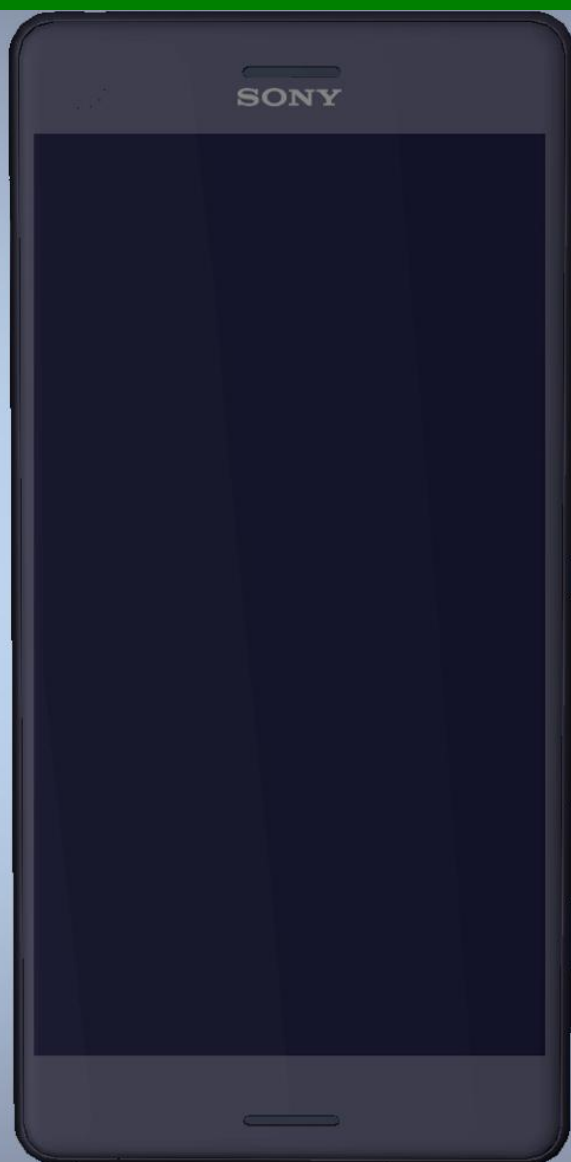


Working Instructions

- mechanical -



Xperia™ X
F5121, F5122 (Dual SIM)

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***For general information about mechanical repair related issues, refer to
1220-1333: Generic Repair Manual - mechanical***

Always firstly disconnect the Battery FPC BtB connector to cut off power supply when the Panel Rear is disassembled.

Note: Proximity Calibration always must be performed when Front Assy and Main PBA reassembly, or Front Assy replacement, or Board Swap, or proximity malfunctions; 1289-2983 Sony Mobile Repair Application-mechanical.

Note: Noise Cancelling Calibration always must be performed when FPC Top replacement or Board Swap; 1289-2983 Sony Mobile Repair Application-mechanical.

Note: Gyroscope and Accelerometer Calibration always must be performed when Main PBA reassembly, or Board Swap, or wrong Gyroscope or Accelerometer readouts; 1289-2983 Sony Mobile Repair Application-mechanical.

Note: Color ID Flashing always must be performed when Board Swap or Front Assy replacement; 1289-2983 Sony Mobile Repair Application-mechanical.

Note: Flashing Customize or Refurbish or SUCE script (SU script cannot be used!) in Emma must be performed when replace Loudspeaker (Top) and/or Speaker (Bottom).

Note: Aged Battery Reset in EMMA must be performed when Battery embedded replacement in order to delete battery log data.

If there are no special indications of 'F5122', F5121 and F5122 share the same repair method as common sections

1 Exterior Views

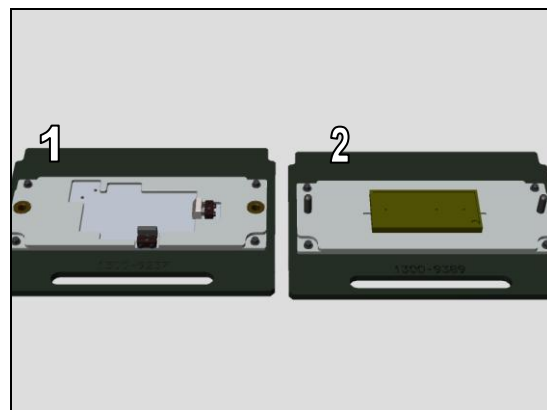
1.1 F5121, F5122



2 Tools

SPECIAL TOOLS

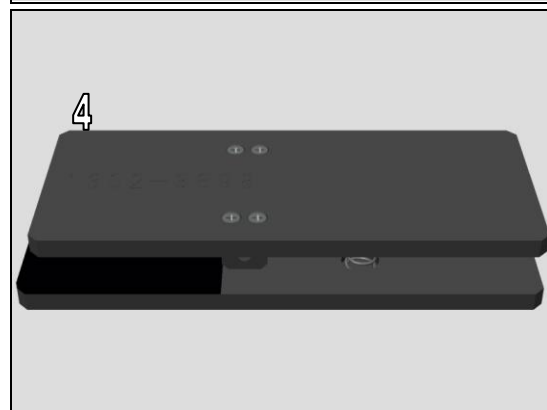
1. Bottom Press Inlay 1300-9237
2. Rear Panel Press Top Inlay 1300-9389



3. Rear Panel Adhesive Alignment Fixture 1300-9503



4. Press Clamp 1302-3698
(For Battery Press)

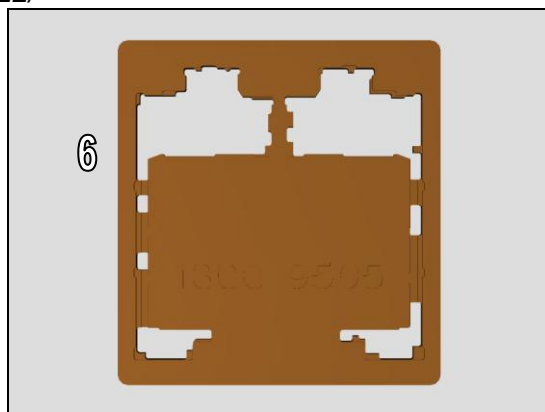


5. Screwdriver JIS 00 1302-7998

For Screw M1x2 assembling.

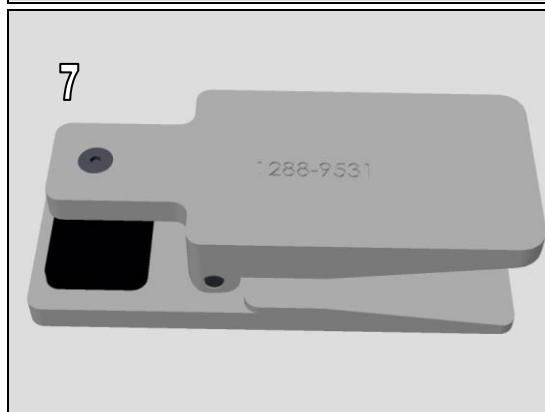


6. Soldering Fixture 1300-9505



7. Press Tool Ear Speaker 1288-9531

For Loudspeaker(Top) and Speaker(Bottom) press.

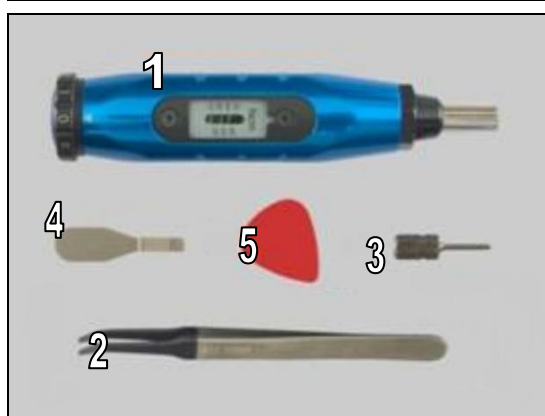


8. Sheet Disassembly A 1295-5578 (Optional)

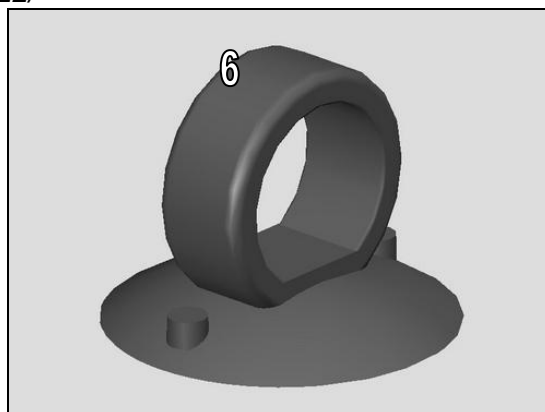


STANDARD TOOLS

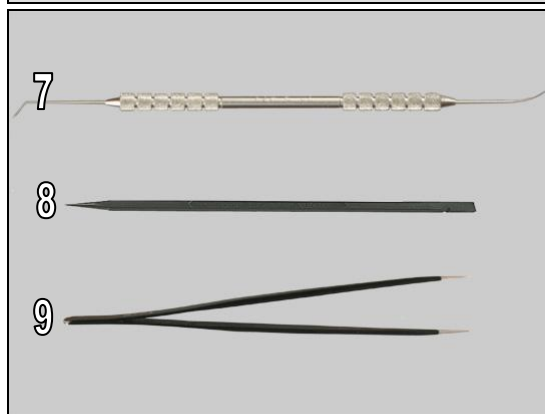
1. Torque Screwdriver
2. Flex Film Assembly Tool
3. Bits JCIS No.0
4. Front Opening Tool
5. Guitar Pick



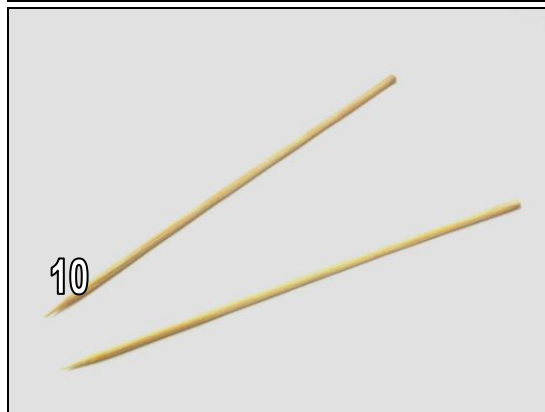
6. Suction cup



7. Dentist Hook
8. Nylon Pointer
9. Tweezers



10. Bamboo Skewer



3 Mandatory Replacement Parts List

The Mandatory Replacement Parts List is embedded.

Click the following icon to open the file.



Targeted replacement parts are listed

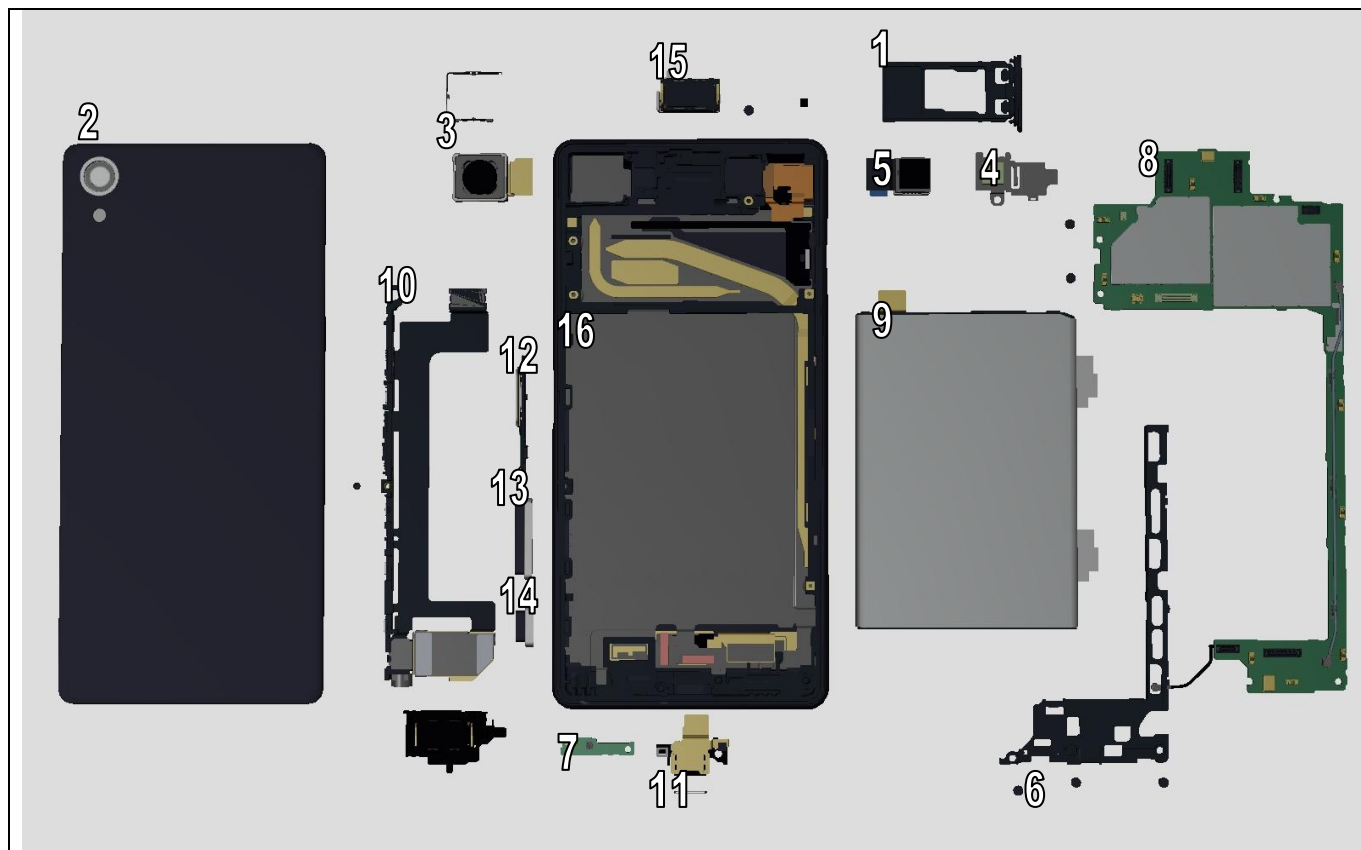
Mandatory replacement part	SPACE	Refurbish	Target replacement part														
			Front Assy	Panel Rear	Cap Tray Assy	FICTIVE Camera 24.5M (Main)	FICTIVE Front Camera	PBA Main	PBA Sub	Battery embedded	FPC Side Key Module	Speaker (Bottom)	FPC USB Module	FP Sensor Assy	Key Volume	Key Cam	Loudspeaker (Top)
Adhesive Back Vol	1301-2355												1				
Adhesive Battery A	1299-7881	2	2							2	2	2		2	2	2	
Adhesive FPC SPK Bot	1299-9645										1	1					
Adhesive Light Guide 3LED	1299-7810	1	1														1
Adhesive Panel Rear	1299-7898	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1
Adhesive Plate SPK	1301-2364										1	1					
Adhesive SPK Bot	1299-7879											1					
Adhesive SPK Bot Duct	1299-7819	1	1									1	1	1			
Adhesive SPK TOP	1299-7818	1	1														1
Battery embedded	1299-8167									1							
Cap Tray Assy (For F5121)																	
Cap Tray Assy Black	1302-4830																
Cap Tray Assy Lime	1302-4832																
Cap Tray Assy Rose	1302-4833																
Cap Tray Assy White	1302-4831	1			1												
(For F5122)																	
Cap Tray Assy DS Black	1302-4834																
Cap Tray Assy DS Lime	1302-4836																
Cap Tray Assy DS Rose	1302-4838																
Cushion Aco	1292-9864	1	1														1
Cushion SPK B	1303-2208										1	1					
Cushion Thermal Front Cam B	1302-4963						1										
Cushion USB	1299-7807												1				
FICTIVE Camera 24.5M	1293-8229					1											
FICTIVE Front Camera	1299-4013						1										
FP Sensor Assy	1302-5132	1												1			
FPC Side Key Module	1296-7099										1						
FPC USB Module	1298-3580	1											1				
Front Assy																	
Front Assy Black	1302-4791		1														
Front Assy White	1302-4795	1															
Front Assy Lime	1302-4798																
Front Assy Rose	1302-4799																
Key Cam																	
Key Cam Black	1299-7870															1	
Key Cam White	1299-9837	1															
Key Cam Lime	1299-9839																
Key Cam Rose	1301-0985																
Key Volume																	
Key Volume Black	1299-7888																
Key Volume White	1299-9832	1													1		
Key Volume Lime	1299-9833																
Key Volume Rose	1301-0974																
Label MoP	1299-9682	1	1					1									
Label NFC	1299-9684	1	1														
Loudspeaker	1287-2024	1	1														1
Panel Rear																	
Panel Rear Sub Assy Black	1299-7899																
Panel Rear Sub Assy Lime	1299-9856																
Panel Rear Sub Assy Rose	1301-0989																
Panel Rear Sub Assy White	1299-9855	1		1													
(For India)																	
Panel Rear Sub Assy IN Black	1303-8542																
Panel Rear Sub Assy IN Lime	1303-8544																
Panel Rear Sub Assy IN Rose	1303-8545																
PBA Main								1									
PBA Sub	1296-5456								1								
Plate Holder Speaker	1299-7880										1	1					
Screw M1.4x4.5	1299-9676	3	3					3	3	3	3	3	3	3	3	3	3
Screw M1X2	1300-0033	1	1								1	3		1	1	1	
Screw Other Len:2.6 Diam:1.4	1270-3154	3	3				1	3		3	3	3	3	3	3	3	3
Sheet Gasket FPC	1299-9625										3	3	1	3	3	3	
Sheet MoP Tray	1299-7852	1	1					1									
Speaker	1277-7139											1					
Thermal Gap Filler Syringe	1299-2102	1	1					1									
Thermal Gap Filler Tube	1299-2103	1	1					1									

Mandatory replacement parts for refurbishment.

Parts that is required to replace in addition to target replacement parts.

Number in the cells indicates parts require replacing for target part.

4 Disassembly



The disassembly is done in the following order:

1. Cap Tray Assy
2. Adhesive Panel Rear & Panel Rear
3. Holder Main Camera & Main Camera & Shield Camera (optional)
4. Cushion Thermal Front Cam & Plate JK & Screw Other Len:2.6 Diam:1.4
5. Cushion Thermal Front Cam B & Front Camera & Holder Front Camera
6. Adhesive Plate Holder Battery & Holder Battery & Plate Holder Battery & Screw M1.4x4.5
7. PBA Sub
8. PBA Main & RF Cable P & RF Cable S
9. Adhesive Battery A & Battery embedded
10. Adhesive SPK Bot Duct & FPC Side Key & Screw M1x2
- 10.1 Adhesive FPC SPK Bot & Adhesive Plate SPK & Cushion SPK B & Plate Holder Speaker.
- 10.2 Adhesive SPK Bot & Holder Speaker & Speaker & Sheet SPK Back Vol
11. Adhesive Back Vol & Cushion USB & FPC USB & Sheet Gasket FPC
12. FP Sensor Assy
13. Key Volume
14. Key Cam
15. Adhesive Light Guide 3LED & LightGuide 3LED & Adhesive SPK Top & Loudspeaker & Cushion Aco
16. Front Assy & MoP Tray

4.1 Cap Tray Assy

Remove Cap Tray Assy.



4.2 Adhesive Panel Rear & Panel Rear

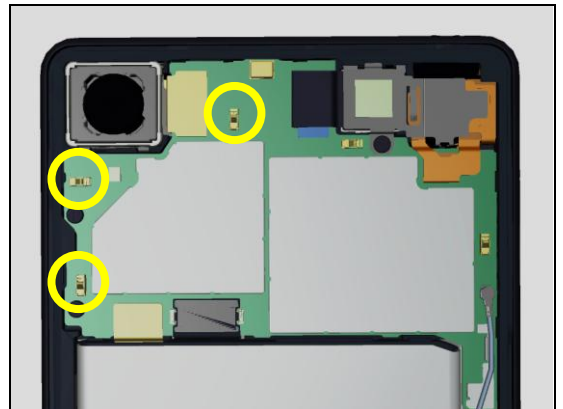
Note! Before disassemble Panel Rear, check if it has any damages such as dimple/dent.

Due to dimple/dent of the Panel Rear Sub Assy, the battery might be damaged.

Check the battery condition to follow the 4.9 Disassembly instructions.



Note! Under Panel Rear, there are several spring pins that make contact with Panel Rear. Make sure not to damage them during disassembling.



Spring pins at Bottom area.



Put Suction cup on Panel Rear and pull up to make a gap between Panel Rear and the phone unit.

