processed automatically.
- If the device does not have certain components or sensors associated with the part that has been replaced, relative calibration will be skipped automatically.

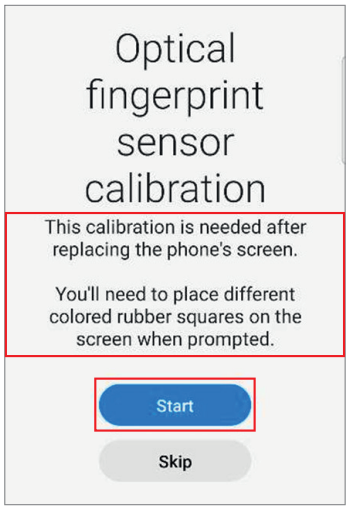


3 Check the part and calibration and then tap **Start**.



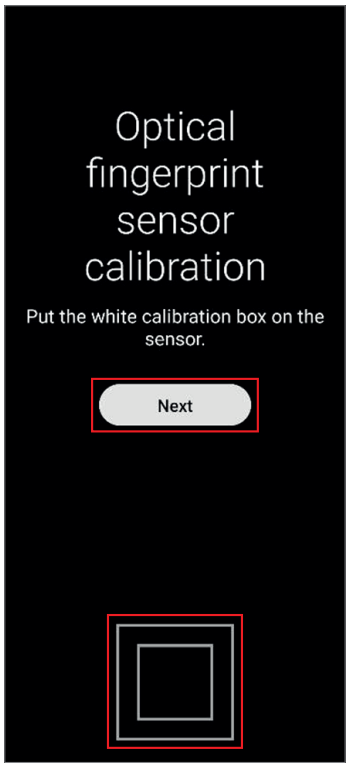
4 Read the on-screen instructions and tap **Start**.

The white calibration box must be prepared before you start.

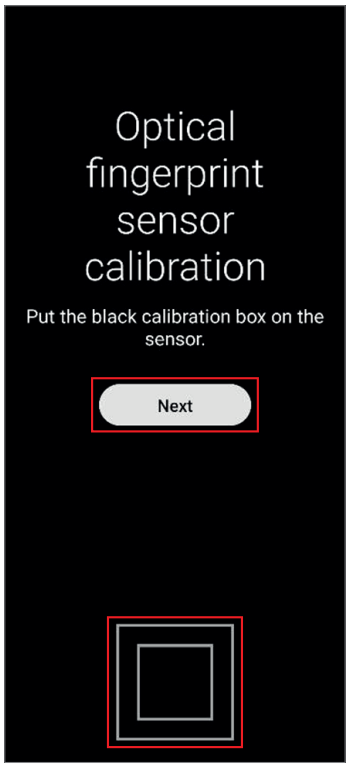


5 Put the white calibration box on the sensor area (below the square side) and push the rubber by applying force with your finger. Tap **Next** and keep pushing the rubber with your finger until you see the success message.

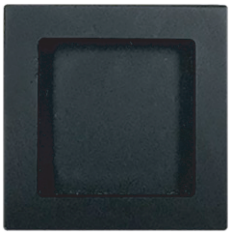
The bottom side of the rubber that is shaped like a square should be located on the square guide line.



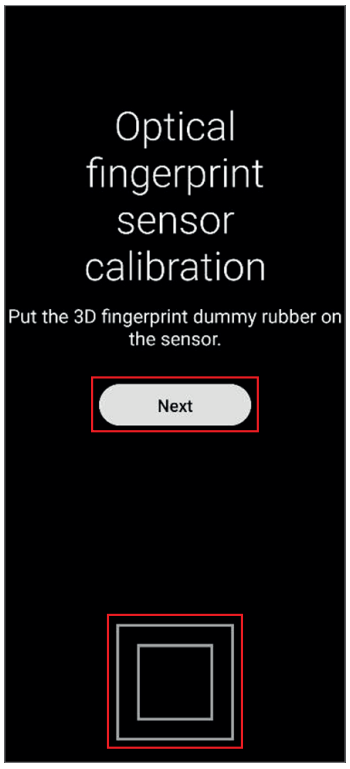
6 Put the black calibration box on the sensor area (below the square side) and push the rubber by applying force with your finger.
Tap **Next** and keep pushing the rubber with your finger until you see the success message.



- The black calibration box must be prepared before you start.
- The bottom side of the rubber that is shaped like a square should be located on the square guide line



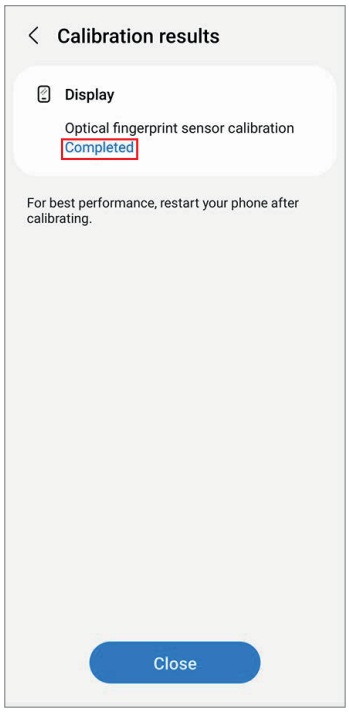
7 Put the 3D fingerprint dummy rubber on the sensor area (below the square side) and push the rubber by applying force with your finger.
Tap **Next** and keep pushing the rubber with your finger until you see the success message.



- The 3D fingerprint dummy rubber must be prepared before you start.
- The bottom side of the rubber that is shaped like a square should be located on the square guide line. (Do not place the pattern horizontally on the 3D fingerprint dummy rubber.)

8 Check the result of the calibration.

Completed appears only when the calibration is successfully completed. If **Completed** does not appear, try calibrating again.

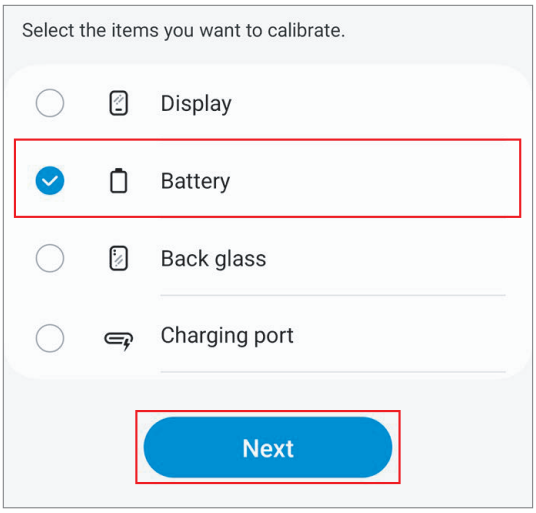


Resetting the Battery Cycle Count

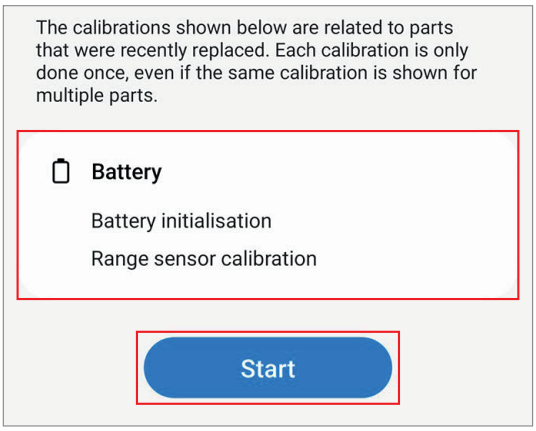
The battery cycle count should be reset whenever your device's battery is replaced.

1 Launch the **Self Repair Assistant** app.

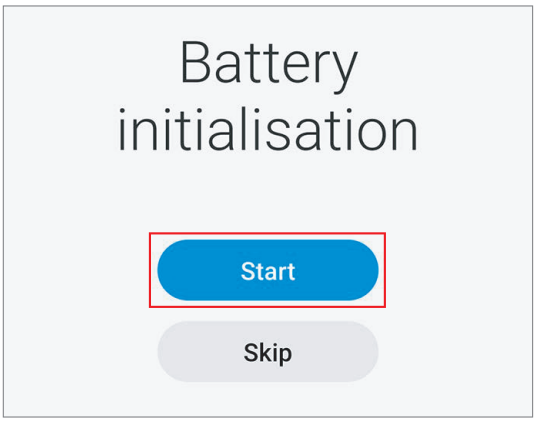
2 Select the part that you have replaced.
Tap **Battery** → **Next**.



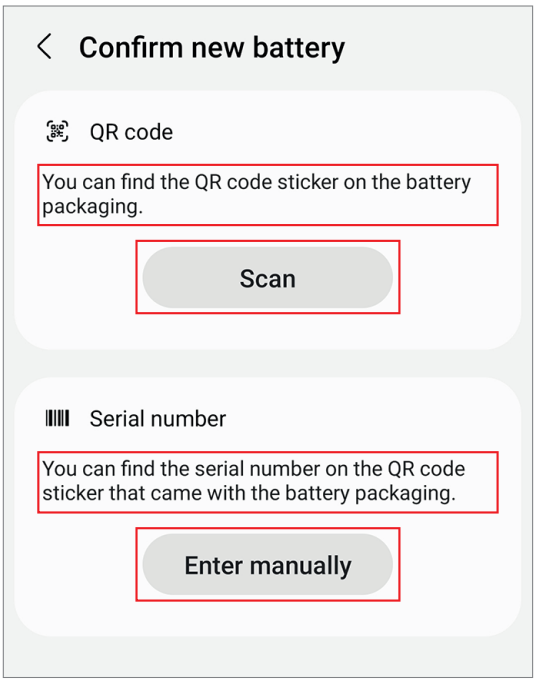
3 Check part and calibration and tap **Start**.



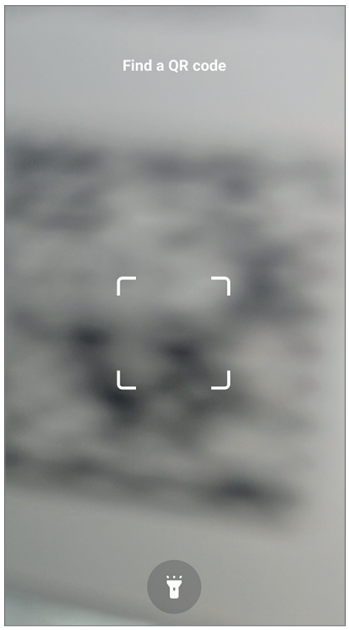
4 Tap **Start**.

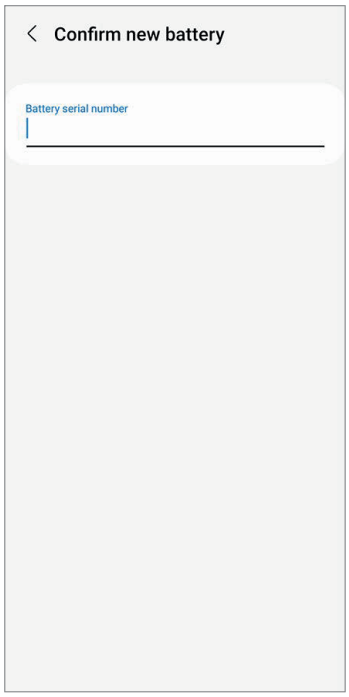


5 Read the on-screen instructions and tap **Scan** to scan the QR code, or tap **Enter manually** to enter the serial number manually.

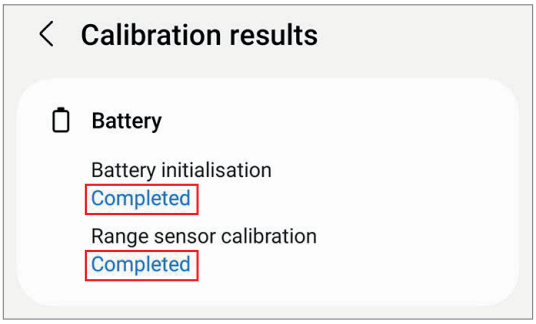


6 Scan the QR code or enter the serial number that appears on the battery package.
The reset will begin.





7 Check the calibration results.



Range Sensor Calibration

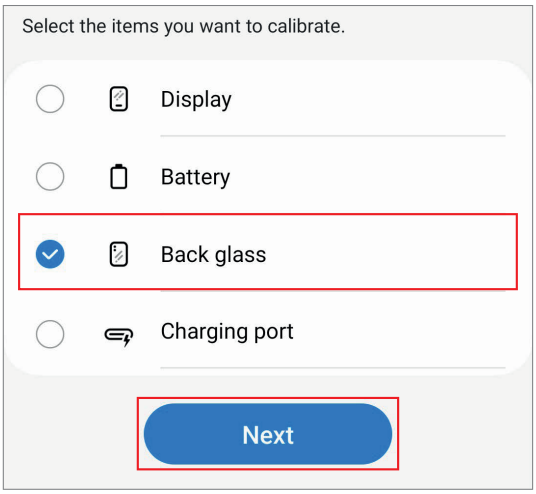
When replacing screens, batteries, back glasses, or charging ports, range sensor calibration is required to ensure the range sensors of devices equipped with them are optimized.

Range sensor calibration is available through the **Self Repair Assistant** app.

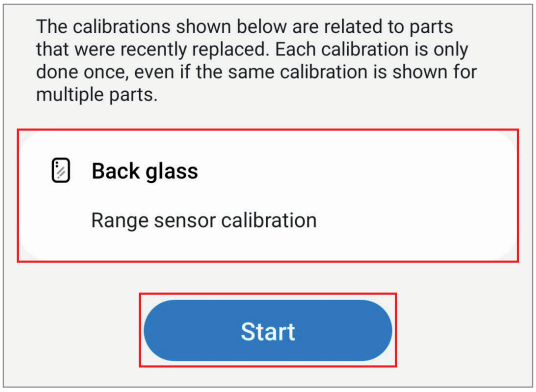
Some content may differ from your device depending on the region, service provider, model specifications, or device's software.

1 Launch the **Self Repair Assistant** app.

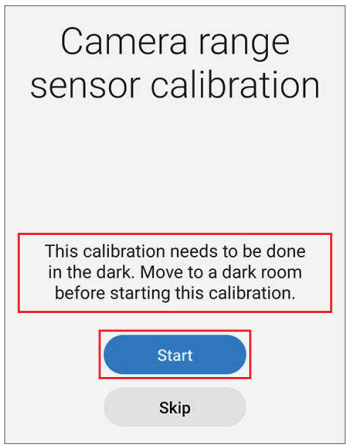
2 Select the part that you have replaced and tap **Next**.



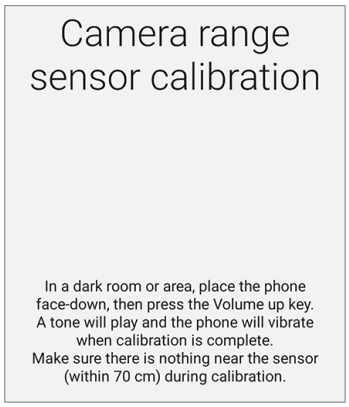
3 Check part and calibration and tap **Start**.



