

SERVICE MANUAL

Level 1&2

NOKIA

5610

XPRESS MUSIC

RM-242



Transceiver characteristics:

Band:

EGSM: Quad-band 850/900/1800/1900MHz

WCDMA: 850/2100MHz

Display:

LCD: 5.588cm QVGA (2.2") (320x240 pixel); 16M colors

Camera:

Camera: 3.2 Megapixel, 8x digital zoom, autofocus, flash

Operating System:

Series 40

Connections:

Wireless: Bluetooth

Connector: Micro USB Connector; AV Connector

Memory:

MicroSD™ (max 4GB)

Transceiver with BP-5M Li-Ion battery pack

Talk time	Standby	Note
up to 6h	up to 13days	Depends on network parameters and phone settings

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1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	11.Sep.2007	Initial draft
Approved	1.0	04.Oct.2007	Approved

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
<mailto:Service.Manual@nokia.com>

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

2. COPYRIGHT

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IMPORTANT

This document is intended for use by qualified service personnel only.

3. WARNINGS AND CAUTIONS

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.

Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

ESD protected spare part packages MUST NOT be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.



5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
 - Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
 - Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
 - Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
 - Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
 - Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
 - Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
 - Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
 - Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.
- All of the above suggestions apply equally to the product, battery, charger or any accessory.

6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMh batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose. Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

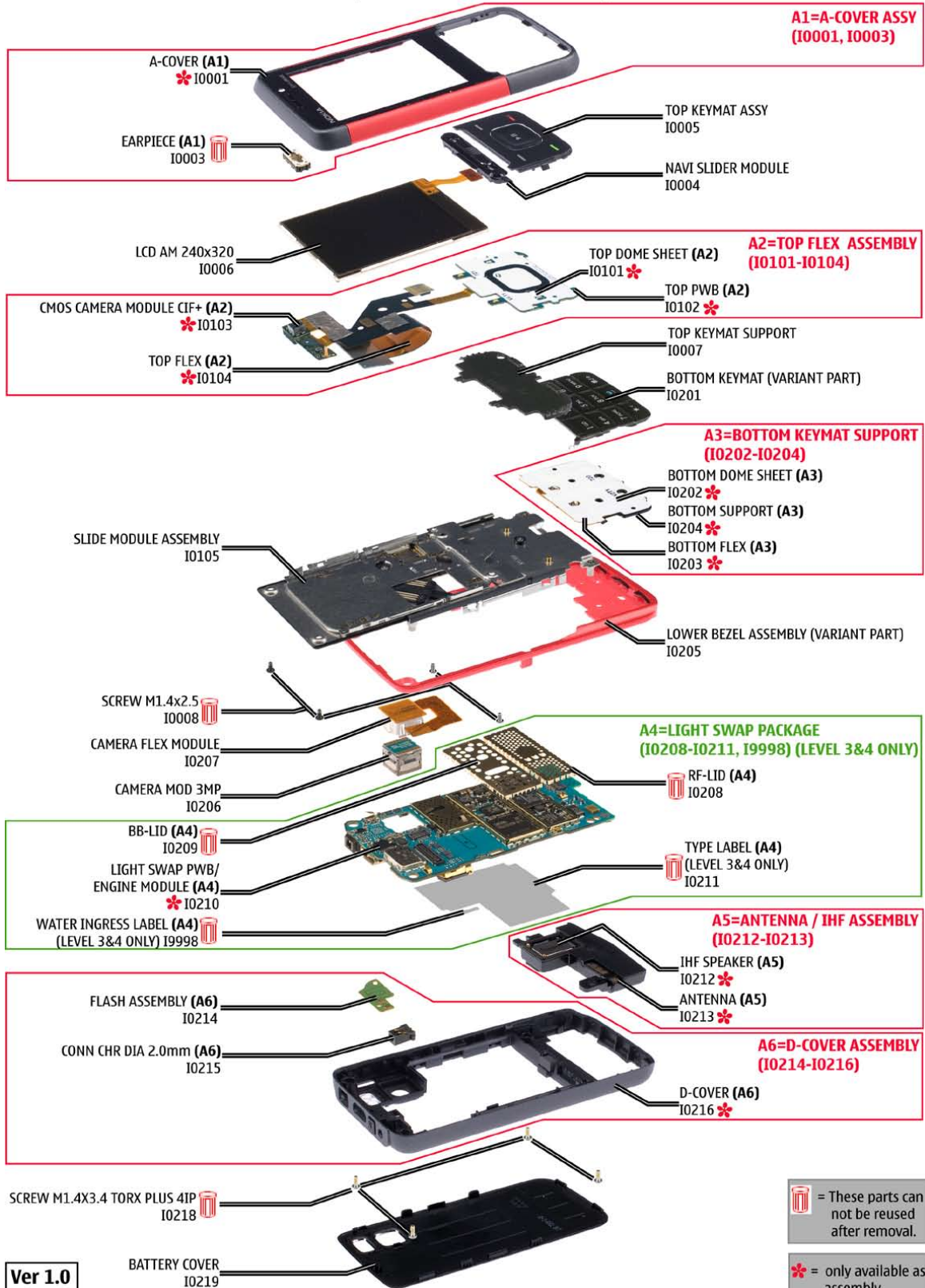
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F). A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling). Do not dispose as household waste.

