

Working Instructions

- mechanical -



Xperia™ tipo

ST21i, ST21a, ST21i2, ST21a2

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make.believe

Working Instructions (mech)

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

1 Exterior Views

1.1 ST21i, ST21a, ST21i2, ST21a2



2 Tools

SPECIAL TOOLS

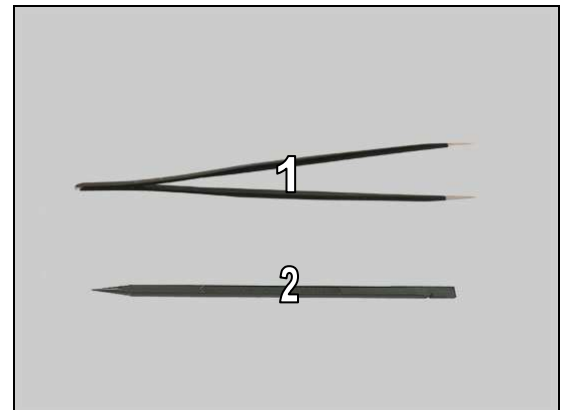
1. Torque Screwdriver
2. Flex Film Assembly Tool
3. Front Opening Tool
4. Bits (T5)
5. Bits (Philip screw)
6. Camera Removal Tool



For part no's on the tools above, refer to the 'Tools Catalogue/Matrix'!

STANDARD TOOLS

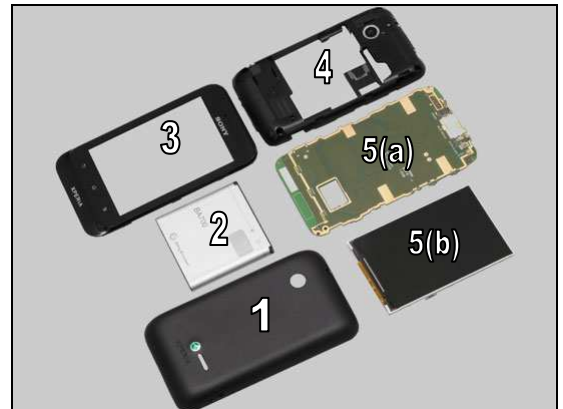
1. Tweezers
2. Nylon Pointer



3 Disassembly

The disassembly is done in the following order:

1. Battery Cover
2. Battery
3. Front Assy
4. Frame Antenna Assy
5. Main PBA (a) & LCD TFT 3.2Inch (b)



3.1 Battery Cover

Insert fingers into the gap as shown in picture and gently pull upwards to release the hooks of the Battery Cover.



3.2 Battery

Insert a finger and raise the bottom of the Battery to release it.



Remove the Battery.



Disassembly

3.3 Front Assy

Remove the four screws (T5)M1.6 by using a screwdriver with Bits (T5).

Scrap! Not to be reused!

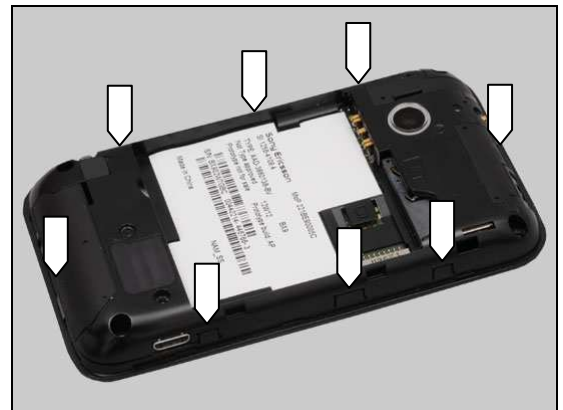


Remove the screw M1.4 by using a screwdriver with Bits (Philip screw).

Scrap! Not to be reused!



There are eight snap hooks securing the Front Assy.



Insert a Front Opening Tool as shown in picture and gently pull upwards to release the three hooks of this side.



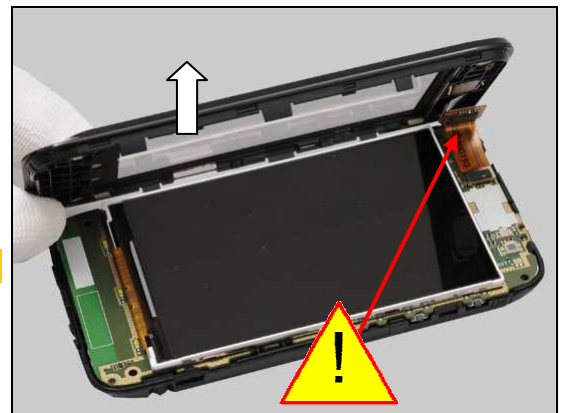
Disassembly

Do the same on the opposite side.



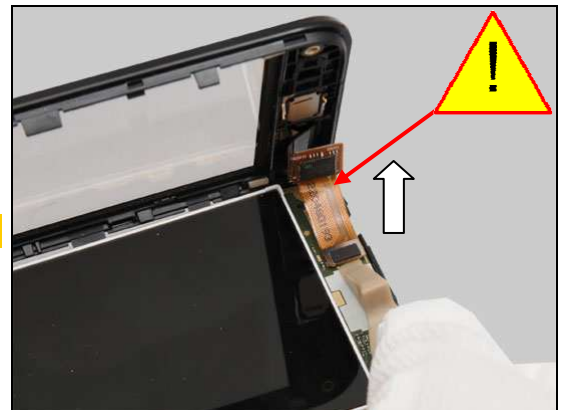
Turn the phone over and gently raise this side of the Front Assy approximately 45 degree to release the hooks of the top side and bottom side as shown in picture.

Do not stretch the FPC!

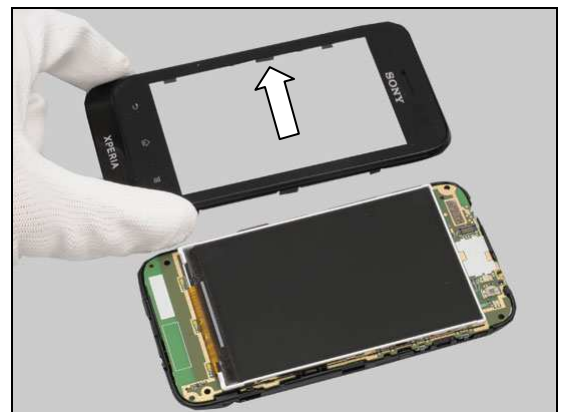


Disconnect the BtB connector.

Do not stretch the FPC!



Remove the Front Assy.



Disassembly

3.4 Frame Antenna Assy

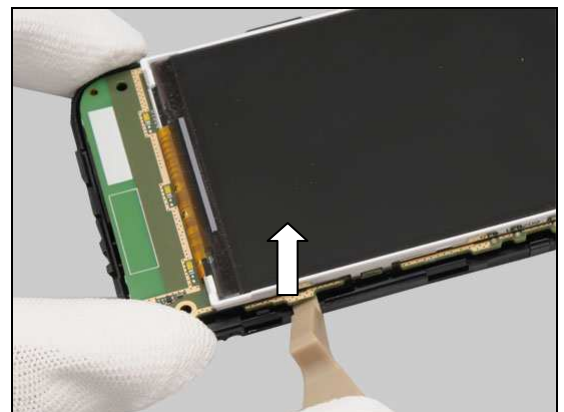
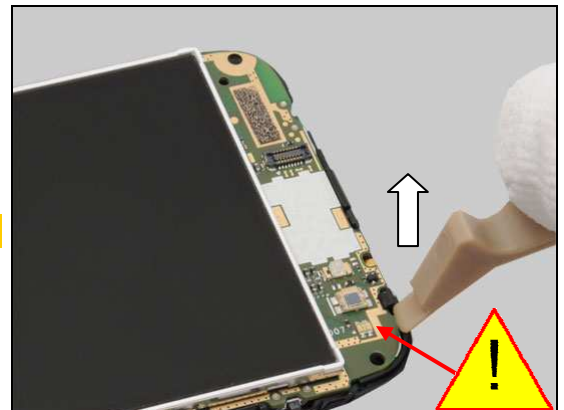
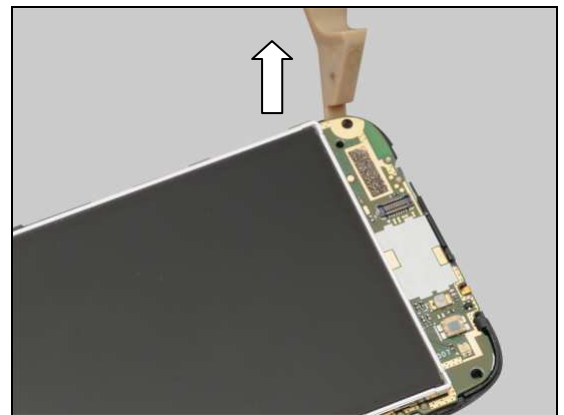
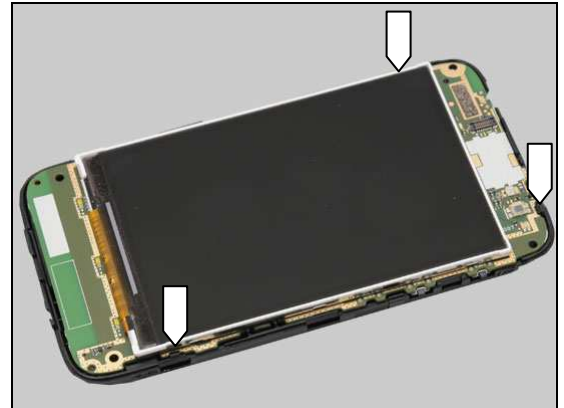
There are three snap hooks securing the Main PBA.