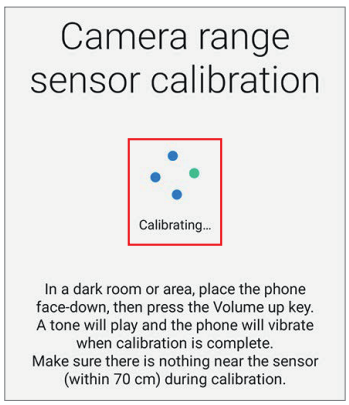
4 Read the on-screen instructions and tap **Start**.



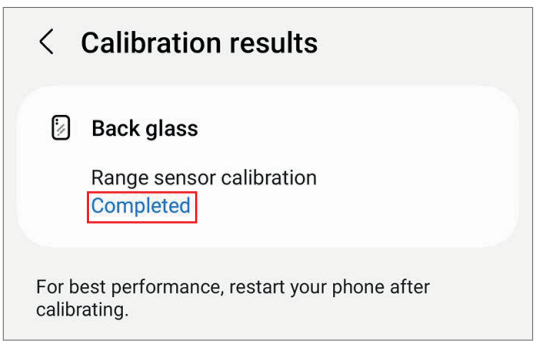
5 In a dark room or area, place the phone face-down, then press the Volume button.



6 The calibration will perform automatically. A tone will play when calibration is complete.



7 Check the calibration result.



Touch Screen Panel Calibration

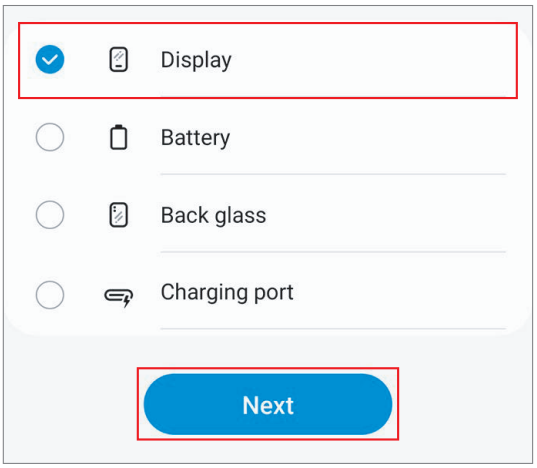
When replacing screens, touch screen panel calibration is required to ensure accurate touch input.

Touch screen panel calibration is available through the **Self Repair Assistant** app.

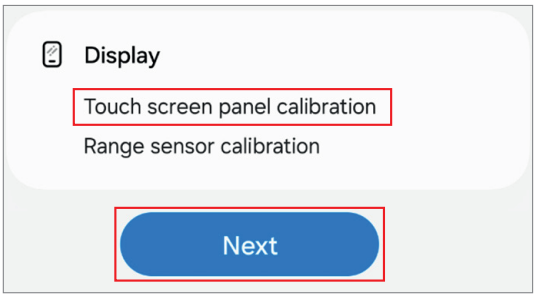
In the Fold models, touch screen panel calibration is performed for both the main and cover screens.

1 Launch the **Self Repair Assistant** app.

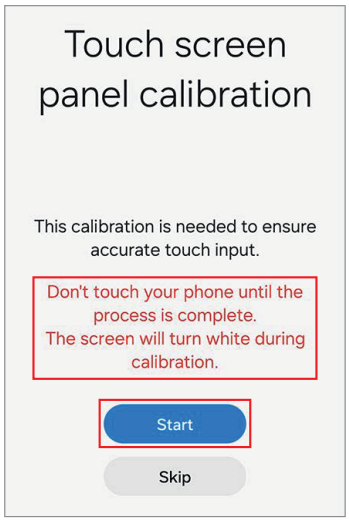
2 Select the part that you have replaced and tap **Next**.



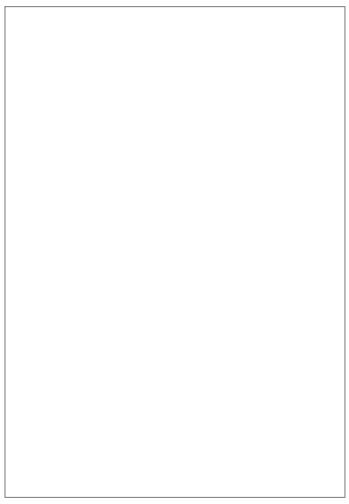
3 Check part and calibration and tap **Next**.



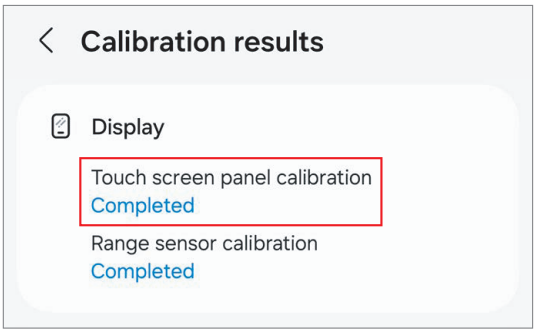
4 Read the on-screen instructions and tap **Start**.



5 The calibration will perform automatically and the screen will turn white during calibration.



6 Check the calibration result.



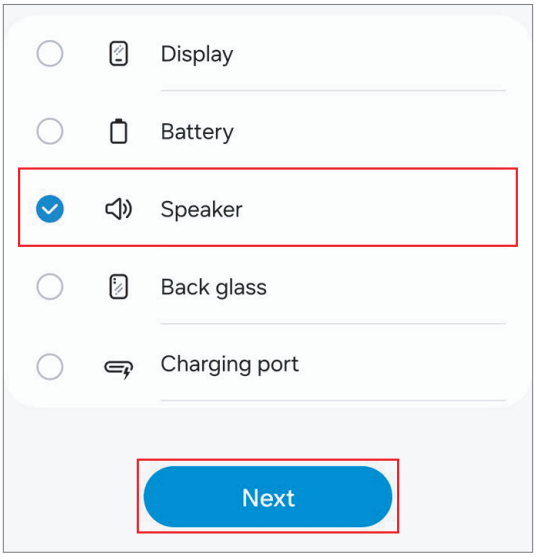
Speaker Calibration

When replacing speakers, the speaker must be calibrated to guarantee optimized speaker performance for devices that have it.

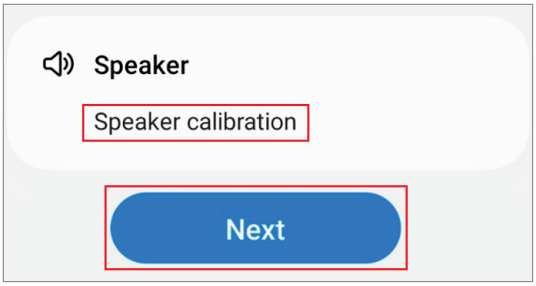
Speaker calibration is available through the **Self Repair Assistant** app.

1 Launch the **Self Repair Assistant** app.

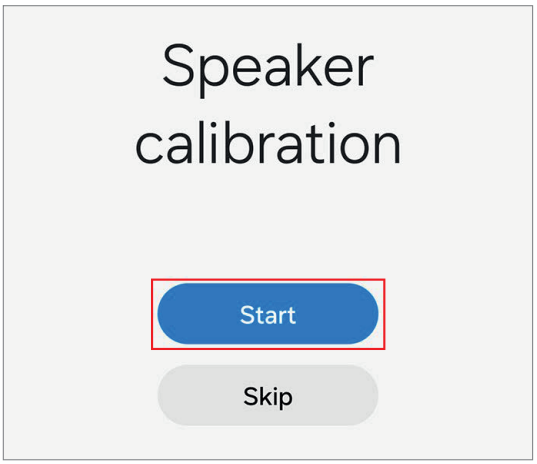
2 Select the part that you have replaced and tap **Next**.



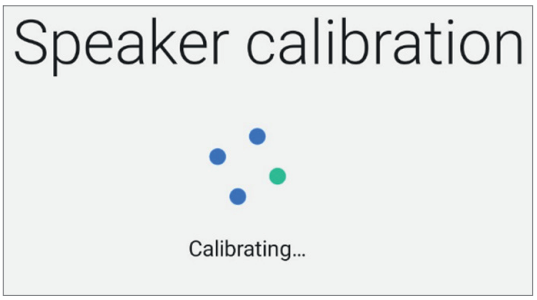
3 Check part and calibration and tap **Next**.



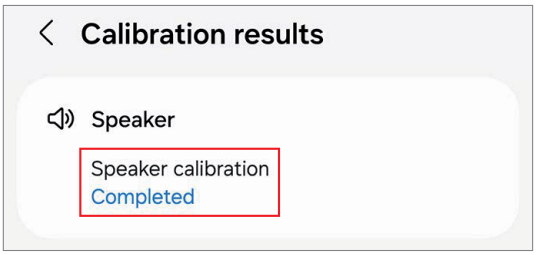
4 Tap **Start**.



5 The calibration will perform automatically.



6 Check the calibration result.



Under-display Camera Calibration (Fold Models Only)

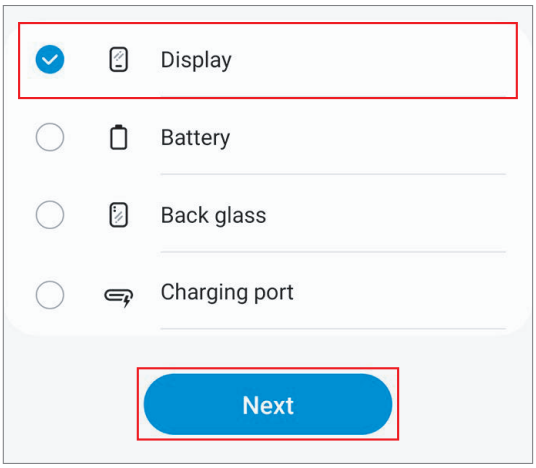
Whenever the screen is replaced, the under-display camera must be calibrated to guarantee optimized under-display camera performance for devices that have it.

Under-display camera calibration is available through the **Self Repair Assistant** app.

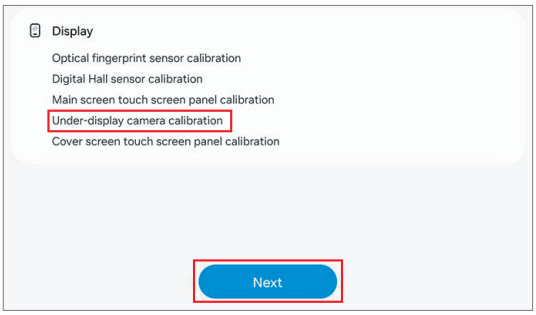
This feature may not be available depending on the model. The availability of this feature can be automatically checked in the Self Repair Assistant app, so please follow the guidance of the Self Repair Assistant app.

1 Launch the **Self Repair Assistant** app.

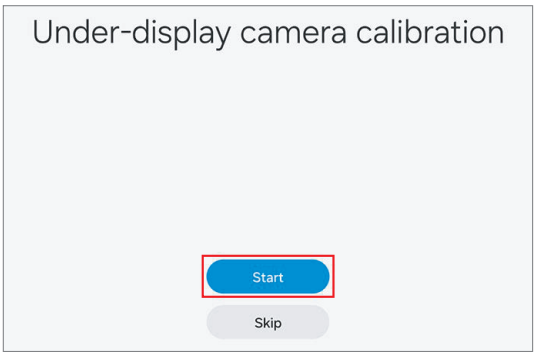
2 Select the part that you have replaced and tap **Next**.



3 Check part and calibration and tap **Next**.

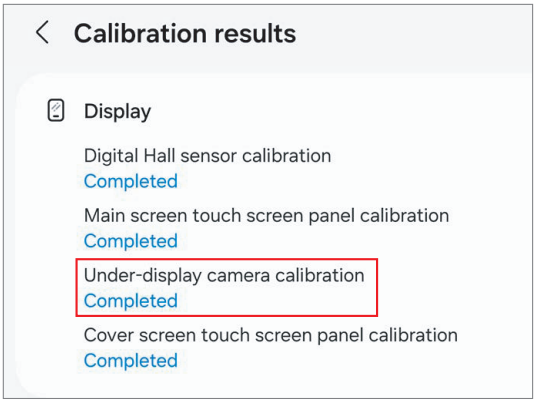


4 Tap **Start**.



5 The calibration will perform automatically.

6 Check the calibration result.



Digital Hall Sensor Calibration (Fold and Flip Models Only)

Whenever the screen is replaced, the digital hall sensor must be calibrated to guarantee optimized digital hall sensor performance for devices that have it.

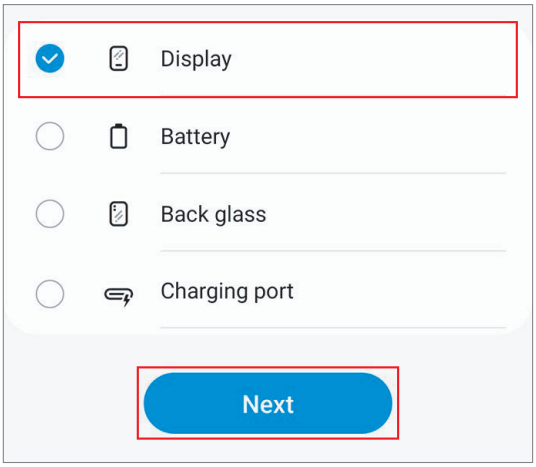
Digital hall sensor calibration is available through the **Self Repair Assistant** app.

- This feature may not be available depending on the model. The availability of this feature can be automatically checked in the Self Repair Assistant app, so please follow the guidance of the Self Repair Assistant app.
- **For Fold models**: If the main screen does not turn on after being replaced (the main screen is off and the cover screen is on when the device is unfolded), follow the steps below to perform digital hall sensor calibration. The boot screen (the screen where the Samsung and carrier logos appear) will appear normally and then turn off, so it is not a hardware failure.
  1) Fold the device and launch the **Self Repair Assistant** app on the cover screen.
  2) Move to the digital hall sensor calibration screen, unfold the device, and then press the Volume Up button or the Volume Down button.
  3) You will hear a vibration, and the calibration will be performed automatically.

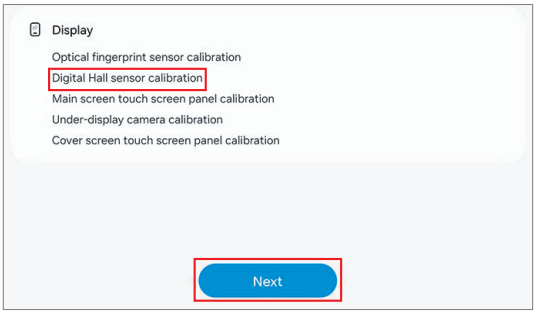
     When calibration is complete, the main screen will turn on normally.
- **For Flip models**: If the main screen does not turn on after being replaced (the main screen is off and the cover screen is on when the device is unfolded), follow the steps below to force the main screen to turn on and perform digital hall sensor calibration. The boot screen (the screen where the Samsung and carrier logos appear) will appear normally and then turn off, so it is not a hardware failure.
  1) Connect the USB cable to the device, and connect the other end of the USB cable to the USB power adapter or your computer.
  2) While pressing and holding the Side button, press the Volume Up button once and the Volume Down button twice.
  3) When the main screen turns on, perform digital hall sensor calibration.

