



Working Instruction, Mechanical

Applicable for T280

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1 Introduction

T280



1.1 Equipment

SPECIAL TOOLS

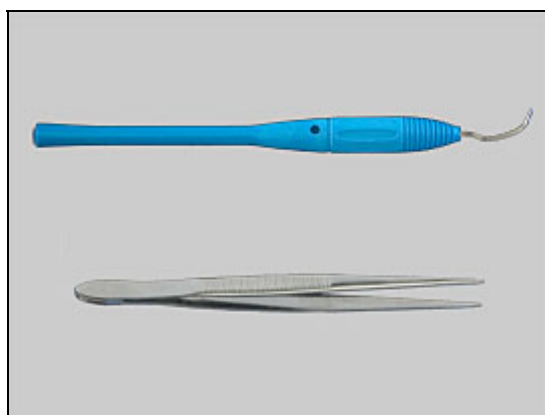
- NTZ 122 459 Torque screwdriver (or equivalent)
- NTZ 122 288 Torx bit no. 6
- NTZ 112 302/2 Front opening tool
- NTZ 122 521 Flex film assembly tool
- LSY 901 55 Camera removal tool
- NTZ 112 590 Guitar pick



STANDARD TOOLS

Standard tools have to be locally purchased

- Dentist hook
- ESD tweezers



LABEL EQUIPMENT

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

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



OTHER EQUIPMENT

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





1.2 General cautions

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

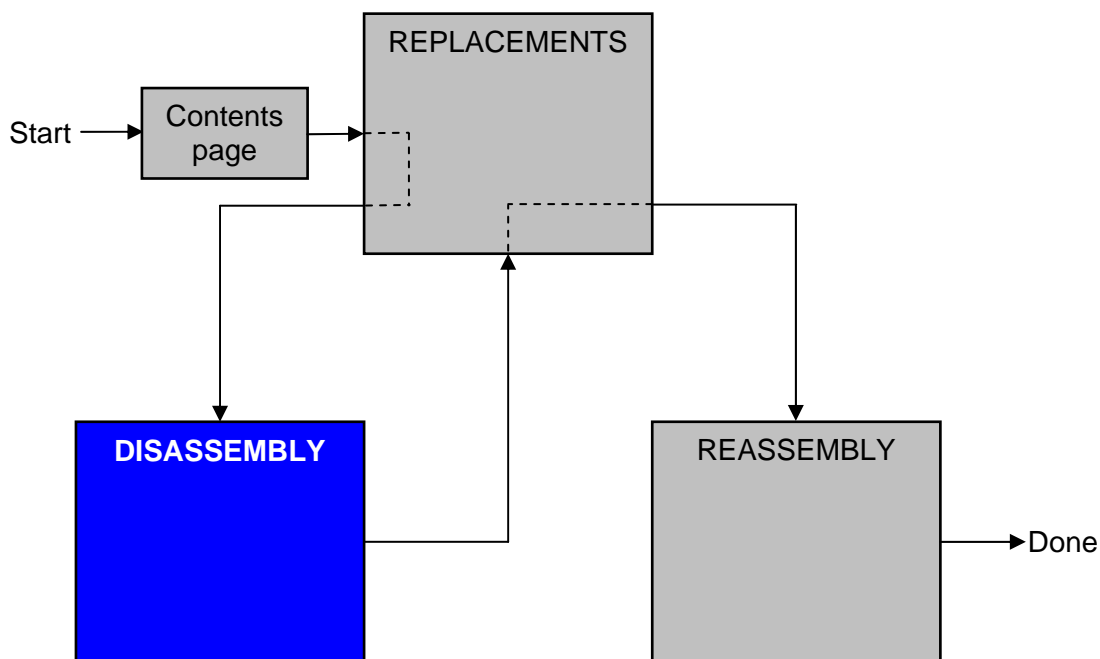
- **SWITCH OFF THE PHONE AND REMOVE ANY MEMORY STICK BEFORE THE START OF THE DISASSEMBLY!**
- **KEEP ALL CONTACT SURFACES CLEAN!**
- **BE CAREFUL WHEN USING TOOLS LIKE THE DENTIST HOOK, TWEEZERS, OPENING TOOLS, GUITAR PICK ETC. TO AVOID SCRATCHES OR DAMAGES TO THE EXTERIOR AND INTERIOR PARTS OF THE PHONE!**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

1.3 Adhesives

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

2 Disassembly

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



2.1 Overview

The disassembly is done in the following order:

1. Battery Cover and Battery
2. Front Cover with Co-Brand Cover
3. Keypad
4. Rear Frame Assembly
5. Antenna Assembly and Bluetooth Antenna
6. LCD



2.1.1 Battery Cover and Battery

Release and remove the Battery Cover.



Lift up the Battery.



2.1.2 Front Cover with Co-Brand Cover

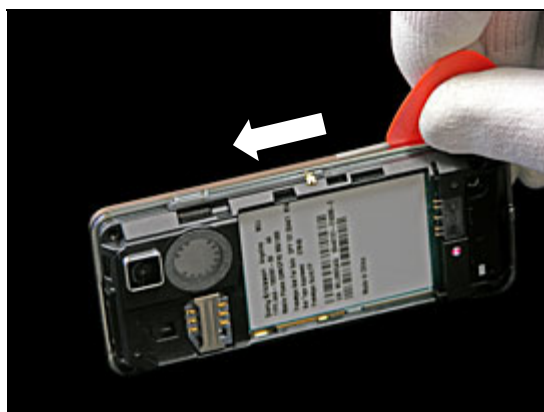
Remove the four screws (Torx T6).



