



Working Instruction, Mechanical

Applicable for W960

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1 Introduction

1.1 W960



1.2 Equipment

SPECIAL TOOLS

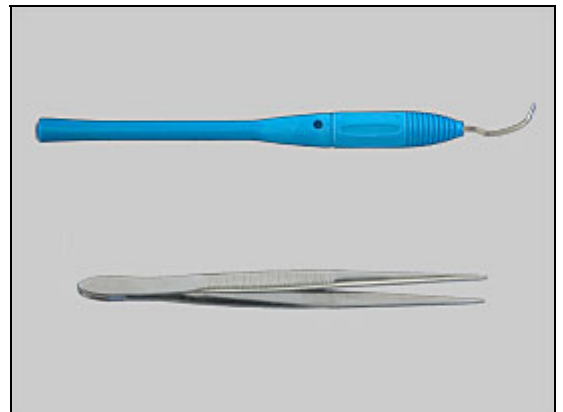
- NTZ 122 459 Torque screwdriver (or equivalent)
- NTZ 122 288 Torx bit no. 6
- NTZ 112 1052 JCIS bit
- NTZ 112 302/2 Front opening tool
- NTZ 122 521 Flex film assembly tool
- NTZ 112 583 Camera Removal Tool
- NTZ 112 590 Guitar pick



STANDARD TOOLS

Standard tools have to be locally purchased

- Dentist hook
- ESD tweezers



LABEL EQUIPMENT

The following special equipment is required when replacing or installing a new label:

- Hot air flow solder station
- Zebra printer connected to computer



OTHER EQUIPMENT

- ESD-wristband
- ESD-gloves
- Isopropyl alcohol
- Air blower



1.3 General cautions

The following cautions are considered to be generic for all phone models and will not be repeated in the Disassembly, Replacements and Reassembly sections:

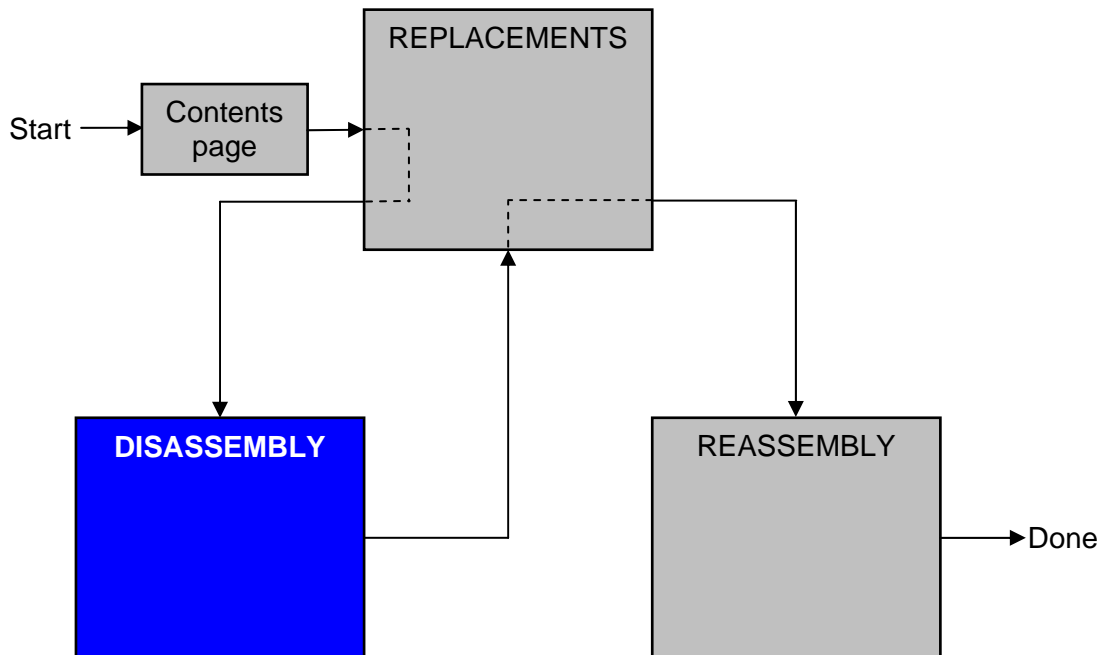
- **SWITCH OFF THE PHONE AND REMOVE ANY MEMORY STICK BEFORE THE START OF THE DISASSEMBLY!**
- **KEEP ALL CONTACT SURFACES CLEAN!**
- **BE CAREFUL WHEN USING TOOLS LIKE THE DENTIST HOOK, TWEEZERS, OPENING TOOLS, GUITAR PICK ETC. TO AVOID SCRATCHES OR DAMAGES TO THE EXTERIOR AND INTERIOR PARTS OF THE PHONE!**
- **BE CAREFUL NOT TO DAMAGE ANY CONTACT SPRINGS!**
- **REMEMBER TO REMOVE THE PROTECTION FOILS ON NEW PARTS SUCH AS THE FRONT COVER AND LCD!**
- **NEVER TOUCH THE DISPLAY GLASS!**
- **USE AIR BLOW EQUIPMENT TO KEEP THE FRONT WINDOW AND DISPLAY MODULE DUST FREE!**

1.4 Adhesives

Use a dentist hook and/or the tweezers to remove old adhesives.
Clean the surface with isopropyl alcohol before attaching new adhesives.

2 Disassembly

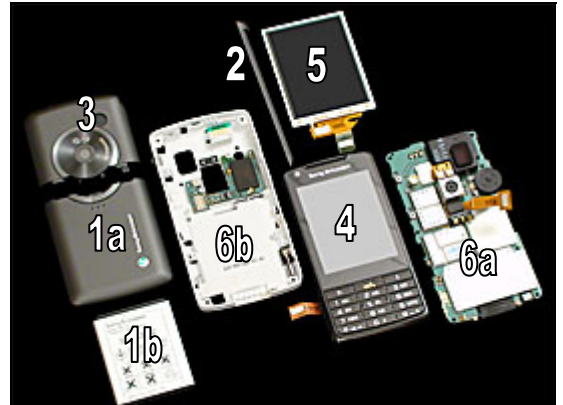
When you are going to replace a part being listed in *Replacements*, the instruction of that section usually begins by directing you to this *Disassembly* section with a specification of the instructions you have to carry out in order to disassemble the phone as far as needed before returning to *Replacements* for the actual replacement.



2.1 Overview

The disassembly is done in the following order:

1. Battery Lid Asm (a) & Battery (b)
2. Stylus
3. Antenna Lid Asm
4. Front Cover
5. LCD w/o Touch Panel
6. PBA (a) & Frame Sub Asm (b)



2.1.1 Battery Lid Asm & Battery

Release the Battery Cover.



Lift up the battery cover.



Remove the Battery Cover.



Grab the Battery and pull it up.



2.1.2 Stylus

Use your fingers to slide out the Stylus



2.1.3 Antenna Lid Asm

Use JCIS to remove the screw.



Use a guitar pick and slid upwards and downwards



Use a guitar pick and slide upwards and downwards



Use a guitar pick and slide upwards and downwards



Antenna Lid Asm *continued*

Remove the Antenna Lis Asm



Use Torx bit no 6 to remove the four screws.



2.1.4 Front Cover



Use a guitar pick and slide upwards and downwards



NOTE. Be cautious not to damage the 5 pole pin connector to Touch Panel on right side where the arrow point.

Use a guitar pick and slide upwards and downwards



Use a guitar pick and slide upwards and downwards

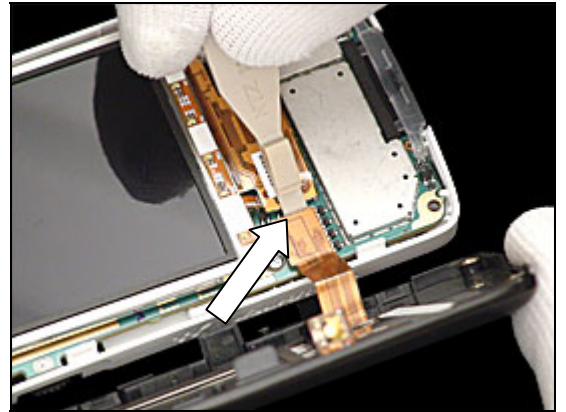


Front Cover continue

Use your fingers and wiggle the Front Cover to the left to release it from the Frame assembly

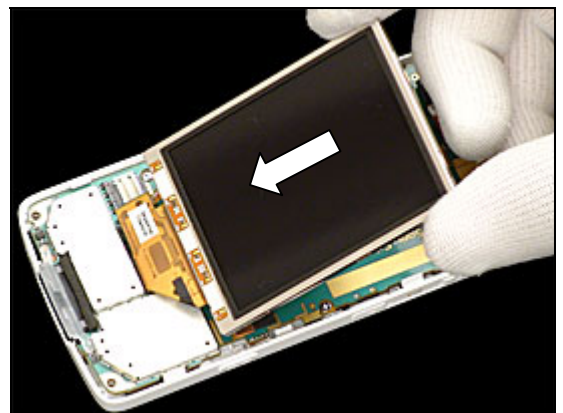


Use a front opening tool to disconnect the BtB connector.

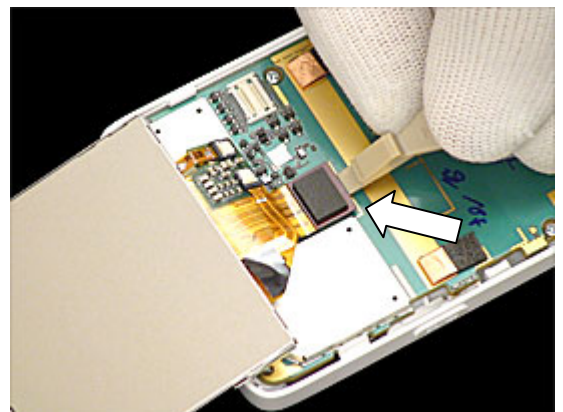


2.1.5 LCD, W/O Touch Panel

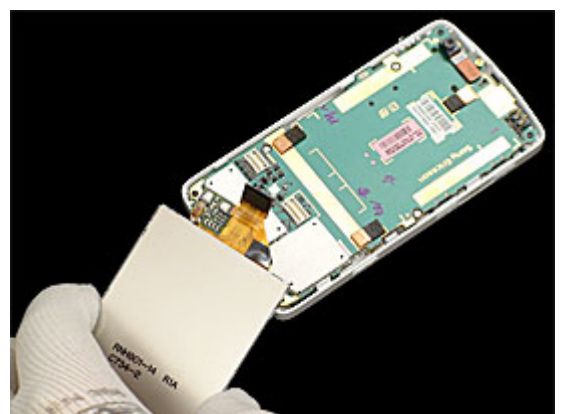
Lift up the Display and turn it over



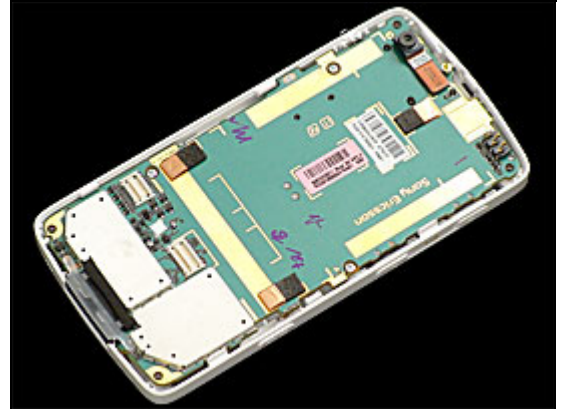
Use a front opening tool and pull it upwards to disconnect the LCD from the PCB.