1 Launch the **Self Repair Assistant** app.

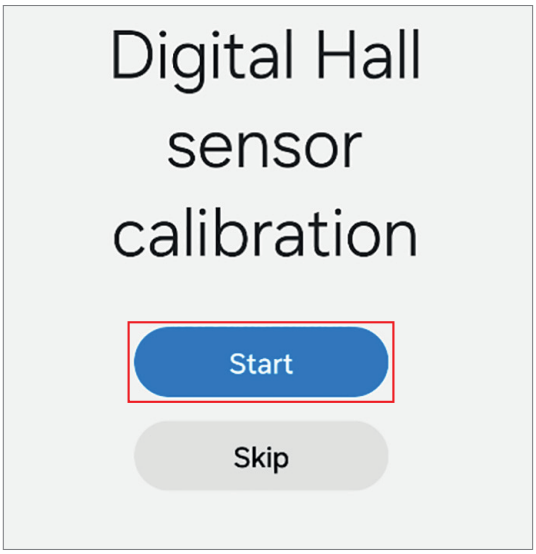
2 Select the part that you have replaced and tap **Next**.



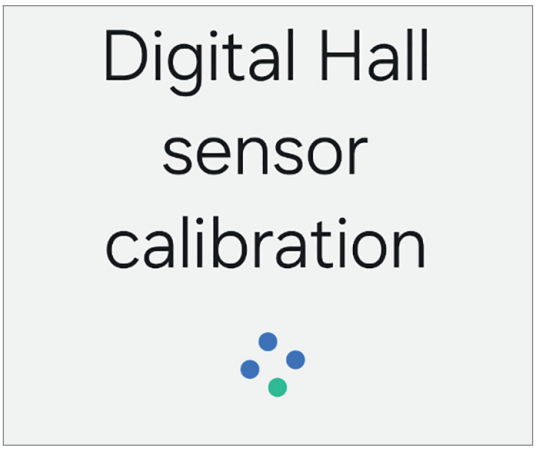
3 Check part and calibration and tap **Next**.



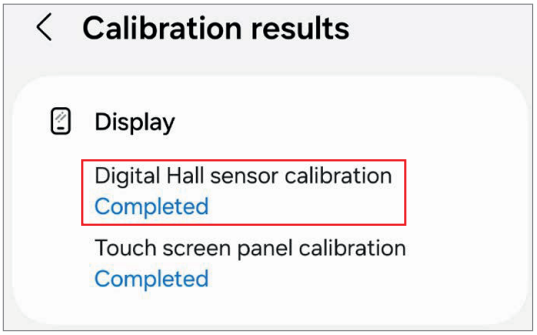
4 Tap **Start**.



5 The calibration will perform automatically.



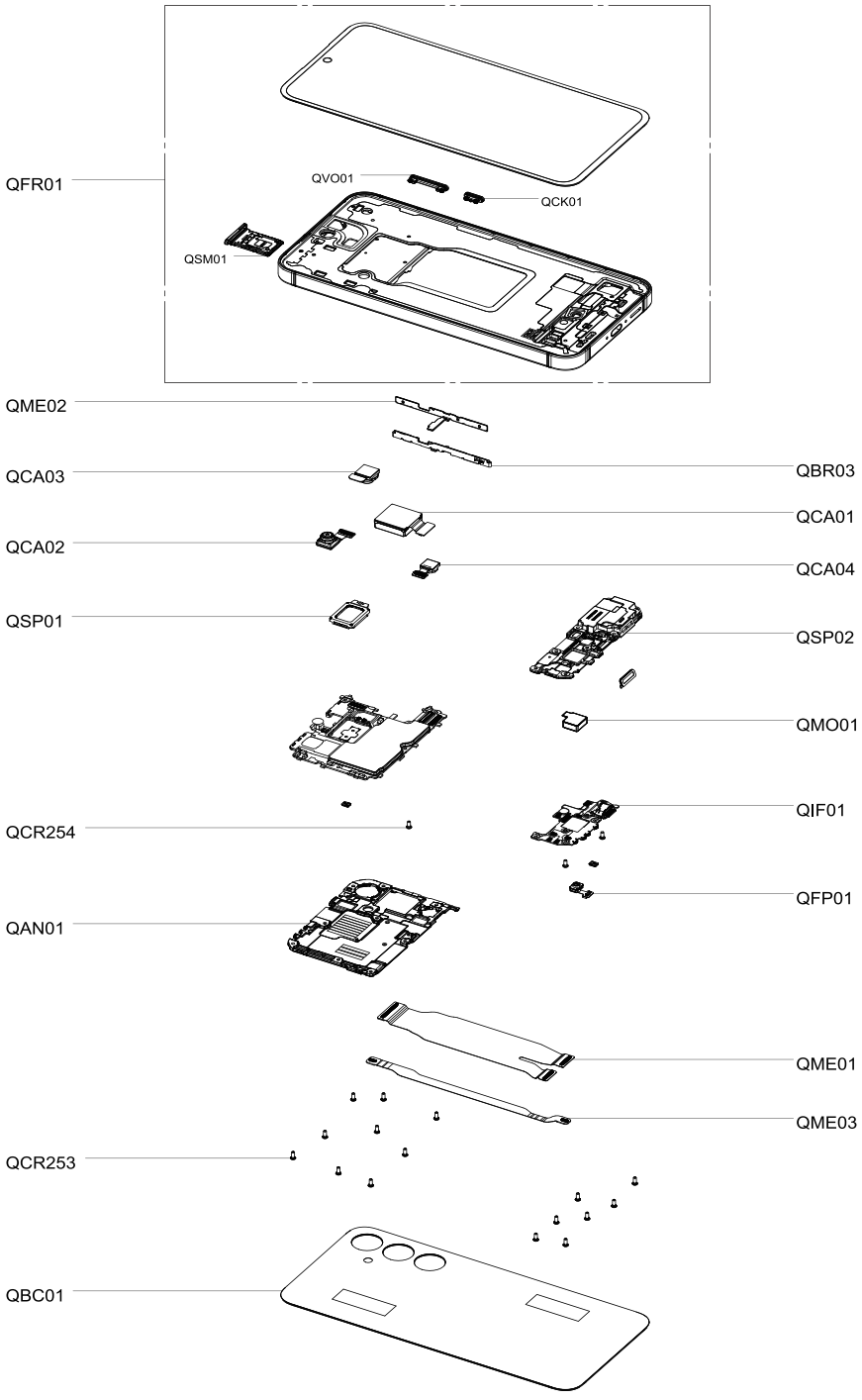
6 Check the calibration result.



Exploded View and Parts List

The product's composition may vary depending on the country, region, or carrier.

Exploded View



Parts List

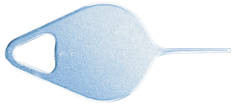
Number	Name
QCR254	Screw 3326
QCR253	Screw 3427
QCA03	Rear Camera (Ultra Wide)
QCA02	Front Camera
QCA01	Rear Camera (Wide)
QCA04	Rear Camera (Macro)
QAN01	Rear (Top)
QSP01	Speaker (Top)
QMO01	Vibrator motor
QME03	Main Flex Cable 1 (Sub PBA to PBA)
QFP01	Fingerprint Recognition Sensor
QIF01	Charging Port
QSP02	Rear (Bottom)
QME02	Button Flex Cable
QBR03	Button Holder
QVO01	Volume Button
QCK01	Side Button
QSM01	SIM Card Tray
QME01	Main Flex Cable 2 (Sub PBA to PBA)
QBC01	Back Cover
QFR01	Screen module

Disassembly and Assembly

Tools for Disassembly and Assembly

When repairing devices, you absolutely must wear protective equipment for your safety.

Tool & Part Code	Image	Description
Safety Goggles		Prevents accidents during repair (protective equipment)
Safety Gloves (ESD safe, cut-resistant)		Prevents accidents during repair (protective equipment)
Safety Mask		Prevents accidents during repair (protective equipment)
Anti-static Wrist Strap		Prevents electrostatic damage (recommended)

Tool & Part Code	Image	Description
ESD Safe Mat		Prevents electrostatic damage (recommended)
Ejection Pin		Pin for ejecting the SIM card tray
Cross-head Screwdriver		Tool for screwing in cross-head screws
Opening Pick		Tool for disassembling the back cover and other parts
Opening Tool		Tool for disassembling the connector and other parts
Suction Cup		Tool for disassembling the back cover and other parts ⚠ For separable handle suction cups, be careful not to injure yourself as the handle can be parted during use.

Tool & Part Code	Image	Description
ESD Safe Tweezers and Round Tip Metal Tweezers		Tool for handling connectors, cables, and other parts • Because it is possible to damage parts or components when using sharp tweezers, use tweezers made with plastic or rubber material. • When removing a vibrator motor, it is required to use the round tip metal tweezers.
Heating Bag		Tool for disassembling the back cover and other parts
Acrylic Protective Cover for Broken Glass		Prevents injuries and scattering caused by broken glass

Fasteners (Adhesives and Materials) for Assembly

The fasteners composition may vary depending on the repair parts, country, region, or carrier.

Item	Quantity	Image	Description
Back Cover Adhesive Tape GH02-25681A	1		Double sided adhesive tape for attaching the back cover to metal frame and rear case of the device
Screw 3427 6001-003427	16		Screws for the rear (16 ea)
Screw 3326 6001-003326	3		Screw for the main board (1 ea) Screw for the charging port (2 ea)
Vibrator Motor Adhesive Tape GH81-23423A	1		Double sided adhesive tape for attaching the vibrator motor to screen module

Disassembly and Reassembly for replacement

The product's composition may vary depending on the country, region, or carrier.

Before disassembling:

- Unplug and turn off device before disassembling.
- Remove the SIM card tray from the device.
- Wear an anti-static wrist strap and connect it to the grounded ESD safe mat.

Before reassembling:

- Remove the adhesive tape residues perfectly.
- Prepare all existing screws of this device and adhesive tapes.
- Wear an anti-static wrist strap and connect it to the grounded ESD safe mat.
- Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

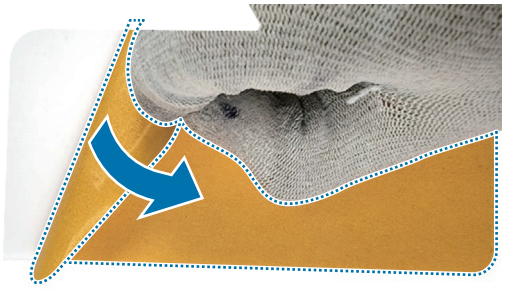
For all cases of broken glass:

1. Wear safety goggles and cut-resistant gloves.
2. Remove the release film of the acrylic protective cover.
3. To prevent injuries and scattering caused by broken glass, attach an acrylic protective cover.

If your device's glass breaks, be careful not to injure your hands or other body parts on debris.

4 Press the acrylic protective cover with strong force so that it is strongly attached to the glass.

Wait more than 5 minutes until the bond between the acrylic protective cover and the glass is strengthened.



5 Follow the disassembly steps in this guide.

Screen glass cannot be separated alone from the AMOLED screen or metal frame. If the glass is broken, it needs to replace the whole screen module.

SIM Card Tray

Disassembly

Prepare the device to repair by yourself. 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.

Reassembly

Leaving screws inside the device may damage internal components, such as the battery. During assembly, be extra careful not to leave any unassembled screws inside the device.

Insert the SIM card tray back into the slot. Ensure that there are no abnormalities.

Back Cover

Disassembly

When removing the back cover, ensure that the device is fixed on a flat surface.

1 Heat the microwaveable heating bag and apply it on the back cover for 3 minutes to soften the adhesive.

- 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.
- If your device's glass breaks, the debris can cause injury to your hands or other body parts. For your safety, attach an acrylic protective cover before disassembling the device.

- Follow the heating bag's instructions for heating. The recommended time for heating the bag is 50 seconds in a 1000 W microwave and 70 seconds in a 700 W 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.)

2 Place the suction cup in the center of the left edge of the back cover, and lift it upwards.

For separable handle suction cups, be careful not to injure yourself as the handle can be parted during use.

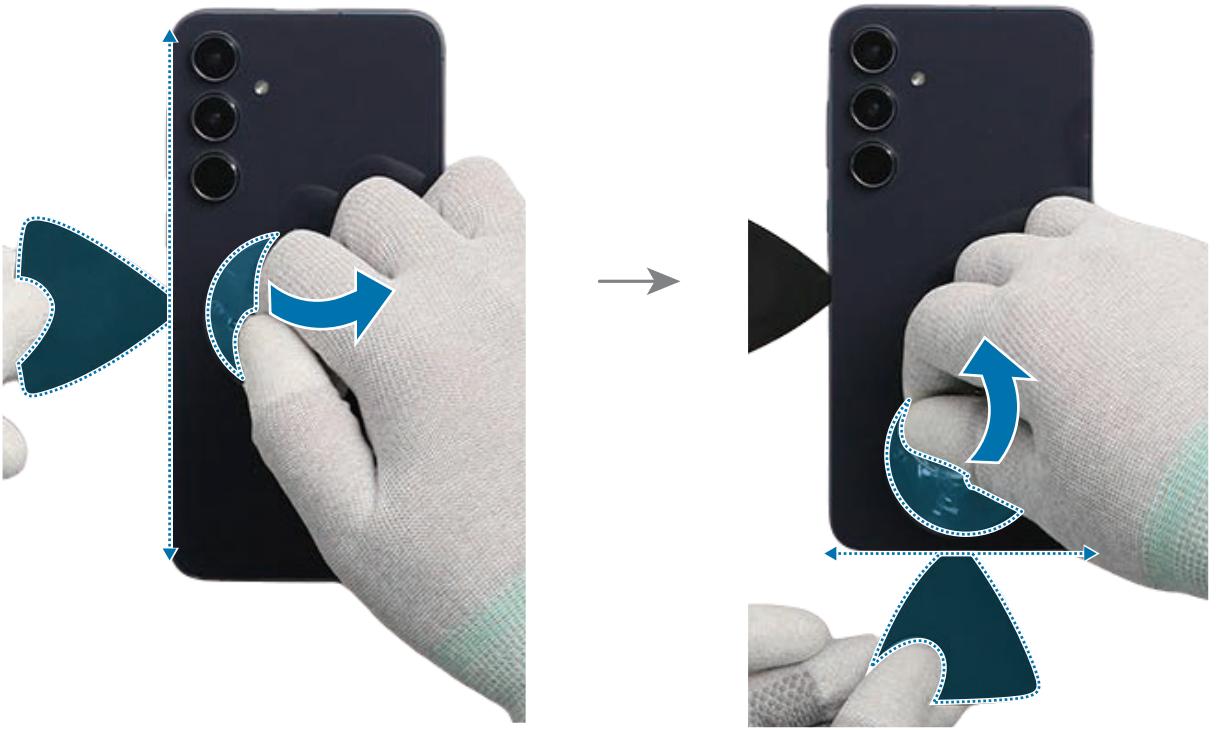
- As the back cover can be damaged by excessive force, be careful not to damage the back cover.
- Be careful that the suction cup does not adhere to the area where the tape or sticker is attached.

