



# Working Instruction, SP/Mechanical

Applicable for Z600/Z608

<b>1</b>	<b>Disassembly Upper &amp; Lower cabinets .....</b>	<b>2</b>
1.1	Equipment.....	2
1.2	Instruction.....	2
<b>2</b>	<b>Reassembly Upper &amp; Lower cabinets .....</b>	<b>10</b>
2.1	Equipment.....	10
2.2	Instruction.....	10
<b>3</b>	<b>Replacement of Mechanical Parts .....</b>	<b>17</b>
3.1	Equipment.....	17
3.2	Instruction.....	17
3.3	Speaker assy .....	17
3.4	Vibrator .....	18
3.5	Microphone.....	19
3.6	Rubber key.....	19
3.7	Receiver 10 mm.....	20
3.8	Systemconnector.....	21
3.9	Cover Exchangeable, Upper and lower .....	22
3.10	Cap RF.....	22
3.11	Cover screw upper 1 .....	23
3.12	Bumper (2).....	23
3.13	Rubber bush (2) .....	24
3.14	Key dome/Blue led's/Foil.....	25
3.15	Battery spring .....	25
3.16	Main LCD.....	26
3.17	Sub LCD.....	28
3.18	Cover hinge – Back .....	29
3.19	Hinge (bearing).....	29
3.20	Cover hinge – Right and left.....	31
3.21	Water label indication.....	31
3.22	Camera holder .....	32
3.23	Camera module.....	33
3.24	Sheet absorbing .....	34
3.25	Lower rear cabinet.....	35
3.26	Lower front cabinet .....	36
3.27	Upper front cabinet.....	36
3.28	Upper rear cabinet .....	37
3.29	Internal coaxial connector cable .....	37
3.30	Hinge flex mount.....	38
3.31	Antenna .....	38
<b>4</b>	<b>Label.....</b>	<b>40</b>
<b>5</b>	<b>Revision History .....</b>	<b>41</b>



# 1 Disassembly Upper & Lower cabinets

## Tools



- Torque screwdriver , set to 10&15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Flex film assembly tool NTZ 112 521
- Blunt pair of tweezers
- Dentist hook

## 1.1 Equipment




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

## 1.2 Instruction

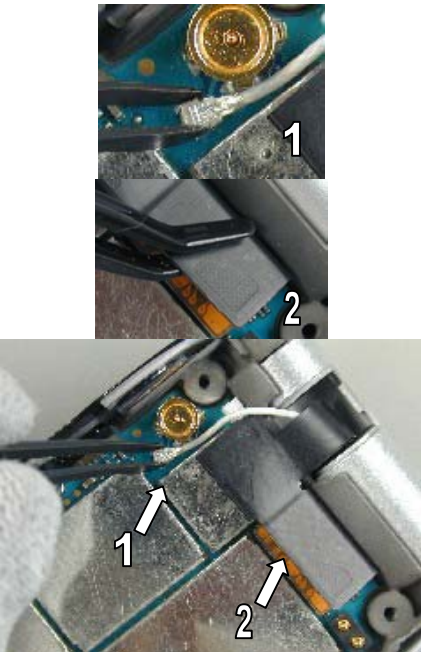
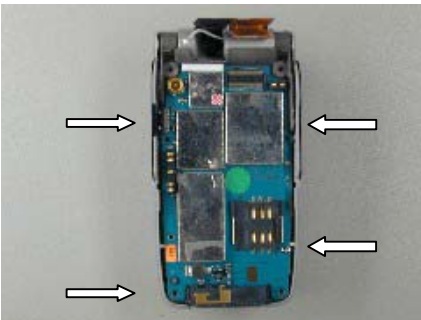
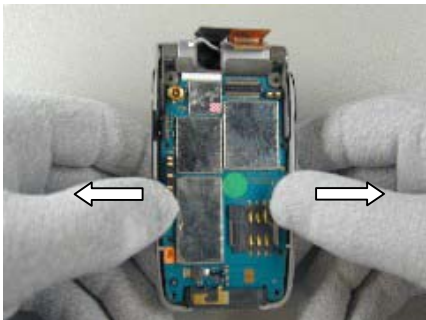
- Use 15 Ncm of torque for the externally screws.
- Use 10 Ncm of torque for the internal screws.
- Keep all contact surfaces clean of dirt and hand-grease!

#	Figure	Instruction	Note
1	 <i>Fig.1.1</i>	Remove the battery cover with your fingers. Slide the battery cover down in the direction of the arrow. <i>(Fig.1.1)</i>	Turn of the phone.
2	 <i>Fig.1.2</i>	Take out the battery. <i>(Fig.1.2)</i>	

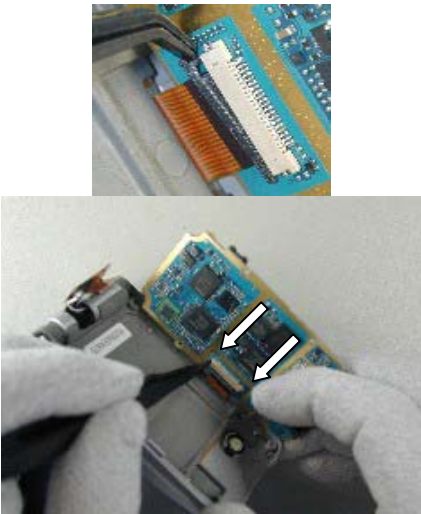
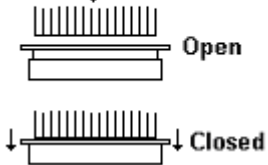
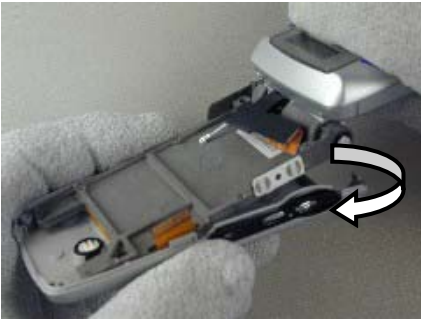




#	Figure	Instruction	Note
3	 <i>Fig.1.3</i>	Remove the four lower rear cabinet screws. <i>(Fig.1.3)</i>	Removed screws cannot be reused and must be scrapped.  Use 15 Ncm of torque for the screws
4	 <i>Fig.1.4</i>	Open the phone with the opening tool (NTZ 112 302/2) Begin as the picture shows.  Then gently move the tool along the gap both ways until the front is loose on this side.  If necessary do the same thing on the other side. <i>(Fig.1.4)</i>	Be careful not to scratch the phone with the opening tool.
5	 <i>Fig.1.5</i>	Open the lower rear cabinet cautiously. <i>(Fig.1.5)</i>	







#	Figure	Instruction	Note
6	 <i>Fig.1.6</i>	<p>1. Remove the internal coaxial connector cable using a blunt pair of tweezers</p> <p>2. Remove main flex film from the board-to-board connector; use the flex film assembly tool NTZ 112 521.</p> <p>(Fig.1.6)</p>	<p>Be careful not to damage the internal coaxial connector cable.</p>
7	 <i>Fig.1.7</i>	<p>Remove the four lower rear cabinet inside screws.</p> <p>(Fig.1.7)</p>	<p>Removed screws cannot be reused and must be scrapped.</p> <p>Use 10 Ncm of torque for the screws</p>
8	 <i>Fig.1.8</i>	<p>With your fingers, gently bend/twist the lower front cabinet sides out from the hooks until the main PBA is loose.</p> <p>(Fig.1.8)</p>	