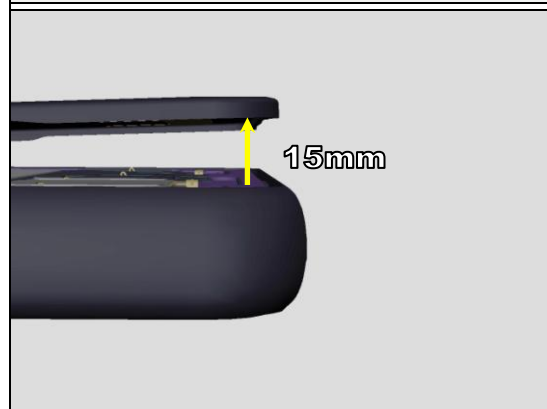
If it has difficulty to make a gap at one side, try the other sides of the phone unit.



Keep pulling up until Panel Rear slightly opens.



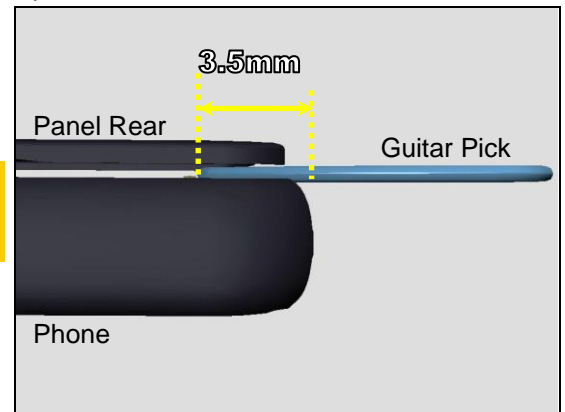
Do not pull up more than 15 mm otherwise Panel Rear would be bent.



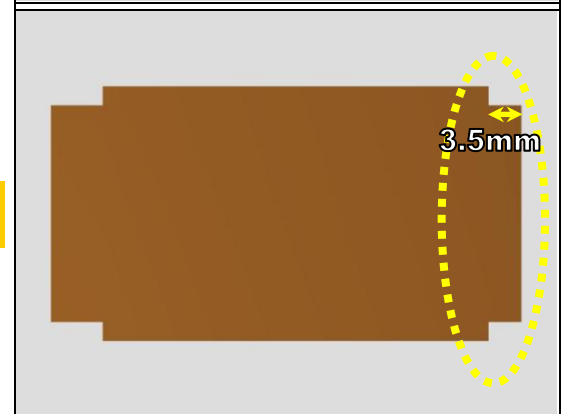
Insert Guitar Pick.



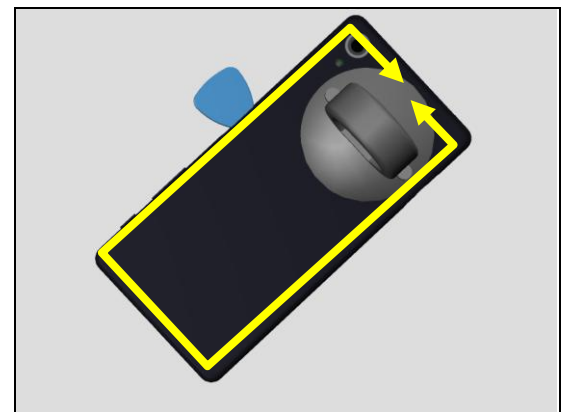
In order to avoid any damage on spring pins, make sure not to insert Guitar Pick more than 3.5mm from the rim of Panel Rear.



You can also utilize circled area of Sheet Disassembly A to be much safer.



Gently slide Guitar Pick along the perimeter of Panel Rear.

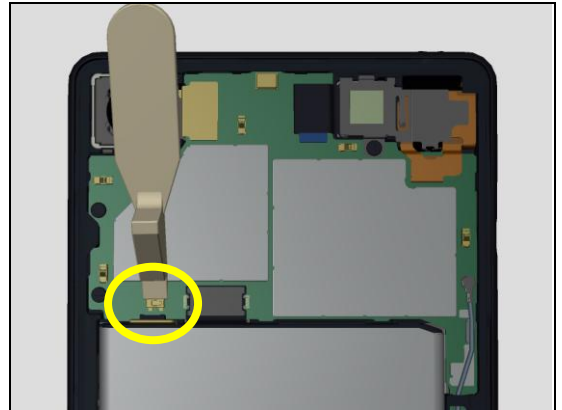


Remove Panel Rear.

Scrap! Do not reuse Adhesive Panel Rear.



Disconnect Battery Embedded connector right after disassembling Panel Rear.

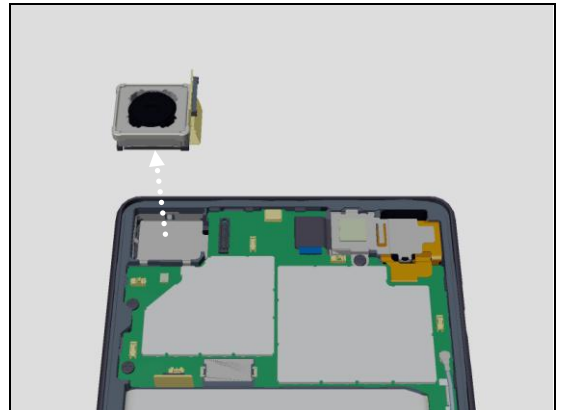


4.3 Holder Main Camera & Main Camera

Disconnect Main Camera connector.



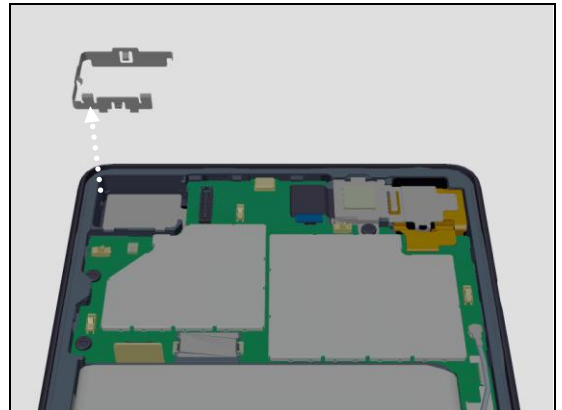
Remove Main Camera along with Holder Main Camera.



4.3.1 Shield Camera

Remove Shield Camera.

If there is no defect in Shield Camera, you can skip this chapter.



4.4 Cushion Thermal Front Cam & Plate JK & Screw Other Len:2.6 Diam:1.4

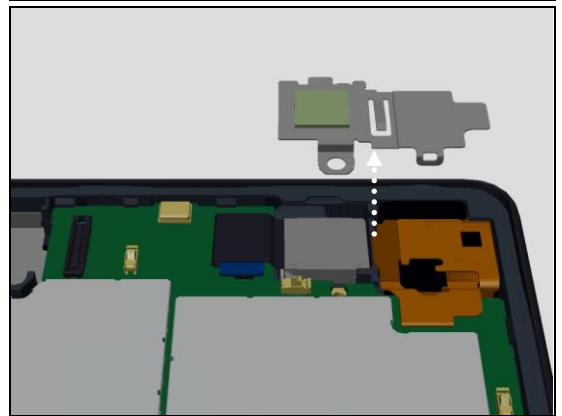
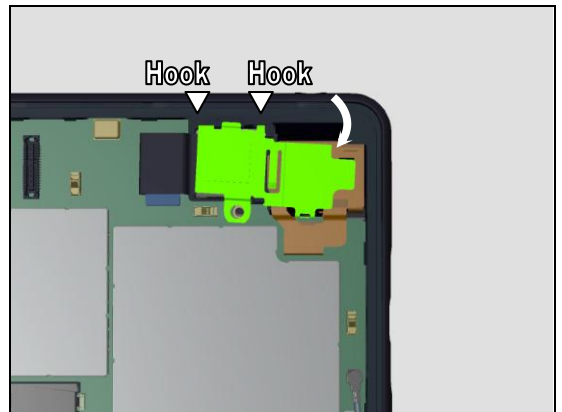
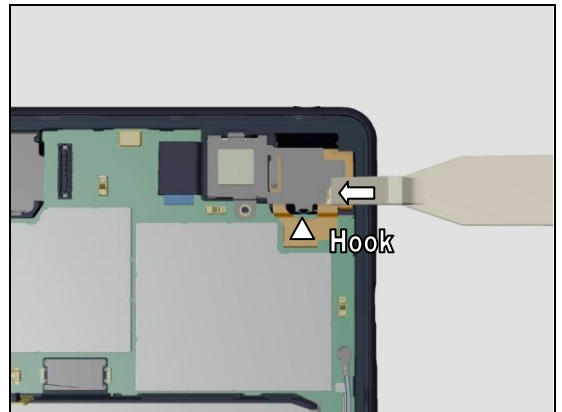
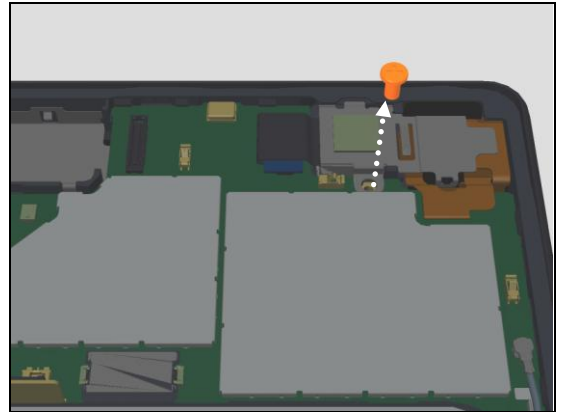
Remove a Screw Other Len:2.6 Diam:1.4 on Plate JK.

Scrap! Do not reuse the screw.

Insert Front Opening Tools beneath Plate JK.
Carefully slide the tool to the left to release the hook.

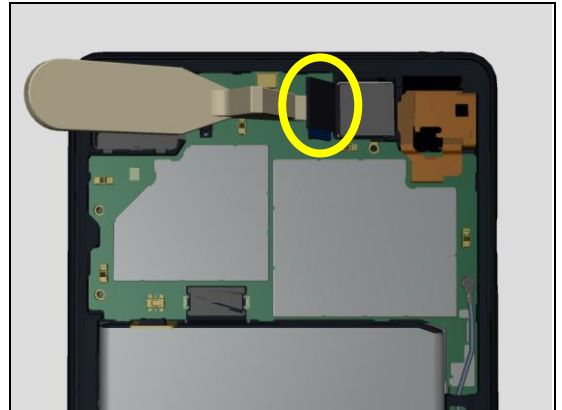
When the first hook is removed, carefully tilt the Plate JK to release the upper hooks.

Remove Plate JK along with Cushion Thermal Front Cam.

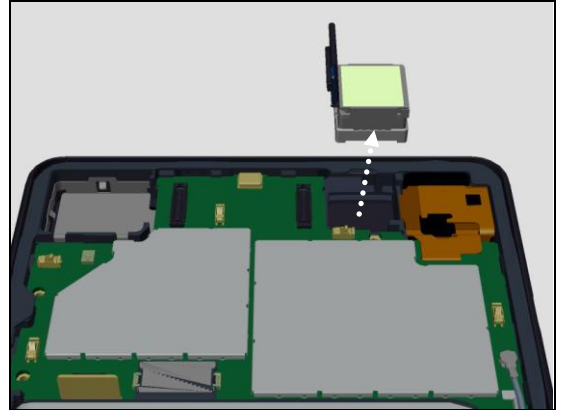


4.5 Cushion Thermal Front Cam B & Front Camera & Holder Front Camera

Disconnect Front Camera connector.



Remove Front Camera along with Cushion Thermal Front Cam B and Holder Front Camera.



4.6 Adhesive Plate Holder Battery & Holder Battery & Plate Holder Battery & Screw M1.4x4.5

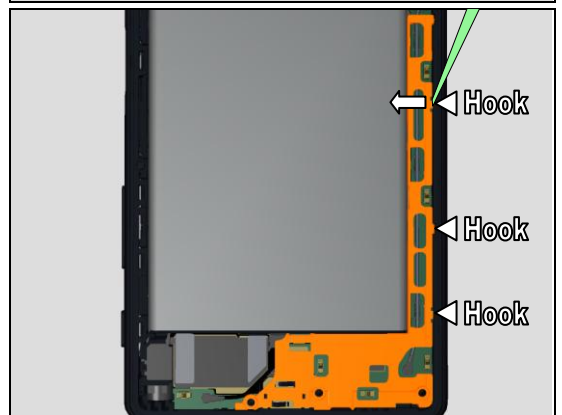
Remove Screw M1.4x4.5.

Scrap! Do not reuse the screws.



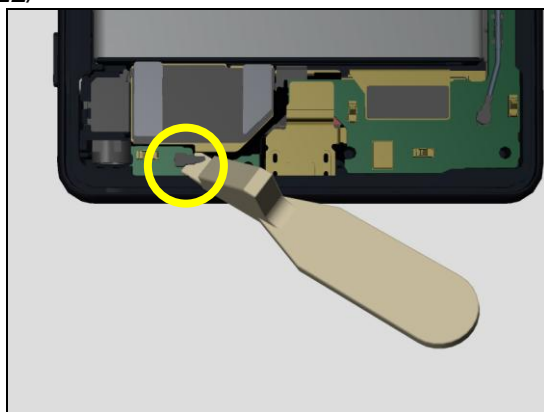
Releasing hooks of Holder Battery, remove Holder Battery along with Adhesive Plate Holder Battery and Plate Holder Battery.

Be careful not to remove PBA Main here.

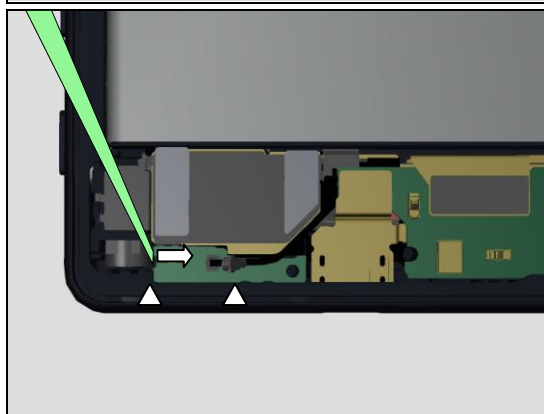


4.7 PBA Sub

Disconnect the RF Cable P connector.

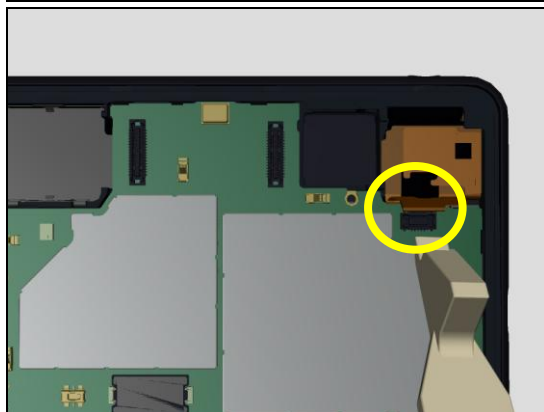


Nudge PBA Sub as the arrow shows.
Remove PBA Sub.

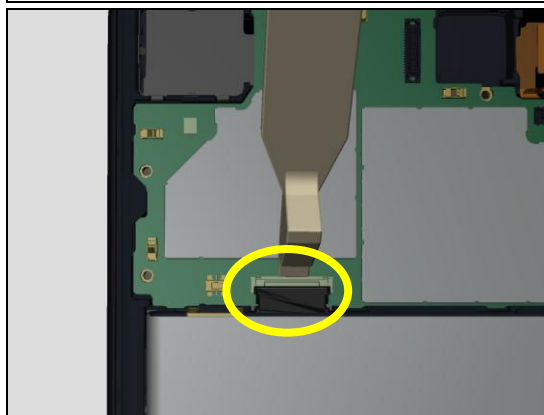


4.8 PBA Main & RF Cable P & RF Cable S

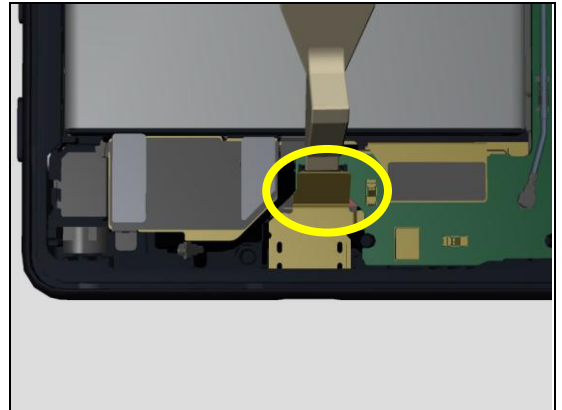
Disconnect the FPC connector of Audio Jack.



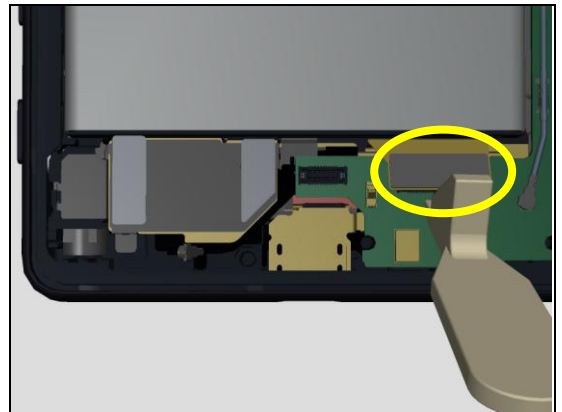
Disconnect the FPC Side Key connector.



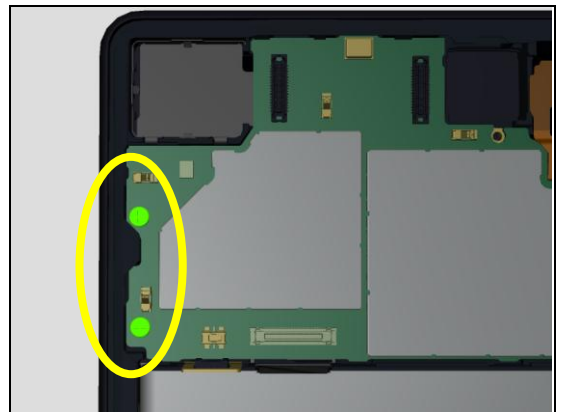
Disconnect the FPC USB connector.



Disconnect the LCD FPC connector of Front Assy



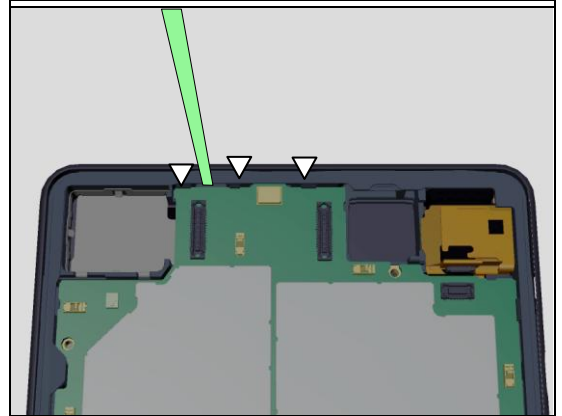
Remove two Screw Other Len:2.6 Diam:1.4 on PBA Main.



Insert Tweezers into the shown gap between PBA Main and Front Assy to release the hooks at upper area.

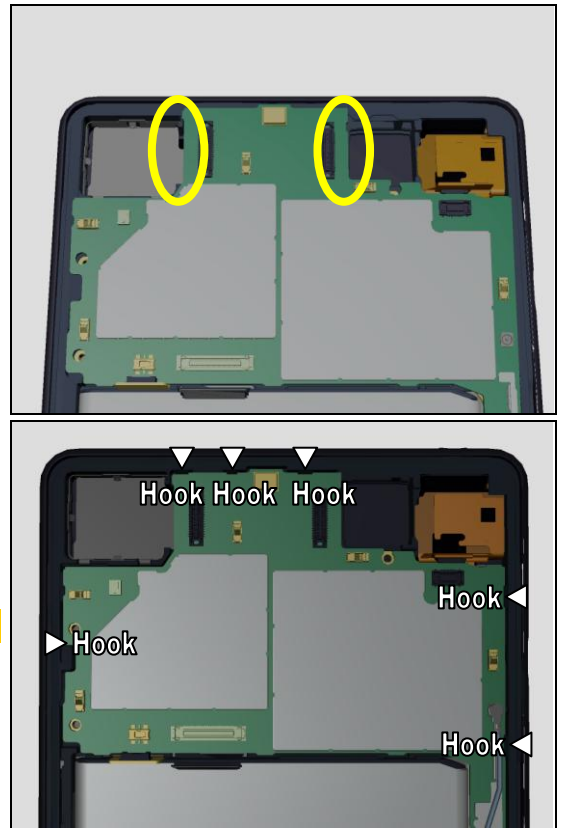
Make sure Cap Tray Assy is already removed, otherwise it makes disassembling PBA impossible.

Do not damage components on PBA Main.



Holding the shown area, remove PBA Main along with RF Cable P and RF Cable S.

Be careful of Hook area.



4.9 Adhesive Battery A & Battery embedded

Place Bamboo Skewer on the tab of Adhesive Battery.
Pinch the tab of Adhesive Battery with fingers.