Use a guitar pick and slide along the side to release the snap hooks.



Slide along the other side.



Remove the Front Cover.



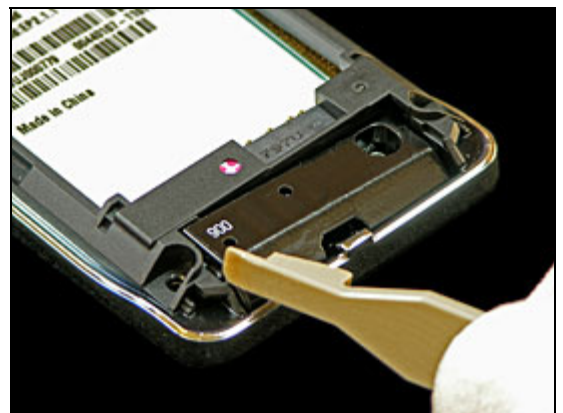
2.1.3 Keypad

Remove the Keypad.



2.1.4 Rear Frame Assembly

Release the four snap hooks with a front opening tool.



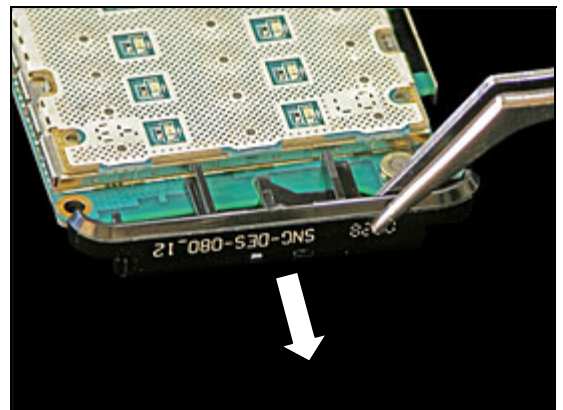
Rear Frame Assembly *continue*

Remove the PCBA from the Rear Frame Assembly.

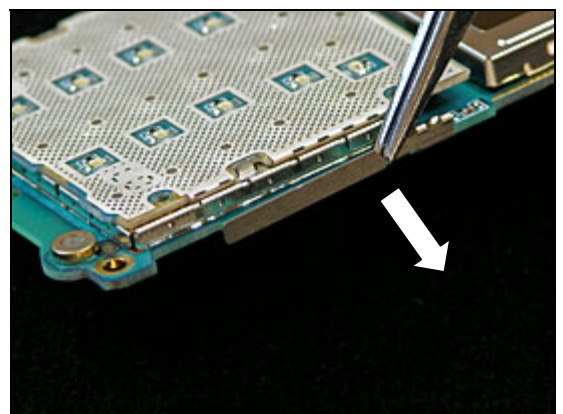


2.1.5 Antenna Assembly and Bluetooth Antenna

Remove the Antenna Assembly.



Remove the Bluetooth Antenna.

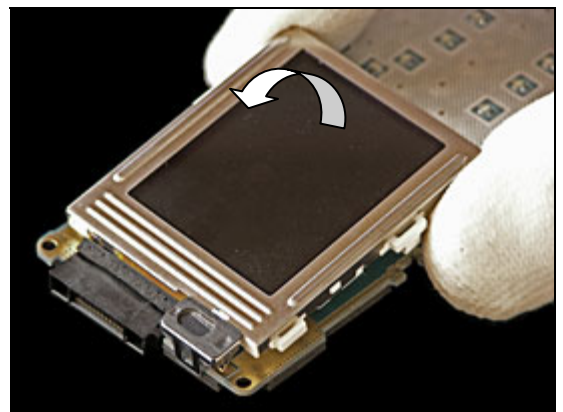


2.1.6 LCD

Release the two snap hooks with a front opening tool.

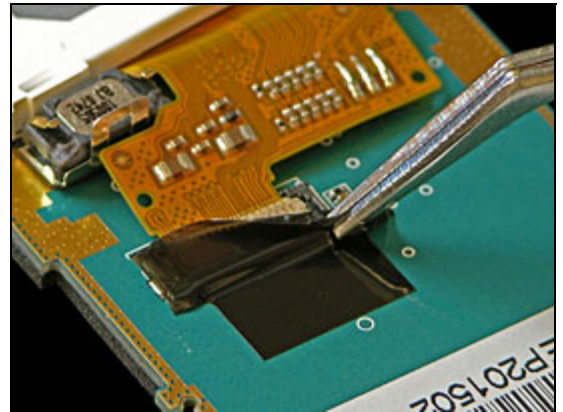


Turn over the LDC.

