



Working Instruction, Mechanical

Applicable for K300

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1 Disassembly

Tools

- Torque screwdriver, set to 15 Ncm \pm 10%. Bits 6, NTZ 112 288
- Flex film assembly tool NTZ 112 521
- Blunt pair of tweezers
- Regular pair of tweezers
- Guitar pick
- Screwdriver, width 2 mm (disassembly antenna cover)
- Front opening tool NTZ 112 302/2

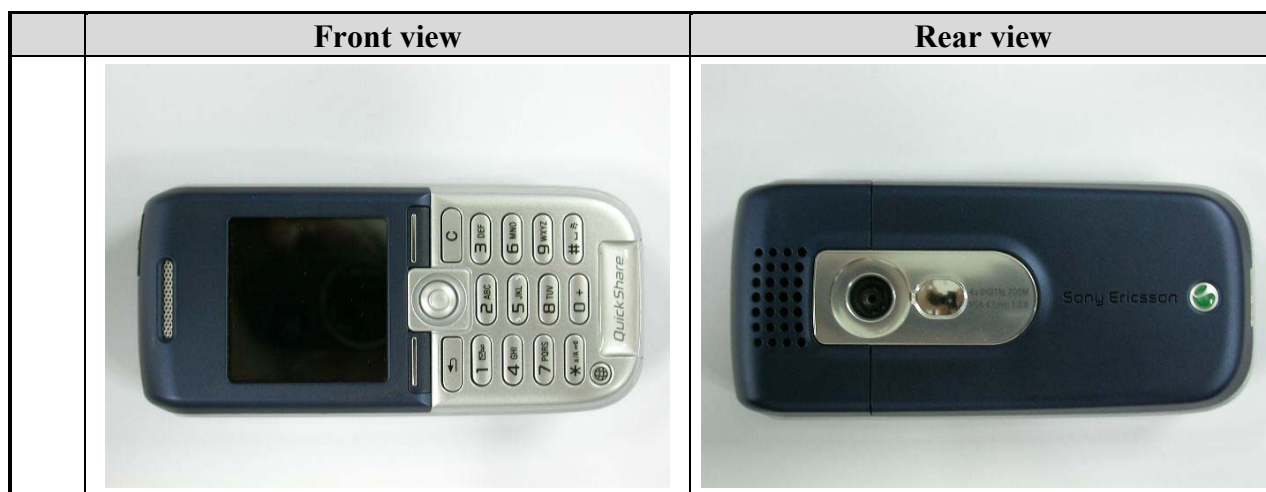
Equipment



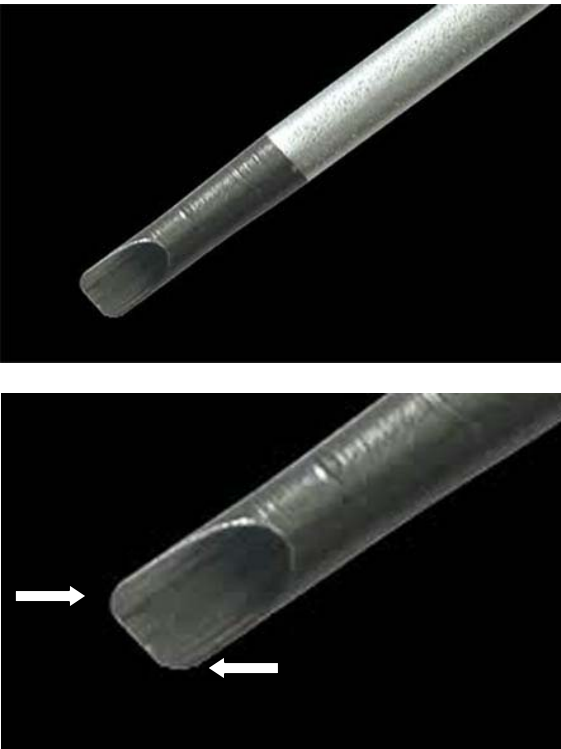
- ESD-gloves (cotton gloves)
- ESD-wristband

Instruction


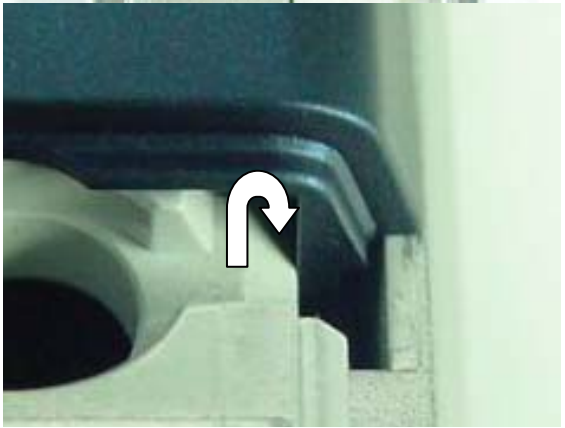

- Keep all contact surfaces clean of dirt and hand-grease
- Removing Antenna Cover is a bit difficult, so it is important you are very careful when removing it, not to damage any plastic parts. It requires much technique to remove the part. Training is very important, both by performing training in Learning Community and by hands on practice.

Phone views


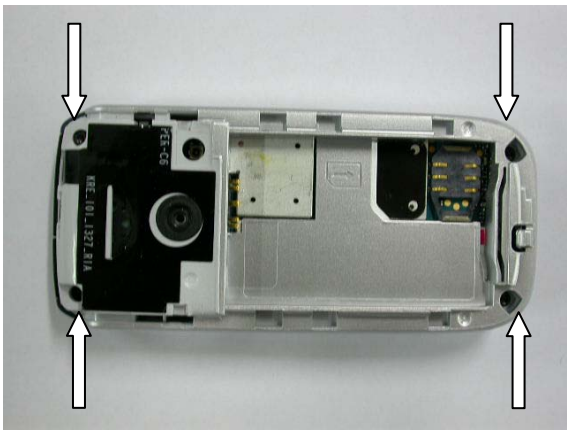




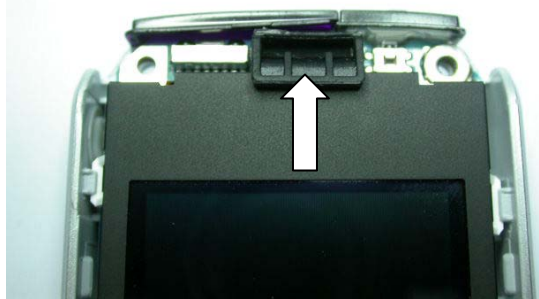


	Step-by-Step Instructions	
1	<p>NOTE! Turn off the phone.</p> <p>Remove the battery cover with your fingers. Slide off the battery cover in the direction of the arrow as shown in the picture.</p>	
2	<p>Remove the battery from the phone with your fingers by using the tab (1) in the lower end of the battery and lift it up.</p>	
	<p>NOTE! For the next step you need a flat 2mm screw driver with rounded corners. You easily make the corners rounded by using an iron file or some sandpaper.</p> <p>It is very important that you make the corners round so you do not damage the Frame when removing the Antenna Cover.</p>	

