

Applicable for K610i, K610m, and V630i

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1 Introduction





V630i







1.1 Equipment

SPECIAL TOOLS

- NTZ 112 459 Torque screwdriver (or equivalent)
- NTZ 112 288 Torx bit no. 6
- NTZ 112 1052 JCIS bit
- NTZ 112 1067 Mega camera removal tool
- NTZ 112 521 Flex film assembly tool
- NTZ 112 302/2 Front opening tool









ESD EQUIPMENT

STANDARD TOOLS

Blunt pair of tweezers

Dentist hook

Guitar pick

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Protect the phone from ESD damages whenever it has been opened by using:

- ESD-wristband
- ESD-gloves

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



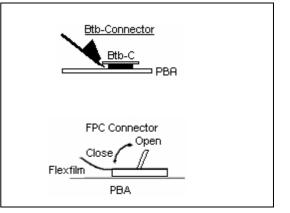
1.2 General cautions

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

- 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!
- NEVER TOUCH THE DISPLAY GLASS!
- USE AIR BLOW EQUIPMENT TO KEEP THE DISPLAY MODULE DUST FREE!







Press the On/Off button to turn off the phone.

Check that the memory stick has been removed.

How to open and close a FPC connector (often done with a dentist hook).

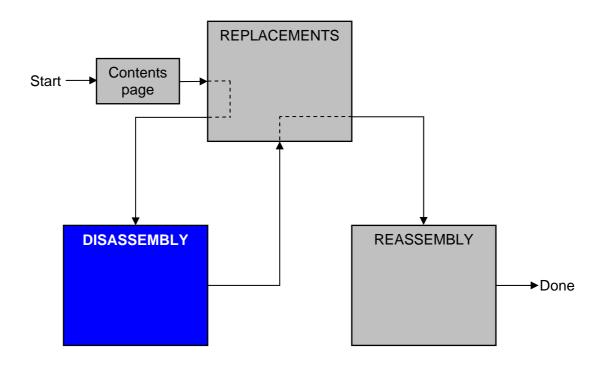
How to open a board-to-board connector with the front

opening tool.



2 Disassembly

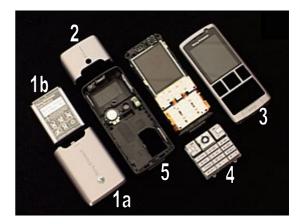
When you are going to replace a part being listed in *Replacements*, the instruction of that section usually begins by directing you to this *Disassembly section* with a specification of the instructions you have to carry out in order to disassemble the phone as far as needed before returning to *Replacements*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



2.1 Overview

The disassembly is done in the following sequence:

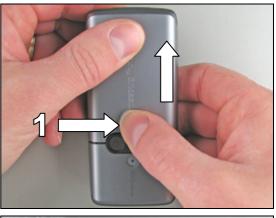
- 1. Sub Assembly Lid (Battery) (a) & Battery (b)
- 2. Cover (Rear)
- 3. Sub Assembly Case (Front)
- 4. Key (Main)
- 5. Sub Assembly Case (Rear)





2.1.1 Sub Assembly Lid (Battery) & Battery

Press (quite hard) on the *battery lid* until you get a gap – use your thumb at the arrow (1).









Slide down the lid from its mounted position towards the bottom of the phone and remove it.

Lift the *battery* straight up at the bottom to release it.

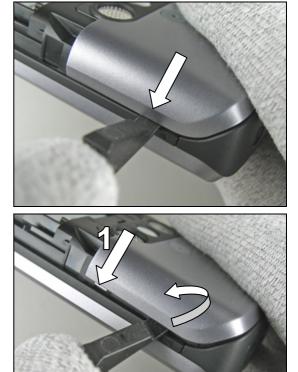
If not released, turning the phone around at the same time will make it become released.

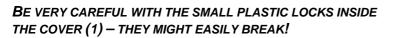
Remove the *battery* from the phone.



2.1.2 Cover (Rear)

Carefully insert the front opening tool where the music key is located.





Gently bend with the front opening tool until the *rear cover* starts to become loose from the *rear case*.

SOMETIMES THE REAR COVER "POPS" AWAY FROM THE PHONE WHEN DISASSEMBLED!

Move the guitar pick along the gap (start at the corner) until the *rear cover* is loose.

Remove the rear cover.







2.1.3 Sub Assembly Case (Front)

Remove the four inside screws from the *rear case* by using torx bit no. 6.

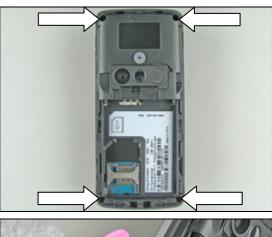
REPLACE THE SCREWS IF THEY ARE DAMAGED, OTHERWISE THEY CAN BE REUSED!

