

SERVICE MANUAL Level 1&2

Nokia X7-00 (RM-707)



Nokia X7-00.1 (RM-659)

Transceiver characteristics

Band

EGSM 850/900/1800/1900 MHz

RM-707:

WCDMA 850/900/1700/1900/2100 MHz

RM-659:

WCDMA 850/1900/2100 MHz

Display

4" AMOLED, up to 16.7 million colors, 16:9
widescreen aspect ratio, 640x360 pixel
resolution

Camera

8Mpix EDOF camera with dual LED flash,
1280x720 25 fps HD video recording

Operating System

Symbian for Nokia devices

Connections:

Micro USB 2.0 with OTG support, Bluetooth
3.0, WLAN 802.11 b/g/n

Transceiver with BL-5K battery pack

Talk time	Standby
GSM: Up to 6 hours	GSM: Up to 450 hours
WCDMA: Up to 4.5 hours	WCDMA: Up to 450 hours

Note:

Talk times are dependent on network
parameters
and phone settings

Table of contents

1. COPYRIGHT	4
2. WARNINGS AND CAUTIONS.....	5
2.1 WARNINGS.....	5
2.2 CAUTIONS.....	5
3. ESD PROTECTION	6
4. CARE AND MAINTENANCE	7
5. BATTERY INFORMATION.....	8
6. EXLPODED VIEW.....	9
7. SERVICE DEVICES	10
8. SOFTWARE UPDATE.....	11
9. DISASSEMBLY INSTRUCTIONS	12
10. ASSEMBLY INSTRUCTIONS	22
11. ASSEMBLY WITH THE SS-252 JIG INSTRUCTIONS	34
12. RESETTING A SHORT-CIRCUITED X7-00	47
13. SOLDER COMPONENTS.....	48

CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	12.04.2011	

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:

Nokia Care Academy
service.manuals@nokia.com

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

1. COPYRIGHT

Copyright © 2011 Nokia. All rights reserved.

Reproduction, transfer, distribution or storage of part or all of the contents in this document in any form without the prior written permission of Nokia is prohibited.

Nokia, Nokia Connecting People, and Nokia X and Y are trademarks or registered trademarks of Nokia Corporation. Other product and company names mentioned herein may be trademarks or tradenames of their respective owners.

Nokia operates a policy of continuous development. Nokia reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Under no circumstances shall Nokia be responsible for any loss of data or income or any special, incidental, consequential or indirect damages howsoever caused.

The contents of this document are provided “as is”. Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document. Nokia reserves the right to revise this document or withdraw it at any time without prior notice.

The availability of particular products may vary by region.

IMPORTANT

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

2. 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:

2.1 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.

2.2 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

3. 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.

4. 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.

5. 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. Shortcircuiting the terminals may damage the battery or the connecting object.

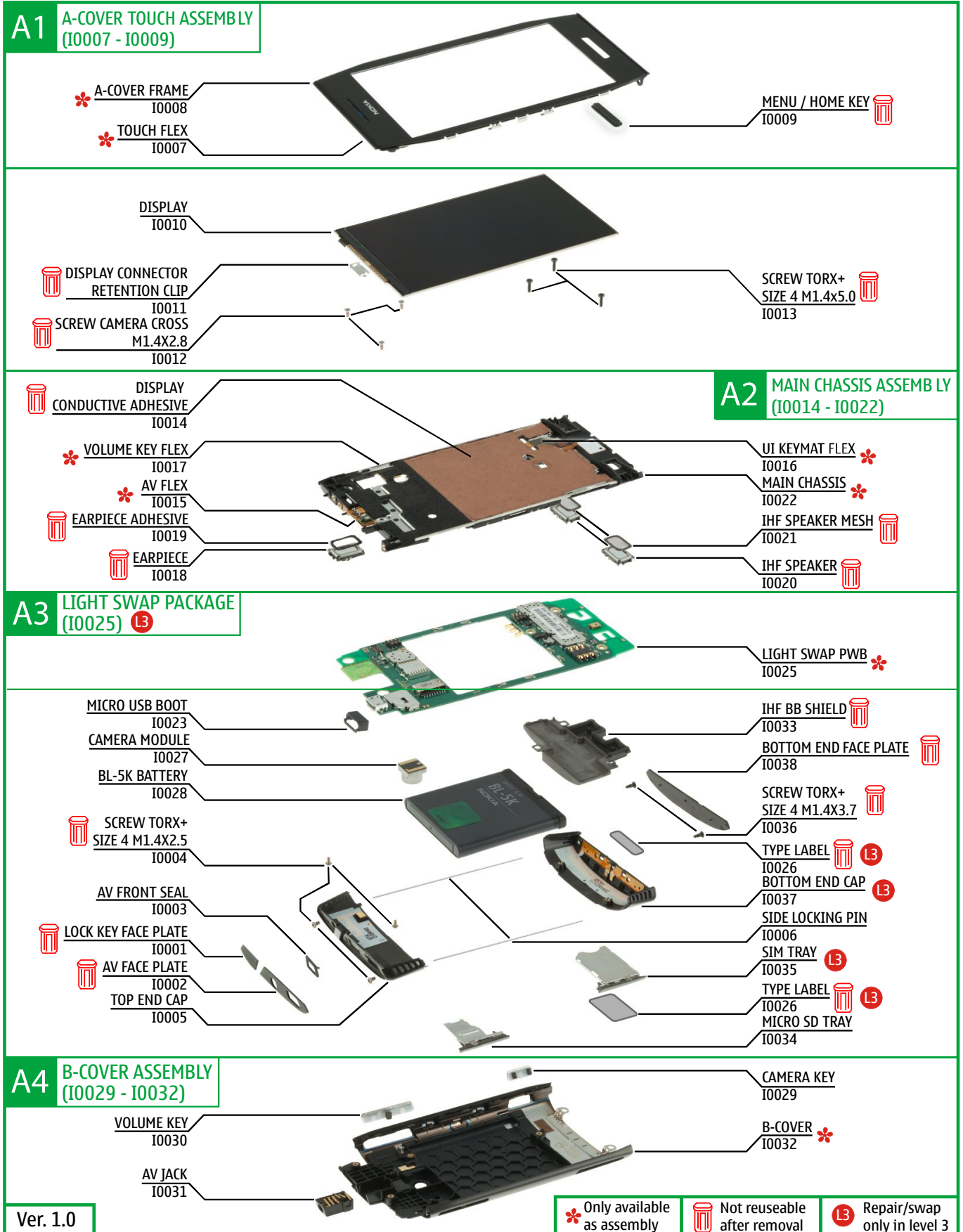
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

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.

6. EXLPODED VIEW



Ver. 1.0

* Only available as assembly

Not reuseable after removal

L3 Repair/swap only in level 3

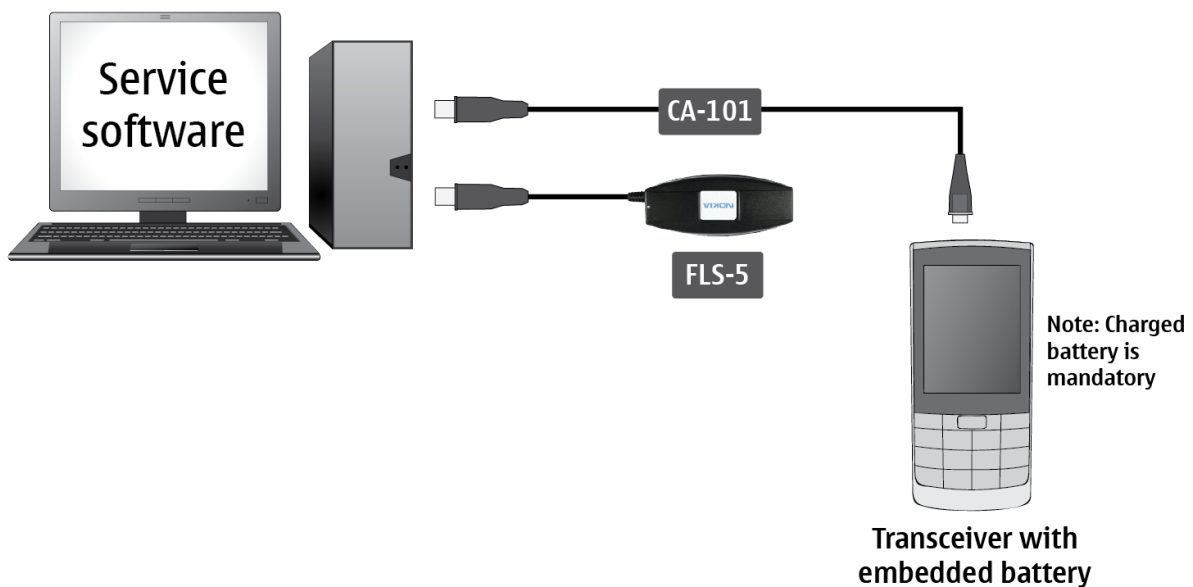
7. SERVICE DEVICES

 <p>CA-101 100cm</p> <p>CA-101 Service Cable</p>	 <p>AC-10 Travel Charger</p>	 <p>BL-5K Battery</p>
	 <p>SS-252 Assembly Jig</p>	 <p>Nokia Standard Toolkit (v2) For more information, 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>

8. SOFTWARE UPDATE

Flash concept (Point of Sale)

To use the FLS-5 Flash Dongle, follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on Nokia Online.



9. DISASSEMBLY INSTRUCTIONS



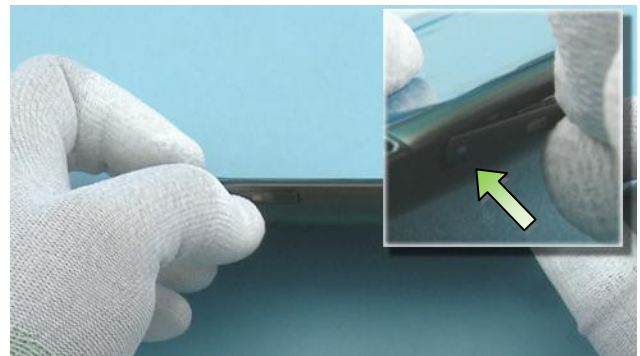
1) Nokia X7-00 disassembly.



2) You must use the Nokia Standard Toolkit version 2.



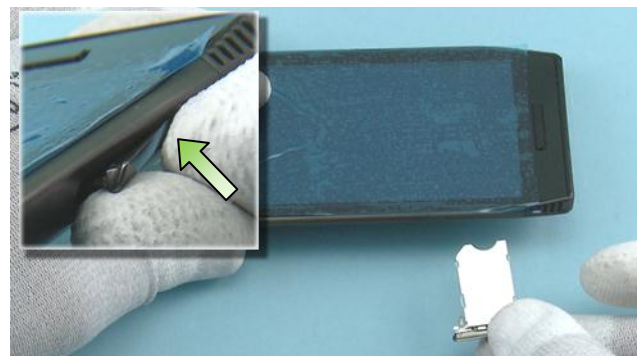
3) Protect the A-COVER TOUCH ASSEMBLY with protective film.



4) Push from the shown place to open the MICRO SD TRAY.



5) Pull out and remove the MICRO SD TRAY.



6) Push from the shown place to open the SIM TRAY. Pull out and remove the SIM TRAY.



7) Slide the SRT-6 to directions shown to release the BOTTOM END FACE PLATE. Do not use it again. Discard it.



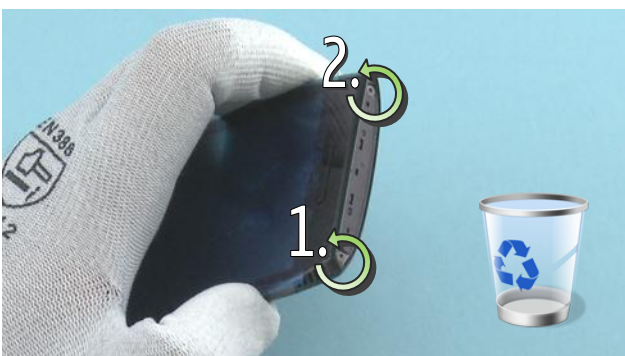
8) Note that this step is for Level 3 only! In case the BOTTOM END CAP or the ENGINE BOARD is to be replaced, use the dental tool to release the second TYPE LABEL. Remove it with tweezers. Discard it. Be careful not to injure yourself with the sharp end of the dental tool.



9) Release the AV FACE PLATE with the SRT-6. Be careful not to damage the MICRO USB connector. Do not use the AV FACE PLATE again. Discard it.



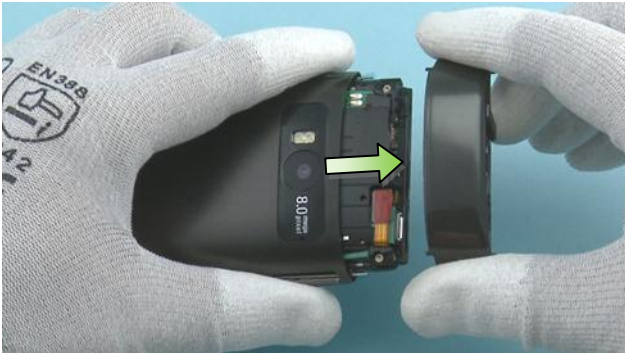
10) Release the LOCK KEY FACE PLATE with the SRT-6. Do not use it again. Discard it.