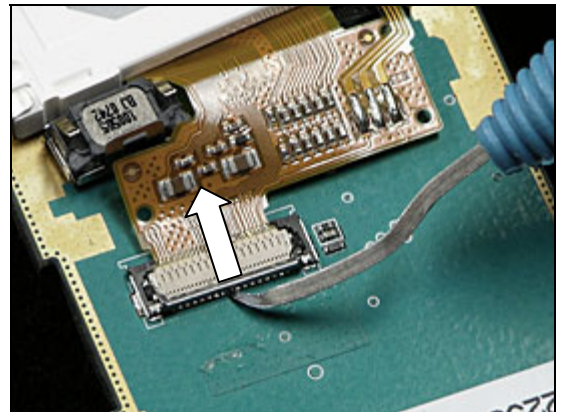


LCD continue

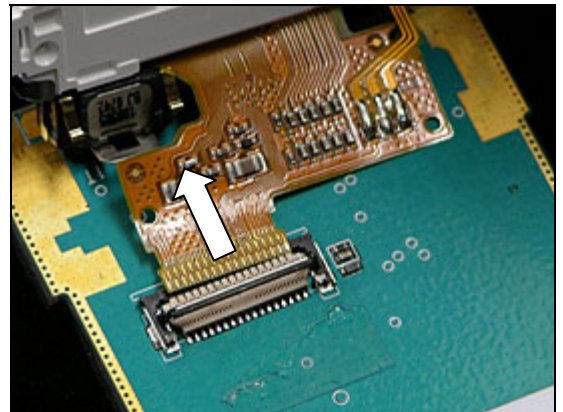
Remove the Isolate Tape.



Open the FPC connector carefully.



Remove the LDC with the flex FPC.



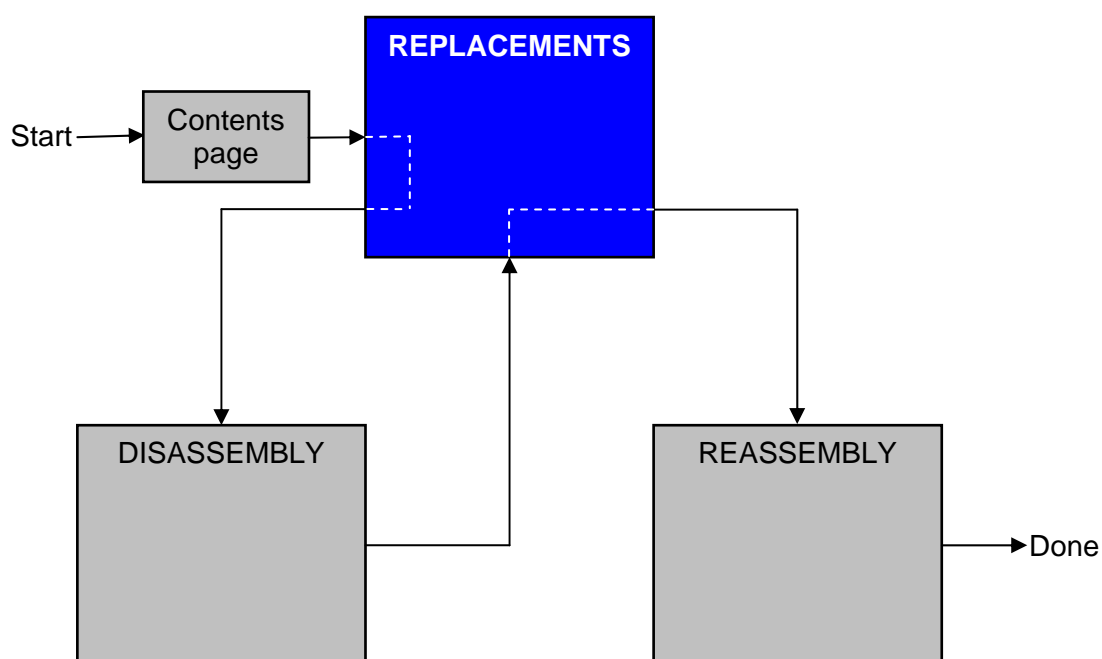
3 Replacements

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

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

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

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



3.1 Battery Cover

Follow the 2.1.1 Disassembly instructions

Prepare the new Battery Cover.

Follow the 4.1.6 Reassembly instructions

3.2 Battery

Follow the 2.1.1 Disassembly instructions

Prepare the new Battery.

Follow the 4.1.6 Reassembly instructions

3.3 Front Cover with Co-Brand Cover

Follow the 2.1.1 – 2.1.2 Disassembly instructions

Prepare the new Front Cover with Co-Brand Cover.

Follow the 4.1.5 – 4.1.6 Reassembly instructions

3.4 Keypad

Follow the 2.1.1 – 2.1.3 Disassembly instructions

Prepare the new Keypad.

Follow the 4.1.4 – 4.1.6 Reassembly instructions

3.5 Rear Frame Assembly

Follow the 2.1.1 – 2.1.4 Disassembly instructions

Prepare the new Rear Frame Assembly.

Follow the 4.1.3 – 4.1.6 Reassembly instructions

3.6 Antenna Assembly

Follow the 2.1.1 – 2.1.5 Disassembly instructions

Prepare the new Antenna Assembly.

Follow the 4.1.2 – 4.1.6 Reassembly instructions

3.7 Bluetooth Antenna

Follow the 2.1.1 – 2.1.5 Disassembly instructions

Prepare the new Bluetooth Antenna.

Follow the 4.1.2 – 4.1.6 Reassembly instructions

3.8 LCD....

Follow the 2.1.1 – 2.1.6 Disassembly instructions

Prepare the new LCD.

