

Trouble shooting Guide - mechanical -



Xperia™ L1 & L1 Dual
G3311, G3313, G3312

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Always firstly disconnect the Battery connector to cut off power supply when the Battery Cover Assy is disassembled.

Always finally connect the Battery connector before the Battery Cover Assy is reassembled.

Note: After replacing Main PBA & Front Cover Assy, calibration by CS-Everest and Flashing Customize by Emma is required.

Calibration tool “CS-Everest 1309-7255” is available at Repair Information.

It is posted under the RE4251: Repair Mechanical – Tools and Equipment (including Repair Software).

1 Problem Areas

1.1 Power

1.1.1 Will not power on or will switch off randomly

Check:

Check whether the phone vibrates by pressing the on/off key.

Action:

1. If activation of the vibrator is detected, but no display, refer to section 1.4 'Display'.

2. If NO activation of the Vibrator is detected and no display by pressing the on/off key, perform a force shut down, press power key and volume up key for 15 seconds and then power on the unit again.

3. If still NO activation of the Vibrator is detected and no display by pressing the on/off key, check that the battery is charging when connected to a charger.

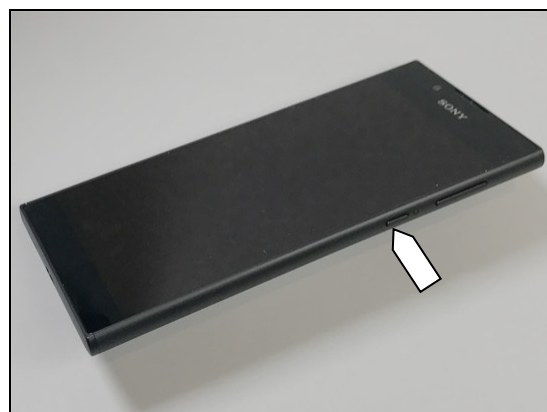
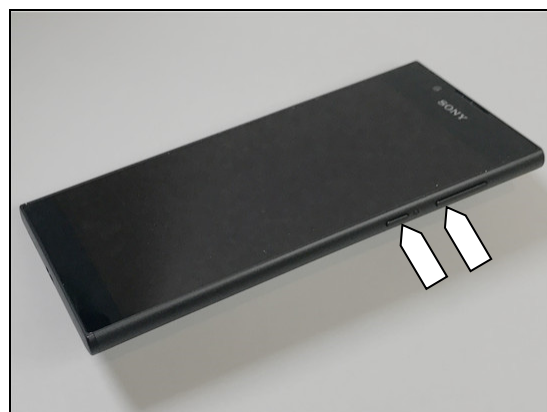
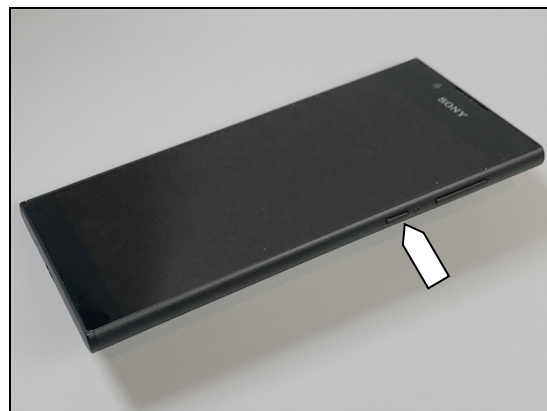
Follow Test Instruction - mechanical chapter 2.3.5 (Charging via Charger or Computer), Diagnostic Battery / Charging status.

Check:

Inspect the on/off key.

Action:

Refer to section 1.2.3 'On/Off Key'.



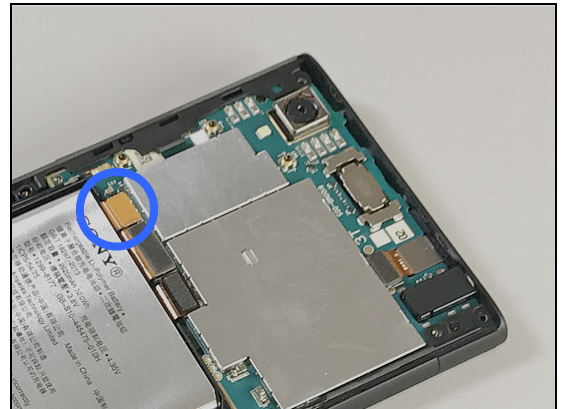
Problem Areas: Power

Check:

Inspect the Battery connector to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.
3. If the BtB connector, the FPC or the Battery embedded is damaged – replace the Battery embedded.
4. Replace Main PBA.



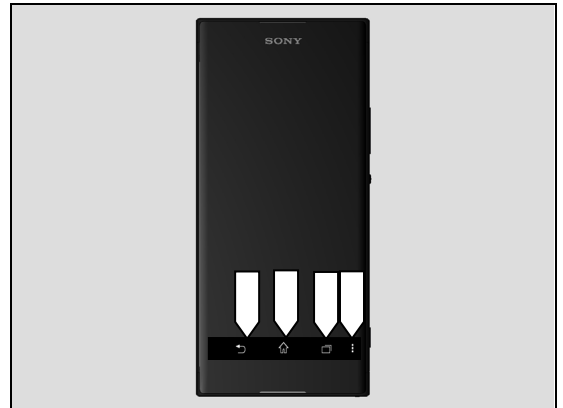
Problem Areas

1.2 Keys

1.2.1 Back, Menu, Home and Multitask Keys

Action:

1. Refer to section 1.3 'Touch Screen'.
2. Replace Main PBA.



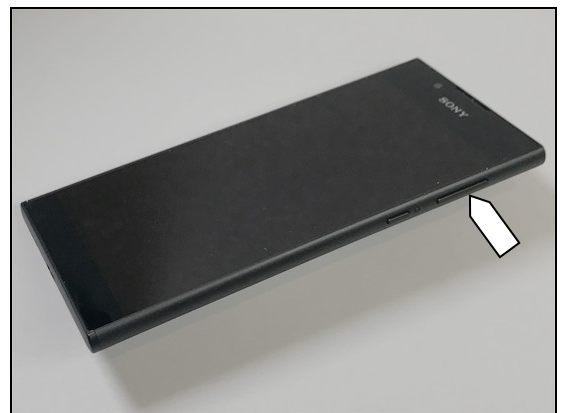
1.2.2 Volume Key

Check:

Inspect the external area of the Volume Key.

Action:

1. If dirty – clean it.
2. If damaged – replace the Side Panel Keys.

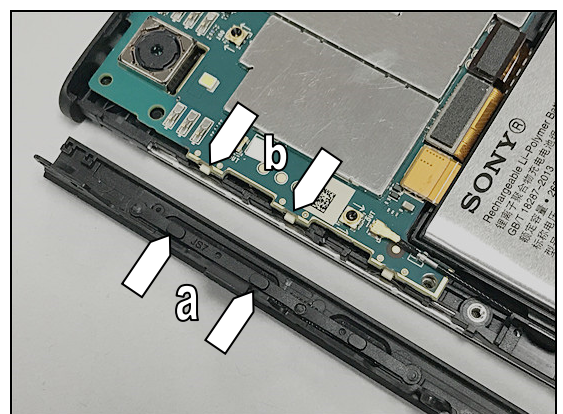


Check:

Inspect the condition of Volume Key rubber (a) and Volume Key switch (b).

Action:

1. If dirty – clean them.

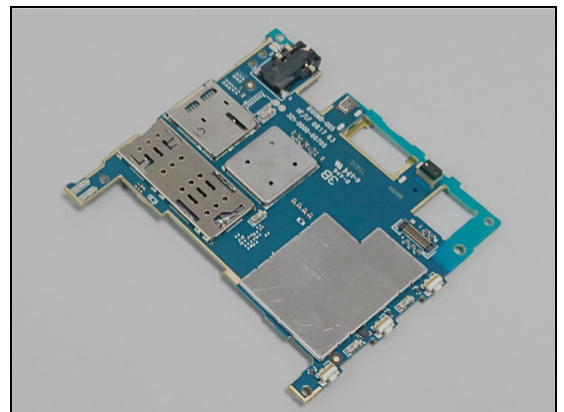


Problem Areas: Keys

2. If the Volume Key rubber is damaged – replace the replace the Side Panel Key.



3. If the volume key switch is damaged – replace the Main PBA.



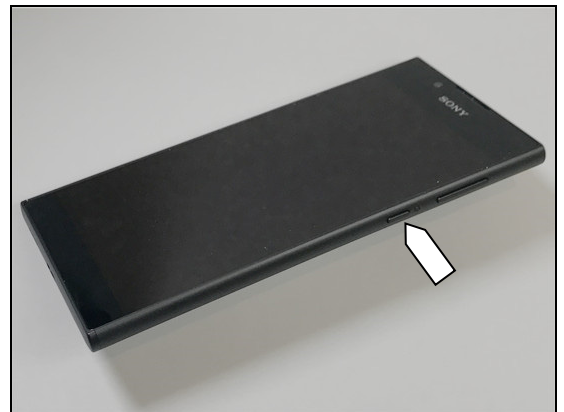
1.2.3 On/Off Key

Check:

Inspect the external area of the On/Off Key.