Gently but firmly move the guitar pick along the gap, starting at the camera key.

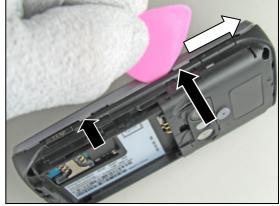
Continue forward with the guitar pick until the front case is loose on this side.

The snap hooks to be released are located as indicated by the black arrows.

Continue up and around the corner and forward on to the opposite side, starting at the system connector, and repeat the two steps above.











Sub Assembly Case (Front) continued

DON'T BEND THE FRONT CASE TOO MUCH SINCE IT CAN CAUSE SERIOUS DAMAGE TO THE FRONT!

Gently wiggle the *front case* slightly side to side to make the entire front become loose.

Gently lift up the front case and remove it.

Front case removed.









2.1.4 Key (Main)

Remove the main key by hand.

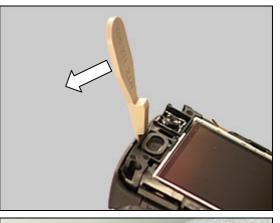
Sometimes the *main key* stays in the front, sometimes it falls out.

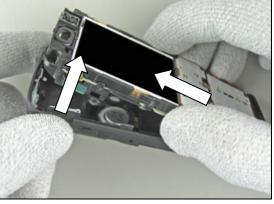




2.1.5 Sub Assembly Case (Rear)

Gently bend with the front opening tool at the centre of the top under the frame/PBA unit until it is released from the *rear case*.







Remove the frame/PBA unit completely from the rear case.

Rear case removed.



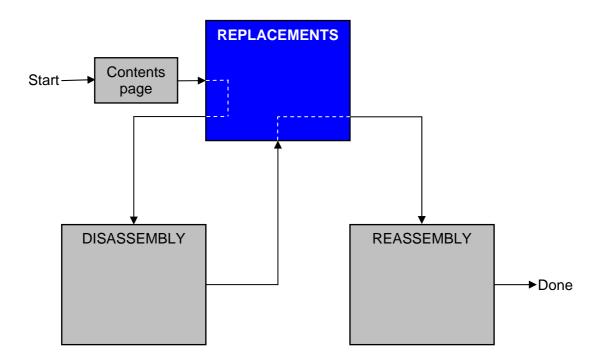
3 Replacements

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 Sub Assembly Lid (Battery)

Follow the 2.1.1 Disassembly instructions! Prepare the new battery lid. Follow the 4.1.5 Reassembly instructions!

3.2 Cover (Rear)

Follow the 2.1.1 - 2.1.2 Disassembly instructions! Prepare the new rear cover. Follow the 4.1.4 - 4.1.5 Reassembly instructions!

3.3 Sub Assembly Case (Front)

Follow the 2.1.1 - 2.1.3 Disassembly instructions! Prepare the new front case. Follow the 4.1.3 - 4.1.5 Reassembly instructions!

3.4 Key (Main)

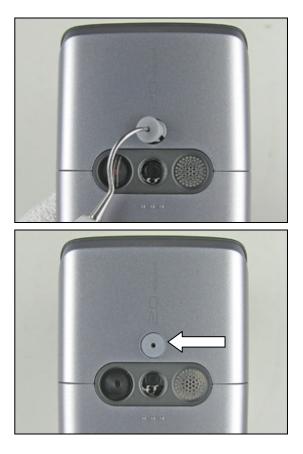
Follow the 2.1.1 - 2.1.4 Disassembly instructions! Prepare the new main key. Follow the 4.1.2 – 4.1.5 Reassembly instructions!



3.5 Cap (RF)

REMOVAL

Remove the *RF cap* with a dentist hook.



INSTALLATION Insert a new *RF cap* with your fingers.



3.6 Co-Branding Label

REMOVAL

Gently remove the co-branding label with a dentist hook.



INSTALLATION

Attach a new *co-branding label* with the tweezers or by hand.

Keep the pressure on for a few seconds to secure a good attachment.



3.7 M2 Cover (MS)

THIS INSTRUCTION IS VALID FOR K618 ONLY!

REMOVAL Remove the *M2 cover* with your fingers.



INSTALLATION Mount a new *M2 cover* with your fingers.

Correctly mounted M2 cover.



3.8 Plate (LCD)

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions!

Gently turn back the upper part of the *key flex module* by using your fingers or the front opening tool.

BE CAREFUL WITH THE DENTIST HOOK!

Start to remove the LCD plate with a dentist hook.

Remove the LCD plate from the phone.

INSTALLATION Put the *LCD plate* in its proper position.