Remove the Display

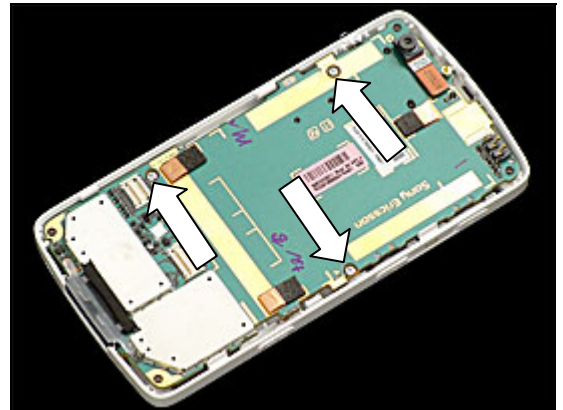


LCD, W/O Touch Panel *continued*

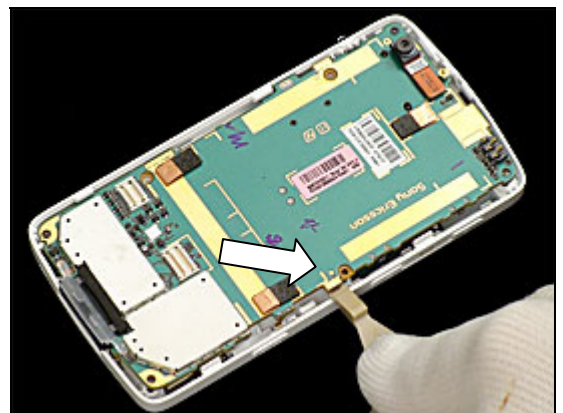


2.1.6 PBA & Frame Sub Asm

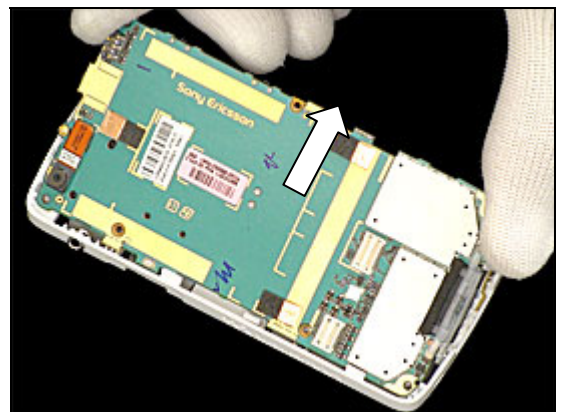
Use JCIS to remove the three screws.



Use the front opening tool to release the latch indicated.

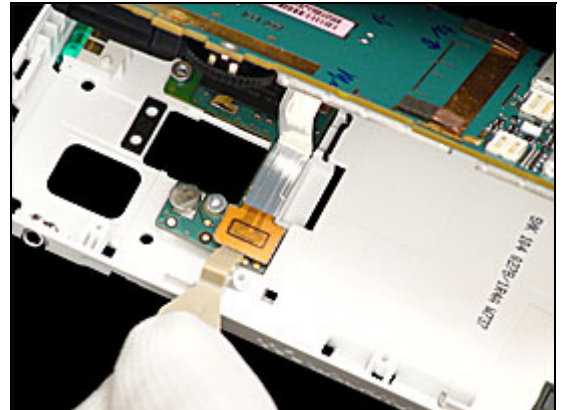


Use your finger to lift up the PBA from the Frame.



PBA & Frame Sub Asm continue

Use the front opening tool to release the BtB connector.



Remove the PBA from the Frame



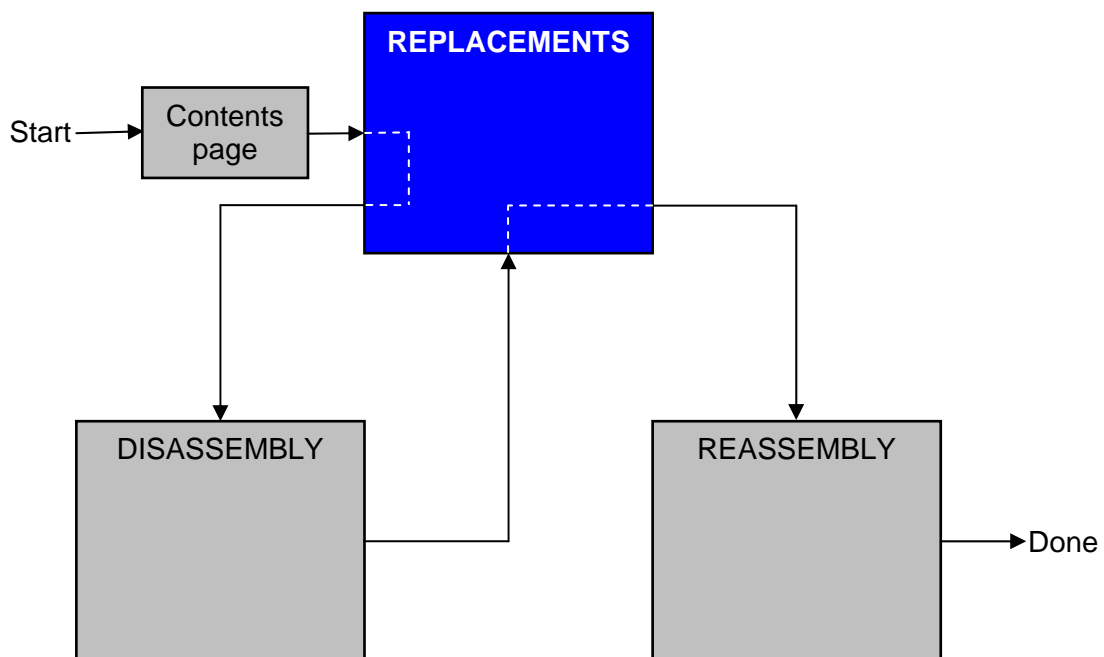
3 Replacements

Search for the part to be replaced on the Contents page and go to that instruction to be found in this *Replacements* section.

The instruction usually begins by directing you to the *Disassembly* section with a specification of the instructions you have to carry out in order to disassemble the phone as far as needed before the actual replacement.

Go back to this *Replacements* section and carry out the instruction.

The instruction usually ends by directing you to the *Reassembly* section with a specification of the instructions you have to carry out in order to reassemble the phone.



3.1 Battery Lid Asm

Follow the 2.1.1 Disassembly instructions!

Prepare the new Battery Lid Asm.

Follow the 4.1.6 Reassembly instructions!

3.2 Battery

Follow the 2.1.1 Disassembly instructions!

Prepare the new Battery.

Follow the 4.1.6 Reassembly instructions!

3.3 Stylus

Follow the 2.1.1 – 2.1.2 Disassembly instructions!

Prepare the new Stylus.

Follow the 4.1.3 – 4.1.6 Reassembly instructions!

3.4 Antenna Lid Asm

Follow the 2.1.1 – 2.1.3 Disassembly instructions!

Prepare the new Antenna Lid Asm.

Follow the 4.1.3 – 4.1.6 Reassembly instructions!

3.5 Front Cover

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Prepare the new Front Cover.

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

3.6 LCD, w/o Touch Panel

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Prepare the new LCD, w/o Touch Panel.

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

3.7 Frame Sub Asm

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Prepare the new Frame Sub Asm.

Follow the 4.1.4 – 4.1.6 Reassembly instructions!

3.8 Mesh Loudspeaker

REMOVAL

Follow the 2.1.1 – 2.1.3 Disassembly instructions!

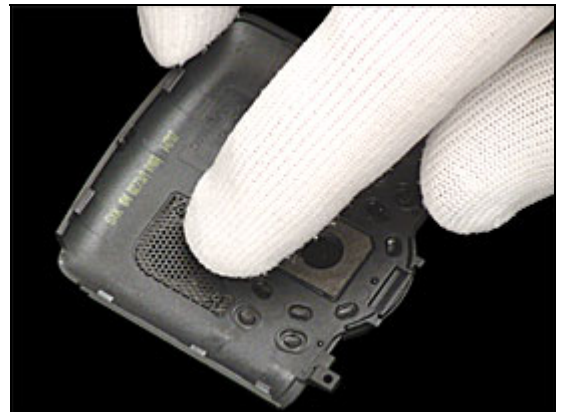
Use a Dentist Hook to remove the Mesh Loudspeaker



INSTALLATION

Use your fingers to position the Mesh Loudspeaker.

Follow the 4.1.4 – 4.1.6 Reassembly instructions!



3.9 Camera Gasket

REMOVAL

Follow the 2.1.1 – 2.1.3 Disassembly instructions!

Use a Dentist Hook to remove the Camera protection lens.



INSTALLATION

Use your fingers to position the Camera protection lens

Follow the 4.1.4 – 4.1.6 Reassembly instructions!

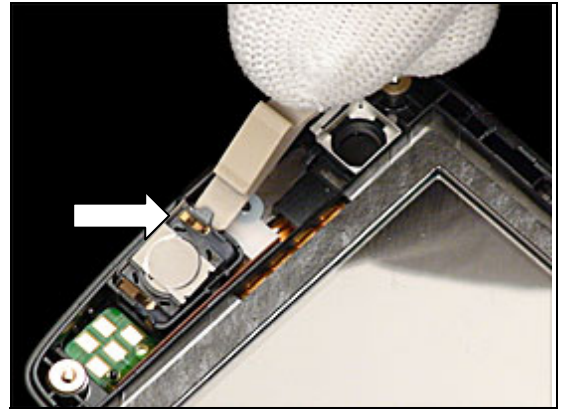


3.10 Earspeaker Bujeon w/o Gasket

REMOVAL

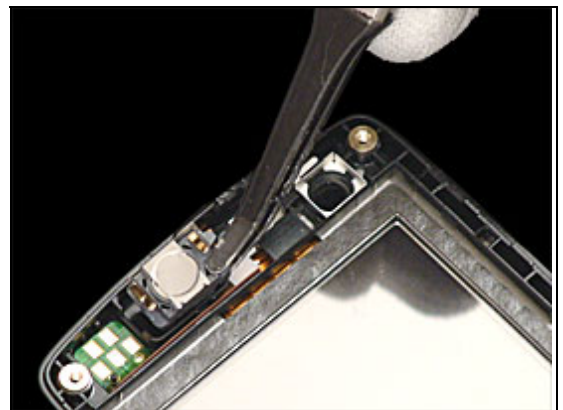
Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Use a front opening tool to disconnect the Earspeaker.