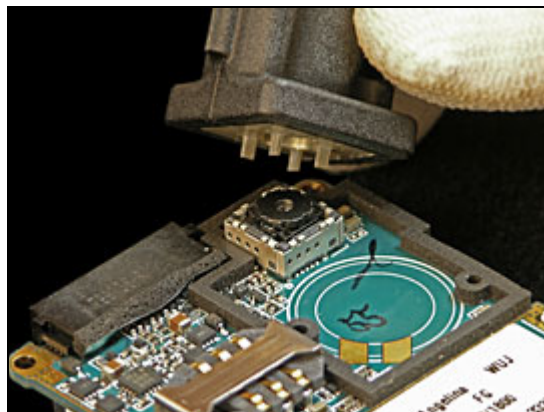
Follow the 4.1.1 – 4.1.6 Reassembly instructions

3.9 Camera

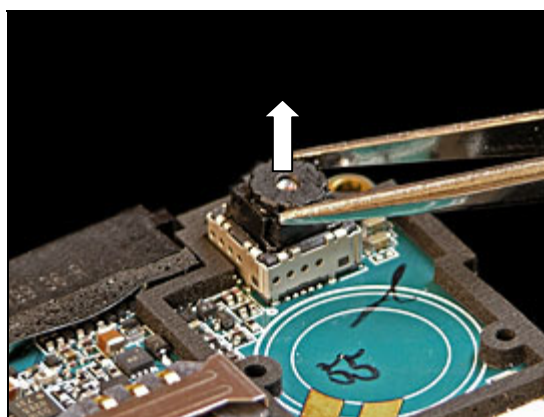
REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

Release the Camera with the camera removal tool.



Remove the Camera with a pair of tweezers.

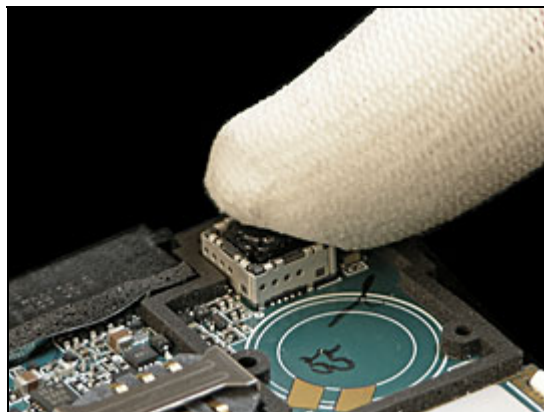


INSTALLATION

Notice the pin on the Camera that fits into the gap in the socket.

Press gently on the top of the new Camera until it snaps into place.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.



3.10 Co-Brand Cover

REMOVAL

Follow the 2.1.1 – 2.1.2 Disassembly instructions.

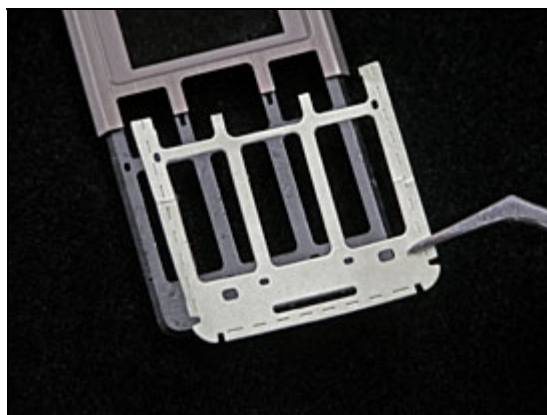
Use a dentist hook and your fingers to remove the Co-Brand Cover.

Clean the Front Cover with isopropyl alcohol.



INSTALLATION

Replace a new Co-Brand Cover Adhesive.



Replace a new Co-Brand Cover.

Follow the 4.1.5 – 4.1.6 Disassembly instructions.

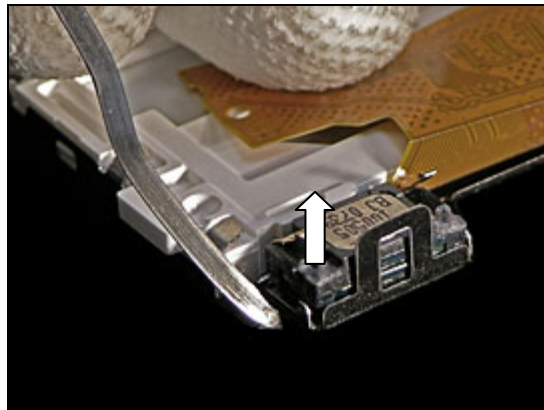


3.11 Ear Phone

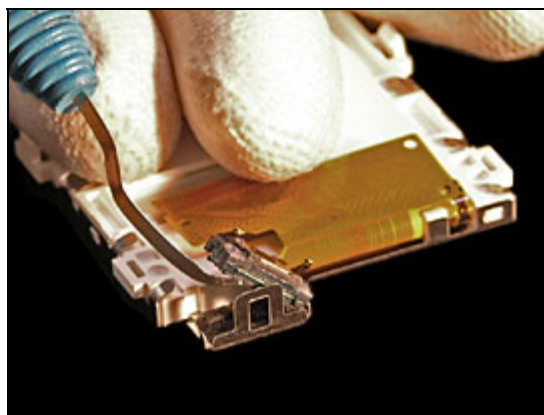
REMOVAL

Follow the 2.1.1 – 2.1.6 Disassembly instructions.

Remove the Ear Phone with a dentist hook.
Attach the hook in the corner.