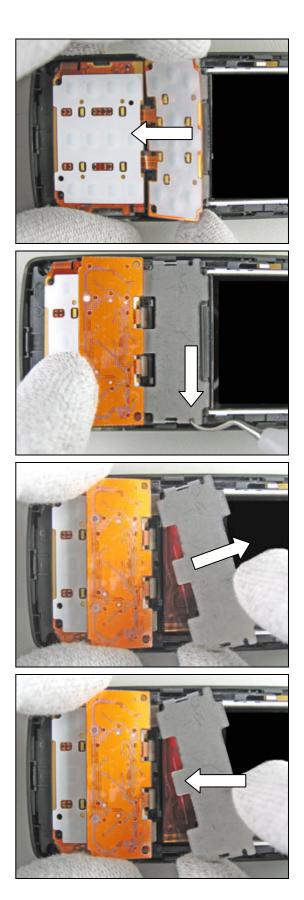


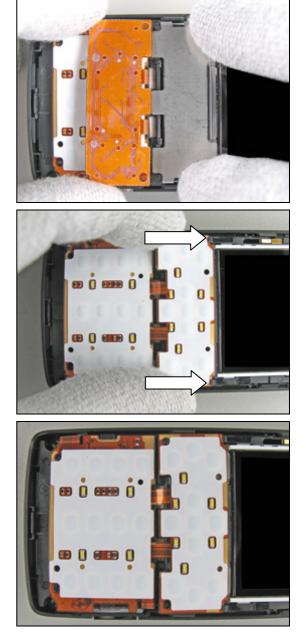


Plate (LCD) continued

Press on the plate with your fingers to secure it to the phone.

Start by pushing the *key flex module* under the two hooks (by the arrows), and then press it down against the *LCD plate*.

Properly mounted LCD plate and key flex module.





3.9 TFT LCD Module 176 x 220

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions! Follow the 3.8 Removal instructions!

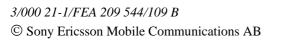
Put the front opening tool into the cavity on the right hand side of the *TFT LCD module* and gently bend until it starts to become loose.

Turn the TFT LCD module upwards.

BE CAREFUL WITH THE LCD FLEX FILM!

Gently bend with the front opening tool under the *TFT LCD module's* board-to-board connector like the picture shows until the connector becomes loose from the main PBA.

TFT LCD module 176 x 220 removed.









TFT LCD Module 176 x 220 continued

INSTALLATION

Start like this before installing the new TFT LCD module.

Connect the *TFT LCD module's* board-to-board connector to the main PBA by using your fingers (1).

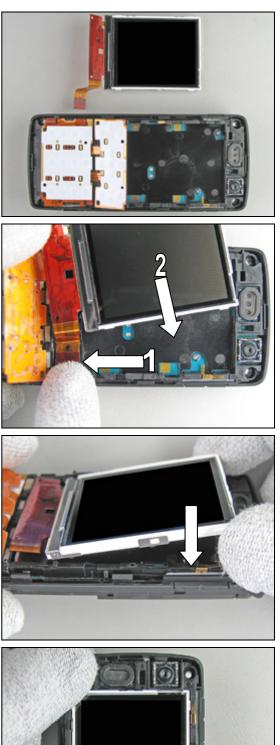
Then move the LCD into position on the frame (2).

Gently turn the *TFT LCD module* against the frame until it is in the correct position.

TFT LCD module correctly mounted into the phone.

DO NOT TOUCH THE LCD GLASS SURFACE. BLOW AWAY DUST WITH AN IONIZED AIR GUN OR BLOWER.

Follow the 3.8 Installation instructions! Follow the 4.1.2 – 4.1.5 Reassembly instructions!





3.10 Key Flex Module

REMOVAL

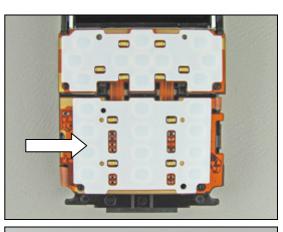
Follow the 2.1.1 – 2.1.5 Disassembly instructions!

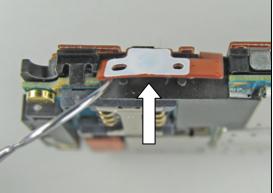
This is the key flex module.

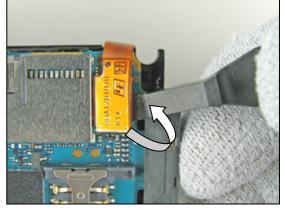


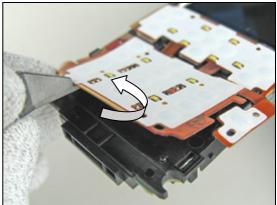
Gently bend with the front opening tool under the *key flex module's* board-to-board connector like the picture shows until the connector become loose from the main PBA.