7. EXPLODED VIEW

See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

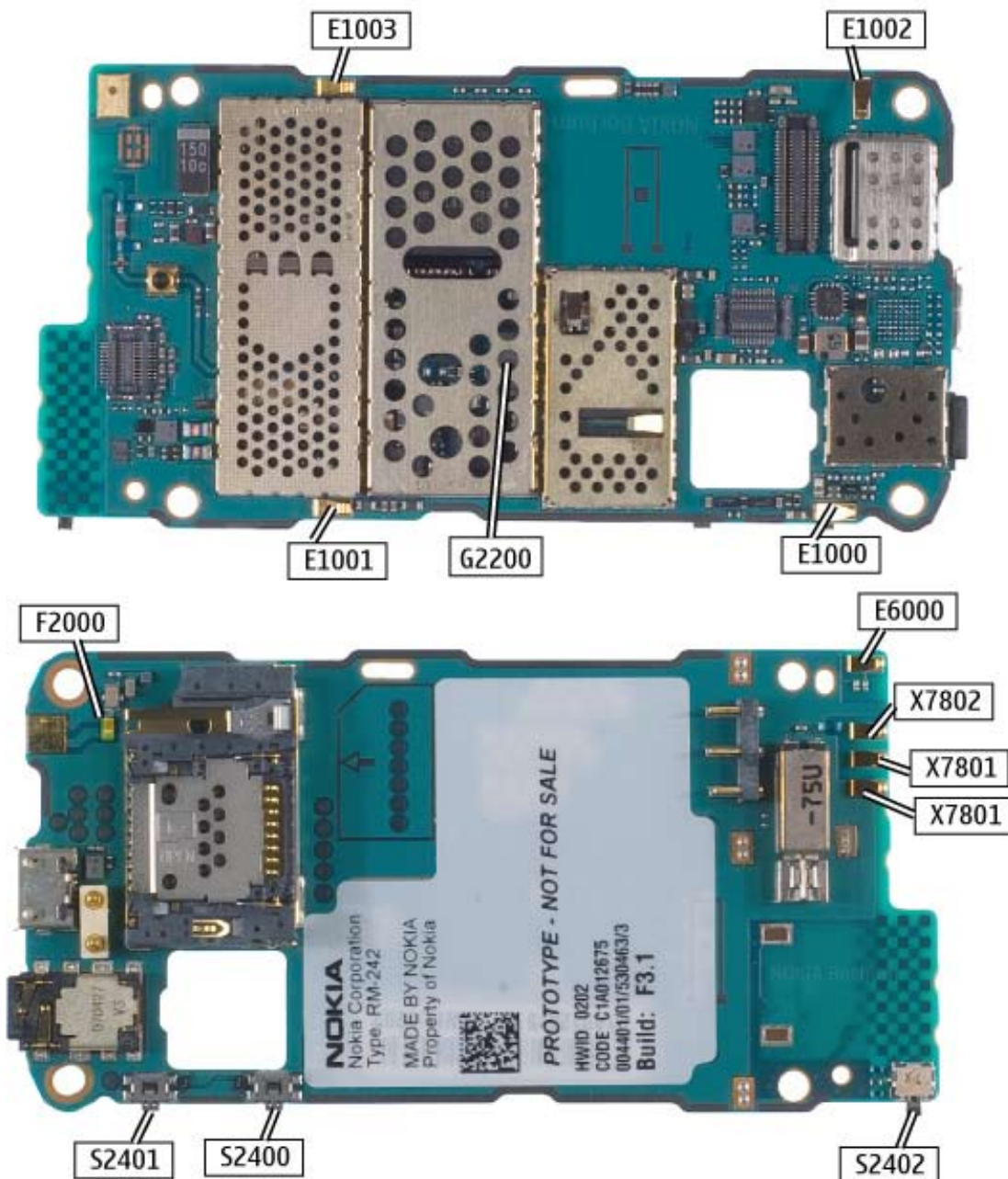
5610 Xpress Music RM-242 Exploded view



8. LEVEL 2 SOLDER COMPONENTS

5610 Xpress Music RM-242 Components overview

Solder components only for LEVEL 2



Ver. 2.0

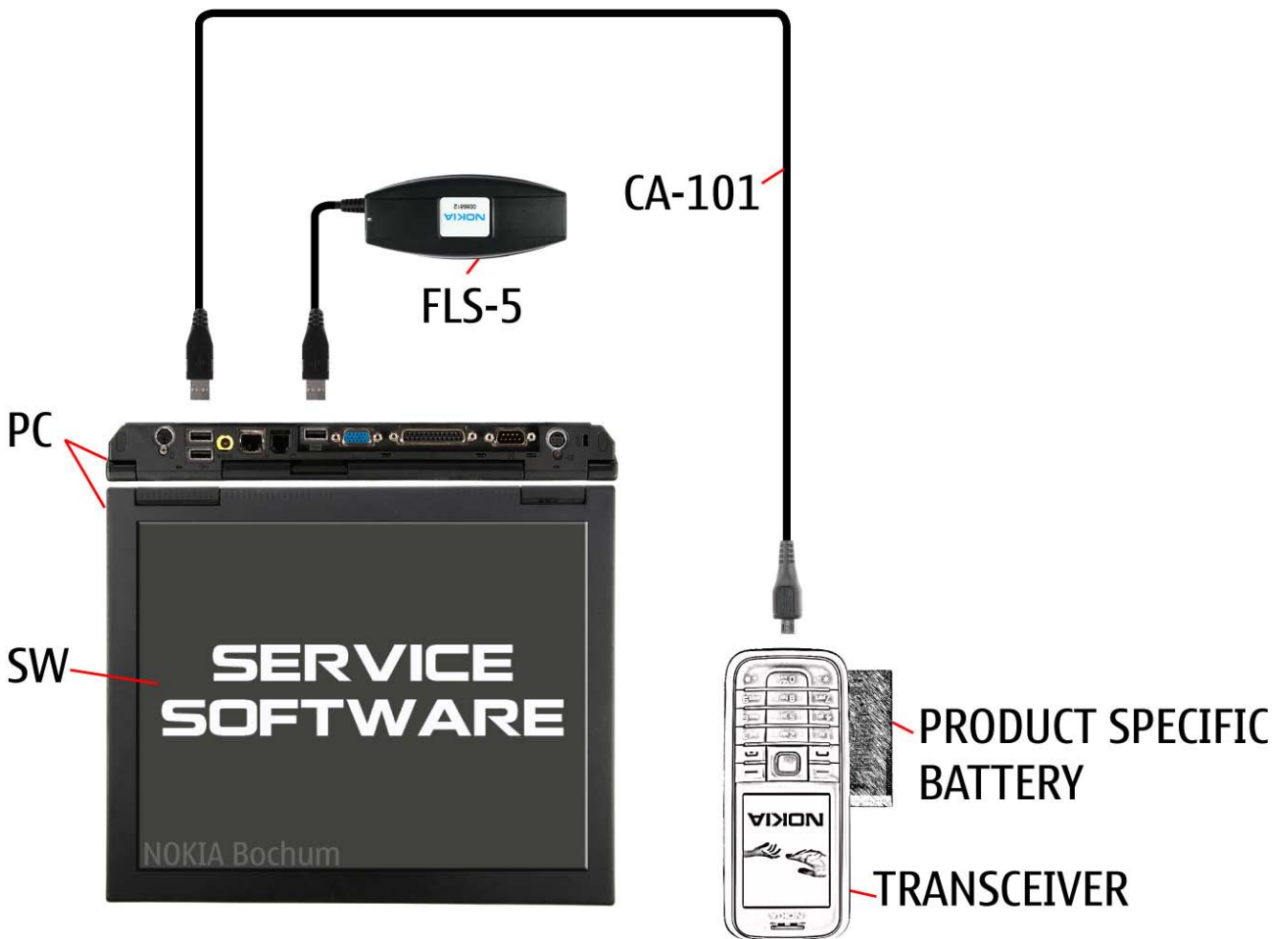
9. SERVICE TOOLS

 <p>FLS-5</p> <p>FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.</p>	 <p>ACF-8 Universal Power Supply is used to power FLS-4S.</p>	 <p>Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.</p>
 <p>CA-101 100cm</p> <p>CA-101 Service Cable to connect the PC with the Micro USB connector.</p>		 <p>RJ-180</p> <p>RJ-180 Soldering Jig</p>
 <p>BP-5M</p> <p>Internal Battery BP-5M Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.</p>		 <p>0772040 NMP Standard Toolkit (V2) For more informations refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "Recommended service equipment" document on NOKIA Online.</p>

10. SW-UPDATE

Flash Concept – (Point of Sales)

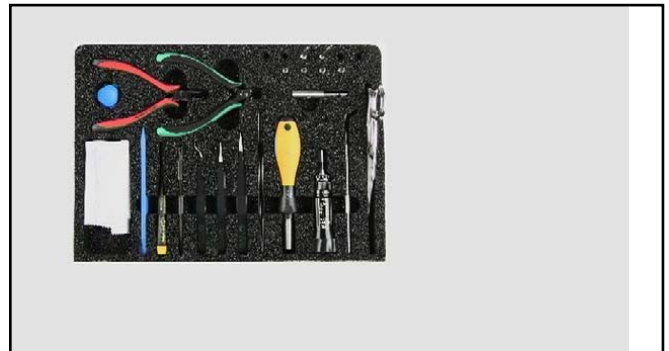
To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on [NOKIA Online](#).