Insert a Front Opening Tool as shown in picture and gently pull upwards to release the hook.

Do the same on the second hook.

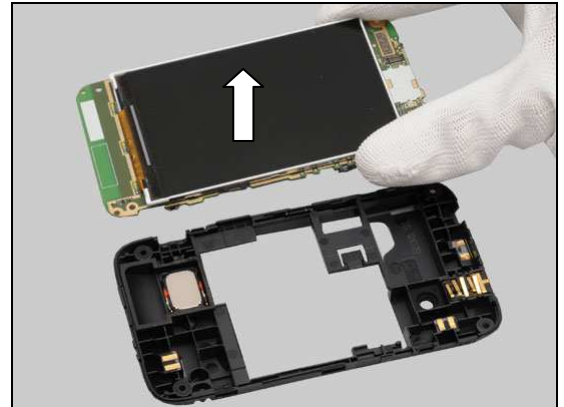
Be careful! Do not damage the components!

Do the same to release the hook of this side.



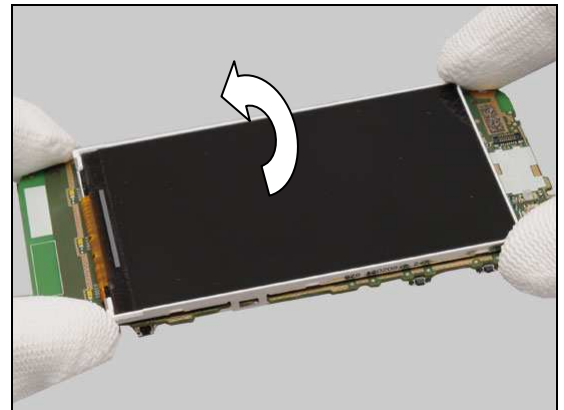
Disassembly

Release the Main PBA from the Frame Antenna Assy and remove the Frame Antenna Assy.

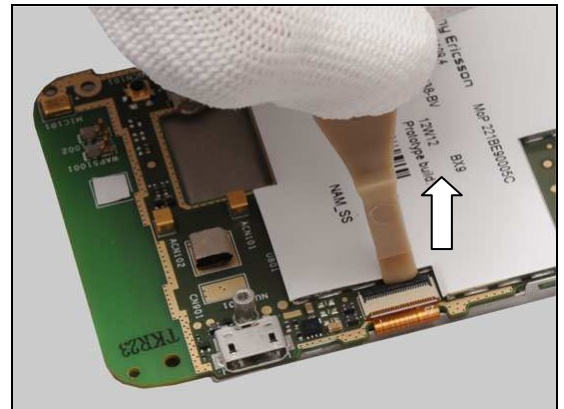


3.5 Main PBA & LCD TFT 3.2Inch

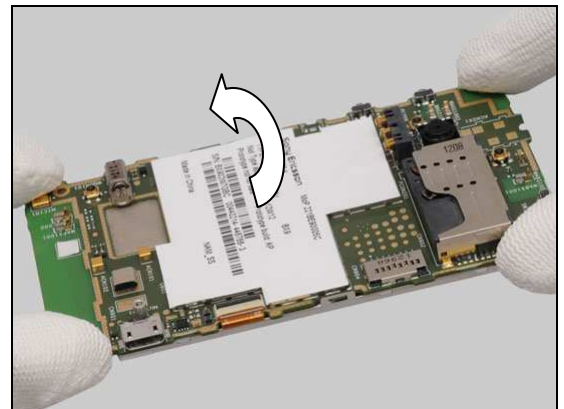
Turn the Main PBA over.



Unlock the ZIF connector by using a Front Opening Tool.

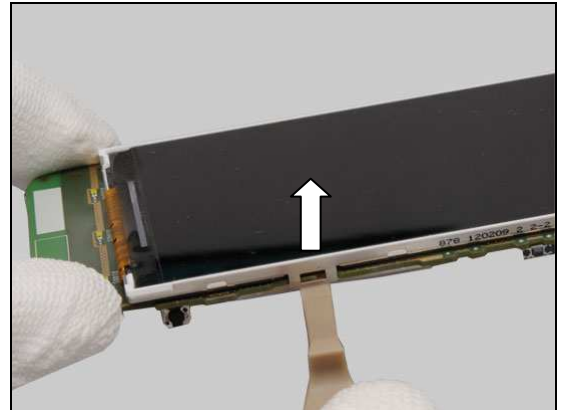


Turn the Main PBA over.

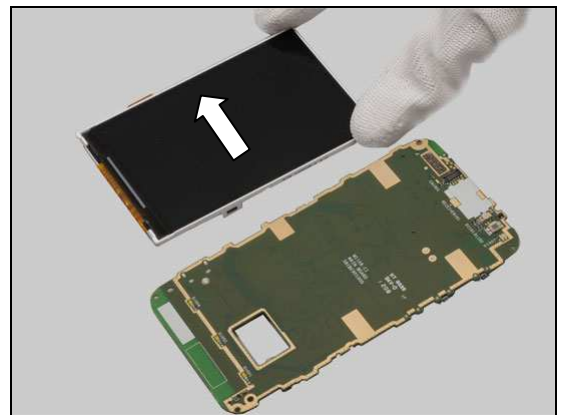


Disassembly

Gently pull upwards to release the hook by using a Front Opening Tool as shown.



Gently remove the LCD TFT 3.2Inch as shown in picture.



4 Replacement

4.1 Battery Cover

Follow the 3.1 Disassembly instructions!

Prepare a new Battery Cover.

Follow the 5.5 Reassembly instructions!



4.2 Front Assy

Follow the 3.1 – 3.3 Disassembly instructions!

Follow the 4.12 and 4.14 Removal instructions!

Prepare a new Front Assy.

Follow the 4.12 and 4.14 Installation instructions!

Follow the 5.3 – 5.5 Reassembly instructions!



4.3 Frame Antenna Assy

Follow the 3.1 – 3.3 Disassembly instructions!

Follow the 4.5 and 4.11 Removal instructions!

Prepare a new Frame Antenna Assy.

Follow the 4.11, 4.22 and 4.5 Installation instructions!

Follow the 5.3 – 5.5 Reassembly instructions!



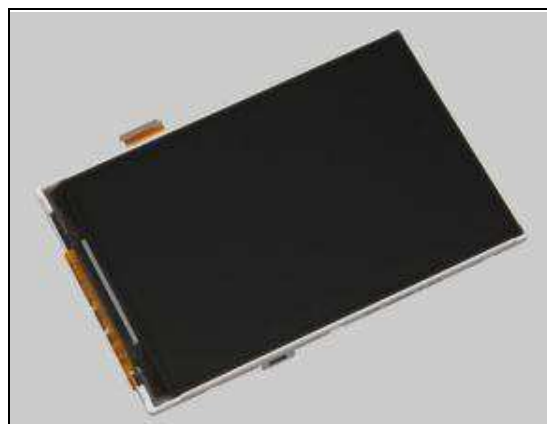
4.4 LCD TFT 3.2Inch

Follow the 3.1 – 3.5 Disassembly instructions!

Prepare a new LCD TFT 3.2Inch.

Follow the 4.8 Installation instructions!

Follow the 5.1 – 5.5 Reassembly instructions!



Replacement

4.5 Audio Jack

Follow the 3.1 – 3.4 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Audio Jack.

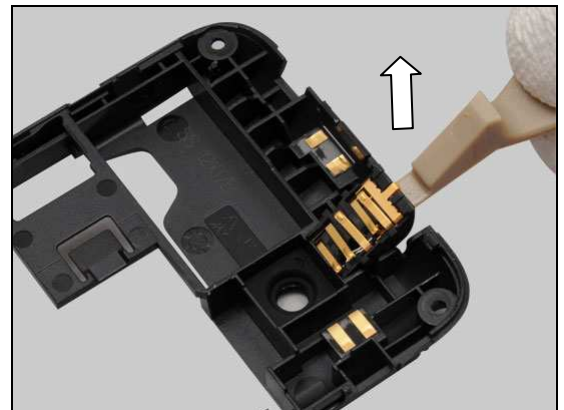
Follow the 4.21 Installation instructions!

Carry out the Installation as described below.

Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

Gently pull upwards to remove the Audio Jack as shown.



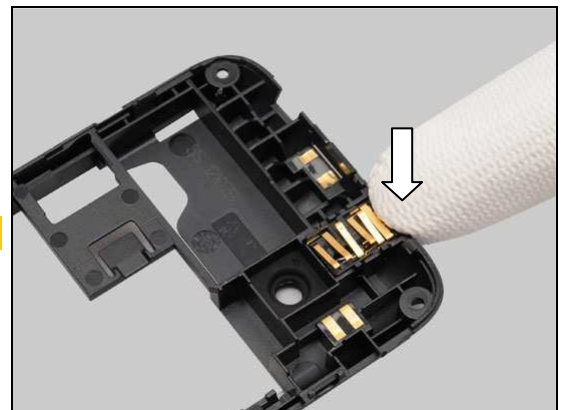
INSTALLATION

Place a new Audio Jack into its socket.



Press to secure its position.

Do not touch the pins!



Replacement

4.6 Camera

Follow the 3.1 – 3.5 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Camera.

Carry out the Installation as described below.