INSTALLATION

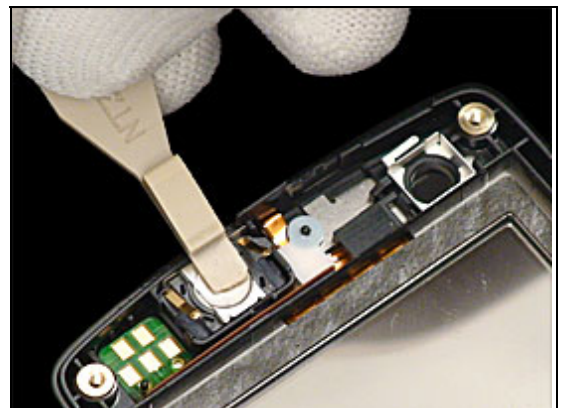
Use a flex film assembly tool to Install the Earspeaker



DO NOT TOUCH THE EAR SPEAKER SPRINGS!

Use a front opening tool to press the Ear speaker into its cavity.

Follow the 4.1.4 – 4.1.6 Disassembly instructions!



3.11 Spring Bracket

REMOVAL

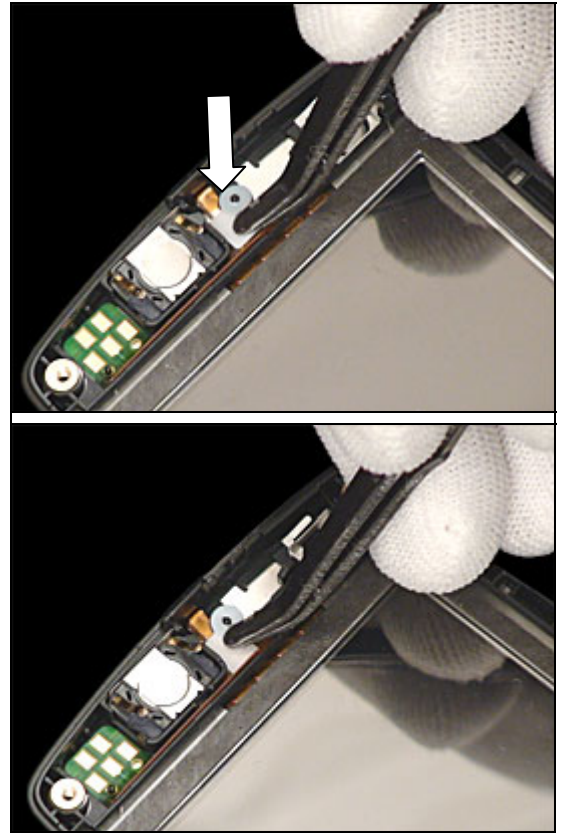
Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Use a flex film assembly tool to remove the Spring Bracket

INSTALLATION

Use the flex assembly tool to insert the Spring Bracket

Follow the 4.1.3 – 4.1.6 Reassembly instructions!

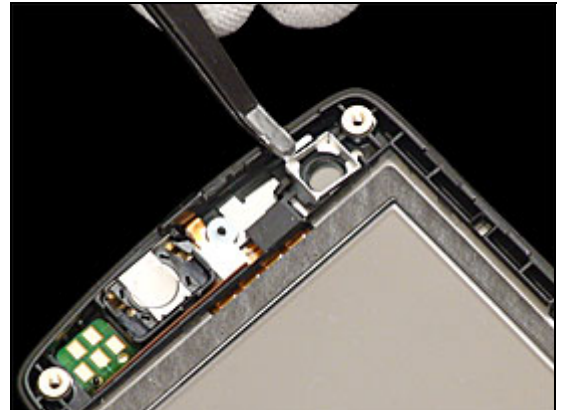


3.12 Shielding Lid, CIF Camera

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Use a flex assembly tool to remove the Shielding Lid



INSTALLATION

Use a flex assembly tool to position the Shielding Lid

Follow the 4.1.3 – 4.1.6 Reassembly instructions!

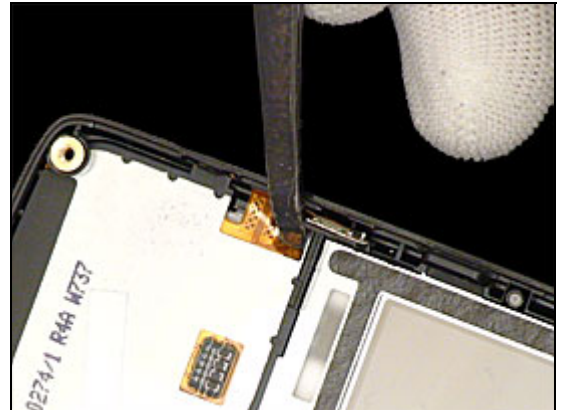


3.13 Keypad

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Use a flex film assembly tool to press out the keypad.



Use a flex film assembly tool to disconnect the Keypad



Use your fingers to remove the Keypad



Keypad continue

INSTALLATION

Use your fingers to position the Keypad



Use your fingers to position the Keypad

Follow the 4.1.3 – 4.1.6 Disassembly instructions!



3.14 Flex Asm Keyboard

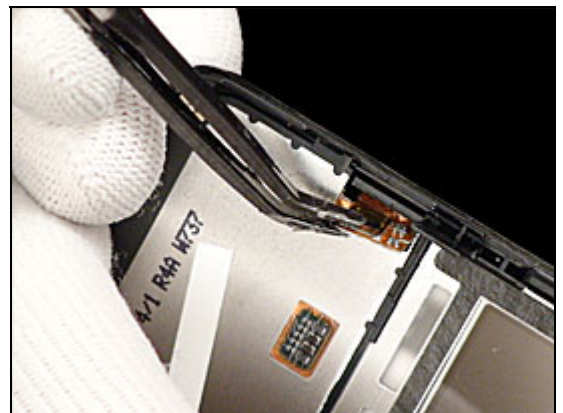
REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Use a Dentist Hook to disconnect the Camera switch



Use a flex assembly tool to push the Camera switch flex through the hole



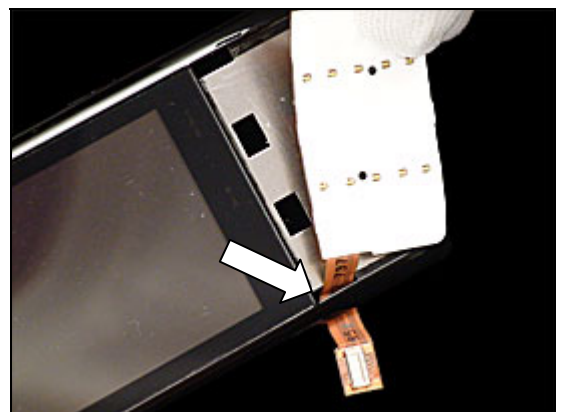
Use your fingers to remove the Flex Asm keyboard



INSTALLATION

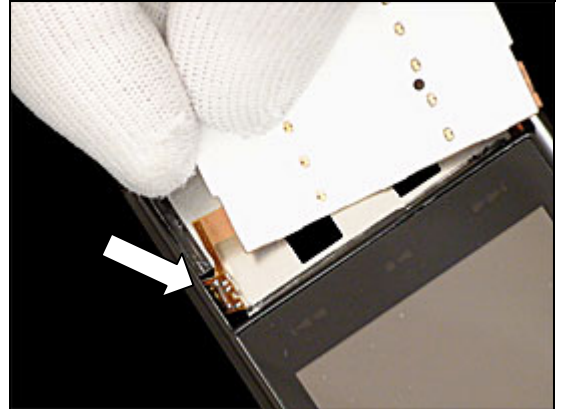
NOTE. Clean Metall plate with alcohol before installation of the new flex.

Use your fingers to position the left BtB connector



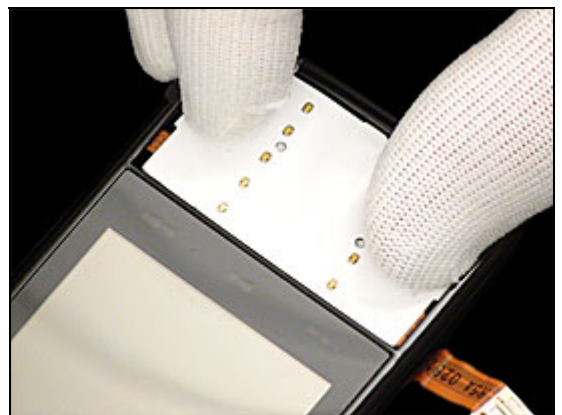
Flex Asm Keyboard continue

Use your fingers to position the right BtB connector



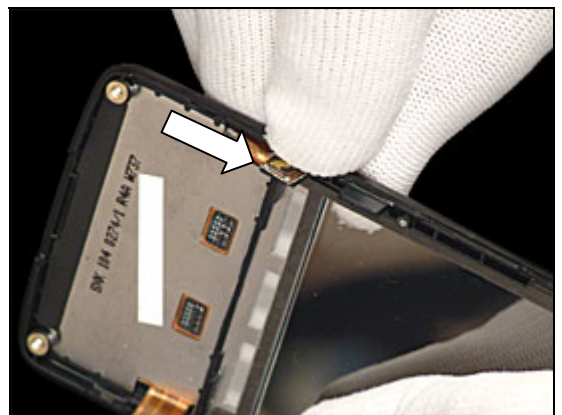
NOTE. Very important! Do not press on the flex above the holes in the metal plate. High risk for damaging components on the flex

Use your fingers to position the Flex Asm Keyboard



Use your fingers to position the Camera button

Follow the 4.1.3 – 4.1.6 Reassembly instructions!