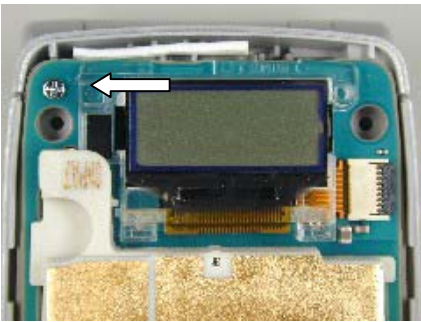


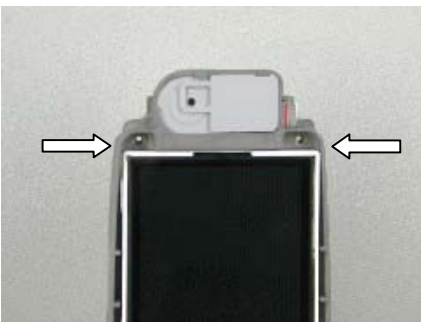
#	Figure	Instruction	Note
9	 <p><i>Fig.1.10</i></p>	<p>Flip up main PBA to the side. Loosen the ZIF-connector on both sides using the flex film assembly tool NTZ 112 521.</p> <p>Remove Main PBA.</p> <p>(Fig.1.9)</p> <p><u>ZIF-connector</u> Flexfilm</p> 	
10	 <p><i>Fig.1.11</i></p>	<p>Open out the phone. Remove the lower front cabinet from the frame by hand.</p> <p>(Fig.1.10)</p>	
11	 <p><i>Fig1.11</i></p>	<p>(Fig.1.11)</p>	<p><b>Lower Cabinet assembly separated.</b></p>
12	 <p><i>Fig.1.12</i></p>	<ol style="list-style-type: none"> <li>1.Remove the two upper front cabinet screw covers with a dentist hook.</li> <li>2.Remove the two screws.</li> </ol> <p>(Fig.1.12)</p>	<p><b>Removed screws cannot be reused and must be scrapped.</b></p> <p><b>Use 15 Ncm of torque for the screws.</b></p>



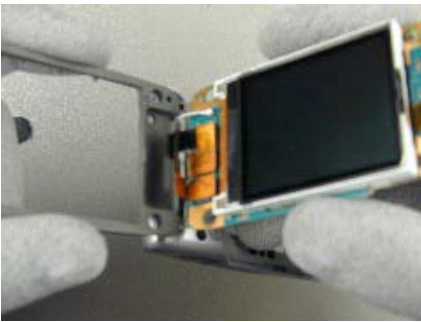
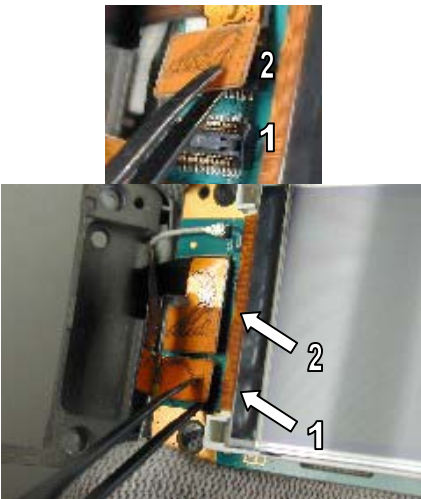
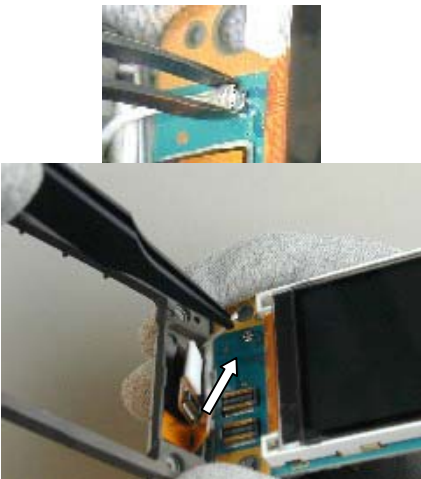
#	Figure	Instruction	Note
13	 <p><i>Fig.1.13</i></p>	<p>Remove the exchangeable upper cover from the upper rear cabinet with your fingers.</p> <p><i>(Fig.1.13)</i></p>	
14	 <p><i>Fig.1.14</i></p>	<p>Remove the two upper rear cabinet screws.</p> <p><i>(Fig.1.14)</i></p>	<p>Removed screws cannot be reused and must be scrapped.</p> <p>Use 15 Ncm of torque for the screws.</p>
15	 <p><i>Fig.1.15</i></p>	<p>Open the phone with the opening tool NTZ 112 302/2. Begin as the picture show.</p> <p>Then gently move the tool along the gap both ways until the front is loose on this side.</p> <p>If necessary do the same thing on the other side.</p> <p><i>(Fig.1.15)</i></p>	<p>Be careful not to scratch the phone with the opening tool.</p>
16	 <p><i>Fig.1.16</i></p>	<p>Gently remove the upper rear cabinet with your fingers.</p> <p><i>(Fig.1.16)</i></p>	






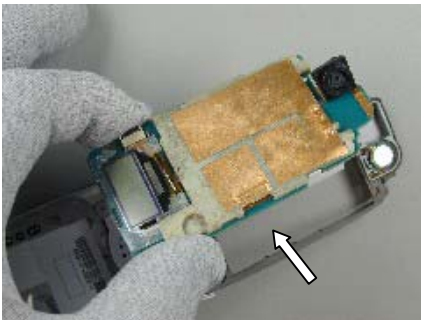
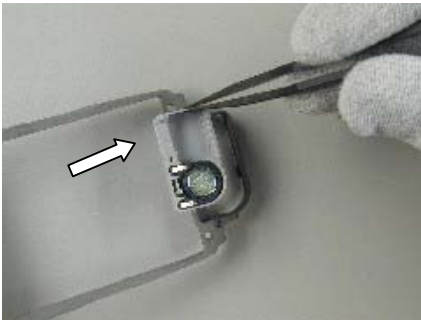

#	Figure	Instruction	Note
17	 <i>Fig. 1.17</i>	Remove the screw. (Fig. 1.17)	Removed screws cannot be reused and must be scrapped.  Use 10 Ncm of torque for the screw.
18	 <i>Fig. 1.18</i>	Open up the phone, slide out the upper front cabinet with your fingers. (Fig. 1.18)	Be careful and don't touch the main LCD.
19	 <i>Fig. 1.19</i>	Remove camera holder with a blunt pair of tweezers. (Fig. 1.19)	
20	 <i>Fig. 1.20</i>	Remove both screws which are securing the antenna/LCD PBA to the frame. (Fig. 1.20)	Removed screws cannot be reused and must be scrapped.  Use 10 Ncm of torque for the screws.



#	Figure	Instruction	Note
21	 <p><i>Fig.1.21</i></p>	Gently fold the antenna PBA and LCD out from the frame. (Fig.1.21)	Sometimes the receiver holder comes along with the antenna/LCD PBA instead of frame 26 found at page 9.
22	 <p><i>Fig.1.22</i></p>	Disconnect the two board-to-board connectors with the help of a blunt pair of tweezers. (Fig.1.22)	Be careful with the camera flex film.
23	 <p><i>Fig.1.23</i></p>	Disconnect the internal coaxial connector cable using a blunt pair of tweezers. (Fig.1.23)	Be careful not to damage the internal coaxial connector cable.





#	Figure	Instruction	Note
24	 <i>Fig.1.24</i>	Gently remove the antenna/LCD PBA from the sheet absorbing B with the help of a blunt pair of tweezers. <i>(Fig.1.24)</i>	
25	 <i>Fig.1.25</i>	Now it's possible to remove the antenna/LCD PBA from the frame by hand. <i>(Fig.1.25)</i>	
26	 <i>Fig.1.26</i>	Lift out the receiver holder with the receiver 10 mm by hand or with a blunt pair of tweezers. <i>(Fig.1.26)</i>	
27	 <i>Fig.1.27</i>	<i>(Fig.1.27)</i>	<b>Upper Cabinet assembly separated.</b>



## 2 Reassembly Upper & Lower cabinets

### Tools


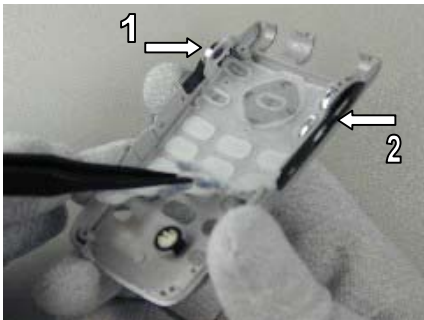
- Torque screwdriver , set to 10&15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Flex film assembly tool NTZ 112 521
- Blunt Pair of tweezers