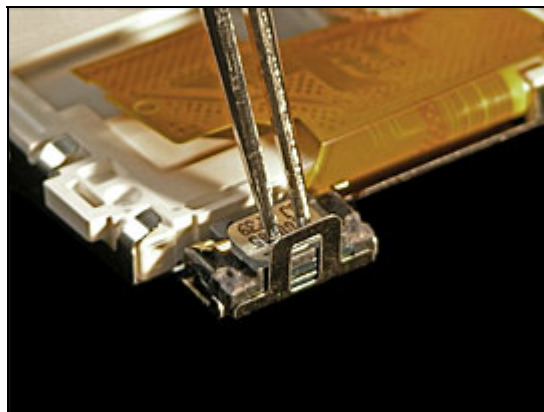
Clean with isopropyl alcohol to remove the old adhesive.



INSTALLATION

Replace a new Ear Phone.
Press down to fasten the adhesive.

Follow the 4.1.1 – 4.1.6 Reassembly instructions.

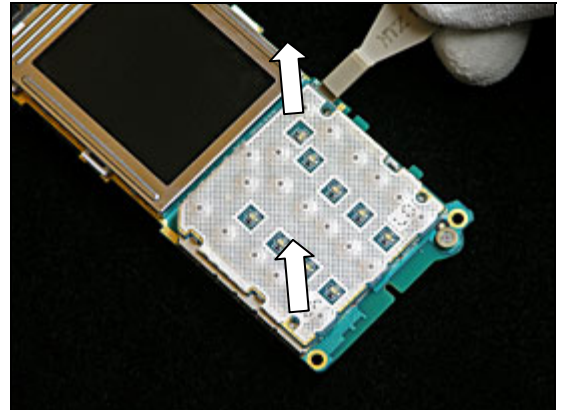


3.12 Key Board Assembly

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

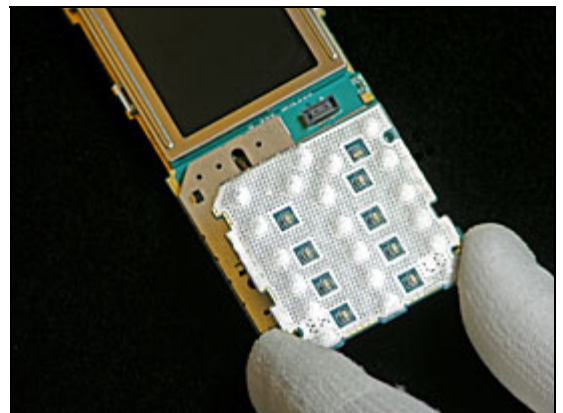
Remove the Key Board Assembly with a front opening tool.
Start in the upper right corner.
Clean the Shield Cover with isopropyl alcohol.



INSTALLATION

Replace a **new** Key Board Assembly.
Press down to fasten the adhesive and connector.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.

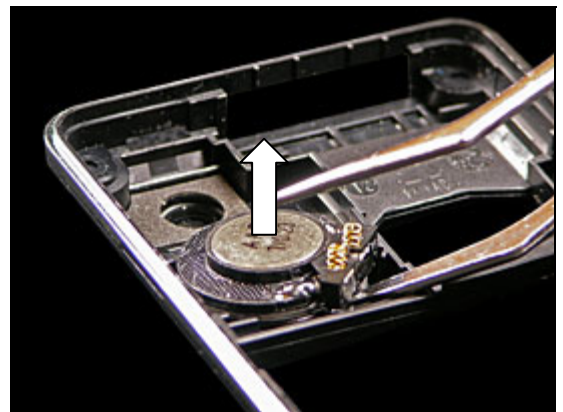


3.13 Loud Speaker

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

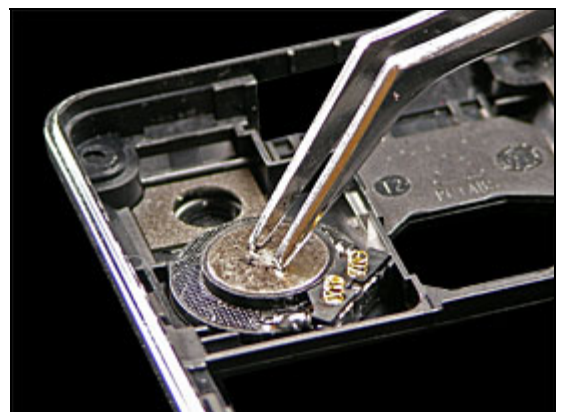
Use a pair of tweezers to remove the Loudspeaker.
Clean with isopropyl alcohol.



INSTALLATION

Replace a new Loud Speaker.
Press down to fasten the adhesive.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.

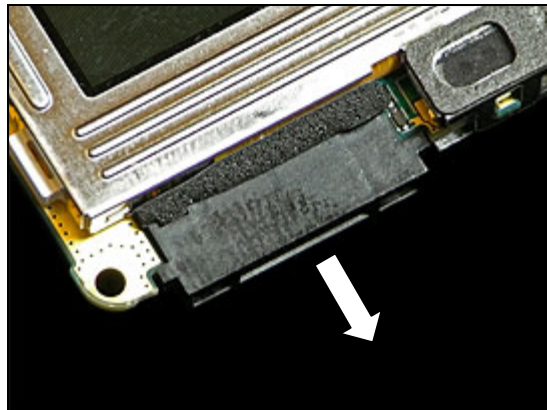


3.14 System Connector

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

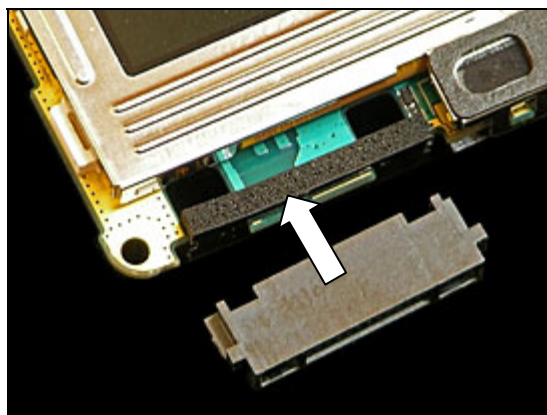
Use your fingers to remove the System Connector and the Gasket.