Action:

1. If dirty – clean it.



2. If damaged – replace the Side Panel Keys.



Problem Areas: Keys

Check:

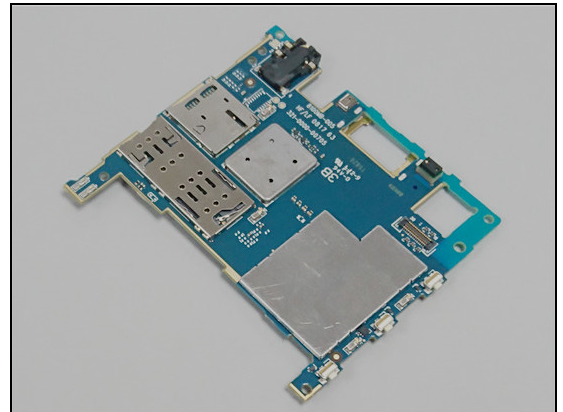
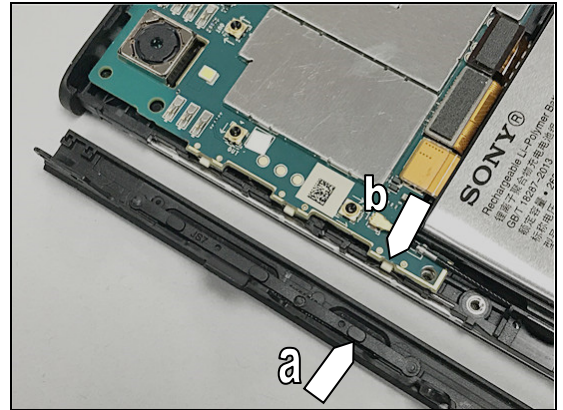
Inspect the condition of the On/Off Key rubber (a) and On/Off Key switch (b).

Action:

1. If dirty – clean them.

2. If the On/Off Key rubber is damaged – replace the Side Panel Keys.

3. If the On/Off Key switch is damaged – replace the Main PBA.



Problem Areas

1.3 Touch Screen

1.3.1 Touch Screen malfunction

Check:

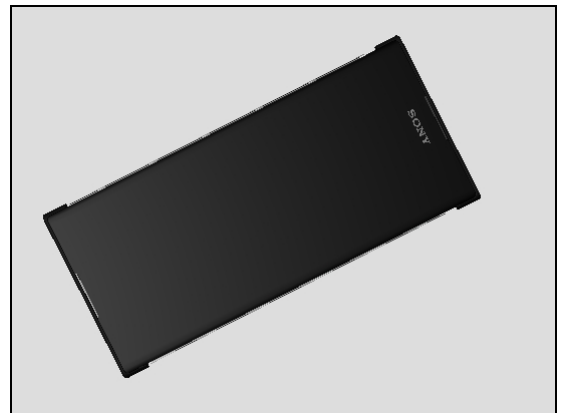
Inspect the touch screen of the Front Cover Assy.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Front Cover Assy.



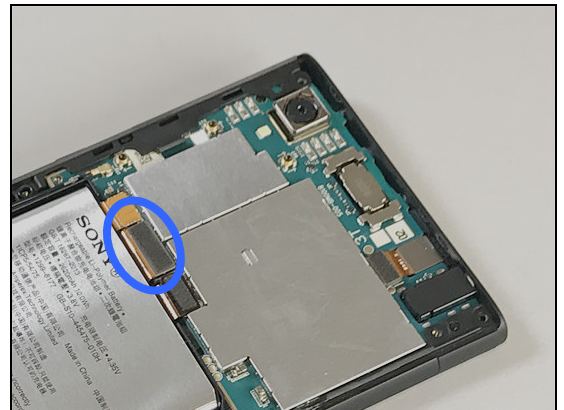
Check:

Inspect the BtB connector of Display FPC to Main PBA.

Action:

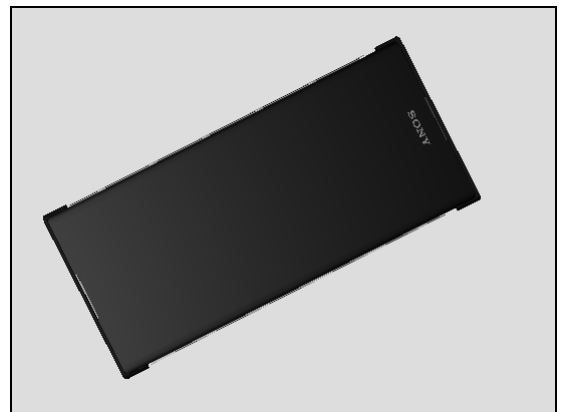
1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean it.



3. If the Display FPC is damaged – replace the Front Cover Assy.

4. Replace Main PBA.



Problem Areas

1.4 Display

1.4.1 Graphics & Illumination

Check:

Check whether the phone vibrates after the on/off key has been pressed.

Action:

1. If the activation described above is not detected, refer to section 1.1 'Power'.

2. If the Front Cover Assy is damaged – replace it.

Check:

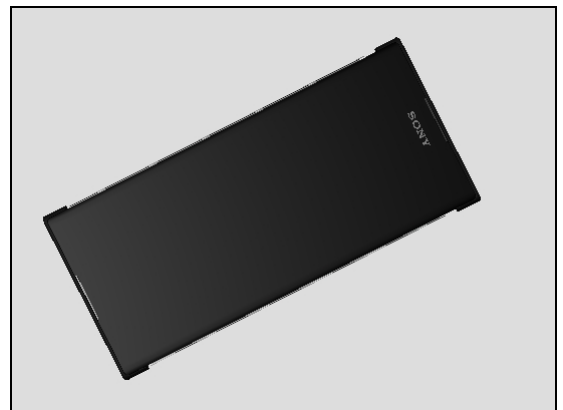
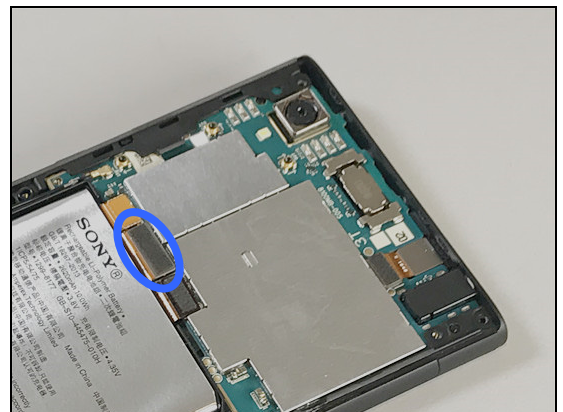
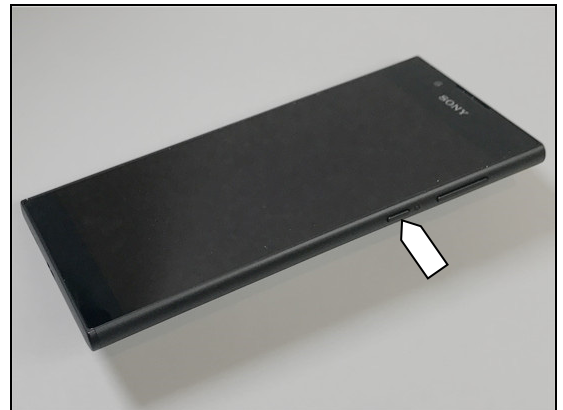
Inspect the BtB connector of Display FPC to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.

3. If the LCM FPC is damaged – replace the Front Cover Assy.

4. Replace Main PBA.



Problem Areas

1.5 LED/Illumination

1.5.1 LED/Illumination

Check:

Inspect external window area of Notification LED on the Display Cover Assy.

Action:

1. If dirty – clean it.



Check:

Inspect the Light Guide of Notification LED.

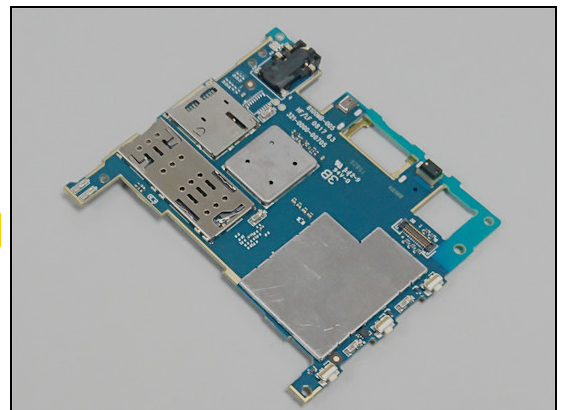
Action:

1. If dirty – clean it.



2. Replace the Main PBA.

LED is available as Electrical Spare Part!



Problem Areas

1.6 Speaker

1.6.1 Loudspeaker

Check:

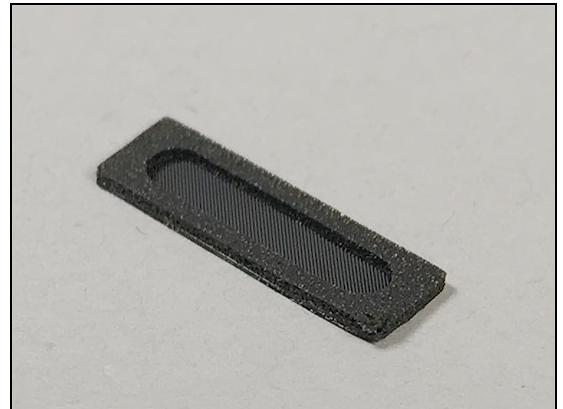
Inspect the Loudspeaker external port on the Front Cover Assy.

Action:

1. If clogged – clean it.



2. If damaged – replace the Speaker Mesh.

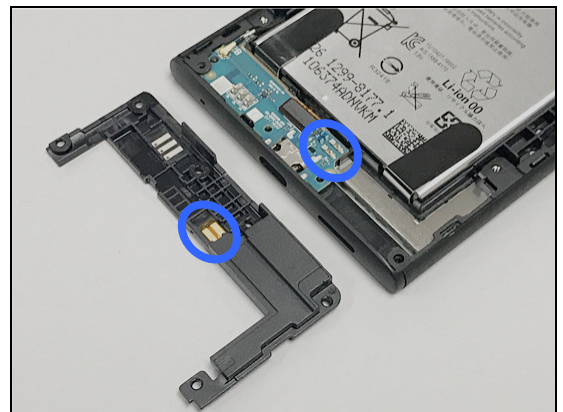


Check:

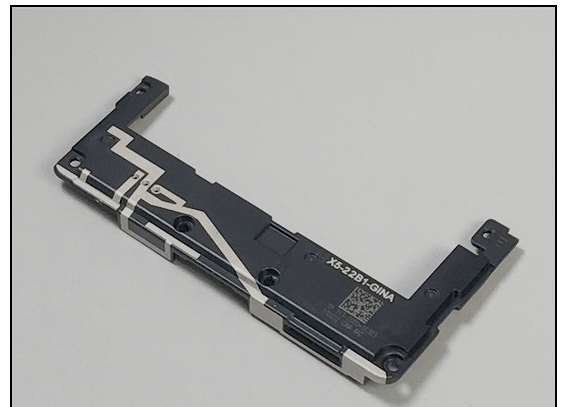
Inspect the contact pads on the Speaker Box/Main Antenna and the contact pins on the Sub PBA.