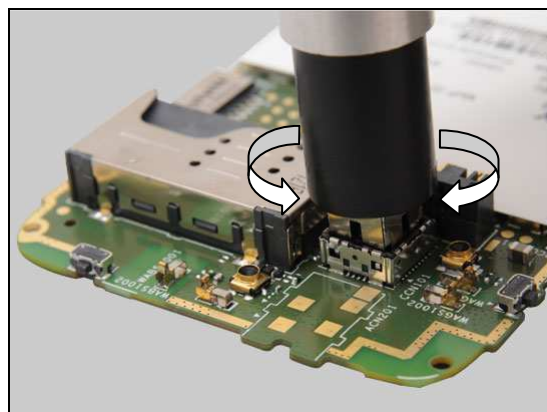
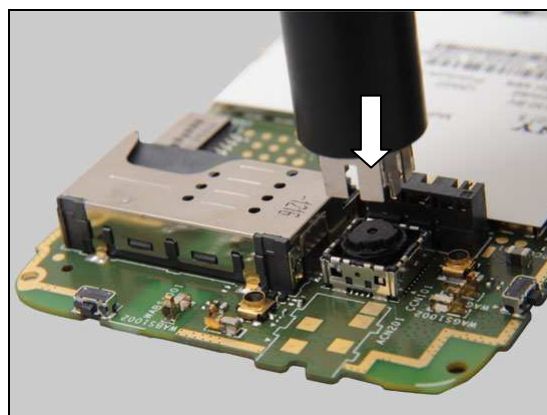
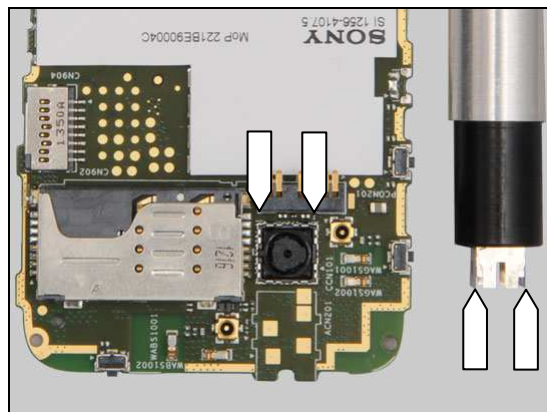
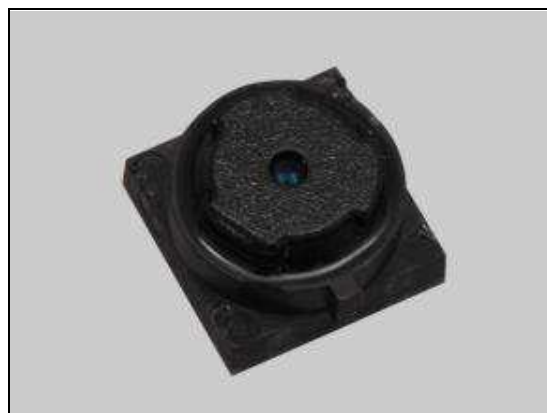
Follow the 5.1 – 5.5 Reassembly instructions!

REMOVAL

Note the orientation of the blades on the Camera Removal Tool in relation to the position of the camera socket!

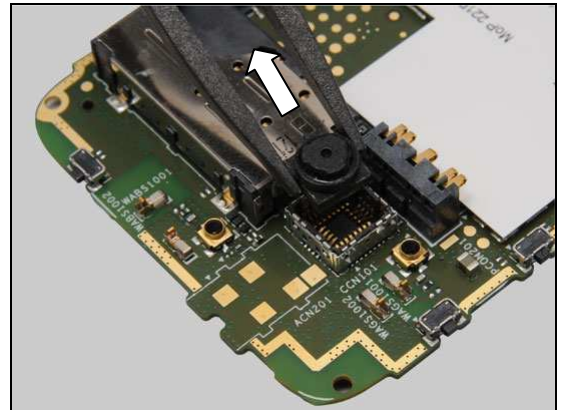
Insert the tool all the way into the camera socket with the Camera Removal Tool in the position shown in the picture.

Wag the tool to release the Camera from its socket as indicated by the arrows.



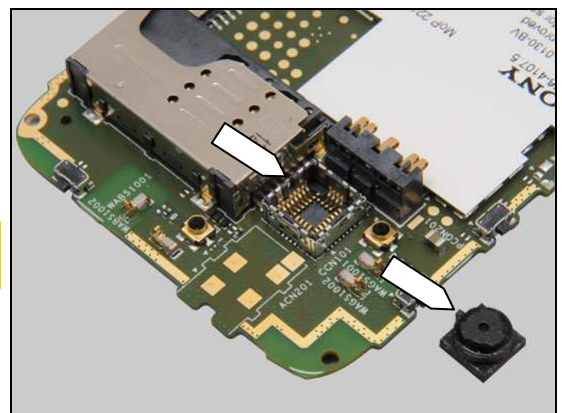
Replacement: Camera

Remove the Camera.

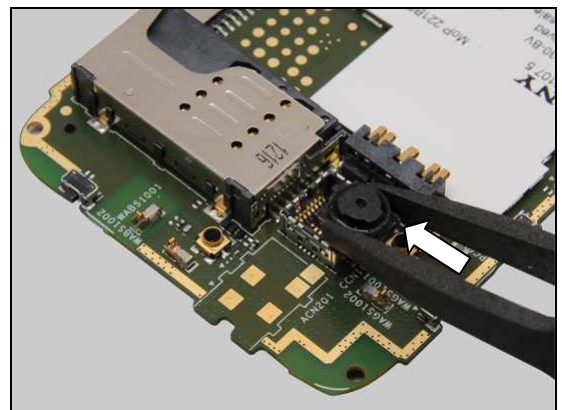


INSTALLATION

Note the orientation of the Camera to be installed as indicated by the pointers!

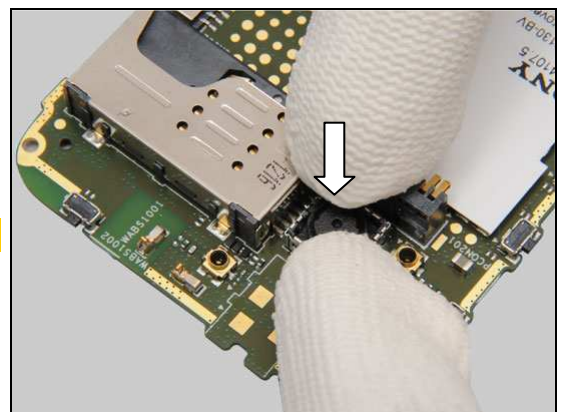


Place the Camera into the socket.



Press the Camera to the bottom of the socket.

Do not touch the camera lens!



Replacement

4.7 Camera Lens

Follow the 3.1 – 3.4 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Camera Lens.

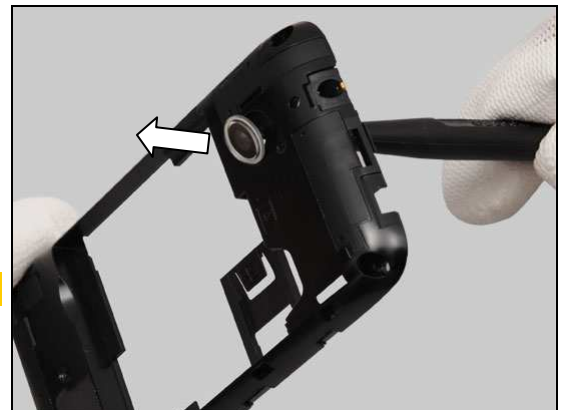
Carry out the Installation as described below.

Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

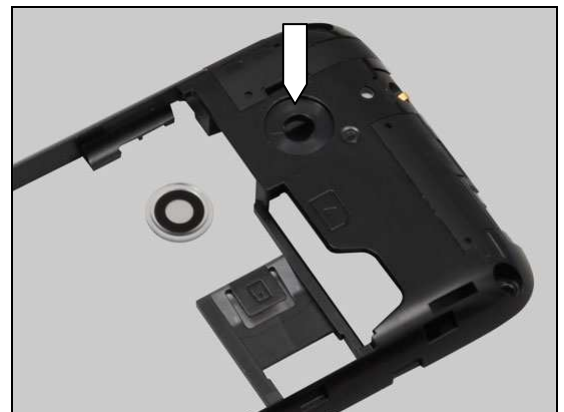
Push against the Camera Lens from the back side with a Nylon Pointer and remove it.

Scrap! Not to be reused!



INSTALLATION

Place a new Camera Lens on its proper position.



Press to secure its position.



Replacement

4.8 Conductive LCM Gasket

Follow the 3.1 – 3.5 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Conductive LCM Gasket.

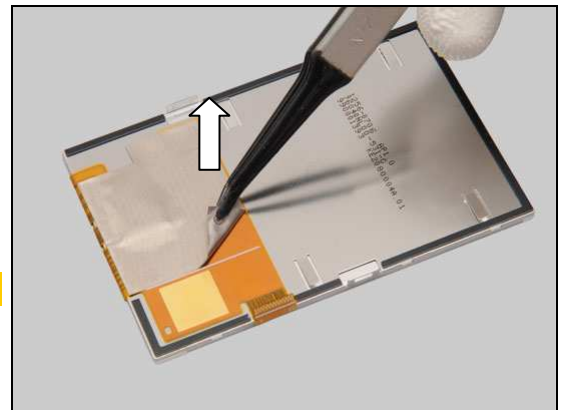
Carry out the Installation as described below.

Follow the 5.1 – 5.5 Reassembly instructions!