11. DISASSEMBLY INSTRUCTION



1. Nokia 5610 Xpress Music disassembly.



2. You will need the Nokia Standard Toolkit version 2.



3. Unlock and remove the BATTERY COVER.



4. Use the SRT-6 only for removing the BOTTOM KEYMAT.



5. Insert the SRT-6 between the "o" key and the LOWER BEZEL.



6. Gently pry open the clips of the KEYMAT.



7. After releasing all clips, the BOTTOM KEYMAT can be removed easily.



8. Equip your Bitholder with a Torx Plus size 4 bit.



9. Unscrew these 4 screws in the order shown.



10. Discard these screws. Do not use them again.



11. Unlock both clips of the A-COVER with the SS-93.



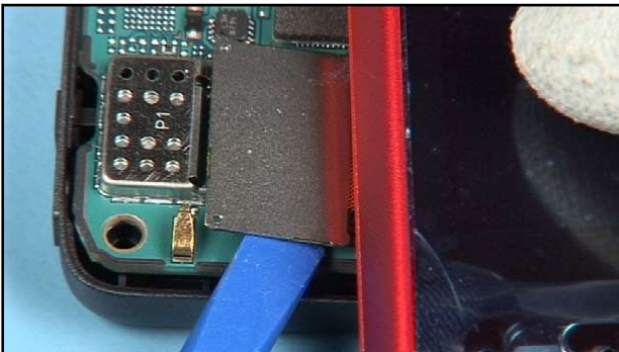
12. Slightly release the assemblies, beginning at the bottom side.



13. Note that this small flex connector was opened before continuing.



14. Gently twist the upper assembly near to 90 degree.



15. The large flex connector becomes visible. Release it with the SS-93. Do not bend the grounding clip.



16. The assemblies can be separated now.



17. Unlock these 3 plastic clips with the SS-93.



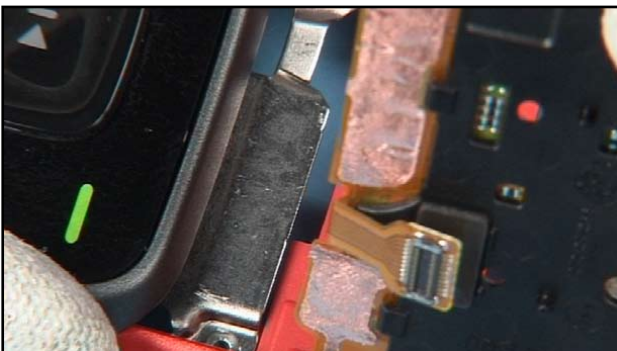
18. Turn the assembly. Gently lift up the BOTTOM KEYMAT SUPPORT.



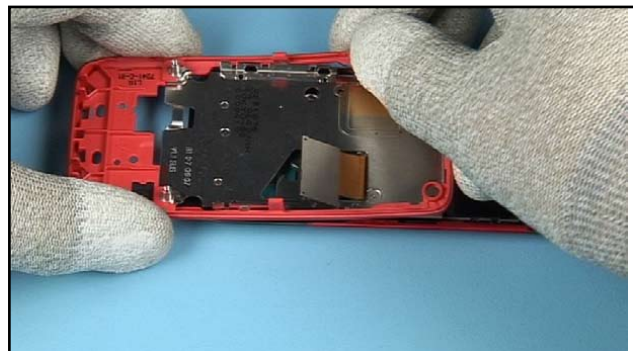
19. The BOTTOM DOMESHEET was glued in at the SLIDE MODULE ASSEMBLY. Gently release the domesheet on both sides.



20. Now the BOTTOM DOMESHEET can be removed. Remove any adhesive residues from the opponent part.



21. Keep this adhesive clean if this part should be used again.



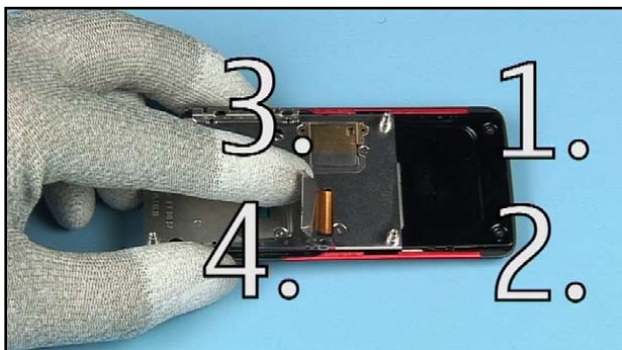
22. Carefully release the LOWER BEZEL ASSEMBLY from the metal snaps of the SLIDE MODULE ASSEMBLY.



23. Shift the LOWER BEZEL ASSEMBLY into direction of the threads. It can be lifted up now.



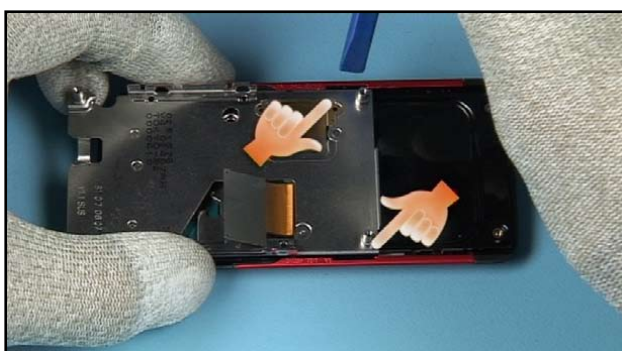
24. Prevent mechanical stress to the NAVI SLIDER MODULE while unscrewing the screws.



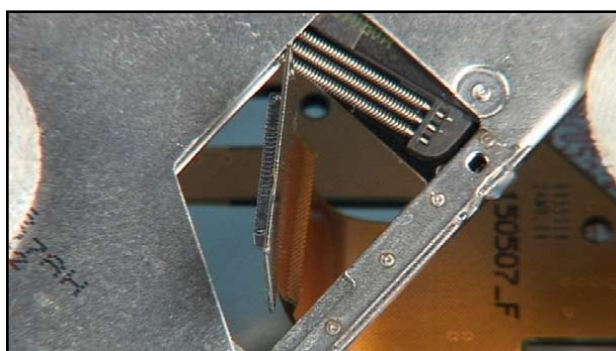
25. Unscrew these 4 screws in the order shown.