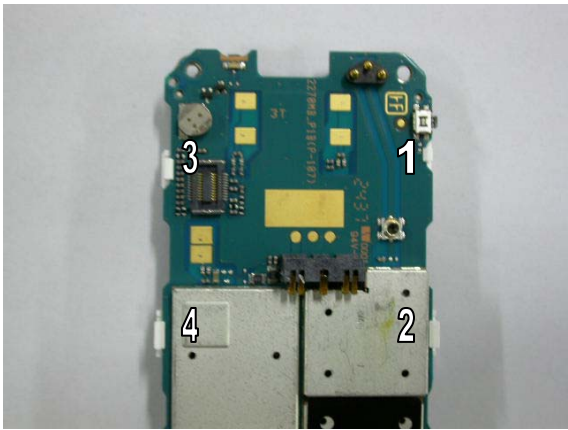


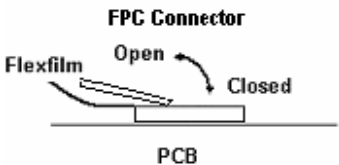
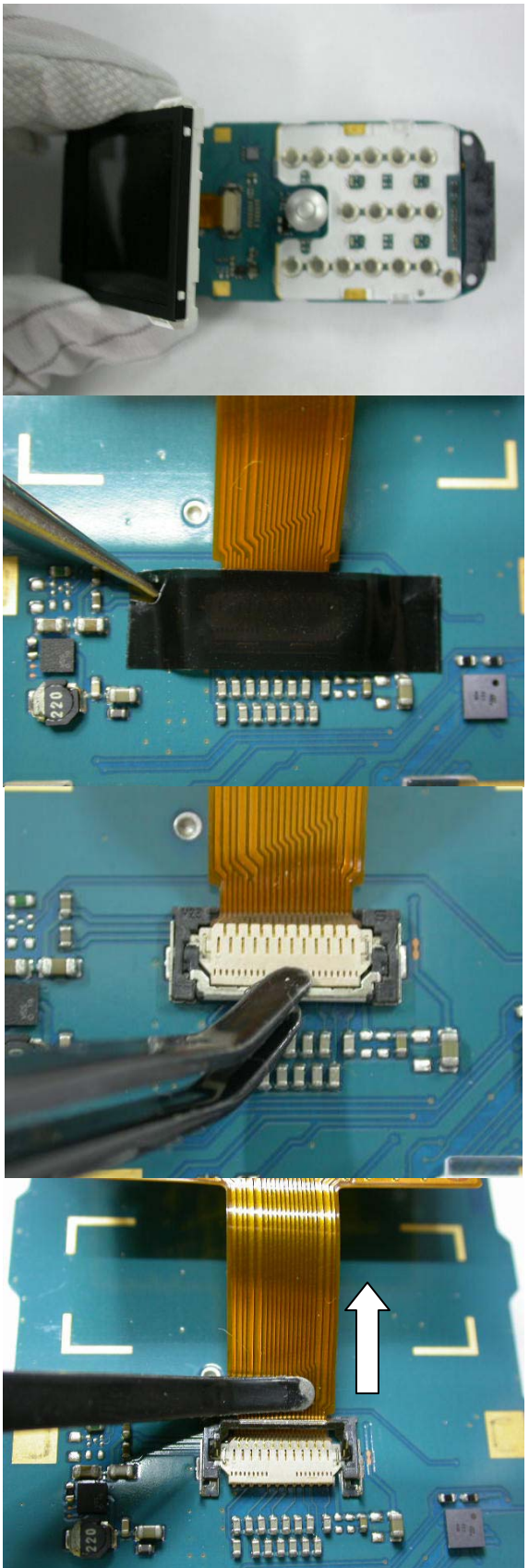
	Step-by-Step Instructions	
3	<p>Note! Be careful not to damage the Antenna Cover and Frame Assy when removing the Antenna Cover.</p> <p>Use a screw driver (2 mm) with rounded corners to carefully release the two snap hooks located on each side of the Antenna Cover.</p> <p>Press down the screwdriver in between the Antenna Cover and the Frame as shown in the picture, then carefully bend sideways-upwards.</p>	   



	Step-by-Step Instructions	
4	<p>NOTE! Be careful when pushing the antenna cover upwards over the Antenna flexfilm, the Antenna Cover can cause scratch-marks in the black plastic, covering the antenna pattern.</p> <p>Make sure the snap hooks are fully released and then slide the Antenna Cover in the direction of the arrow while slightly lifting it upwards as shown in the picture.</p>	
5	<p>Use the Torque screwdriver to untighten the 4 screws.</p>	
6	<p>NOTE! Do not use a screwdriver or other sharp tools; it might cause some damage to the plastics or other components.</p> <p>Use the Guitar pick to release the Front Assy from the Frame Assy. Start by the System Connector. Use your thumb to make a small gap between the frame and the front as shown in the picture</p> <p>Place the Guitar pick between the frame and the front right next to key 3 and 6 as shown in the picture. Slide it along the side from No.1 to No.2. Pay attention to the angle of the Guitar pick in the picture.</p> <p>Once the right side has been released the front can be carefully removed with your fingers.</p>	 

	Step-by-Step Instructions	
7	<p>NOTE! Do not touch the display.</p> <p>Remove the Receiver Chamber with your fingers.</p>	
8	<p>NOTE! Do not touch the SIM Reader and Battery Connector.</p> <p>The PCB is attached to the Frame Assy with 6 snap hooks (1A,1B,1C, 2A, 2B, 2C). Use the Front Opening Tool to release the snap hooks holding the PCB, start with 1C and continue with 1B and 1A. Pushing the Shield Can Lid from the backside will make it easier to release the snap hooks.</p> <p>NOTE! The PCB and the Frame Assy are connected by the camera flexfilm.</p> <p>Once the three hooks are released, you should be able to carefully lift the PCB.</p>	
9	<p>NOTE! Be careful with the tweezers and do not damage the BTB connector (Camera).</p> <p>Disconnect the camera flexfilm from BTB connector (Camera) by lifting upwards with the Flex film assembly tool.</p>	