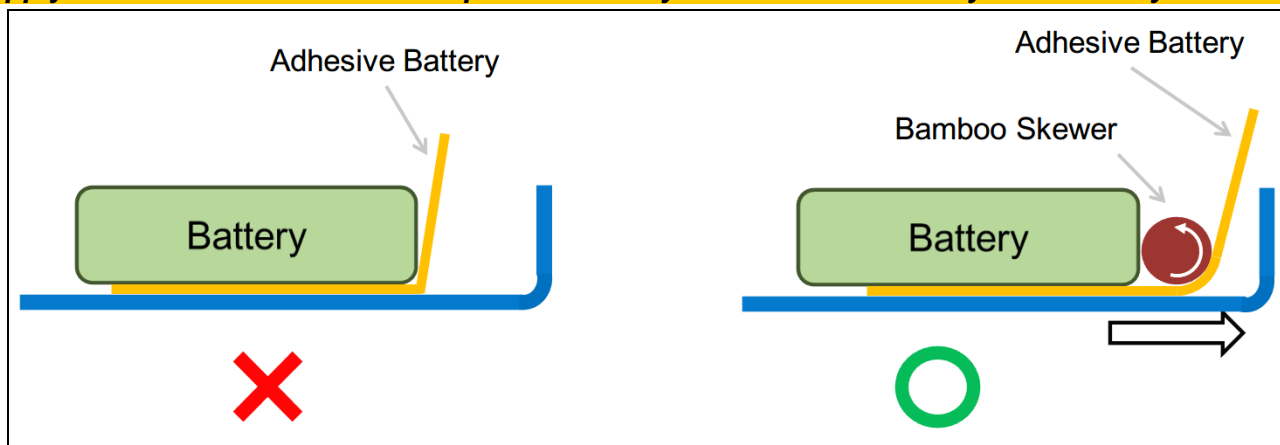
Pull Adhesive Battery gently, and rotate Bamboo Skewer simultaneously.

Steady the Battery with a finger during pulling out the Adhesive Battery.



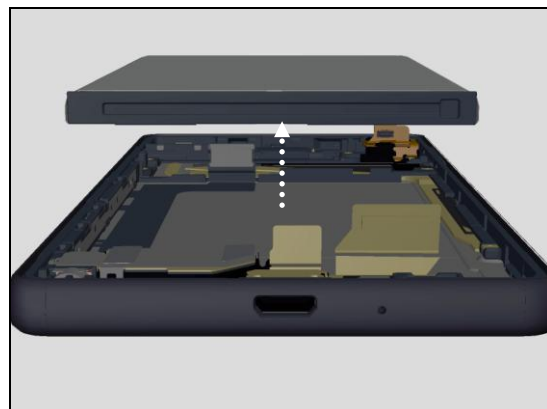
To avoid snapping of Adhesive Battery, do not pull to up-right direction.

Apply Bamboo Skewer in order to pull the Battery adhesive horizontally from Battery.



Remove Battery embedded.

Scrap! Do not reuse Adhesive Battery.



REUSE INSTRUCTION

If you intend to reuse the Battery, carefully check the followings.

If it is failed, scrap the Battery. Do not reuse it.

BATTERY HANDLING NOTICES

1. Don't damage the battery foil with sharp objects.
2. Don't twist or deform the battery in any way.
3. If the battery is dropped to floor, should not be used, and scrap.
4. Hold the battery at the frame edges of battery (green circled portion).



DOT MARKING CHECK

1. Check if the Battery (which has been removed from the unit) has blue/red or black/red dot marking.

Do not reuse, if the Battery has four blue/red or black/red dot markings in all, and scrap it.

Blue and black dot indicates Battery had been removed from the unit, and red dot indicates Battery had been reinstalled (reused).

Scrap! If the battery has four blue/red or black/red dot markings in all, it can't be reused more than three times.



2. If no dot marking or two dot markings on the Battery, put black dot marking with permanent pen.



SONY

Working Instruction Repair Instruction Mechanical/F5121, F5122/ COSMETIC CHECK

1. Check if the Battery has any physical damages such as deformed, bent, dent, dimple, bubbles, swelled, pinholes, punctures, wrinkles, lifting of aluminum foil, glue overflowed, and so on.

Scrap! If the Battery has damages.

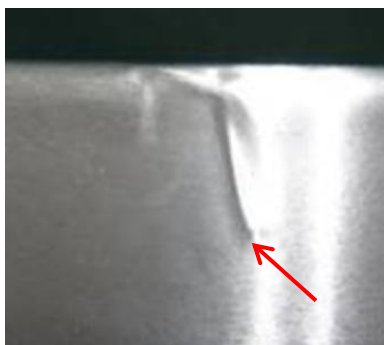
2. Remove any foreign materials from the battery surface by cloth wiping or pressure air.

If any foreign materials are stuck on the battery permanently and could not be removed, scrap the Battery.

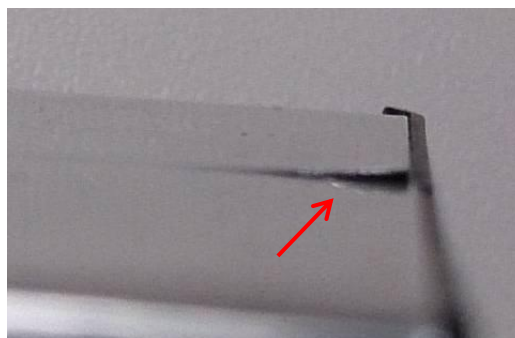
Sample of failures



Bubble

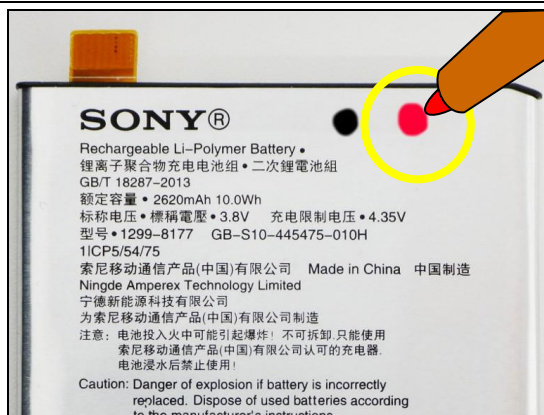


Wrinkle



Lifting

3. If no failure has been detected by above appearance check, put the red dot marking on the Battery with permanent pen for reinstalling (reuse).



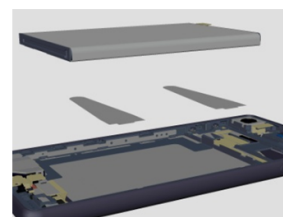
Overall procedure for Battery Reusing

Check if battery has dots marking.

Put black dot.

Put red dot.

Install on the unit.



4.10 Adhesive SPK Bot Duct & FPC Side Key & Screw M1x2

Remove Screw M1x2 with Screwdriver JIS 00.

Scrap! Do not reuse the screw.

Release the hooks on FPC Side Key.

Release the BtoB connector to FP Sensor Assy hidden inside the circle.

Holding the Holder Speaker, remove FPC Side Key along with Plate Holder Speaker and Holder Speaker and Speaker.

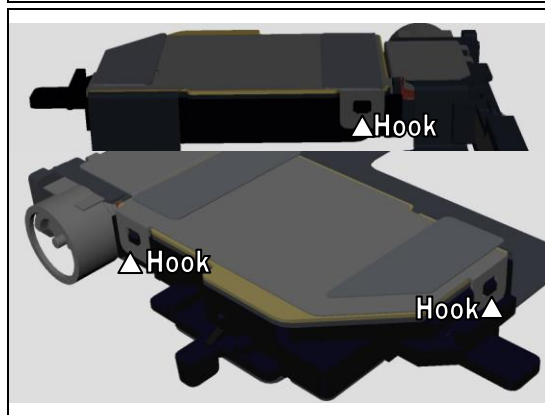
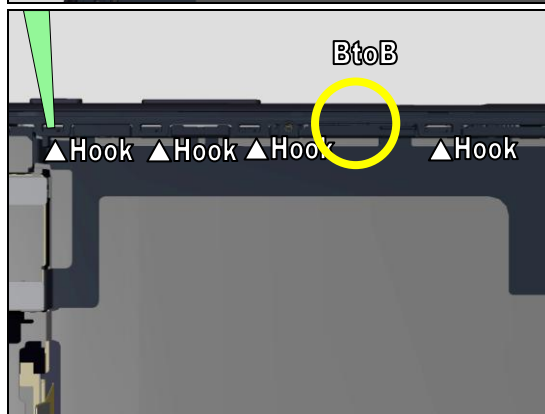
Scrap! Do not reuse Adhesive SPK Bot Duct.

Scrap! Do not reuse Adhesive Back Vol (on FPC USB).

4.10.1 Adhesive FPC SPK Bot & Adhesive Plate SPK & Cushion SPK B & Plate Holder Speaker

Release three hooks of Plate Holder Speaker

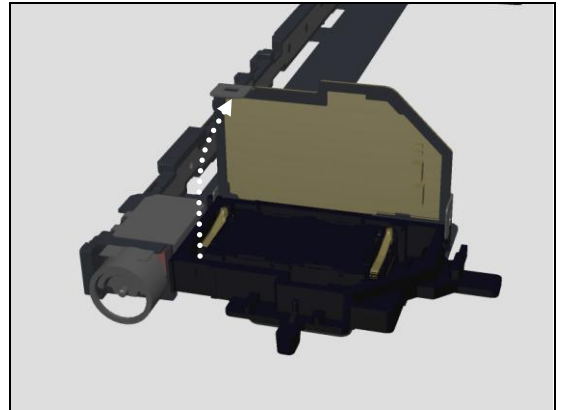
If there is no defect in FPC Side Key and Speaker, you can skip this chapter.



Detach FPC area which makes contact with Speaker from Holder Speaker.

Remove Holder Speaker along with Speaker.

Scrap! Do not reuse Adhesive FPC SPK Bot, Adhesive Plate SPK, Cushion SPK B, and Plate Holder Speaker.



4.10.2 Adhesive SPK Bot & Holder Speaker & Speaker & Sheet SPK Back Vol

Remove Speaker.

Scrap! Do not reuse Adhesive SPK Bot and Speaker.

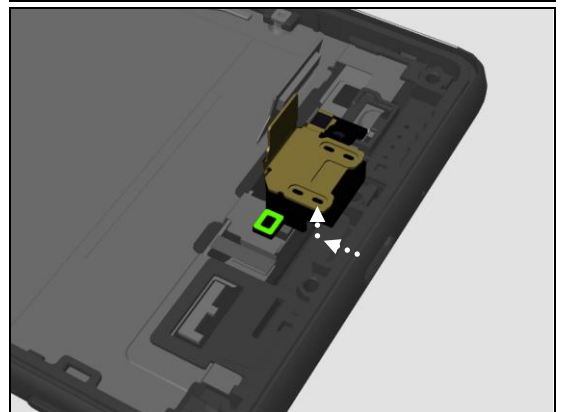
If there is no defect in Speaker, you can skip this chapter.



4.11 Adhesive Back Vol & Cushion USB & FPC USB & Sheet Gasket FPC

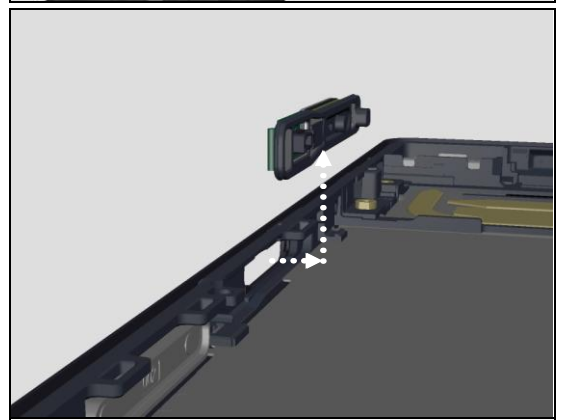
Remove FPC USB.

Scrap! Do not reuse Adhesive Back Vol (highlighted).



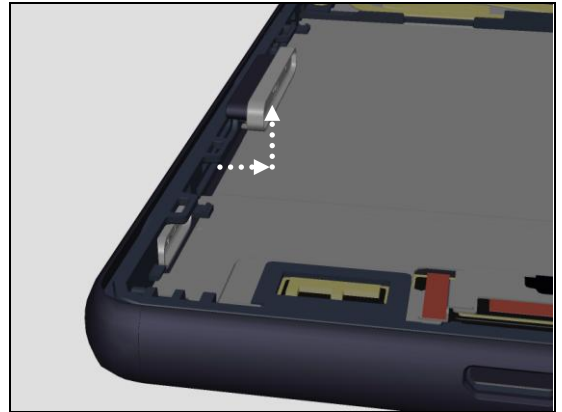
4.12 FP Sensor Assy

Remove FP Sensor Assy.



4.13 Key Volume

Remove Key Volume.



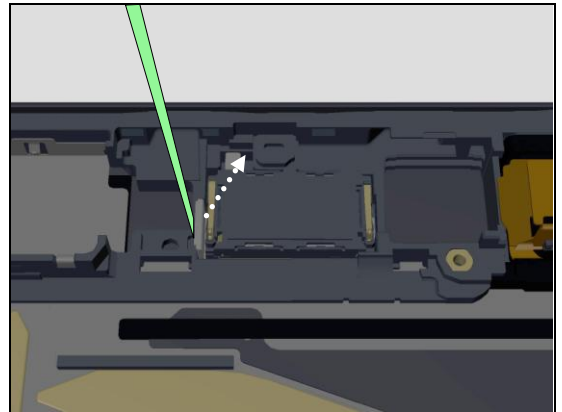
4.14 Key Cam

Remove Key Cam.

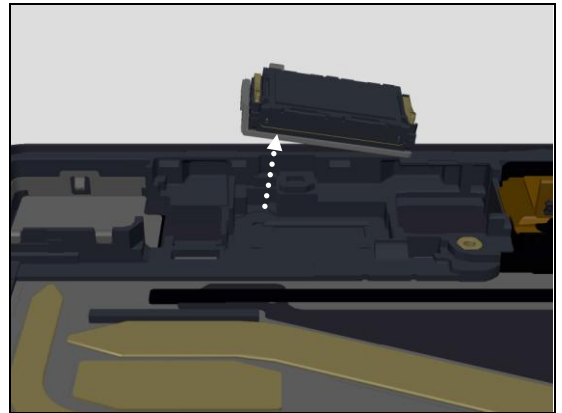


4.15 Adhesive Light Guide 3LED & LightGuide 3LED

Insert Flex Film Assembly Tool into the shown ditch.



Remove LightGuide 3LED along with Loudspeaker and Cushion ACO.



Scrap! Do not reuse Adhesive Light Guide 3LED.

4.15.1 Adhesive SPK Top & Loudspeaker & Cushion Aco

Remove Loudspeaker.

Scrap! Do not reuse Adhesive SPK Top, Loudspeaker and Cushion Aco.

If there is no defect in Speaker, you can skip this chapter.



5 Replacement

5.1 Cap Tray Assy

Follow the 4.1 Disassembly instructions!

Prepare new Cap Tray Assy.

Follow the 6.30 Reassembly instructions!



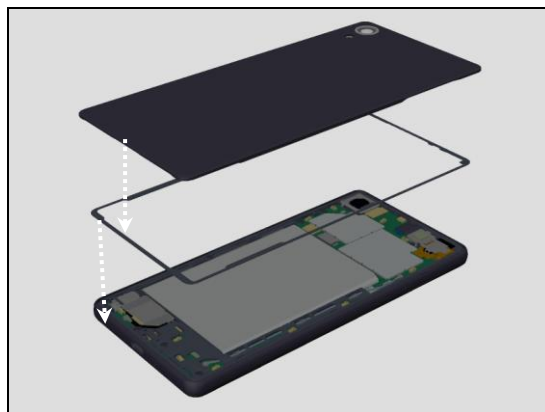
5.2 Adhesive Panel Rear & Panel Rear

Follow the 4.1, 2 Disassembly instructions!

Prepare new Adhesive Panel Rear and Panel Rear.

Follow the 6.28-30 Reassembly instructions!

Scrap! Do not reuse Adhesive Panel Rear.



5.2.1 Cushion Camera

Follow the 4.1, 2 Disassembly instructions!

Prepare new Cushion Camera.

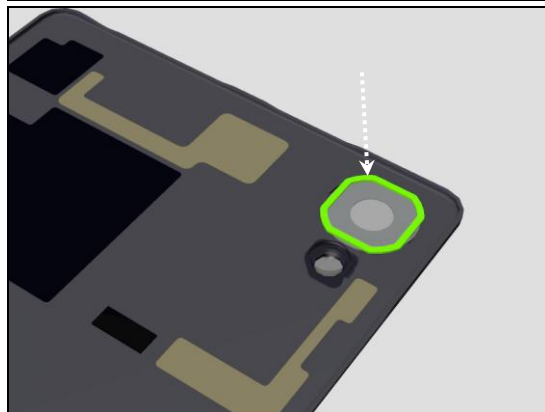
Remove and clean the old Cushion Camera.

Paste the new Cushion Camera.

Follow the 6.28-30 Reassembly instructions!

Scrap! Do not reuse Cushion Camera.

This part is initially included in Panel Rear.

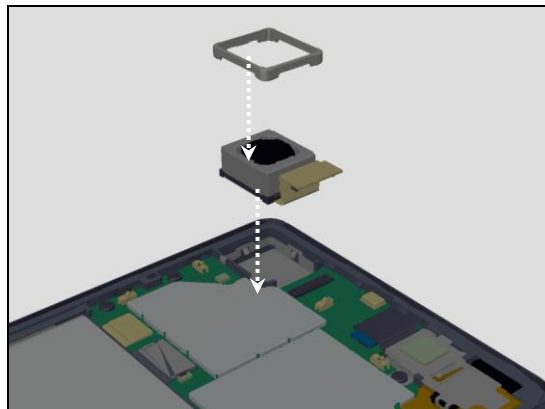


5.3 Holder Main Camera or Main Camera

Follow the 4.1, 2 Disassembly instructions!

Prepare new Holder Main Camera or Main Camera.

Follow the 6.21, 28-30 Reassembly instructions!

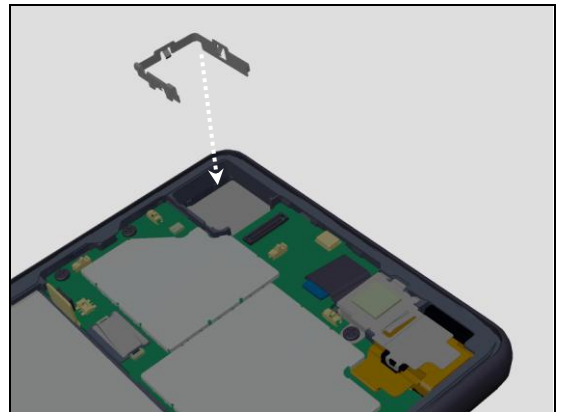


5.3.1 Shield Camera

Follow the 4.1, 2 Disassembly instructions!

Prepare new Shield Camera.

Follow the 6.21, 28-30 Reassembly instructions!



5.4 Cushion Thermal Front Cam & Plate JK & Screw Other Len:2.6 Diam:1.4

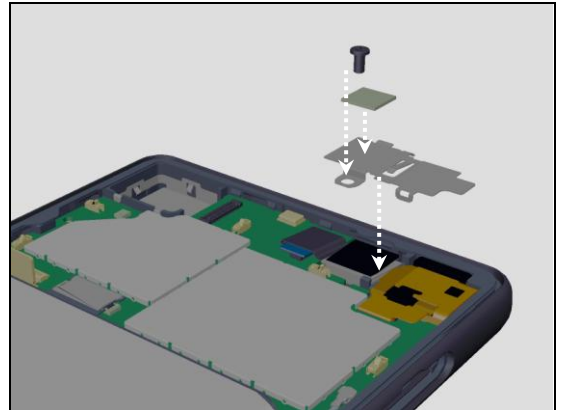
Follow the 4.1, 2 Disassembly instructions!

Prepare new Cushion Thermal Front Cam and Plate JK and Screw Other Len:2.6 Diam:1.4

Follow the 6.19, 20, 28-30 Reassembly instructions!

Scrap! Do not reuse Cushion Thermal Front Cam when it is removed from Plate JK.

Scrap! Do not reuse Screw Other Len:2.6 Diam:1.4.



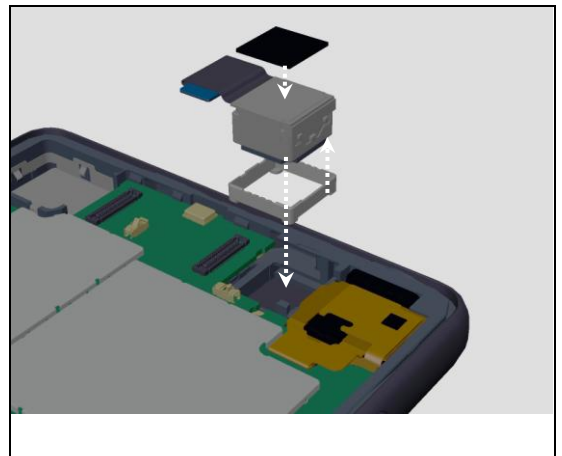
5.5 Front Camera & Cushion Thermal Front Cam B, or Holder Front Camera

Follow the 4.1, 2, 4, 5 Disassembly instructions!