26. Discard these screws. Do not use them again.



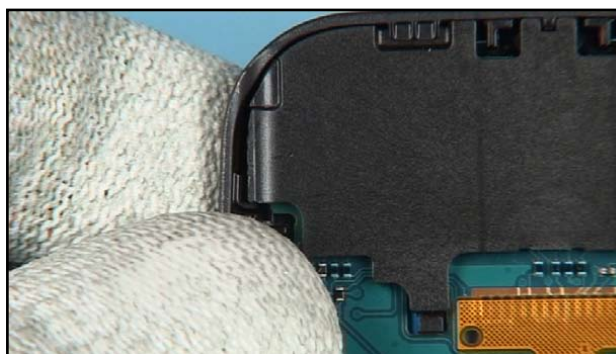
27. Gently release the latches of the A-COVER on both sides.



28. Lift up and shift open the SLIDE MODULE ASSEMBLY partly. Slot through the flex foil connector.



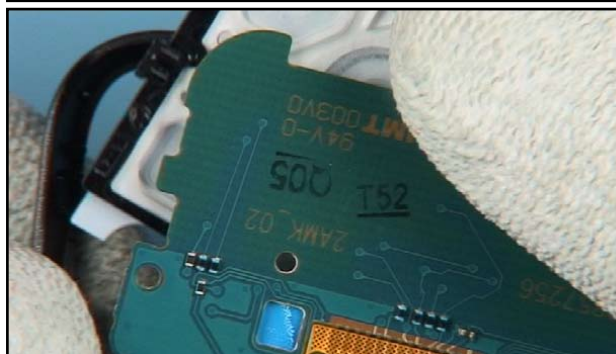
29. Carefully bend the A-COVER on both sides...



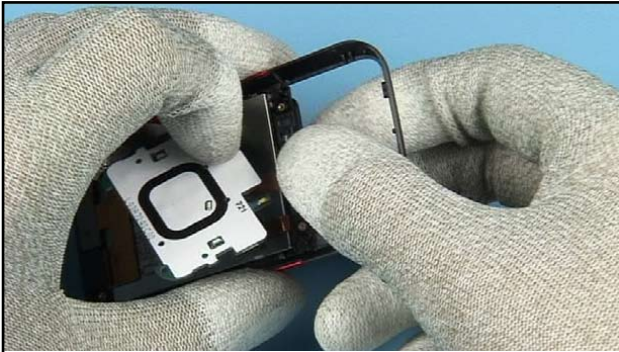
30. ...until the clips of the TOP KEYMAT SUPPORT are released.



31. Lift up the TOP KEYMAT SUPPORT.



32. Lift up the TOP PWB. The TOP KEYMAT ASSEMBLY can be removed now.



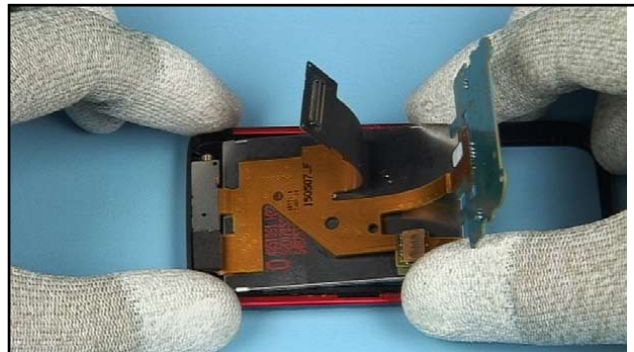
33 . Now the NAVI SLIDER MODULE can be reached. Gently pull it down...



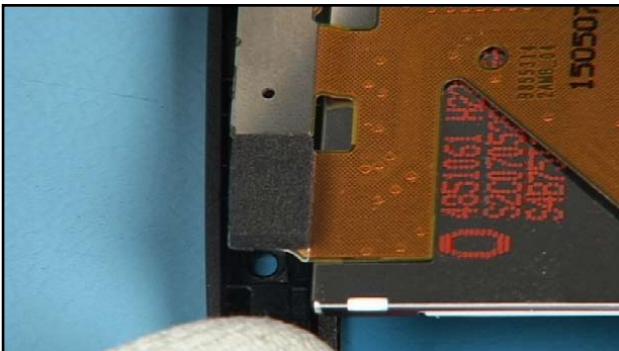
34. ...until this large clip was released partly. Now pull it out sideways to release the clip completely.



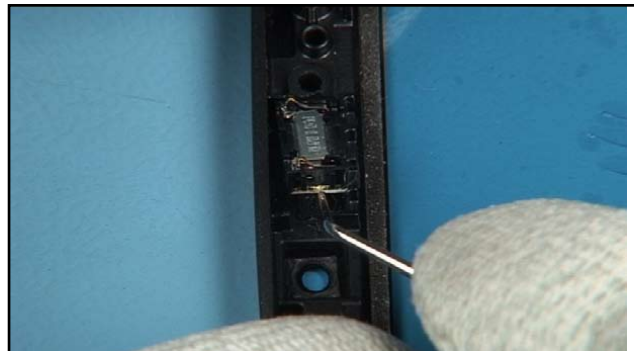
35. Release the LCD from its sealing with the SS-93 partly.



36. Lift up the LCD together with the TOP FLEX ASSEMBLY.



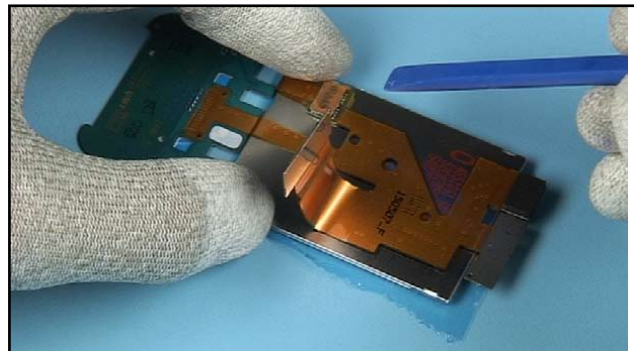
37. Gently release the CMOS CAMERA MODULE and the counterpart of the EARPIECE. Remove the assembly.



38. Partly ease out the EARPIECE with the dental pick.



39. Now pull it out with tweezers. Discard it, do not use it again.



40. Place the assembly on the face of the LCD. Use the SS-93 for opening the flex connector.



41. Do not apply pressure at the components underneath. Gently lever up the flex connector.



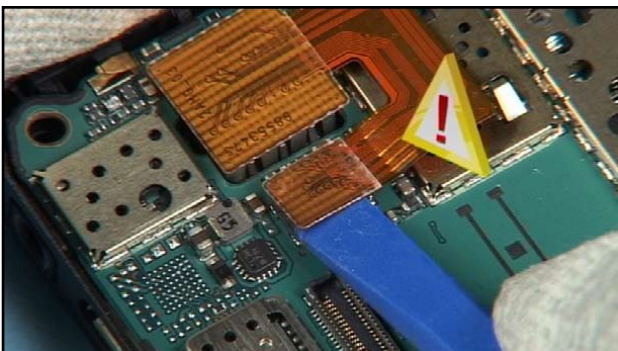
42. Release the adhesive pads of the TOP FLEX ASSEMBLY, beginning at this edge. Also release the other shown pads.