INSTALLATION

Replace the Gasket and System Connector.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.

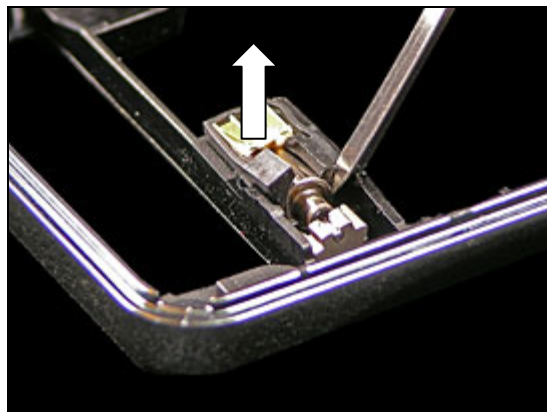


3.15 Vibrator

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

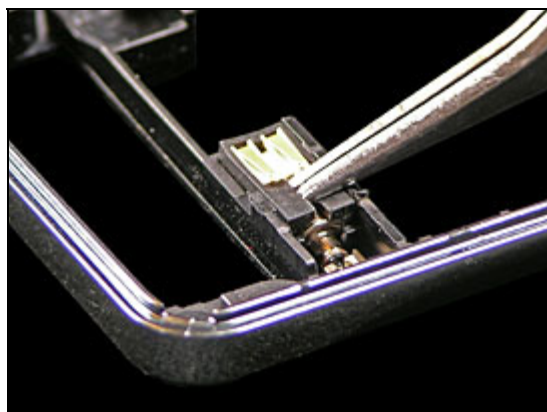
Remove the Vibrator with a dentist hook.



INSTALLATION

Use your fingers or a pair of tweezers to replace the new Vibrator.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.



3.16 Sponge Earphone

REMOVAL

Follow the 2.1.1 – 2.1.2 Disassembly instructions.

Remove the Sponge Earphone with a pair of tweezers.



INSTALLATION

Align a new Sponge Earphone with a pair of tweezers.
Press with your fingers to fasten the adhesive.

Follow the 4.1.5 – 4.1.6 Reassembly instructions.



3.17 Gasket Loud Speaker

REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

Remove the Gasket Loud Speaker with a pair of tweezers.



INSTALLATION

Align a new Gasket Loud Speaker with a pair of tweezers.
Press with your fingers to fasten the adhesive.

Follow the 4.1.3 – 4.1.6 Reassembly instructions.



3.18 Liquid Intrusion Indicator

INSPECTION

There is a Liquid Intrusion Indicator located at the arrow.



REMOVAL

Follow the 2.1.1 – 2.1.4 Disassembly instructions and the 3.15 Replacements instructions.

Remove the old Liquid Indicator with a pair of tweezers.



INSTALLATION

Use a pair of tweezers to mount a new Liquid Indicator on the Vibrator.

Follow the 3.15 Replacements instructions and the 4.1.3 - 4.1.6 Reassembly instructions.

3.19 KRH - label

Follow the 2.1.1 – 2.1.4 Disassembly instructions.

Read the old label and/or write the information into the “Label make” program before removal.

Note the position of the label before removal.

Heat up the label by using hot air, if needed.

Carefully remove the label without causing scratches.

If there still are residues, clean the surface with isopropyl alcohol.

Check that the proper label format is loaded in the Zebra printer.

Write a new label by using the program “Label make” and check that the printing is OK.

Take the new label and place it onto the frame as in the adjacent picture.