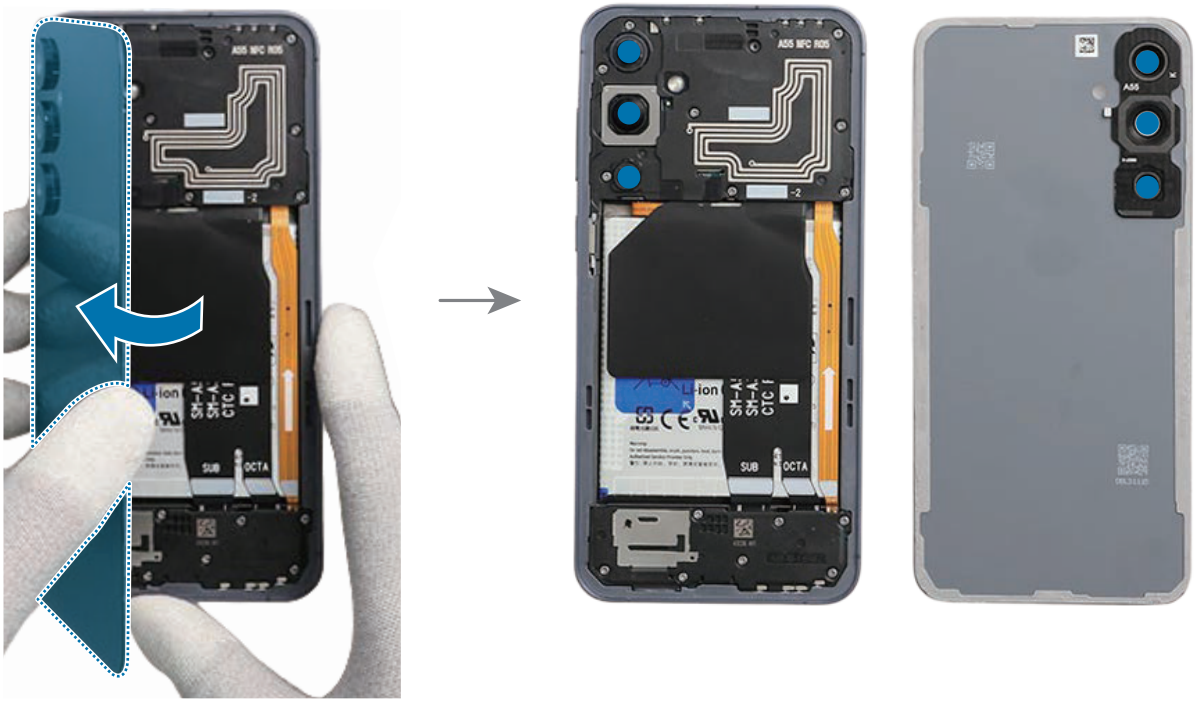
If you have trouble creating a gap, heat the microwaveable heating bag additionally, and apply it on the back cover to further soften the adhesive. When reheating, it should be heated no longer than 30 seconds.

3 While pulling up the suction cup with strong, steady force to create the gap between the back cover and the screen module, place the opening pick in the gap between the back cover and the screen module and slide the opening pick back and forth along the edge to slice through the adhesive. Repeat this on the all sides and slice through the adhesive. Lift up the back cover slowly and remove it gently from the device.

- As the back cover can be damaged by excessive force, be careful not to damage the back cover.
- As the internal circuitry can be damaged, do not insert the opening pick more than 3 mm.
- Be careful not to put your fingertips or any foreign objects on the rear cameras or back cover lens (●).

- Make sure to leave the opening pick inserted in the edges to prevent the adhesive from resealing.
- If you have trouble creating a gap, heat the microwaveable heating bag additionally, and apply it on the back cover to further soften the adhesive. When reheating, it should be heated no longer than 30 seconds.





Reassembly

Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

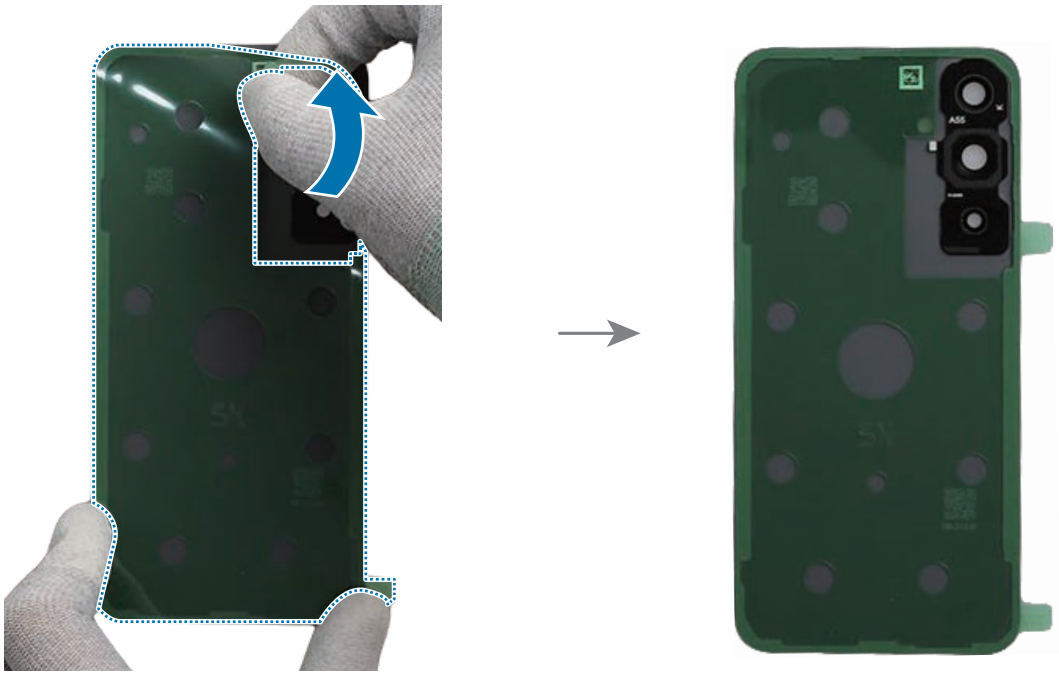
Before attaching the back cover, make absolutely sure that there are no screws, miscellaneous parts, or other foreign objects on the inside of the device (among the battery, PBA, etc.).

1 Remove all adhesive tapes on the separated back cover (●) if you use the existing back cover as it is.

- Be careful not to put your fingertips or any foreign objects on the rear camera or back cover lens (●).
- Make sure to remove any residual tapes (●) attached to the inside of the back cover before reassembling the device.
- Be careful not to damage the near components.

Apply additional heat with a microwaveable heating bag if you are having trouble separating the adhesive.

2 Remove the release film of the new back cover adhesive tape. Align the adhesive tape on the back cover and attach it.



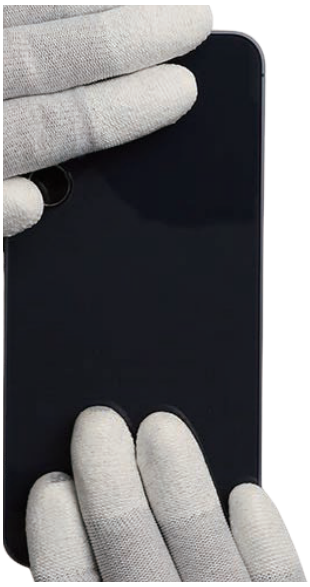
3 Using the tweezers or your fingers, gently press around the edges to ensure a secure fit.

4 Using the tweezers or your fingers, remove all the remaining release films on the back cover.

5 Attach the back cover and press down on the edges of the back cover. Check the gap between the back cover and metal frame.

If you feel the some gap, remove the back cover and attach it again. Some foreign materials can be inside the device.

6 Press down the edges of the back cover evenly in order to attach the back cover perfectly. Ensure that there are no abnormalities.



Reassemble the SIM Card Tray to complete assembly.

Rear Top and Bottom

Disassembly

- Remove the Back Cover first before you begin.
- If only the rear top needs to be removed, disassemble only the rear top.

1 Check and remove the screws at the 16 different points at the top and bottom of the rear using a cross-head screwdriver.

Be careful not to damage the battery.

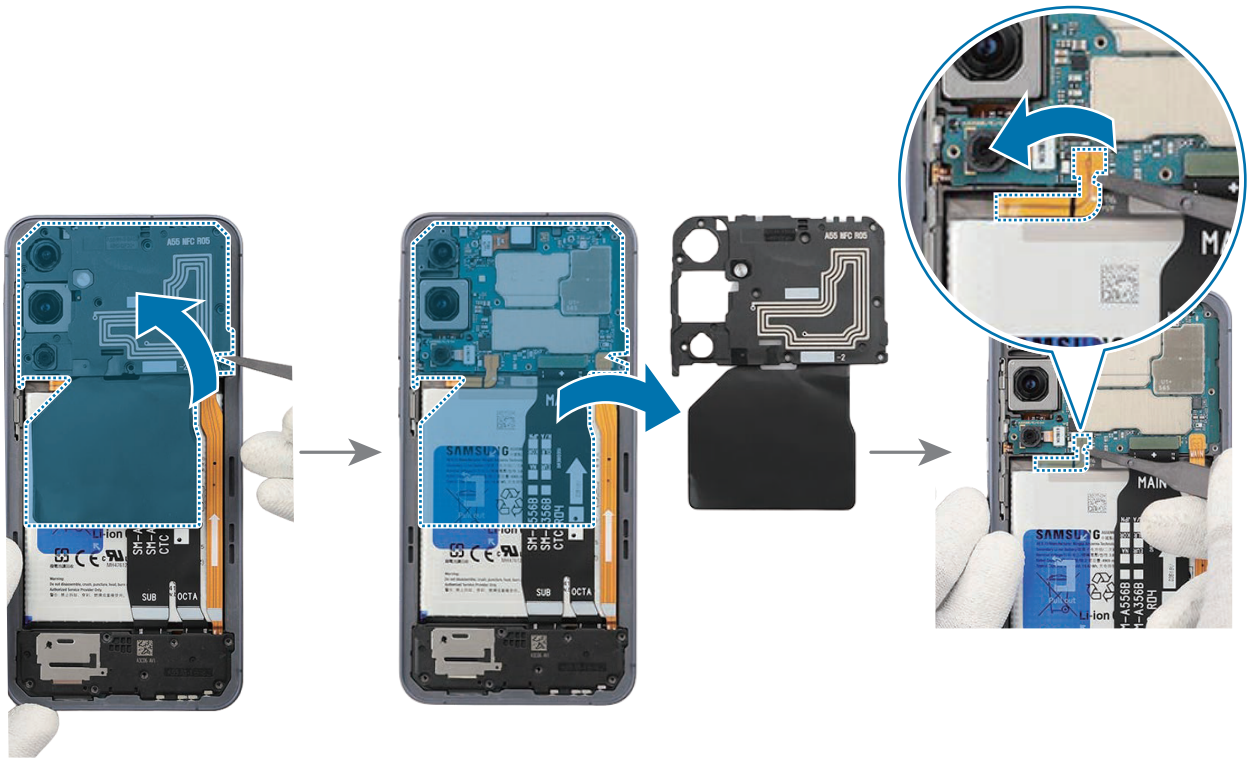
Be careful not to damage the near components.

- Check the number of screws that have been removed, and store them carefully to make sure that no unassembled screws are left inside the device during assembly.
- To only remove the rear top, loosen only the top 9 screws.

2 Using the tweezers, lift up on the separator groove of the rear top and remove it carefully. Using the tweezers, disconnect the battery connector first from the main board.

- Make sure to first disconnect the battery connector for your own safety.
- Be careful not to damage the battery.

Be careful not to damage the main board and near components.

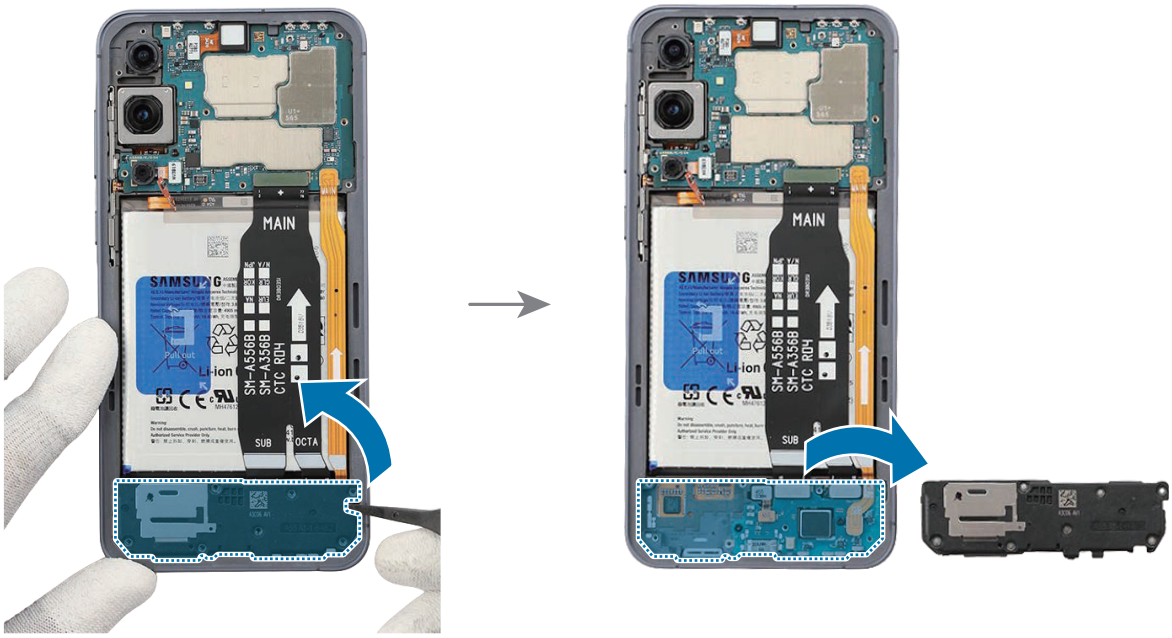


3 Using the tweezers, lift up on the separator groove of the rear bottom and remove it carefully.

Be careful not to damage the battery.

Be careful not to damage the charging port and near components.

The bottom speaker is built into the rear bottom.



Reassembly

Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

If only the rear top was disassembled, reassemble the rear top only.

1 Using the tweezers, assemble the rear bottom above the charging port and press down on it in its position with your fingers.

Be careful not to damage the battery.

Be careful not to damage the charging port and near components.