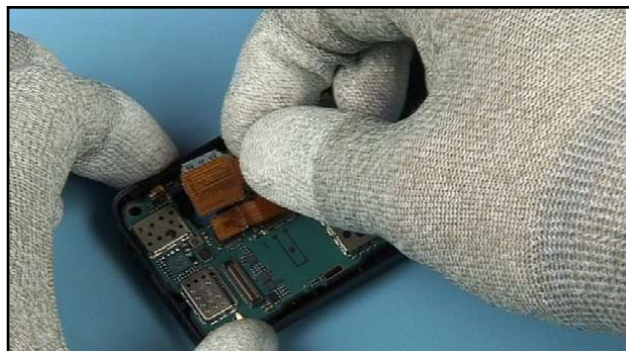
43. Keep these adhesives clean if this part should be reused. Also remove the adhesive residues on the opponent part.



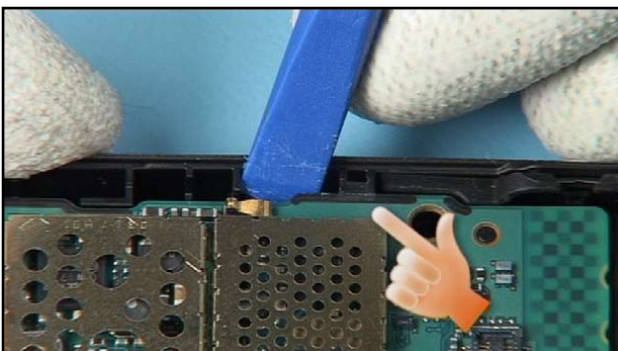
44. Continue with the lower assembly. Use the SS-93 for opening the flex connector of the CAMERA FLEX MODULE.



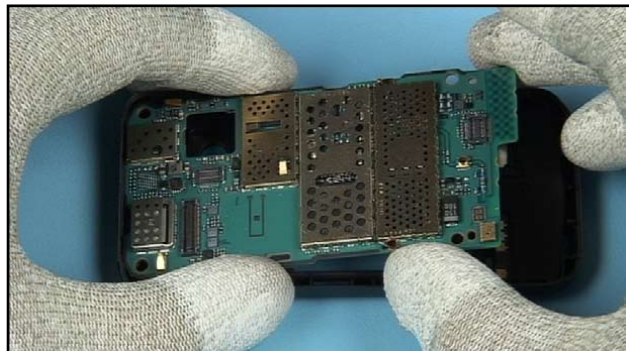
45. Do not apply pressure at the components while opening the flex connector.



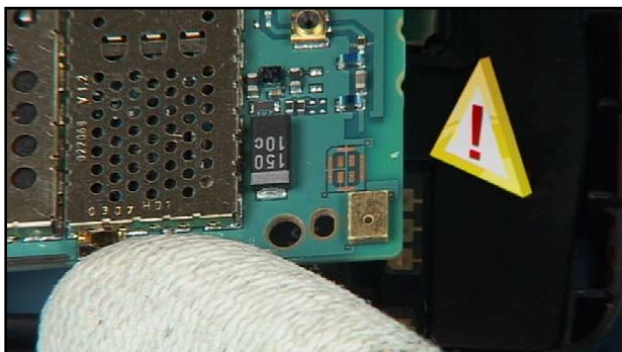
46. Lift out the CAMERA FLEX MODULE now.



47. Gently unlock this clip of the D-COVER on both sides of the ENGINE MODULE.



48. Lift out the ENGINE MODULE.



49. Do not touch the delicate microphone.



50. Turn the D-COVER. Simply let drop out the ANTENNA IHF ASSEMBLY.



51. Push out the DC jack partly.



52. Now it can be lifted out easily.



53. Lever out the FLASH ASSEMBLY. Keep the adhesive clean if this part should be used again.

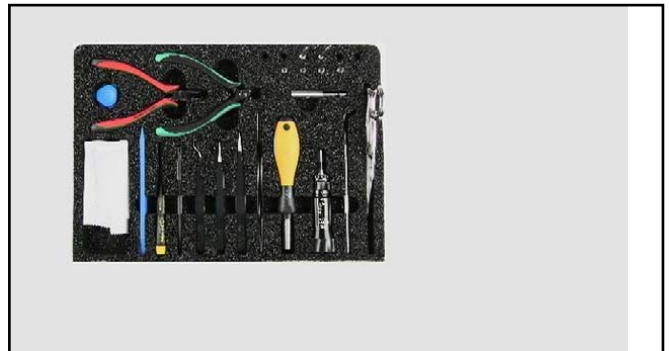


54. The disassembly procedure is now finished.

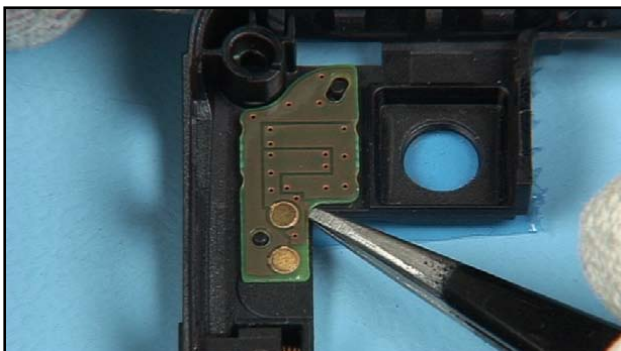
12. ASSEMBLY INSTRUCTION



1. Nokia 5610 Xpress Music assembly.



2. You will need the Nokia Standard Toolkit version 2.



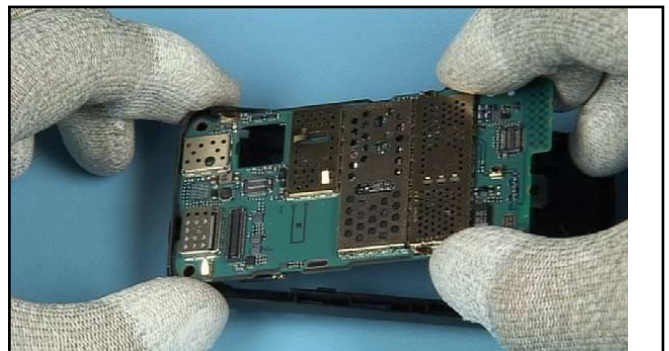
3. Insert the FLASH ASSEMBLY and push it down slightly. The adhesive protection film must be removed if this part is new.



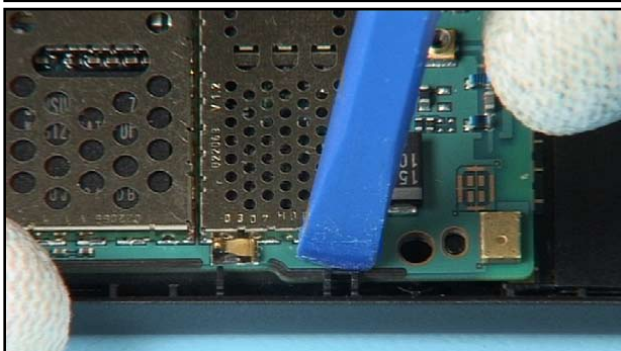
4. Insert the DC PLUG.