Unscrew the two Torx+ size 4 screws in the order shown. Do not use them again. Discard them.



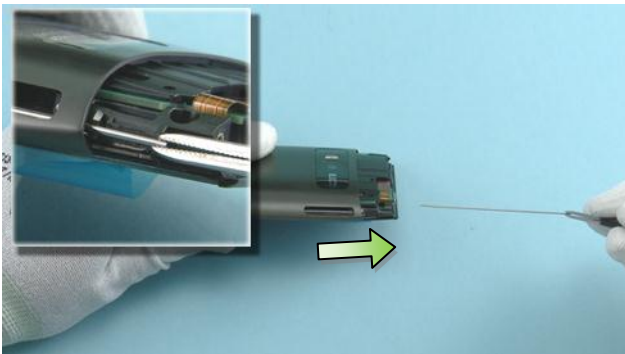
11) Unscrew the two Torx+ size 4 screws in the order shown. Do not use them again. Discard them.



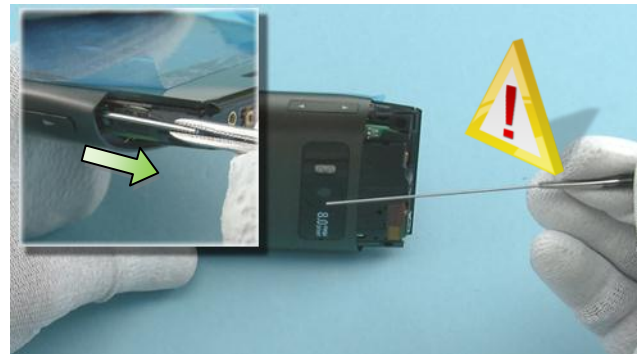
12) Pull the TOP END CAP to the direction shown and remove it.



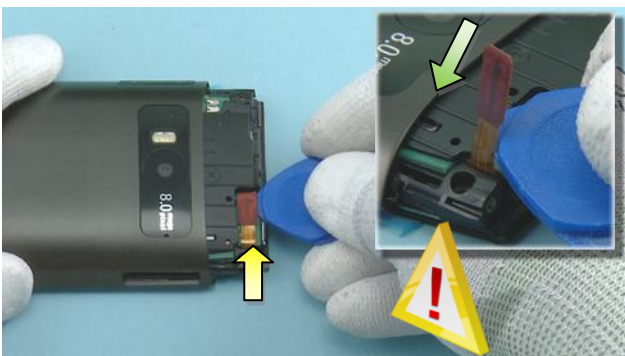
13) Unscrew the two Torx+ size 4 screws in the order shown. Do not use them again. Discard them.



14) Remove the SIDE LOCKING PIN on the left side with the serrated nose tweezers. Be careful not to damage the A-COVER TOUCH ASSEMBLY while removing the SIDE LOCKING PIN.



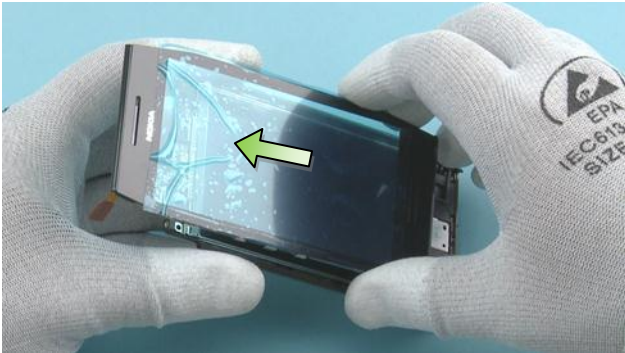
15) Remove the SIDE LOCKING PIN on the right side with the serrated nose tweezers. Be careful not to damage the A-COVER TOUCH ASSEMBLY while removing the SIDE LOCKING PIN.



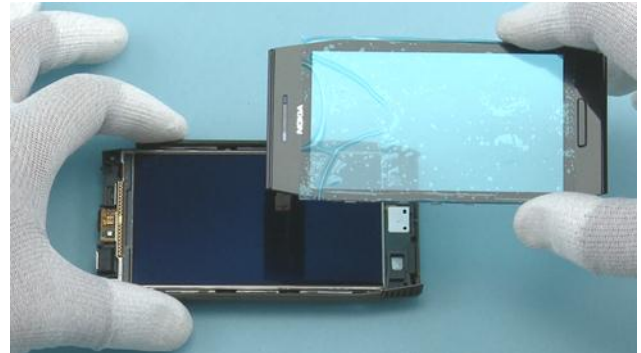
16) Open and turn aside the TOUCH FLEX connector with the SRT-6. Be careful not to damage the connector.



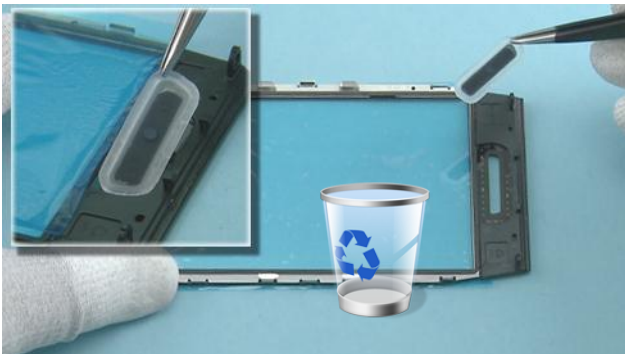
17) Lift slightly up the top end of the A-COVER TOUCH ASSEMBLY. Be careful not to damage the TOUCH FLEX connector.



18) Lift up the sides and the bottom end of the A-COVER TOUCH ASSEMBLY. Push the A-COVER TOUCH ASSEMBLY to direction shown to safely remove the TOUCH FLEX connector from its place.



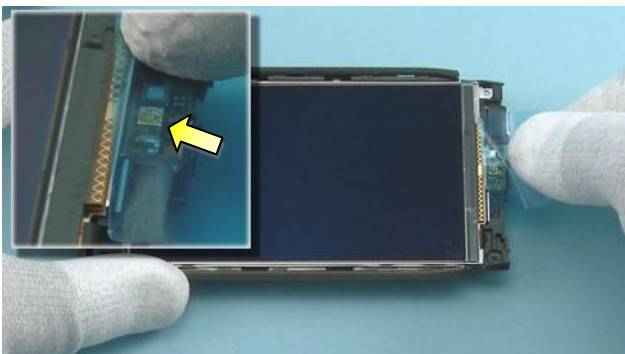
19) Separate the A-COVER TOUCH ASSEMBLY.



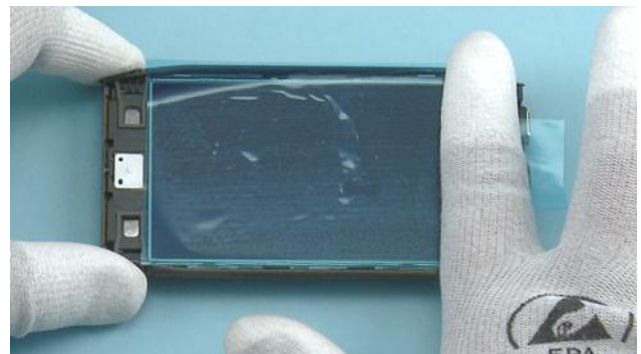
20) Remove the MENU / HOME KEY with the tweezers. Do not use it again. Discard it.



21) Protect the inner side of the A-COVER TOUCH ASSEMBLY with the protective film.



22) Protect the DIPRO LED with the protective film to avoid short circuit.



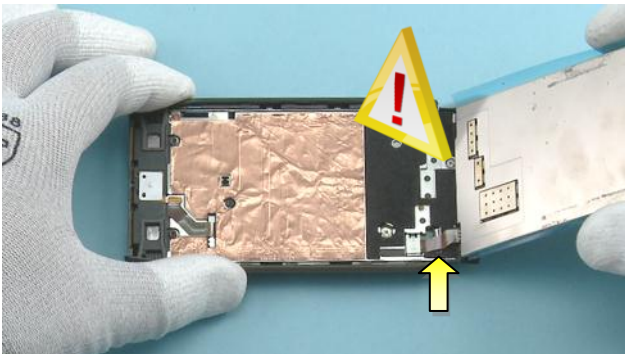
23) Protect the DISPLAY with the protective film.



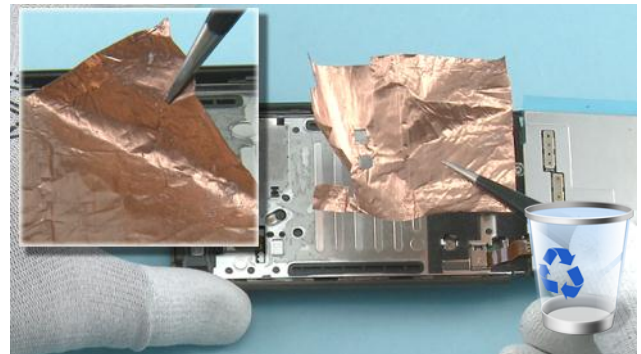
24) Lift up the DISPLAY with the SRT-6 tool carefully from the shown place. Be careful not to bend the DISPLAY.



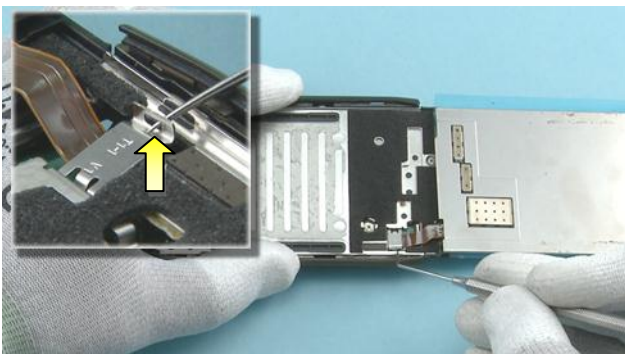
25) Push the SS-93 carefully under the DISPLAY to loosen the DISPLAY CONDUCTIVE ADHESIVE. Be careful not to bend the DISPLAY.



26) Turn the DISPLAY over. Be careful not to damage the DISPLAY connector.



27) Remove the DISPLAY CONDUCTIVE ADHESIVE with the tweezers. Do not use it again. Discard it.



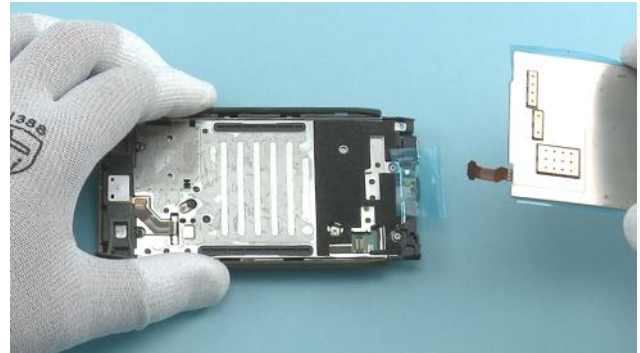
28) Release the DISPLAY CONNECTOR RETENTION CLIP with the dental tool from the shown place.



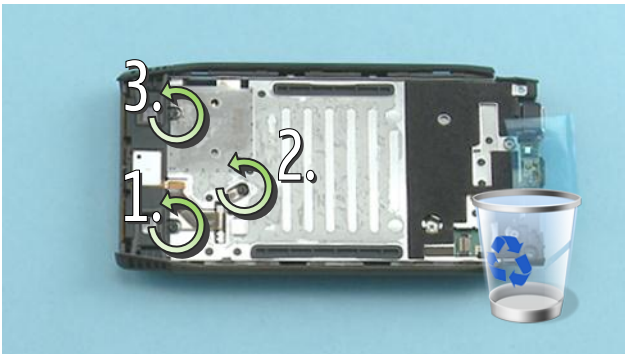
29) Remove the DISPLAY CONNECTOR RETENTION CLIP with the tweezers. Do not use it again. Discard it.



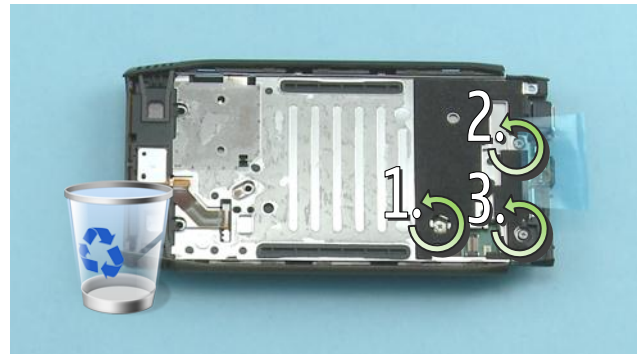
30) Open the DISPLAY connector with the SRT-6 as shown. Be careful not to damage the DISPLAY connector.