Prepare new Front Camera and Cushion Thermal Front Cam B or Holder Front Camera.

Follow the 6.18- 20, 28-30 Reassembly instructions!

Scrap! Do not reuse Cushion Thermal Front Cam B when it is removed from Front Camera.



5.6 Holder Battery, or Adhesive Plate Holder Battery & Plate Holder Battery & Screw M1.4x4.5

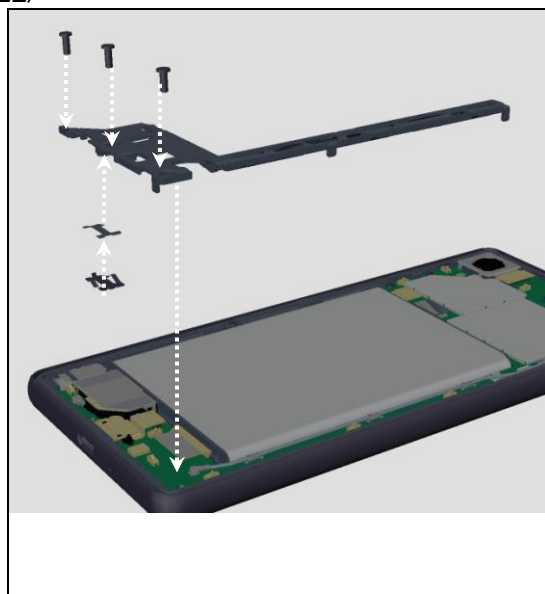
Follow the 4.1, 2, 6 Disassembly instructions!

Prepare new Holder Battery or Adhesive Plate Holder
Battery & Plate Holder Battery & Screw M1.4x4.5

Follow the 6.23-25, 28-30 Reassembly instructions!

**Scrap! Do not reuse Adhesive Plate Holder Battery and
Plate Holder Battery when they are removed from
Holder Battery.**

Scrap! Do not reuse Screw M1.4x4.5.

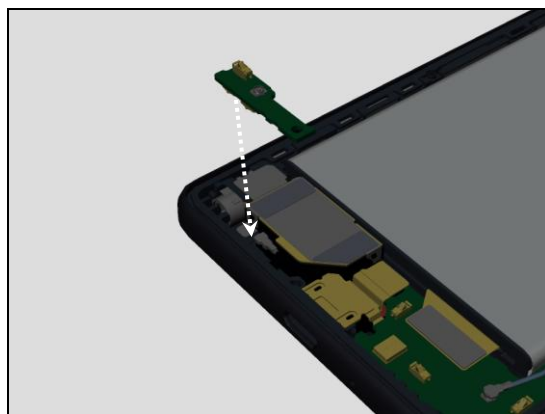


5.7 PBA Sub

Follow the 4.1, 2, 6, 7 Disassembly instructions!

Prepare new PBA Sub.

Follow the 6.22-26, 28-30 Reassembly instructions!



5.8 PBA Main, RF Cable P or RF Cable S

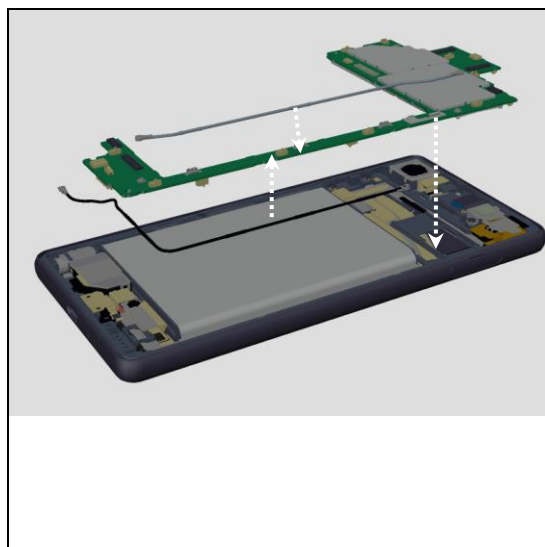
Follow the 4.1-8 Disassembly instructions!

Prepare new PBA Main, RF Cable P or RF Cable S.

Follow the 6.15-26, 28-30 Reassembly instructions!

**Note! Thermal Gap Filler must be re-applied in case of
PBA replacement!**

**Proximity, Noise Cancelling, Gyroscope and
Accelerometer Calibration and Color ID Flashing must
be performed for all replaced units; 1289-2983 Trouble
Shooting Application – mechanical.**



5.9 Battery embedded & Adhesive Battery A

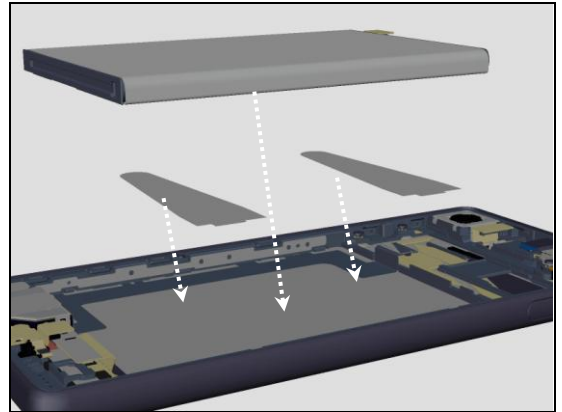
Follow the 4.1-9 Disassembly instructions!

Prepare new Battery embedded & Adhesive Battery A.

Follow the 6.14, 17-30 Reassembly instructions!

Scrap! Do not reuse Adhesive Battery A.

Aged Battery Reset in EMMA must be performed in case of Battery embedded replacement in order to delete battery log data.



5.10 FPC Side Key & Adhesive SPK Bot Duct & Screw M1x2

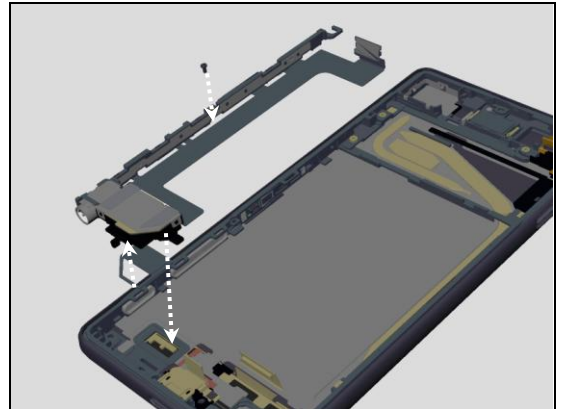
Follow the 4.1-10.2 Disassembly instructions!

Prepare new FPC Side Key & Adhesive SPK Bot Duct & Screw M1x2

Follow the 6.10-12, 14, 17-30 Reassembly instructions!

Scrap! Do not reuse Adhesive SPK Bot Duct and Screw M1x2.

Scrap! Do not reuse Adhesive Back Vol (on FPC USB).



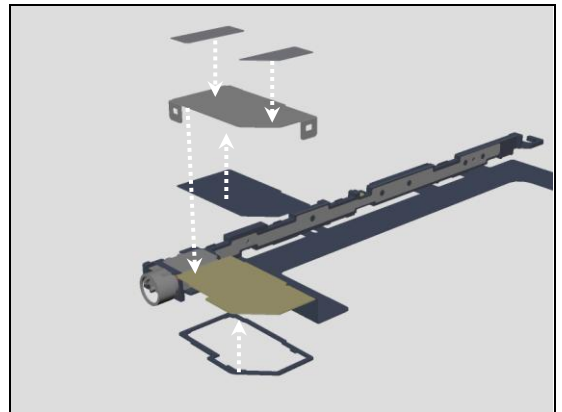
5.10.1 Adhesive FPC SPK Bot & Adhesive Plate SPK & Cushion SPK B & Plate Holder Speaker

Follow the 4.1-10.2 Disassembly instructions!

Prepare new Adhesive FPC SPK Bot, Adhesive Plate SPK, Cushion SPK B and Plate Holder Speaker

Follow the 6.9-11, 14, 17-30 Reassembly instructions!

Scrap! Do not reuse Adhesive FPC SPK Bot, Adhesive Plate SPK, Cushion SPK B and Plate Holder Speaker.



5.10.2 Speaker & Adhesive SPK Bot, or Holder Speaker & Sheet SPK Back Vol

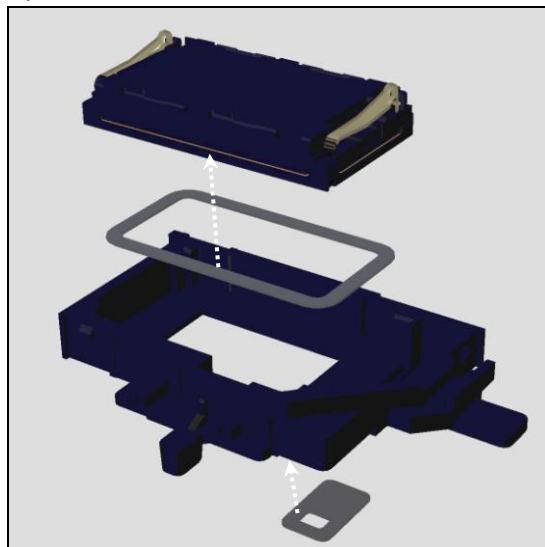
Follow the 4.1-10.2 Disassembly instructions!

Prepare new Speaker and Adhesive SPK Bot, or Holder Speaker and Sheet SPK Back Vol

Follow the 6.9-12, 14, 17-30 Reassembly instructions!

Scrap! Do not reuse Speaker and Adhesive SPK Bot and Sheet SPK Back Vol

Important! After replacing Speaker, flash the phone by Customize or Refurbish or SUCE (not SU) in EMMA.



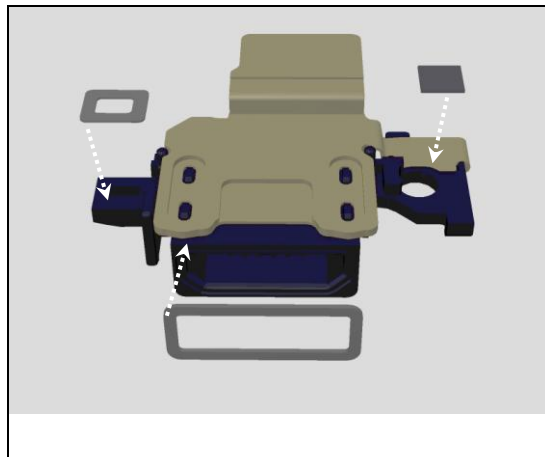
5.11 FPC USB & Adhesive Back Vol & Cushion USB & Sheet Gasket FPC

Follow the 4.1-11 Disassembly instructions!

Prepare new FPC USB, Adhesive Back Vol, Cushion USB and Sheet Gasket FPC

Follow the 6.2, 3, 9-12, 14, 17-30 Reassembly instructions!

Scrap! Do not reuse Adhesive Back Vol, Cushion USB and Sheet Gasket FPC.

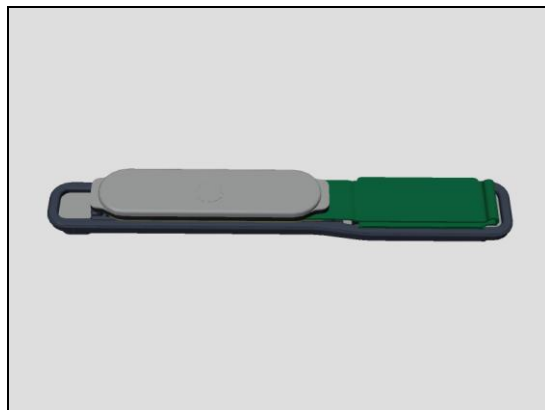


5.12 FP Sensor Assy

Follow the 4.1-10, 12 Disassembly instructions!

Prepare new FP Sensor Assy.

Follow the 6.7, 9-12, 14, 17-30 Reassembly instructions!

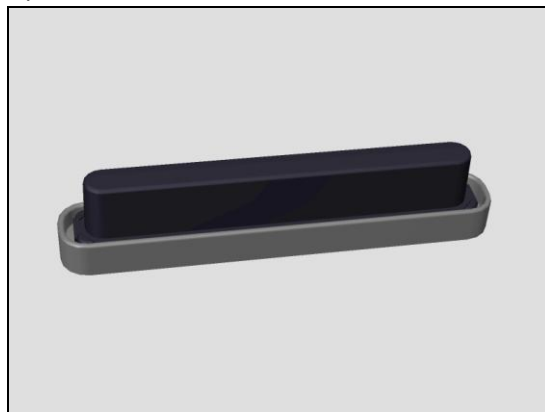


5.13 Key Volume

Follow the 4.1-10, 13 Disassembly instructions!

Prepare new FP Sensor Assy.

Follow the 6.8-12, 14, 17-30 Reassembly instructions!

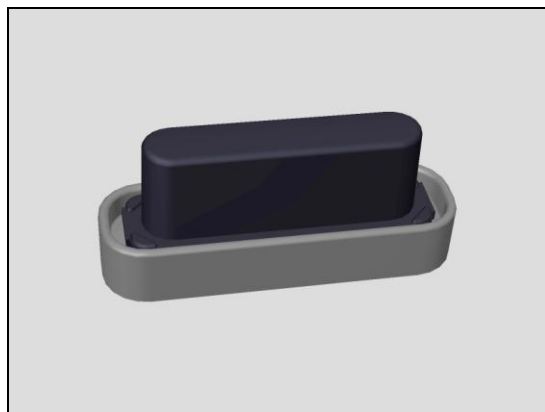


5.14 Key Cam

Follow the 4.1-10, 14 Disassembly instructions!

Prepare new FP Sensor Assy.

Follow the 6.8-12, 14, 17-30 Reassembly instructions!



5.15 LightGuide 3LED & Adhesive Light Guide 3LED

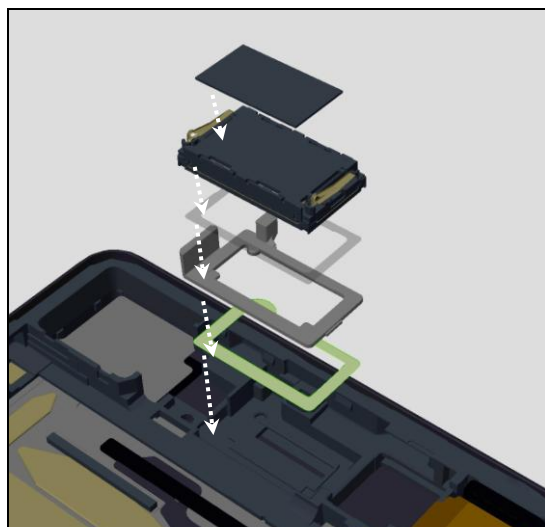
Follow the 4.1-8, 15.1 Disassembly instructions!

Prepare new LightGuide 3LED, Adhesive Light Guide 3LED, Loudspeaker, Adhesive SPK Top and Cushion Aco.

Follow the 6.4-6, 17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Adhesive Light Guide 3LED, Loudspeaker, Adhesive SPK Top and Cushion ACO.

Important! After replacing Loudspeaker, flash the phone by Customize or Refurbish or SUCE (not SU) in EMMA.



5.15.1 Loudspeaker & Adhesive SPK Top & Cushion Aco

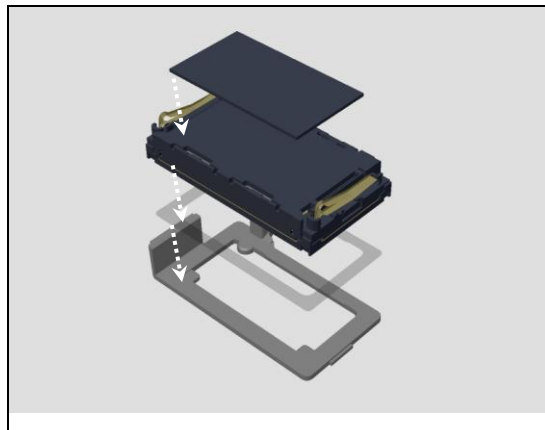
Follow the 4.1-8, 15.1 Disassembly instructions!

Prepare new Loudspeaker, Adhesive SPK Top and Cushion Aco.

Follow the 6.4-6, 17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Loudspeaker, Adhesive SPK Top and Cushion ACO.

Important! After replacing Loudspeaker, flash the phone by Customize or Refurbish or SUCE (not SU) in EMMA.



5.16 Front Assy

Follow the 4.1-15 Disassembly instructions!

Prepare new Front Assy.

Follow the 6.1-31 Reassembly instructions!

Note! Thermal Gap Filler must be re-applied in case of Front Assy replacement!



5.16.1 Cushion 1st MIC

Follow the 4.1-8 Disassembly instructions!

Prepare new Cushion 1st MIC.

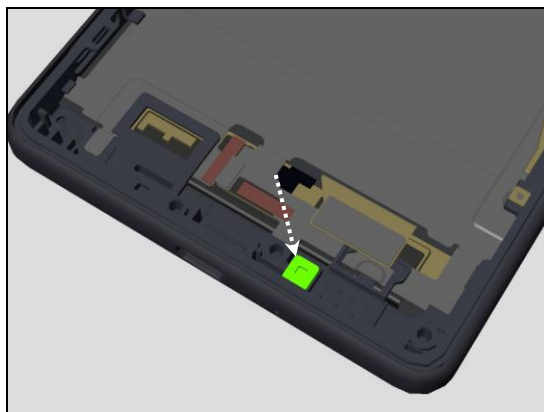
Remove and clean the old Cushion 1st MIC.

Paste the new Cushion 1st MIC.

Follow the 6.17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Cushion 1st MIC.

This part is initially included in Front Assy.



5.16.2 Cushion 2nd MIC

Follow the 4.1-8 Disassembly instructions!

Prepare new Cushion 2nd MIC.

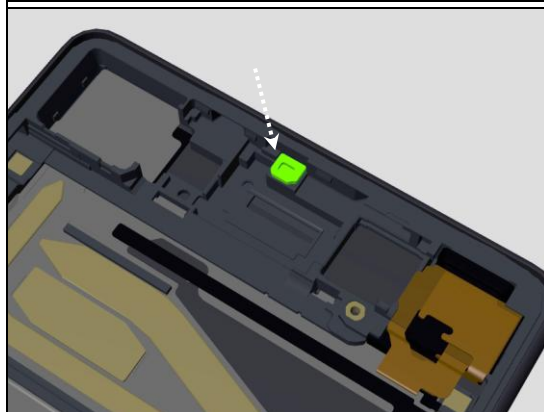
Remove and clean the old Cushion 2nd MIC.

Paste the new Cushion 2nd MIC.

Follow the 6.17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Cushion 2nd MIC.

This part is initially included in Front Assy.



5.16.3 Sheet Guide MoP & Water Indicator

Follow the 4.1-8 Disassembly instructions!

Prepare new Sheet Guide MoP and Water Indicator.

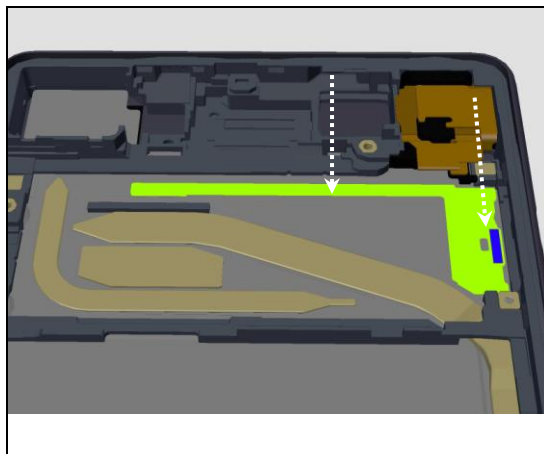
Remove and clean the old Sheet Guide MoP.

Paste the new Sheet Guide MoP and Water Indicator.

Follow the 6.13, 17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Sheet Guide MoP and Water Indicator.

These parts are initially included in Front Assy.



5.16.4 Sheet MSM

Follow the 4.1-8 Disassembly instructions!

Prepare new Sheet MSM.

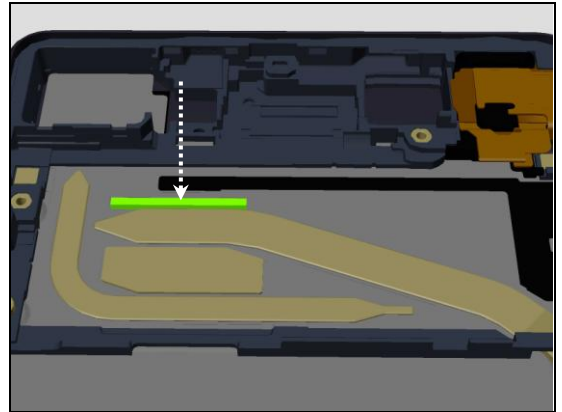
Remove and clean the old Sheet MSM.