Action:

1. If pins and pads dirty – clean them.



2. If contact pads or loudspeaker are damaged – replace the Speaker Box/Main Antenna.



Problem Areas: Speaker

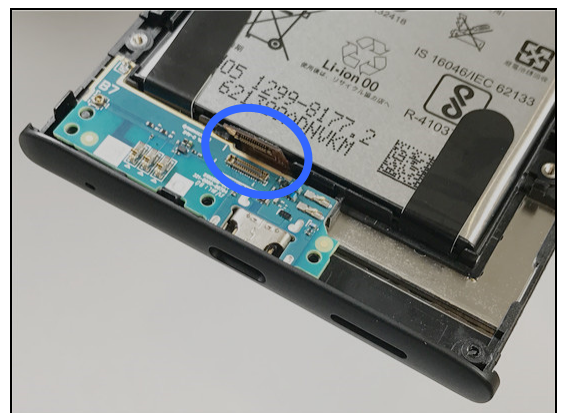
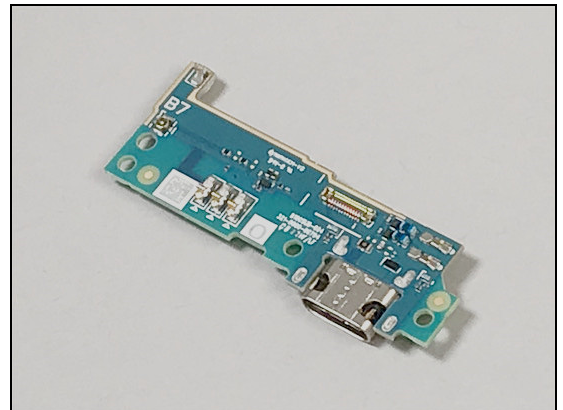
3. If contact pins are damaged – Replace Sub PBA.

Check:

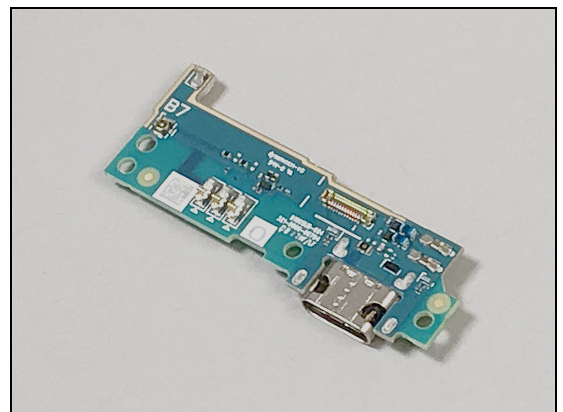
Inspect the BtB connector of the Main FPC Assy to Sub PBA Assy.

Action:

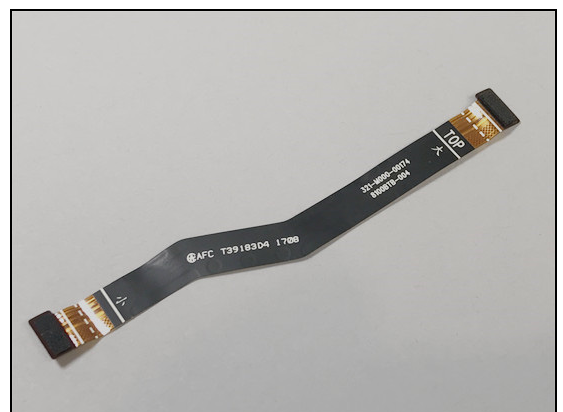
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If Sub PBA is damaged – Replace it.



4. If the connector of Main FPC or the Main FPC itself is damaged – Replace it.



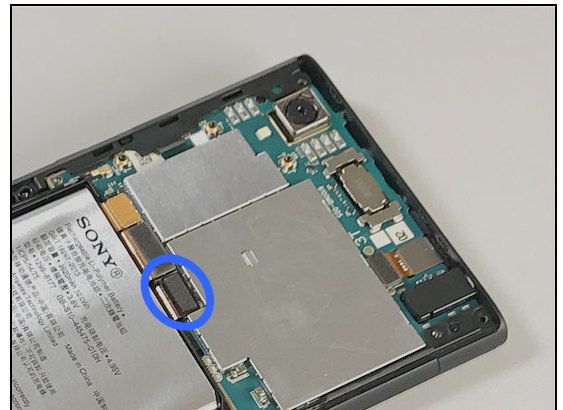
Problem Areas: Speaker

Check:

Inspect the BtB connector of Main FPC to Main PBA.

Action:

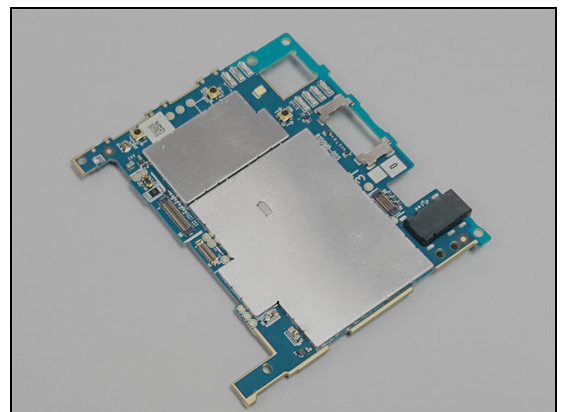
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the connector of Main FPC or the Main FPC itself is damaged – Replace it.



4. If the BtB connector of Main PBA or Main PBA itself is damaged – Replace the Main PBA.



Problem Areas

1.7 Earphone

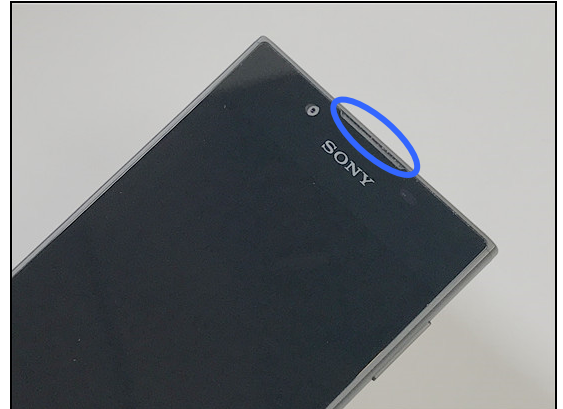
1.7.1 Ear Speaker

Check:

Inspect the external port of Ear Speaker on the Front Cover Assy.

Action:

1. If clogged – clean it.

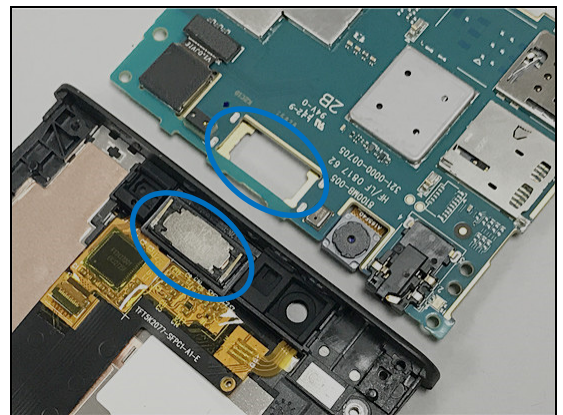


Check:

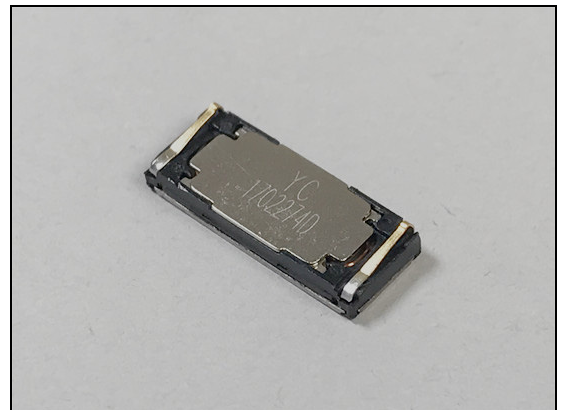
Inspect the contact pads on the Main PBA and the contact pins on the Ear Speaker.

Action:

1. If dirty – clean them.



2. If the contact pins of the Ear Speaker or the Ear Speaker are damaged – replace the Ear Speaker and Ear Speaker Holder.
3. Replace Main PBA.



Problem Areas

1.8 Microphone

1.8.1 Main Microphone

Check:

Inspect the Main Microphone's external port on the Front Cover Assy.