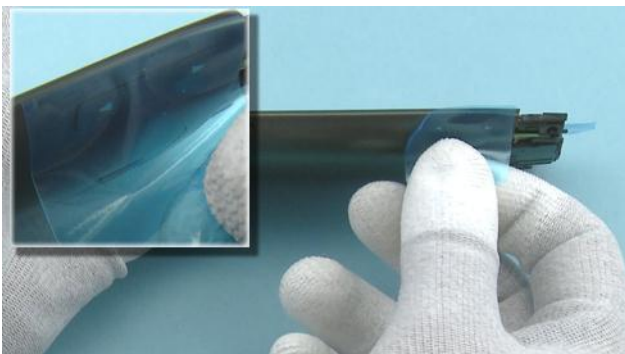
31) Remove the DISPLAY.



32) Unscrew the three Torx+ size 4 screws in the order shown. Do not use them again. Discard them.



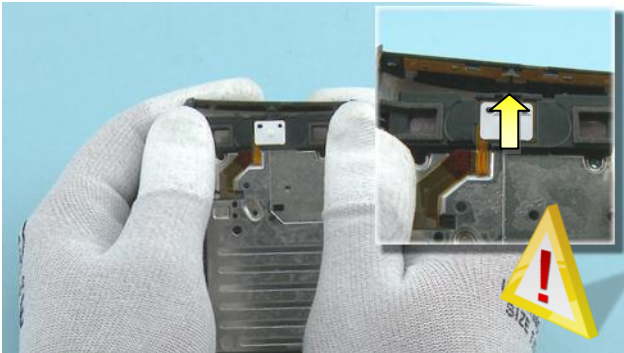
33) Unscrew the three camera cross screws in the order shown. Do not use them again. Discard them.



34) Protect the VOLUME KEY with the protective film.



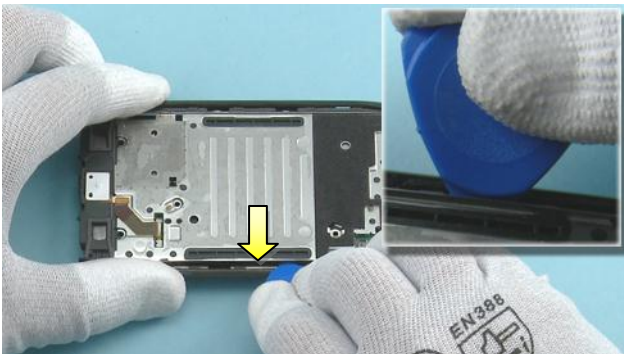
35) Protect the CAMERA KEY with the protective film.



36) Remove the BOTTOM END CAP by pushing from the back side to release the shown clip.



37) Remove the BOTTOM END CAP.



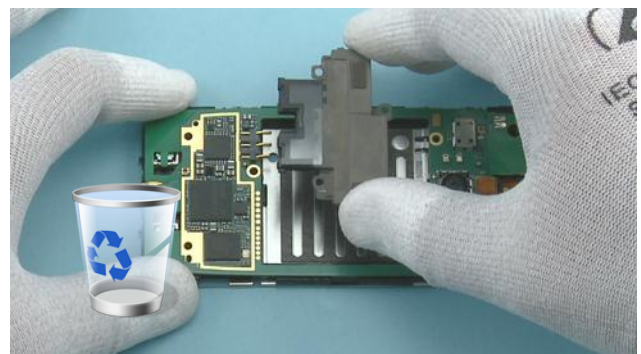
38) Use the SRT-6 to release the B-COVER from the shown place.



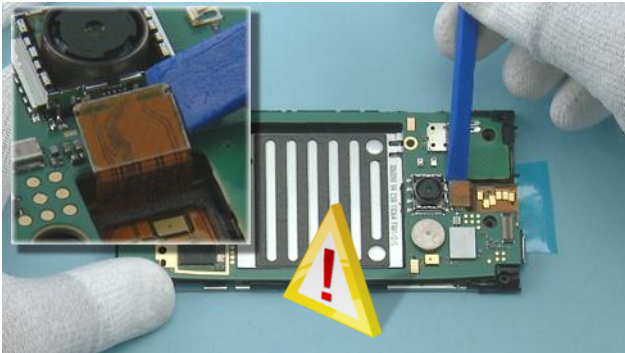
39) Turn the device over and remove the B-COVER.



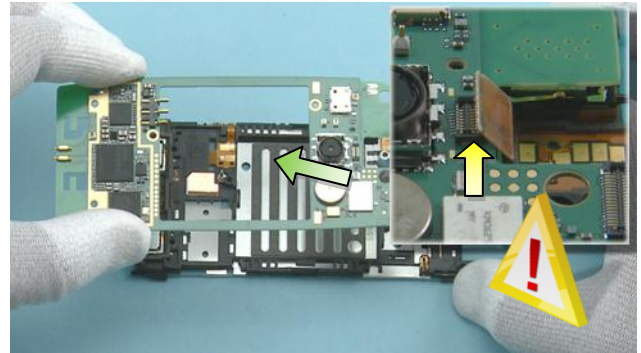
40) Remove the BATTERY.



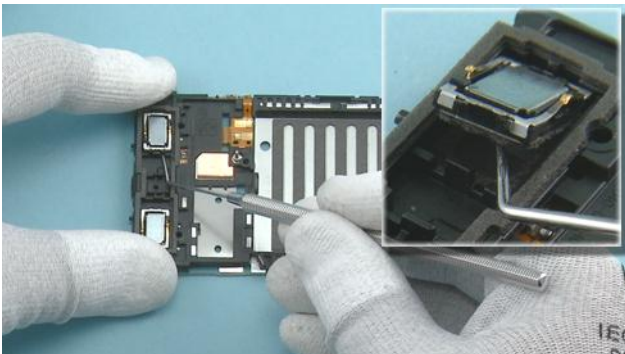
41) Remove the IHF BB SHIELD. Do not use it again. Discard it.



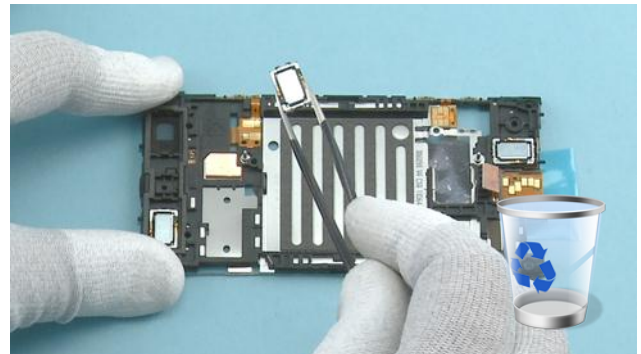
42) Release the AV FLEX connector with the SS-93. Be careful not to damage the connector or any nearby components.



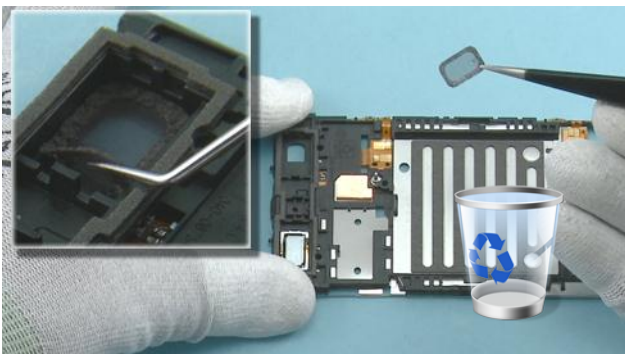
43) Carefully lift up the ENGINE BOARD and pull it to the direction shown. Be careful not to damage the connector or any nearby components.



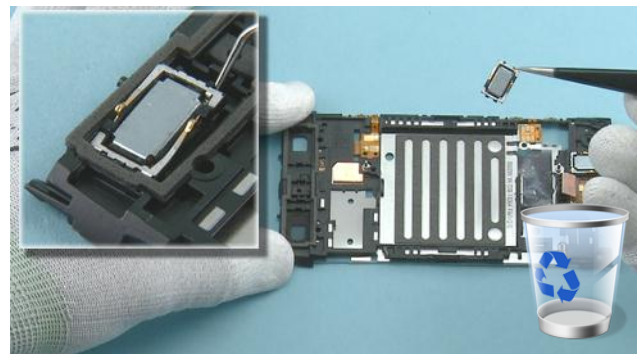
44) Use the dental tool to release the IHF SPEAKER.



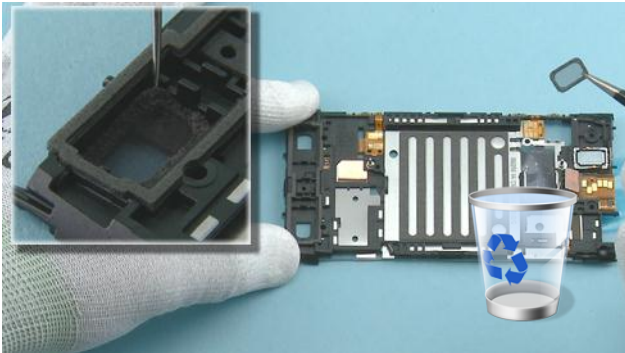
45) Remove the IHF SPEAKER with the tweezers. Do not use it again. Discard it.



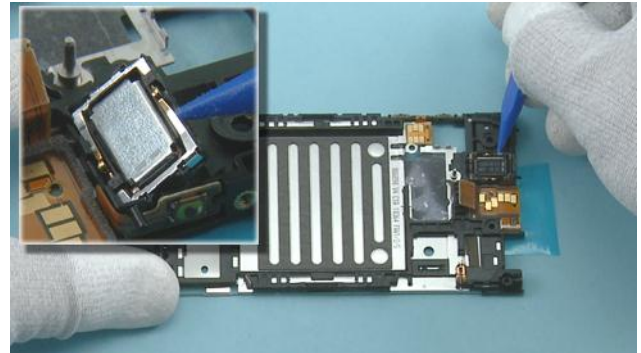
46) Release the IHF SPEAKER MESH with the dental tool and remove it with the tweezers. Do not use it again. Discard it.



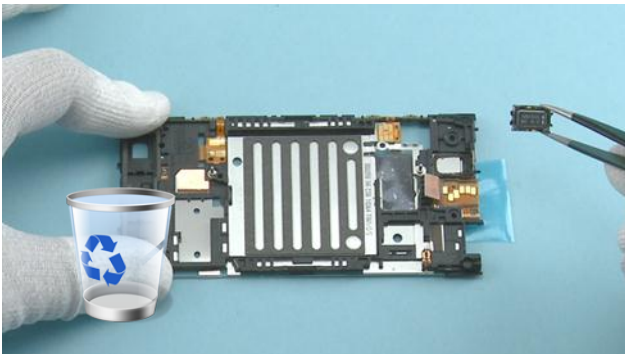
47) Use the dental tool to release the second IHF SPEAKER and remove it with the tweezers. Do not use it again. Discard it.



48) Release also the second IHF SPEAKER MESH with the dental tool and remove it with the tweezers. Do not use it again. Discard it.



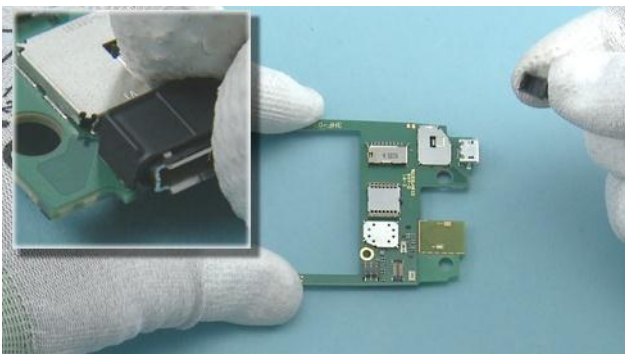
49) Use the sharp end of the SS-93 to release the EARPIECE.



50) Remove the EARPIECE with the tweezers. Do not use it again. Discard it.



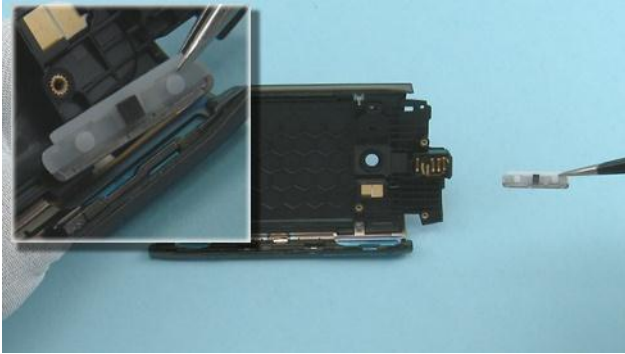
51) Remove the EARPIECE ADHESIVE with dental tool. Do not use it again. Discard it.