### 2.1 Equipment


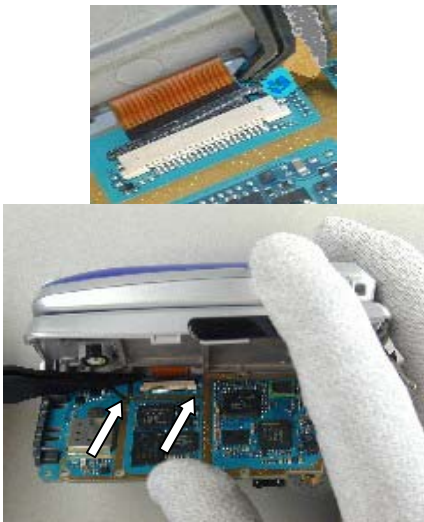

- ESD-gloves (cotton gloves).
- ESD-wristband

### 2.2 Instruction


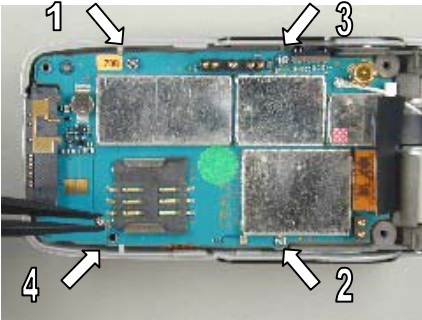


- Use 15 Ncm of torque for the externally screws.
- Use 10 Ncm of torque for the internal screws.
- Keep all contact surfaces clean of dirt and hand-grease!

#	Figure	Instruction	Note
1	 <i>Fig. 2.1</i>	Start like this when reassembling the lower cabinet. (Fig.2.1)	
2	 <i>Fig. 2.2</i>	If necessary, place a new keypad inside the lower front cabinet with a blunt pair of tweezers or by hand. (Fig.2.2)	Make sure that the camera key (1) and the volume keys (2) are assembled in the right position.


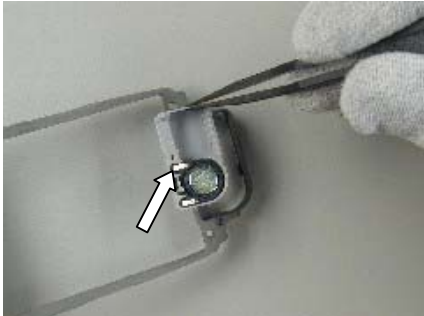
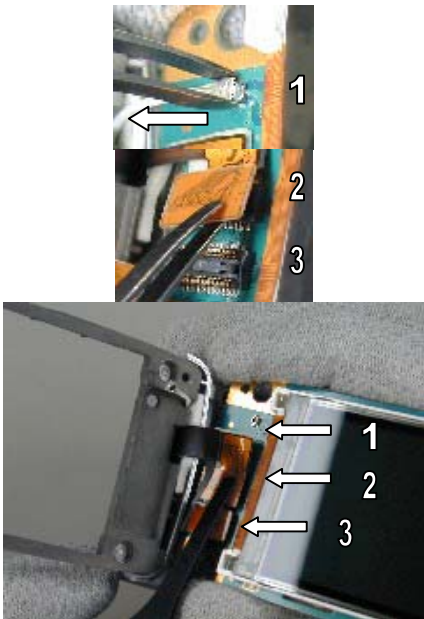
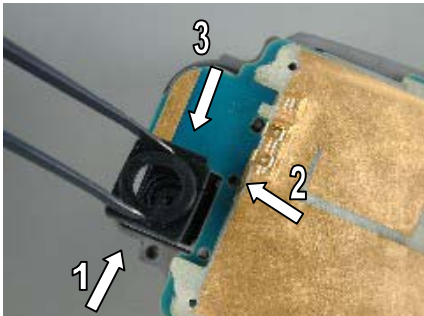


#	Figure	Instruction	Note
3	 <p><i>Fig.2.3</i></p>	<p>Take the lower front cabinet and assemble it on the frame. (Fig.2.3)</p>	<p>Check the camera and volume keys position.</p>
4	 <p><i>Fig.2.4</i></p>	<p>Close the phone, put the main PBA to the side where the flexfilm emerge. Slide the flex film into the ZIF-connector, lock it on both sides using the flex film assembly tool NTZ 112 521. (Fig.2.4)</p> <p><u>ZIF-connector</u> Flexfilm ↓ Open ↓ Closed</p>	<p>Make sure that the gold line on the flex film is in line with the ZIF connector and that the connector is properly closed.</p> <p>Be careful not to damage the flex film with the flex film assembly tool.</p>
5	 <p><i>Fig.2.5</i></p>	<p>Assemble the internal coaxial connector cable with a blunt pair of tweezers and your fingers as support. (Fig.2.5)</p>	<p>Be careful not to damage the internal coaxial connector cable.</p>




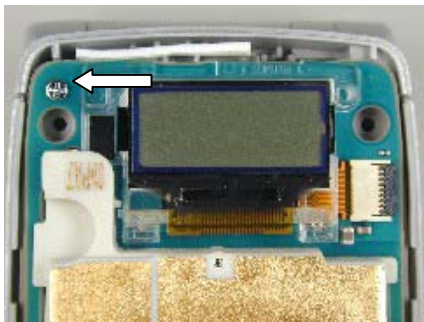


#	Figure	Instruction	Note
6	 <p><i>Fig.2.6</i></p>	<p>Assemble the main flexfilms board-to-board connector to main PBA using your fingers (best in this case) or the flex film assembly tool NTZ 112 521.</p> <p>(Fig.2.6)</p>	<p>Be careful not to damage the board-to-board connector.</p>
7	 <p><i>Fig.2.7</i></p>	<p>Assemble four <b>new</b> screws. Tighten the lower front cabinet screws according to sequence shown in (Fig.2.7).</p>	<p>Use 10 Ncm of torque for the screws.</p>
8	 <p><i>Fig.2.8</i></p>	<p>Assemble the lower rear cabinet using your fingers.</p> <p>(Fig.2.8)</p>	<p>Make sure that the switches on the PBA are in contact with the camera/volume key.</p> <p>Check so there is no gaps around the lower rear cabinet.</p> <p>If there is a gap, gently press the two half's together with your fingers.</p>
9	 <p><i>Fig.2.9</i></p>	<p>Assemble four <b>new</b> screws. Tighten the lower rear cabinet screws according to screw sequence shown in (Fig.2.9).</p>	<p>Use 15 Ncm of torque for the screws.</p> <p><b>Reassembly of lower cabinet done.</b></p>



#	Figure	Instruction	Note
10	 <p>Fig.2.10</p>	<p>Reassembling of upper cabinet starts.</p> <p>(Fig.2.10)</p>	
11	 <p>Fig.2.11</p>	<p>Place the camera holder with the receiver 10 mm in the frame by hand or with a blunt pair of tweezers.</p> <p>(Fig.2.11)</p>	
12	 <p>Fig.2.12</p>	<p>Pick up the main PBA.</p> <p>1. Assemble the internal coaxial connector cable with a blunt pair of tweezers.</p> <p>2 and 3. Assemble the two flex film connectors to the PBA with the flex film assembly tool NTZ 112 521.</p> <p>(Fig.2.12)</p>	<p>Be careful not to damage the board-to-board connector and the internal coaxial connector cable.</p>
13	 <p>Fig.2.13</p>	<p>1. Place the camera holder on the camera using a blunt pair of tweezers.</p> <p>2. Assemble a <b>new</b> screw.</p> <p>(Fig.2.13)</p>	<p>3. The camera holder rubber edge should be under the antenna/LCD PBA when properly assembled.</p> <p>Use 10 Ncm of torque for the screw.</p>






#	Figure	Instruction	Note
14	 <i>Fig.2.14</i>	Assemble the two (new) screws. (Fig.2.14)	Do not touch the LCD-glass with your fingers. Use 10 Ncm of torque for the screws.
15	 <i>Fig.2.15</i>	Assemble the screw (a new).	Use 10 Ncm of torque for the screw.
16	 <i>Fig.2.16</i>	Assemble the upper rear cabinet with your fingers. (Fig.2.16)	Check for dust before assembling.
17	 <i>Fig.2.17</i>	Assemble the upper front cabinet with your fingers. (Fig.2.17)	Open out the phone. Check for dust before reassembling the upper front cabinet.