Action:

1. If clogged or dirty – replace a new Main Mic Mesh and clean the Main Mic rubber.

Check:

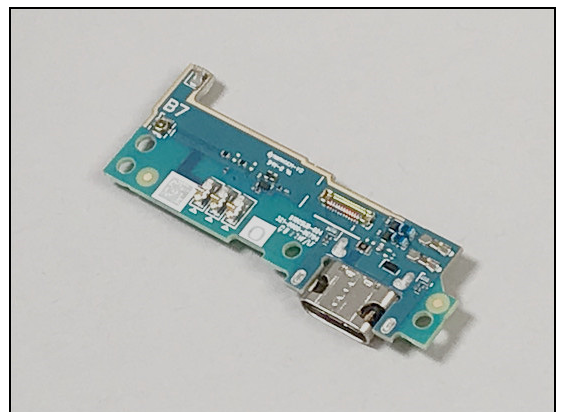
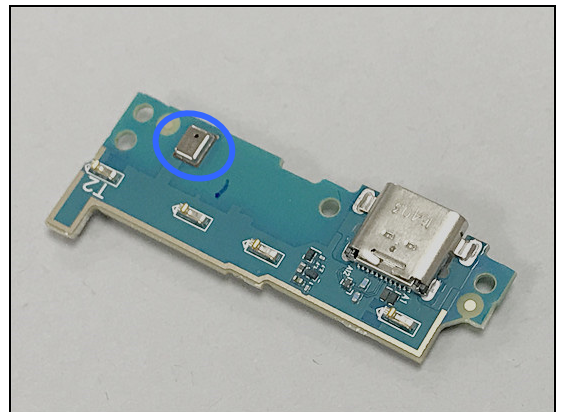
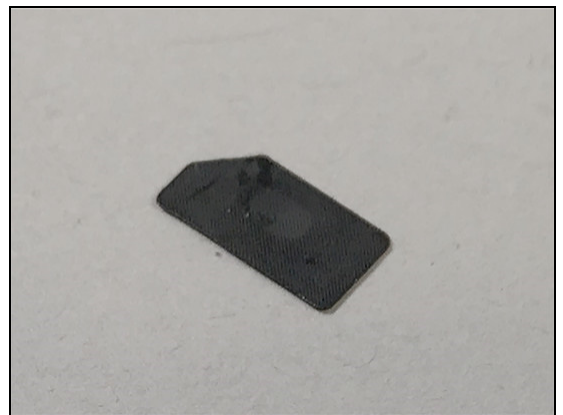
Inspect the Microphone of the Sub PBA

Action:

1. If dirty or oxidized – clean it.

Do not apply any liquid!

2. If Microphone or Sub PBA is damaged – Replace the Sub PBA.



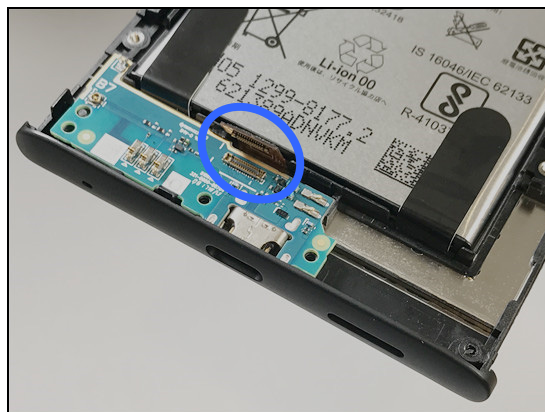
Problem Areas: Microphone

Check:

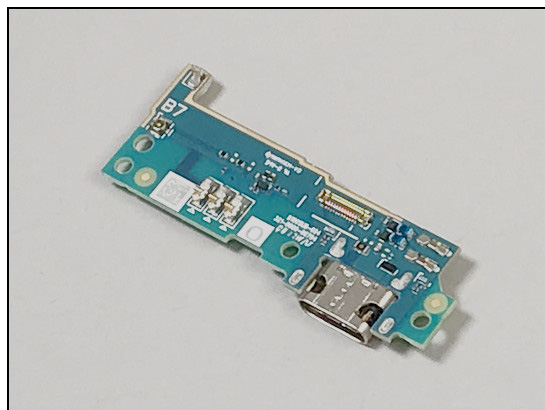
Inspect the BtB connector of the Main FPC Assy to Sub PBA Assy.

Action:

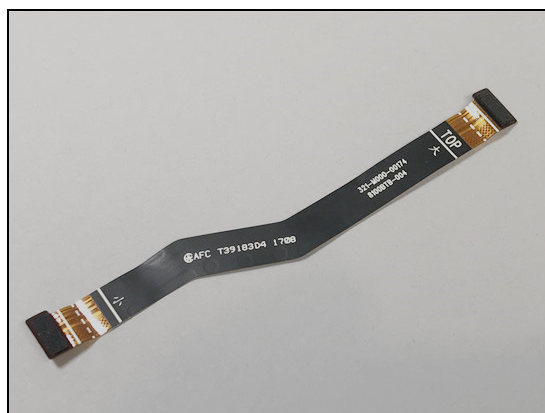
1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If Sub PBA is damaged – Replace it.



4. If the connector of Main FPC or the Main FPC itself is damaged – Replace it.

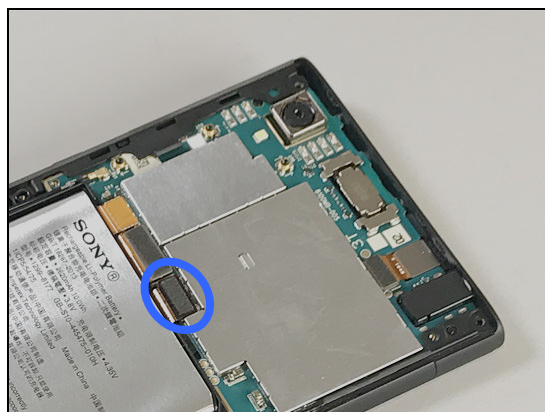


Check:

Inspect the BtB connector of Sub PBA to Main FPC.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.

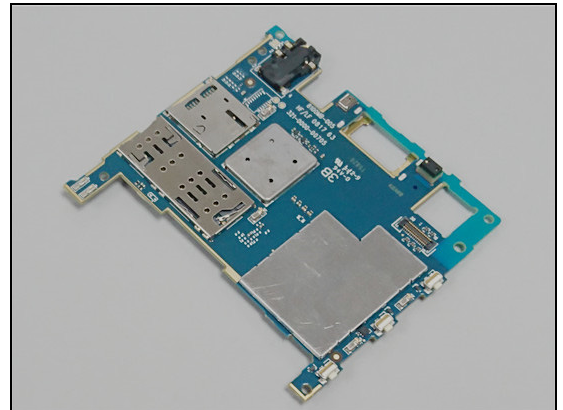


Problem Areas: Microphone

3. If the connector of Main FPC or the Main FPC itself is damaged – Replace it.



4. If the BtB connector of Main PBA or Main PBA itself is damaged – Replace the Main PBA.



Problem Areas: Microphone

1.8.2 Secondary Microphone

Check:

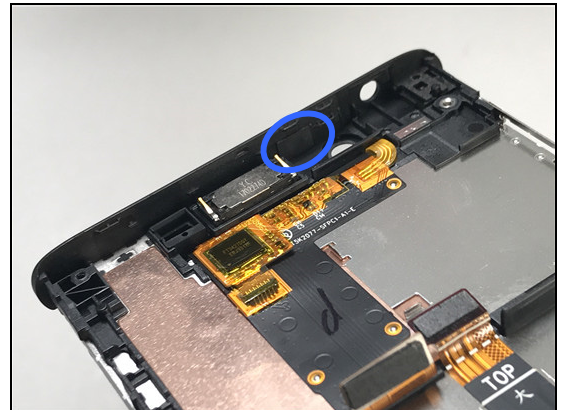
Inspect the external port of secondary microphone on the Front Cover Assy.

Action:

1. If clogged – clean it.



If dirty – Replace a new 2nd Mic Mesh.

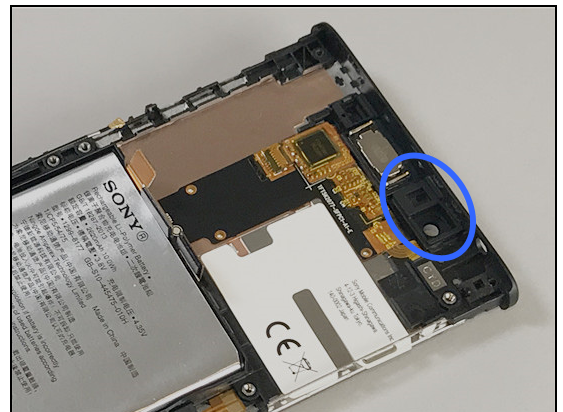


Check:

Inspect the Rubber 2nd Mic.

Action:

1. If Rubber 2nd Mic is not properly installed – disassemble and reassemble it.



Check:

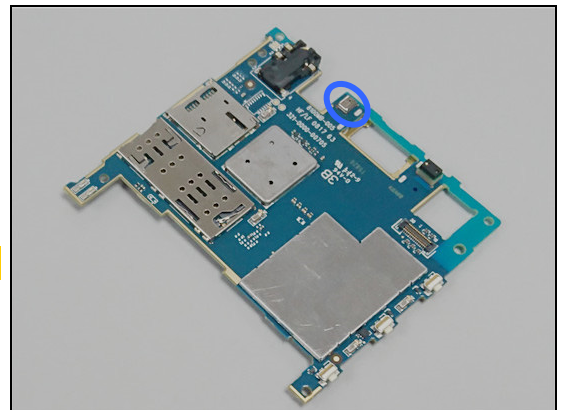
Inspect the Microphone of the Main PBA

Action:

1. If dirty or oxidized – clean it.

Do not apply any liquid!

2. Replace the Main PBA.



Problem Areas

1.9 Vibrator

1.9.1 Vibrator not generating alerts

Check:

Inspect the Vibrator.