2 Connect the battery connector to the main board.

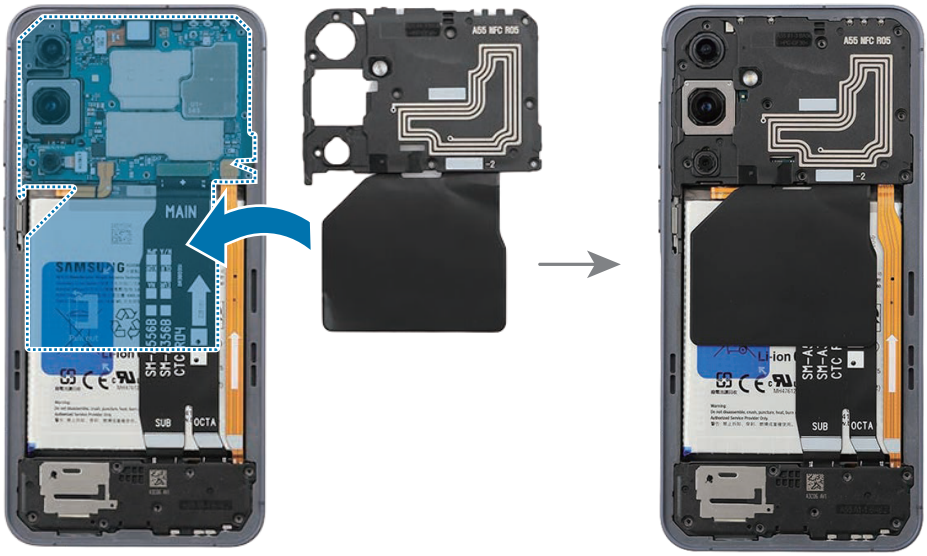
Be careful not to damage the battery.

Be careful not to damage the battery connector and near components.

3 Using the tweezers, assemble the rear top above the main board and press down on it in its position with your fingers.

Be careful not to damage the battery.

Be careful not to damage the main board and near components.



4 Check the screw 3427 (16 ea) at the 16 different points on the top and bottom of rear, and fasten them using a cross-head screwdriver.

Be careful not to damage the battery.

Be careful not to damage the near components.

If only the rear top was removed, fasten only the top 9 screws.

5 Check carefully with your fingers to see if there are any screws or other foreign substances inside the device (battery, PBA, cable, etc.). Shake the device lightly with the back of the device facing down to remove any remaining screws.

Reassemble the Back Cover and SIM Card Tray to complete assembly.

Charging Port and Microphone

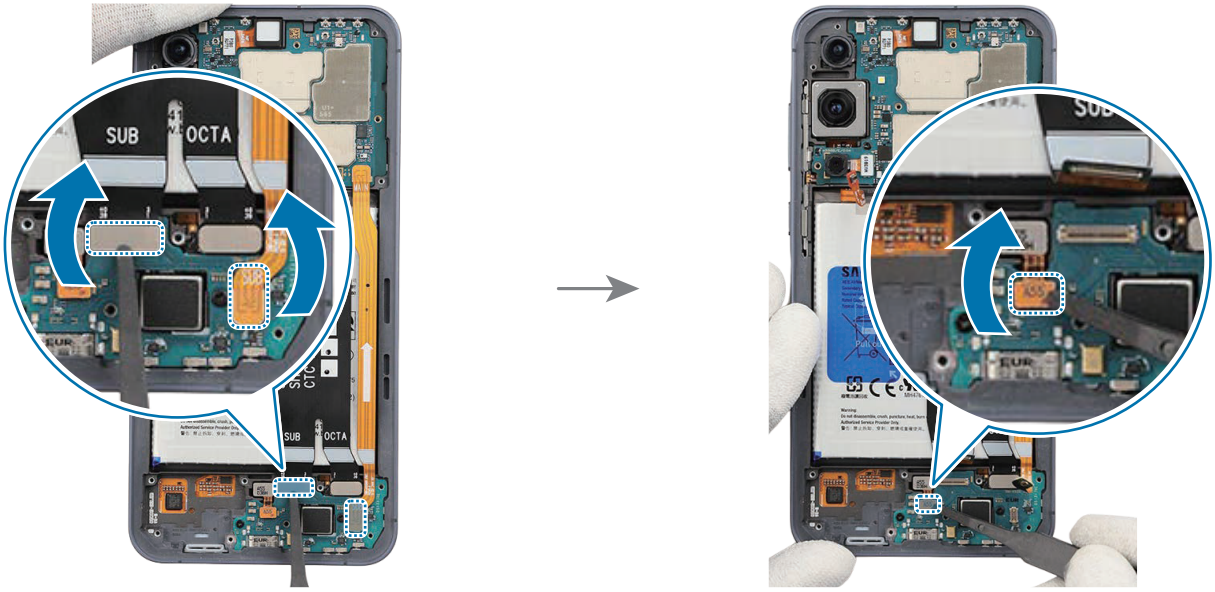
The microphone is built into the charging port module.

Disassembly

Remove the Back Cover and Rear Top and Bottom first before you begin.

1 Using the tweezers, disconnect the 2 flex cable connectors and the fingerprint recognition sensor connector from the charging port.

- Be careful not to damage the cable.
- Be careful not to damage the charging port and near components.

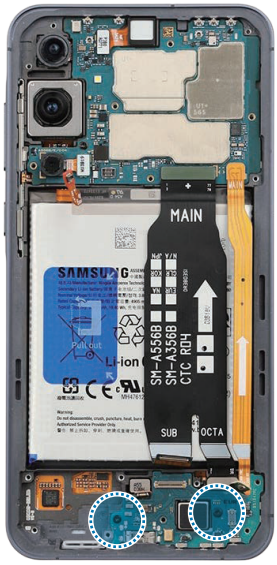


2 Check the screws at the 2 different points on the charging port and remove them using a cross-head screwdriver.

Be careful not to damage the battery.

Be careful not to damage the near components.

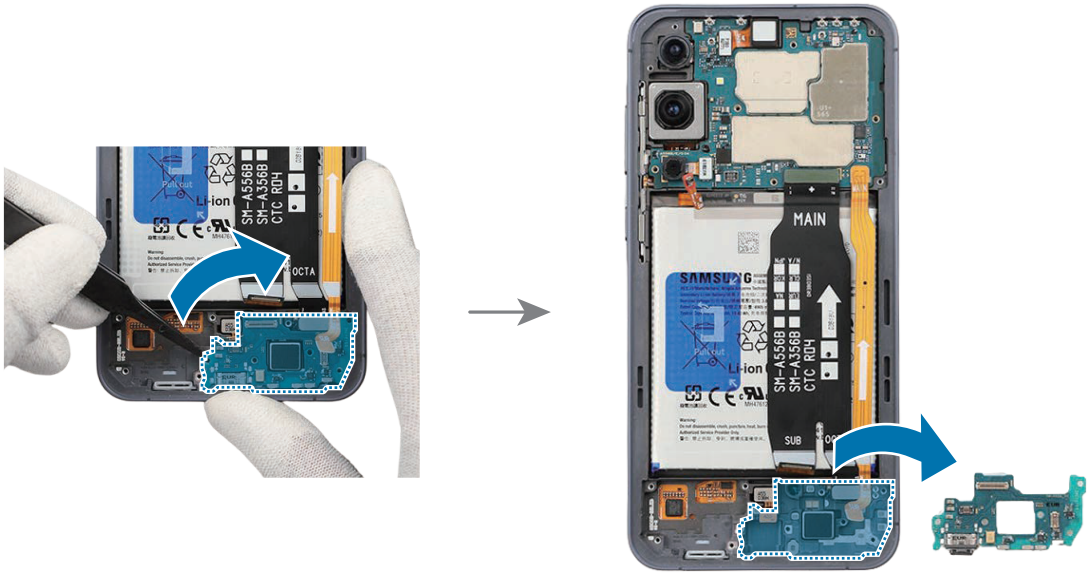
Check the number of screws that have been removed, and store them carefully to make sure that no unassembled screws are left inside the device during assembly.



3 Using the tweezers, lift up on the separator groove of the charging port module, and remove it carefully.

Be careful not to damage the battery.

Be careful not to damage the charging port and near components.

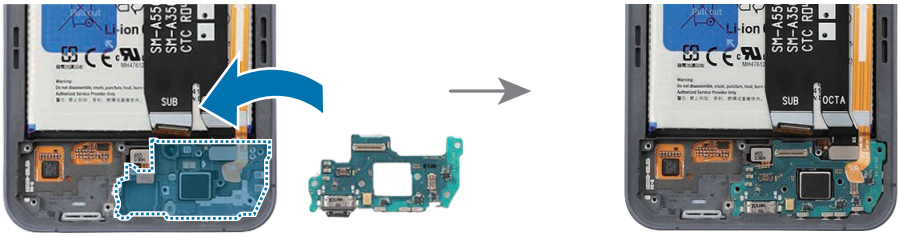


Reassembly

Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

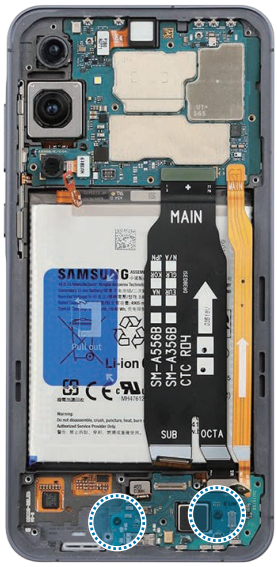
1 Using the tweezers, insert the charging port module to the bottom metal frame of device, and press down on it in its position smoothly.

Be careful not to damage the charging port and near components.



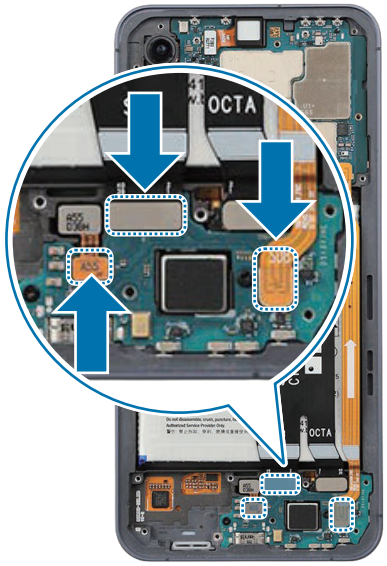
2 Check the screw 3326 (2 ea) at the 2 different points on the charging port and fasten the 2 screws using a cross-head screwdriver.

Be careful not to damage the charging port module side contact.



3 Using your fingers, connect the 2 flex cable connectors and the fingerprint recognition sensor connector to the charging port.

- Be careful not to damage the cable.
- Be careful not to damage the charging port and near components.



Reassemble the Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

Main Board

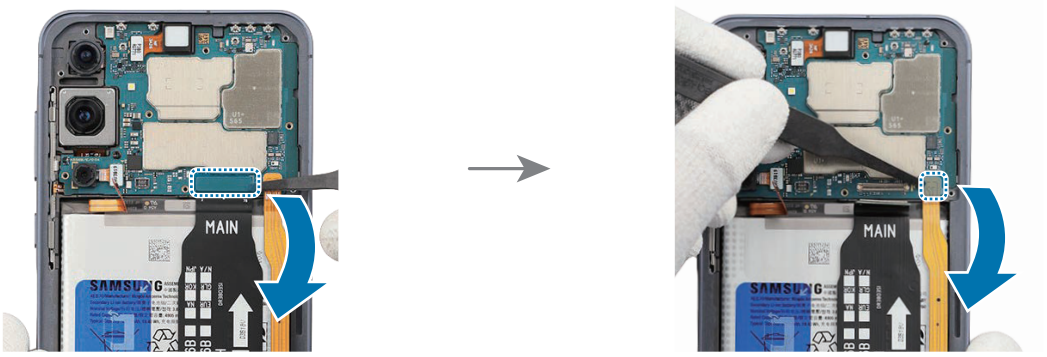
The PBA can only be replaced at an authorized repair shop. If the PBA is faulty, contact Samsung for further instruction.

Disassembly

Remove the Back Cover and Rear Top and Bottom first before you begin.

1 Using the tweezers, disconnect the 2 flex cable connectors from the main board.

- Be careful not to damage the cable.
- Be careful not to damage the main board and near components.

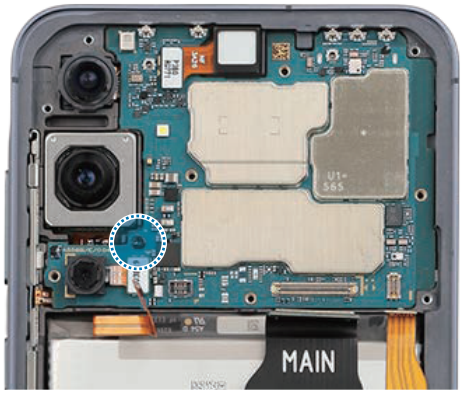


2 Check the screw on the main board and remove it using a cross-head screwdriver.

Be careful not to damage the battery.

Be careful not to damage the near components.

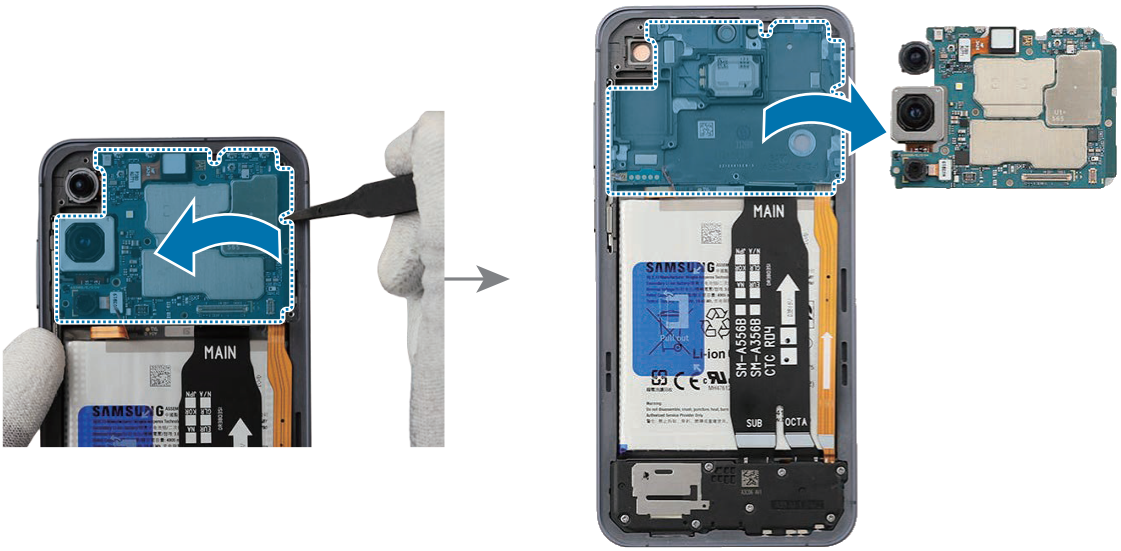
Check the number of screws that have been removed, and store them carefully to make sure that no unassembled screws are left inside the device during assembly.



3 Using the tweezers, lift up on the separator groove of the main board and remove it carefully.

Be careful not to damage the battery.

Be careful not to damage the main board and near components.