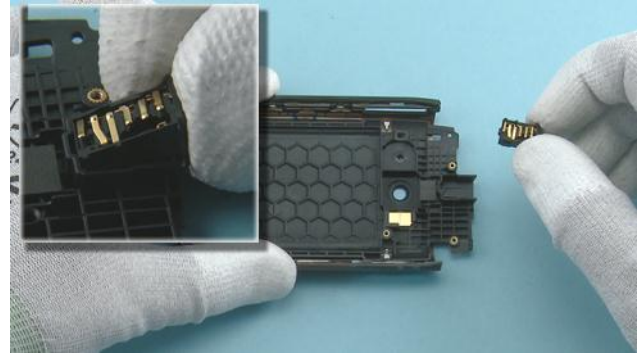
52) Remove the MICRO USB BOOT.



53) Remove the CAMERA KEY with the tweezers.



54) Remove the VOLUME KEY with the tweezers.



55) Remove the AV JACK.



56) The Nokia X7-00 disassembly is now complete.

-END OF DISASSEMBLY-

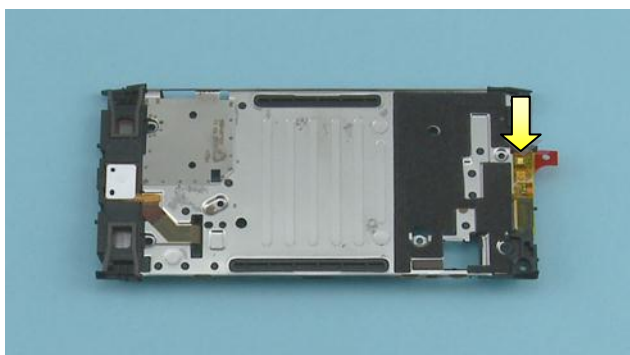
10. ASSEMBLY INSTRUCTIONS



1) Nokia X7-00 assembly.



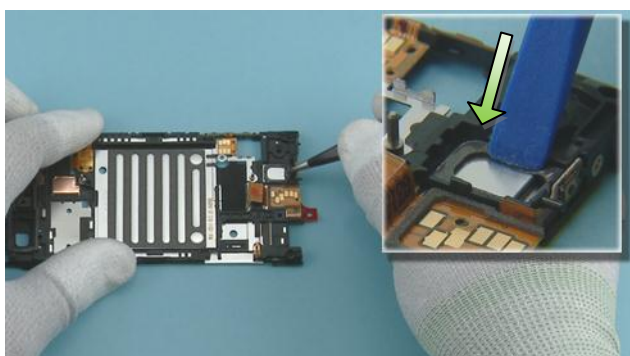
2) For assembling you need the Nokia Toolkit version 2.



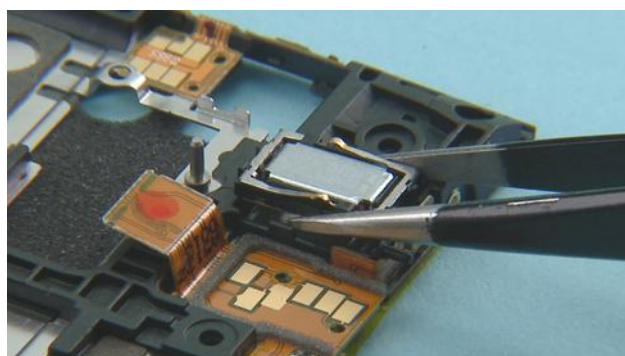
3) Protect the DIPRO LED with the protective film to avoid short circuit.



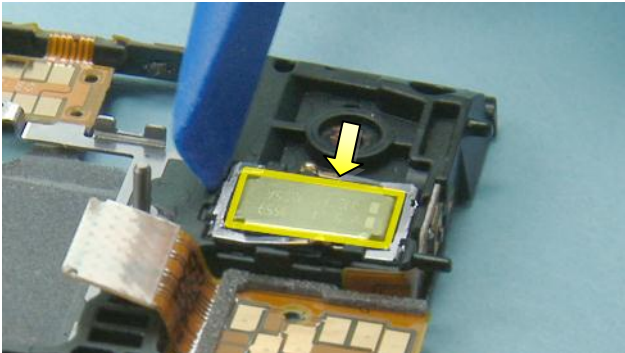
4) Remove the EARPIECE ADHESIVE protective films.



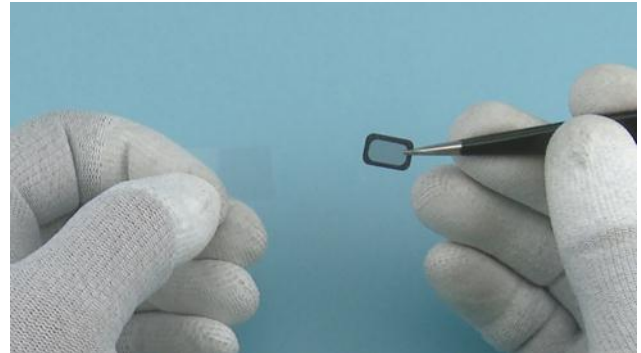
5) Place the EARPIECE ADHESIVE with the tweezers. Press it gently with the SS-93 to activate the adhesive.



6) Place the EARPIECE with the tweezers. Note the alignment of the EARPIECE.



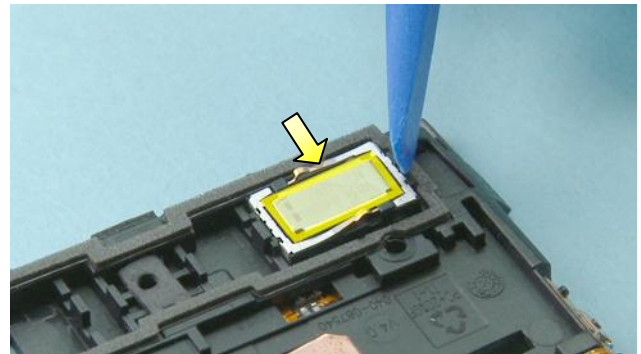
7) Push the EARPIECE with the SS-93 to its place as shown. Be careful not to touch the highlighted area!



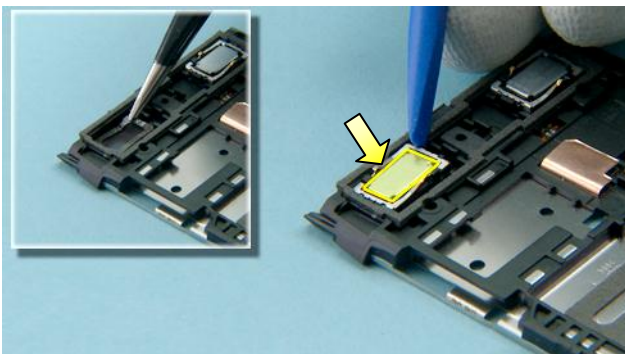
8) Remove the IHF SPEAKER MESH protective films.



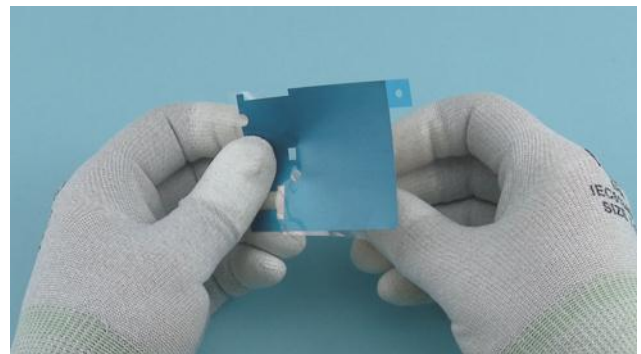
9) Place the first IHF SPEAKER MESH with the tweezers. Press it gently with the SS-93 to activate the adhesive.



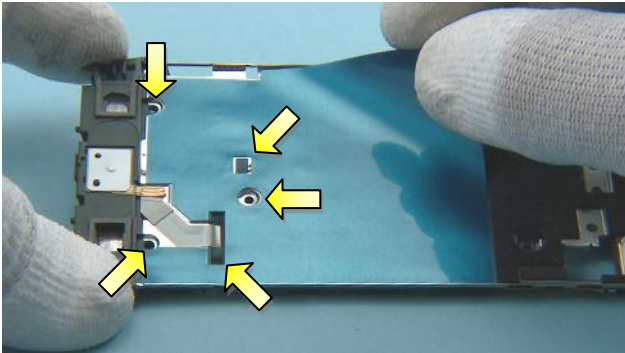
10) Then place the first IHF SPEAKER with the tweezers. Note the alignment of the IHF SPEAKER. Push the IHF SPEAKER with the SS-93 to its place as shown. Be careful not to touch the highlighted area!



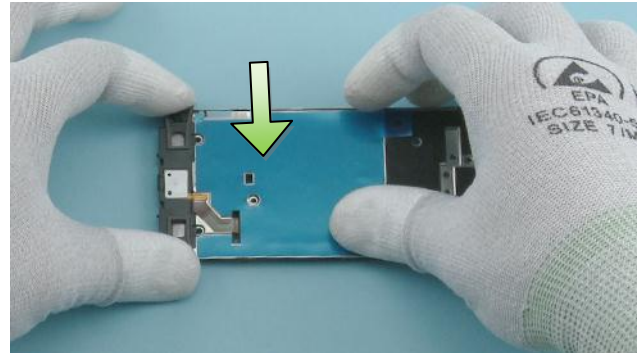
11) Use the same procedure as described earlier to place the second IHF SPEAKER MESH and second the IHF SPEAKER. Be careful not to touch the highlighted area!



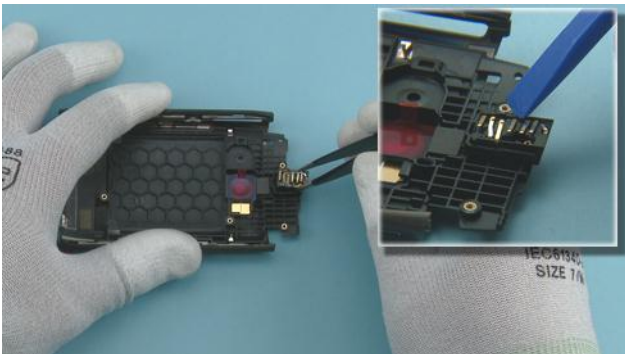
12) Peel off the DISPLAY CONDUCTIVE ADHESIVE protective film.



13) Place the DISPLAY CONDUCTIVE ADHESIVE on the MAIN CHASSIS. To place the DISPLAY CONDUCTIVE ADHESIVE correctly, use the shown places as guides.



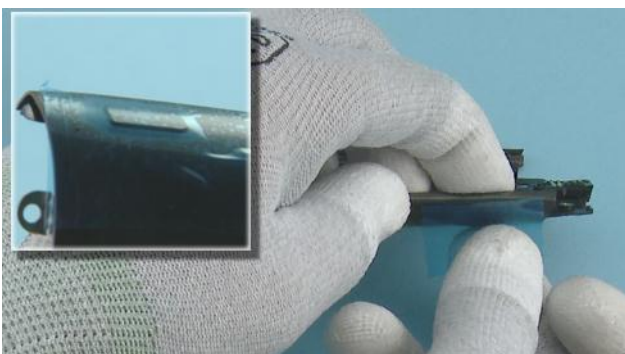
14) Press the DISPLAY CONDUCTIVE ADHESIVE to activate the adhesive.



15) Use the tweezers to place the AV JACK. Press gently the AV JACK with the SS-93 to lock it into its place.



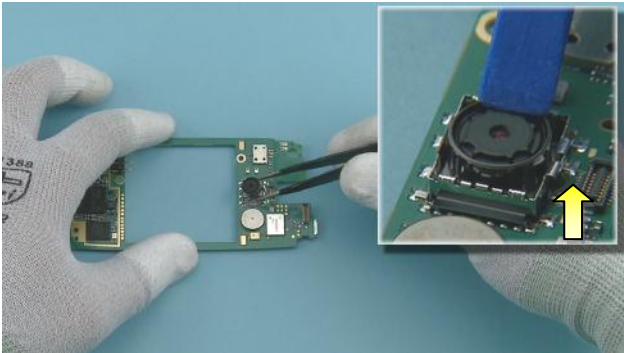
16) Use the tweezers to place the CAMERA KEY and the VOLUME KEY.



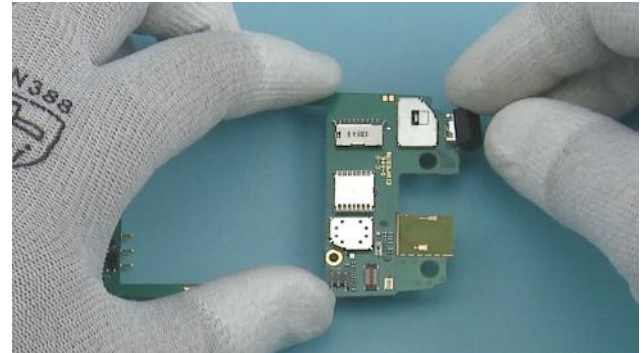
17) To ensure that the VOLUME KEY and the CAMERA KEY stays in place, be sure to use the protective film as shown.