#	Figure	Instruction	Note
18	 <i>Fig.2.18</i>	<p>1. Assemble the two (new) screws.</p> <p>2. Place new screwcovers over the screwcavitys.</p> <p>(Fig.2.18)</p>	<p>Check so the upper cabinet is properly assembled – there should be no gaps along the sides.</p> <p>Use 15 Ncm of torque for the screws.</p> <p><b>Don't forget to assemble new screwcovers.</b></p> <p><b>(See 3.11 in Working Instruction, SP/Mechanical)</b></p>
19	 <i>Fig.2.19</i>	<p>Assemble the two (new) screws.</p> <p>(Fig.2.19)</p>	<p>Use 15 Ncm of torque for the screws.</p>
20	 <i>Fig.2.20</i>	<p>Assemble the exchangeable upper rear cover with your fingers. Start from the camera end of the phone.</p> <p>(Fig.2.20)</p>	<p><b>Reassembly of upper cabinet done.</b></p>
21	 <i>Fig.2.21</i>	<p>Place the battery like the picture shows.</p> <p>(Fig.2.21).</p>	



#	Figure	Instruction	Note
22	 <p><i>Fig.2.22</i></p>	Slide on the battery cover like the picture shows. (Fig.2.22)	<b>Reassembly of upper &amp; lower cabinets done.</b>



## 3 Replacement of Mechanical Parts

### 3.1 Equipment

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

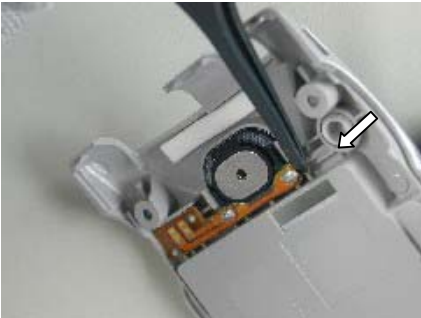
### 3.2 Instruction

- Use 15 Ncm of torque for the externally screws.
- Use 10 Ncm of torque for the internal screws.
- Keep all contact surfaces clean of dirt and hand-grease!
- Tools listed under each heading in this chapter “replacement of mechanical parts” is just a help for the user when disassembling and reassembling the phone.

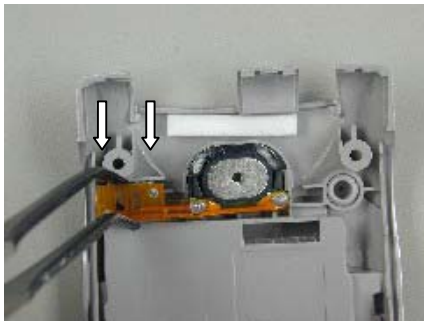
### 3.3 Speaker assy

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
  - Blunt pair of tweezers
  - Flex film assembly tool NTZ 112 521
- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.1</i>	Remove the speaker assy. Use a blunt pair of tweezers, start like the picture shows. <i>(Fig.3.1)</i>	



#	Figure	Instruction	Note
2	 <i>Fig.3.2</i>	Assemble the new speaker assy with the flex film assembly tool NTZ 112 521. (Fig.3.2)	Check so the guidepins on the lower rear cabinet is aligned against the new speaker assy.

- Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 8-9.

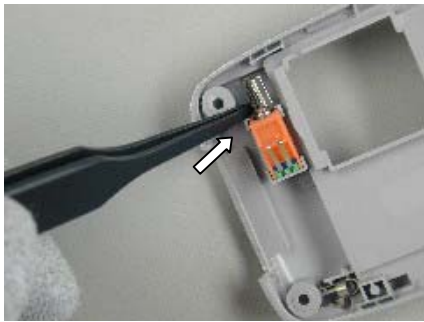

### 3.4 Vibrator

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Blunt pair of tweezers

#### Instruction

- Disassemble the phone as described in 1 Disassembly Upper & Lower cabinets, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.3</i>	Lift up the vibrator motor with a blunt pair of tweezers, start like the picture shows. (Fig.3.3)	
2	 <i>Fig.3.4</i>	Assemble the new vibrator according to the picture. Use a blunt pair of tweezers. (Fig.3.4)	Do not touch or damage the vibrator contact springs.

- Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 8-9.





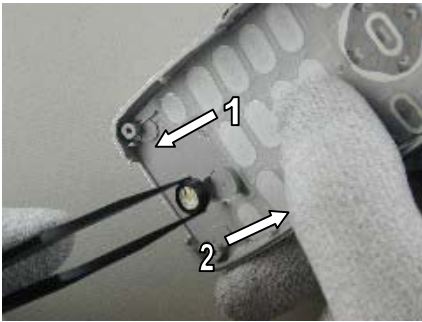
## 3.5 Microphone

### Tools

- Blunt pair of tweezers

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-5, 10.

#	Figure	Instruction	Note
1	 Fig.3.5	1. Remove the old microphone with a blunt pair of tweezers.  2. Assemble the new microphone in the opposite direction.  (Fig.3.5)	<b>Be gently !</b> The rubber can be damaged when picking it up.  Do not touch the elastomer with your fingers.  FYI : The microphone can be placed in any direction.

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 2-3, 7-9.

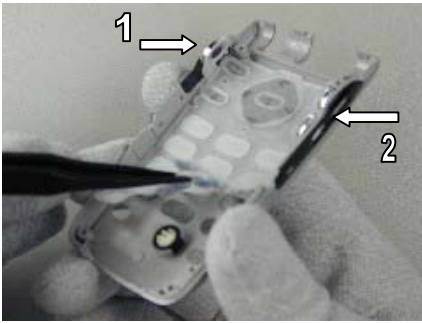
## 3.6 Rubber key

### Tools

- Torque screwdriver, set to  $15\text{Ncm} \pm 6\%$ . Bits NTZ 112 1052
- Blunt pair of tweezers

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-5, 10.

#	Figure	Instruction	Note
1	 Fig.3.6	Replace the rubber key in the lower upper cabinet with a new one using a blunt pair of tweezers or by hand.  (Fig.3.6)	<b>Make sure that the camera key (1) and the volume keys (2) are assembled in the right position -you get help from the guidepins.</b>

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 2-3, 8-9.



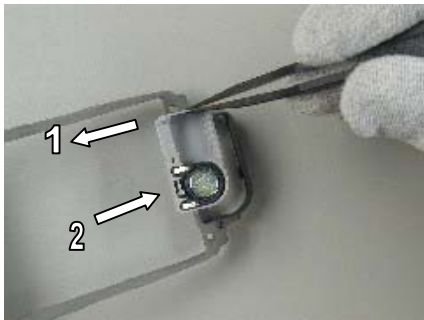

### 3.7 Receiver 10 mm

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Blunt pair of tweezers

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-26.

#	Figure	Instruction	Note
1	 <i>Fig.3.7</i>	1. Remove the camera holder (with the receiver 10 mm inside) with a blunt pair of tweezers or by hand.  (Fig .3.7)	
2	 <i>Fig.3.8</i>	Remove the old receiver 10 mm. Use a blunt pair of tweezers.  Assemble the new receiver 10 mm in the speaker holder.  (Fig .3.8)  2. Then assemble the unit back into the frame.  (Fig .3.7)	Do not touch the contact pads on the receiver.

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 11-22.