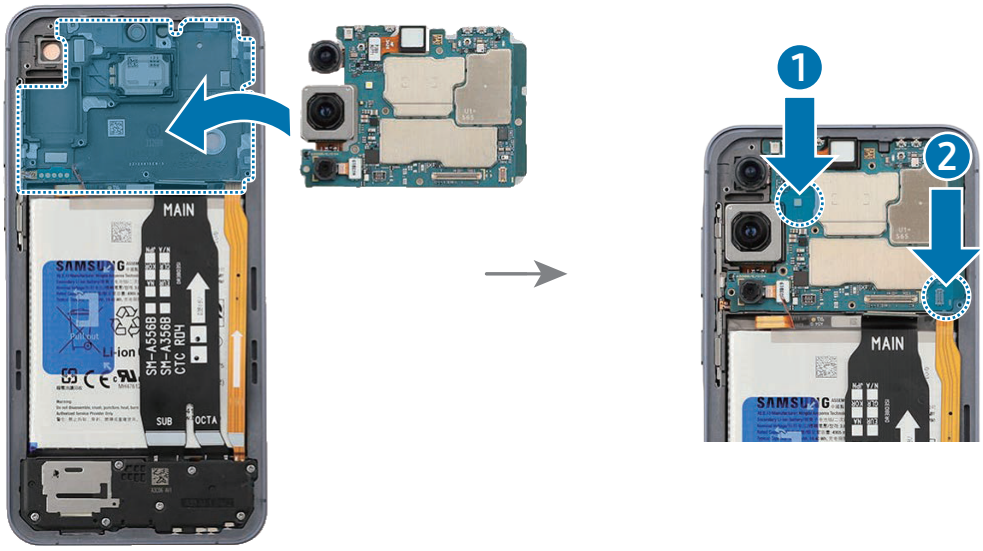
Reassembly

Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

1 Align the main board module onto the device frame. After attaching the upper part of the main board diagonally on the screen module, assemble the lower part.

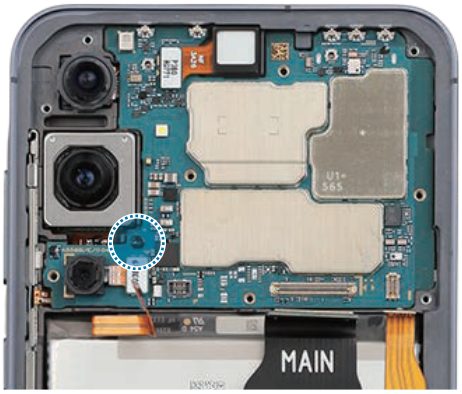
Be careful not to damage the battery.

Be careful not to damage the battery connector.



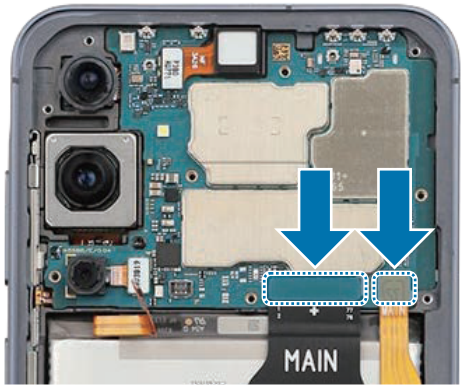
2 Check the screw 3326 (1 ea) on the main board and fasten the screw using a cross-head screwdriver.

Be careful not to damage the camera lens and the main board.



3 Using your fingers, connect the 2 flex cable connectors to the main board.

- Be careful not to damage the cable.
- Be careful not to damage the main board and near components.



Reassemble the Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

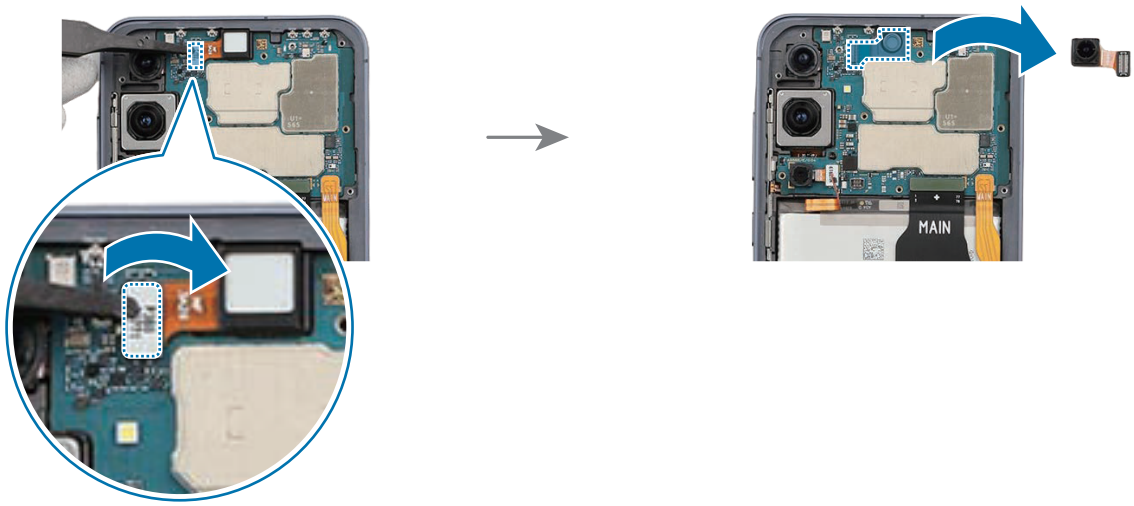
Front Camera

Disassembly

Remove the Back Cover and Rear Top and Bottom first before you begin.

Using the tweezers, separate the front camera connector from the main board and remove the front camera carefully from the device. Leave the camera lens facing up.

- Be careful not to touch the camera lens while removing the camera.
- Be careful not to damage the camera and near components.

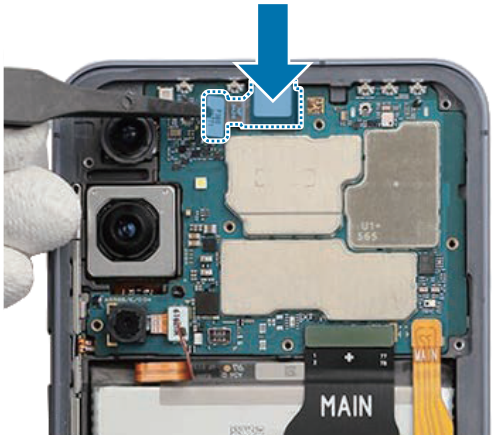


Reassembly

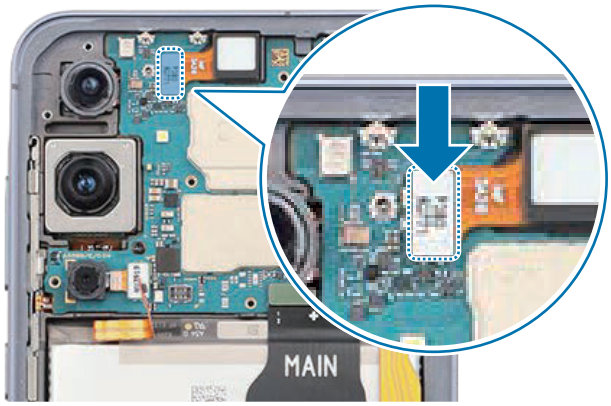
Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

1 Using the tweezers or your fingers, place the front camera in the camera hole so that the lens faces forward, and gently insert the front camera.

- Be careful not to damage the camera lens and near components.
- Be careful not to damage the main board.
- Be careful not to damage and scratch the camera module.



2 Connect the camera connector carefully on the main board.



Reassemble the Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

Rear Camera

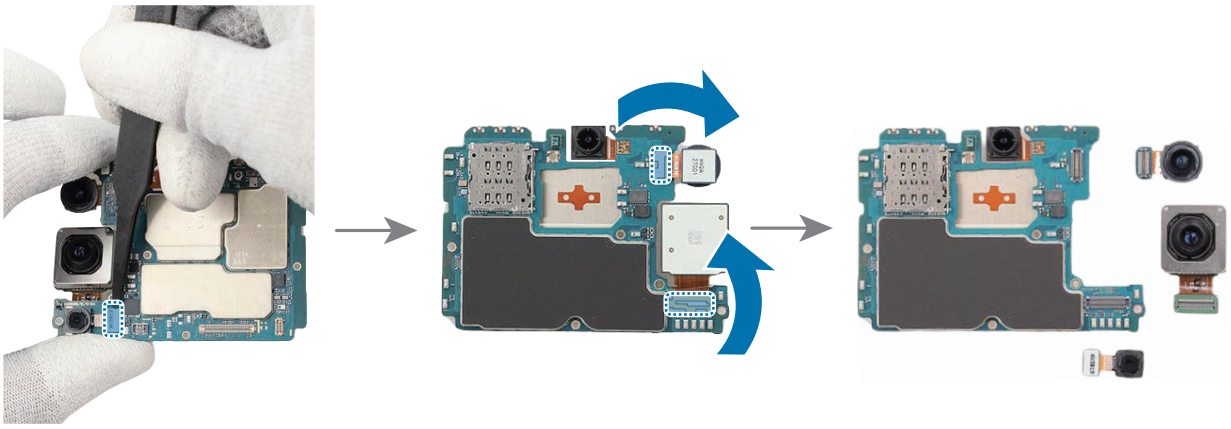
Disassembly

Remove the Back Cover, Rear Top and Bottom, and Main Board first before you begin.

Disconnect the rear camera connector from the main board using the tweezers, and remove the rear camera carefully from the main board. Leave the camera lens facing up.

- Be careful not to touch the camera lens while removing the camera.
- Be careful not to damage the camera and near components.
- Be careful not to damage the main board.

Separate and replace only the problematic camera.

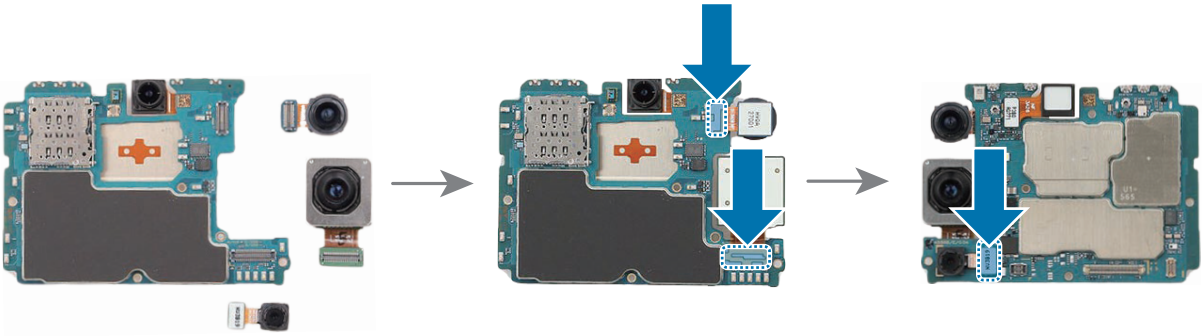


Reassembly

Leaving screws inside the device may damage internal components, such as the battery. When assembling, be extra careful not to leave any unassembled screws inside the device.

Using your fingers, connect the rear camera connector on the main board. Leave the camera lens facing up.

- Be careful not to drop the camera while connecting the connector.
- Be careful not to damage the camera lens and near components.
- Be careful not to damage the main board.



Reassemble the Main Board, Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

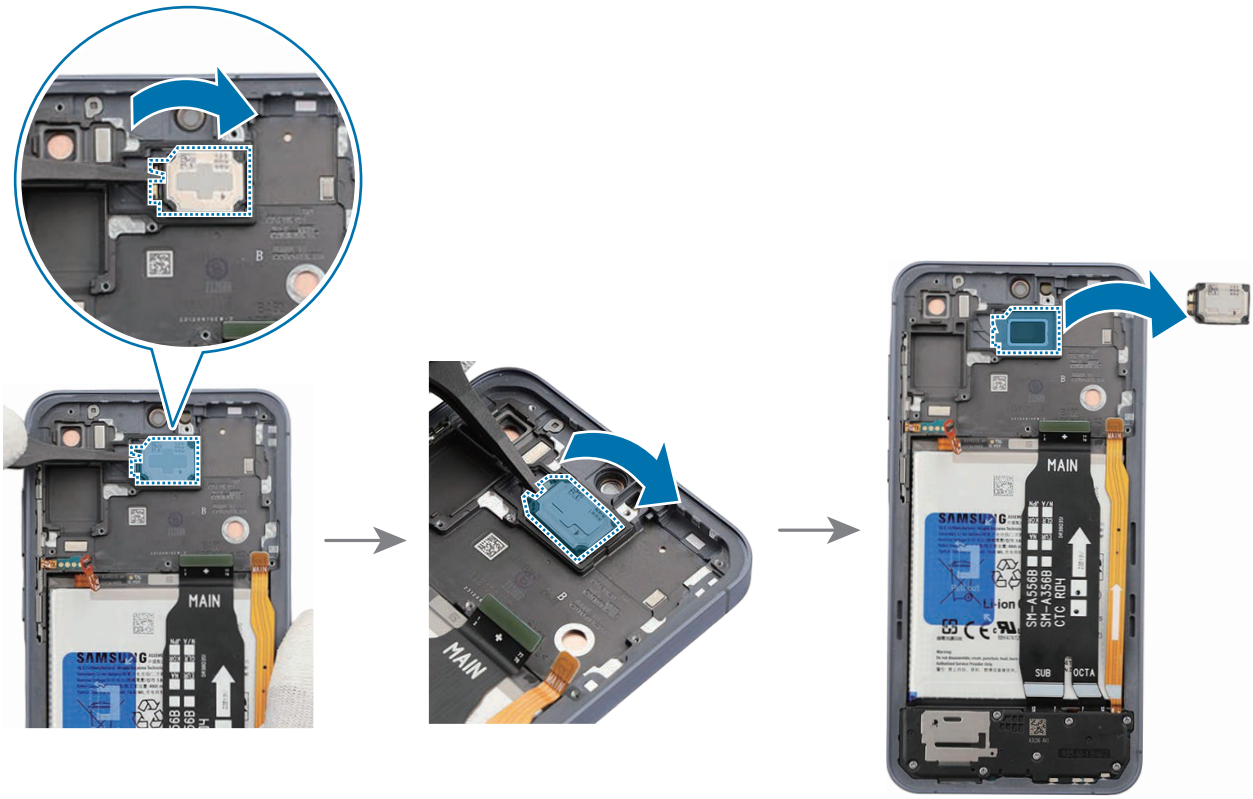
Top Speaker

Disassembly

- Remove the Back Cover, Rear Top and Bottom, and Main Board first before you begin.
- The top speaker is already built into the screen module. Disassemble the speaker only if the speaker itself requires repairs.

Lift up on the separator groove of top speaker using the tweezers and remove it carefully from the screen module.

Be careful not to damage the speaker and near components.



Reassembly

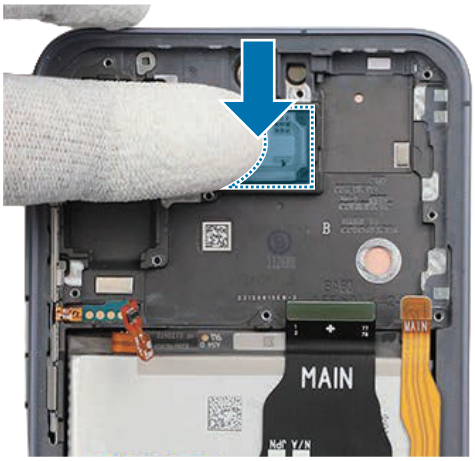
Leaving screws inside the device may damage internal components, such as the battery. During assembly, be extra careful not to leave any unassembled screws inside the device.