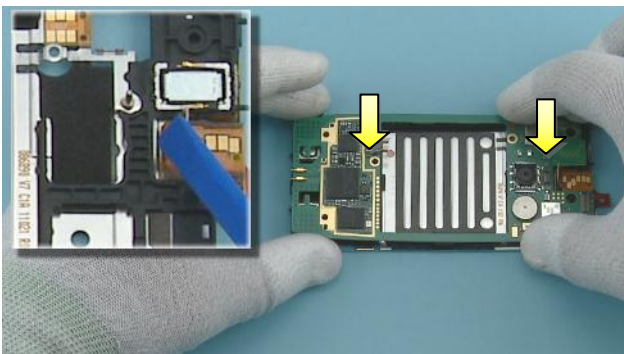
18) Remove the CAMERA opening protective film with the tweezers.



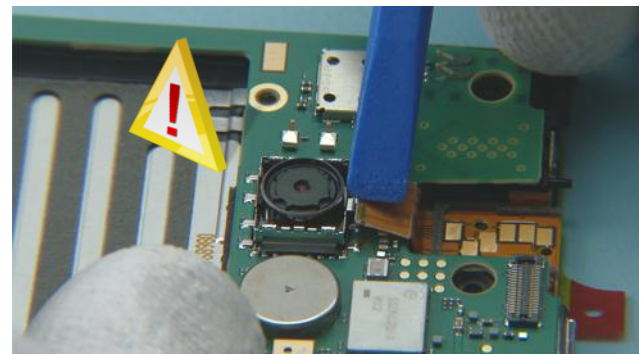
19) Place the CAMERA MODULE with the tweezers. Check that the guiding pin is aligned correctly. Press the CAMERA MODULE with the SS-93, so that the camera retaining pins are locked.



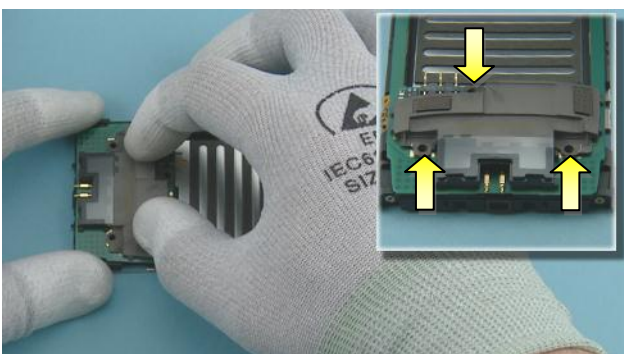
20) Place the MICRO USB BOOT as shown.



21) Before placing the ENGINE BOARD, move the HSJ FLEX connector out of the way carefully. Carefully place the ENGINE BOARD by using the two shown guiding pins.



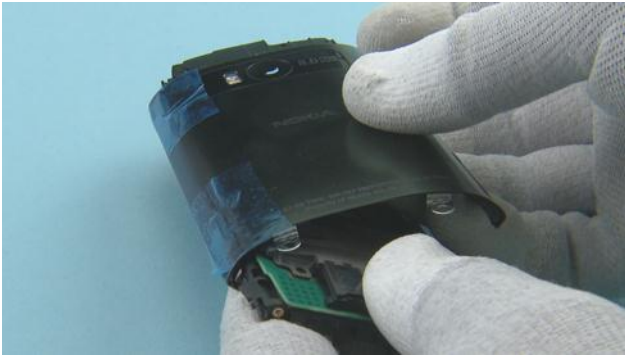
22) Connect the HSJ FLEX connector with the SS-93. Be careful not to damage the HSJ FLEX connector.



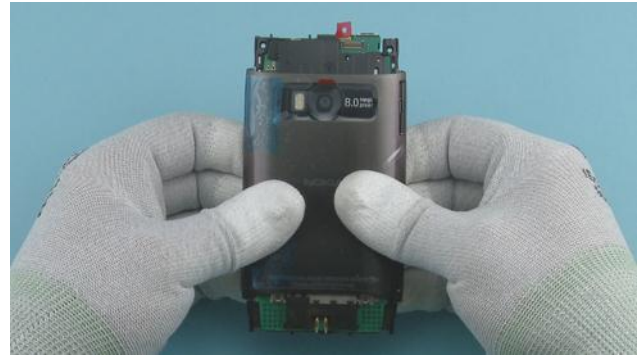
23) Place the IHF BB SHIELD and align it using the three shown holes.



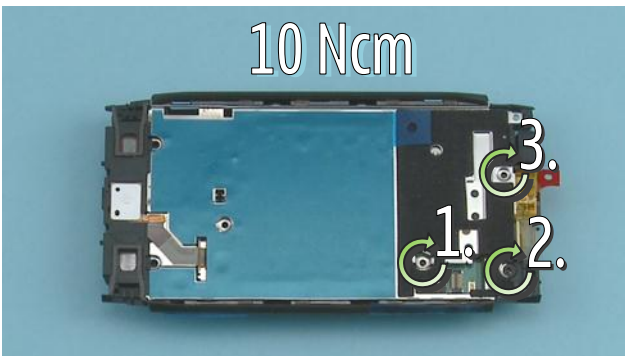
24) Place the BATTERY.



25) Place the CAMERA KEY and the VOLUME KEY side of the B-COVER first.



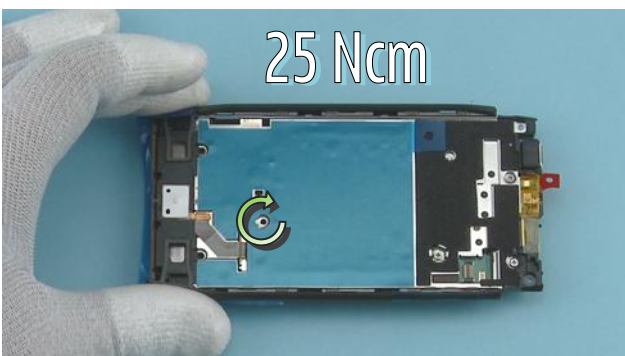
26) Then lower down the opposite side of the B-COVER. Press the B-COVER down until it snaps into place.



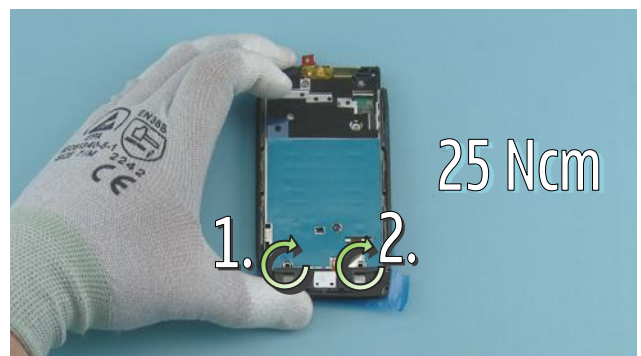
27) Tighten these three camera cross screws to the torque of 10 Ncm in the order shown.



28) Place the BOTTOM END CAP, by first sliding it in partially. Push it from the back side to lock the shown clip into its place. Be careful not to damage the clip. Press the BOTTOM END CAP to its place by pressing from the shown sides, and from the back of it.



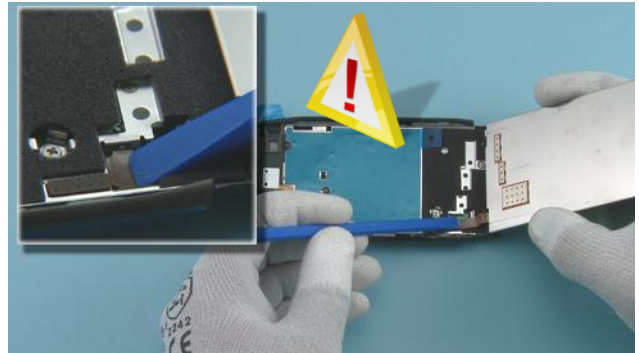
29) Tighten the shown TORX+ size 4 screw to the torque of 25 Ncm.



30) Hold the device as shown while fastening the next two screws to minimize the gap between the BOTTOM END CAP and the MAIN CHASSIS ASSEMBLY. Tighten the two shown TORX+ size 4 screws to the torque of 25 Ncm in the order shown.



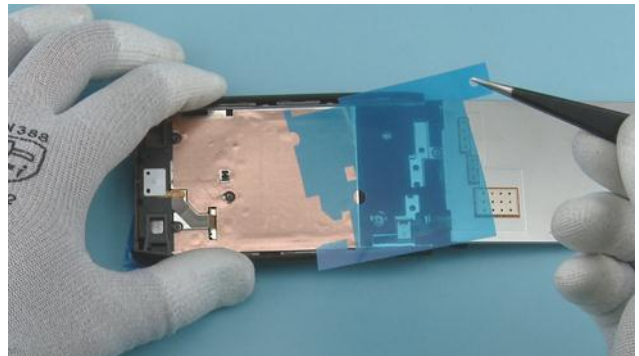
31) Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



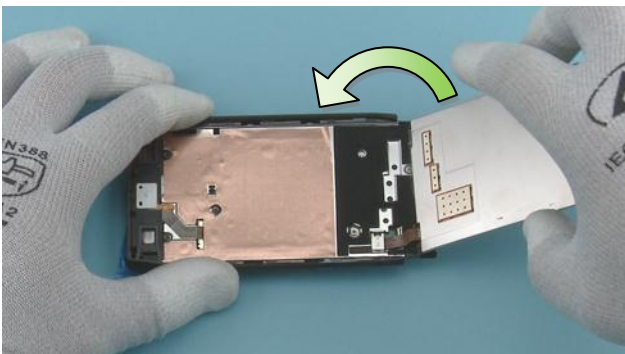
32) Use the SS-93 to connect the DISPLAY CONNECTOR. Be careful not to damage the connector.



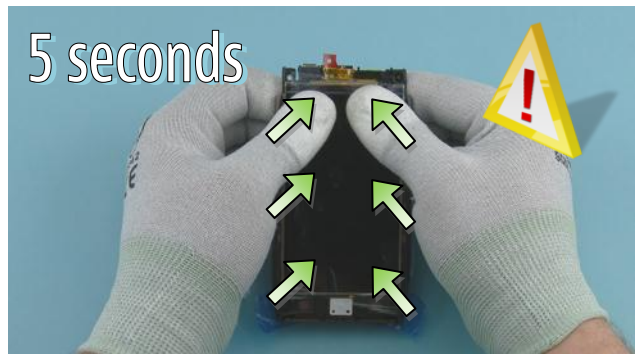
33) Use the tweezers to place the DISPLAY CONNECTOR RETENTION CLIP as shown. Press the DISPLAY CONNECTOR RETENTION CLIP with the SS-93 to fasten it correctly.



34) Remove the DISPLAY CONDUCTIVE ADHESIVE protective film.



35) Turn the DISPLAY over on to the MAIN CHASSIS.



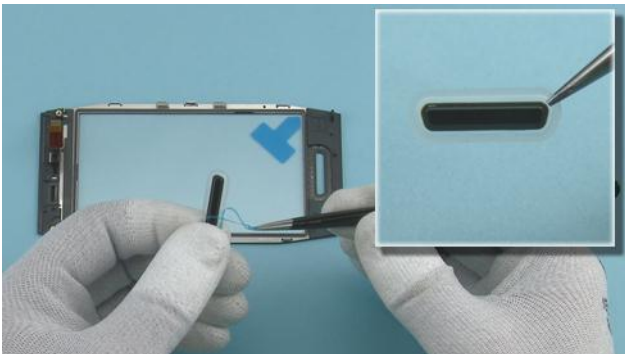
36) Activate the adhesive by gently pressing the DISPLAY for 5 seconds from the top, middle and bottom as shown. Be careful not to damage the DISPLAY.



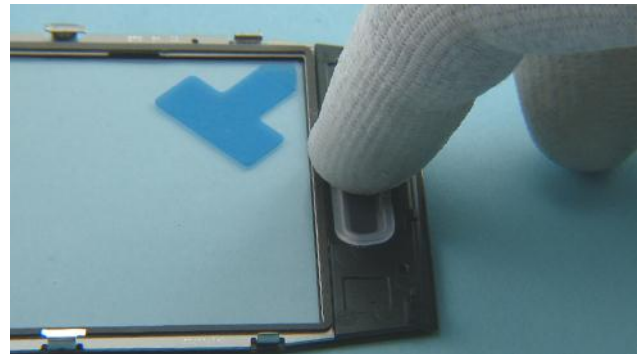
37) Remove the DIPRO LED protective film.



38) Remove the DISPLAY protective film.



39) Remove the adhesive protective film from the MENU / HOME KEY. Hold the MENU / HOME KEY as shown with tweezers to avoid scratches. If possible use plastic tweezers or tweezers with rubber tips.