Action:

1. If the Vibrator is damaged – replace the Vibrator.

Check:

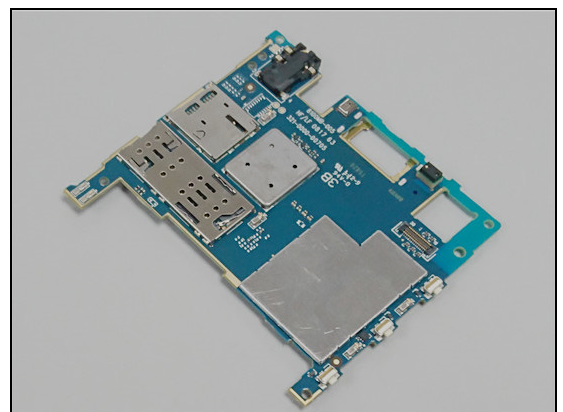
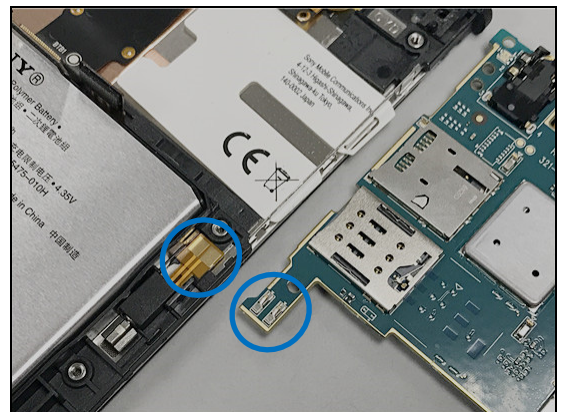
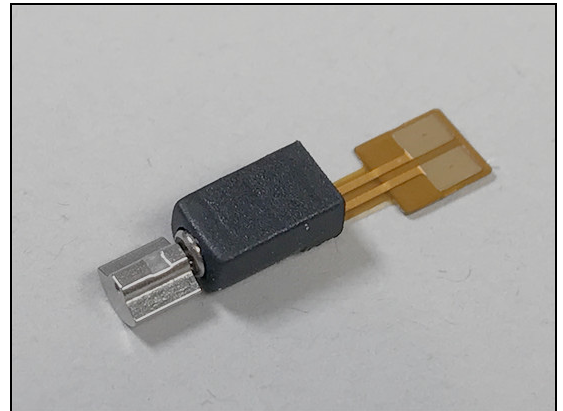
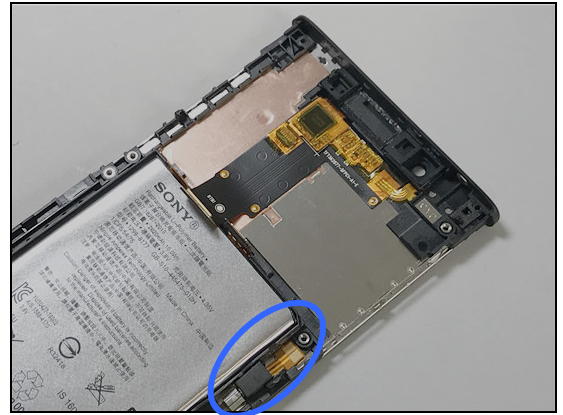
Inspect the contact pins on the Main PBA and the contact pads on the Vibrator.

Action:

1. If dirty – clean them.

2. If the contact pads of the Vibrator are damaged – replace it.

3. Replace Main PBA.



Problem Areas

1.10 Camera

1.10.1 Main Camera

Check:

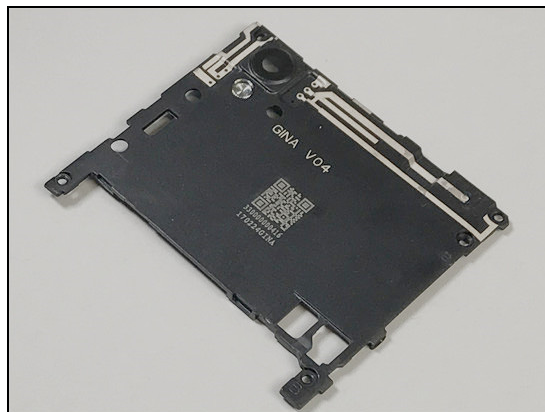
Inspect the external area of camera window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Antenna Assy DIV/BT/WIFI/GPS.

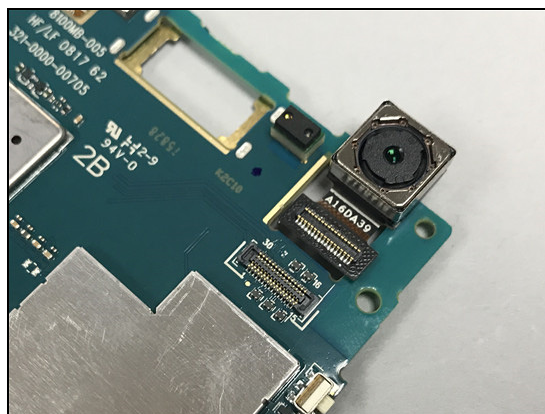


Check:

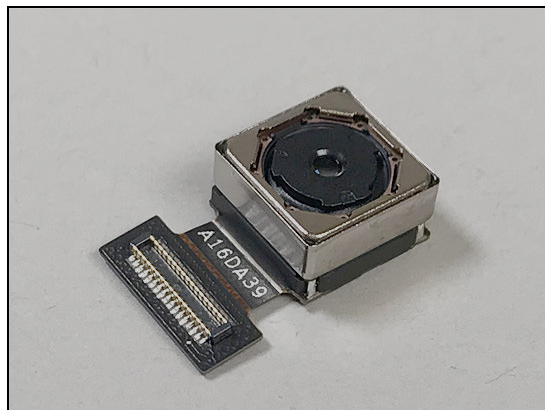
Inspect the BtB connector of Main Camera to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the BtB connector or the Main Camera is damaged – replace the Main Camera.
4. Replace Main PBA.



Problem Areas: Camera

1.10.2 Video Call Camera defects

Check:

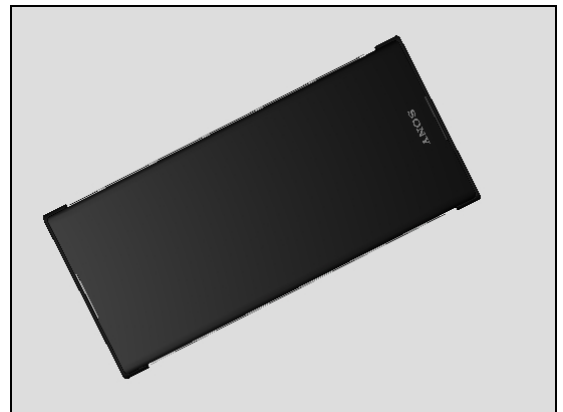
Inspect the external area of the Front camera window.

Action:

1. If dirty – clean it.



2. If scratched or damaged – replace the Front Cover Assy.



Check:

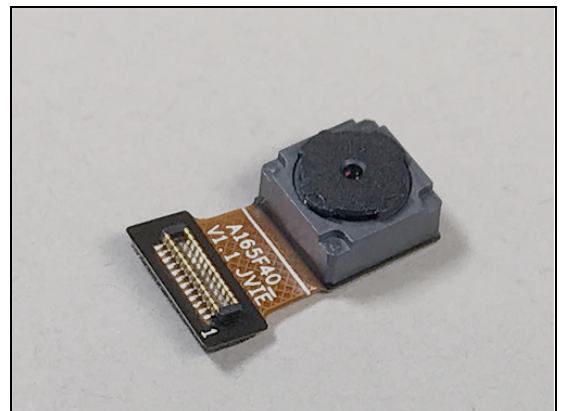
Inspect the BtB connector of Front Camera to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the Front Camera is damaged – replace the Front Camera.
4. Replace Main PBA.



Problem Areas

1.11 Flash LED

1.11.1 Flash LED not flashing

Check:

Inspect the flash LED lens.

Action:

1. If dirty – clean it.

2. If scratched or damaged – replace the Antenna Assy
DIV/BT/WIFI/GPS.

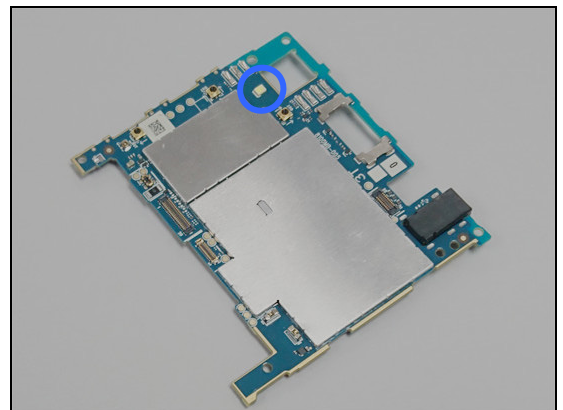
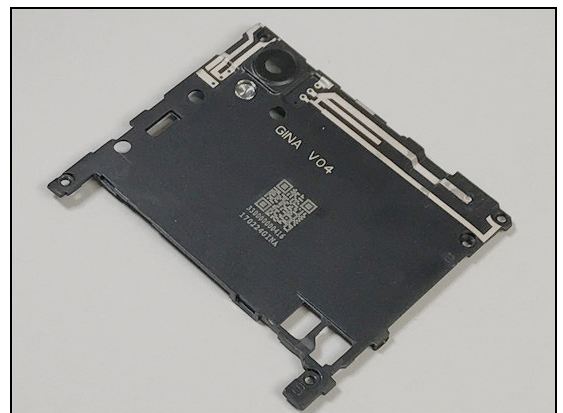
Check:

Inspect the Flash LED on Main PBA.

Action:

1. If dirty – clean it.

2. If Flash LED is damaged – Replace Main PBA.



Problem Areas

1.12 Bluetooth and WLAN

1.12.1 Bluetooth or WLAN connection failure

Check:

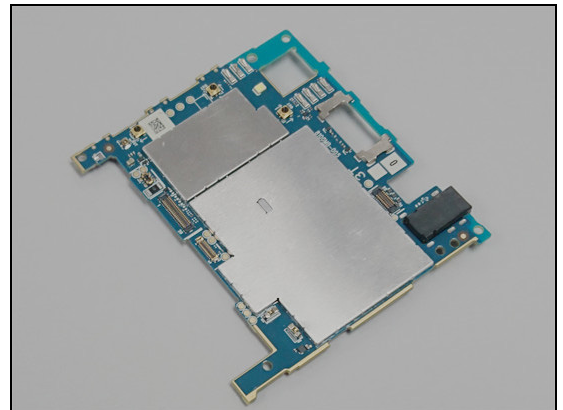
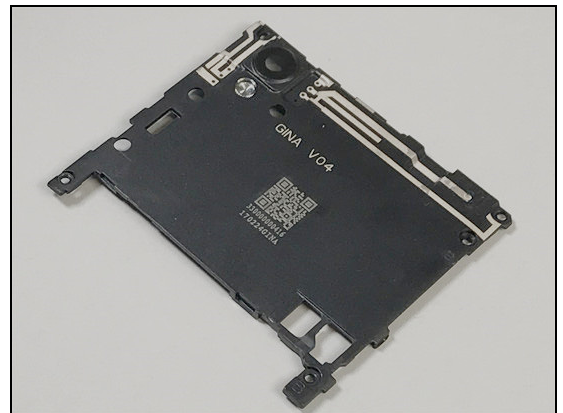
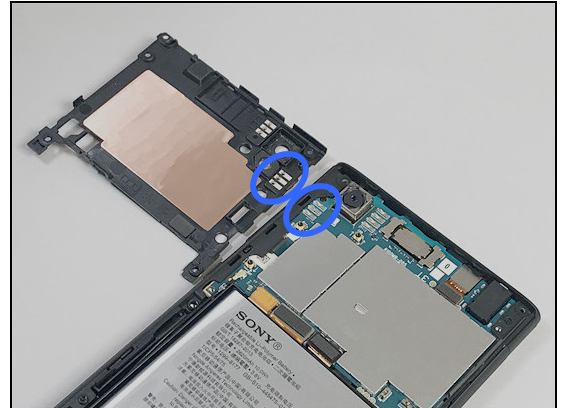
Inspect the contact pads on Antenna Assy
DIV/BT/WIFI/GPS and the contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.