1 Remove the clear film from the new top speaker and assemble it to the exact position of the screen module using the tweezers or your fingers.

Be careful not to damage the speaker and near components.

2 Press the top speaker with your fingers softly so that the speaker can be assembled well.

Be careful not to damage the speaker and near components.



Reassemble the Main Board, Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

Button

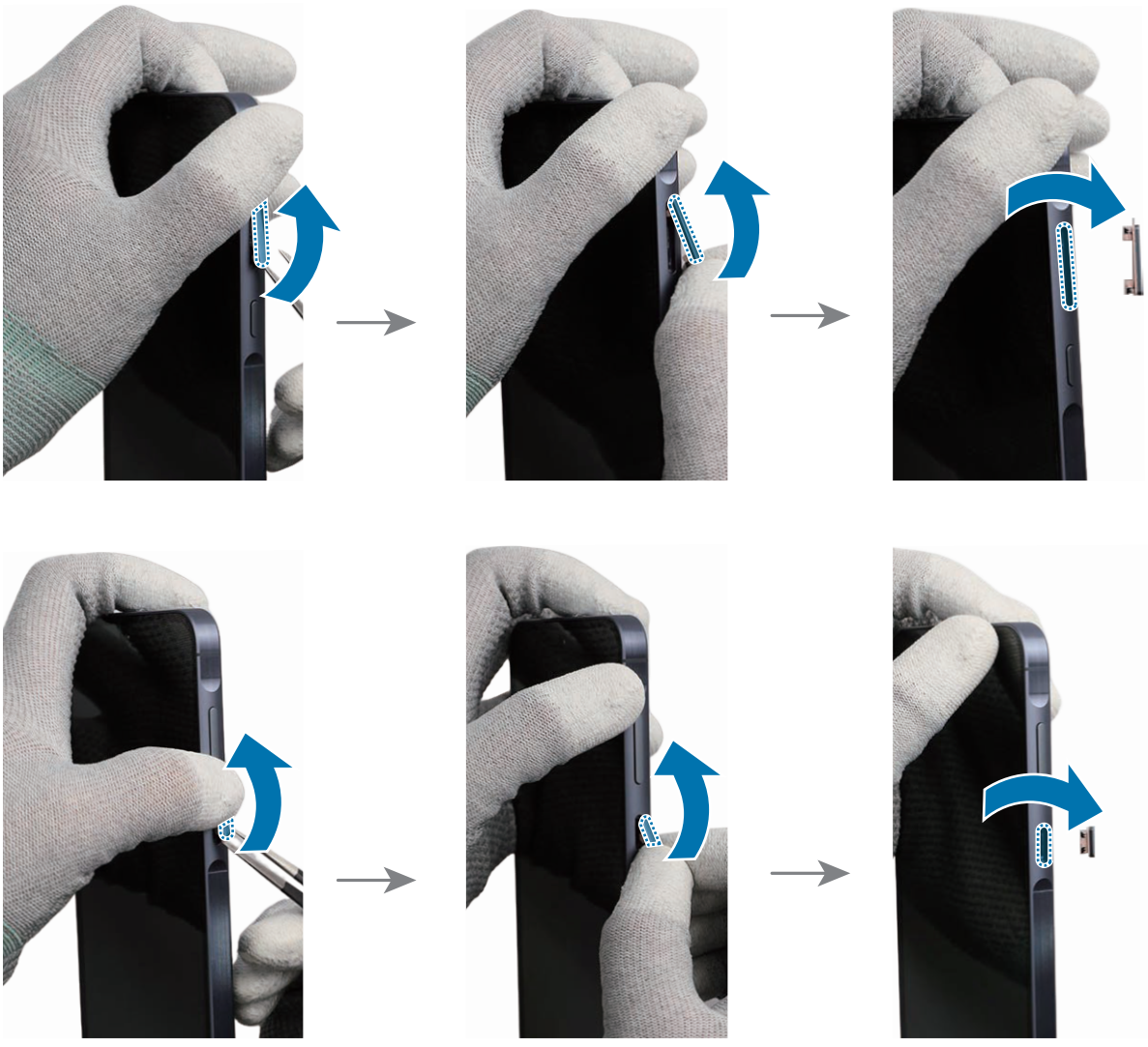
The buttons are already built into the screen module. Disassemble the buttons only if the buttons themselves require repairs.

Disassembly

To remove the Volume button or Side button, lightly press one end of the button with your fingers so that the other end protrudes. Push the tip of the protruding button up carefully with the round-tip metal tweezers and lift it up until you can grab it with your fingers. Grab the button with your fingers and pull it out carefully from the device.

When holding the buttons with the tweezers, be careful not to damage or scratch the device.

If you have trouble separating the buttons with your tweezers, please try using a sharper and thinner tool.



Reassembly

Leaving screws inside the device may damage internal components, such as the battery. During assembly, be extra careful not to leave any unassembled screws inside the device.

1 Remove the release film of new Volume button. Using your fingers, grab the Volume button and insert it on the slot carefully.

Be careful not to damage the button and device.

2 Press down the Volume button softly and evenly so that the button can be completely assembled. Press the button to make sure it clicks. It should have the same sound and feel as before disassembly.

3 Remove the release film of new Side button. Using your fingers, grab the Side button and insert it on the slot carefully.

Be careful not to damage the button and device.

4 Press down the Side button softly and evenly so that the button can be completely assembled. Press the button to make sure it clicks. It should have the same sound and feel as before disassembly.

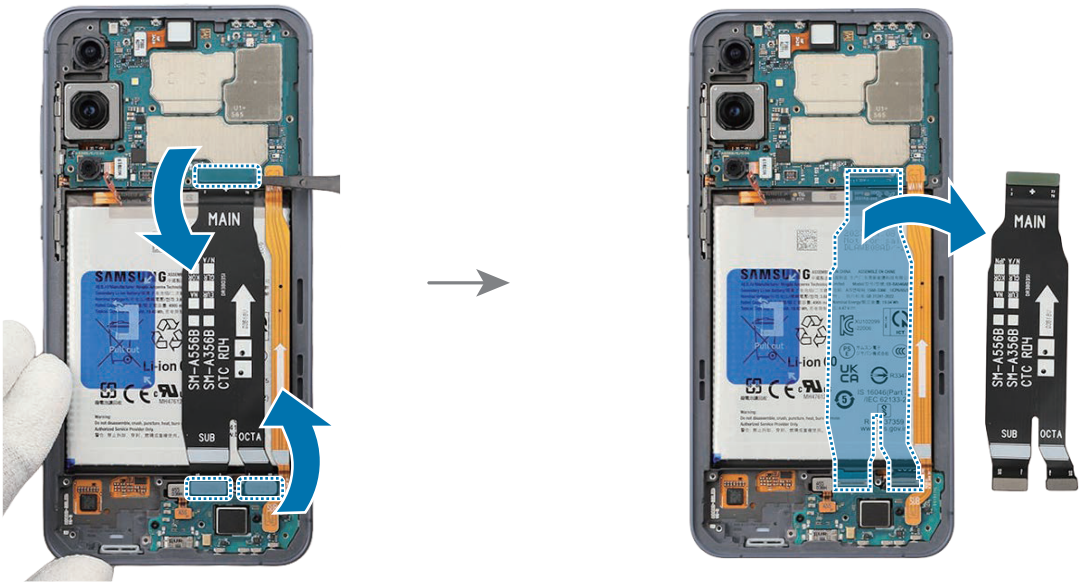
Screen Module

Disassembly

Remove the Back Cover and Rear Top and Bottom first before you begin.

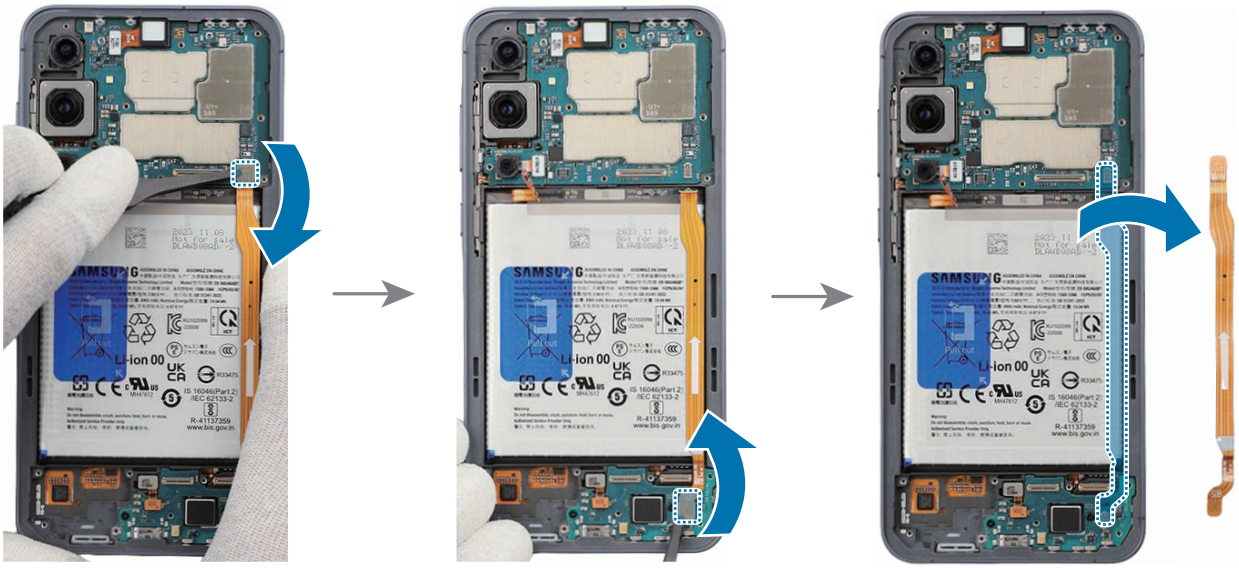
1 Using the tweezers, disconnect the 3 cable connectors and remove the flex cable completely.

- Be careful not to damage the cable.
- Be careful not to damage the near components.



2 Using the tweezers, disconnect the 2 cable connectors and remove the flex cable completely.

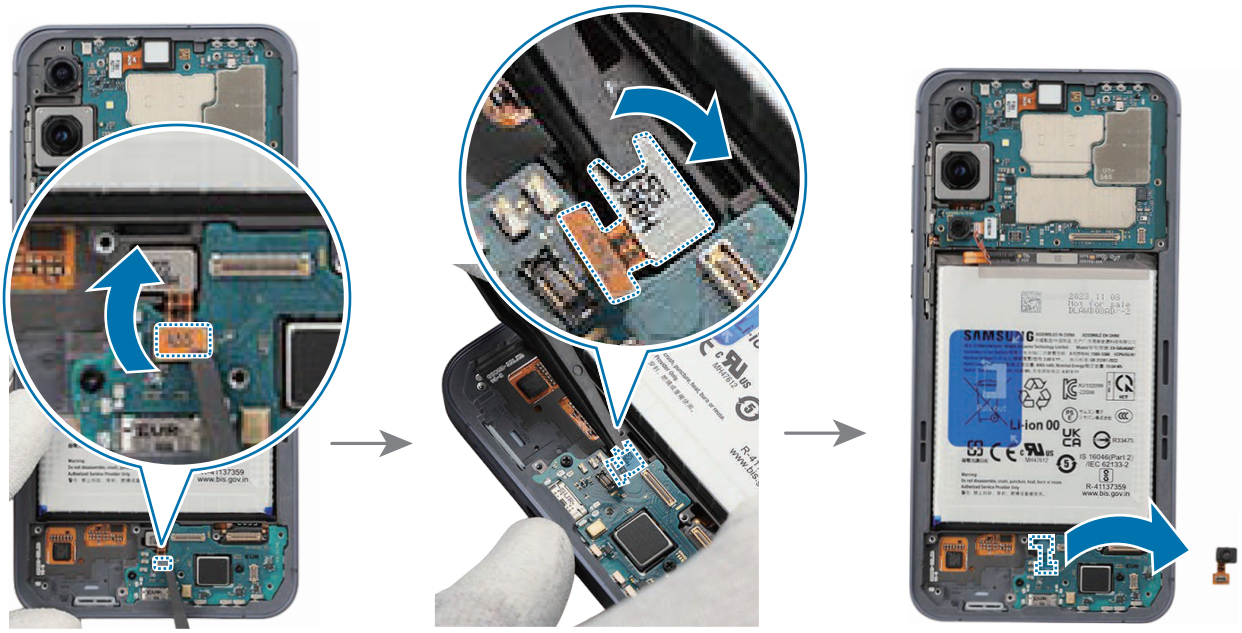
- Be careful not to damage the cable.
- Be careful not to damage the near components.



3 Using the tweezers, separate the connector of the fingerprint recognition sensor carefully from the charging port and remove the fingerprint recognition sensor completely. Leave the sensor facing up.

Be careful not to damage the battery.

- Be careful not to damage the fingerprint recognition sensor.
- Be careful not to damage the charging port and near components.



4 Check and remove the screws at the 3 different points at the main board and charging port using a cross-head screwdriver.

Be careful not to damage the battery.

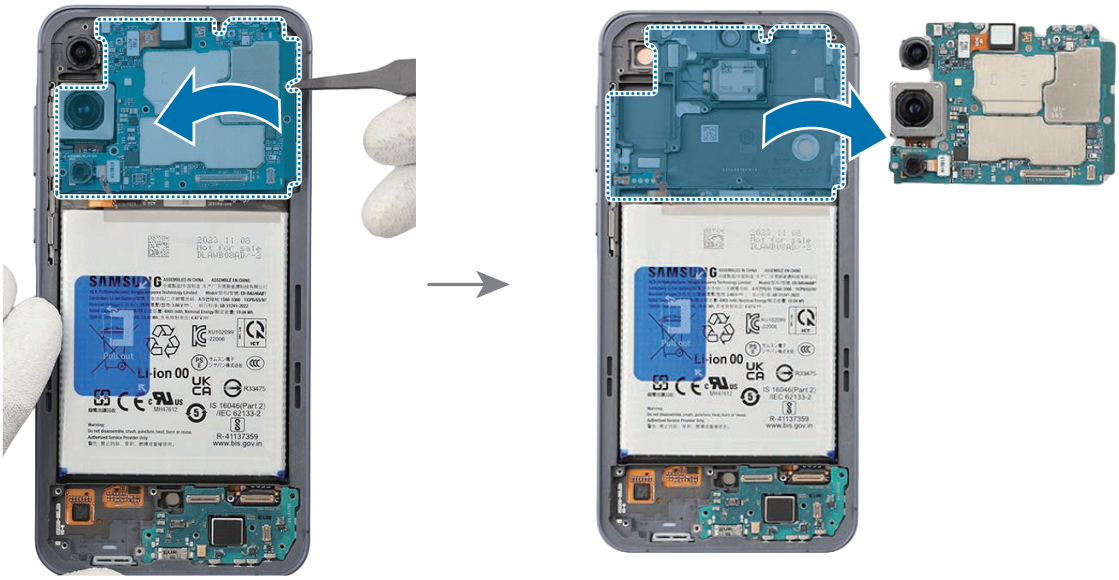
- Be careful not to damage the main board and charging port.
- Be careful not to damage the near components.