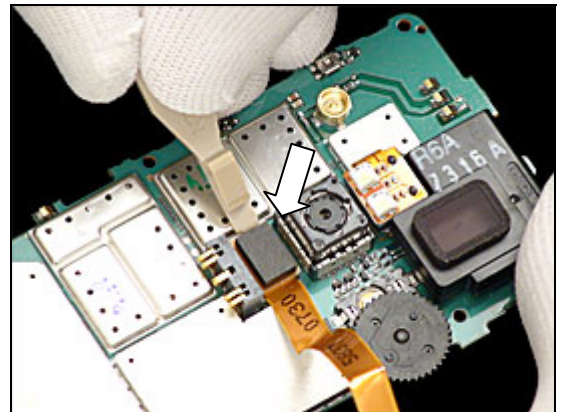


3.15 BtB Flex

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

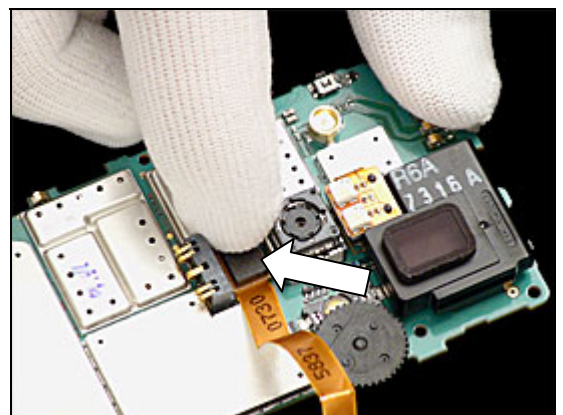
Use a Front Opening tool to disconnect the BtB Flex



INSTALLATION

Use your fingers to position the BtB Flex

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

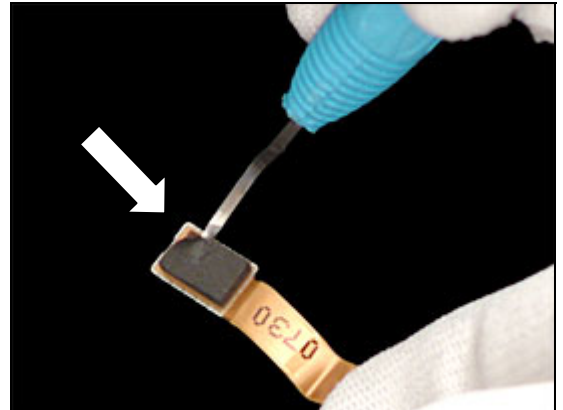


3.16 BtB Flex Poron

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

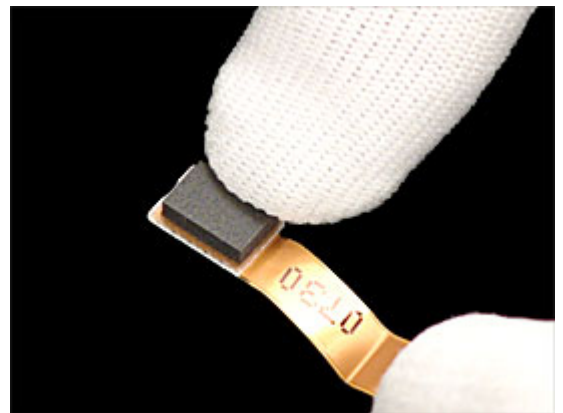
Use a Dentist Fork to remove the BtB Flex Poron



INSTALLATION

Remove the activated Liquid Indicator with a Dentist Hook and the tweezers.

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

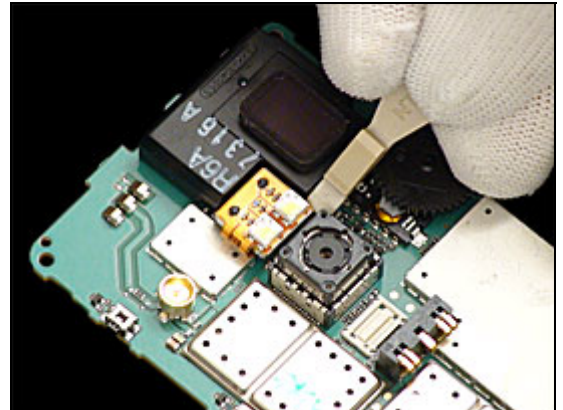


3.17 Acoustic Box

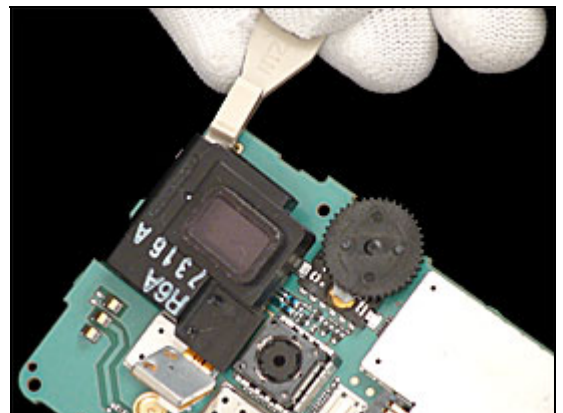
REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

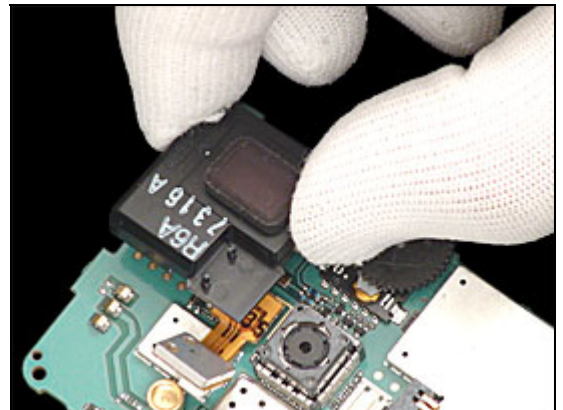
Use a Front Opening Tool to disconnect the Flash Flex Asm



Use a Front Opening tool to disconnect the Acoustic Box

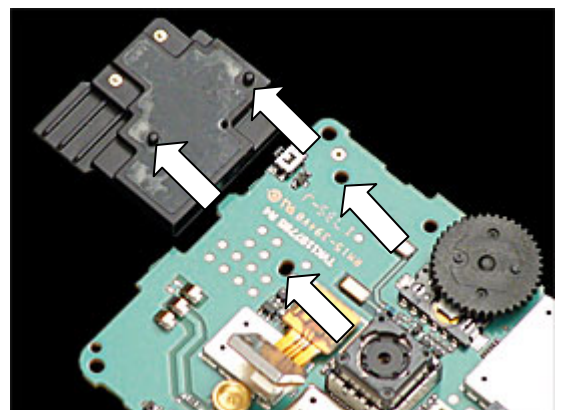


Use your fingers to remove the Acoustic Box



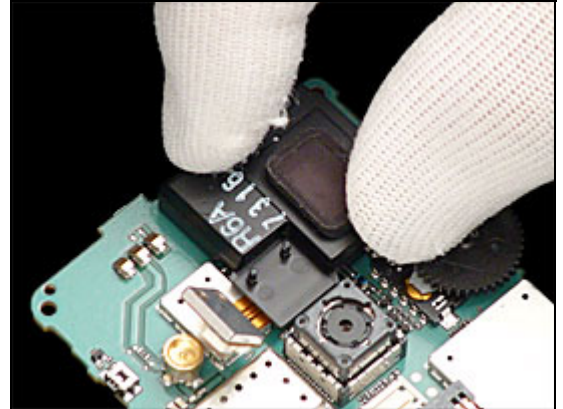
INSTALLATION

Use the guiding when install the Acoustic box



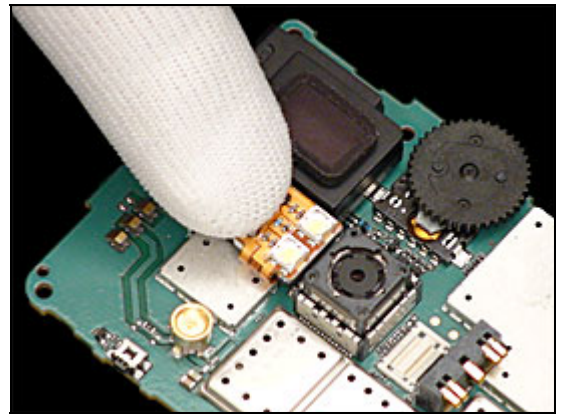
Acoustic Box continue

Use your fingers to position the Acoustic Box



Use your fingers to position the Flash Flex Asm

Follow the 4.1.1 – 4.1.6 Disassembly instructions!

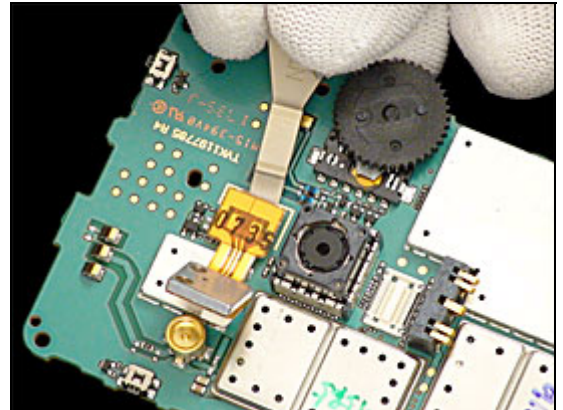


3.18 Flash Flex Asm

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

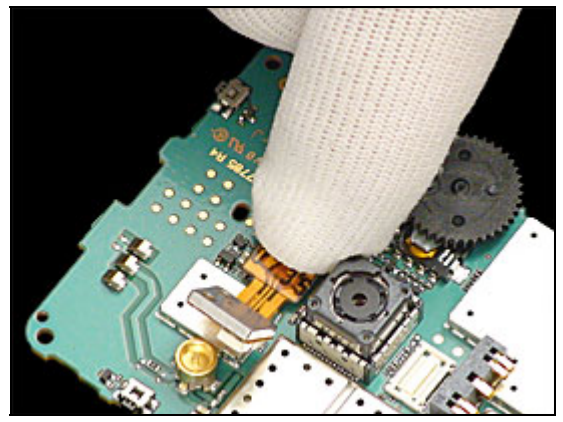
Use a Front Opening tool to disconnect the Flash Flex Asm



INSTALLATION

Use your fingers to install the Flash Flex Asm.

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

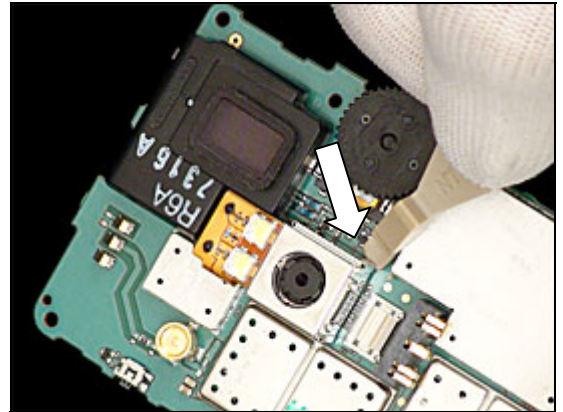


3.19 Shielding Box, MPixel Camera

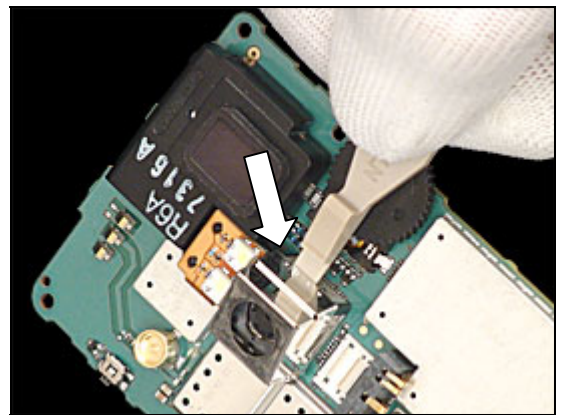
REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use the Front opening tool to disconnect the Shielding Box

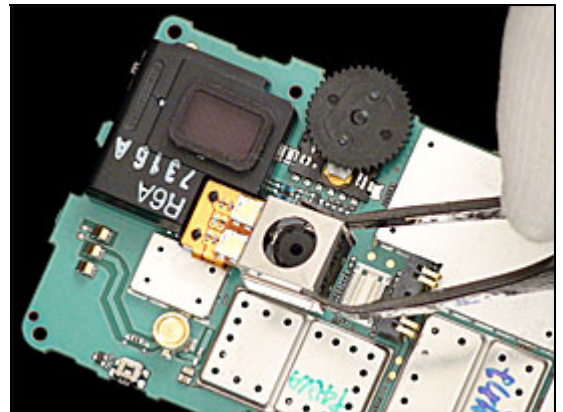


Use the Front opening tool to remove the Shielding Box



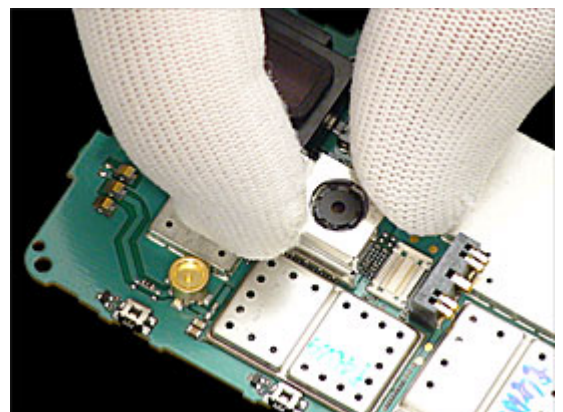
INSTALLATION

Use tweezers to position the Shielding Box



Use your fingers to connect the Shielding Box

Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.20 Camera, 3MPixel

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Press down the camera tool (NTZ 112 583).