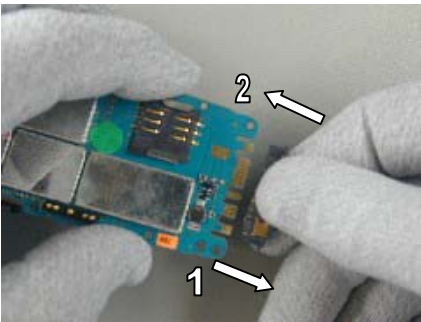
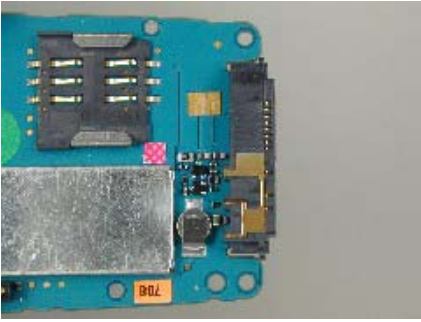
## 3.8 Systemconnector

### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-9.

#	Figure	Instruction	Note
1	 <i>Fig.3.9</i>	1. Remove the system connector from the board with your fingers. 2. Assemble the new one. (Fig .3.9)	
2	 <i>Fig.3.10</i>	Correctly mounted system-connector. (Fig .3.10)	

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 4-9.


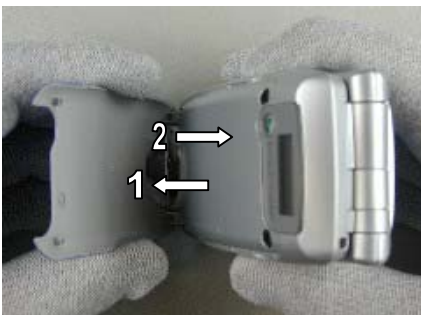


### 3.9 Cover Exchangeable, Upper and lower

**Tools**

- By hand

**Instruction**


	Figure	Instruction	Note
1	 <i>Fig.3.11</i>	<p>1. Remove the battery cover by pressing it downwards in the direction of the arrow.</p> <p>2. Take a new cover and slide it on the telephone.</p> <p>(Fig.3.11)</p>	Turn of the phone.
2	 <i>Fig.3.12</i>	<p>1. Remove the old cover by hand.</p> <p>2. Assemble a new upper cover.</p> <p>See (Fig.3.12)</p>	Start from the camera end of the phone with the new cover.

### 3.10 Cap RF

**Tools**

- By hand

**Instruction**

	Figure	Instruction	Note
1	 <i>Fig.3.13</i>	<p>1. Remove the battery cover.</p> <p>2. Remove the RF cap with a blunt pair of tweezers.</p> <p>3. Assemble a new rubbercap with your fingers.</p> <p>(Fig.3.13)</p>	




### 3.11 Cover screw upper 1

#### Tools

- Dentist hook
- Blunt pair of tweezers

#### Instruction


#	Figure	Instruction	Note
1	 <i>Fig.3.14</i>	Open out the phone.  1. Remove the screw covers with the dentist hook.  2. Assemble the new ones with your fingers or with a blunt pair of tweezers.  <i>(Fig .3.14)</i>	

### 3.12 Bumper (2)

#### Tools

- Dentist hook

#### Instruction

#	Figure	Instruction	Note
1	 <i>Fig.3.15</i>	1. Open out the phone.  2. Remove the two bumpers with the dentist hook.  3. Assemble new bumpers by hand.  <i>(Fig .3.15)</i>	







### 3.13 Rubber bush (2)

#### Tools

- Dentsit hook

#### Instruction

	Figure	Instruction	Note
1	 <i>Fig.3.16</i>	Remove the upper exchangeable cover by hand. <i>(Fig.3.16)</i>	
2	 <i>Fig.3.17</i>	1. Remove the old rubber bush with the dentist hook. 2. Assemble a new (or two) rubber bush. Gently press it into the upper rear cabinet by hand. <i>(Fig.3.17)</i>	



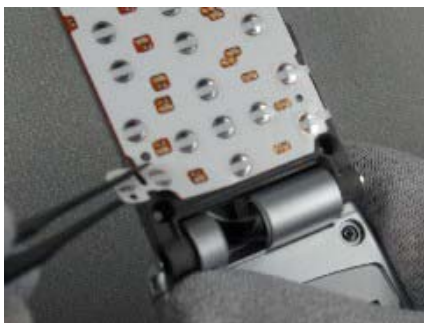
### 3.14 Key dome/Blue led`s/Foil

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- By hand.
- Blunt pair of tweezers.

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-11.

#	Figure	Instruction	Note
1	 <i>Fig.3.18</i>	<p>1. Remove the dome switch foil with a blunt pair of tweezers or by hand.</p> <p>2. Assemble a new one with your fingers.</p> <p>(Fig.3.18)</p>	<p>Before removal of the dome switch foil –notice the position of the foil, check the guideholes.</p> <p>After removal – clean the surface of the frame with Isopropyl alcohol.</p>

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 1-9.

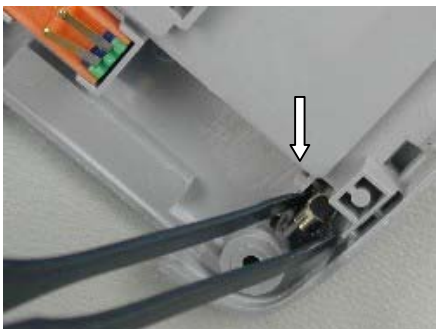
### 3.15 Battery spring

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.19</i>	<p>Remove the old spring and replace with a new one.</p> <p>(Fig.3.19)</p>	<p>After reassembling of the phone, check the spring from the outside – you should feel it when sliding on the batterycover.</p>

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 8-9, 21-22.



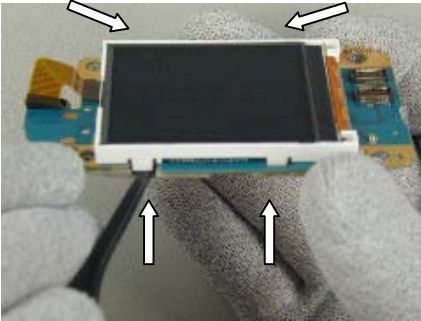

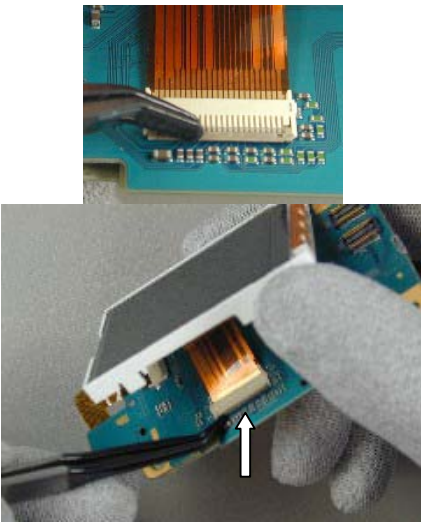
### 3.16 Main LCD

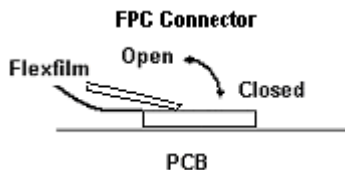
#### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

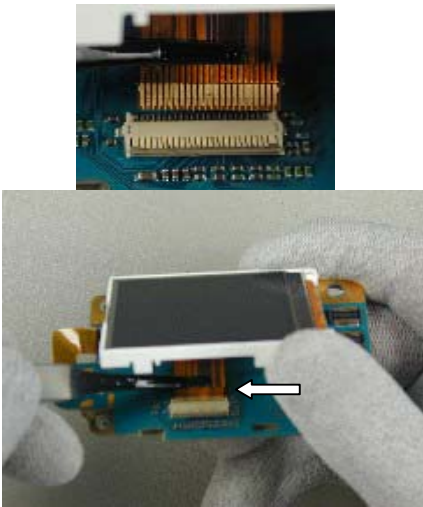
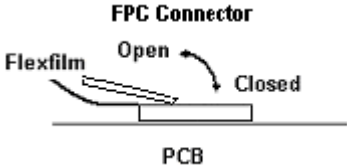
#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-25.