REMOVAL

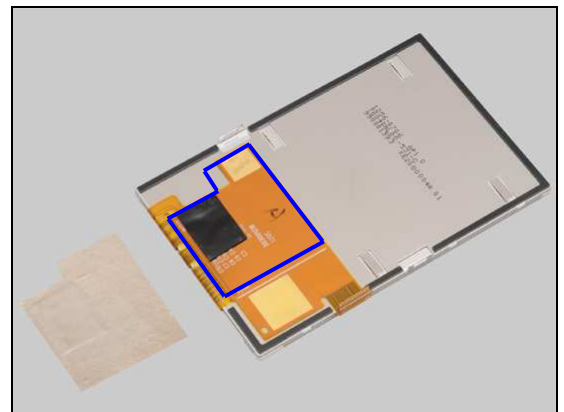
Gently peel off the Conductive LCM Gasket by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

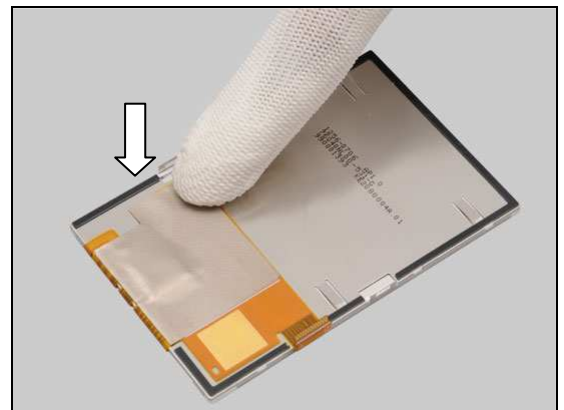


INSTALLATION

Place a new Conductive LCM Gasket on its proper position as indicated by the blue lines.



Press along to secure its attachment and position.



Replacement

4.9 Conductive TP Gasket

Follow the 3.1– 3.3 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Conductive TP Gasket.

Carry out the Installation as described below.

Follow the 5.3 – 5.5 Installation instructions!

REMOVAL

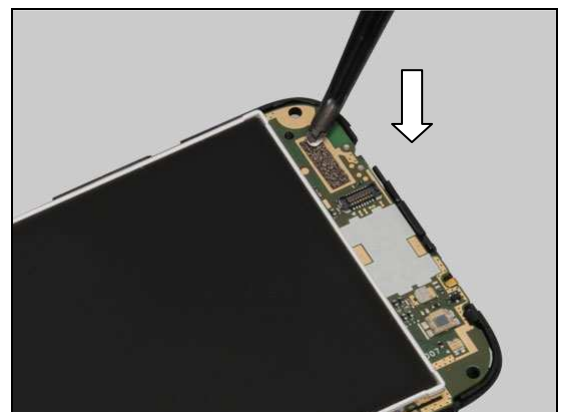
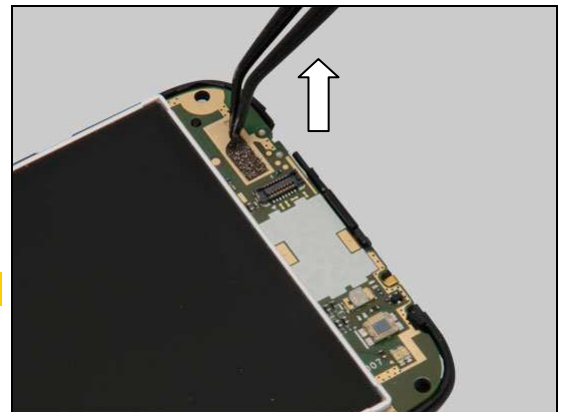
Gently peel off the Conductive TP Gasket by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new Conductive TP Gasket on the PBA as indicated by the golden area.

Press along to secure its attachment and position.



Replacement

4.10 Core Unit Label

Follow the 3.1 – 3.2 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Core Unit Label.

Carry out the Installation as described below.

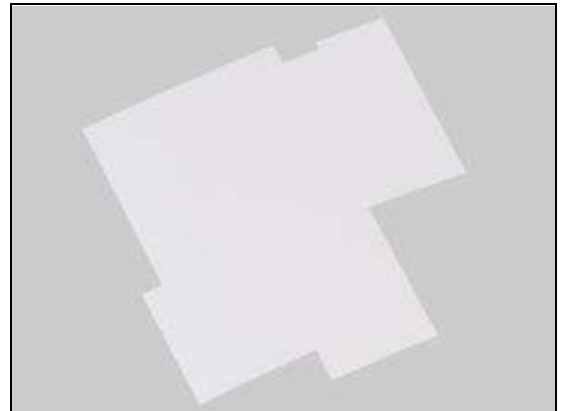
Follow the 5.4 – 5.5 Reassembly instructions!

REMOVAL

Read the old Label Mobile Phone and write the information into the 'LabelMake' program.

Carefully peel off to remove the Core Unit Label.

Scrap! Not to be reused!



INSTALLATION

Check that the proper label format is loaded in the Zebra printer and write a new Label by using the 'LabelMake' software.

Press along the surface of the Core Unit Label to make it securely attached as shown.

One label only is allowed!



Replacement

4.11 Loudspeaker

Follow the 3.1 – 3.4 Disassembly instructions!

Carry out the Removal as described below.

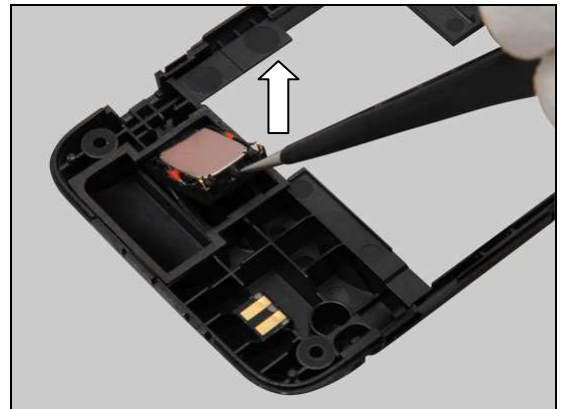
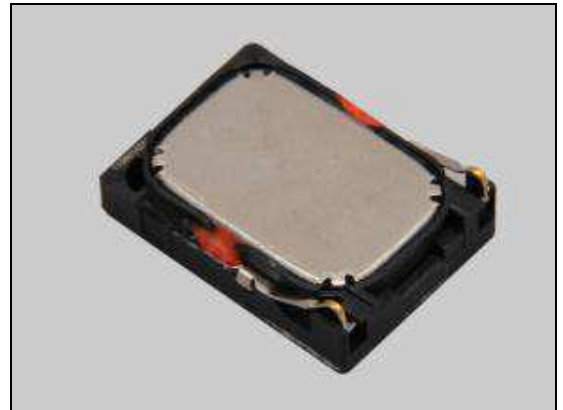
Prepare a new Loudspeaker.

Carry out the Installation as described below.

Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

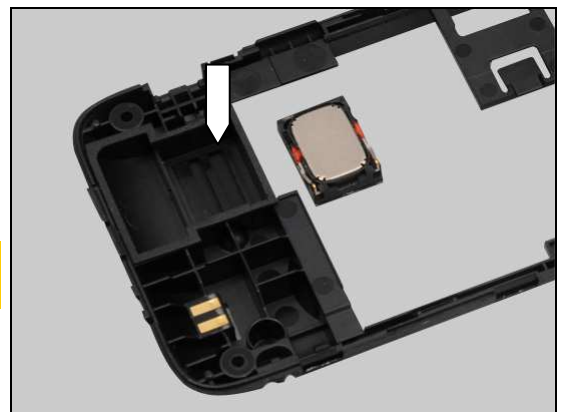
Detach to remove the Loudspeaker by using a pair of Tweezers.



INSTALLATION

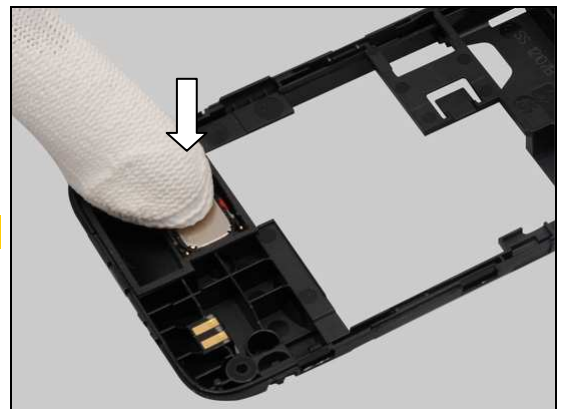
Place a new Loudspeaker in the cavity.

Note the orientation of the Loudspeaker to be installed as shown!



Press to secure its attachment.

Do not touch the contact pins!



Replacement

4.12 Receiver

Follow the 3.1 – 3.3 Disassembly instructions!

Carry out the Removal as described below.

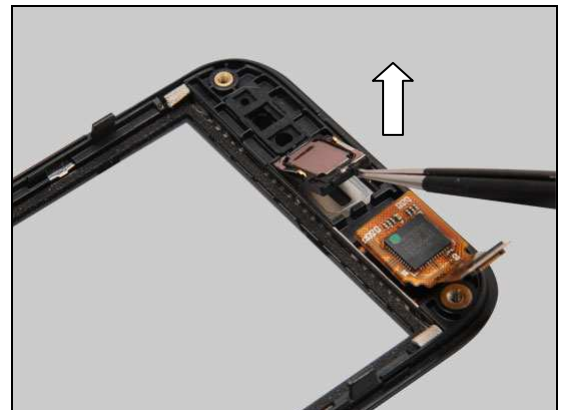
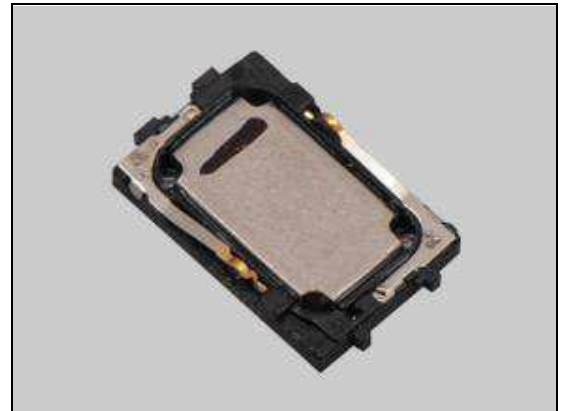
Prepare a new Receiver.