2. If the contact pads on Antenna Assy DIV/BT/WIFI/GPS are damaged – replace it.

3. If the contact pins on Main PBA is damaged – replace Main PBA.



Problem Areas

1.13 NFC

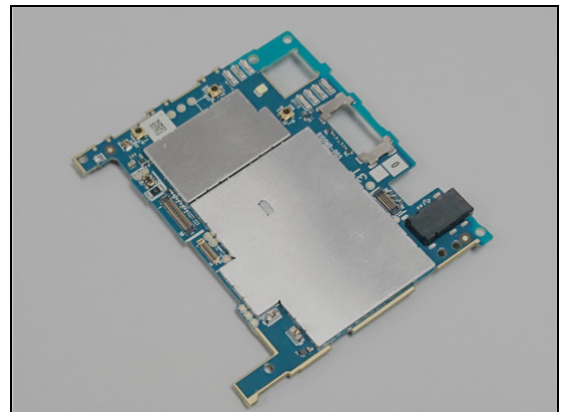
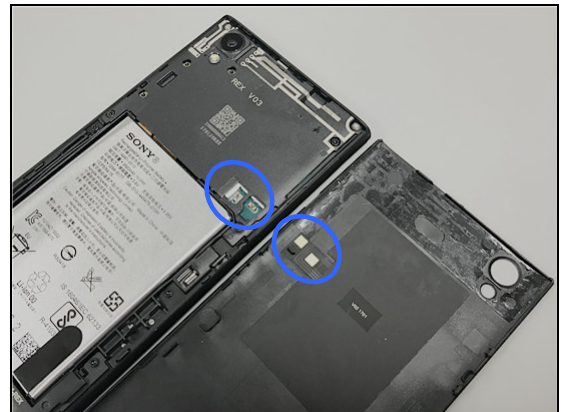
1.13.1 NFC malfunctions

Check:

Inspect the NFC antenna contact pads on Back Cover Assy and the contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. If the NFC antenna contact pads are damaged – replace the Back Cover Assy.
3. If the contact pins on main PBA are damaged – replace Main PBA.



Problem Areas

1.14 GPS

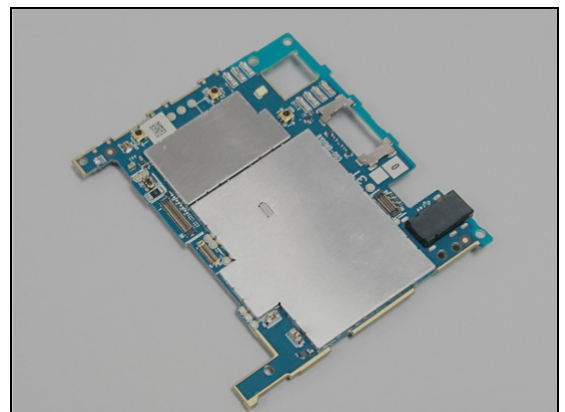
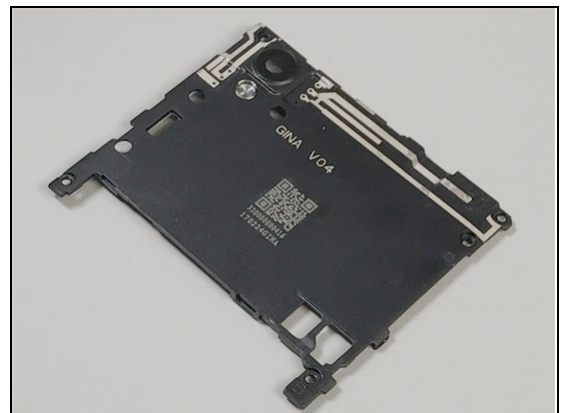
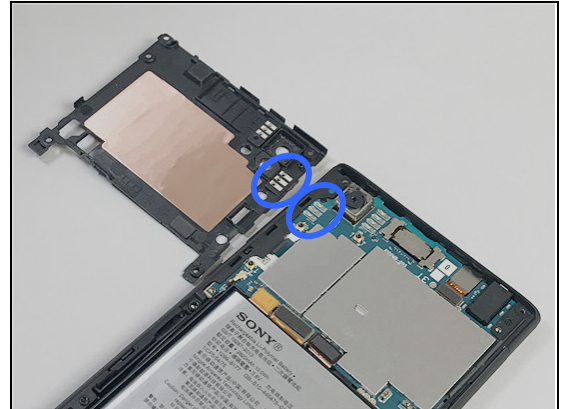
1.14.1 GPS malfunctions

Check:

Inspect the contact pads on Antenna Assy
DIV/BT/WIFI/GPS and the contact pins on Main PBA.

Action:

1. If dirty or oxidized – clean the pads and pins.
2. If the contact pads on Antenna Assy DIV/BT/WIFI/GPS are damaged – replace it.
3. If the contact pins on Main PBA is damaged – replace Main PBA.



Problem Areas

1.15 Compass

1.15.1 Compass fails

Action:

1. Replace Main PBA.

Problem Areas

1.16 Accelerometer

1.16.1 Accelerometer test fails

Action:

1. Replace Main PBA.

Problem Areas

1.17 Gyroscope

1.17.1 Gyroscope test fails

N/A.

Problem Areas

1.18 Ambient Light Sensor

1.18.1 Light Sensor malfunctions

Run Light sensor calibration through Calibration tool "CS-Everest 1309-7255" firstly!

Check:

Inspect the external window area of light sensor on the Front Cover Assy.



Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Front Cover Assy.

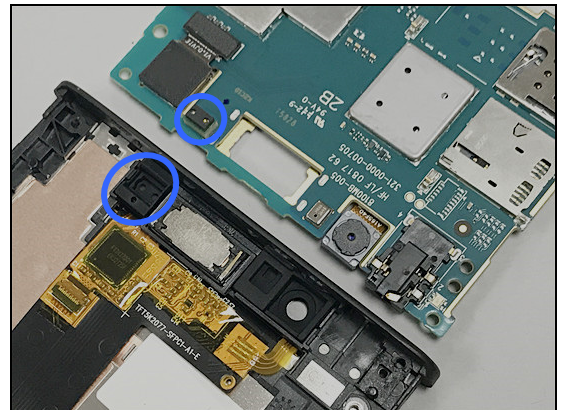


Check:

Inspect the light sensor rubber on the Front Cover Assy.

Action:

1. If dirty – clean it.
2. If misplace – disassemble and reassemble it.
3. If damage – replace a new Front Cover Assy

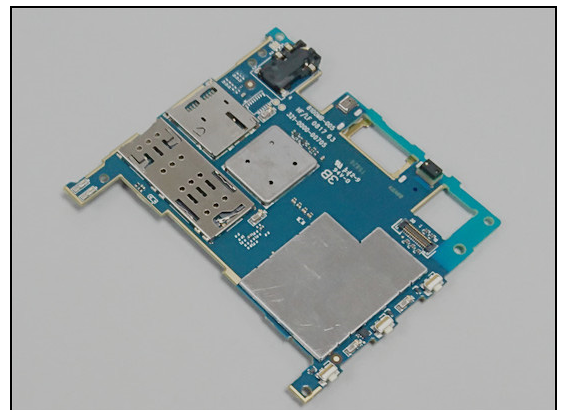


Check:

Inspect the light sensor on the Front Cover Assy.

Action:

1. If dirty – clean it.
2. If damage – replace the Main PBA



Problem Areas

1.19 Proximity Switch

1.19.1 Proximity switch malfunctions

Run Proximity sensor Calibration through Calibration tool "CS-Everest 1309-7255" firstly!

Check:

Inspect the external window area of Proximity sensor on the Front Cover Assy.

Action:

1. If dirty – clean it.
2. If scratched or damaged – replace the Front Cover Assy.

Check:

Inspect the light sensor rubber on the Front Cover Assy.

Action:

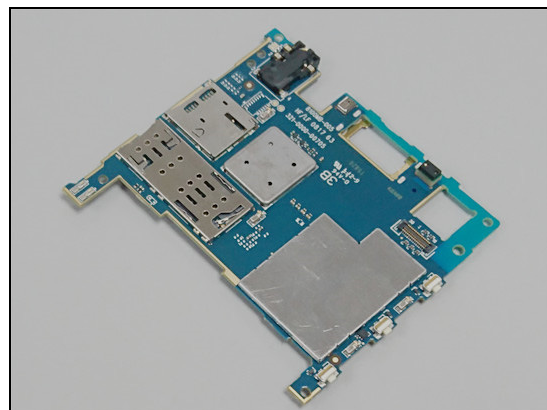
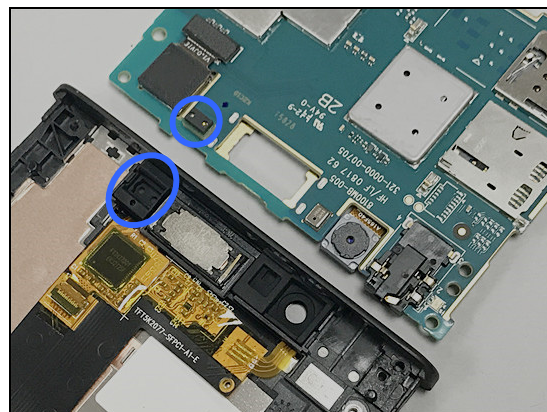
1. If dirty – clean it.
2. If misplace – disassemble and reassemble it.
3. If damage – replace a new Front Cover Assy

Check:

Inspect the P-sensor on the Front Cover Assy.