#	Figure	Instruction	Note
1	 <i>Fig.3.20</i>	With a blunt pair of tweezers gently “bend” the LCD frame “snapholders” until all four holders are free and loose. <i>(Fig.3.20)</i>	Be careful with the LCD.
2	 <i>Fig.3.21</i>	Lift up the main LCD just enough so you can access the FPC contact with the flex film assembly tool. <i>(Fig.3.21)</i>	Be careful not to damage the flex film.
3	 <i>Fig.3.22</i>	Open the FPC connector with the flex film assembly tool NTZ 112 521. Remove the old LCD. <i>(Fig.3.22)</i>	





#	Figure	Instruction	Note
4	 <p><i>Fig.3.23</i></p>	<p>Assemble the new LCD in the opposite direction. Use the flex film assembly tool for the FPC connector.</p> <p>(Fig.3.23)</p> 	<p><b>Don't forget to remove the protection tape from the new LCD.</b></p> <p>Make sure that the gold line on the flex film is in line with the FPC connector and that the connector is properly closed.</p> <p>Be careful not to damage the flex film with the flex film assembly tool.</p>

- Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 11-22.



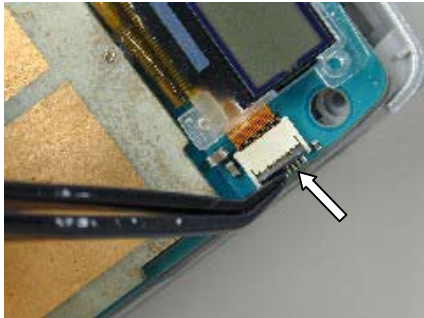
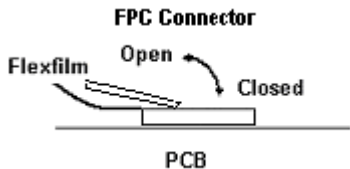
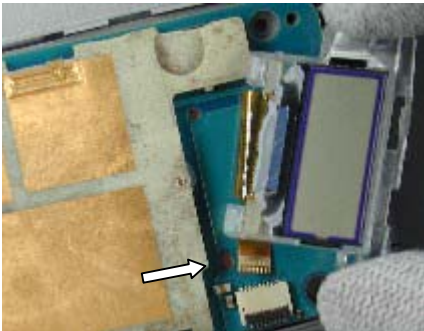
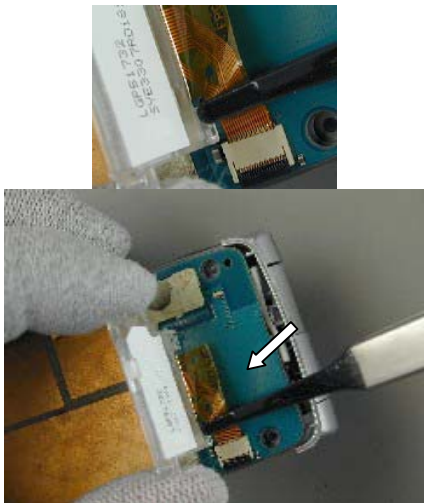
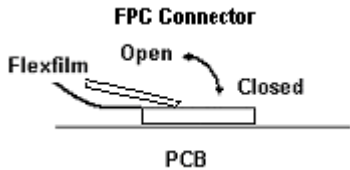
### 3.17 Sub LCD

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Flex film assembly tool NTZ 112 521

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-16.

#	Figure	Instruction	Note
1	 <i>Fig.3.24</i>	Open the FPC connector with the flex film assembly tool NTZ 112 521. ( <i>Fig.3.24</i> ) 	
2	 <i>Fig.3.25</i>	1. Remove the old sub LCD with your fingers. ( <i>Fig.3.25</i> )	Fold away the sheet absorbing B in front of the display with a blunt pair of tweezers so the sub LCD becomes free.  Be careful with the flex film.
3	 <i>Fig.3.26</i>	Assemble the flexfilm on the new sub LCD into the FPC connector with the flex film assembly tool NTZ 112 521 and close it.  Then gently fold the LCD into the right position (See note on the side) on the antenna PBA. ( <i>Fig.3.26</i> ) 	<b>Don't forget to remove the protection tape from the new LCD.</b>  Sometimes it's necessary to lift a little in the antenna with the dentist hook just to squeeze the new sub LCD in the right position.  Make sure that the gold line on the flex film is in line with the FPC connector and that the connector is properly closed. Be careful not to damage the flex film with the flex film assembly tool.

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 16, 18-22.





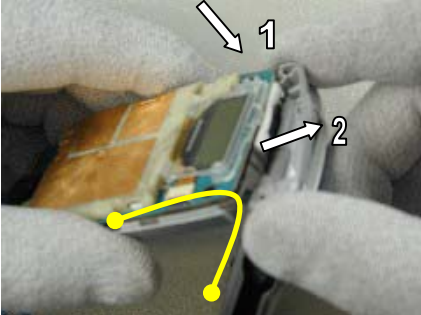
### 3.18 Cover hinge – Back

#### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-16.

#	Figure	Instruction	Note
1	 Fig.3.27	<ol style="list-style-type: none"><li>1. Remove the screw.</li><li>2. Remove the old back hinge cover with your fingers and replace it with a new one.</li><li>3. Assemble a new screw. (Fig.3.27)</li></ol>	<p>Notice the telephone position (marked with yellow color).</p> <p>Removed screws cannot be reused and must be scrapped.</p> <p>Use 10 Ncm of torque for the screw.</p>

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 16-22.


### 3.19 Hinge (bearing)

#### Tools

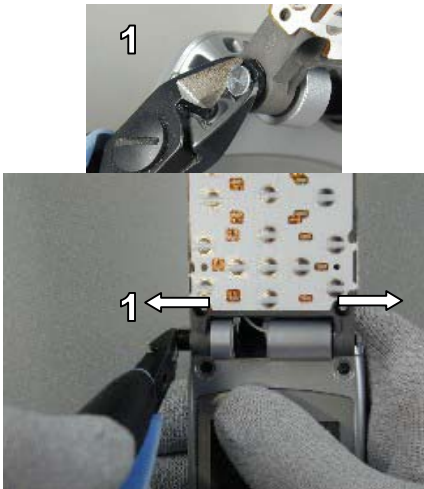



- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521
- Hingetool NTZ 112 1049
- Side cutter

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-6, 10.

#	Figure	Instruction	Note
1	 Fig.3.28	<p>Open out the phone frame. Press on the hinge with the angular end of the hingetool NTZ 112 1049 until roughly 3 mm of the hinge becomes loose. (Fig.3.28)</p>	<p><b>Open out the phone frame.</b></p> <p>The hinge demands quite lot of pressure to come loose.</p> <p>Be careful not to damage the flexfilm and the internal coaxial connector cable with the hingetool.</p>



#	Figure	Instruction	Note
2	 <i>Fig.3.29</i>	Use a side cutter to pull out the hinges on both sides of the telephone. (Fig.3.29)	<b>Be cautious with the pliers.</b>  Notice the flexfilm and internal coaxial connector cable position before removal.
3	 <i>Fig.3.30</i>	Use the long side of the hingetool NTZ 112 1049 and press out the hinge roughly 3 mm.  Use the plier again (see 3.29) and remove the second hinge. (Fig.3.30)	<b>The hinge demands quite lot of pressure to come loose.</b>  <b>Be careful not to damage the flexfilm and the internal coaxial connector cable with the hingetool.</b>
4	 <i>Fig.3.31</i>	Upper and lower cabinets separated. (Fig.3.31)	
5	 <i>Fig.3.32</i>	Assemble the new hinges by hand. (Fig.3.32)	<b>Notice ! The phone must be in the opened out position and the hinge bearing must be held with the slot in the right position (up) like the picture show – otherwise it won't fit into the frame.</b>  <b>Be careful not to damage the flexfilm and the internal coaxial connector cable when assembling the upper and lower cabinets again.</b>

Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 1-9




## 3.20 Cover hinge – Right and left

### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

### Instruction

- Disassemble the phone as described in 3 *Replacement of Mechanical Part* 3.19, 3.18

#	Figure	Instruction	Note
1	 <i>Fig.3.33</i>	Remove the right and left hinge covers by hand and replace them (or one of them) with new ones. ( <i>Fig.3.33</i> )	Be careful not to damage the flex film and the internal coaxial connector cable.