Carry out the Installation as described below.

Follow the 5.3 – 5.5 Reassembly instructions!

REMOVAL

Detach to remove the Receiver by using a pair of Tweezers.



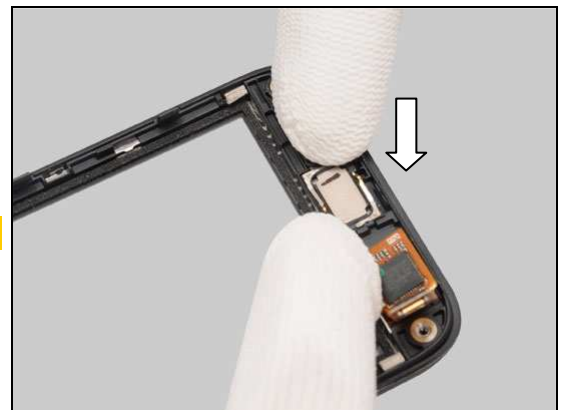
INSTALLATION

Place a new Receiver in the cavity.



Press to secure its attachment.

Do not touch the contact pins!



Replacement

4.13 RF Switch Mylar

Follow the 3.1 – 3.2 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new RF Switch Mylar.

Carry out the Installation as described below.

Follow the 5.4 – 5.5 Reassembly instructions!

REMOVAL

Detach the RF Switch Mylar by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new RF Switch Mylar on its proper position as shown.

Press to secure its attachment.



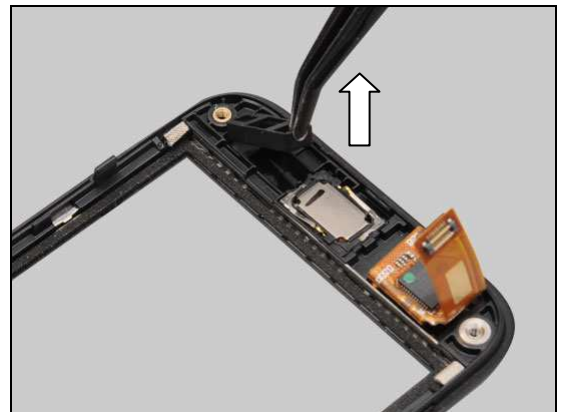
Replacement

4.14 Rubber Indicator

Follow the 3.1 – 3.3 Disassembly instructions!
 Carry out the Removal as described below.
 Prepare a new Rubber Indicator.
 Carry out the Installation as described below.
Follow the 5.3 – 5.5 Reassembly instructions!

REMOVAL

Gently remove the Rubber Indicator by using a Flex Film Assembly Tool.

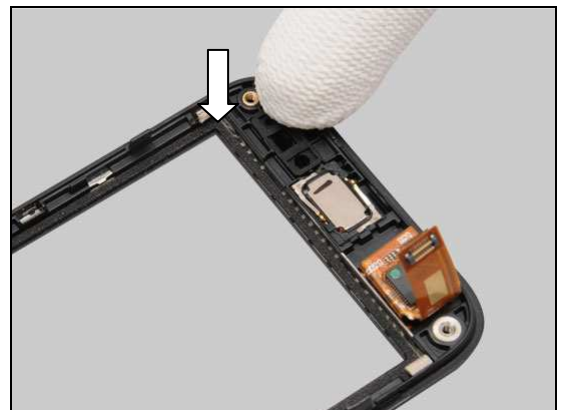


INSTALLATION

Place a new Rubber Indicator in the cavity as shown.



Press to secure its position.



Replacement

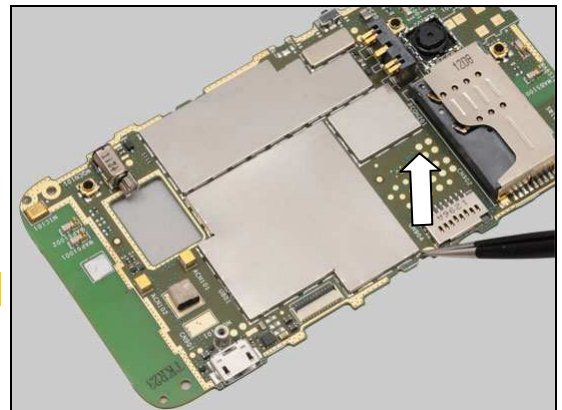
4.15 Shield Can Lid Baseband

Follow the 3.1 – 3.5 Disassembly instructions!
Follow the 4.10 Removal instructions!
 Carry out the Removal as described below.
 Prepare a new Shield Can Lid Baseband.
 Carry out the Installation as described below.
Follow the 4.10 Installation instructions!
Follow the 5.1 – 5.5 Reassembly instructions!

REMOVAL

Unsnap the corners of the Shield Can Lid Baseband by using a pair of Tweezers and pull upwards to remove it.

Scrap! Not to be reused!

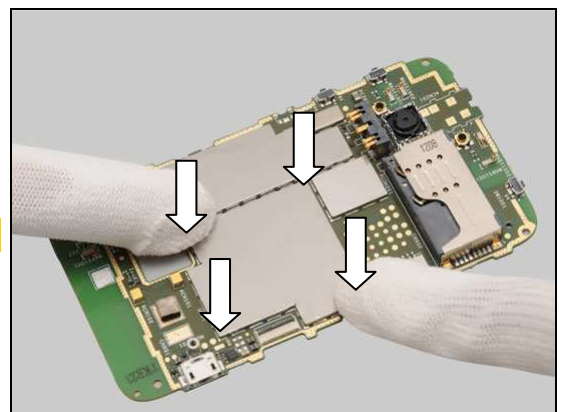
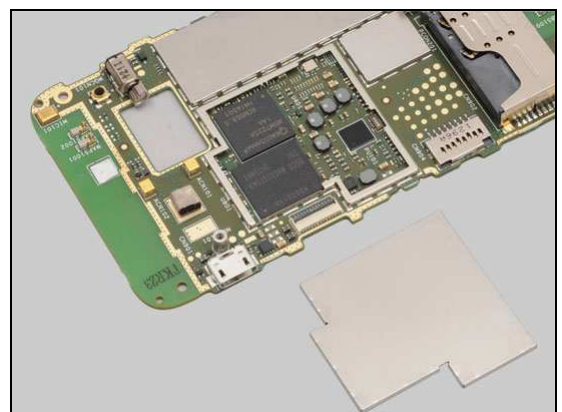


INSTALLATION

Prepare a new Shield Can Lid Baseband.

Press to snap it.

Only the edge of the Shield Can is allowed to press.



Replacement

4.16 Shield Can Lid BT

Follow the 3.1 – 3.5 Disassembly instructions!

Follow the 4.10 Removal instructions!

Carry out the Removal as described below.

Prepare a Shield Can Lid BT.

Carry out the Installation as described below.

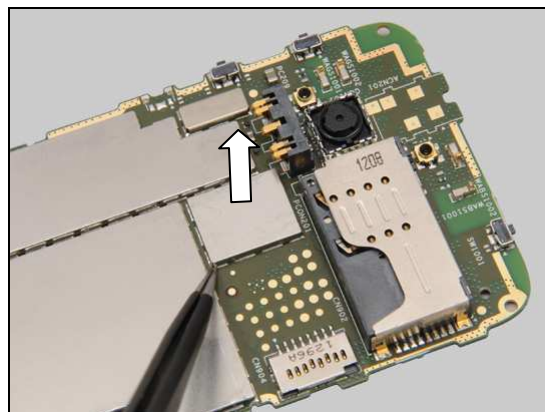
Follow the 4.10 Installation instructions!

Follow the 5.1 – 5.5 Reassembly instructions!

REMOVAL

Unsnap the corners of the Shield Can Lid BT by using a pair of Tweezers and pull upwards to remove it.

Scrap! Not to be reused!

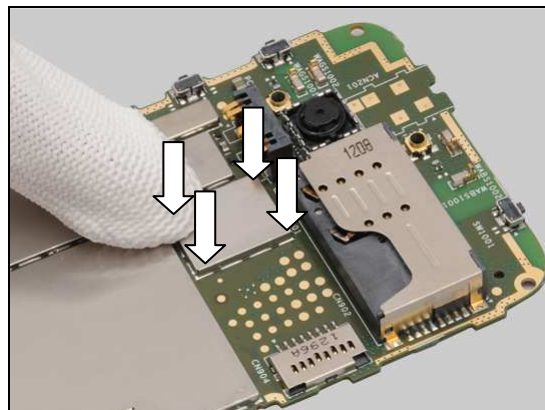
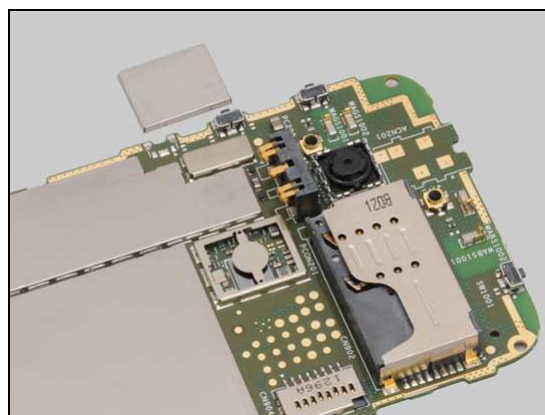


INSTALLATION

Prepare a new Shield Can Lid BT.

Press to snap it.

Only the edge of the Shield Can is allowed to press.



Replacement

4.17 Shield Can Lid RF

Follow the 3.1 – 3.5 Disassembly instructions!

Follow the 4.10 Removal instructions!

Carry out the Removal as described below.

Prepare a Shield Can Lid RF.

Carry out the Installation as described below.