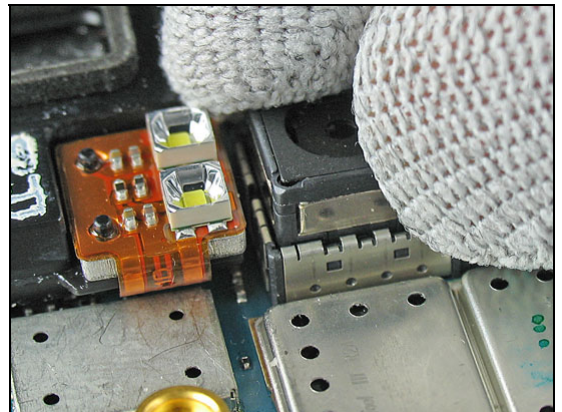
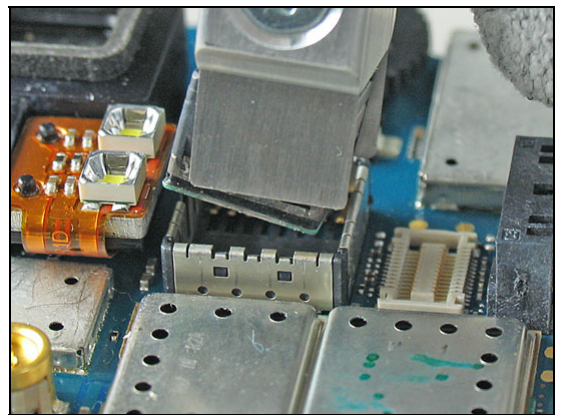
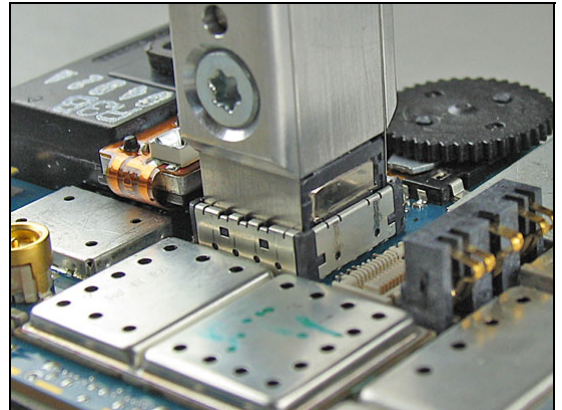
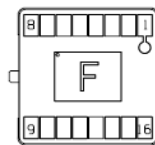
Pull up the camera.

INSTALLATION

DO NOT TOUCH THE CAMERA LENS!

Press down the new camera with your fingers.

NOTE KEYING TAP ON CAMERA

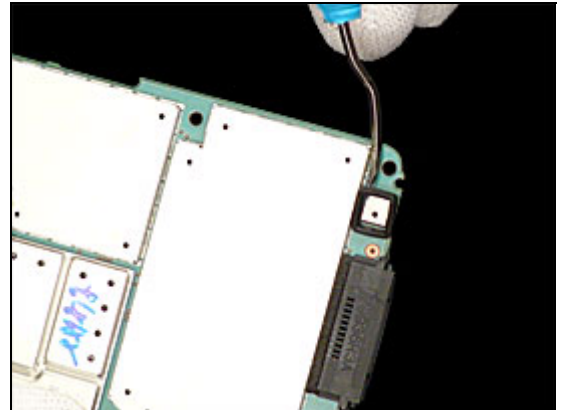


3.21 Mic Grommet

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

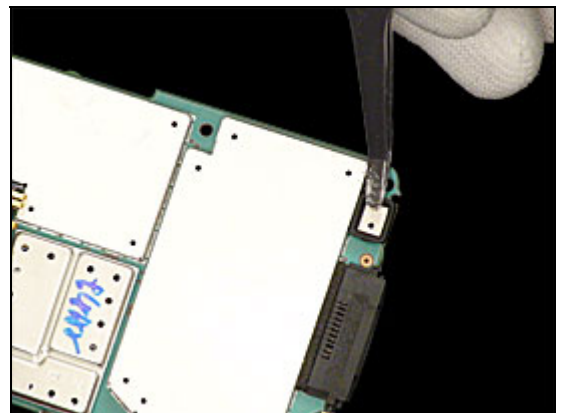
Use a Dentist Hook to disconnect the Mic Grommet



INSTALLATION

Use a tweezer to install the Mic Grommet

Follow the 4.1.1 – 4.1. Reassembly instructions!

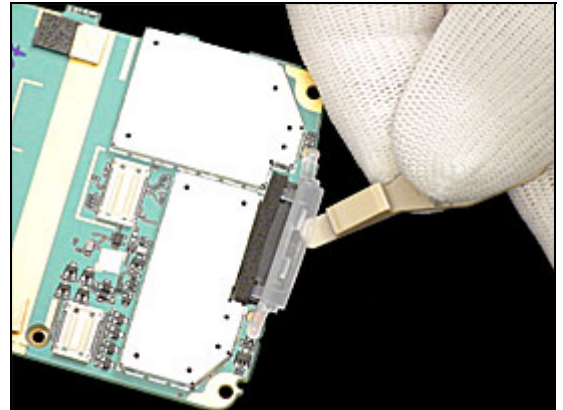


3.22 Light Guide Assembly

REMOVAL

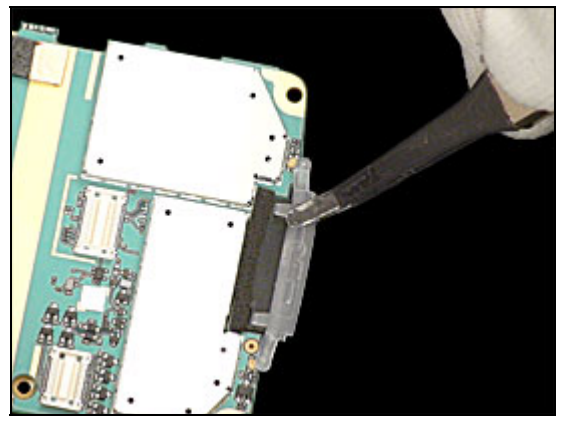
Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Front Opening Tool to disconnect the Light Guide Assembly



INSTALLATION

Use a tweezer to install the Light Guide Assembly

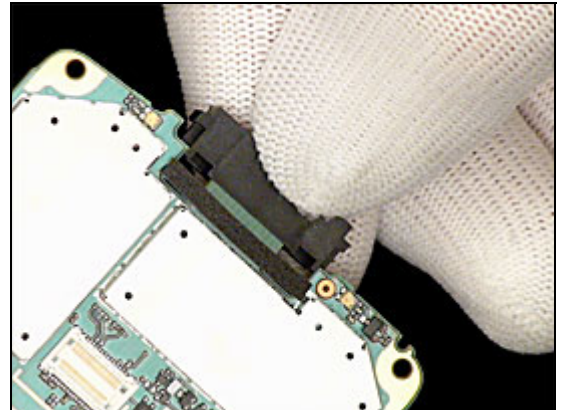


3.23 System Connector

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

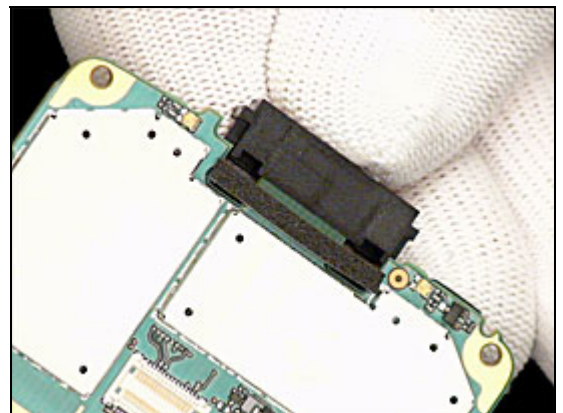
Use your fingers to remove the System Connector



INSTALLATION

Use your fingers to connect the System Connector

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

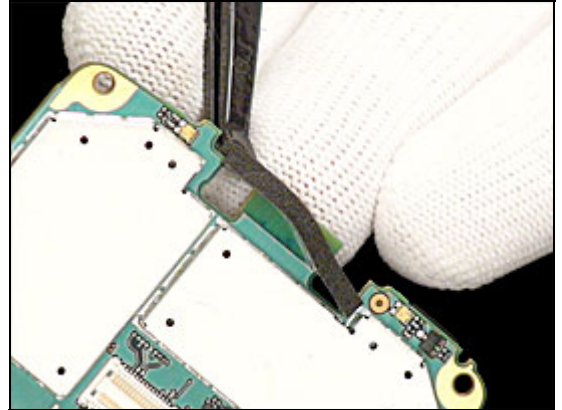


3.24 Dust Gasket Large System Connector

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

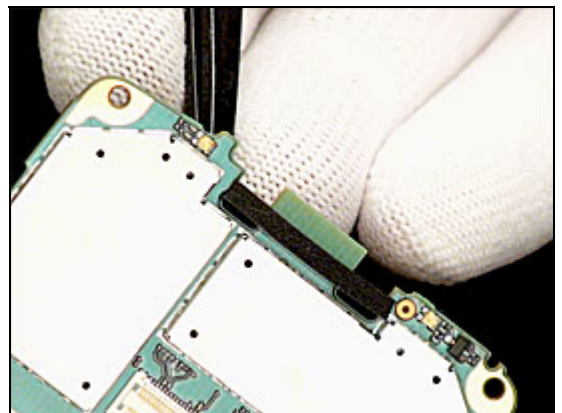
Use a tweezer to disconnect the Dust Gasket large System Connector