	Step-by-Step Instructions	
10	<p>NOTE! Do not touch the Display glass with your fingers.</p> <p>The Display is attached to the PCB with four snap hooks. Use your fingers to release the snap hooks. Start with No.1 to No.4, as shown in the picture.</p>	

	Step-by-Step Instructions	
11	<p>NOTE! Do not touch the display glass with your fingers.</p> <p>Lift the display with your fingers as shown in the picture.</p> <p>NOTE! Be careful not to damage the display flexfilm with the tweezers.</p> <p>Remove the Tape FPC with a blunt pair of tweezers.</p> <p>NOTE! Removed Tape FPC should not be reused and must be scrapped.</p> <p>NOTE! Be careful not to damage the FPC connector clamp with the tweezers.</p> <p>Open the FPC connector with the Flex Film Assembly Tool.</p>  <p>NOTE! Be careful with the display flexfilm.</p> <p>Remove the Display from the FPC connector by pulling the Display flex film with the Flex Film Assembly Tool in the direction of the arrow as shown in the picture.</p>	

2 Reassembly

Tools

- Torque screwdriver, set to 15 Ncm \pm 10%. Bits 6, NTZ 112 288
- Flex film assembly tool NTZ 112 521
- Blunt pair of tweezers
- Standard pair of tweezers
- Screwdriver, width 2 mm (disassembly antenna cover)
- Front opening tool NTZ 112 302/2

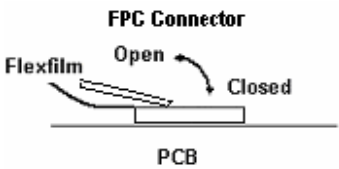
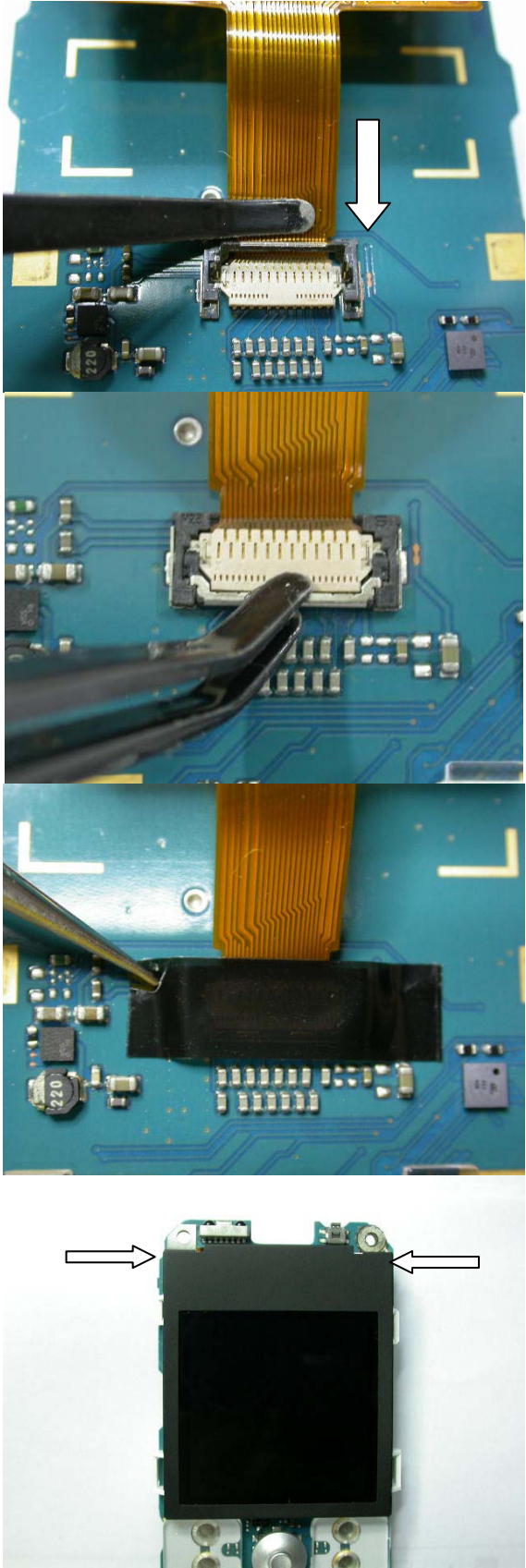
Equipment


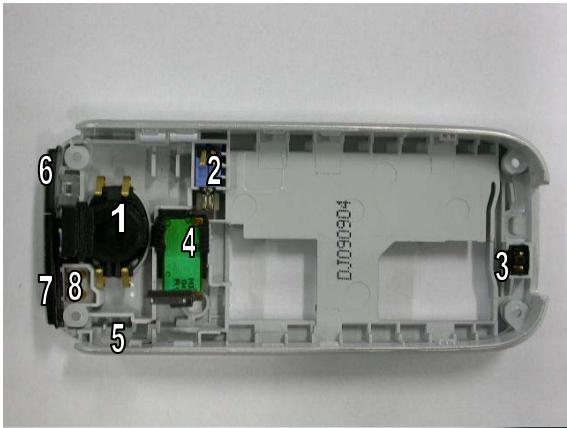
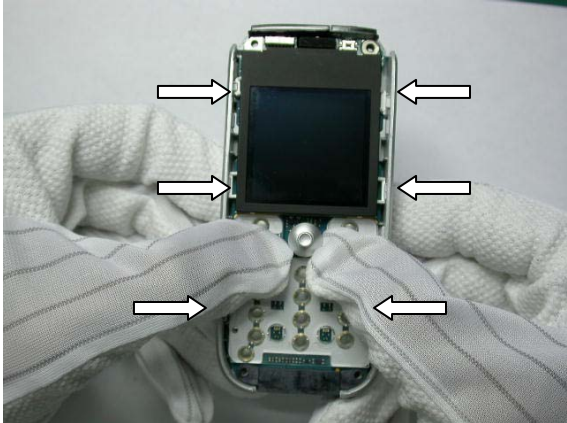