Use the front opening tool to bend under the *key flex module* until it becomes loose.







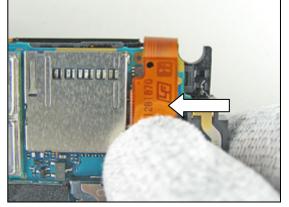


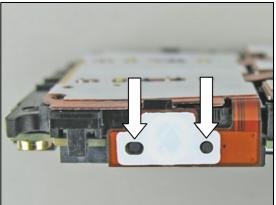


Key Flex Module continued

Remove the key flex module with your fingers.

<image>





INSTALLATION Place the new *key flex module* by hand.

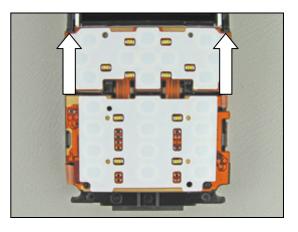
Connect the *key flex module's* board-to-board connector to the main PBA by using your fingers.

Fold down the *camera flex* over the two guide pins on the frame.



Key Flex Module continued

Gently push the *key flex module's* upper half under the two hooks on the frame.





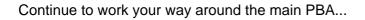
3.11 Frame (PWB)

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

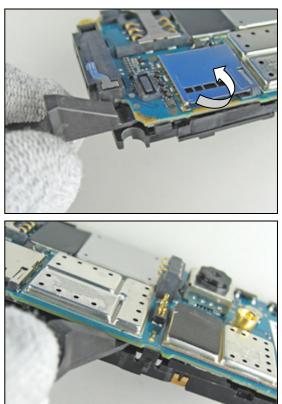
BE VERY CAREFUL WITH THE MAIN PBA!

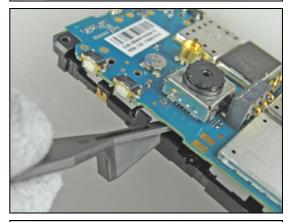
Use the front opening tool to bend under the main PBA until it becomes loose.



... with the front opening tool.

Remove the main PBA by hand.









Frame (PWB) continued

INSTALLATION

Start like this!







Place the main PBA over the frame.

Snap the main PBA in place onto the frame. Make sure that the main PBA is properly mounted onto the *frame*.



3.12 Receiver

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions! Follow the 3.11 Removal instructions!

Raise the receiver out of its cavity with a dentist hook ...

... and remove it with the tweezers.

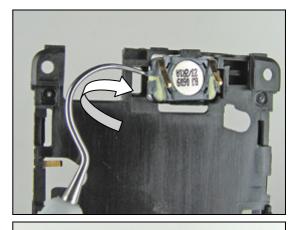
INSTALLATION

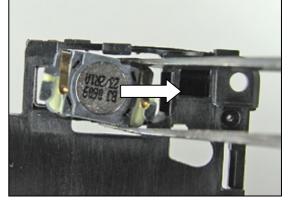
DO NOT TOUCH OR BEND THE CONTACT SPRINGS!

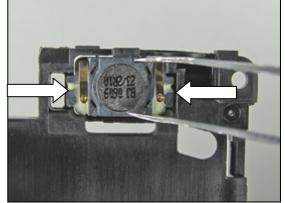
Position the *receiver* and press gently on each side with the tweezers.

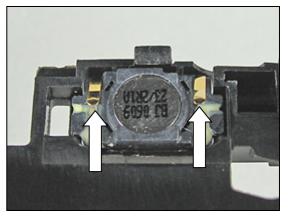
Check that the contact springs are in good condition and that they are not deformed.

Follow the 3.11 Installation instructions! Follow the 4.1.1 – 4.1.5 Reassembly instructions!









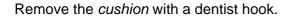


3.13 Cushion (Frame)

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions! Follow the 3.11 Removal instructions!

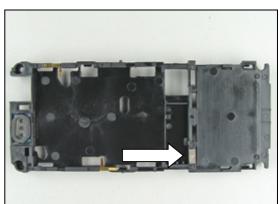
This picture just points out the position of the *cushion* on the frame (under the *key flex module*).

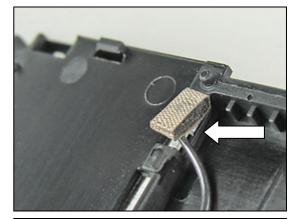


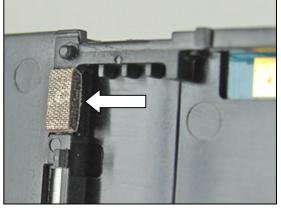
INSTALLATION

Attach a new cushion with the tweezers.

Follow the 3.11 Installation instructions! Follow the 4.1.1 – 4.1.5 Reassembly instructions!