Paste the new Sheet MSM.

Follow the 6.17-26, 28-30 Reassembly instructions!

Scrap! Do not reuse Sheet MSM.

These parts are initially included in Front Assy.



5.17 Label MoP

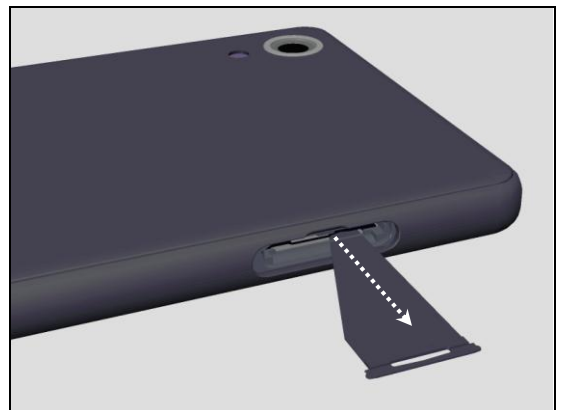
Prepare new Label MoP printed.

Remove Cap Tray Assy.

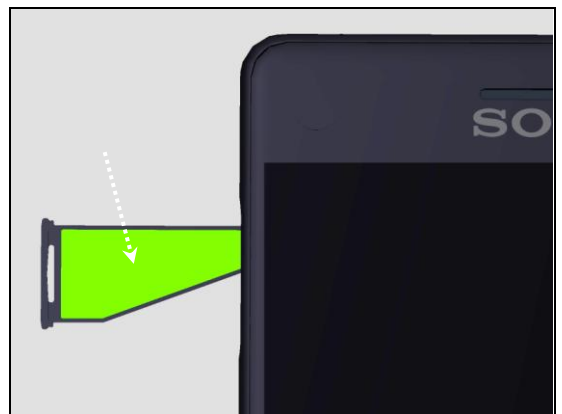


Pull out Sheet MoP Tray.

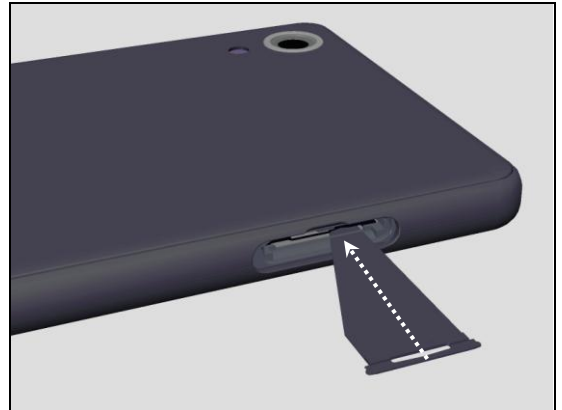
Remove the old Label MoP



Paste the new Label MoP.



Insert Sheet MoP Tray.



Insert Cap Tray Assy.



5.18 Thermal Gap Filler

Follow the 4.1-8 Disassembly instructions!

Prepare new Thermal Gap Filler Tube & Thermal Gap Filler Syringe.

Remove the old Thermal Gap Filler.

Follow the 6.16-26, 29-31 Reassembly instructions!

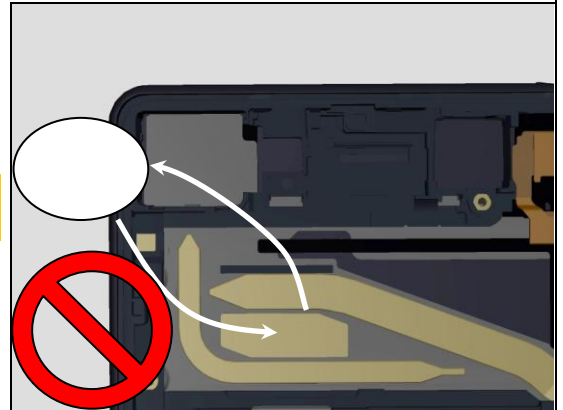


Scrap! Thermal Gap Filler cannot be reused in case of Front Assy replacement or Main PBA replacement!



If reusing the PBA Main, Thermal Gap Filler must be on the Front Assy side otherwise re-apply the TGF.

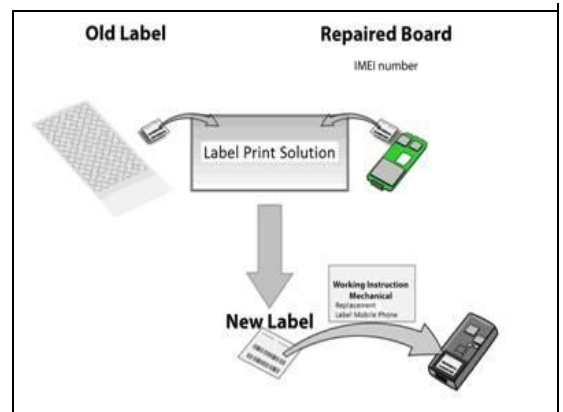
Broken or “once-removed” Thermal Gap Filler cannot be reused!



5.19 Board Swap – Change Label

CHANGE LABEL

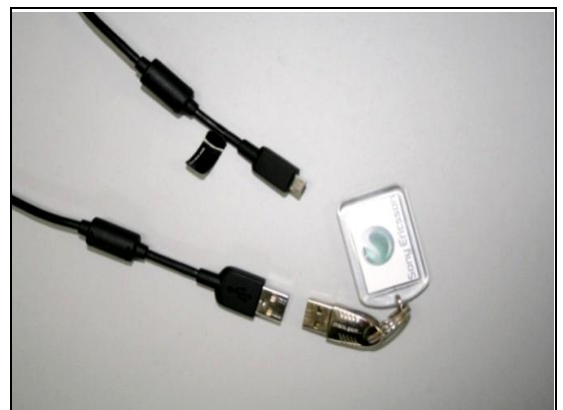
Follow the instructions in the Generic Repair Manual – Build swap for change of label.



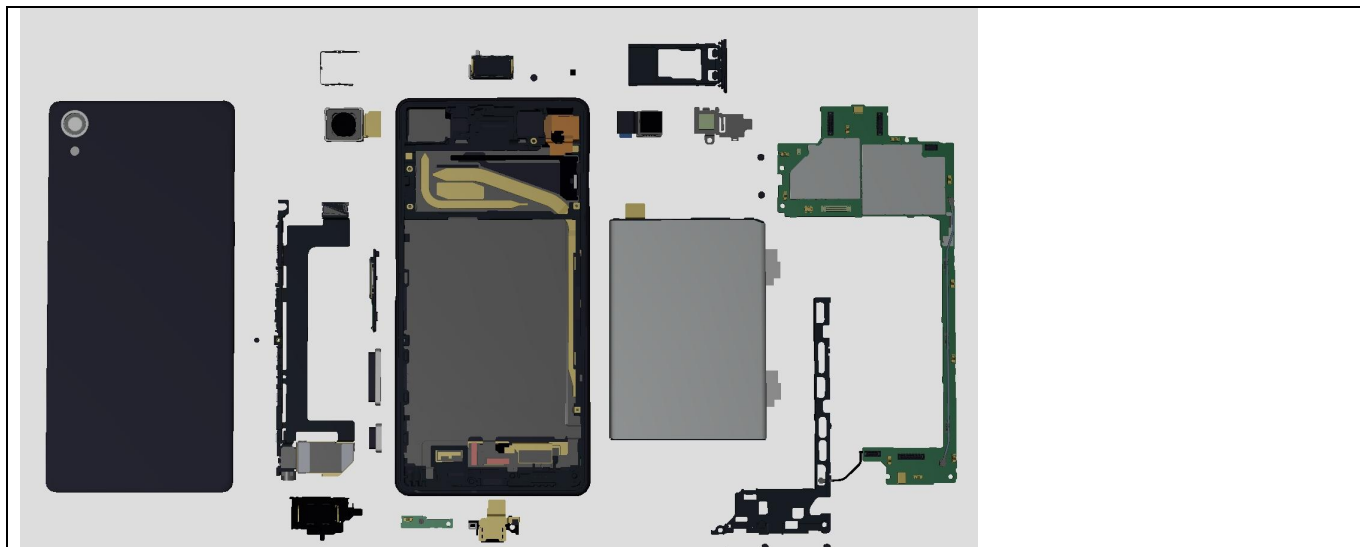
5.20 Board Swap – Customize of Software

CUSTOMIZE OF SOFTWARE

Follow the instructions in the Generic Repair Manual – Build swap for customization of the software.



6 Reassembly



The reassembly is done in the following order:

1. Front Assy
2. Cushion USB & Sheet Gasket FPC & Adhesive Back Vol
3. FPC USB
4. Adhesive Light Guide 3LED
5. Adhesive SPK Top & LightGuide 3LED
6. Loudspeaker & Cushion Aco
7. FP Sensor Assy
8. Key Volume & Key Cam
9. Adhesive Plate SPK & Cushion SPK B & Plate Holder Speaker
10. Adhesive FPC SPK Bot & FPC Side Key & Screw M1x2
11. Adhesive SPK Bot Duct & Sheet SPK Back Vol & Holder Speaker
12. Adhesive SPK Bot & Speaker
13. Sheet MoP Tray
14. Adhesive Battery A
15. RF Cable P & RF Cable S
16. Apply Thermal Gap Filler
17. PBA Main
18. Holder Front Camera & Front Camera & Cushion Thermal Front Cam B
19. Plate JK & Cushion Thermal Front Cam
20. Screw Other Len:2.6 Diam:1.4
21. Shield Camera & Main Camera & Holder Main Camera
22. PBA Sub
23. Adhesive Plate Holder Battery & Plate Holder Battery
24. Holder Battery
25. Screw M1.4x4.5
26. Connect RF Cable S
27. Battery embedded
28. Adhesive Panel Rear
29. Panel Rear
30. Cap Tray Assy
31. Label NFC

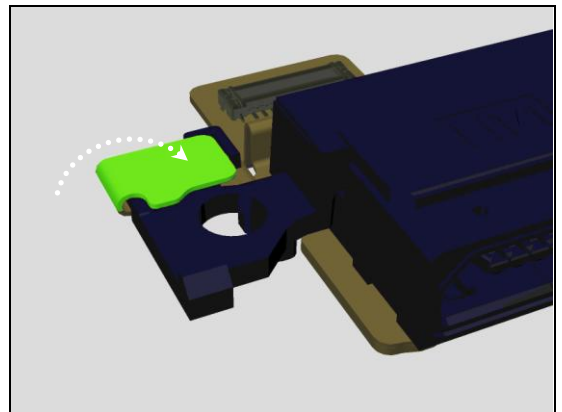
6.1 Front Assy

Prepare new Front Assy.

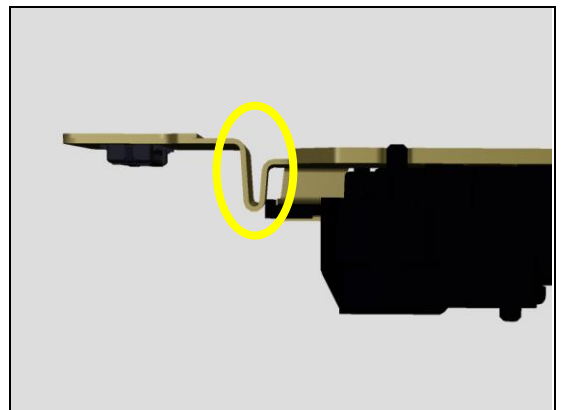


6.2 Cushion USB & Sheet Gasket FPC & Adhesive Back Vol

Fold the small FPC end and paste it on the holder.

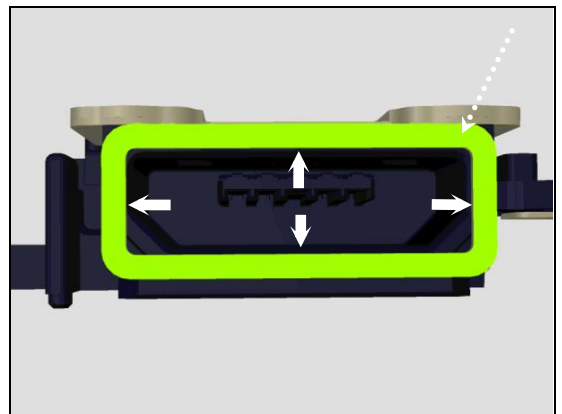


Form the connector area by bending.

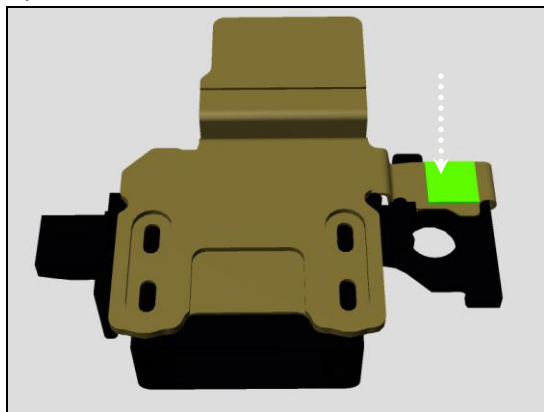


Paste Cushion USB on FPC USB module.

**Paste it precisely on the rim of the USB connector.
Any degree of projecting is not allowed.**



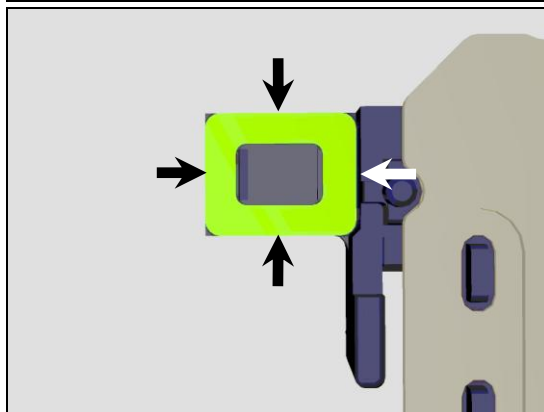
Paste Sheet Gasket FPC on FPC USB module.



Paste Adhesive Back Vol on FPC USB.

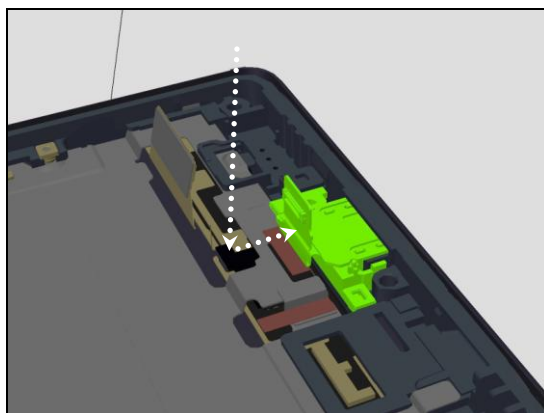


Make sure it does not go beyond the target area of FPC USB.



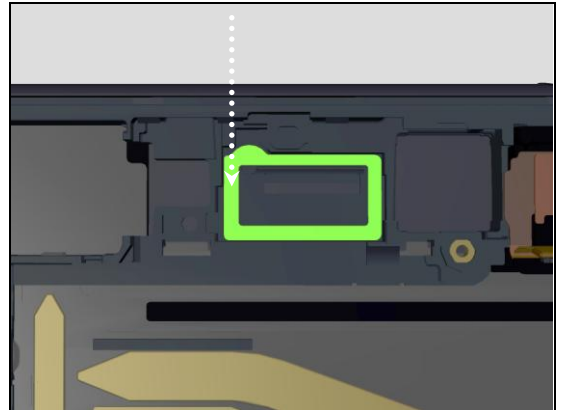
6.3 FPC USB

Assemble FPC USB into the cavity of Front Assy.



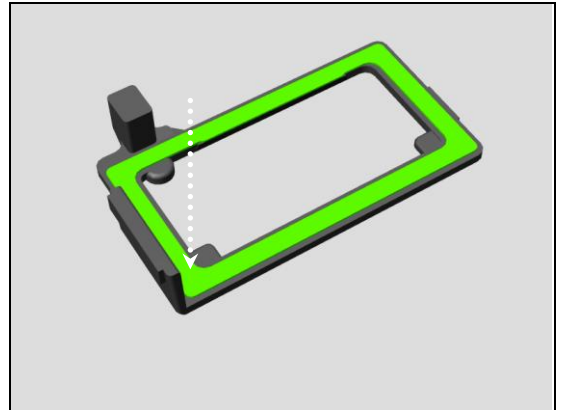
6.4 Adhesive Light Guide 3LED

Paste Adhesive Light Guide 3LED on Front Assy.

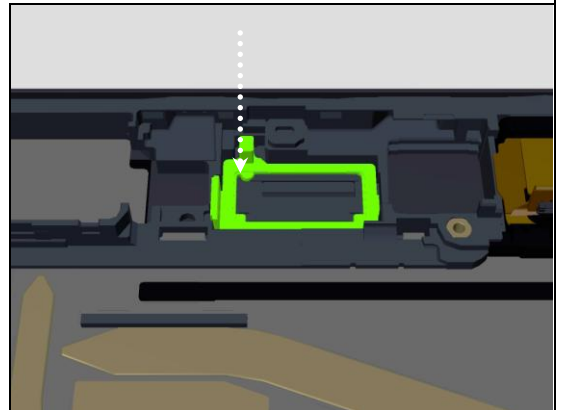


6.5 Adhesive SPK Top & LightGuide 3LED

Paste Adhesive SPK Top on LightGuide 3LED.

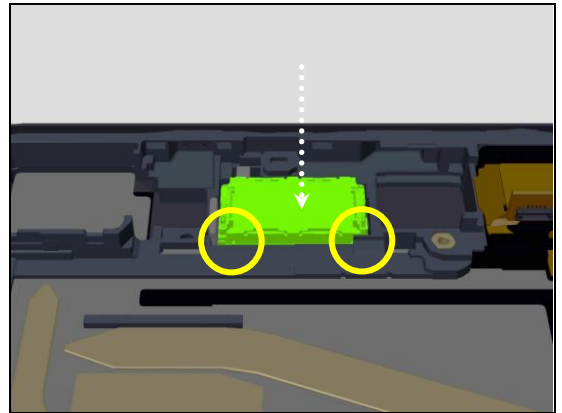


Paste LightGuide 3LED on Front Assy.

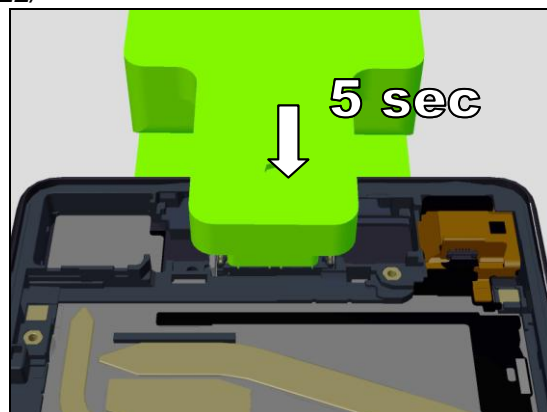


6.6 Loudspeaker & Cushion Aco

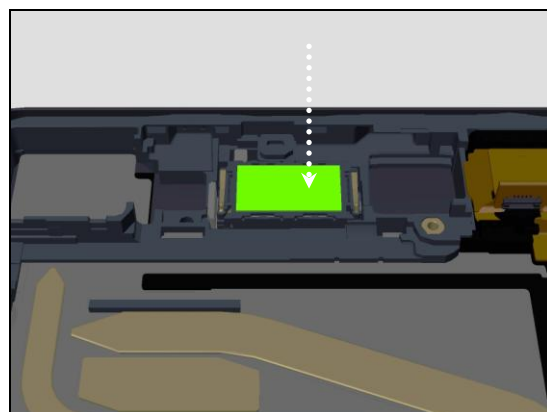
Paste Loudspeaker on LightGuide 3LED, with contact pin side down.



Press Loudspeaker with Press Tool Ear Speaker for 5 sec.

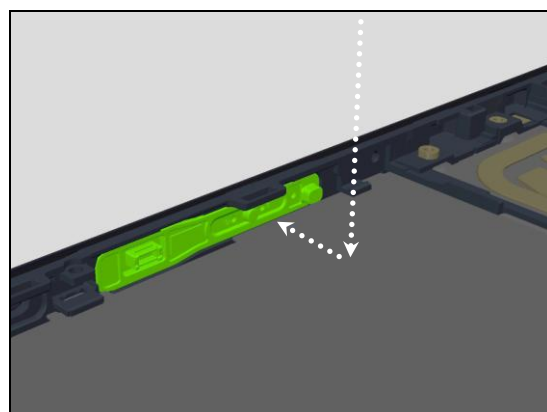


Paste Cushion Aco on Loudspeaker.