INSTALLATION

Use your fingers to connect the Dust Gasket Large System Connector

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

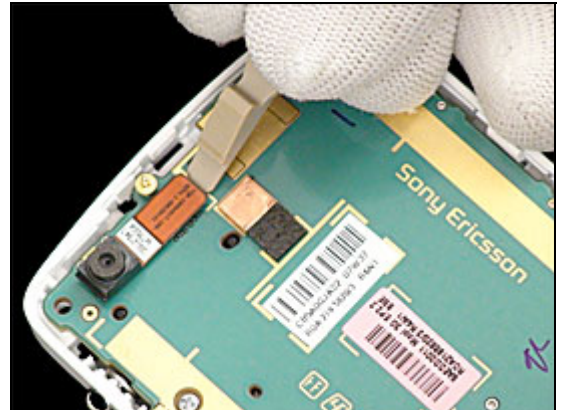


3.25 Camera Module, QCIF

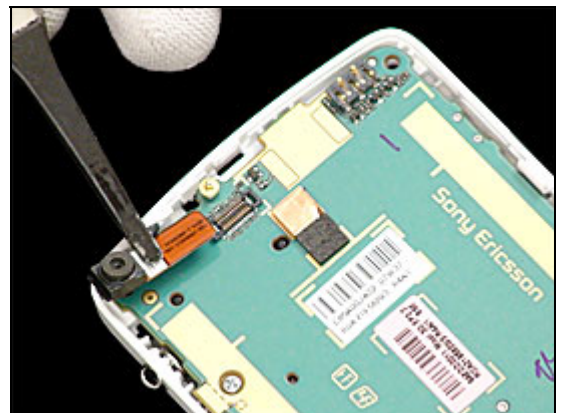
REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Use a Front Opening tool to disconnect the Camera Module



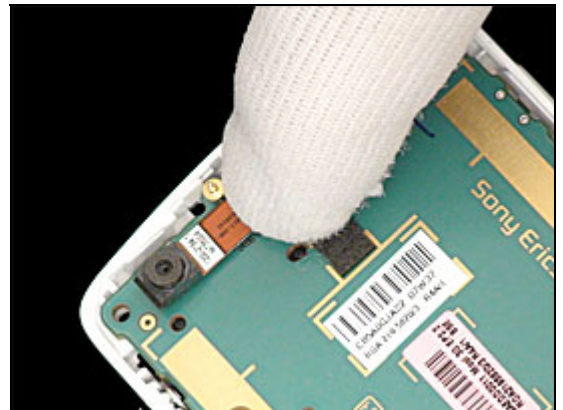
Use a tweezer to remove the Camera module



INSTALLATION

Use your fingers to position the Camera Module

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

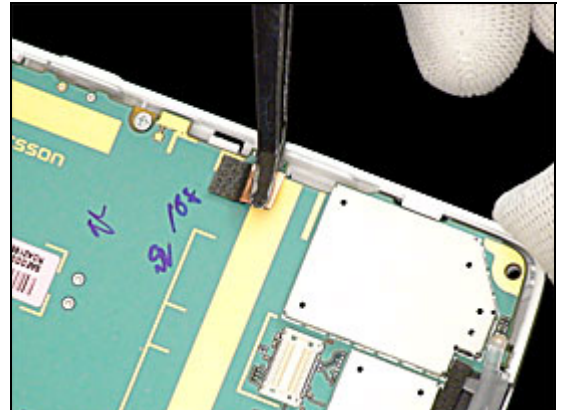


3.26 Gasket LCD

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

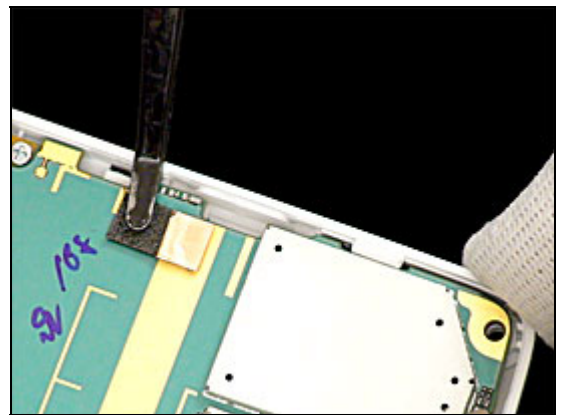
Use a tweezer to disconnect the Gasket LCD



INSTALLATION

Use a tweezer to position the Gasket LCD

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

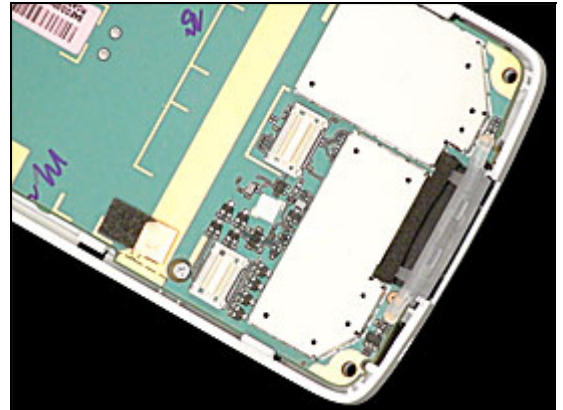


3.27 Liquid Intrusion Indicator

REMOVAL

There is one Liquid Indicator located at the position of the arrow

To get access to and to inspect the indicators:
Follow the 2.1.1 – 2.1.6 Disassembly instructions!



REMOVAL

Remove the activated Liquid Indicator with the dentist hook and the tweezers.

INSTALLATION

Attach the new *Liquid Indicator* with the tweezers and the dentist hook.

Follow the 4.1.1 . 4.1.6 Reassembly instructions!

3.28 Sub PWB Asm

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use Torx bit no 6 to remove the two screws.

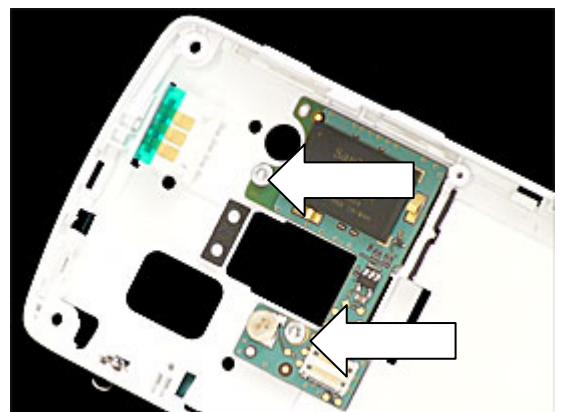
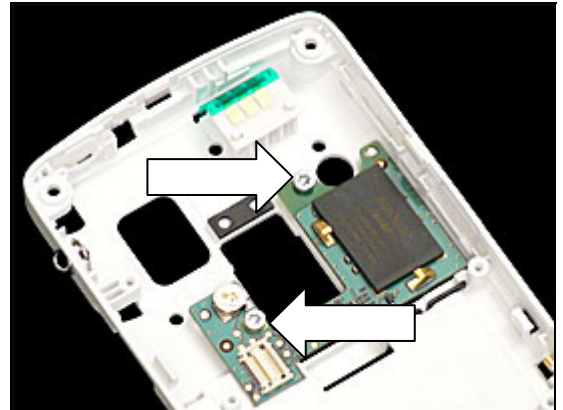
Use a tweezer to disconnect the Sub PWB Asm

INSTALLATION

Use tweezers to position the Sub PWB Asm

Install two screws with torque screwdriver at 15 Ncm with a T6 bit.

Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.29 Battery Spring

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Dentist Hook to disconnect the Battery Spring



Use a tweezer to remove the battery Spring



INSTALLATION

Use tweezers to position the battery Spring

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

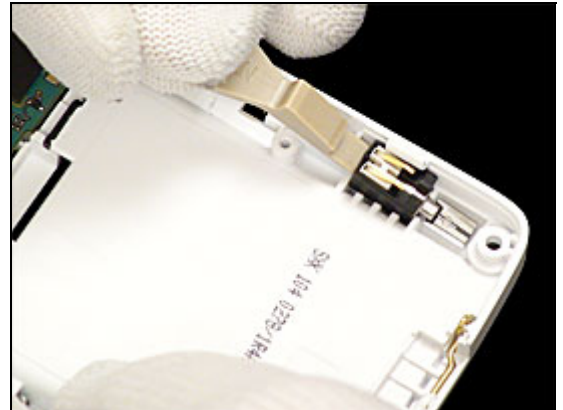


3.30 Vibrator

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Front Opening Tool to disconnect the Vibrator



Use a tweezer to remove the Vibrator



INSTALLATION

Use a Front opening Tool to position the Vibrator

Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.31 Gasket Microphone

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a tweezer to disconnect the Gasket Microphone



Use a tweezer to remove the Gasket Microphone



INSTALLATION

Use your fingers to position the Gasket Microphone

Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.32 Net Microphone

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Dentist Hook to disconnect the Net Microphone



INSTALLATION

Use a tweezer to install the Net Microphone

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

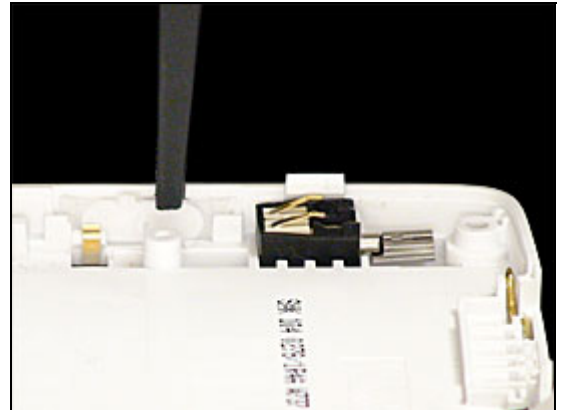


3.33 Camera Key

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

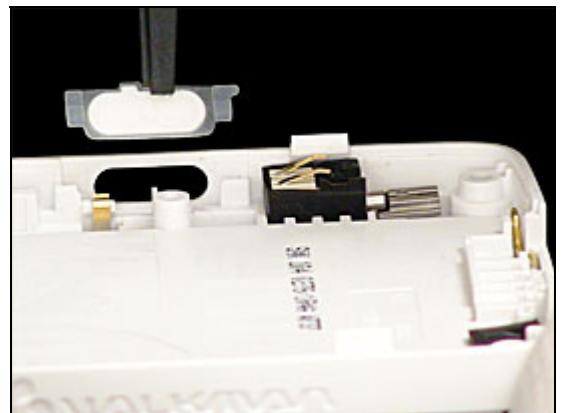
Use a tweezer to disconnect the camera Key