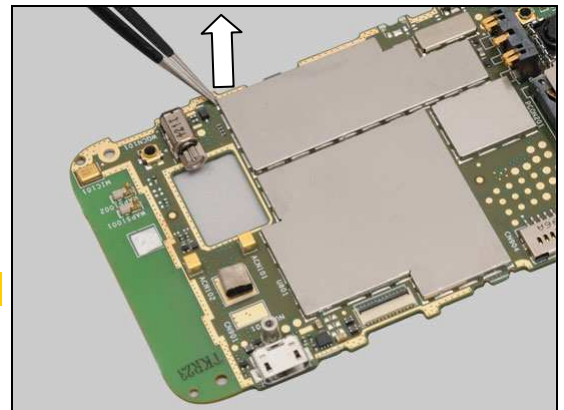
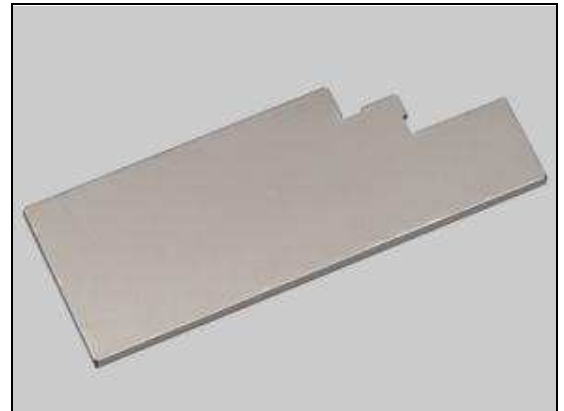
Follow the 4.10 Installation instructions!

Follow the 5.1 – 5.5 Reassembly instructions!

REMOVAL

Unsnap the corners of the Shield Can Lid RF by using a pair of Tweezers and pull upwards to remove it.

Scrap! Not to be reused!

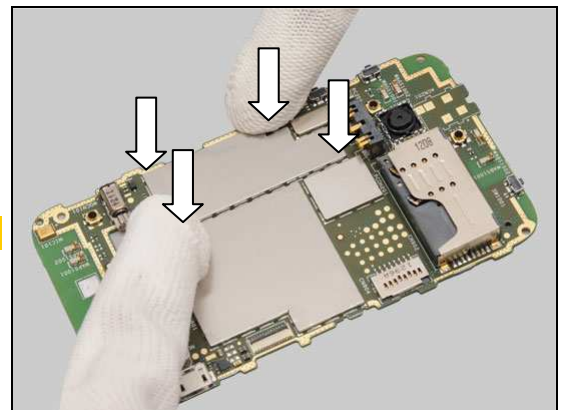
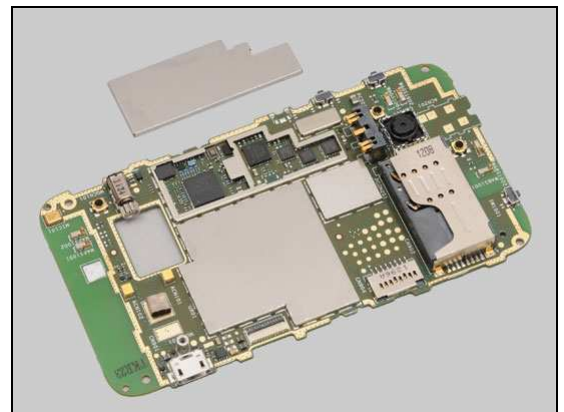


INSTALLATION

Prepare a new Shield Can Lid RF.

Press to snap it.

Only the edge of the Shield Can is allowed to press.



Replacement

4.18 Speaker Gasket

Follow the 3.1 – 3.4 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Speaker Gasket.

Carry out the Installation as described below.

Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

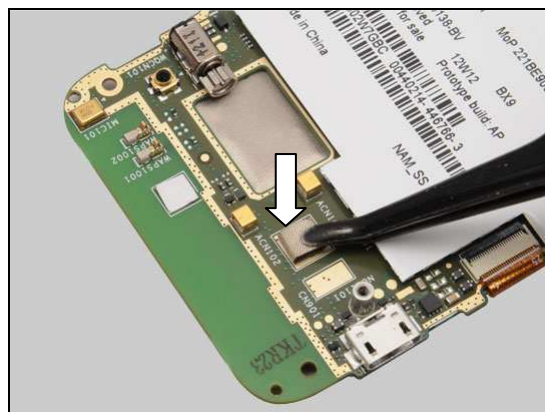
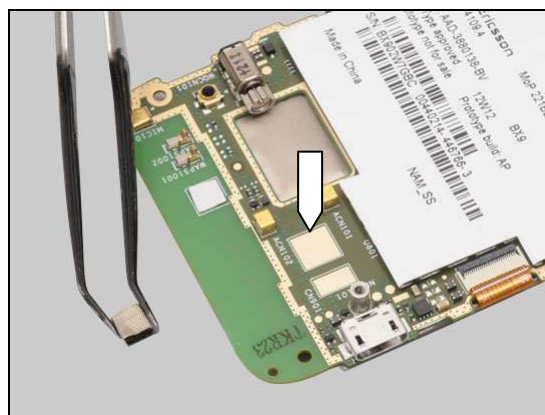
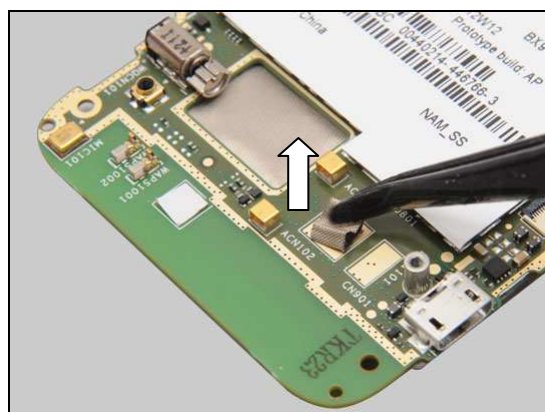
Gently detach the Speaker Gasket by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new Speaker Gasket on its proper position as indicated by the golden area.

Press to secure its attachment and position.



Replacement

4.19 Speaker Mesh

Follow the 3.1 – 3.2 Disassembly instructions!

Carry out the Removal as described below.

Prepare a new Speaker Mesh.

Carry out the Installation as described below.

Follow the 5.4 – 5.5 Reassembly instructions!

REMOVAL

Gently peel off the Speaker Mesh by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new Speaker Mesh on its proper position as indicated by the guiding lines.

Press along to secure its attachment and position.



Replacement

4.20 TP Protection Film

Carry out the Removal as described below.
Prepare a new TP Protection Film.
Carry out the Installation as described below.

REMOVAL

Gently peel off the TP Protection Film with fingers.

Scrap! Not to be reused!



INSTALLATION

Clean the surface of the phone and place a new TP Protection Film on its proper position as shown.



Press along to secure its attachment and position.



Replacement

4.21 Water Indicator (on board)

Follow the 3.1 – 3.4 Disassembly instructions!
 Carry out the Removal as described below.
 Prepare a new Water Indicator.
 Carry out the Installation as described below.
Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

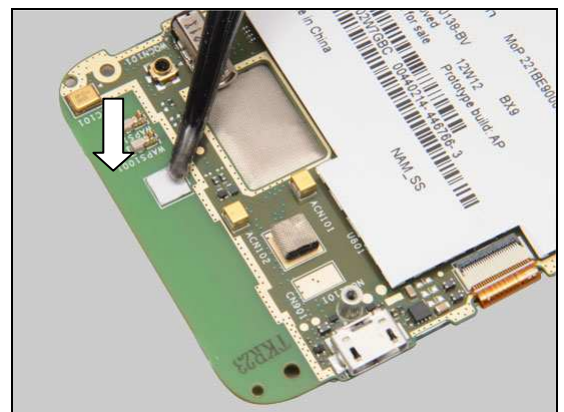
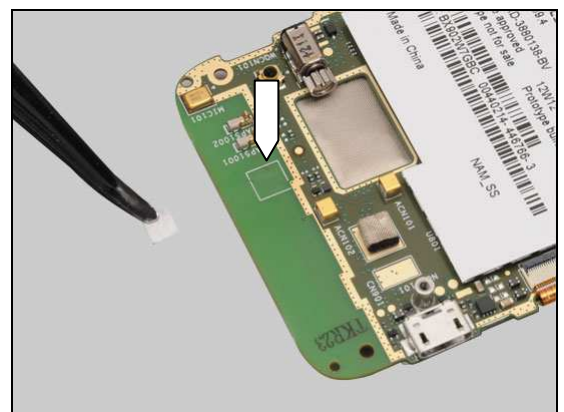
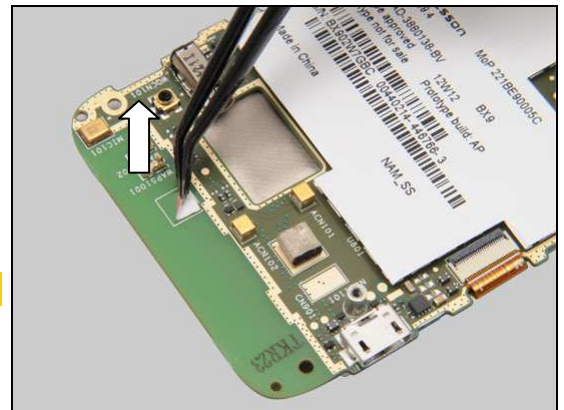
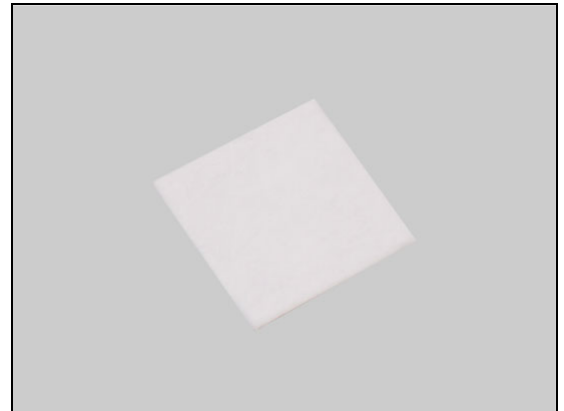
Gently detach to remove the Water Indicator by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new Water Indicator on the proper position as indicated by the guiding rectangle.