40) Place the MENU / HOME KEY to the A-COVER TOUCH ASSEMBLY as shown. Press the MENU / HOME KEY very gently so that the adhesive does not activate completely.



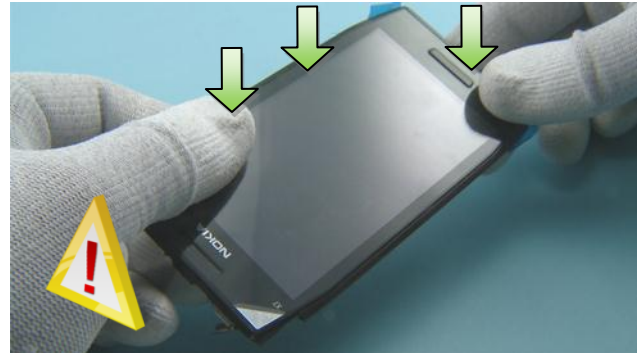
41) Check that the MENU / HOME KEY is aligned correctly in to the A-COVER TOUCH ASSEMBLY. The MENU / HOME KEY should be located on the center. Press the MENU / HOME KEY for 3 seconds to activate the adhesive.



42) Remove the inner A-COVER TOUCH ASSEMBLY protective film.



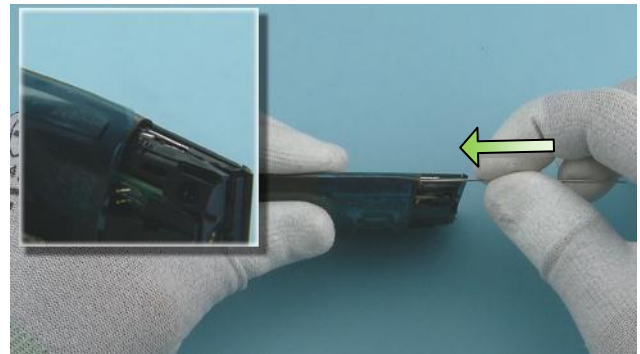
43) Guide the TOUCH FLEX to its gap as shown. Be careful not to damage the flex! Start placing the A-COVER TOUCH ASSEMBLY to its place from the shown side. Note that the A-COVER TOUCH ASSEMBLY has to be assembled in a slight angle.



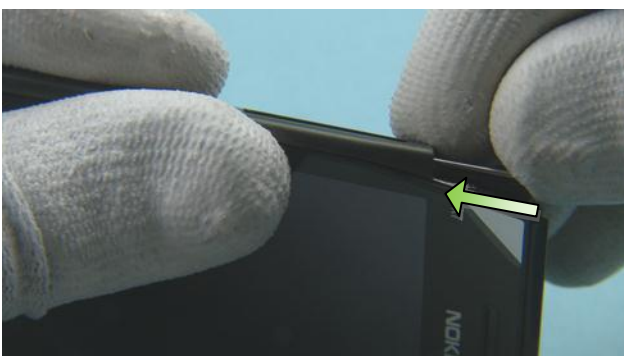
44) Lower down the other side of the A-COVER TOUCH ASSEMBLY. Be careful not to damage the B-COVER water seal with the A-COVER TOUCH ASSEMBLY hooks. Press the side and the bottom end of the A-COVER TOUCH ASSEMBLY into place.



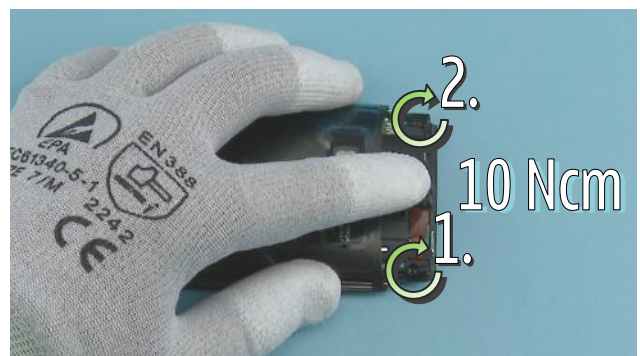
45) Connect the TOUCH FLEX connector with the SS-93. Be careful not to damage the connector.



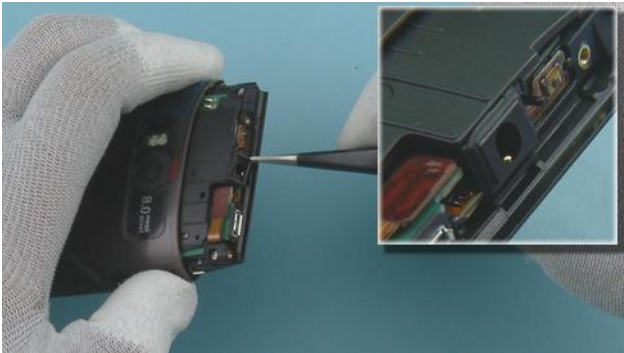
46) Hold tightly from the side of the device and push the SIDE LOCKING PIN in as shown.



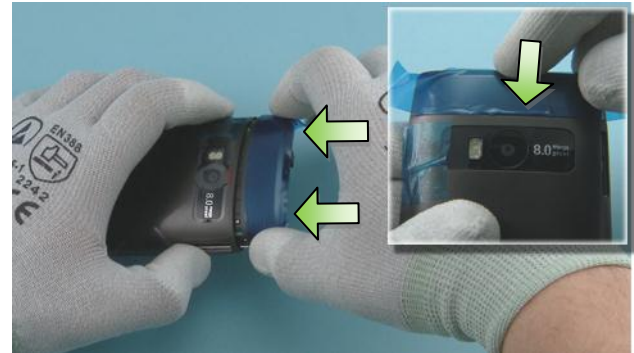
47) Use the same procedure and push in also the second SIDE LOCKING PIN.



48) Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown. Press the B-COVER down while tightening these screws.



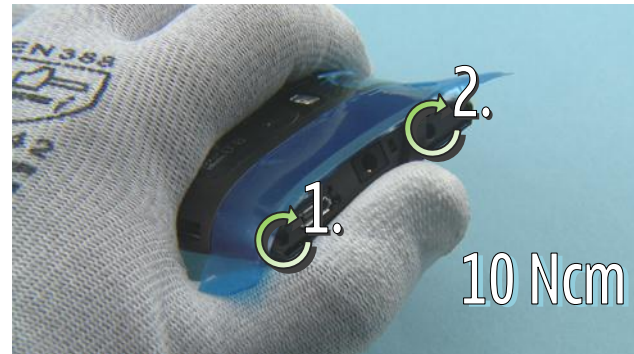
49) Place the AV FRONT SEAL to the AV JACK as shown. Then press the AV FRONT SEAL to its place with finger and make sure it is aligned correctly.



50) Place the TOP END CAP and push it from the top side and from the back side to lock it in its place.



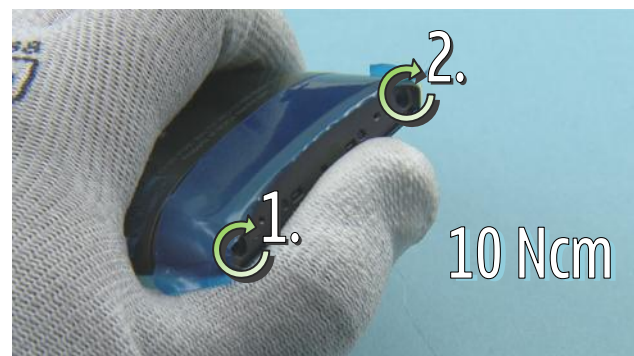
51) Test that the device can be powered up properly. If the device does not power up, this may be caused by the Dipro LED short circuit. In this case please follow the instructions how to reset a short-circuited Nokia X7-00 on page 47.



52) Push the TOP END CAP with finger as shown while fastening the next two screws. Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown.



53) Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



54) Push the BOTTOM END CAP with finger as shown while fastening the next two screws. Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown.



55) Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



56) Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



57) Note that this step is for Level 3 only! Take the second TYPE LABEL and attach it to the BOTTOM END CAP in the shown place.



58) Peel out the BOTTOM END FACE PLATE adhesive protective film.



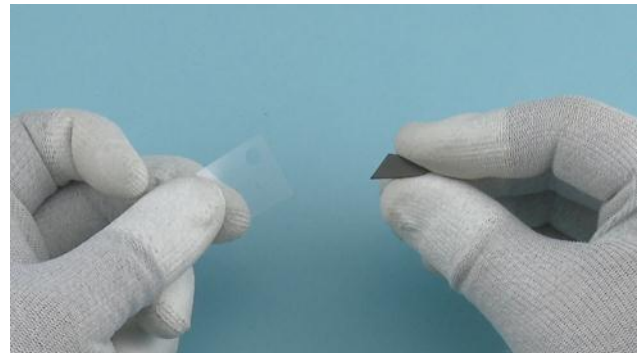
59) Place the BOTTOM END FACE PLATE to the BOTTOM END CAP and press it gently for 5 seconds to activate the adhesive.



60) Peel out the AV FACE PLATE adhesive protective film.



61) Place the AV FACE PLATE to the TOP END CAP and press it gently for 5 seconds to activate the adhesive.



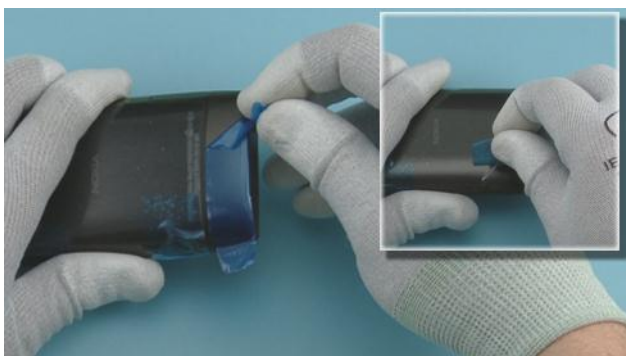
62) Peel out the LOCK KEY FACE PLATE adhesive protective film.



63) Place the LOCK KEY FACE PLATE to the TOP END CAP and press it gently for 5 seconds to activate the adhesive.



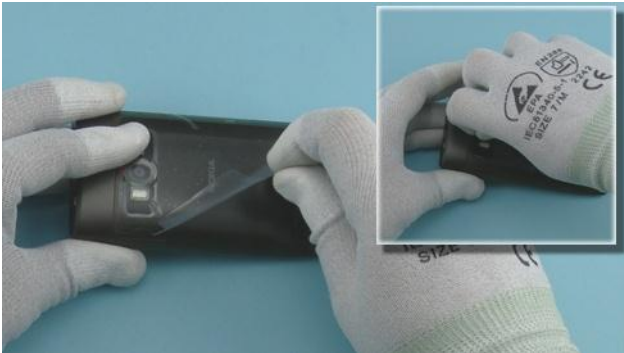
64) Insert the SIM TRAY and the MICRO SD TRAY.



65) Remove the BOTTOM END CAP and the CAMERA KEY protective films.



66) Remove the VOLUME KEY and the TOP END CAP protective films.



67) Remove the B-COVER and the CAMERA protective films.



68) Now the Nokia X7-00 assembly procedure is complete.

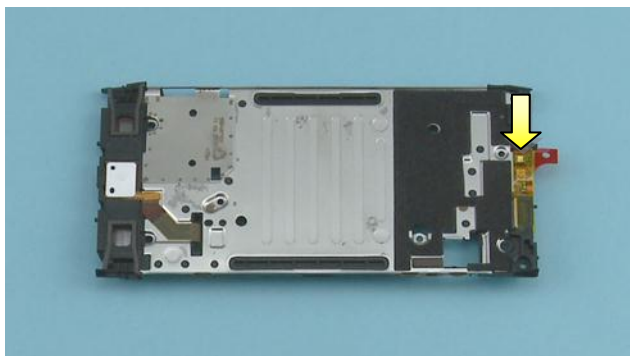
11. ASSEMBLY WITH THE SS-252 JIG INSTRUCTIONS



1) Nokia X7-00 assembly with the SS-252 jig.



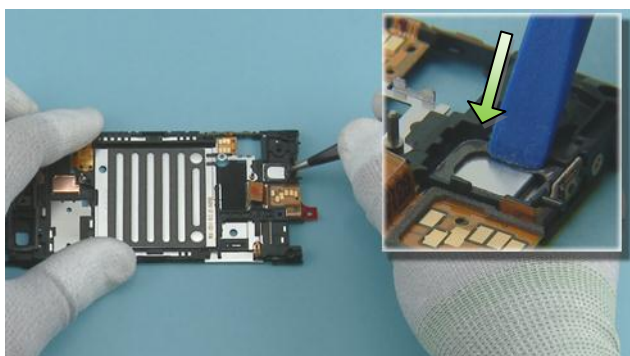
2) For assembling you need the Nokia Toolkit version 2. You will also need the SS-252 jig. Note that the SS-252 jig is optional and it is targeted only for high volume repair usage.