INSTALLATION

Use a tweezer to install the Camera key

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

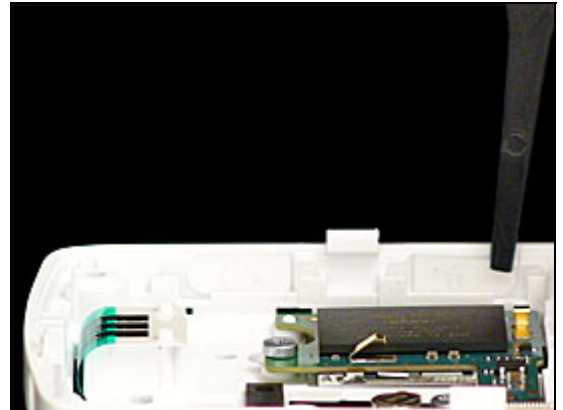


3.34 Volume Key

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

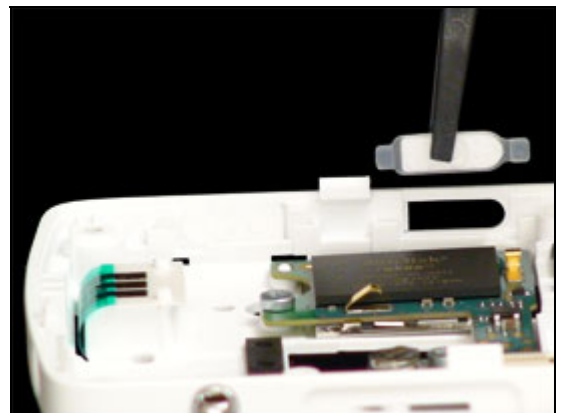
Use a tweezer to disconnect the Volume key



INSTALLATION

Use a tweezer to install the Volume Key

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

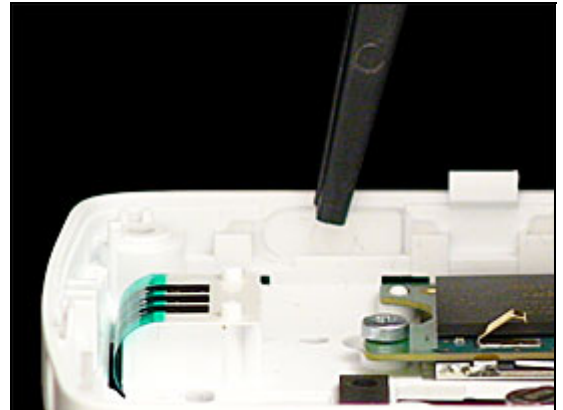


3.35 Volume Key

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

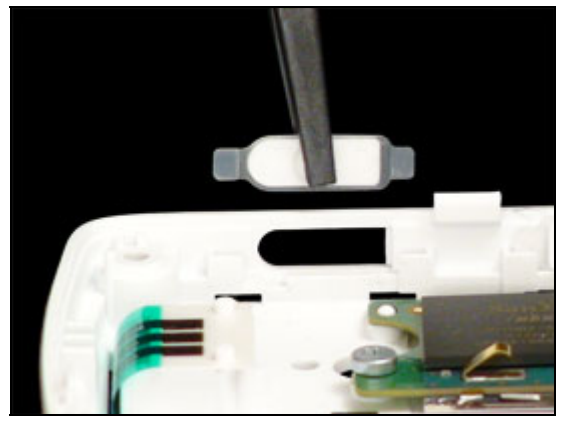
Use a tweezer to disconnect the Volume key



INSTALLATION

Use a tweezer to install the Volume Key

Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.36 On/Off Key

REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a tweezer to disconnect the On/Off Key



INSTALLATION

Use a tweezer to install the On/Off Key

Follow the 4.1.1 – 4.1.6 Reassembly instructions!

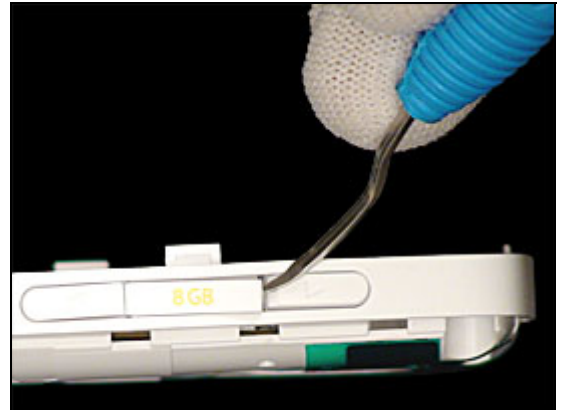


3.37 Separator

REMOVAL

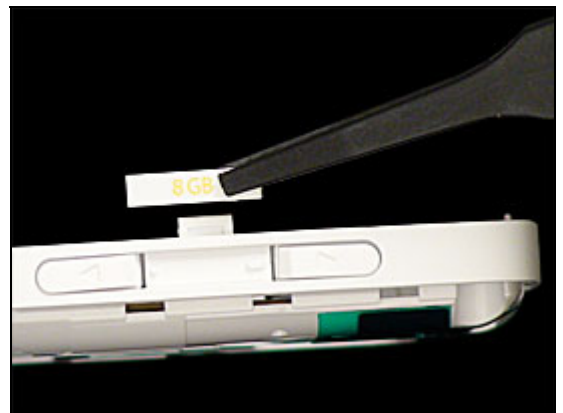
Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Dentist Hook to disconnect the Separator

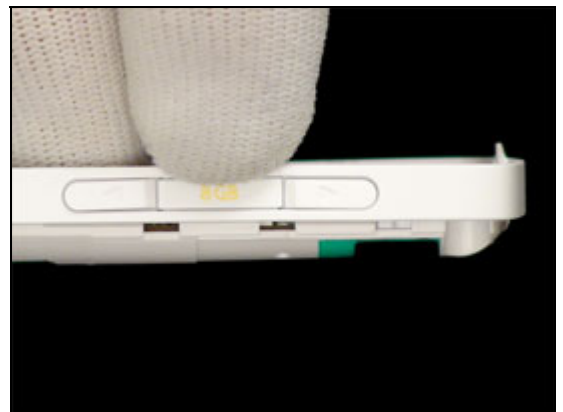


INSTALLATION

Use a tweezer to position the Separator



Use your fingers to install the Separator and press firmly for at least 10 seconds.



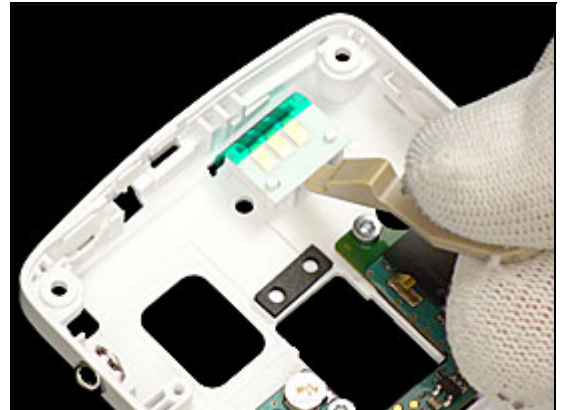
Follow the 4.1.1 – 4.1.6 Reassembly instructions!

3.38 Antenna Flex

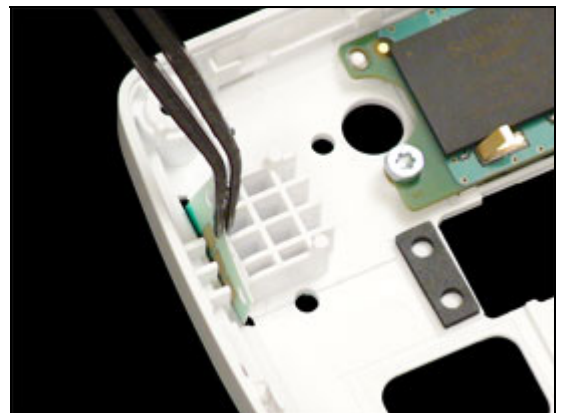
REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions!

Use a Front opening Tool to disconnect the Antenna Flex



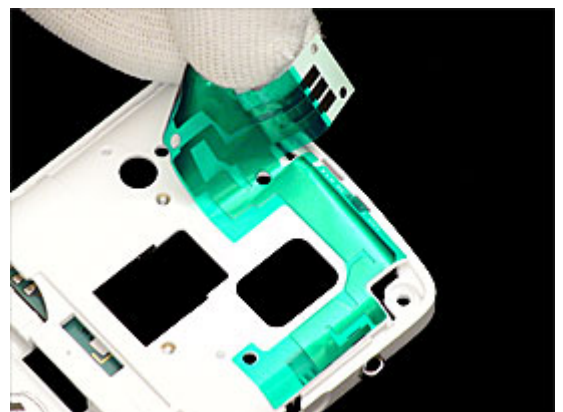
Use a tweezer to push the Antenna Flex through the hole



Use a tweezer to grab the flex on the other side



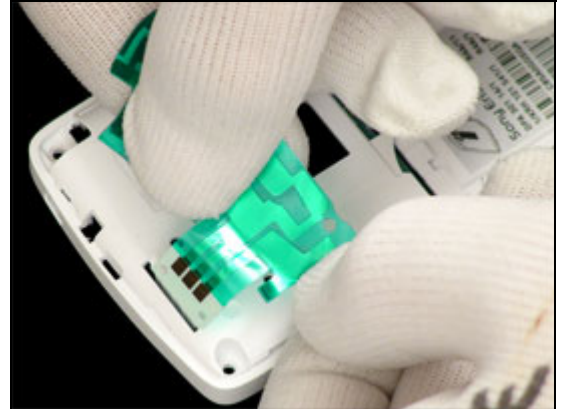
Use your fingers to remove the Foil



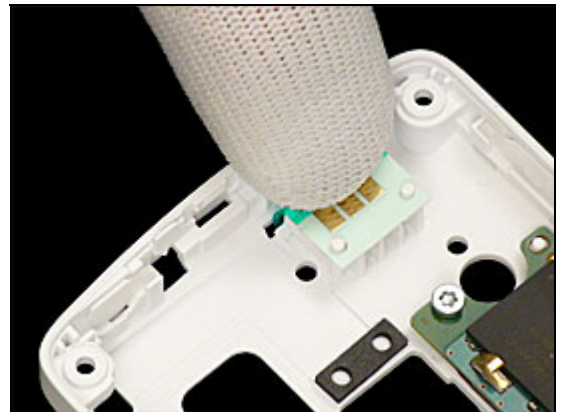
Antenna FLex continue

INSTALLATION

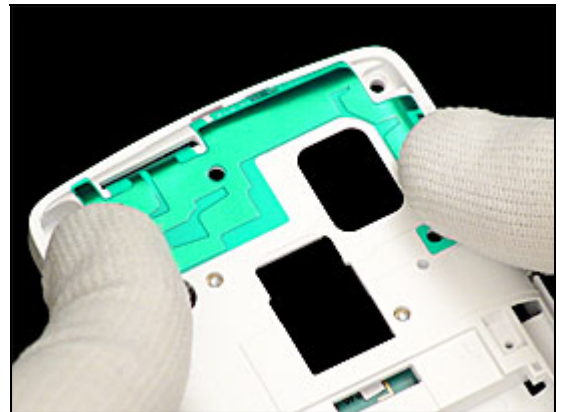
Thread the Antenna Flex through the hole



Use your fingers to position the Antenna Flex.