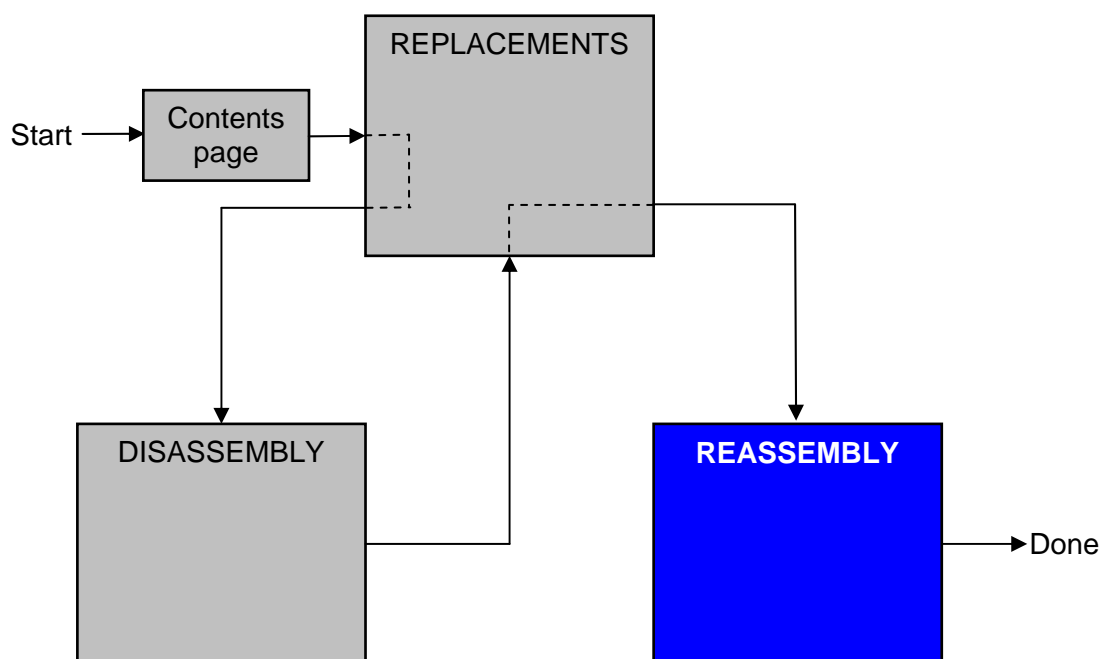
ONE LABEL ONLY IS ALLOWED!

Follow the 4.1.3 – 4.1.6 Reassembly instructions.



4 Reassembly

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



4.1 Overview

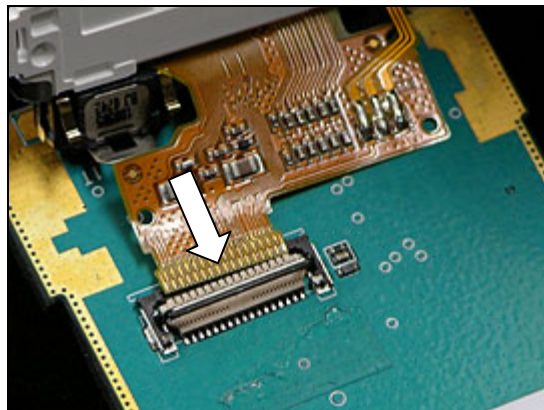
The reassembly is done in the following order:

1. LCD
2. Antenna Assembly and Bluetooth Antenna
3. Rear Frame Assembly
4. Keypad
5. Front Cover with Co-Brand Cover
6. Battery Cover and Battery

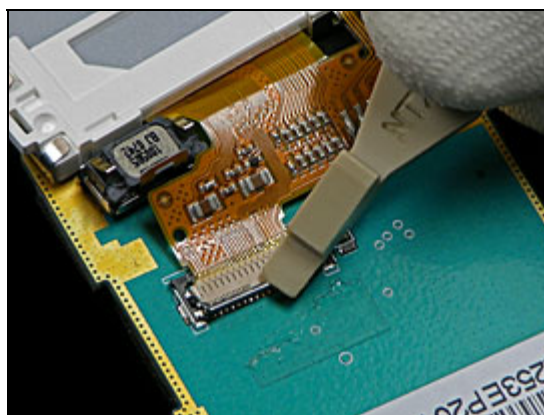


4.1.1 LCD

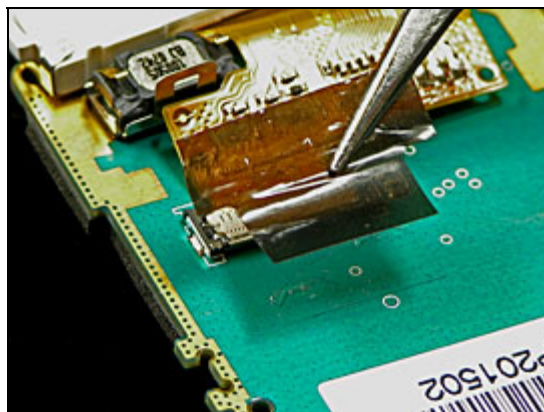
Install the LDC's flex FPC in the connector.



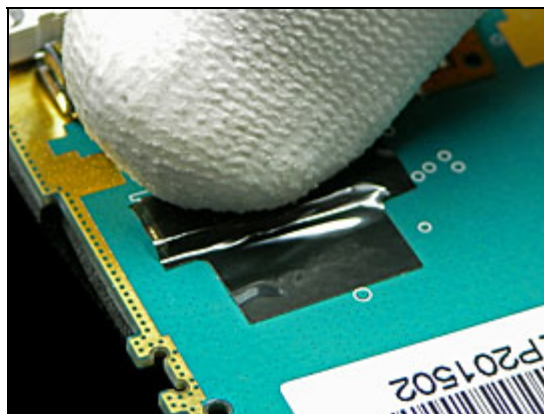
Close the FPC connector gently.



Mount a **new** Isolate Tape.

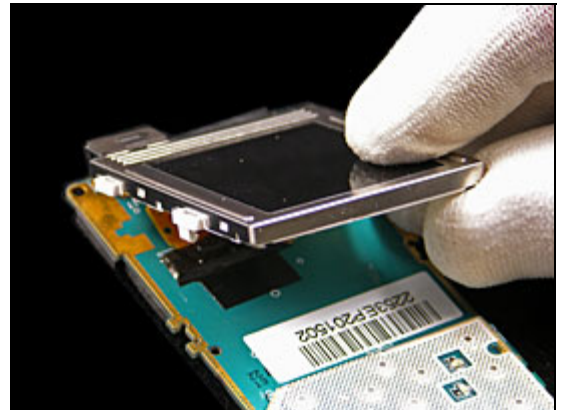


Press with your fingers to fasten the Isolate Tape.