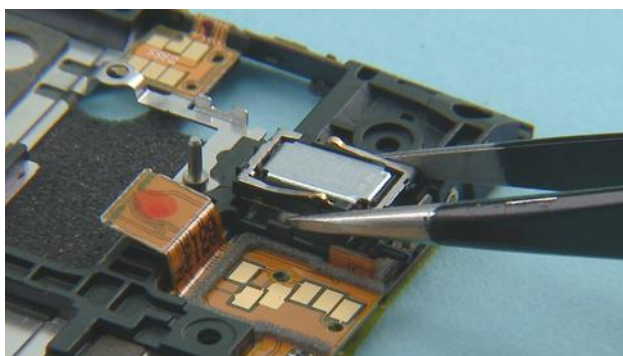
3) Protect the DIPRO LED with the protective film to avoid short circuit.



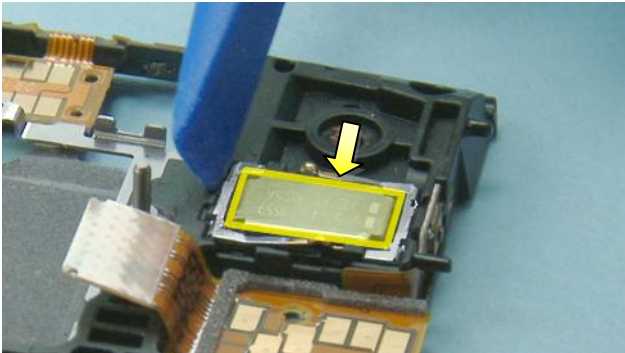
4) Remove the EARPIECE ADHESIVE protective films.



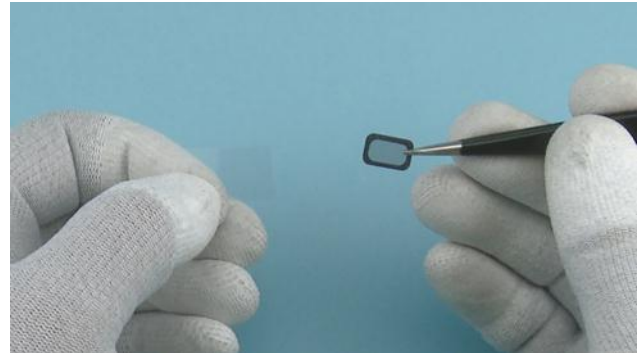
5) Place the EARPIECE ADHESIVE with the tweezers. Press it gently with the SS-93 to activate the adhesive.



6) Place the EARPIECE with the tweezers. Note the alignment of the EARPIECE.



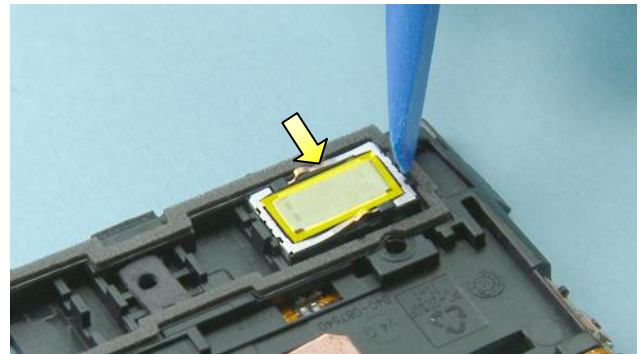
7) Push the EARPIECE with the SS-93 to its place as shown. Be careful not to touch the highlighted area!



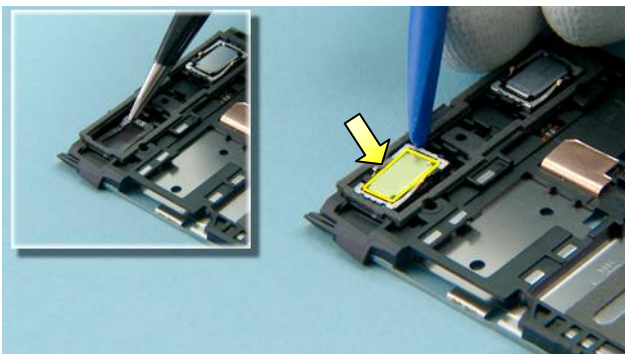
8) Remove the IHF SPEAKER MESH protective films.



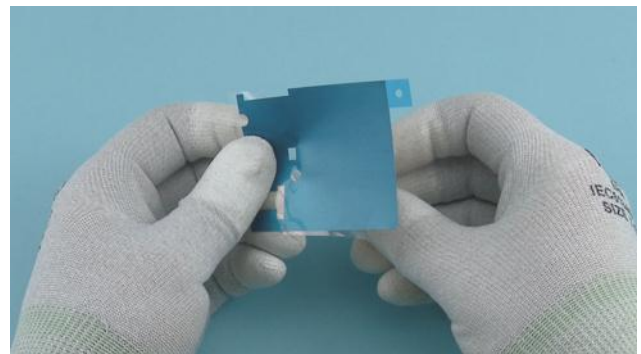
9) Place the first IHF SPEAKER MESH with the tweezers. Press it gently with the SS-93 to activate the adhesive.



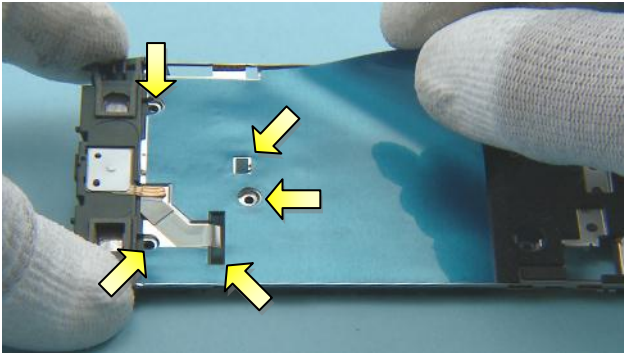
10) Then place the first IHF SPEAKER with the tweezers. Note the alignment of the IHF SPEAKER. Push the IHF SPEAKER with the SS-93 to its place as shown. Be careful not to touch the highlighted area!



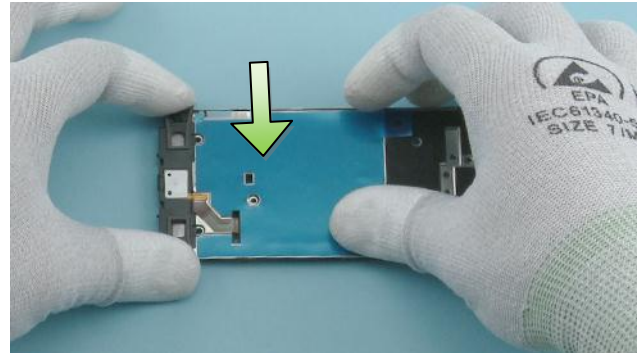
11) Use the same procedure as described earlier to place the second IHF SPEAKER MESH and second the IHF SPEAKER. Be careful not to touch the highlighted area!



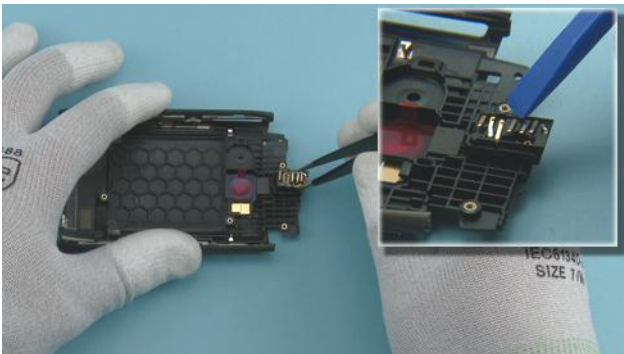
12) Peel off the DISPLAY CONDUCTIVE ADHESIVE protective film.



13) Place the DISPLAY CONDUCTIVE ADHESIVE on the MAIN CHASSIS. To place the DISPLAY CONDUCTIVE ADHESIVE correctly, use the shown places as guides.



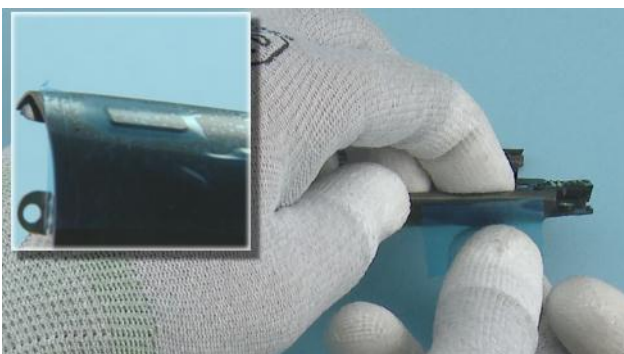
14) Press the DISPLAY CONDUCTIVE ADHESIVE to activate the adhesive.



15) Use the tweezers to place the AV JACK. Press gently the AV JACK with the SS-93 to lock it into its place.



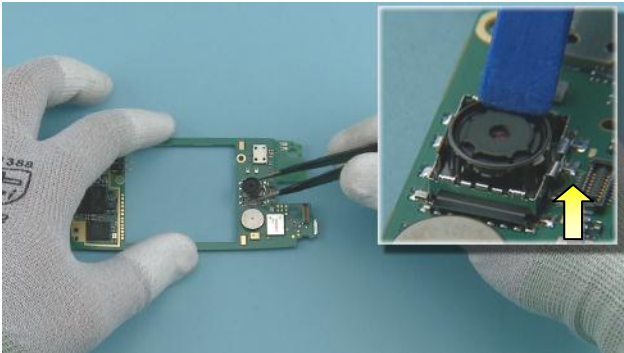
16) Use the tweezers to place the CAMERA KEY and the VOLUME KEY.



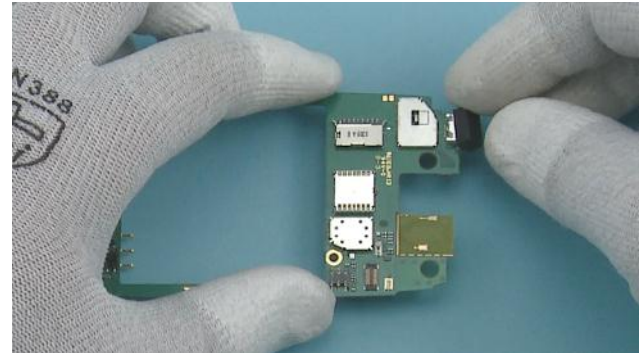
17) To ensure that the VOLUME KEY and the CAMERA KEY stays in place, be sure to use the protective film as shown.



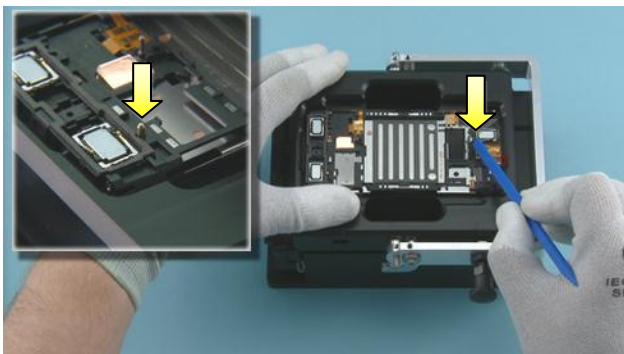
18) Remove the CAMERA opening protective film with the tweezers.



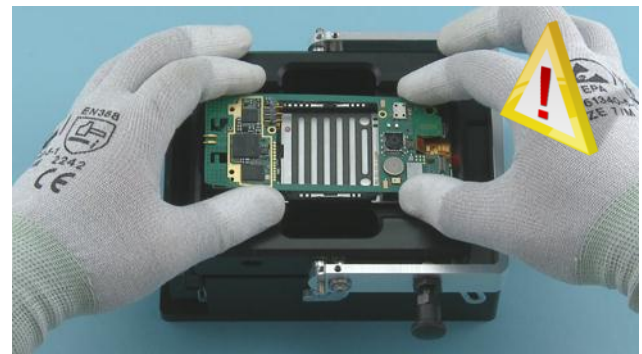
19) Place the CAMERA MODULE with the tweezers. Check that the guiding pin is aligned correctly. Press the CAMERA MODULE with the SS-93, so that the camera retaining pins are locked.



20) Place the MICRO USB BOOT as shown.



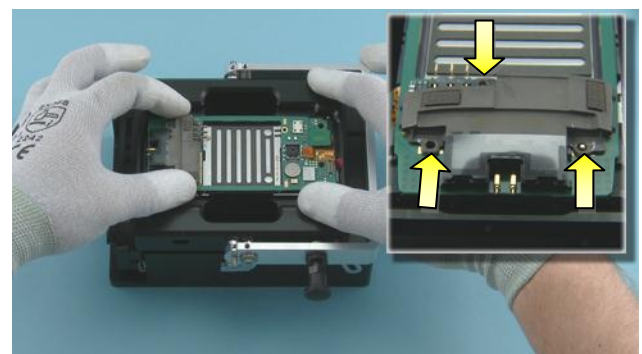
21) Place the MAIN CHASSIS on the SS-252 jig by using the two shown guiding pins. Before placing the ENGINE BOARD, move the HSJ FLEX connector out of the way carefully with the SS-93.