Use your fingers to attach the Foil



Follow the 4.1.1 – 4.1.6 Reassembly instructions!



3.39 KRH Label

Follow the 2.1.1 Disassembly instructions!

- Read the old label and/or write the information into the “Label make” program before removal
- Note the position of the label before removal
- Heat up the label by using hot air, if needed
- Carefully remove the label without causing scratches
- If there still are residues, clean the surface with isopropyl alcohol



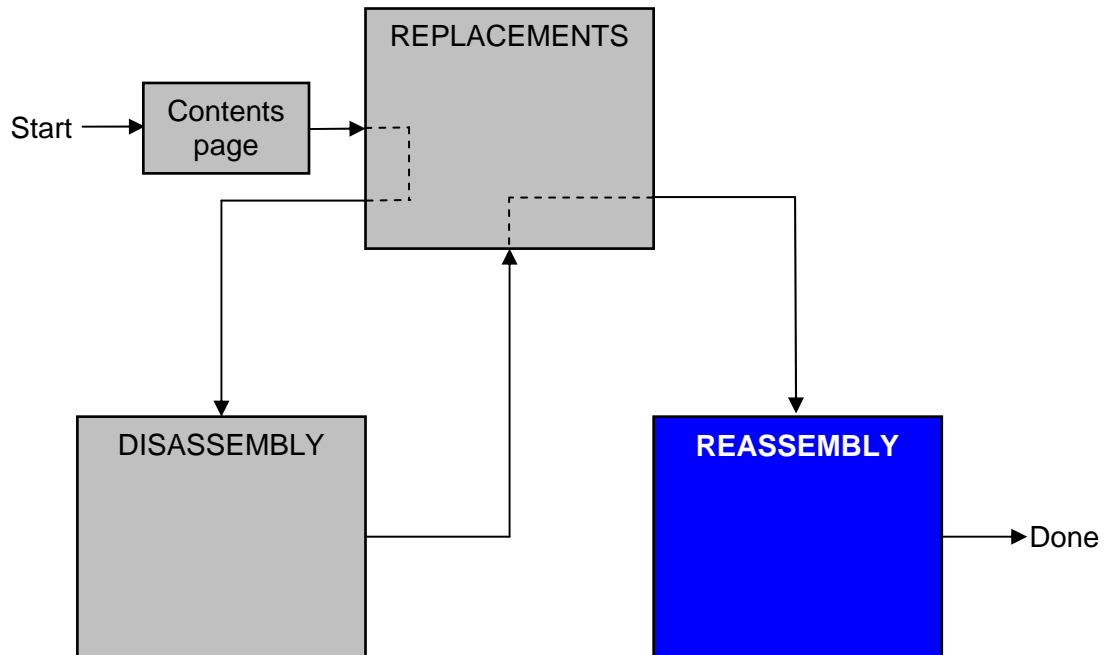
- Check that the proper label format is loaded in the Zebra printer
- Write a new label by using the program “Label make” and check that the printing is OK
- Take the new label and place it onto the frame as in the adjacent picture

ONE LABEL ONLY IS ALLOWED!

Follow the 4.1.6 Reassembly instructions!

4 Reassembly

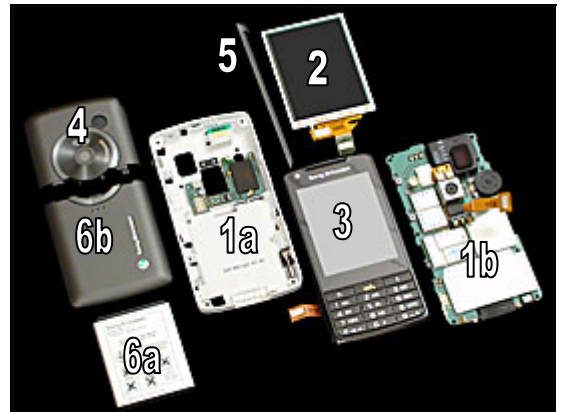
After replacing a part being listed in Replacements, the instruction of that section usually ends by directing you to this Reassembly section with a specification of the instructions you have to carry out in order to reassemble the phone.



4.1 Overview

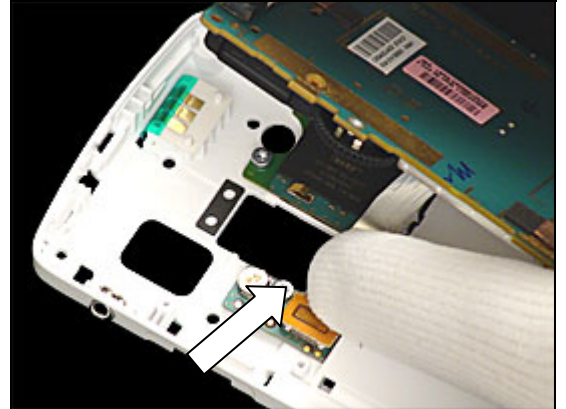
The reassembly is done in the following order:

1. Frame Sub Asm (a) & PBA (b)
2. LCD, w/o Touch Panel
3. Front Cover
4. Antenna Lid Asm
5. Stylus
6. Battery (a) & Battery Lid Asm (b)

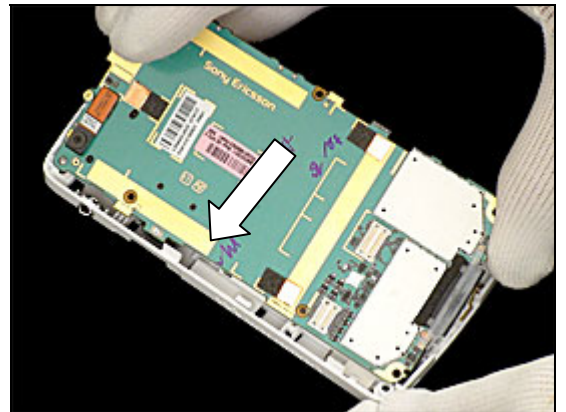


4.1.1 Frame Sub Asm & PBA

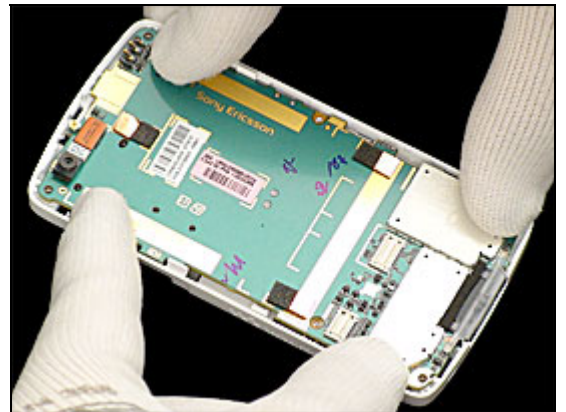
Use your fingers to install the BtB connector



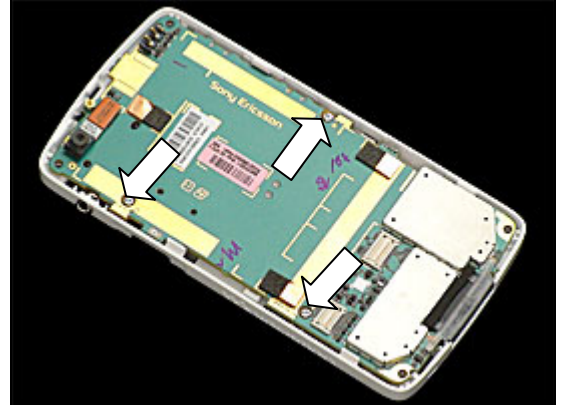
Use your fingers to position Frame Sub Asm



Use your fingers to snap the Frame Sub Asm and PBA together

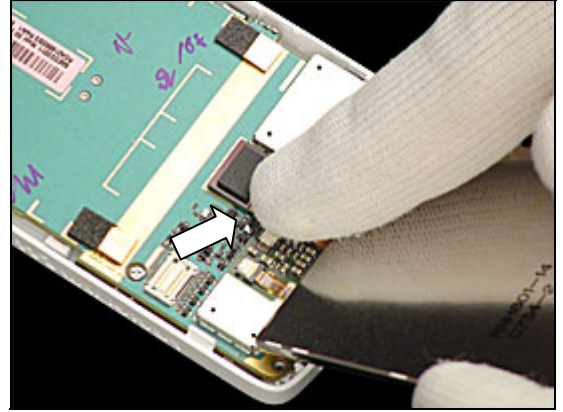


Install three screw with torque screwdriver at 11 Ncm with a JCIS.

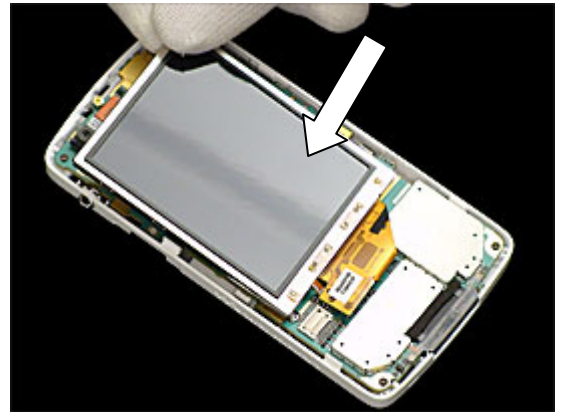


4.1.2 Display

Use your fingers to install the BtB connector

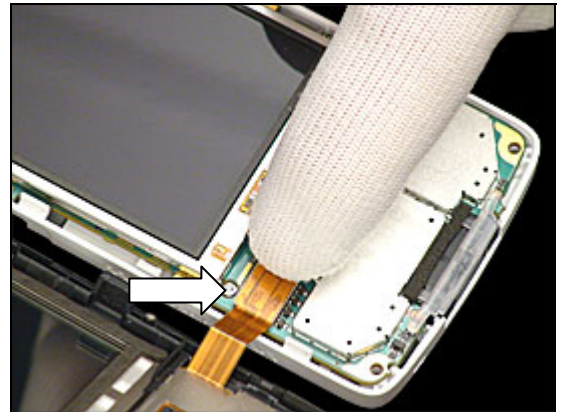


Use your fingers to position the display



4.1.3 Front Cover

Use your fingers to position the BtB connector



Use your fingers to snap on the Front Cover



Install four new screws with torque screwdriver at 17 Ncm with a T6 bit.



4.1.4 Antenna Lid Asm

Use your fingers to position the Antenna Lid Asm



Snap the Antenna Lid Asm using your fingers



Install a screw with torque screwdriver at 11 Ncm with a JCIS.



4.1.5 Stylus

Use your fingers to thread the Stylus into the phone



4.1.6 Battery & Battery Lid Asm

Use your fingers to position the Battery



Use your fingers to position the Battery



Use your fingers to snap on the Battery Lid Asm



5 Revision history

Rev.	Date	Changes / Comments
1	2007-11-29	Initial release