Action:

1. If dirty – clean it.
2. If damage – replace the Main PBA



Problem Areas

1.20 Hall Sensor

1.20.1 Hall Sensor test fails

Replace Main PBA.

Problem Areas

1.21 Real Time Clock

1.21.1 Real time clock test fails

Action:

Replace Main PBA.

Problem Areas

1.22 Total call time

1.22.1 Total call time fails

Action:

Replace Main PBA.

Problem Areas

1.23 External Memory

1.23.1 Memory Card not detected

Check:

Inspect the external port of the memory card holder.

Action:

If dirty or clogged – clean the external port.

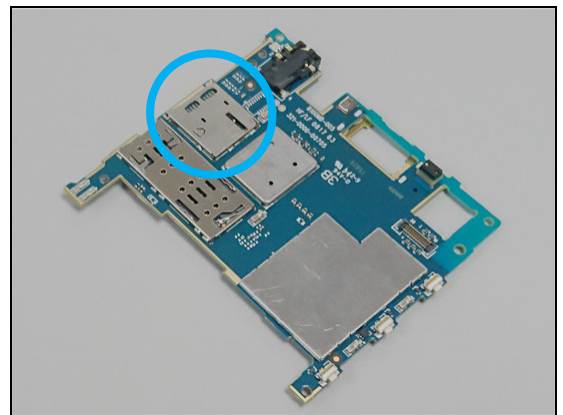


Check:

Inspect the memory card holder on Main PBA.

Action:

1. If dirty or clogged – clean the holder.
2. Replace Main PBA.



Problem Areas

1.24 Security

1.24.1 Security fails

Action:

Replace Main PBA.

Problem Areas

1.25 FM Radio

1.25.1 No/Poor FM Radio reception

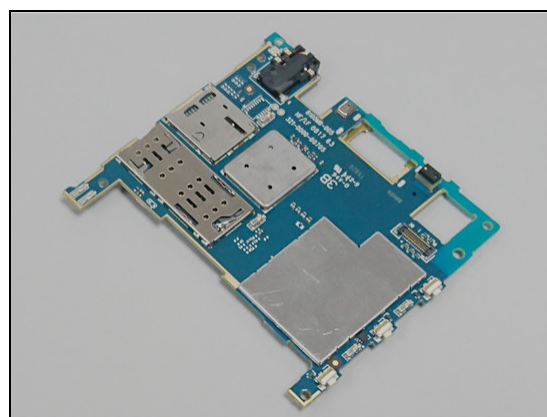
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. If damaged - Replace Main PBA.



Problem Areas

1.26 Verify Certificates

1.26.1 Verify Certificates fails

Action:

N/A.

Problem Areas

1.27 Network & Signal

1.27.1 No/Poor signal

Check:

Inspect the contact pins on the Sub PBA and contact pads on the Speaker Box/Main Antenna.

Action:

1. If dirty or oxidized – clean them.

2. If the contact pads on the Speaker Box/Main Antenna are damaged – replace it.

3. If the contact pins on the Sub PBA are damaged – replace Sub PBA.

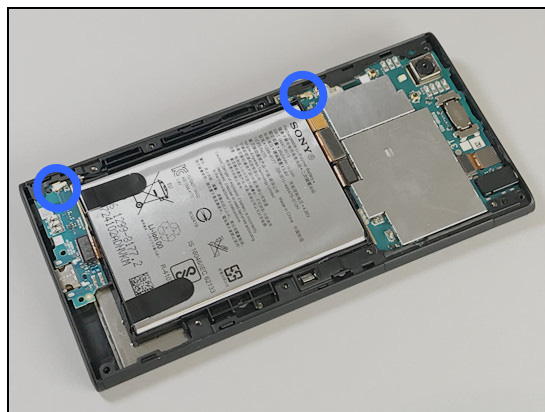
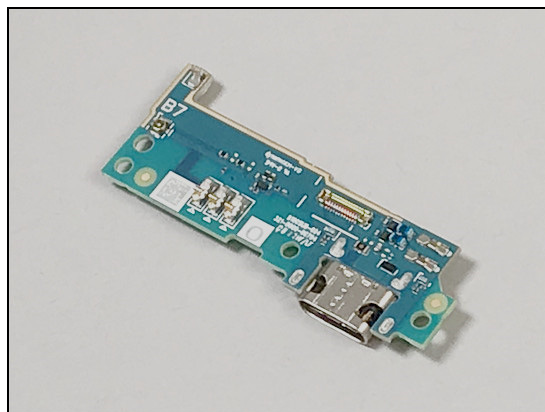
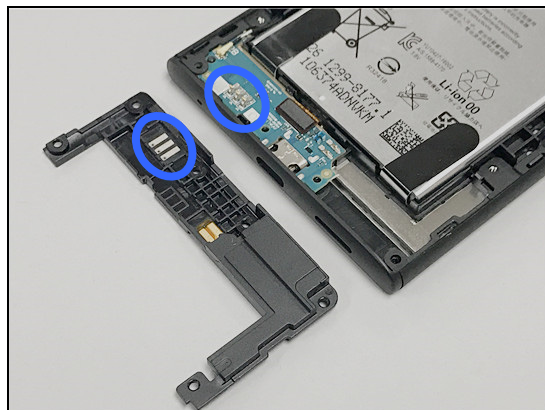
Check:

Inspect the RF connectors of RF Cables to the Main PBA and Sub PBA.

Action:

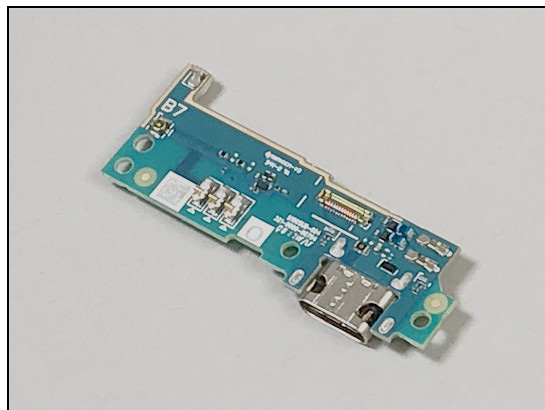
1. If not properly connected – disconnect and reconnect them.

2. If dirty or oxidized – clean them.



Problem Areas: Network & Signal

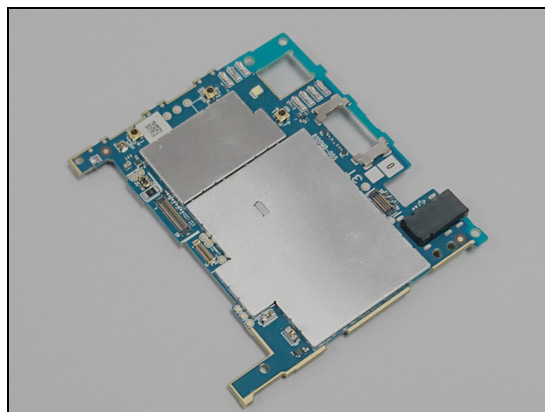
3. If the connector on the Sub PBA is damaged – replace Sub PBA.



4. If the RF Cable is damaged – replace it.



4. If the connector on the Main PBA is damaged – replace Main PBA.



Problem Areas

1.28 SIM

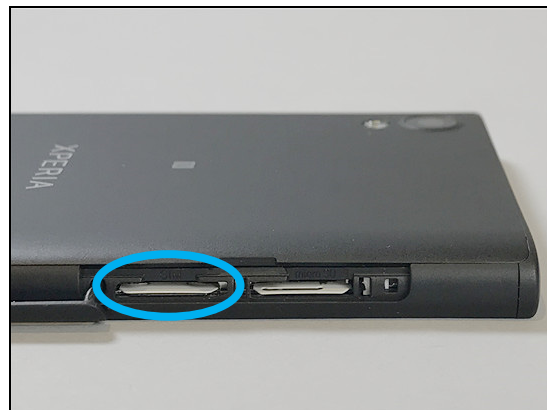
1.28.1 SIM not detected

Check:

Inspect the external port of the SIM card holder.

Action:

If dirty or clogged – clean the external port.

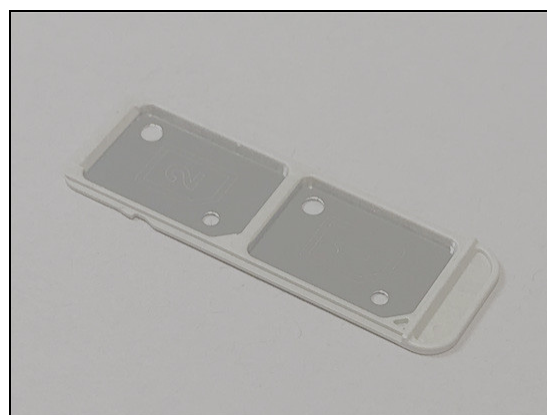


Check:

Check if Tray SIM is properly mounted into the SIM Slot.

Action:

1. If not properly assembled – reassemble it.
2. If Tray SIM is damaged – Replace it.



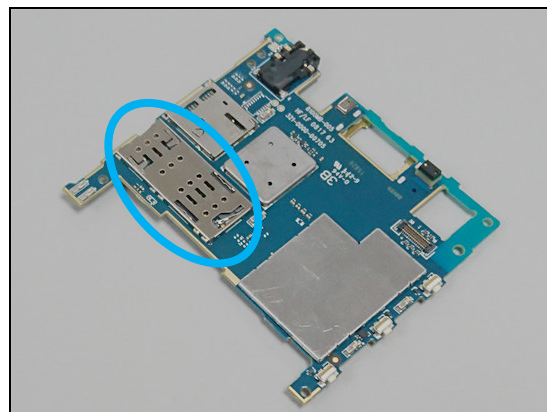
Check:

Inspect the SIM card holder on Main PBA.