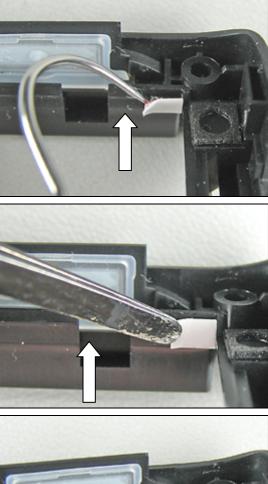


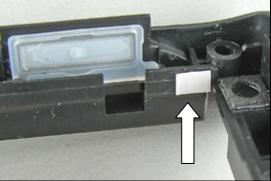


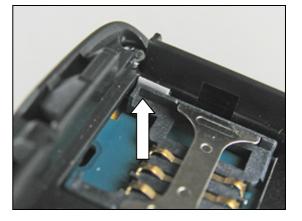
3.14 Water Indicator

REMOVAL

Follow the 2.1.1 - 2.1.5 Disassembly instructions! Remove the water indicator with a dentist hook.







INSTALLATION Attach a new *water indicator* with the tweezers.

Close up picture on a properly mounted water indicator.

Follow the 4.1.1 – 4.1.5 Reassembly instructions!

INSPECTION

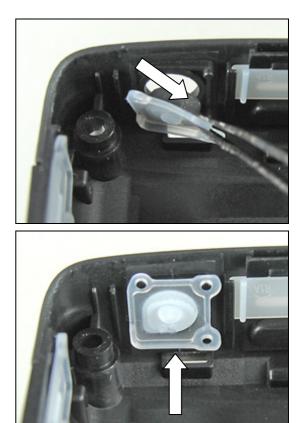
Check for water damage on the *water indicator with the* battery lid and battery removed!



3.15 Key (Power)

REMOVAL Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove the *power key* with the tweezers.



INSTALLATION

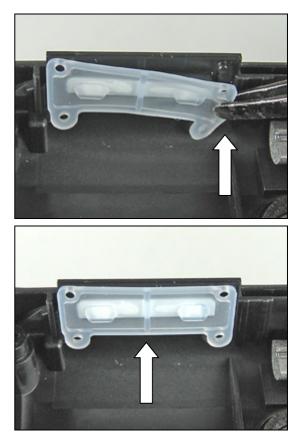
Mount a new *power key* into the rear case with the tweezers.



3.16 Key (Volume)

REMOVAL

Follow the 2.1.1 - 2.1.5 Disassembly instructions! Remove the volume key with the tweezers.



INSTALLATION

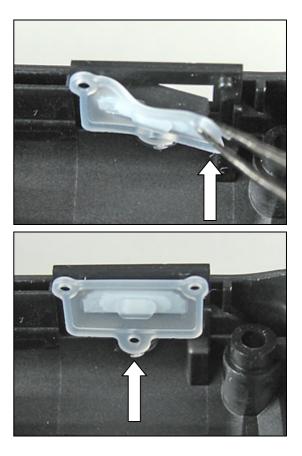
Mount a new volume key into the frame with the tweezers.



3.17 Key (Music)

REMOVAL Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove the *music key* with the tweezers.



INSTALLATION

Mount a new music key into the frame with the tweezers.

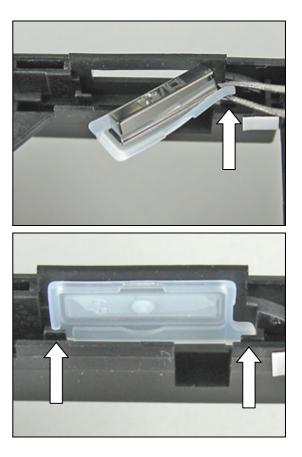


3.18 Key (Cam)

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove the cam key with the tweezers.



INSTALLATION

Mount a new *cam key* into the frame with the tweezers. Check that the *cam key* is mounted in the right position.



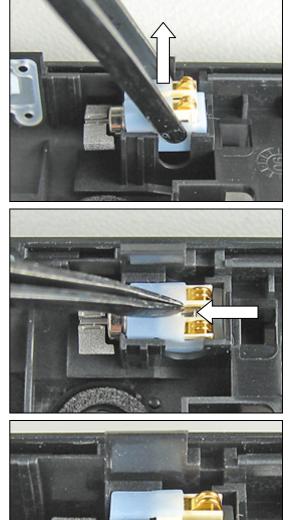
3.19 Vibrator

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

DO NOT TOUCH THE VIBRATOR CONTACT SPRINGS OR DAMAGE THE FLYWHEEL!

Lift the vibrator straight up with the tweezers.



INSTALLATION

Press the vibrator gently to the bottom of the cavity with the tweezers without touching the contact springs.

Check that the contact springs are in good condition and that they are not deformed.