- ESD-gloves (cotton gloves)
- ESD-wristband

Instruction


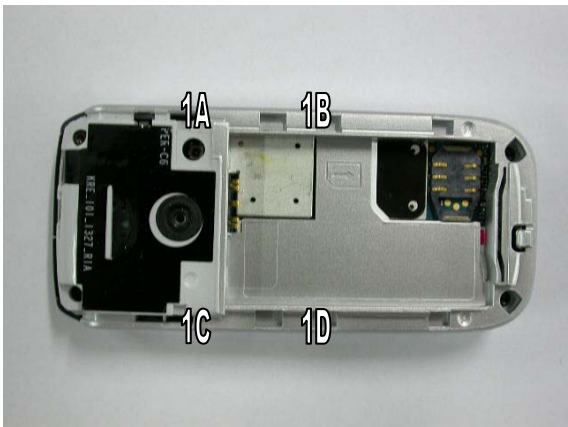
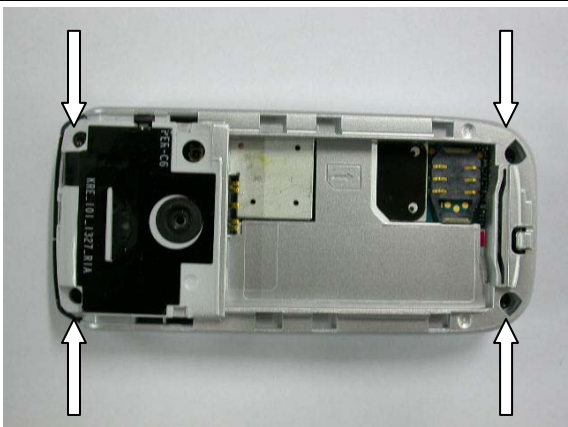
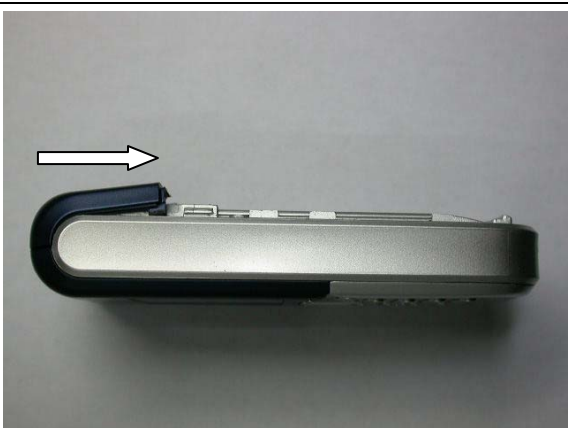
Make sure to keep all contact surfaces clean of dirt and hand-grease.






	Step-by-Step Instructions	
1	<p>NOTE! Do not touch the display glass with your fingers.</p> <p>Assemble the Display flexfilm by carefully sliding the film into the FPC connector in the direction of the arrow as shown in the picture, using the Flex Film Assembly Tool.</p> <p>Close the FPC connector (Display) with a blunt pair of tweezers.</p>  <p>Assemble a new Tape FPC over the FPC connector (Display).</p> <p>Gently fold the Display flex film underneath the Display. Place the Display at the proper position by using the guiding pin on the Display and the guiding hole on the PCB. When in right position, gently press the snap hooks so they grip around the PCB. Do NOT press the Display glass.</p> <p>NOTE! If you have assembled a new display: Remember to remove the Display protection foil with a pair of tweezers before assembling the Front Cover.</p>	

	Step-by-Step Instructions	
2	Connect the Camera flexfilm to the BTB connector by using your fingers.	
3	<p>NOTE! Make sure the Dual Speaker/Receiver (1), Vibrator (2), Microphone (3), Camera (4), Camera Key (5), On/Off Button (6) IrDA Window (7) and Antenna Flexfile (8) are in place before you assemble the PCB.</p> <p>Place the PCB into the Frame Assy, starting with putting the upper part of the PCB into the frame. Gently press down the PCB under the Snap hooks (the arrows in the picture shows where the Snap hooks are located). Make sure it fits correctly.</p>	 
4	Mount the Receiver Chamber with your fingers.	



	Step-by-Step Instructions	
5	<p>NOTE! Make sure that the Front Assy glass is clean. Use air blow equipment if necessary.</p> <p>Place the Keyboard into the Front Assy.</p> <p>NOTE! If you have assembled a new front: Remember to remove the protection foil inside the front, with a pair of tweezers, before assembling. Be careful not to scratch the glass with the tweezers.</p>	
6	<p>Place the Frame Assy over the Front Assy, make sure that the keypad is correctly positioned in the Front Assy, press on all sides where front snap fit hooks are located (1A-1D). Click sounds will be heard when the snap hooks grips into the frame.</p>	
7	<p>NOTE! Do NOT reuse the old screws.</p> <p>Tighten the 4 screws, according to the arrow indication No.1 to No.4. using the Torque screwdriver, set to 15 Ncm \pm 10%.</p>	
8	<p>Position the Antenna Cover Assy on the phone, according to the picture, by sliding it on in the direction of the arrow as shown in the picture.</p>	

	Step-by-Step Instructions	
9	Press down the Antenna Cover Assy to make it fit correctly. Click sounds are heard when the two snap hooks, indicated by the arrow in the picture, fastens into the Frame Assy.	
10	Place the battery into the frame cavity. Start at battery connector area indicated by the arrow in the picture.	
11	Slide on the Battery Cover onto the phone in the direction indicated by the arrow in the picture.	

3 Replacement of Mechanical Parts

Tools

- Regular pair of tweezers
- Blunt pair of tweezers
- Screwdriver, width 2 mm
- Dentist hook

Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband

Instruction

- Keep all contact surfaces clean of dirt and hand-grease

3.1 Antenna Cover Assy

Replacement of Antenna Cover Assy: Check Disassembly and Reassembly, pay attention to Note comments.

3.2 Front Assy

Replacement of Front Assy: Check Disassembly and Reassembly, pay attention to Note comments.

3.3 Battery Cover Assy

Replacement of Battery Cover Assy: Check Disassembly and Reassembly headings, pay attention to Note comments.

3.4 Display

Replacement of Display: Check Disassembly and Reassembly, pay attention to Note comments.


3.5 Keypad

Replacement of Keypad: Check Disassembly and Reassembly, pay attention to Note comments.

3.6 Tape FPC

Replacement of Tape FPC: Check Disassembly and Reassembly, pay attention to Note comments.

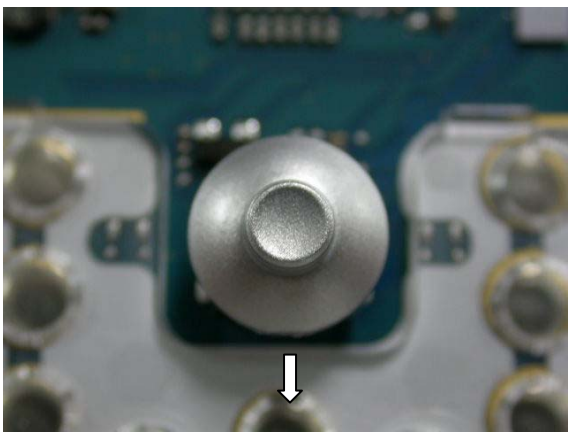
3.7 Name Plate

	Step-by-Step Instructions	
1	<p>NOTE! Be careful not to scratch the Front Assy with a pair of tweezers.</p> <ol style="list-style-type: none"> 1. Gently remove the old Name Plate by pushing it off from the backside thru the hole with a pair of tweezers. 2. Remove adhesive remains with isopropyl alcohol. 3. Assemble the new Name Plate with a blunt pair of tweezers or with your fingers. 	