LCD with Isolate Tape *continue*

Turn over the LDC.

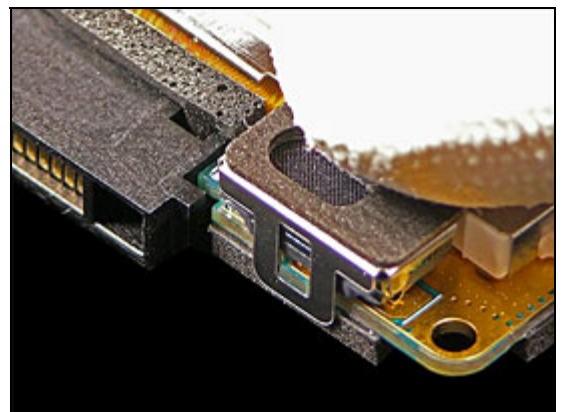


Use your fingers to snap on the LDC.



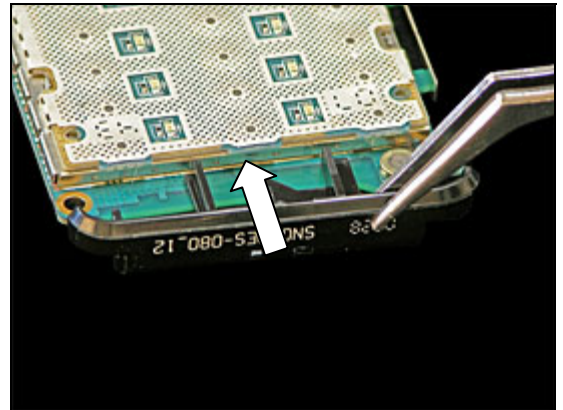
Press down the Ear Phone to snap it to the PCBA.

If necessary mount a new Sponge Ear Phone.
Follow the 3.16 Replacements instructions.

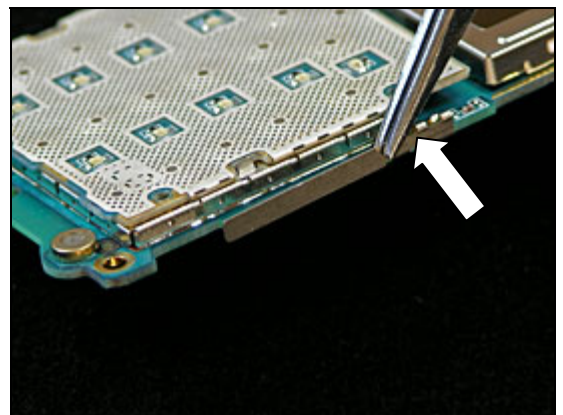


4.1.2 Antenna Assembly and Bluetooth Antenna

Mount the Antenna Assembly.



Mount the Bluetooth Antenna.



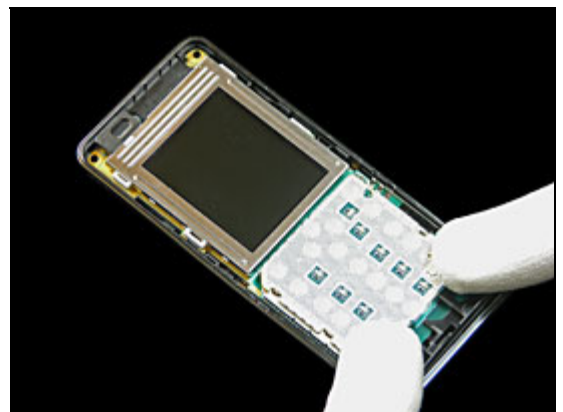
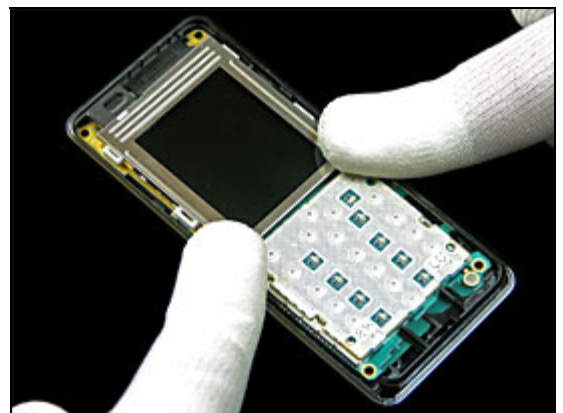
4.1.3 Rear Frame Assembly

Align the System Connector and the PCBA with the Rear Frame Assembly.

Notice the position of the Bluetooth Antenna.



Press the PCBA to snap on to the Rear Frame Assembly.



4.1.4 Keypad

Mount the Keypad.



4.1.5 Front Cover with Co-Brand Cover

Mount the Front Cover.



Use your fingers to snap on the Front Cover.



Install four new screws with a torque screwdriver at 8-12 Ncm with a Torx T6.



4.1.6 Battery Cover and Battery

Place the Battery into the battery cavity.



Use your fingers to snap on the Battery Cover.



5 Revision History

Rev.	Date	Changes / Comments
1	2008-04-18	First release