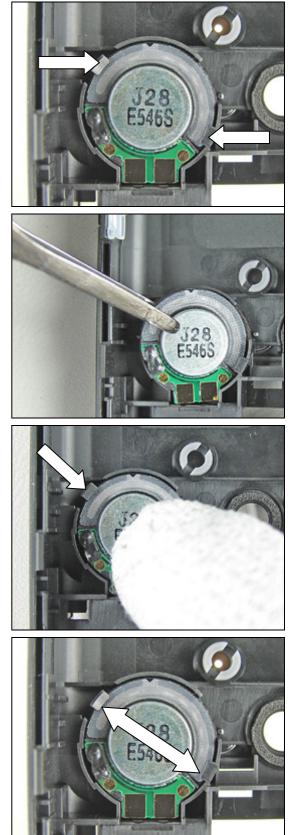


3.20 Loudspeaker

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Release the *loudspeaker* from one of the two locking devices.



Remove the loudspeaker with the tweezers.

INSTALLATION

DO NOT TOUCH THE CONTACT SURFACE!

Slide the new *loudspeaker* into the cavity (under one of the locking devices) and press gently with your finger and hold it for a few seconds to secure a god attachment.

Make sure that the two locking devices are properly locked.

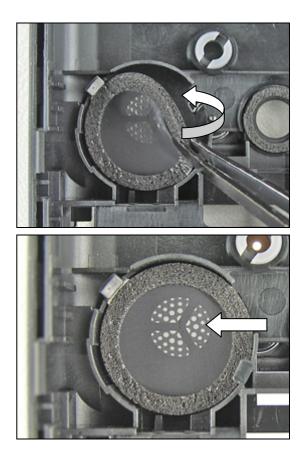


3.21 Cushion (Speaker)

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions! Follow the 3.20 Removal instructions!

Remove the speaker cushion with the tweezers.



INSTALLATION

Attach a new speaker cushion with the tweezers.

Follow the 3.20 Installation instructions! Follow the 4.1.1 – 4.1.5 Reassembly instructions!



3.22 Sub Assembly Case (Rear)

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

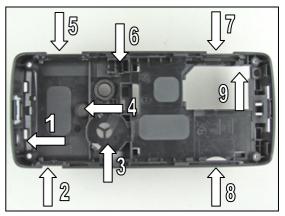
MOST OF THE COMPONENTS CAN BE REUSED UNLESS THEY ARE DAMAGED!

INSTALLATION

Don't forget to install:

- 1. Key (power), 2. Key (music), 3. Loudspeaker, 4. Cap RF
- 5. Key (volume), 6. Vibrator, 7. Key (cam)
- 8. M2 Cover MS (K618), 9. Water indicator



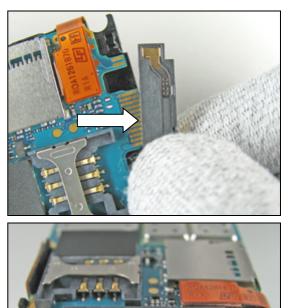




3.23 System Connector

REMOVAL Follow the 2.1.1 – 2.1.5 Disassembly instructions!

Remove the system connector by hand.



INSTALLATION

Mount a new *system connector* with your fingers. Press the *system connector* firmly to the bottom of the PBA. Picture shows a properly mounted *system connector*.



3.24 Main Antenna

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

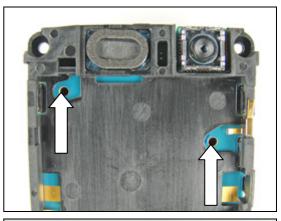
Remove the two screws from the *main antenna* by using the JCIS bit.

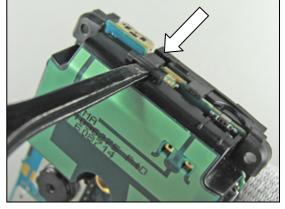
REMOVED SCREWS CAN BE REUSED IF THEY AREN'T DAMAGED!

Release the hook that secures the *main antenna* by pushing from the back with the tweezers (or a small screwdriver) until it becomes loose.

Wiggle the *main antenna* slightly until it is completely loose from the frame/PBA.

Main antenna removed.











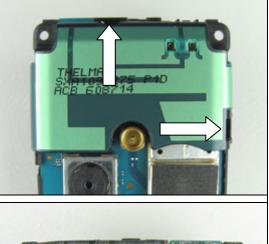
Main Antenna continued

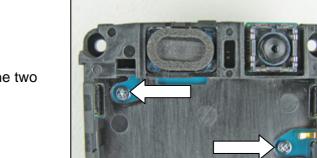
INSTALLATION

Begin by placing the main antenna against the frame/PBA.

Continue to snap the *main antenna* to the frame/PBA until it is completely in place.