Check the number of screws that have been removed, and store them carefully to make sure that no unassembled screws are left inside the device during assembly.

5 Using the tweezers, lift up on the separator groove of the main board and remove it carefully.

Be careful not to damage the battery.

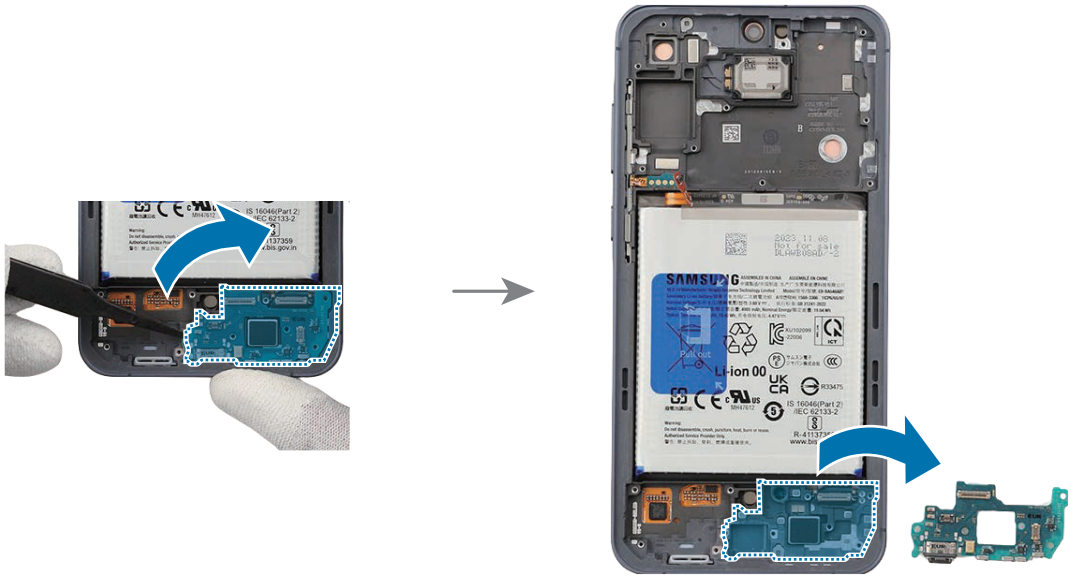
Be careful not to damage the main board and near components.



6 Using the tweezers, lift up on the separator groove of the charging port and remove it carefully.

Be careful not to damage the battery.

Be careful not to damage the charging port and near components.



7 Using the tweezers, lift up on the separator groove of the vibrator motor and remove it carefully from the screen module. The screen module consists of the screen, metal bracket, and battery. As they are bonded to each other, they cannot be separated.

Be careful not to damage the battery.

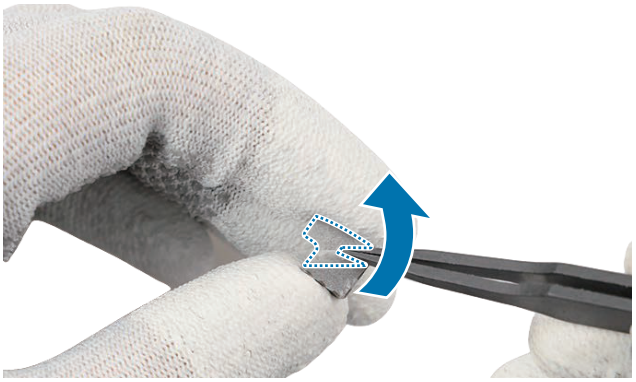
Be careful not to damage the vibrator motor and near components.

Reassembly

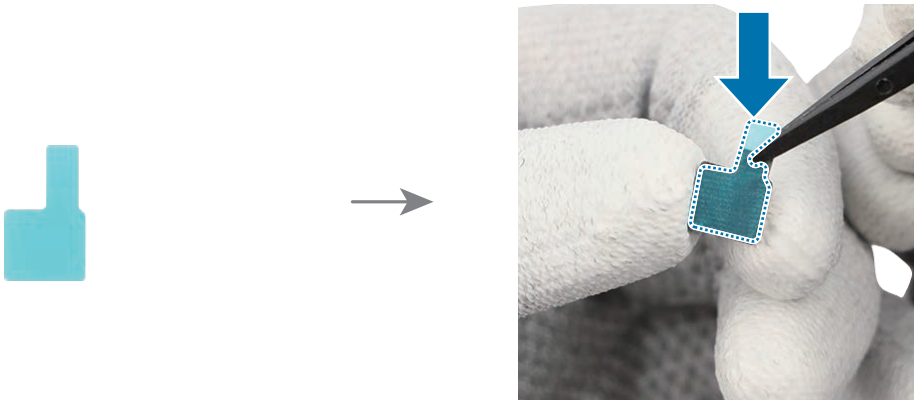
Leaving screws inside the device may damage internal components, such as the battery. During assembly, be extra careful not to leave any unassembled screws inside the device.

1 If you use the existing vibrator motor as it is when reassembling, remove the adhesive tape on the bottom of the vibrator motor.

Be careful not to damage the vibrator motor.

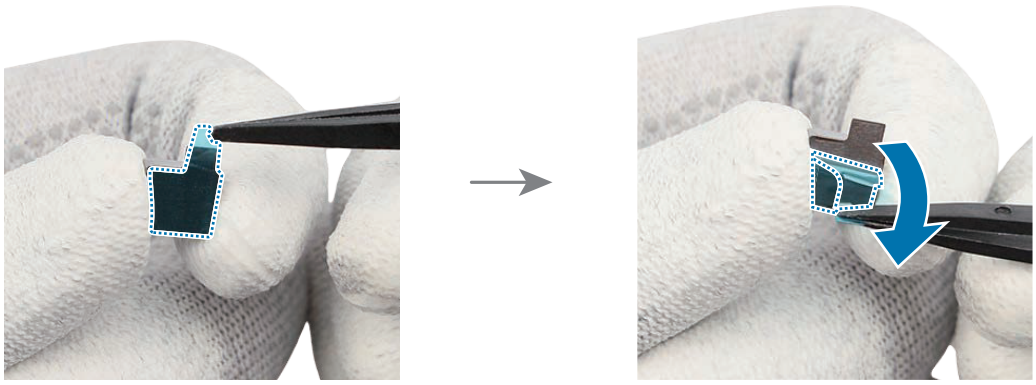


2 Remove the clear film from the new vibrator motor adhesive tape and apply it to the bottom of the vibrator motor.



3 Remove the release film from the adhesive tape.

Be careful not to damage the vibrator motor.



4 Using the tweezers or your fingers, assemble the vibrator motor to the exact position of the screen module and press it with your fingers softly.

Be careful not to damage the vibrator motor and near components.

5 Using the tweezers, insert the charging port module to the bottom metal frame of device and press down on it in its position smoothly.

Be careful not to damage the charging port and near components.

6 Align the main board module onto the device frame. After attaching the upper part of the main board diagonally on the screen module, assemble the lower part.

Be careful not to damage the battery.

Be careful not to damage the battery connector.

7 Check and fasten the screws 3326 (3 ea) at the 3 different points at the main board and charging port using a cross-head screwdriver.

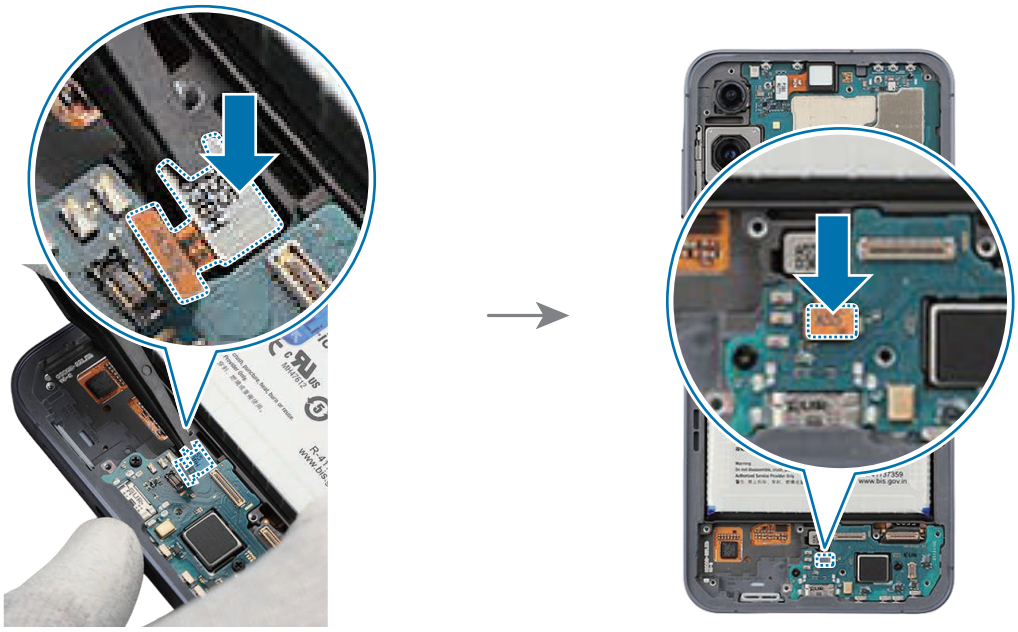
Be careful not to damage the battery.

- Be careful not to damage the main board and charging port.
- Be careful not to damage the near components.

8 Using the tweezers or your fingers, assemble the fingerprint recognition sensor to the exact position and connect its connector carefully to the charging port.

Be careful not to damage the battery.

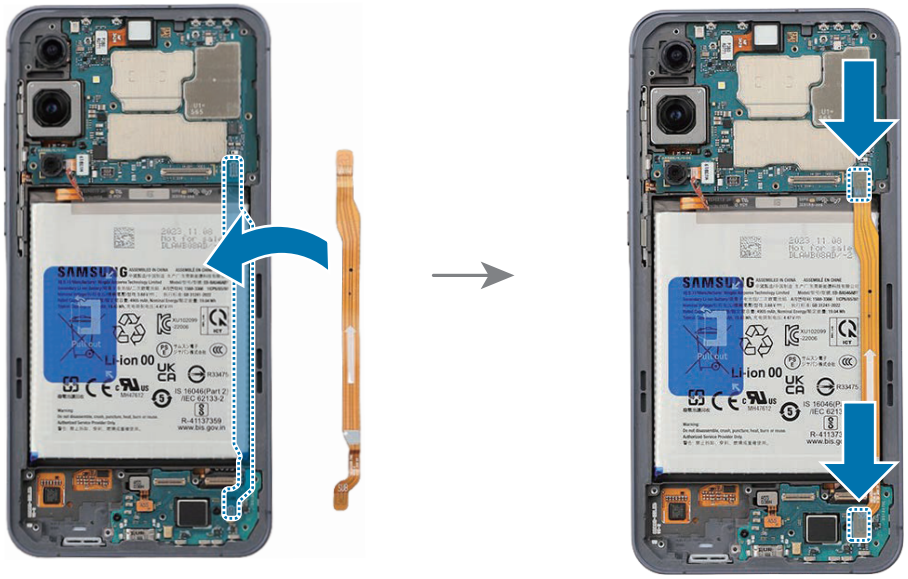
- Be careful not to damage the fingerprint recognition sensor.
- Be careful not to damage the charging port and near components.



9 Place the flex cable to the device frame and connect the 2 connectors carefully.

Be careful not to damage the battery.

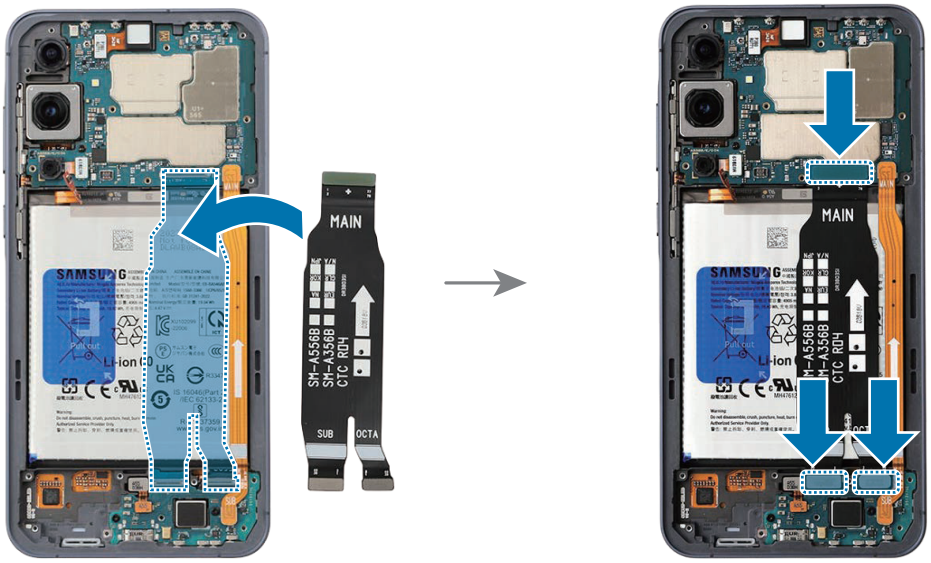
Be careful not to damage the cable.



10 Place the flex cable to the device frame and connect the 3 connectors carefully.

Be careful not to damage the battery.

Be careful not to damage the cable.



Reassemble the Rear Top and Bottom, Back Cover, and SIM Card Tray to complete assembly.

- Check whether the parts or sensors in the device work properly with the Self Repair Assistant app after repairing and assembling your device. Refer to Calibrations for more information.
- Visit a Samsung Service Center when finding some issues from the calibration results. However, you may incur additional charges if the device has a malfunction because of DIY repairs.

SAMSUNG

RCV AMP
SPK AMP
MIC_MAIN
MIC_SUB
SENSOR
AMBIENT
ACC & GYRO
MAGNETIC
HALL(SUB)
BTP
CAM
RCAM1
RCAM2
RCAM3
FCAM
AP
VOLUME KEY
MAIN PMIC
PWR KEY
SUB PMIC
DCXO
IF PMIC
USB CONN(C type)
PWR KEY
Flash LED
DC IC
MOTOR Driver
Motor
DISPLAY
OCTA / 6.6"
SIM/SD
3 in 2
NFC
T-FLASH
NVM
MAIN 1
SUB 4, WIFI 1ST 2.4G+5G
Diplexer
MAIN 2
LB L-PAMID
OMH PAMID
MAIN 3
MAIN 4
MHB LFEM
UHB LFEM
SUB2, GPS
SUB 5
Extractor
UHB L-PAMID
SUB1, WIFI 2nd 5G
MHB LFEMiD
ENDC PA
LB LFEMiD
LNA
SAW
RFIC
SWITCH
WIFI 2nd 2.4G
BT/WIFI/FM
uMCP
8GB + 128GB/256GB