Press to secure its position.



Replacement

4.22 Water Indicator (on Audio Jack)

Follow the 3.1 – 3.4 Disassembly instructions!

Follow the 4.5 Removal instructions!

Carry out the Removal as described below.

Prepare a new Water Indicator.

Carry out the Installation as described below.

Follow the 4.5 Installation instructions!

Follow the 5.2 – 5.5 Reassembly instructions!

REMOVAL

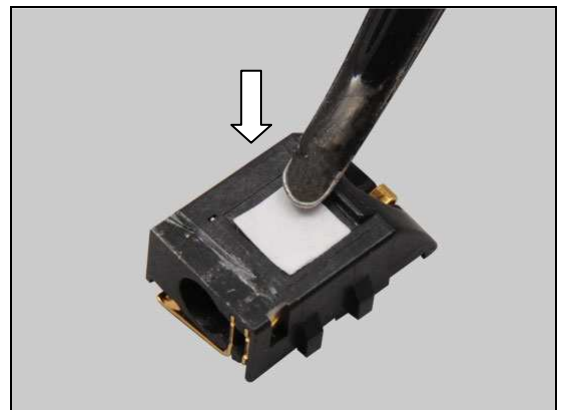
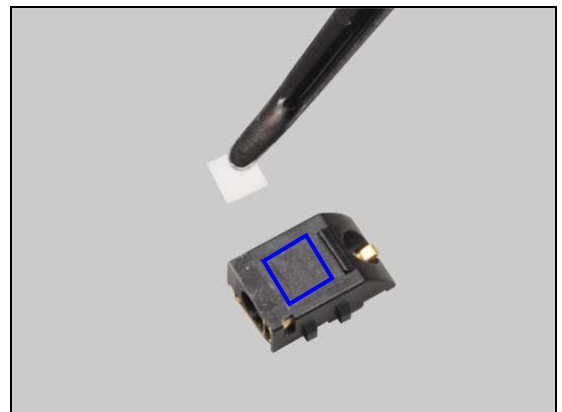
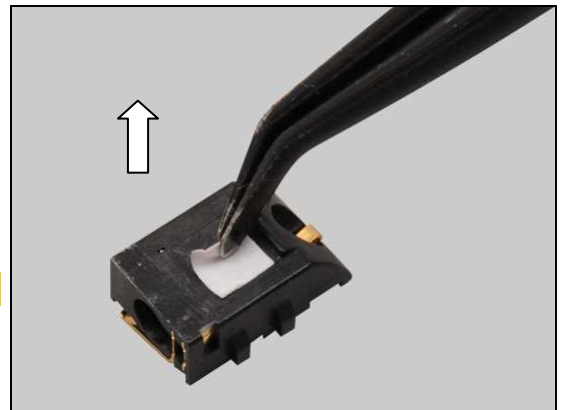
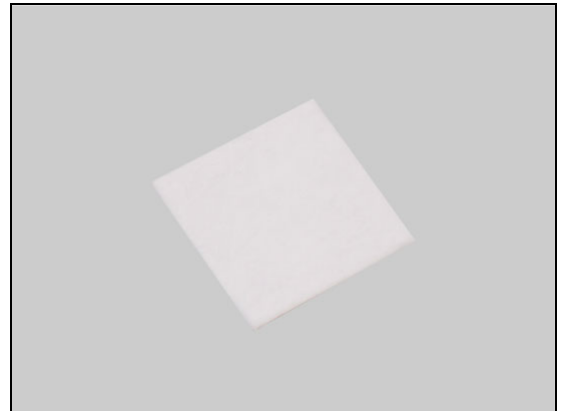
Gently detach to remove the Water Indicator by using a Flex Film Assembly Tool.

Scrap! Not to be reused!

INSTALLATION

Place a new Water Indicator on the proper position as indicated by the blue rectangle.

Press along to secure its attachment and position.



Replacement

4.23 Board Swap - Replacement

Follow the 3.1 – 3.5 Disassembly instructions!

Follow the 4.6 Removal instructions!

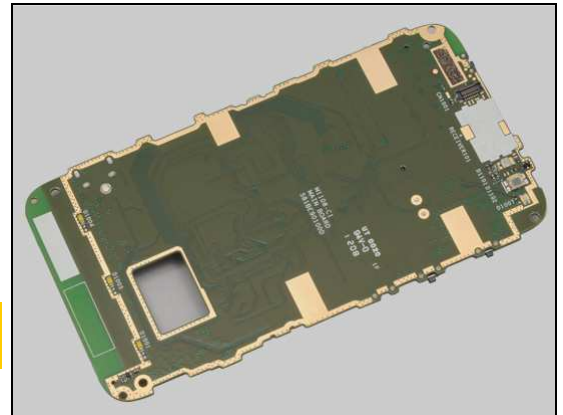
Replace the Swap Board.

Reuse the Camera.

Follow the 4.6, 4.9 and 4.17 Installation instructions!

Follow the 5.1 – 5.5 Reassembly instructions!

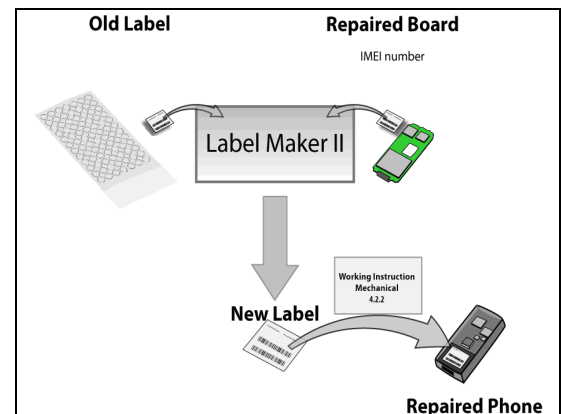
**Startup the unit to initialize settings, before performs
Customize Phone in Emma.**



4.24 Board Swap – Change Label

CHANGE LABEL

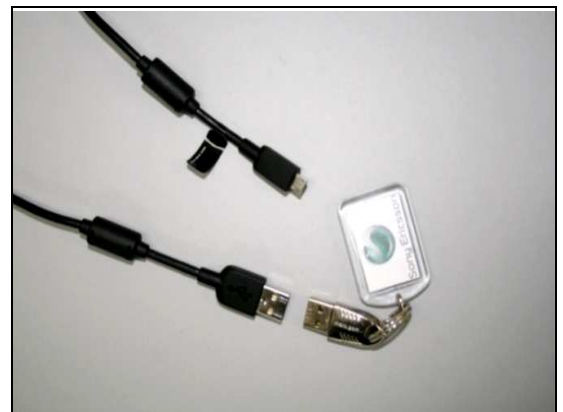
Follow the instructions in the Generic Repair Manual –
Build swap for change of label.



4.25 Board Swap – Customize of Software

CUSTOMIZE OF SOFTWARE

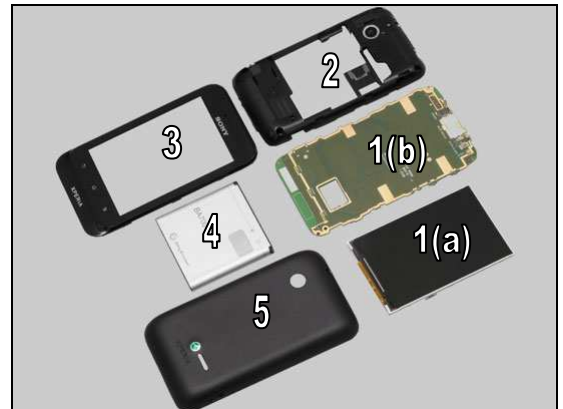
Follow the instructions in the Generic Repair Manual –
Build swap for customization of the software.



5 Reassembly

The reassembly is done in the following order:

1. LCD TFT 3.2Inch (a) & Main PBA (b)
2. Frame Antenna Assy
3. Front Assy
4. Battery
5. Battery Cover

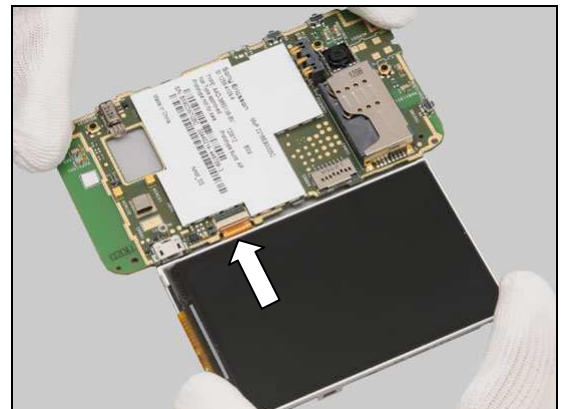


5.1 LCD TFT 3.2Inch & Main PBA

Prepare the LCD TFT 3.2Inch and the Main PBA.



Insert the FPC of the LCD TFT 3.2Inch into the ZIF connector on the Main PBA.