3.8 Joystick Button

Instruction

- Disassemble the phone as described in *1 Disassembly*

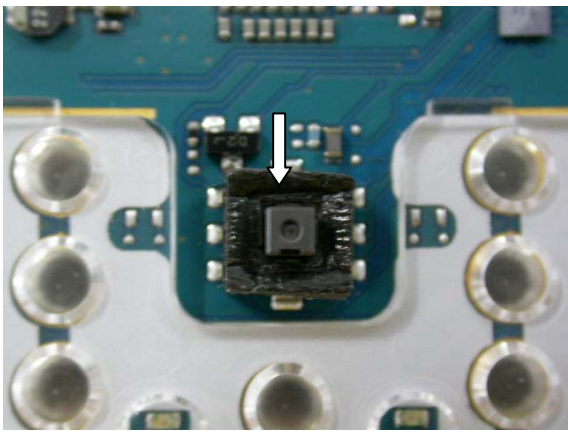
	Step-by-Step Instructions	
1	<p>Remove the old Joystick Button with you fingers and replace it with the new one. Make sure the phased side of the Joystick Button is facing away from the display, in the direction of the arrow in the picture.</p>	

- Assemble the phone as described in *2 Reassembly*

3.9 Joystick Sponge

Instruction

- Disassemble the phone as described in *1 Disassembly*

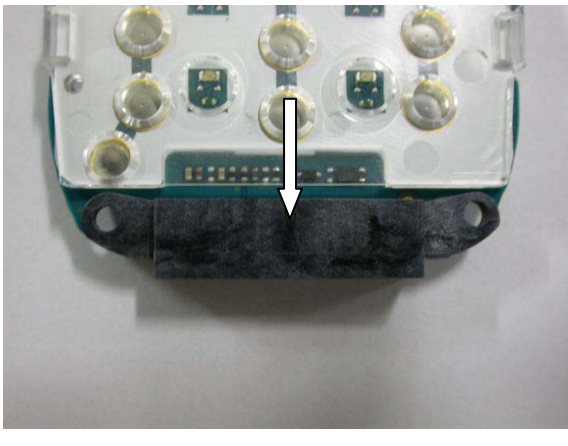
	Step-by-Step Instructions	
1	<ol style="list-style-type: none"> 1. Remove the old Joystick Sponge with a pair of tweezers. 2. Remove adhesive remains with isopropyl alcohol. 3. Apply the new Joystick Sponge using a pair of tweezers. 	

Assemble the phone as described in *2 Reassembly*

3.10 System Connector

Instruction

- Disassemble the phone as described in *1 Disassembly*

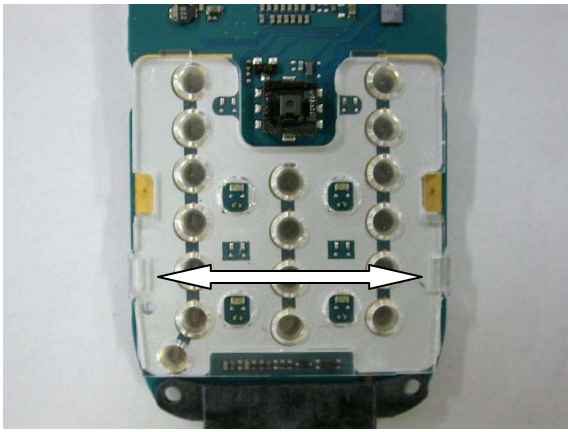
	Step-by-Step Instructions	
1	<p>NOTE! Do not touch the System Connector pads on the PCB.</p> <ol style="list-style-type: none"> 1. Remove the System Connector from the PCB with your fingers. Pull the System Connector downwards as shown in the picture. 2. Assemble the new System Connector using your fingers. 	

- Assemble the phone as described in *2 Reassembly*

3.11 Keypad Light-guide

Instruction

- Disassemble the phone as described in *1 Disassembly*

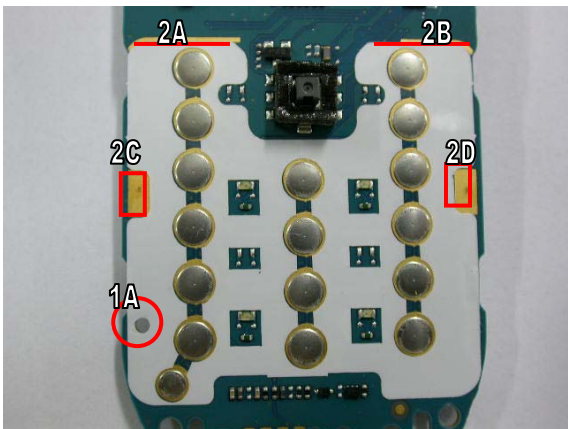
	Step-by-Step Instructions	
1	<p>1. There are two snap hooks, indicated by the arrow in the picture, attaching the Keypad Light-guide to the PCB. Use your fingers to release the two snap hooks and then remove it.</p> <p>2. Assemble the new Keypad Light-guide.</p>	

- Assemble the phone as described in *2 Reassembly*

3.12 Keypad Domefoil

Instruction

- Disassemble the phone as described in *1 Disassembly*

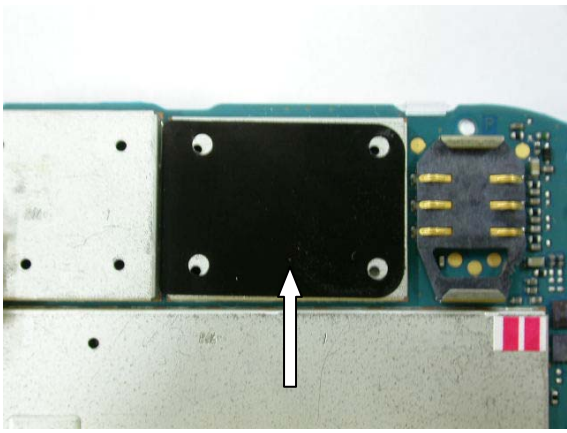
	Step-by-Step Instructions	
1	<p>NOTE! Do not touch the Keypad Domefoil or PCB. Always use a pair of tweezers.</p> <p>1. Remove the old Keypad Domefoil with a pair of tweezers.</p> <p>2. Remove adhesive remains with isopropyl alcohol.</p> <p>3. Apply the new Keypad Domefoil on the PCB using a pair of tweezers. Guide the Keypad Domefoil according to the guide hole (1A) and guide line (2A-2D) on the PCB as shown in the picture.</p>	