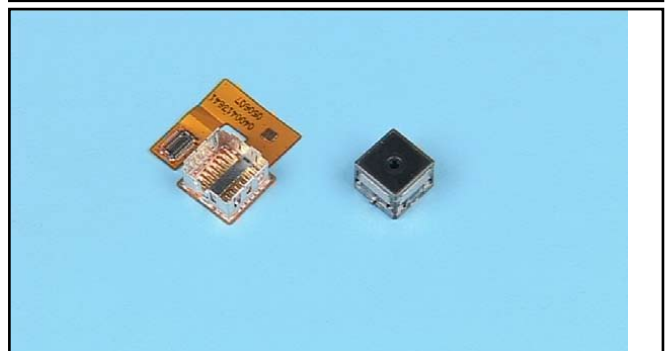
5. Place the ANTENNA IHF ASSEMBLY.



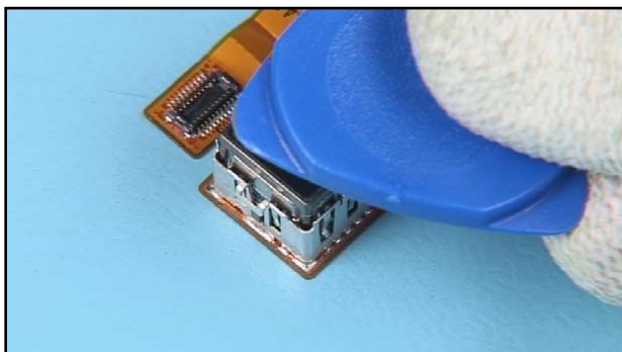
6. Insert the ENGINE MODULE, beginning from the top.



7. Click the ENGINE MODULE into its place on both sides.



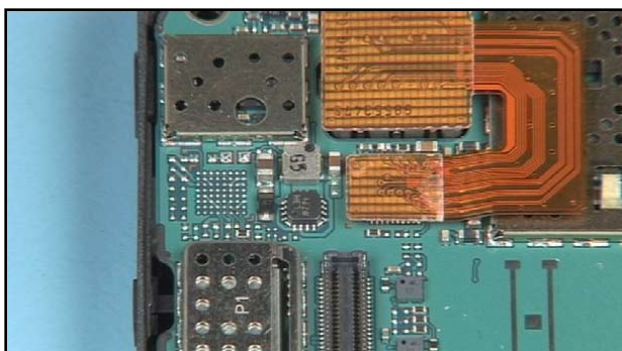
8. The CAMERA MODULE and the FLEX MODULE can be ordered as separate parts only.



9. Insert the CAMERA MODULE into its housing. Push it into its place slightly. Do not touch the lens.



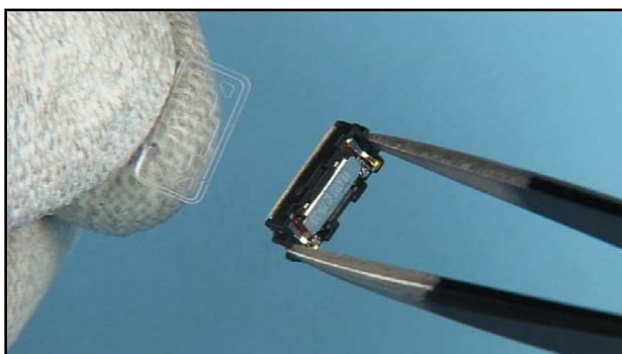
10. Check the camera window for cleanliness.
Insert the CAMERA FLEX MODULE into its compartment.



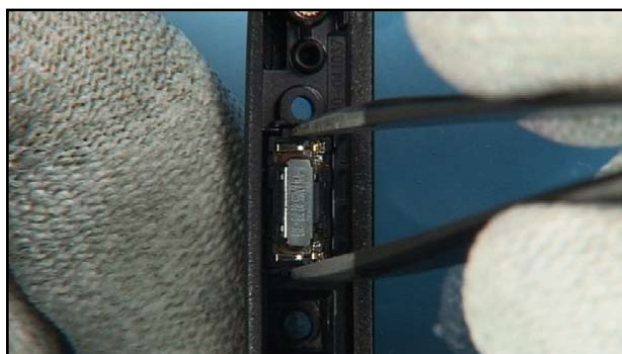
11. Close the flex connector of the camera.



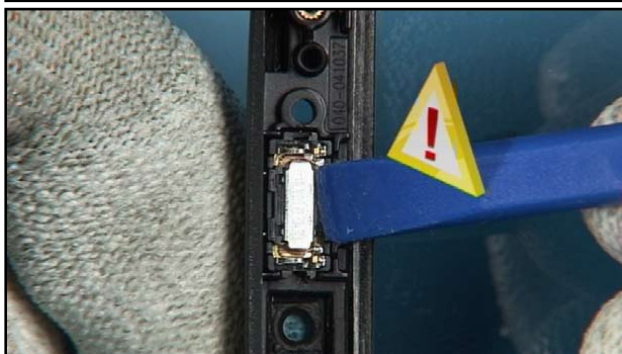
12. Check that all keys operate before going on.



13. Remove the protective film from the EARPIECE.



14. Insert the EARPIECE into its compartment.



15. Push it down carefully. Never push down the metal part, otherwise the EARPIECE could be destroyed.



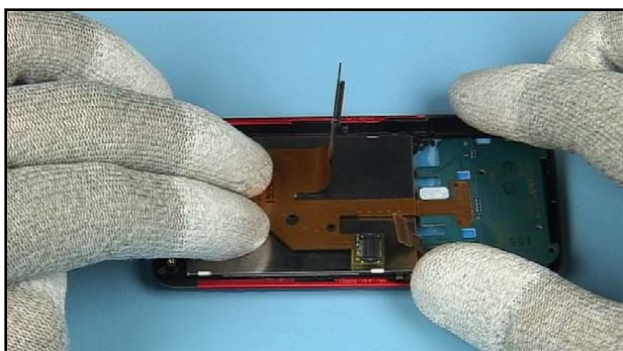
16. Align the LCD to the top guide. Smooth it down evenly.



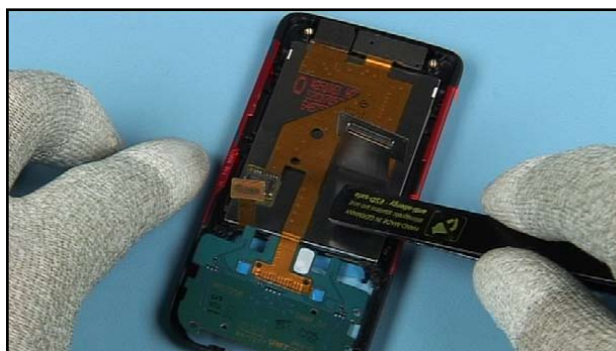
17. Place the TOP FLEX ASSEMBLY. Remove the protective film before if this part is new.