Make sure that the *main antenna* is mounted correctly in the frame/PBA and that the two hooks (located by the arrows) are latched.

REPLACE THE SCREWS IF THEY ARE DAMAGED!

Apply **13 Ncm** \pm 2 Ncm torque when tightening the two screws with the JCIS bit.



3.25 Camera Shield

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions!

This part is the *camera shield* which is to be removed.

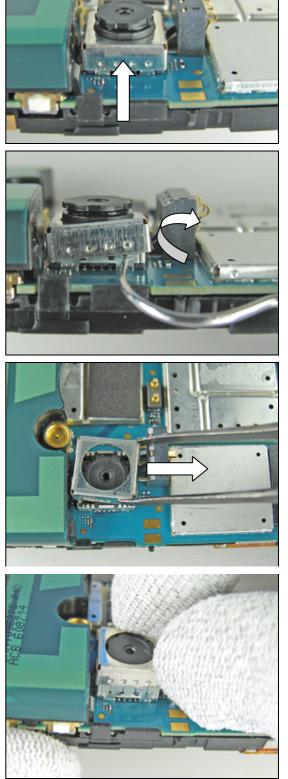
Gently release the *camera shield* with the dentist hook: Then work your way around the *camera shield* until it becomes completely loose.

Remove the camera shield with the tweezers.

INSTALLATION

CHECK THAT THE CAMERA SHIELD IS IN ITS PROPER POSITION !

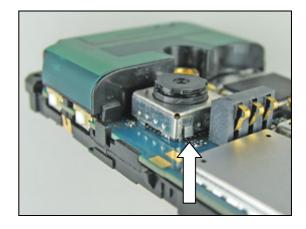
Install a new camera shield with your fingers.





Camera Shield continued

Make sure that the *camera shield* is in its right position. Note the slit on the side by the arrow before you push it to the bottom.





3.26 Camera, 2M Pixel

REMOVAL

Follow the 2.1.1 – 2.1.5 Disassembly instructions! Follow the 3.25 Removal instructions!

NEVER TOUCH THE CAMERA LENS!

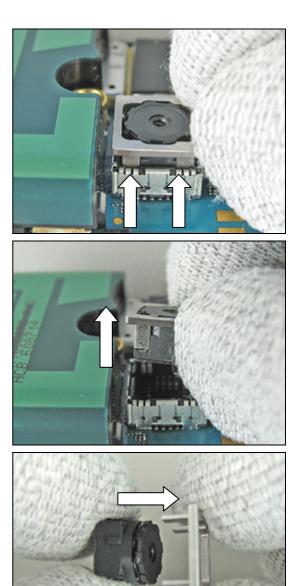
Start by pressing the mega camera removal tool over the *camera* all the way to the bottom.

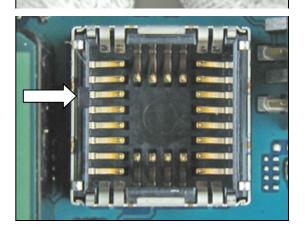
If necessary wiggle the mega camera removal tool slightly side to side and at the same time pull the *camera* straight up (together with the tool) from the socket.

Remove the camera from the mega camera removal tool.

INSTALLATION

Notice the small notch in the camera socket.







Camera, 2M Pixel continued

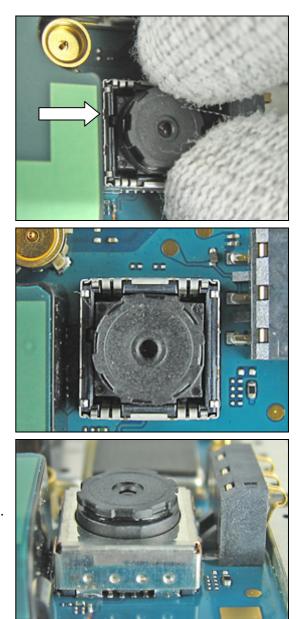
NEVER TOUCH THE CAMERA LENS!

Press gently on the top of the *camera* until it snaps into place.

Make sure that the camera is in its right position (to the bottom of the socket and properly locked).

Mount the camera shield over the camera with your fingers.

Follow the 3.25 Installation instructions! Follow the 4.1.1 – 4.1.5 Reassembly instructions!





3.27 Label

REMOVAL

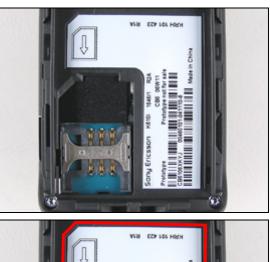
Follow the 2.1.1 Disassembly instructions!

- 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

INSTALLATION

- 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!