- Assemble the phone as described in *2 Reassembly*

3.13 Tape Shield Can

Instruction

- Disassemble the phone as described in *1 Disassembly*

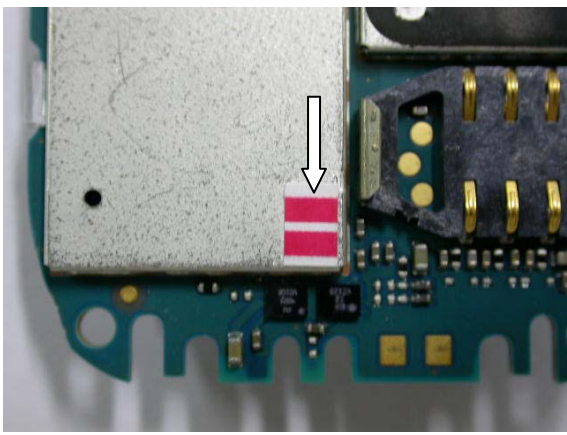
	Step-by-Step Instructions	
1	<ol style="list-style-type: none"> 1. Remove the old Tape Shield Can with a pair of tweezers or your fingers. 2. Remove adhesive remains with isopropyl alcohol. 3. Apply the new Tape Shield Can. 	

- Assemble the phone as described in *2 Reassembly*

3.14 Liquid Intrusion Indicator

Instruction

- Disassemble the phone as described in *1 Disassembly*

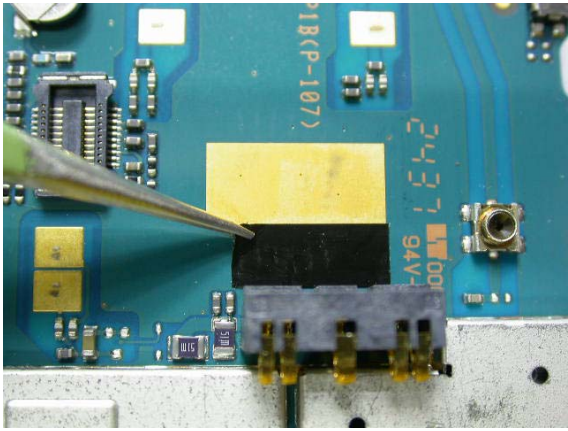
	Step-by-Step Instructions	
1	<ol style="list-style-type: none"> 1. Remove the old Liquid Intrusion Indicator with a pair of tweezers or your fingers. 2. Remove adhesive remains with isopropyl alcohol. 3. Apply the new Liquid Intrusion Indicator. 	

- Assemble the phone as described in *2 Reassembly*

3.15 Tape PCB

Instruction

- Disassemble the phone as described in *1 Disassembly*

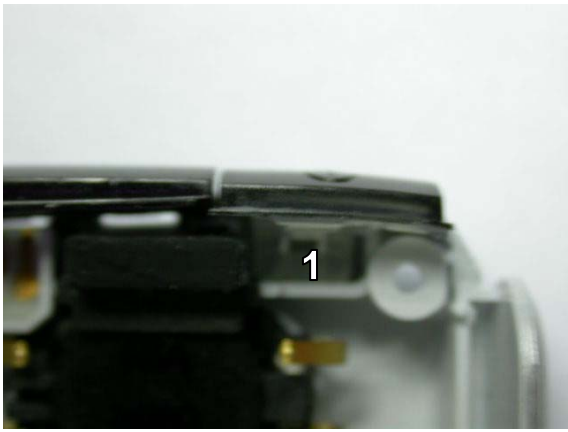
	Step-by-Step Instructions	
1	<ol style="list-style-type: none"> 1. Remove the old Tape PCB with a pair of tweezers or your fingers. 2. Remove adhesive remains with isopropyl alcohol. 3. Apply the new Tape PCB. 	

- Assemble the phone as described in *2 Reassembly*

3.16 On/Off Button

Instruction

- Disassemble the phone as described in *1 Disassembly*

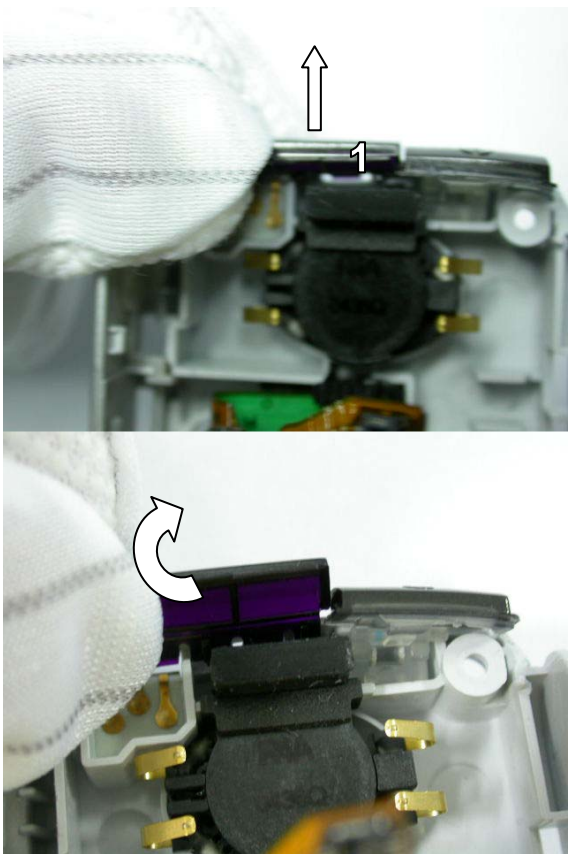
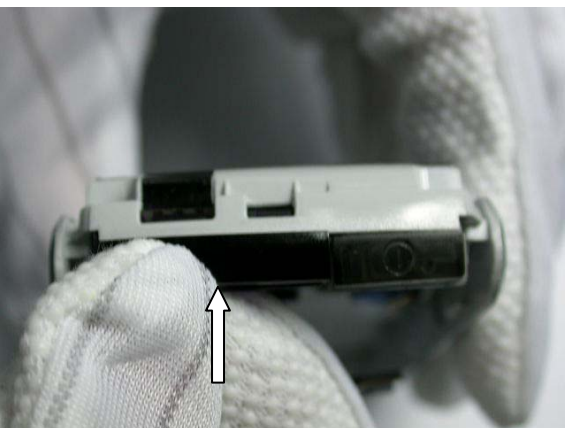
	Step-by-Step Instructions	
1	<ol style="list-style-type: none"> 1. Remove the old On/Off button with your fingers. 2. Assemble the new On/Off button in the frame. Use your finger and press the On/Off button down into the bottom of the cavity (1). 	