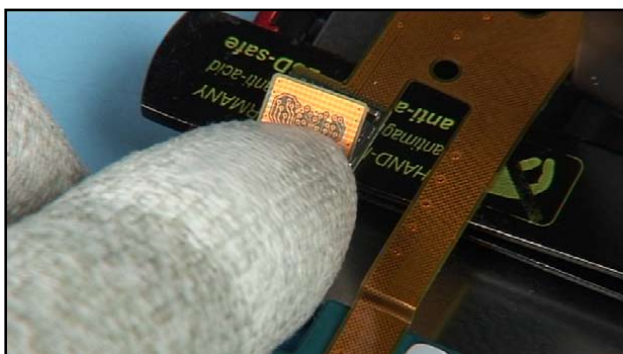
18. Slightly push the CMOS CAMERA and this guide pin into its place.



19. Smooth down the TOP FLEX ASSEMBLY evenly.



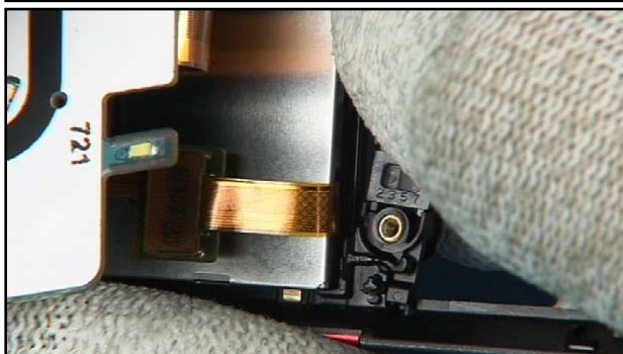
20. Insert the metal tweezers under the flex foil.



21. Close the flex foil connector.



22. Insert the NAVI SLIDER...



23....beginning from the shown side first.



24. Click the clip on the opposite side into its place.



25. Fit the TOP KEYMAT ASSEMBLY into the A-COVER.



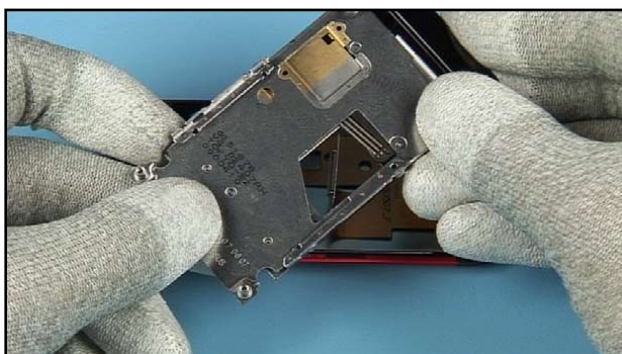
26. Place the TOP KEYMAT SUPPORT.



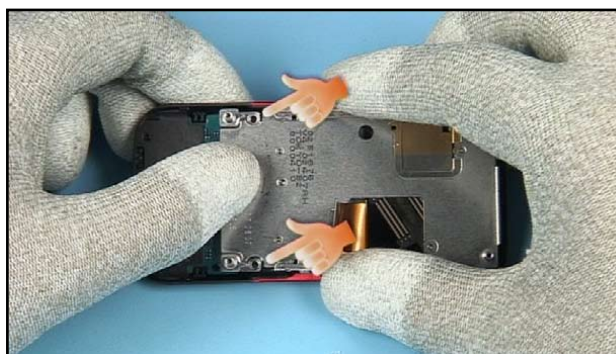
27. Click the plastic clips into their places.



28. Check the correct functionality of the NAVI SLIDER before continuing.



29. Shift open the SLIDE MODULE ASSEMBLY partly in order to reach the maximum recess. Slot the flex through this recess.



30. Align the SLIDE MODULE ASSEMBLY to these guides exactly...



31. ...and click the clips into their places evenly.



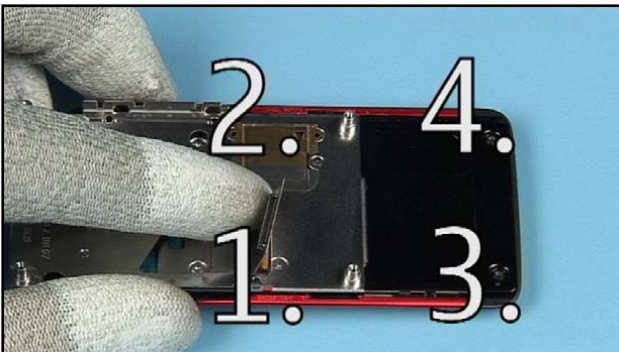
32. Shift open the SLIDE MODULE ASSEMBLY.



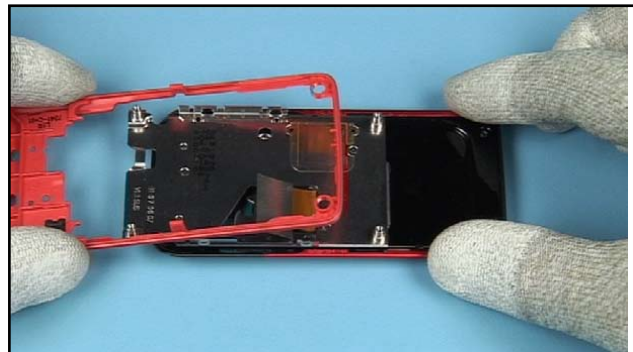
33. Insert the 4 new screws.



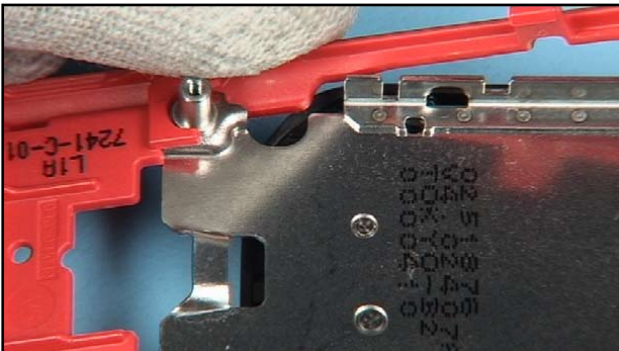
34. Set the correct torque.



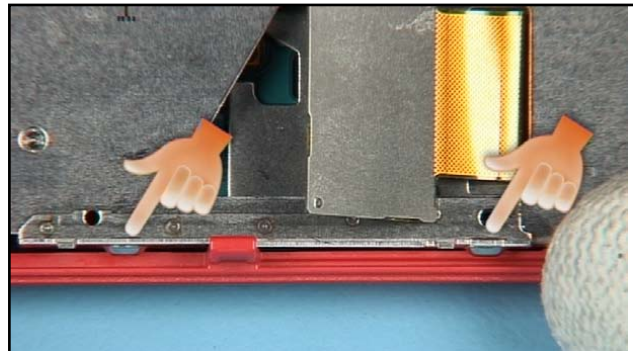
35. Tighten the screws in the order shown.