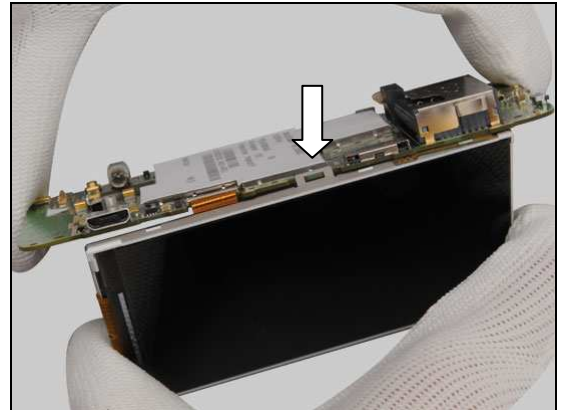


Lock the ZIF connector.

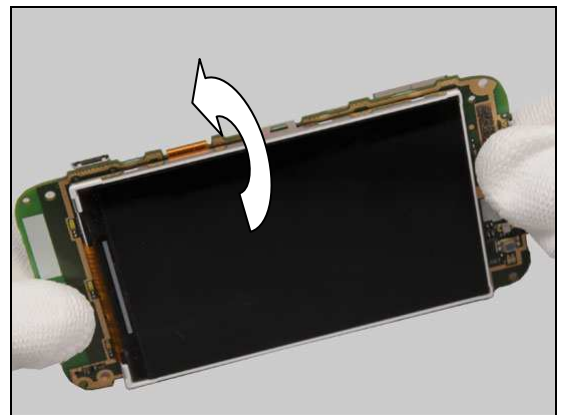


Reassembly

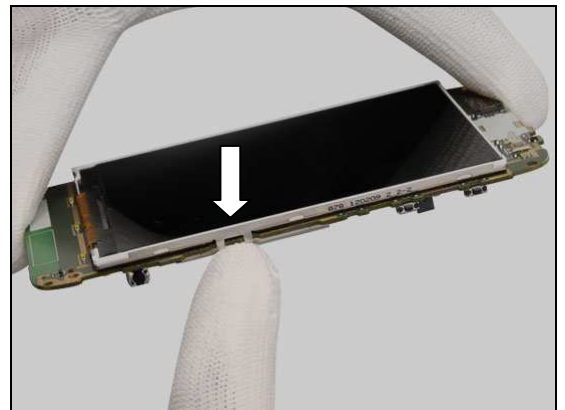
Insert the hook of the Main PBA into the hole as shown in picture.



Turn over the Main PBA.

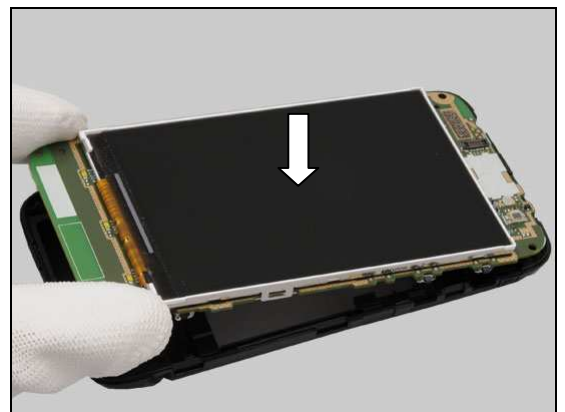


Snap the hook on the opposite side of the Main PBA as shown.



5.2 Frame Antenna Assy

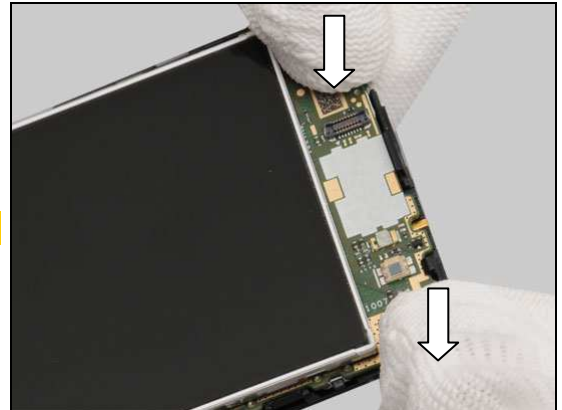
Securely place the Main PBA on the Frame Antenna Assy.



Reassembly

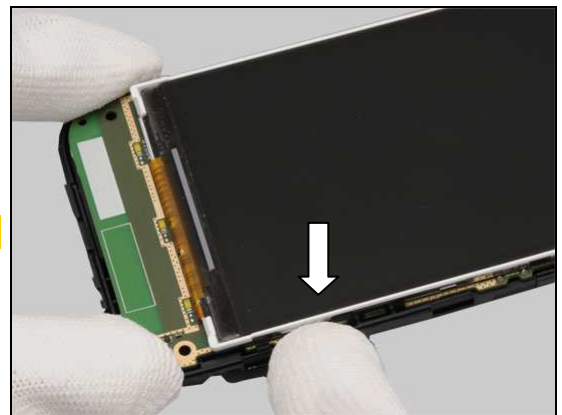
Press to snap the two hooks of this side.

Be careful! Do not press the components!

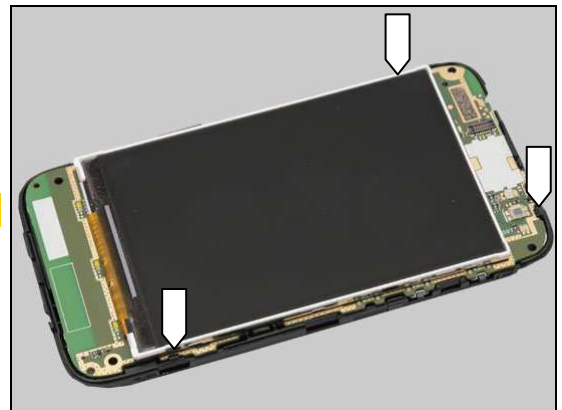


Press to snap the hook of this side.

Be careful! Do not press the Display!

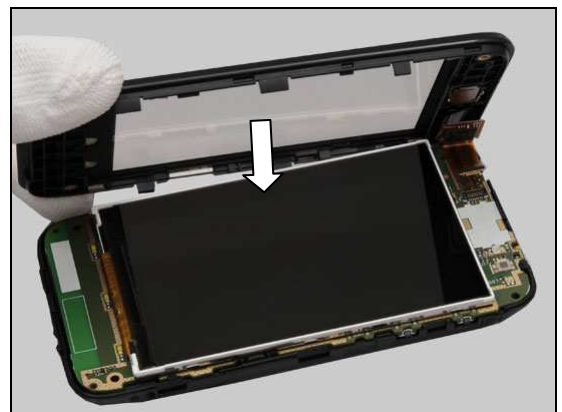


Make sure the three hooks are securely snapped!



5.3 Front Assy

Place the Front Assy on the core unit at approximately 45 degree as shown.



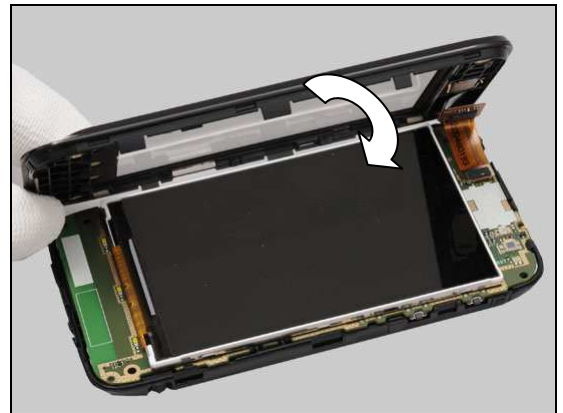
Reassembly

Snap the BtB connector.

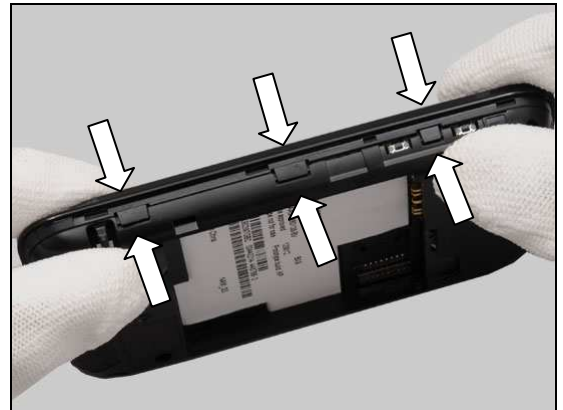
Do not stretch the FPC!



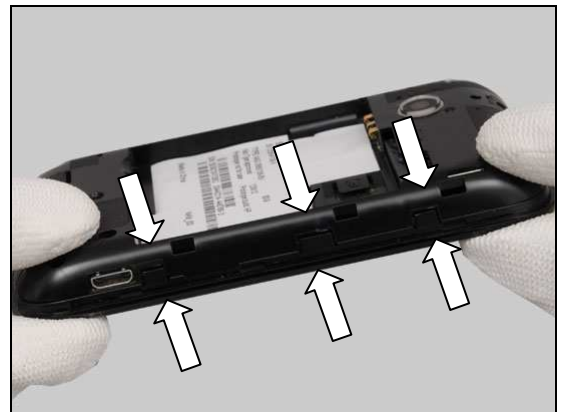
Turn the Front Assy over back to its horizontal position.



Press to snap the hooks of this side.



Do the same on the opposite side.



Reassembly

Apply 8 Ncm torque when tightening the screw with Bits (Philip screw).



Apply 10 Ncm torque when tightening the four screws with Bits (T5).



5.4 Battery

Insert the Battery into the socket.



Press to secure its position.



Reassembly

5.5 Battery Cover

Place the Battery Cover on the proper position.



Press to snap the hooks of the Battery Cover.



6 Revision History

Rev.	Date	Changes / Comments
1	2012-Jul-20	Initial release
2	2012-Aug-23	Update the Board Swap chapter and commercial name
3	2012-Aug-31	4.3 update 4.11 heading text update