- Assemble the phone as described in *2 Reassembly*

3.17 IrDA Window

Instruction

- Disassemble the phone as described in *1 Disassembly*

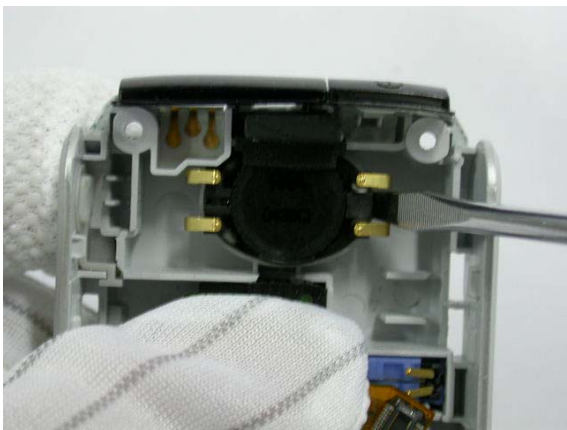
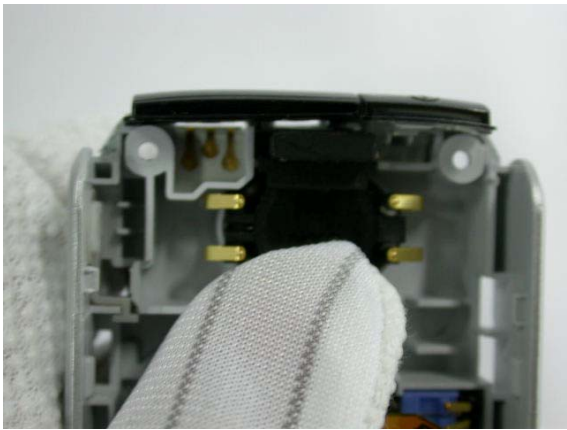
Step-by-Step Instructions		
1	<p>NOTE! Notice the position of the IrDA Window before removal.</p> <p>If the IrDA Window shall be replaced; be careful not to touch the IrDA Window glass with your fingers.</p> <p>1. Overturn the IrDA Window as shown in the picture.</p> <p>2. Continue to overturn IrDA Window in 90 degrees angle to release it. A “click” sound will be heard.</p>	
2	<p>Insert the new IrDA Windows as the arrow indicates. A “click” sound will be heard when the IrDA Window snaps into its position.</p>	

- Assemble the phone as described in *2 Reassembly*

3.18 Dual Speaker/Receiver

Instruction

- Disassemble the phone as described in *1 Disassembly*

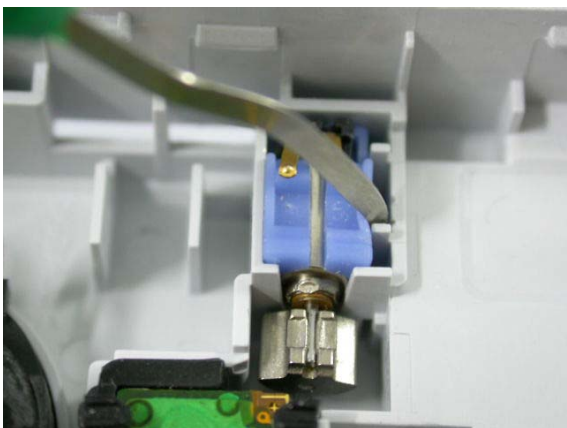

	Step-by-Step Instructions	
1	<p>NOTE! Be careful not to damage the plastic of the Frame Assy when removing the Dual Speaker/Receiver.</p> <p>Use a screwdriver and start like the picture shows to remove the Dual Speaker/Receiver. Gently bend with the screwdriver against the frame under the Dual Speaker/Receiver contact spring, until the speaker comes loose.</p>	
2	<p>1. Remove adhesive remains with isopropyl alcohol.</p> <p>2. Peel off the protection foil and position the Dual Speaker/Receiver into the frame cavity. Press the speaker to fasten it properly.</p>	

- Assemble the phone as described in *2 Reassembly*

3.19 Vibrator

Instruction

- Disassemble the phone as described in *1 Disassembly*

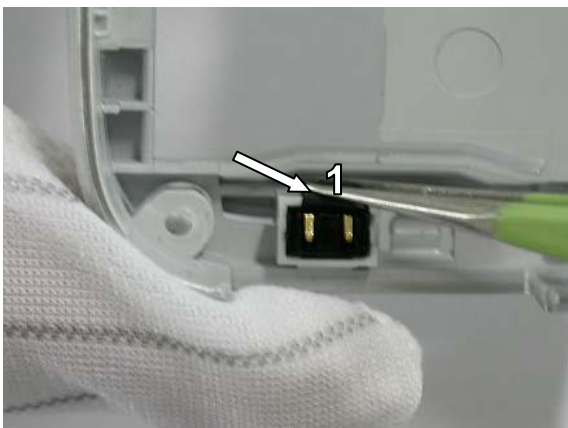
Step-by-Step Instructions		
1	<p>NOTE! Be careful not the damage the Frame Assy when removing the Vibrator. Do not touch or damage the Vibrator contact springs or flywheel.</p> <p>Remove the old Vibrator using a dentist hook as shown in the picture.</p>	
2	<p>NOTE! Do not touch or damage the Vibrator contact springs or flywheel.</p> <p>Assemble the new Vibrator into the Frame Assy cavity by using a pair of tweezers. Press the vibrator to the bottom of the cavity.</p>	