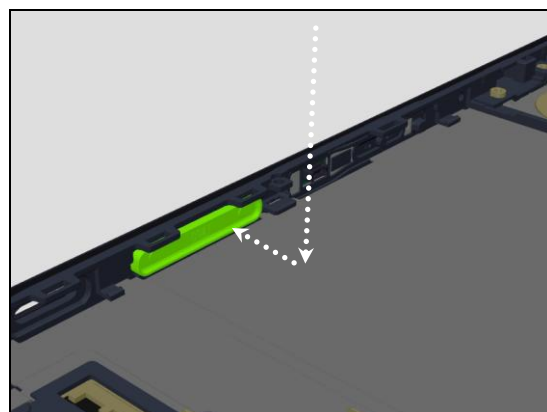
6.7 FP Sensor Assy

Assemble FP Sensor Assy into the cavity of Front Assy.

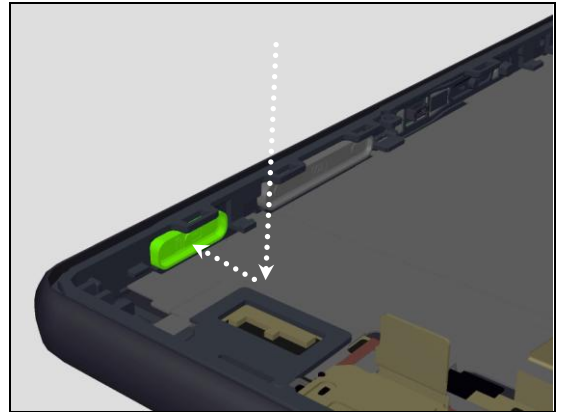


6.8 Key Volume & Key Cam

Assemble Key Volume into the cavity of Front Assy.

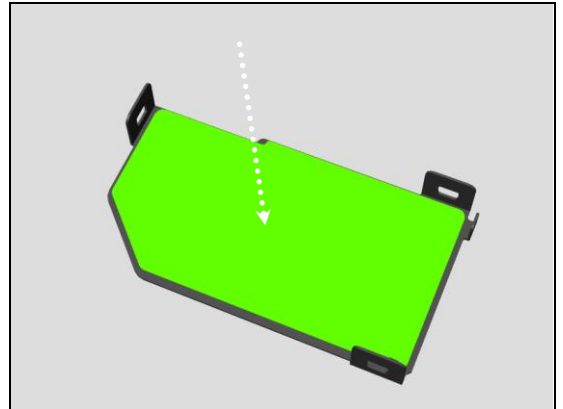


Assemble Key Cam into the cavity of Front Assy.

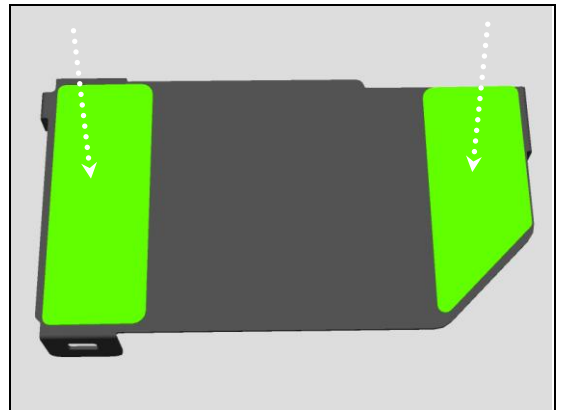


6.9 Adhesive Plate SPK & Cushion SPK B & Plate Holder Speaker

Paste Adhesive Plate SPK on the flip side of Plate Holder Speaker.

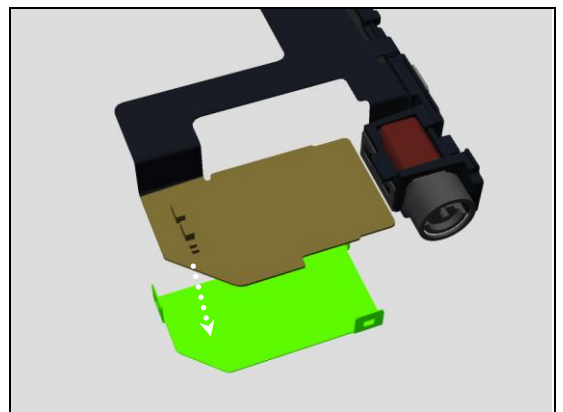


Paste Cushion SPK B on Plate Holder Speaker.

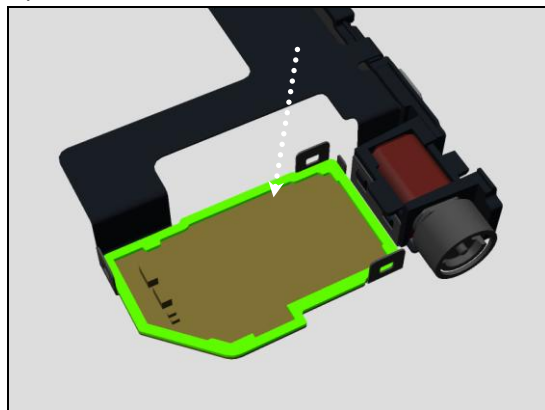


6.10 Adhesive FPC SPK Bot & FPC Side Key & Screw M1x2

Paste Plate Holder Speaker on FPC Side Key.

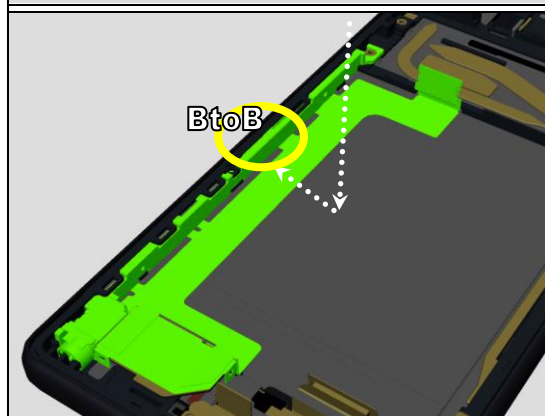


Paste Adhesive FPC SPK Bot on FPC Side Key.



Connect the BtoB connector between FP Sensor Assy and FPC Side Key.

Assemble FPC Side Key to Front Assy.

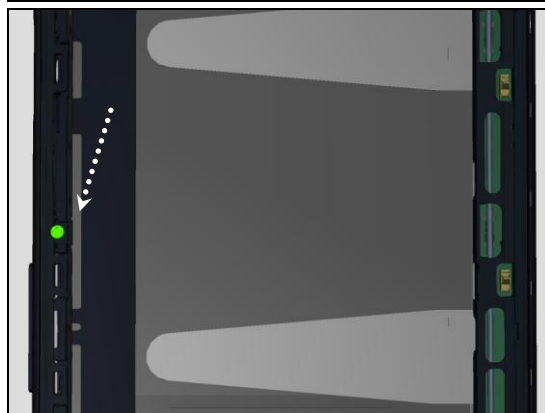


Make sure it hooks.



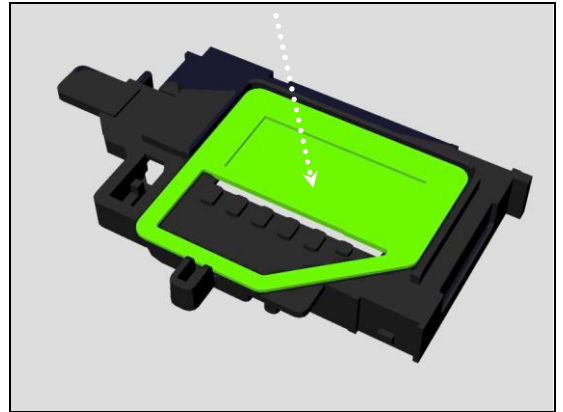
Assemble Screw M1x2 with Screwdriver JIS 00.

If you have JIS 00 size torque driver, the Torque is $3\pm 10\%$ (Ncm).

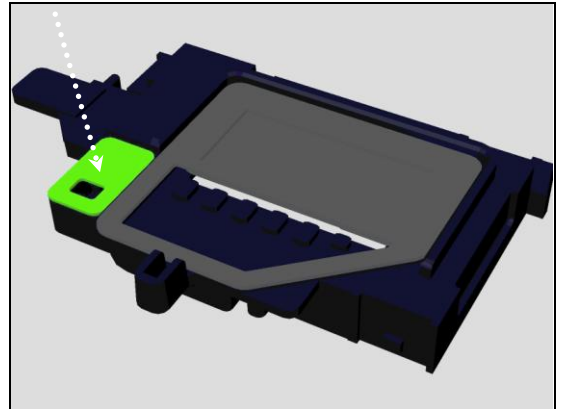


6.11 Adhesive SPK Bot Duct & Sheet SPK Back Vol & Holder Speaker

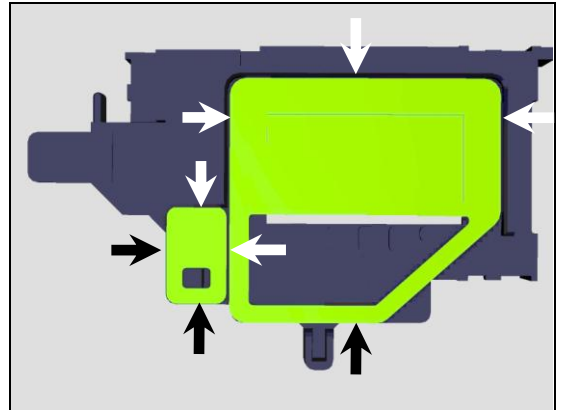
Paste Adhesive SPK Bot Duct on Holder Speaker.



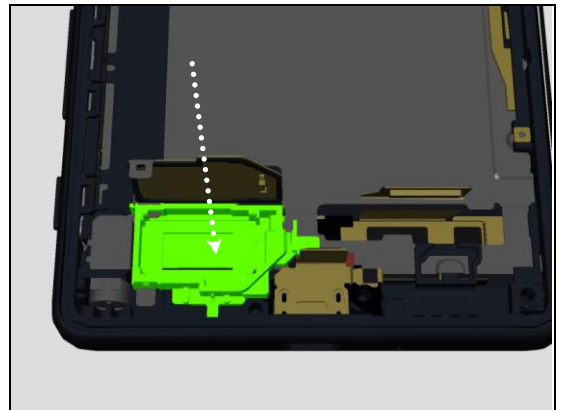
Paste Sheet SPK Back Vol on Holder Speaker.



Make sure they do not go beyond the target area of Holder Speaker.



Paste Holder Speaker on Front Assy.



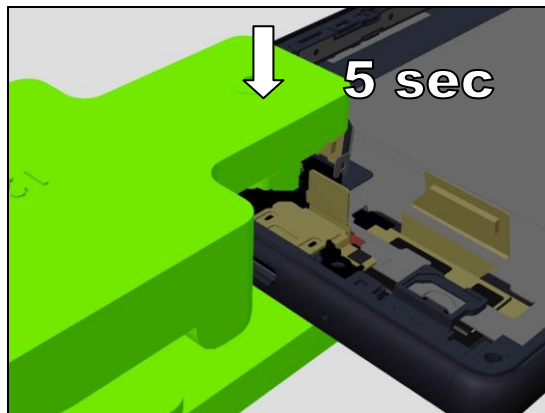
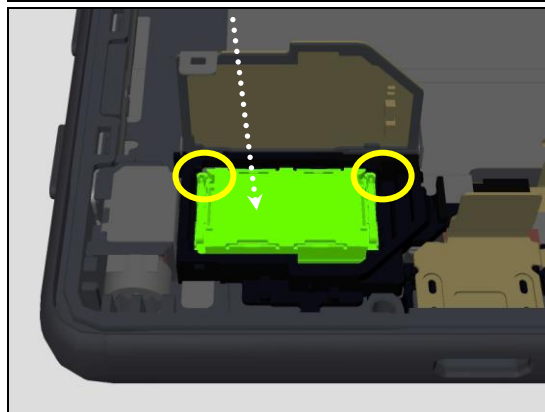
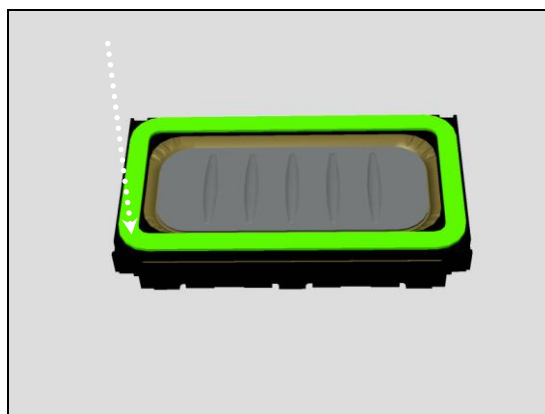
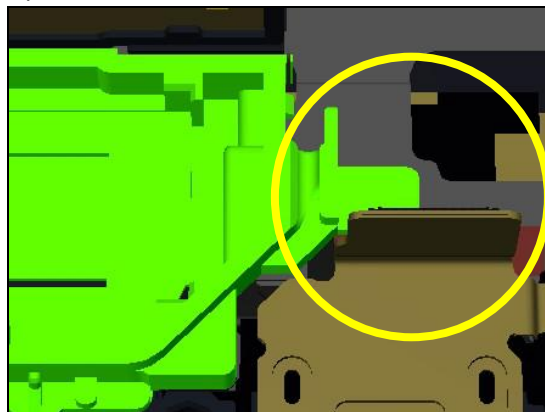
Do not paste on the FPC of FPC USB.

6.12 Adhesive SPK Bot & Speaker

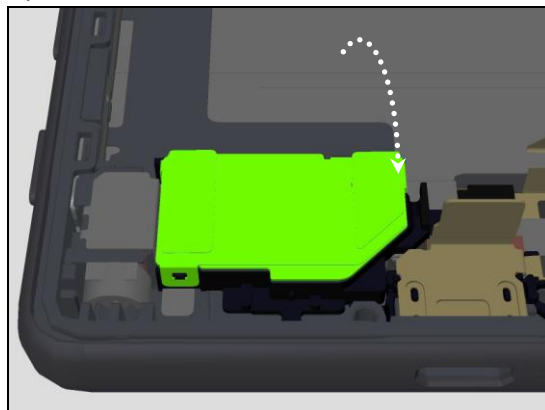
Paste Adhesive SPK Bot on Speaker.

Paste Speaker on Holder Speaker, with contact pin side up.

Press Speaker with Press Tool Ear Speaker for 5 sec.

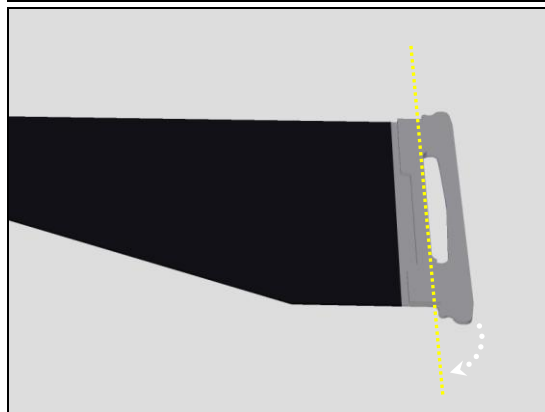


Paste FPC Side Key on Holder Speaker.

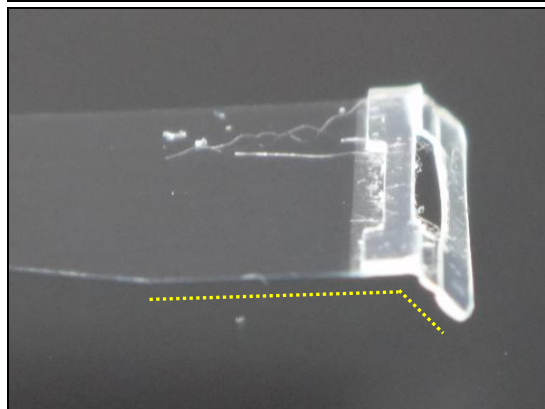


6.13 Sheet MoP Tray

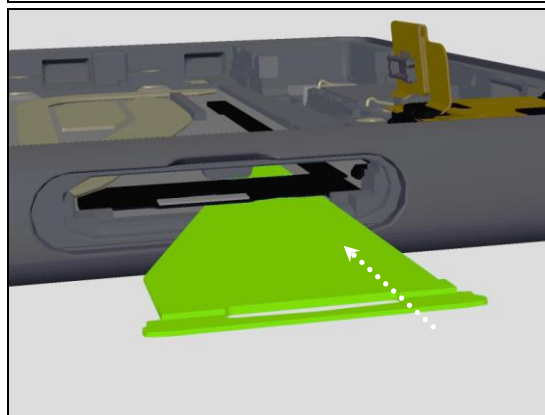
Form the tab of Sheet MoP Tray by bending.



Sample.



Insert Sheet MoP Tray into the hole of Cap area.

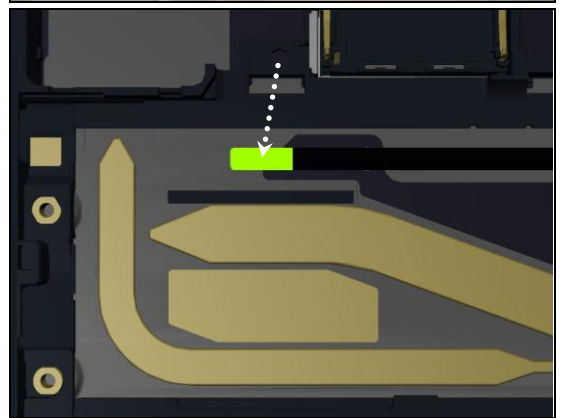
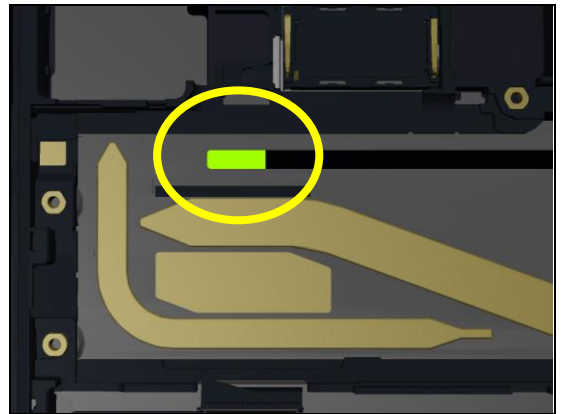
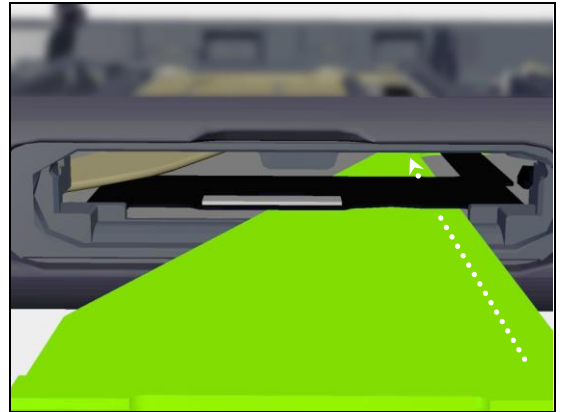


Note! Pass Sheet MoP Tray under Sheet Guide MoP.

Release the sticking area of Sheet Guide MoP.

Pass the hole of Sheet MoP Tray through it.

Paste the sticking area of Sheet Guide MoP on Front Assy.

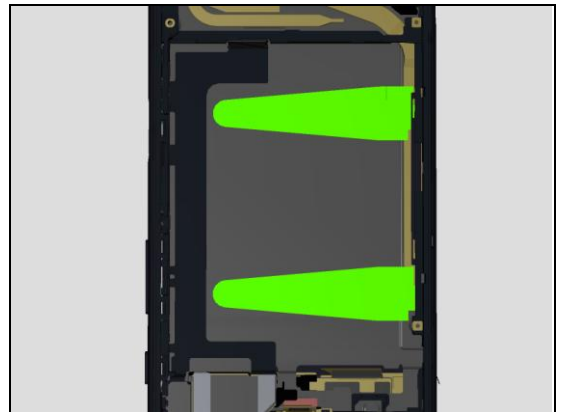


The pull tab of Sheet MoP Tray shall be available from the hole of Cap area.

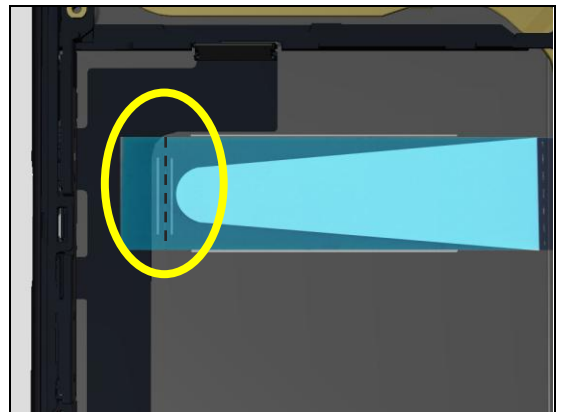


6.14 Adhesive Battery A

Paste Adhesive Battery A on Front Assy.