36. Fit the LOWER BEZEL ASSEMBLY, beginning at the shown side.



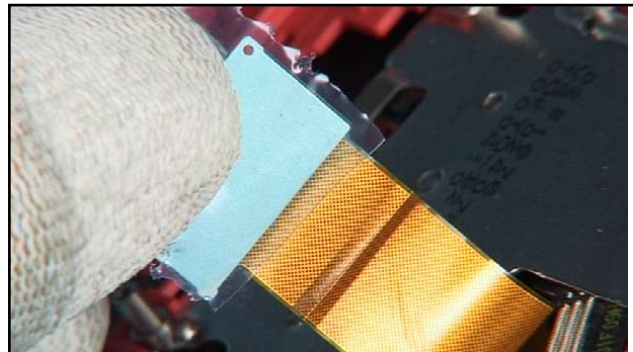
37. Align it, beginning at the treads.



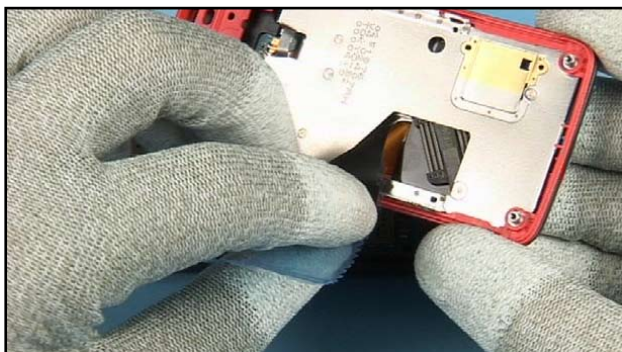
38. Click the metal snaps into their places, also on the opposite side.



39. Check the functionality of the slider before continuing.



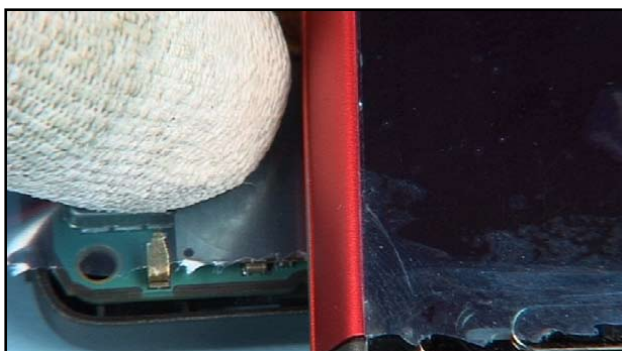
40. Fit a piece of adhesive tape to the connector as shown.



41. Carefully flip the flex foil as shown. Do not fold it!



42. Hold the flex connector. Bring the upper part into position over the lower part as shown.



43. Use the tape to align the connector correctly. Close the connector and remove the tape.



44. Gently lift up and flip the upper part over the D-COVER.



45. Click these clip into its place, -also at the opposite side.



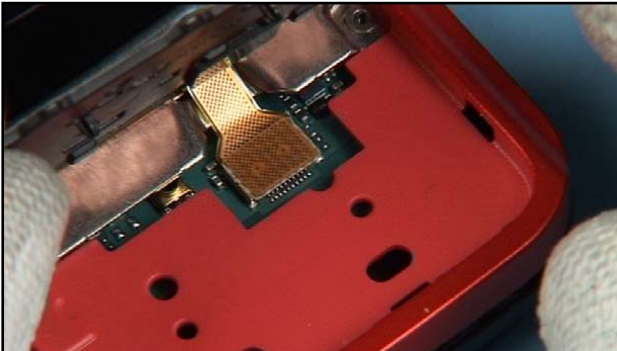
46. Check the correct positioning of both clips before going on.



47. Shift open the assembly. Click these bottom clips into their places. Check the correct alignment of the cover parts.



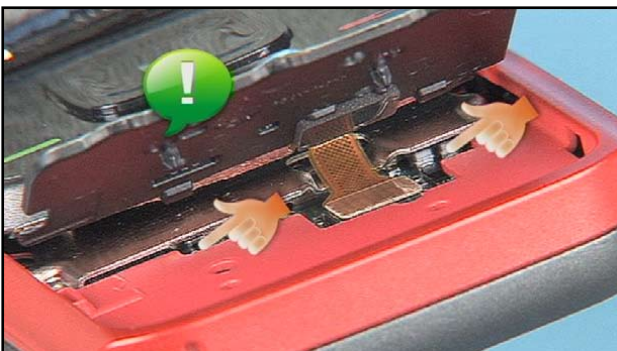
48. Bring the BOTTOM KEYMAT SUPPORT into position as shown.



49. Close the flex connector.



50. Align the shown plastic clips of the BOTTOM KEYMAT SUPPORT...



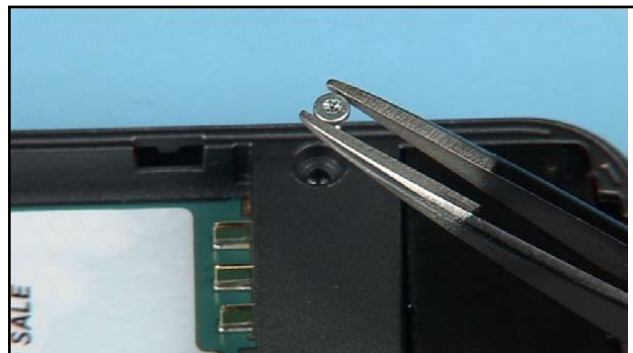
51. ...under the metal border of the SLIDE MODULE ASSEMBLY.



52. Smooth down the BOTTOM KEYMAT SUPPORT evenly. Click the clips into their places.



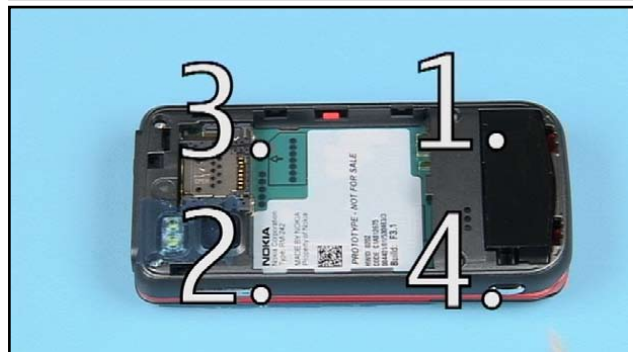
53. Check the correct positioning of the BOTTOM KEYMAT SUPPORT before going on.



54. Close the slider. Insert the 4 new screws.



55. Set the correct torque.



56. Prevent mechanical stress to the NAVI SLIDER. Tighten all screws with the correct torque in the order shown,



57. Shift open the assembly again.



58. Insert the BOTTOM KEYMAT.



59. Click all clips into their places. Smooth it down evenly.



60. Check the correct placement of the keymat.



61. Place the BATTERY COVER.