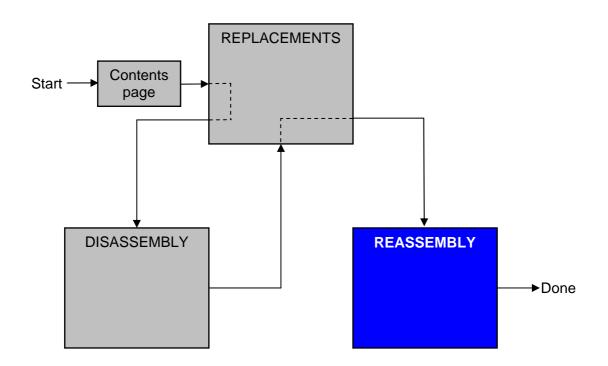






4 Reassembly

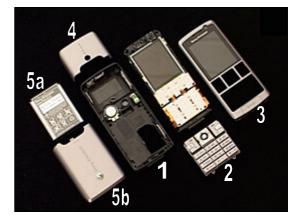
After replacing a part being listed in Replacements, the instruction of that section usually ends by directing you to this Reassembly section with a specification of the instructions you have to carry out in order to reassemble the phone.



4.1 Overview

The reassembly is done in the following sequence:

- 1. Sub Assembly Case (Rear)
- 2. Key (Main)
- 3. Sub Assembly Case (Front)
- 4. Cover (Rear)
- 5. Battery (a) & Sub Assembly Lid (Battery) (b)





4.1.1 Sub Assembly Case (Rear)

BE MOST CAREFUL WITH THE MUSIC KEY BUTTON (1), POWER KEY BUTTON (2), VOLUME KEY BUTTON (3) AND THE CAM KEY BUTTON (4) WHEN THE FRAME/PBA IS INSTALLED IN THE REAR CASE SINCE THE KEY BUTTONS EASILY CAN BE SQUEEZED AND DAMAGED!

Start like this before the installation of the rear case.

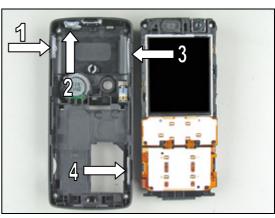
Push the frame/PBA unit into the cavity for the system connector on the *rear case*.

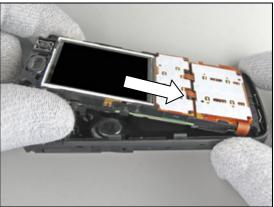
If the rubber keys obstruct the passage of the frame/PBA, gently push the rubber keys into place by using the tweezers or the dentist hook.

Gently press the frame/PBA into the rear case.

Make sure that the frame/PBA is securely fastened to the *rear case*.

Frame/PBA properly installed inside the *rear case*.







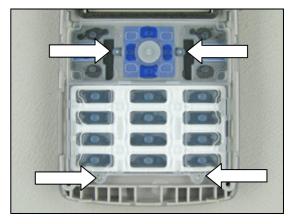




4.1.2 Key (Main)

Mount the main key by hand.

Make sure that the *main key* is placed properly on the four guiding pins.





4.1.3 Sub Assembly Case (Front)

START THE ASSEMBLY FROM THE BOTTOM OF THE PHONE!

Place the *front case* over the phone.

Sometimes the *main key* stays in the *front case*, sometimes it falls out. Just be careful and align the *front case* with the *main key*.

Snap the front case and the phone together ...

... along both sides.

Check that there are no gaps along the sides.

If there still is a gap somewhere, gently press the two halves together with your fingers.

Apply **20 Ncm** \pm 2 Ncm torque by tightening the four screws using torx bit no. 6.

REPLACE THE SCREWS IN CASE THEY ARE DAMAGED!











4.1.4 Cover (Rear)

IT IS MOST IMPORTANT TO START THE ASSEMBLY OF THE REAR COVER TOWARDS THE TOP OF THE PHONE!

Snap the rear cover to the phone by starting at the top.

BE MOST CAREFUL WITH THE PLASTIC LOCKS SINCE THEY EASILY MIGHT BREAK.

First press *inwards* and then *downwards* to lock the *rear cover*.

Continue and do they same thing on the opposite side.





Cover (Rear) continued

Check that the *rear cover* is properly mounted, with no gaps along the sides.

If there still is a gap somewhere, gently press the two halves together with your fingers.





4.1.5 Battery & Sub Assembly Lid (Battery)

Put the top of the *battery* into the battery compartment.









Slide the *battery* towards the top and press at the bottom to secure its position.

Place the *battery lid* on top of the *battery* and slide it towards the top of the phone.

Push with your fingers at the bottom of the *battery lid* until it becomes completely closed (no gap).



5 Revision history

Rev. Date

Changes / Comments

A 2006-06-23 First releaseB 2006-06-28 New Working Instruction Directive