Align dotted line of the separator between two lines of Front Assy.



6.15 RF Cable P & RF Cable S

Assemble RF Cable P on PBA Complete.



Assemble RF Cable S on the flip side of PBA Complete.



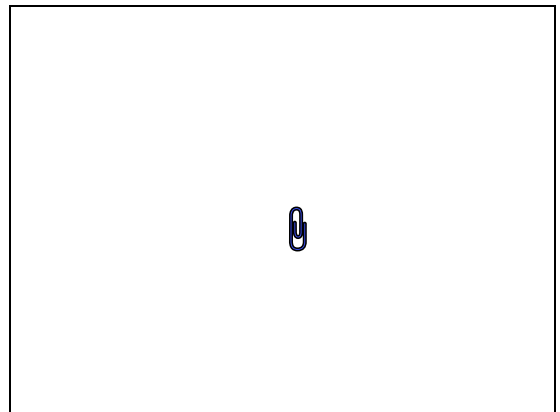
(This area is intentionally left blank)

6.16 Apply Thermal Gap Filler

Prepare new Thermal Gap Filler Syringe and Thermal Gap Filler Tube.



Open the Thermal Gap Filler instruction on the right and make sure to go through it prior to use!



Confirm the manufacturing date that is stamped at the Thermal Gap Filler Tube end.

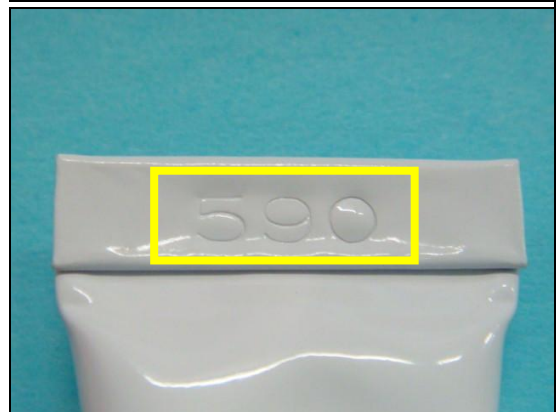
Expiration date is 6 month after manufacturing.

X: Manufacturing Year (201X)

Y: Manufacturing Month (1,2,,,9, A, B, C)

Z: Manufacturing Date (1,2,,,9, A, B,,,V)

Ex) Lot.590 = Manufacturing date is September 24th , 2015.



Material will start to set once it is exposed to air.

Scrap! Thermal Gap Filler Tube cannot be used 24h after first opening.

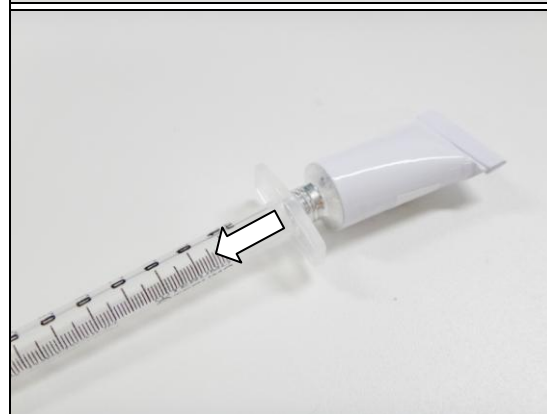
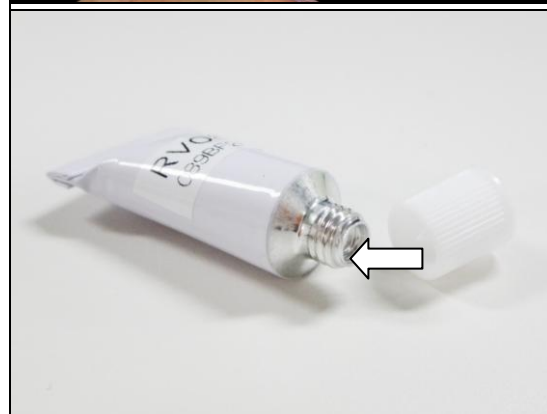


Scrap! Thermal Gap Filler Syringe cannot be used 1h after filling.

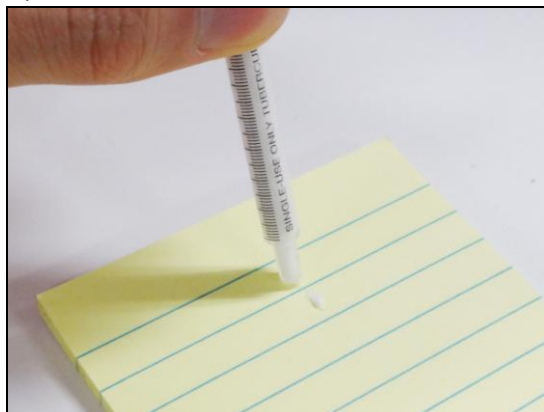
Open the tube with the cap head.

Inject contents of the tube from the end of the syringe.

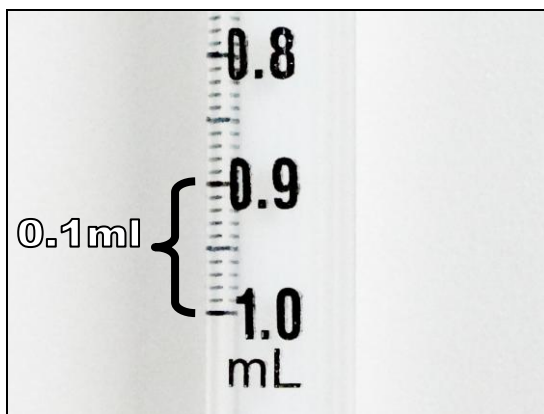
Make sure the contents reach up to the tip of the syringe and a small amount of the contents flows out as air is released.



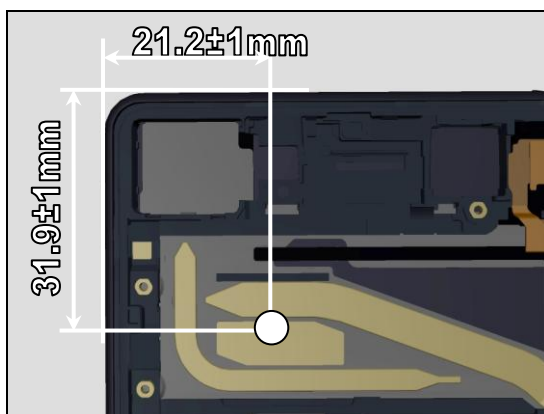
Wipe off the tip before using.



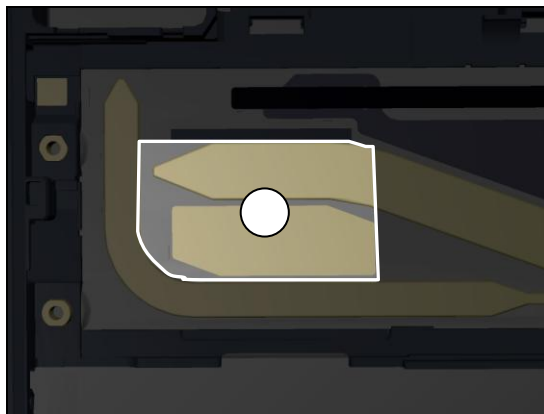
Volume for one unit is 0.1 ml at one point.



Carefully apply the Thermal Gap Filler on the shown point.



Note! Thermal Gap Filler must not cross the shaded area.



SONY

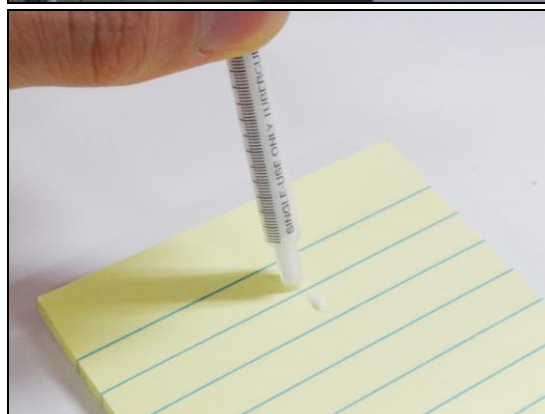
Working Instruction Repair Instruction Mechanical/F5121, F5122/

<Sample picture>



Wipe off the tip of the syringe until next repair.

Scrap! Do not refill the same syringe.



Next time you use, let a small amount of contents flow out and wipe off the tip again.



REWORK

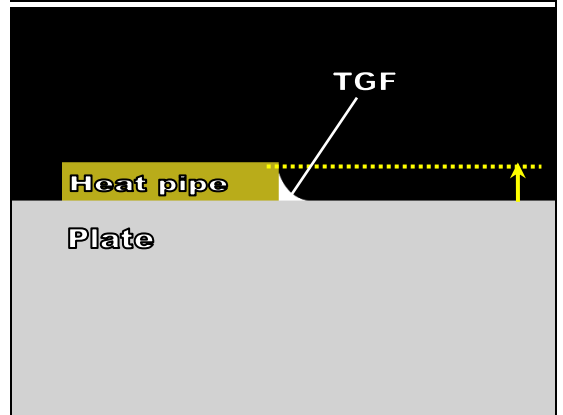
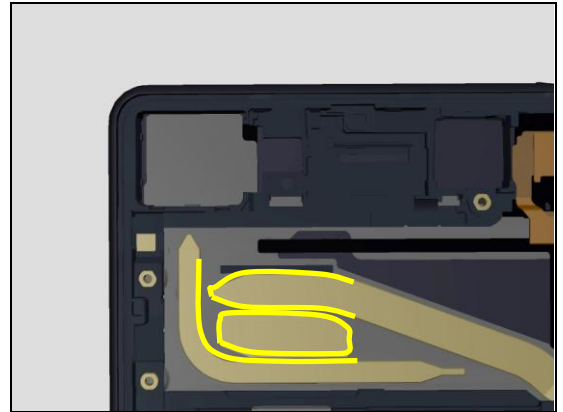
If the position or amount is not correct, wipe it off with a cotton swab.



Do inspection before applying new Thermal Gap Filler.

Thermal Gap Filler is only allowed to be left at yellow ditch up to 1mm width.

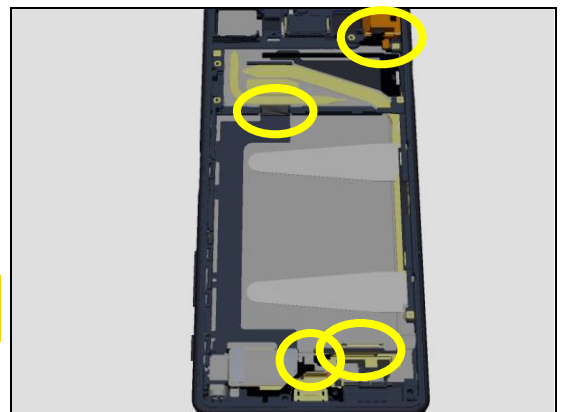
Do not let Thermal Gap Filler exceed the height of heat pipe.



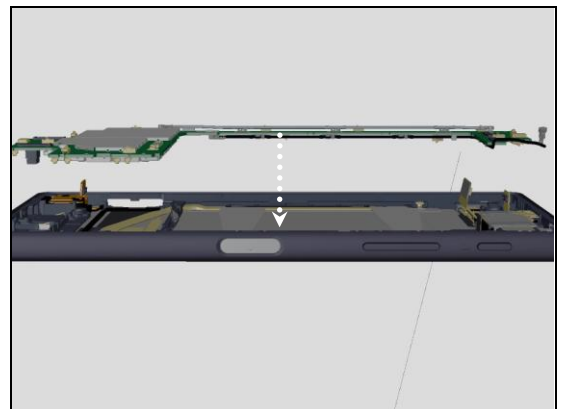
6.17 PBA Main

Set FPC connectors aside before assembling PBA Main.

Main PBA assembling must be done immediately (within 5 minutes after Thermal Gap Filler applying).



Put PBA Main down on Front Assy.



Make sure it hooks.

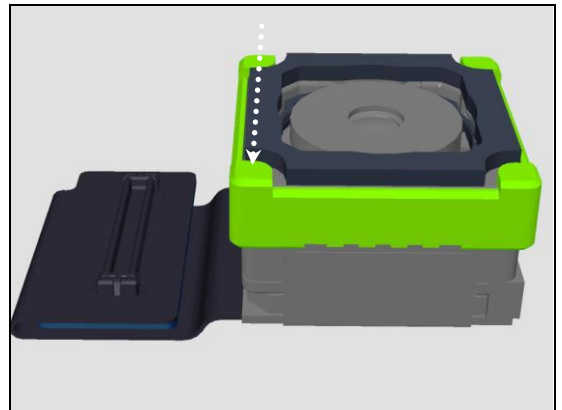


Connect the BtoB connector of FPC Audio Jack.

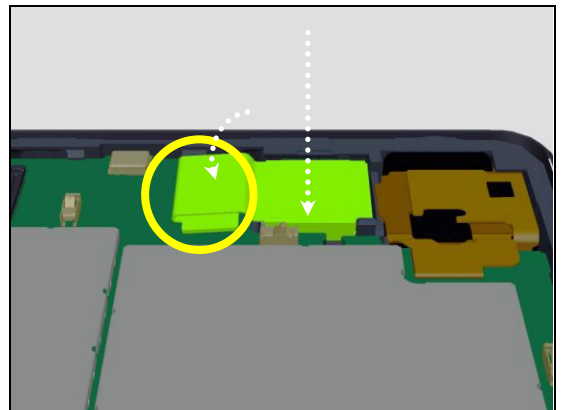


6.18 Holder Front Camera & Front Camera & Cushion Thermal Front Cam B

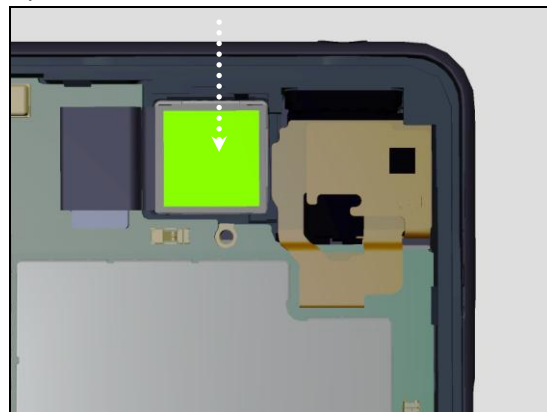
Assemble Holder Front Camera on Front Camera.



Assemble Front Camera on the cavity of Front Assy.
Connect the BtoB connector of Front Camera.

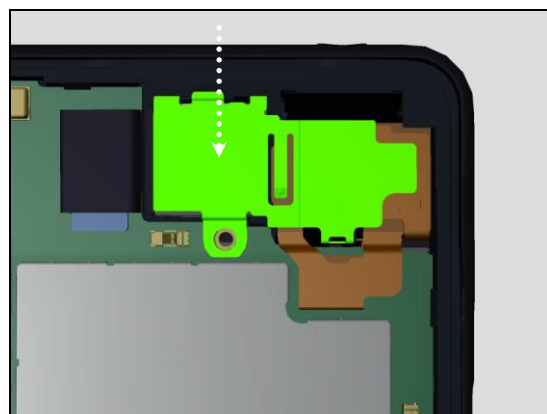


Paste Cushion Thermal Front Cam B on Front Camera.

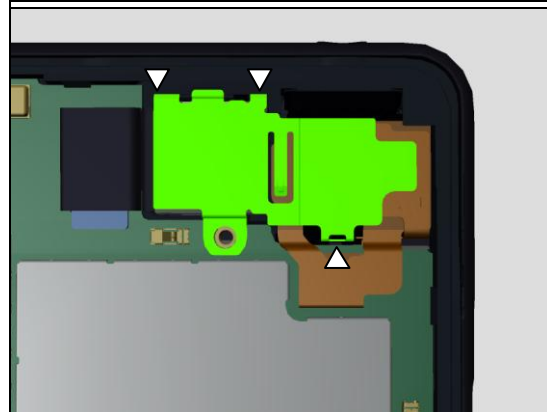


6.19 Plate JK & Cushion Thermal Front Cam

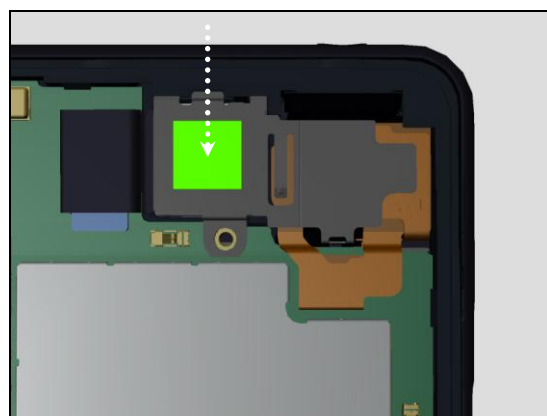
Assemble Plate JK on Front Camera and Audio Jack.



Make sure it hooks.



Paste Cushion Thermal Front Cam on Plate JK.



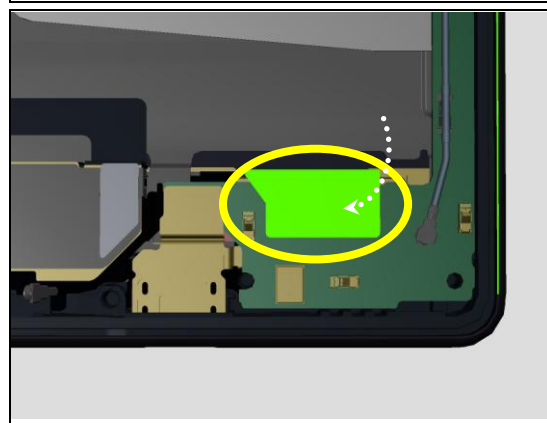
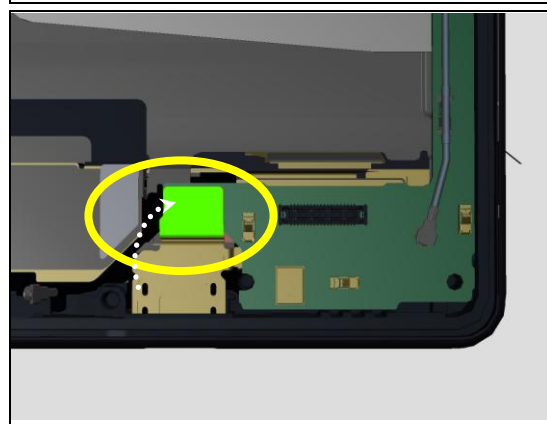
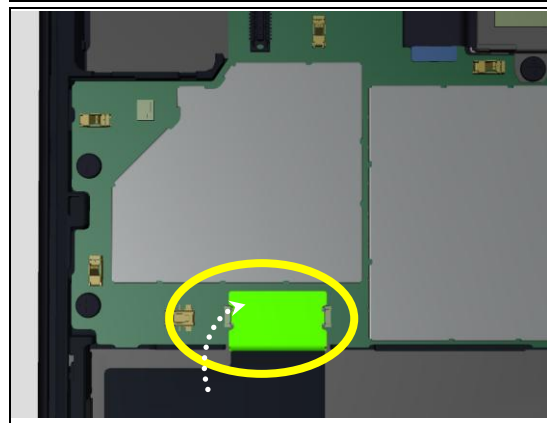
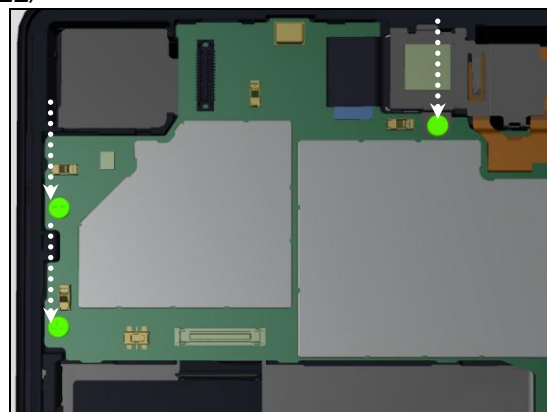
6.20 Screw Other Len:2.6 Diam:1.4

Assemble Screw Other Len:2.6 Diam:1.4 on PBA Main.
Torque : $13 \pm 10\%$ (Ncm)

Connect the BtoB connector of FPC Side Key.

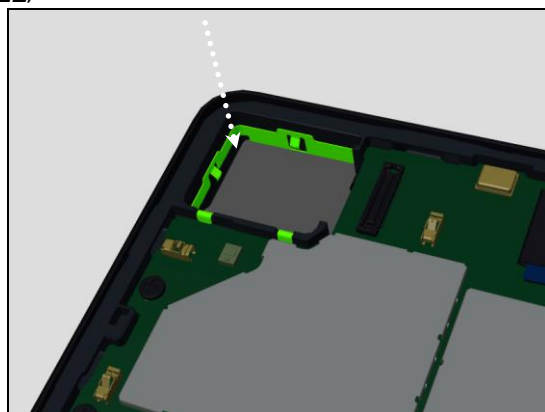
Connect the BtoB connector of FPC USB.