Action:

1. If dirty or clogged – clean the holder.
2. Replace Main PBA.

Note: only Single SIM illustration shown!



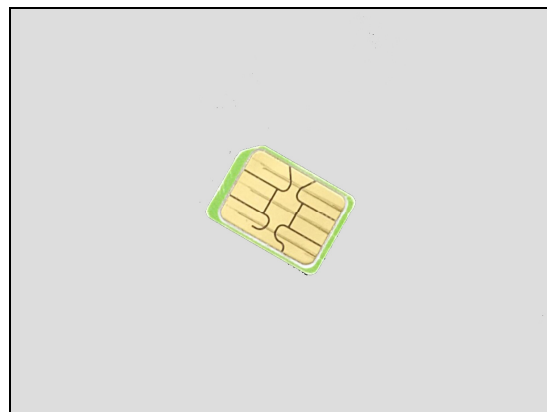
1.28.2 Incorrect Nano SIM indicated

Check:

Check whether the phone is locked to a particular operator and whether the correct operator Nano SIM is being used.

Action:

1. Use a proper operator Nano SIM or test Nano SIM.
2. Replace Main PBA.



Problem Areas

1.29 Charging

1.29.1 Battery will not charge by USB connector

Check:

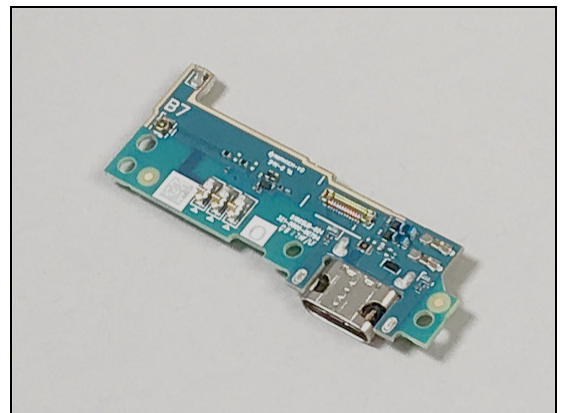
Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.



2. If USB connector is damaged – replace Sub PBA.

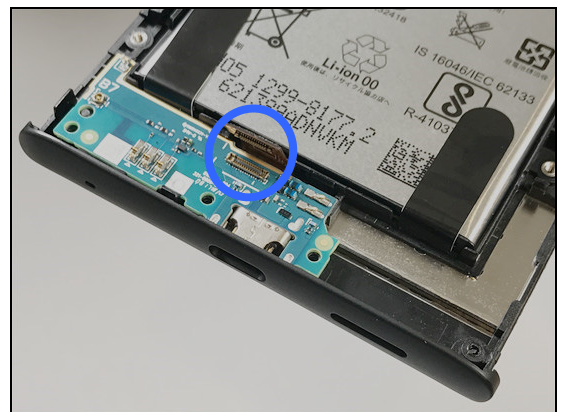


Check:

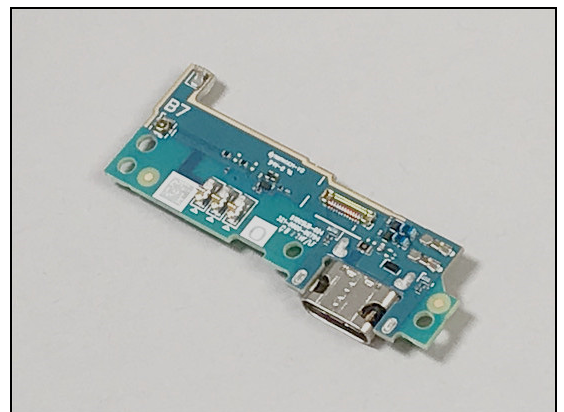
Inspect the BtB connector of Main FPC to Sub PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If Sub PBA is damaged – replace it.



Problem Areas: Charging

4. If the Main FPC is damaged – replace it.

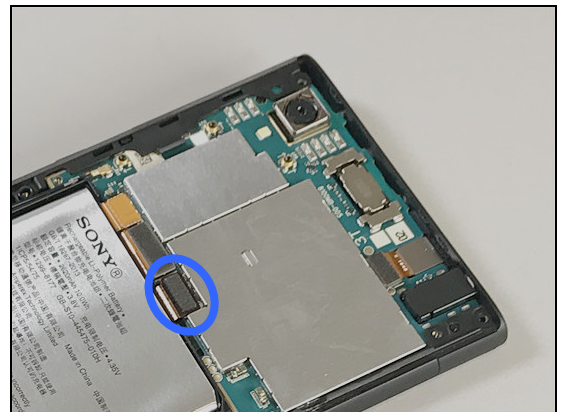


Check:

Inspect the BtB connector of Main FPC to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the Main FPC Assy is damaged – replace it.
4. Replace the Main PBA.



Check:

Inspect the Battery connector to Main PBA.

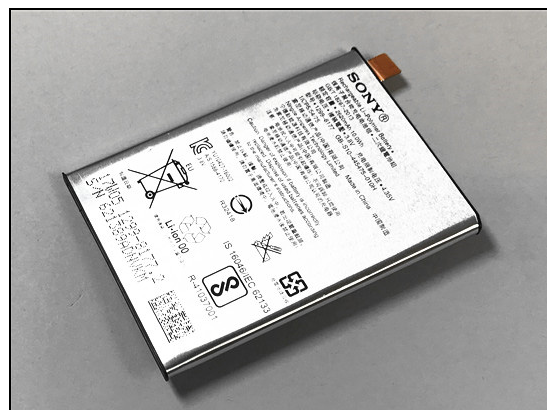
Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean the both sides of the BtB connector.



Problem Areas: Charging

3. If the BtB connector, the FPC or the Battery is damaged – replace the Battery.
4. Replace Main PBA.



Problem Areas

1.30 Audio Jack test

1.30.1 Connection to headset fails

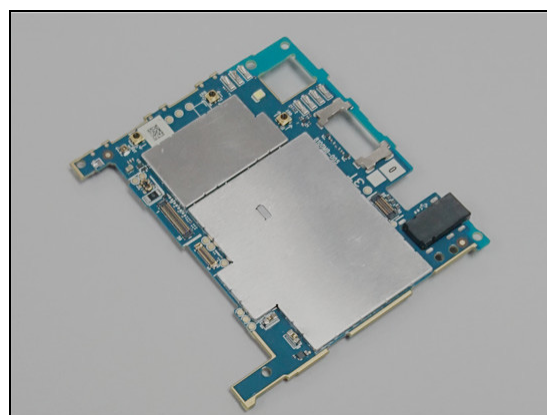
Check:

Inspect the external port of the Audio Jack.

Action:

1. If dirty or oxidized – clean it.

2. If damaged - Replace Main PBA.



Problem Areas

1.31 Data Communication

1.31.1 Data transfer via System Connector fails

Check:

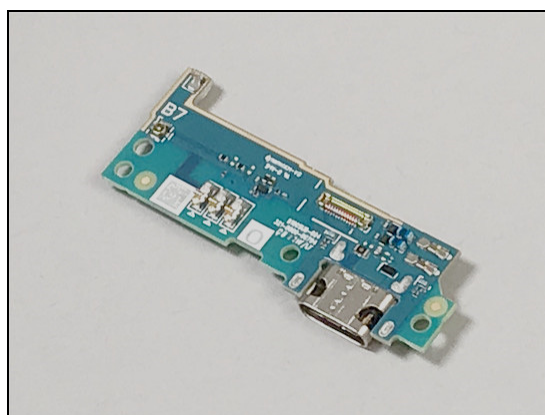
Inspect the USB connector.

Action:

1. If dirty or oxidized – clean the connector.



2. If USB connector is damaged – replace Sub PBA.



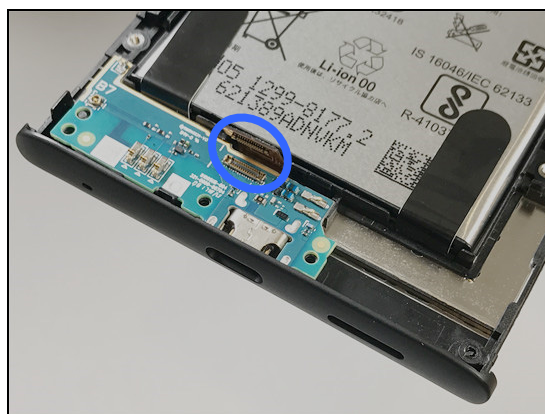
Check:

Inspect the BtB connector of Main FPC to Sub PBA.

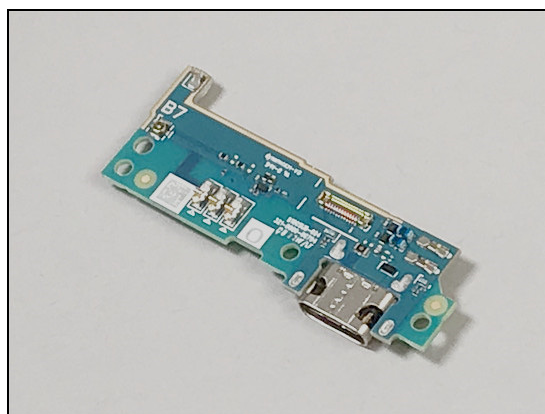
Action:

1. If not properly connected – disconnect and reconnect it.

2. If dirty or oxidized – clean it.



3. If Sub PBA is damaged – replace it.



Problem Areas: Data Communication

4. If the Main FPC is damaged – replace it.



Check:

Inspect the BtB connector of Main FPC to Main PBA.

Action:

1. If not properly connected – disconnect and reconnect it.
2. If dirty or oxidized – clean it.



3. If the Main FPC Assy is damaged – replace it.

4. Replace the Main PBA.



2 Revision History

Rev.	Date	Changes / Comments
1	2017-Apr-15	Initial release