- Assemble the phone as described in *2 Reassembly*

3.20 Microphone

Instruction

- Disassemble the phone as described in *1 Disassembly*

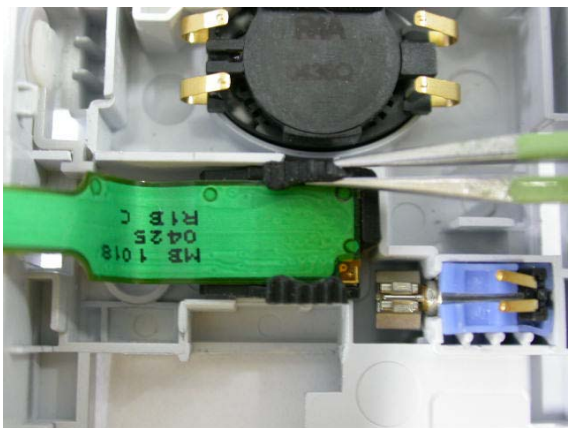
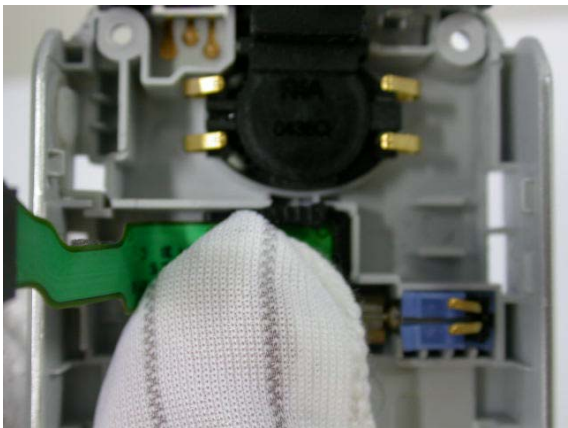
Step-by-Step Instructions		
1	<p>NOTE! Do not touch the contact springs with your fingers or the tweezers.</p> <p>1. Remove the old Microphone with a pair of tweezers. Lift the Microphone by grabbing the Microphone grommet tap (1) as shown in the picture.</p> <p>2. Assemble the new Microphone using a pair of tweezers. Press the Microphone to the bottom of the cavity.</p>	

- Assemble the phone as described in *2 Reassembly*

3.21 Camera Part for Mobile Phone

Instruction

- Disassemble the phone as described in *1 Disassembly*

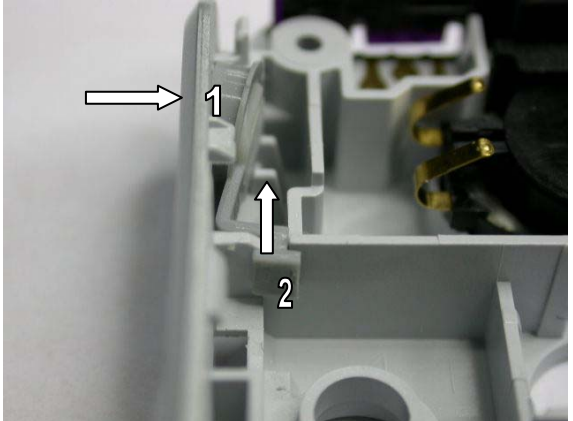
Step-by-Step Instructions		
1	<p>NOTE! Be careful not to damaged the Camera flexfilm.</p> <p>Gently remove the Camera Part for Mobile Phone using a pair of tweezers.</p>	
2	<p>Place the new Camera Part for Mobile Phone into the cavity.</p> <p>Press the Camera to the bottom of the cavity with your fingers.</p>	

- Assemble the phone as described in *2 Reassembly*

3.22 Camera Key

Instruction

- Disassemble the phone as described in *1 Disassembly*




	Step-by-Step Instructions	
1	<p>1. Push the Camera Key as the arrow(1) indicates. A “click” sound will be heard.</p> <p>2. Remove the old Cameraa Key with your fingers. Lift the Camera Key by grabbing the Camera Key grommet tap (2) as shown in the picture.</p> <p>3. Assemble the new Camera Key by using your fingers or a pair of tweezers.</p>	

- Assemble the phone as described in *2 Reassembly*

3.23 Antenna Flexfilm

Instruction

- Disassemble the phone as described in *1 Disassembly*

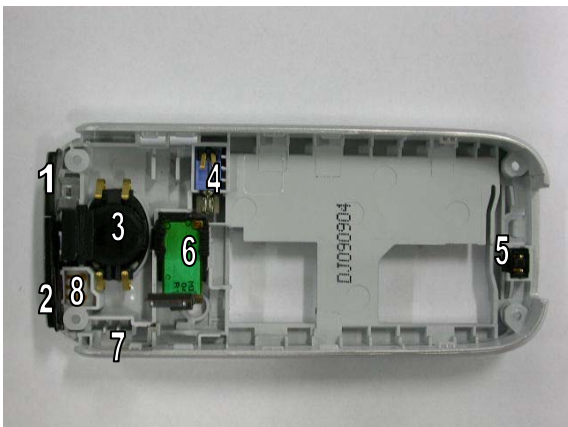
	Step-by-Step Instructions	
1	<p>NOTE! Be careful not to damage the plastic of the Frame Assy when removing the Antenna Flexfilm. DO NOT reuse the Antenna Flexfilm.</p> <p>1. Use a pair of tweezers to remove the Antenna Flexfilm.</p> <p>2. Remove adhesive remains with isopropyl alcohol.</p>	
2	<p>NOTE! Do not touch the connection area.</p> <p>Peel off the protection foil and position the Antenna Flexfilm into the frame cavity. Press the Antenna Flexfilm to fasten it properly.</p>	
3	<p>Apply the Antenna Flexfilm on the Frame Assy using a pair of tweezers. Guide the Antenna Flexfilm according to the red circle as shown in the picture. Press the Antenna Flexfilm to fasten it properly.</p>	

- Assemble the phone as described in *2 Reassembly*

3.24 Frame Assembly

Instruction

- Disassemble the phone as described in *1 Disassembly*

Step-by-Step Instructions		
1	<p>NOTE! Disassemble the 7 frame assembly components according to heading 3.16-3.22.</p> <p>Replace the old frame with the new one.</p> <p>Assemble the 8 Frame Assembly components back into the new frame according to heading 3.16-3.23.</p>	

- Assemble the phone as described in *2 Reassembly*

4 Label

Tools

- Hot air flow solder station
- Blunt pair of tweezers
- Zebra printer and computer

Instruction

This instruction should be used when you are exchanging an old label or assemble a new one.

NOTE!

Notice the position of the label before removal.

Only one label is allowed on the frame.

1. Read the old label and/or write the information into the Labelmake program.
2. Heat up the label with a hot air flow solder station, if needed.
3. Carefully remove the label, make sure that all residues are gone. If necessary clean the surface with Isopropyl alcohol. Do not scratch the frame.
4. Check that the right label format is loaded in the Zebra printer.
5. Write a new label by using the program Labelmake. Check that the printing is ok.
6. Take the new label and place it onto the frame according to *Fig 1*. Make sure that the label is placed in the right position.



Fig 1.

5 Revision History

Rev.	Date	Changes / Comments
A	2005-03-10	Initial release.