Connect the BtoB connector of FPC Display (part of Front Assy).

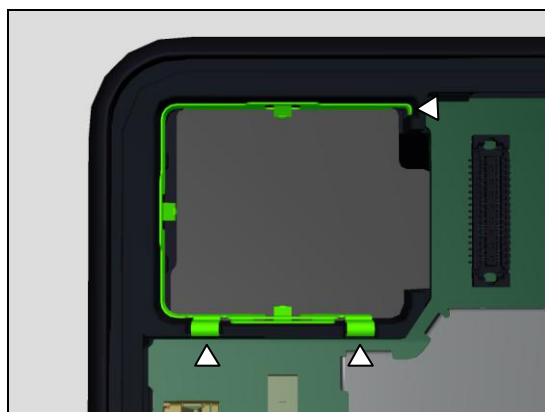


6.21 Shield Camera & Main Camera & Holder Main Camera

Assemble Shield Camera on Front Assy.

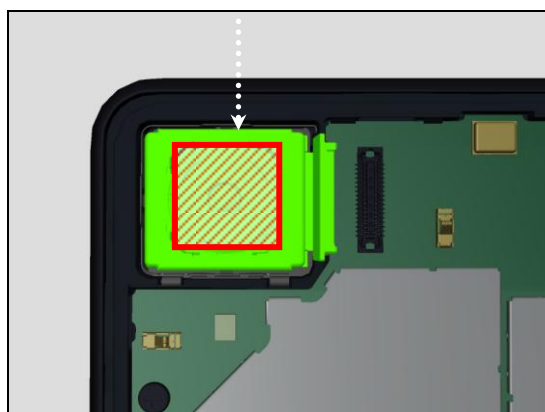


Make sure it hooks.

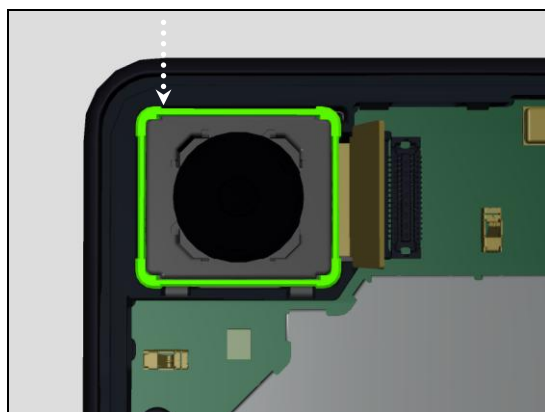


Assemble Main Camera.

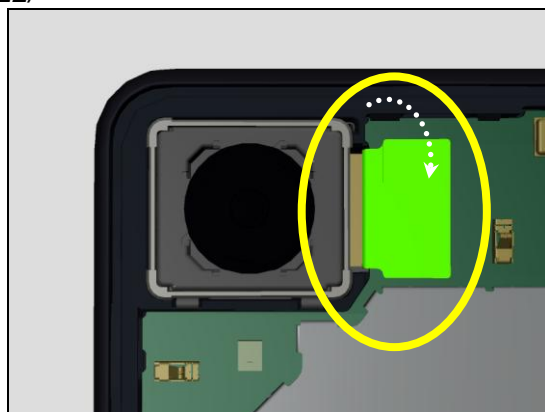
Do not press the lens module area (red hatching area).



Assemble Holder Main Camera.



Connect the BtoB connector of Main Camera.

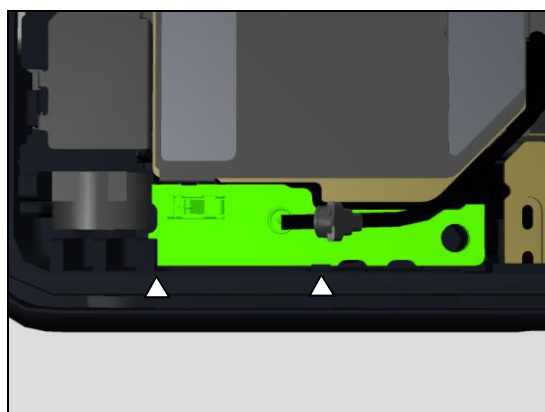


6.22 PBA Sub

Insert PBA sub at an angle, bottom side first.

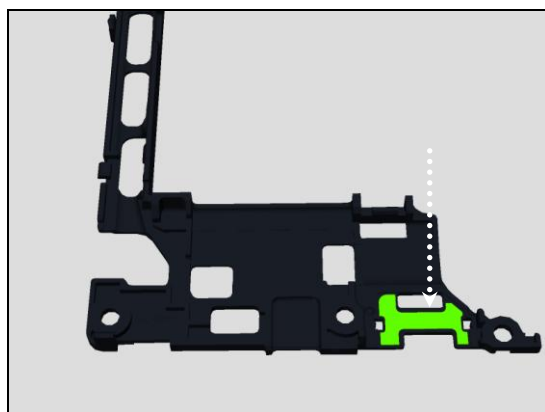


Make sure it hooks.

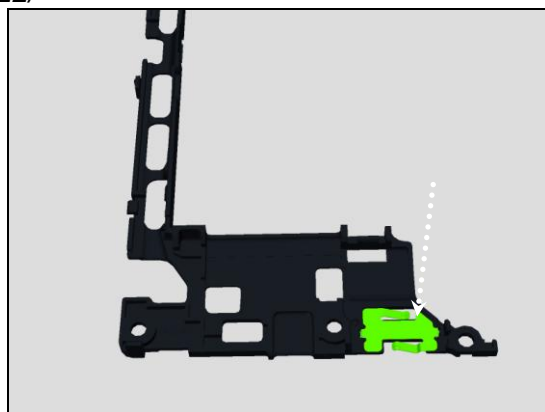


6.23 Adhesive Plate Holder Battery & Plate Holder Battery

Paste Adhesive Plate Holder Battery on Holder Battery.

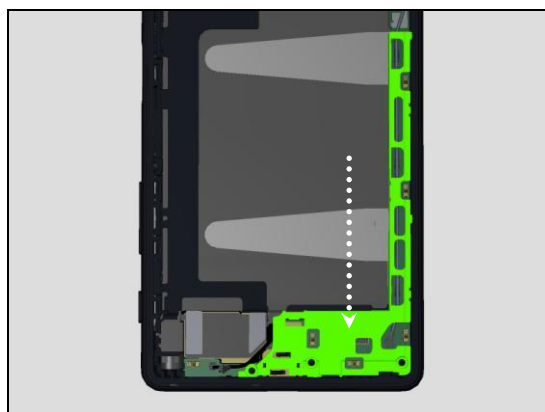


Paste Plate Holder Battery of Holder Battery.

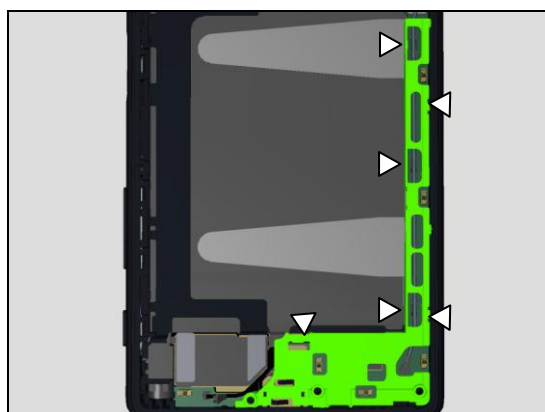


6.24 Holder Battery

Assemble Holder Battery.



Make sure it hooks.

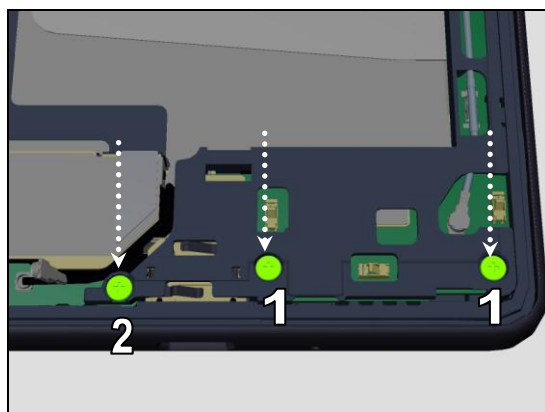


6.25 Screw M1.4x4.5

Assemble Screw M1.4x4.5.

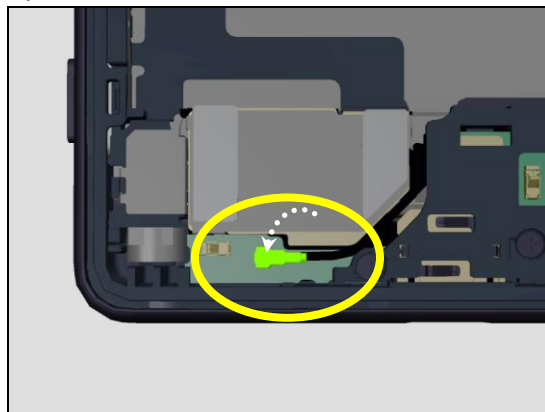
Torque 1 : $13 \pm 10\%$ (Ncm)

Torque 2 : $9 \pm 10\%$ (Ncm)

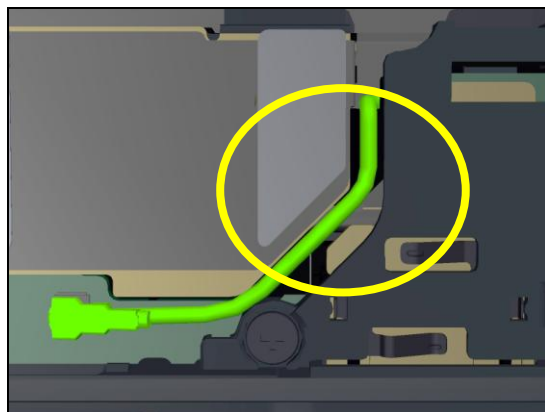


6.26 Connect RF Cable S

Connect RF Cable connector on PBA Sub.



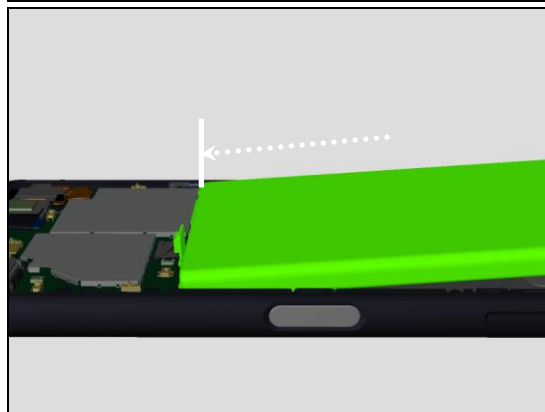
Put RF Cable through the lane on the holder speaker.



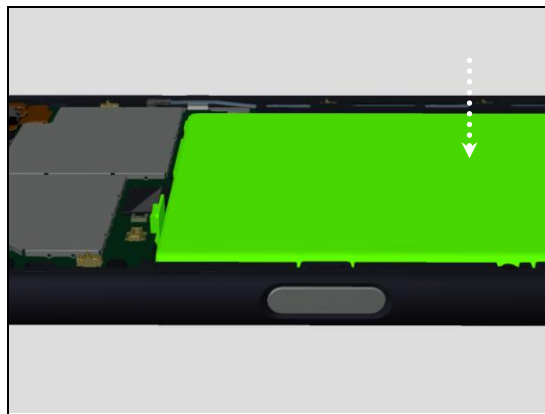
6.27 Battery embedded

Paste Battery embedded on Front Assy as shown procedure.

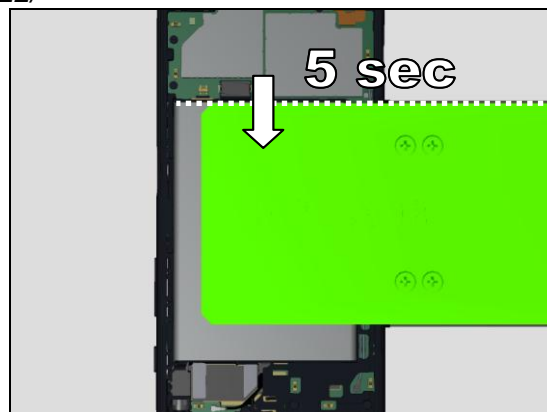
(Procedure 1 of 2)



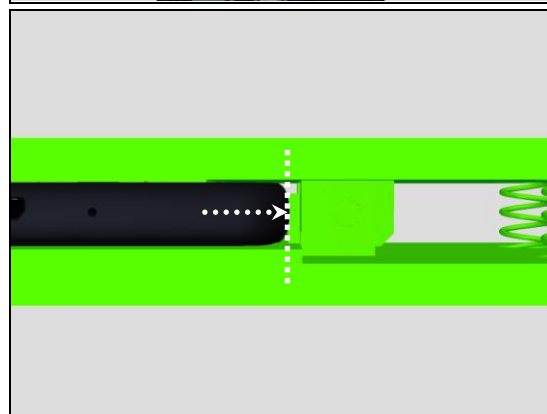
(Procedure 2 of 2)



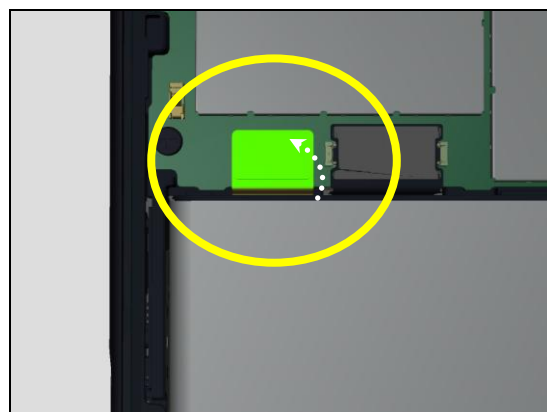
Press 5 sec with Press Clamp, aligned with upper side of Battery.



Make sure the phone is touching the very back of Press Clamp.

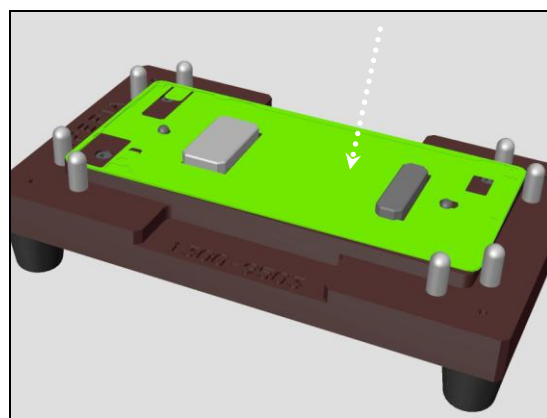


Connect the BtoB connector of Battery embedded.

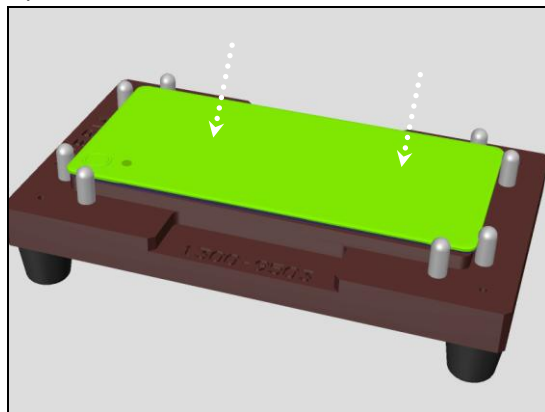


6.28 Adhesive Panel Rear

Place Adhesive Panel Rear on Rear Panel Adhesive Alignment Fixture.

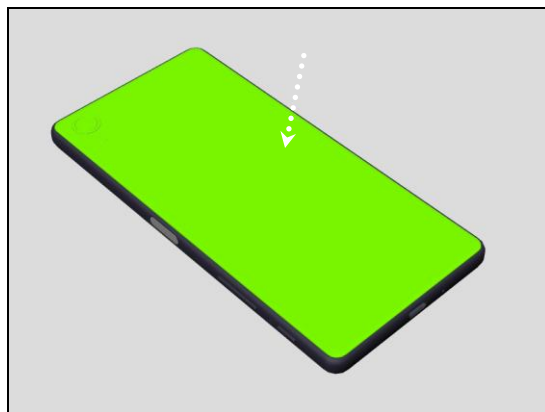


Paste Adhesive Panel Rear, pushing around spring areas.

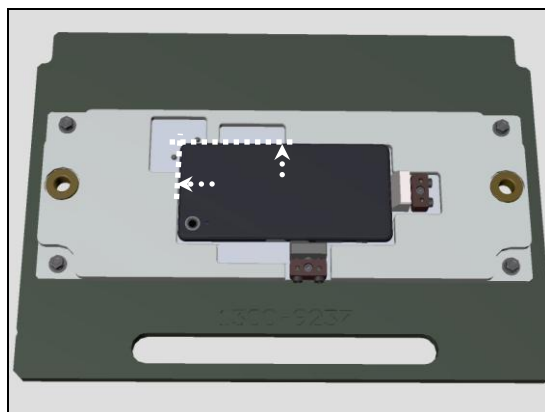


6.29 Panel Rear

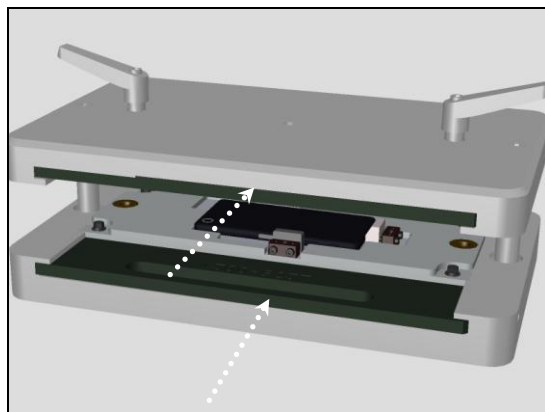
Paste Panel Rear on the phone unit.



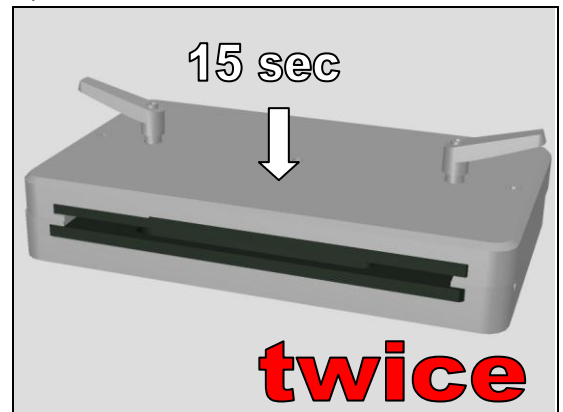
Place the phone unit on Bottom Press Inlay, aligned with dotted line.



Insert Bottom Press Inlay the Rear Panel Press Top Inlay in Generic fixture for Press tool.



Press with Bottom Press Inlay and Rear Panel Press Top Inlay for 15 sec with $700N \pm 50$.
After that, press it one more time with the same condition.



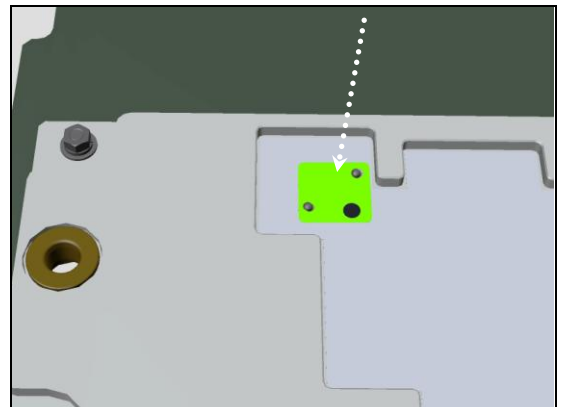
6.30 Cap Tray Assy

Assemble Cap Tray Assy.

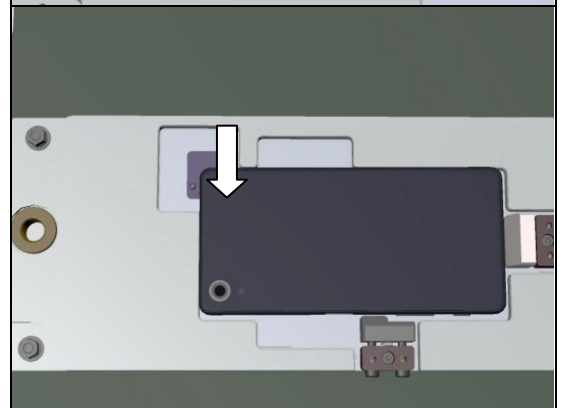


6.31 Label NFC

Put Label NFC on Bottom Press Inlay.



Put the phone on it, display side down.
Press the phone gently with fingers.



7 Revision History

Rev.	Date	Changes / Comments
1	2016-05-13	Initial release
2	2016-05-27	Revise instruction in 4.2. Add important notice in 6.21.