- Assemble the phone as described in 2 *Reassembly Upper & Lower cabinets*, step 1-9, 15-16, 18-22.

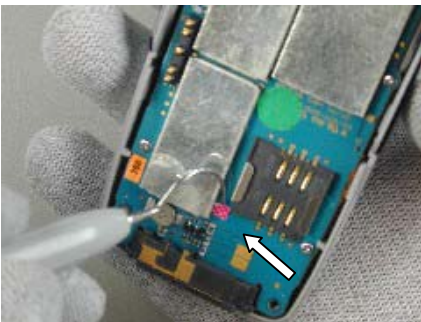
## 3.21 Water label indication

### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Dentist hook

### Instruction

- Disassemble the phone as described in 1 *Disassembly Upper & Lower cabinets*, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.34</i>	Replace the damaged water label with a new one, use the dentist hook. ( <i>Fig.3.34</i> )	Notice the water label position before removal.

- Assemble the phone as described in 2 *Reassembly Upper & Lower cabinets*, step 8-9, 21-22.



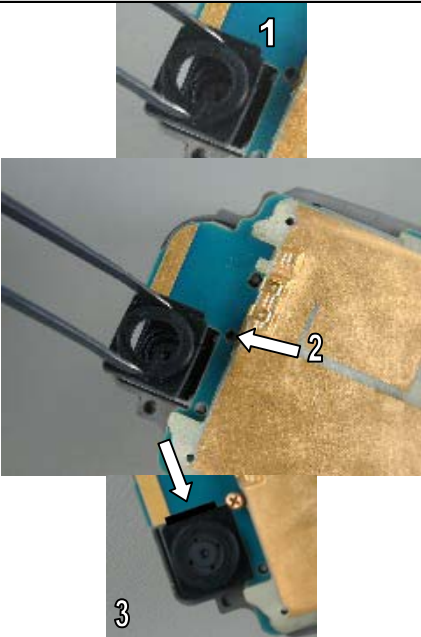
## 3.22 Camera holder

### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-16.

#	Figure	Instruction	Note
1	 <i>Fig.3.35</i>	<p>1. Remove the old camera holder with a blunt pair of tweezers and replace it with a new one.</p> <p>3. The camera holder rubber edge should be in level with the antenna/LCD PBA when properly assembled. (Fig.3.35)</p>	<p>In some earlier versions the camera holder rubber could be forced/jammed under the antenna/LCD PBA – If so, loosen/remove the screw. See picture 3.35 number 2.</p> <p>Removed screws cannot be reused and must be scrapped.</p> <p>Use 10 Ncm of torque for the screw.</p>

- Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 16, 18-22.




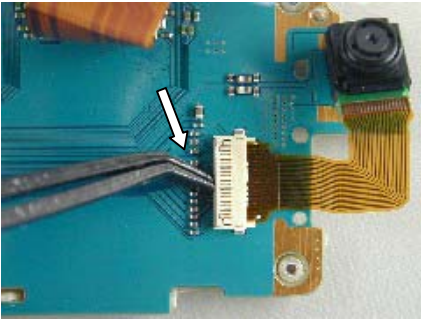
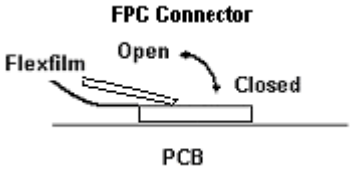
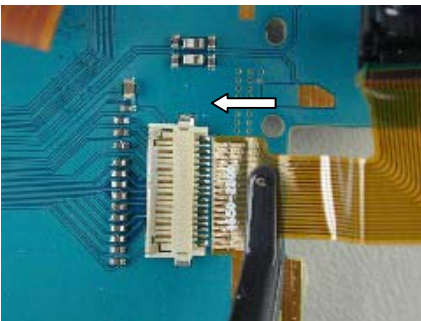
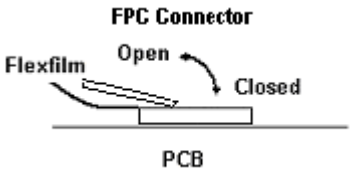
## 3.23 Camera module

### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

### Instruction

- Disassemble the phone as described in 1 *Disassembly Upper & Lower cabinets*, step 12-25.

#	Figure	Instruction	Note
1	 <i>Fig.3.36</i>	With a blunt pair of tweezers gently “bend” the LCD frame “snapholders” until all four holders are free and loose. <i>(Fig.3.36)</i>	Be careful with the LCD.
2	 <i>Fig.3.37</i>	Gently fold the main LCD to the side, and then open the FPC connector with the flex film assembly tool NTZ 112 521.  Remove the old camera module. <i>(Fig.3.37)</i>  	For more information regarding the main LCD (See 3.16 Replacement of Mechanical Parts).
3	 <i>Fig.3.38</i>	Assemble the new camera module in the opposite direction. Use the flex film assembly tool for the FPC connector. <i>(Fig.3.38)</i>  	Make sure that the gold line on the flex film is in line with the FPC connector and that the connector is properly closed.  Be careful not to damage the flex film with the flex film assembly tool.

- Assemble the phone as described in 2 *Reassembly Upper & Lower cabinets*, step 12-22.





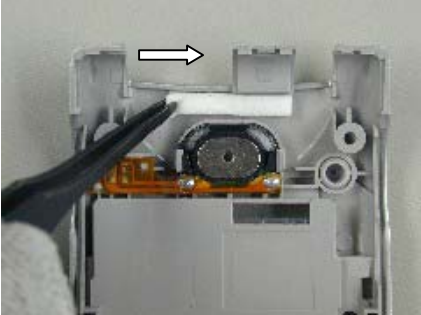
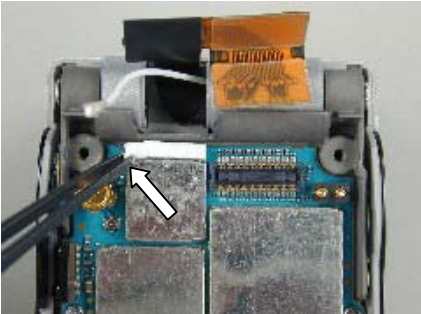
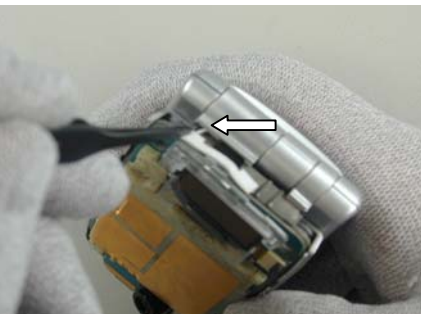
## 3.24 Sheet absorbing

### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521


### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-7, 12-22.

#	Figure	Instruction	Note
1	 <i>Fig.3.39</i>	Remove the sheet absorbing D with a blunt pair of tweezers and replace it with a new one. ( <i>Fig.3.39</i> )	Notice the sheet absorbing D position before removal. After removal – clean the surface with Isopropyl alcohol.
2	 <i>Fig.3.40</i>	Remove the sheet absorbing C with a blunt pair of tweezers and replace it with a new one. ( <i>Fig.3.40</i> )	Notice the sheet absorbing C position before removal. After removal – clean the surface with Isopropyl alcohol.
3	 <i>Fig.3.41</i>	Remove the sheet absorbing B with a blunt pair of tweezers and replace it with a new one. ( <i>Fig.3.41</i> )	Notice the sheet absorbing B position before removal. After removal – clean the surface with Isopropyl alcohol.





#	Figure	Instruction	Note
4	 <i>Fig.3.42</i>	Remove the sheet absorbing A with a blunt pair of tweezers and replace it with a new one. <i>(Fig.3.42)</i>	Notice the sheet absorbing A position before removal. After removal – clean the surface with Isopropyl alcohol.

- Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 6, 8-9, 12 -22.


## 3.25 Lower rear cabinet

### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2

### Instruction

- Disassemble the phone as described in 1 Disassembly Upper & Lower cabinets, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.43</i>	Assemble a new lower rear cabinet. <i>(Fig.3.43)</i>	Check so there is no gaps around the lower rear cabinet. If there is a gap, gently press the two half's together with your fingers.

- Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 8-9, 21-22.




## 3.26 Lower front cabinet

### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm 6\%$ . Bits NTZ 112 1052
- Opening tool NTZ 112 302/2

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-5.

#	Figure	Instruction	Note
1	 <i>Fig.3.44</i>	Assemble a new lower front cabinet. ( <i>Fig.3.44</i> )	<b>Check so there is no gaps around the lower front cabinet.</b>  If there is a gap, gently press the two half's together with your fingers.

Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 8-9.


## 3.27 Upper front cabinet

### Tools

- Torque screwdriver, set to 15Ncm  $\pm 6\%$ . Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Dentist hook

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-16.

#	Figure	Instruction	Note
1	 <i>Fig.3.45</i>	Assemble a new upper front cabinet. ( <i>Fig.3.45</i> )	<b>Check so there is no gaps around the upper front cabinet.</b>  If there is a gap, gently press the two half's together with your fingers.  Use air blow equipment and check for dust before reassembling the screws.

Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 17-22.




## 3.28 Upper rear cabinet

### Tools

- Torque screwdriver, set to 15Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-16.

#	Figure	Instruction	Note
1	 <i>Fig.3.46</i>	Assemble a new upper rear cabinet. <i>(Fig.3.46)</i>	<b>Check so there is no gaps around the upper rear cabinet.</b>  <b>If there is a gap, gently press the two half's together with your fingers.</b>  <b>Check for dust before reassembling the screws.</b>

Assemble the phone as described in *2 Reassembly Upper & Lower cabinets*, step 16-22.

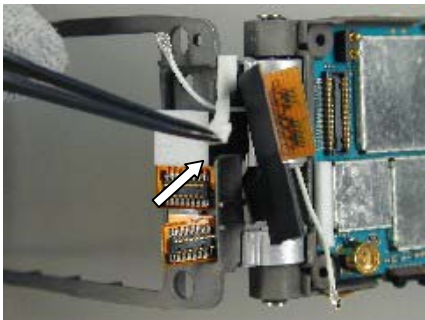
## 3.29 Internal coaxial connector cable

### Tools

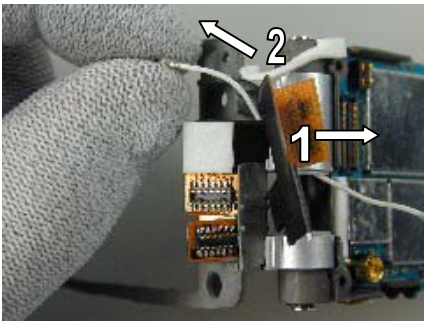
- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 1-6, 10 and 12-25.

#	Figure	Instruction	Note
1	 <i>Fig.3.47</i>	Fold away the sheet absorbing B with a blunt pair of tweezers so the internal coaxial connector cable becomes free. <i>(Fig.3.47)</i>	.



#	Figure	Instruction	Note
2	 <i>Fig.3.48</i>	<ol style="list-style-type: none"><li>1. Fold away the flexfilm with your thumb.</li><li>2. With your other hand pull out the old coaxial cable through the hinge mechanism and flexfilm.</li></ol> <p>Assemble a new coaxial cable in the opposite direction.</p> <p>(Fig.3.48)</p>	<p><b>Notice the internal coaxial connector cable position before removal.</b></p> <p><b>Be careful and do not damage the flexfilm and the coaxial cable when assembling the upper and lower cabinets again.</b></p>

Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 3, 5-6, 8-14, **3.18**, 15-22.


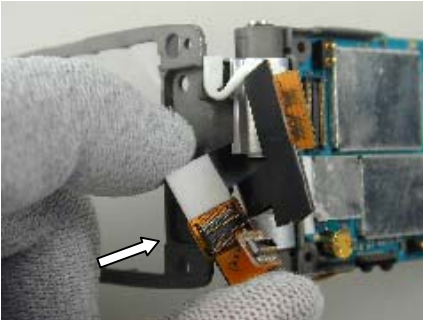
### 3.30 Hinge flex mount

#### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm 6\%$ . Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

#### Instruction

- Disassemble the phone as described in 1 Disassembly Upper & Lower cabinets, step 1-6, 10 and 12-25.

#	Figure	Instruction	Note
1	 <i>Fig.3.49</i>	<p>Start like this</p> <p>(Fig.3.49)</p>	<p><b>Remove the Internal coaxial connector cable first (See 3.29 Replacement of Mechanical Parts).</b></p>
2	 <i>Fig.3.50</i>	<p>Gently slide the old flexfilm under the hinge cover and pull it out by hand.</p> <p>Assemble a new flexfilm in the opposite direction.</p> <p>(Fig.3.50)</p>	<p><b>Notice the flexfilm position before removal.</b></p> <p><b>Be careful and do not damage the flexfilm when assembling the upper and lower cabinets again.</b></p>

Assemble the phone as described in 2 Reassembly Upper & Lower cabinets, step 3, 5-6, 8-14, **3.18**, 15-22.



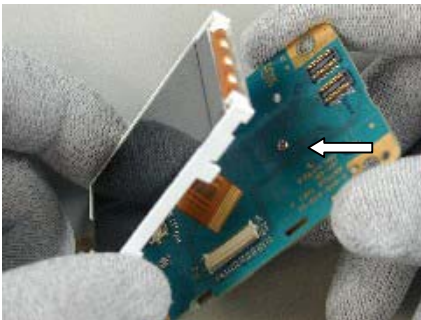
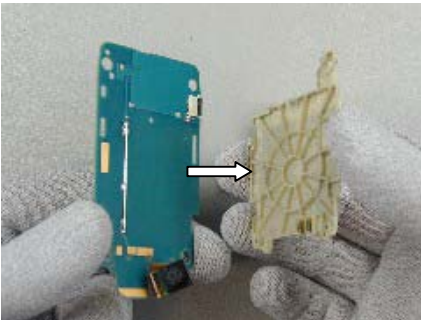
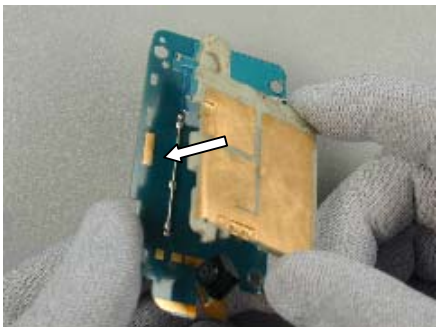
### 3.31 Antenna

#### Tools

- Torque screwdriver, set to 10&15 Ncm  $\pm$  6 %. Bits NTZ 112 1052
- Opening tool NTZ 112 302/2
- Blunt pair of tweezers
- Flex film assembly tool NTZ 112 521

#### Instruction

- Disassemble the phone as described in *1 Disassembly Upper & Lower cabinets*, step 12-25.

#	Figure	Instruction	Note
1	 <i>Fig.3.51</i>	Remove the screw. ( <i>Fig.3.51</i> )	<b>Remove the main LCD first</b> (See 3.16 Replacement of Mechanical Parts).
2	 <i>Fig.3.52</i>	Remove the antenna from the PBA. ( <i>Fig.3.52</i> )	
3	 <i>Fig.3.53</i>	Assemble a new antenna in the opposite direction ( <i>Fig.3.53</i> )	<b>Use 10 Ncm of torque for the screw.</b>

- Assemble the phone as described in *3 Replacement of Mechanical Parts 3.16* and *2 Reassembly Upper & Lower cabinets*, step 10-22.





## 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 intending to exchange an old label or mount a new one.

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.
3. Carefully remove the label, make sure that all residues are gone. Do not scratch the frame.  
**NOTE! Only one label is allowed on the frame.**
4. Check that the right label format (see Part List) 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 4.1*. Assure that label is placed in the right position.



*Fig.4.1*





## 5 Revision History

Rev.	Date	Changes / Comments
A	2003-09-17	First release
B	2003-09-23	Updates
C	2003-09-26	Updates according to ext.val.