22) Place the ENGINE BOARD by using the same guiding pins as in previous step. Be careful not to damage the HSJ FLEX connector.



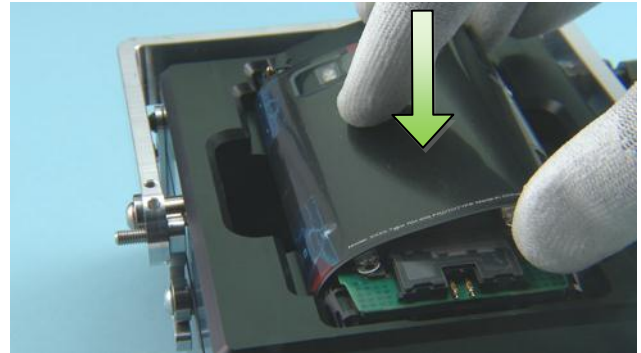
23) Connect the HSJ FLEX connector with the SS-93. Be careful not to damage the connector.



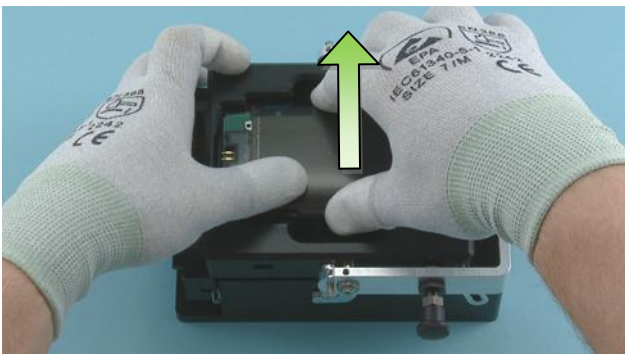
24) Place the IHF BB SHIELD and align it using the three shown holes.



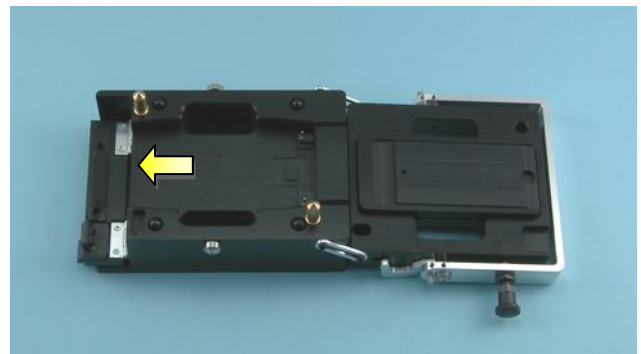
25) Place the BATTERY.



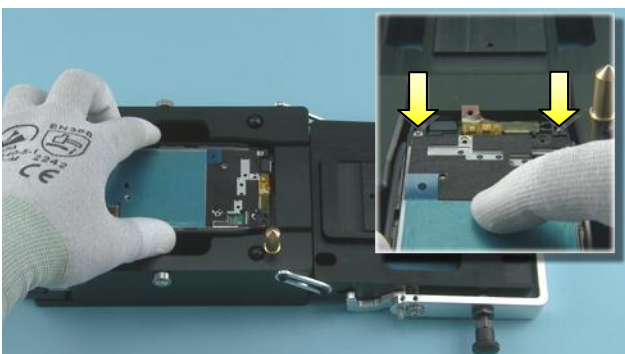
26) Place the CAMERA KEY and the VOLUME KEY side of the B-COVER first. Then lower down the opposite side of the B-COVER. Press the B-COVER down until it snaps into place.



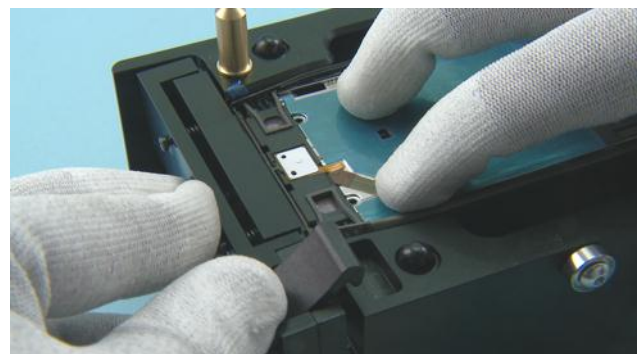
27) Remove the device from the jig.



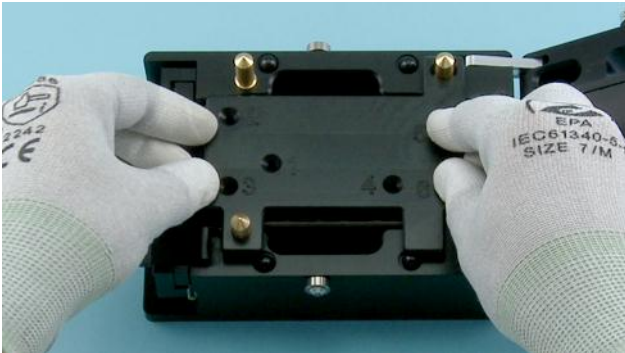
28) Open the jig as shown. Be sure to open also the shown end of the jig.



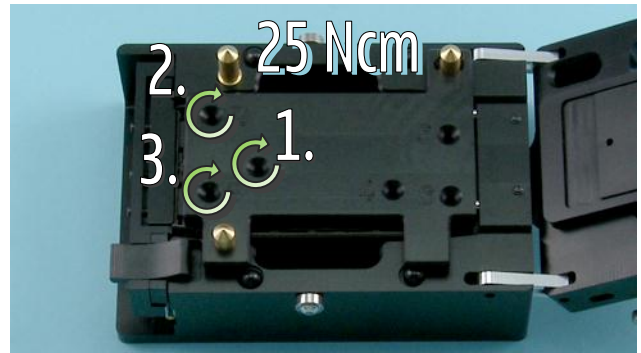
29) Place the device in the jig by using the two shown guiding pins.



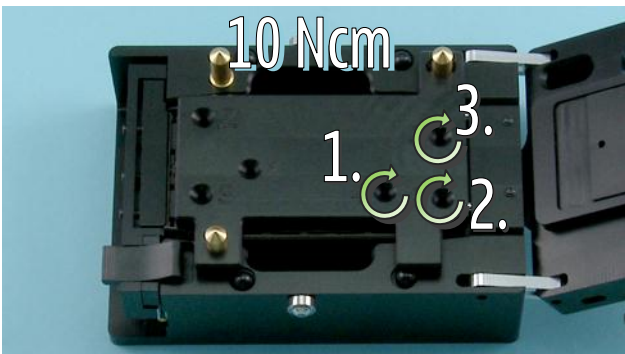
30) Lock the bottom end of the jig.



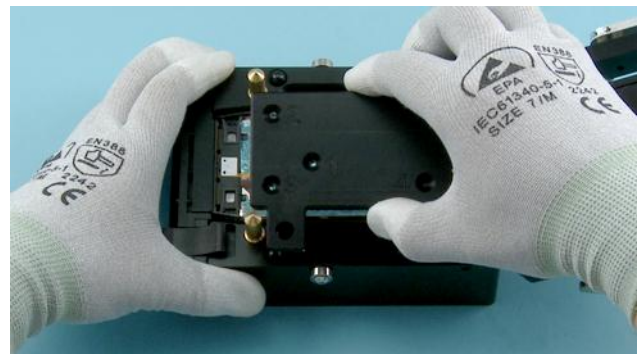
31) Place the screw guide plate.



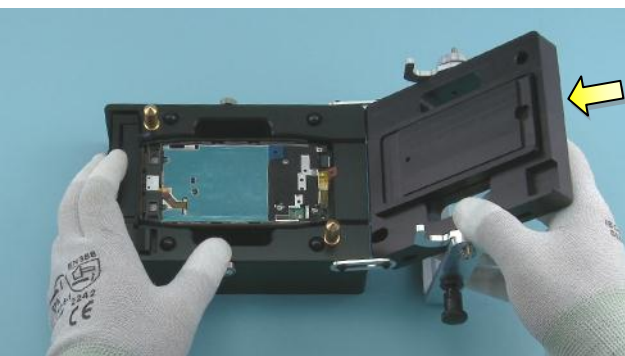
32) Tighten the three shown TORX+ size 4 screws to the torque of 25 Ncm in the order shown.



33) Tighten these three camera cross screws to the torque of 10 Ncm in the order shown.



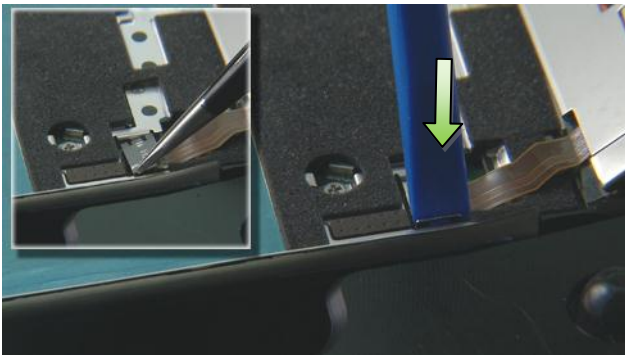
34) Remove the screw guide plate.



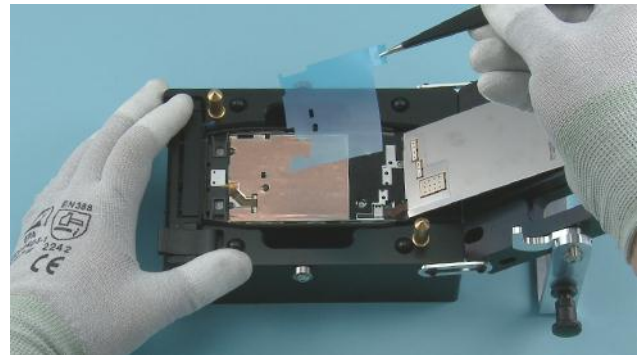
35) Adjust the top part of the jig as shown.



36) Use the SS-93 to connect the DISPLAY CONNECTOR. Be careful not to damage the connector.



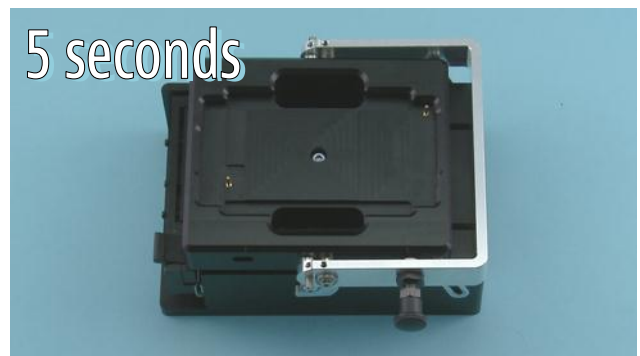
37) Use the tweezers to place the DISPLAY CONNECTOR RETENTION CLIP as shown. Press the DISPLAY CONNECTOR RETENTION CLIP with the SS-93 to fasten it correctly.



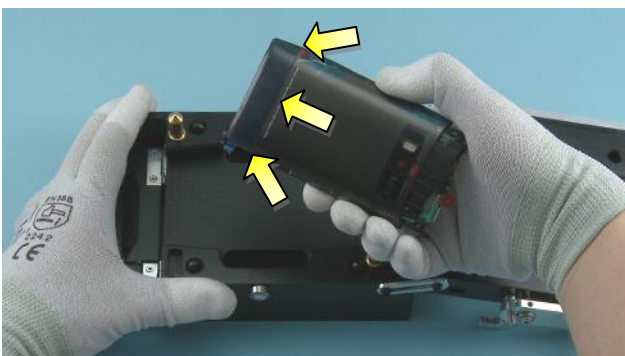
38) Remove the DISPLAY CONDUCTIVE ADHESIVE protective film.



39) Turn the DISPLAY over on to the MAIN CHASSIS. Check that the shown side of the press plate is on top.



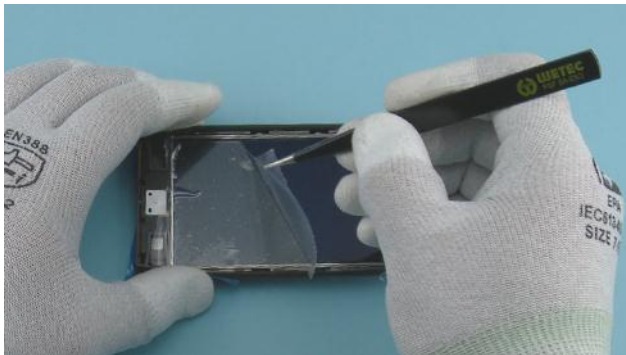
40) Close the jig as shown. Lock the jig and keep it locked down for 5 seconds to activate the DISPLAY CONDUCTIVE ADHESIVE.



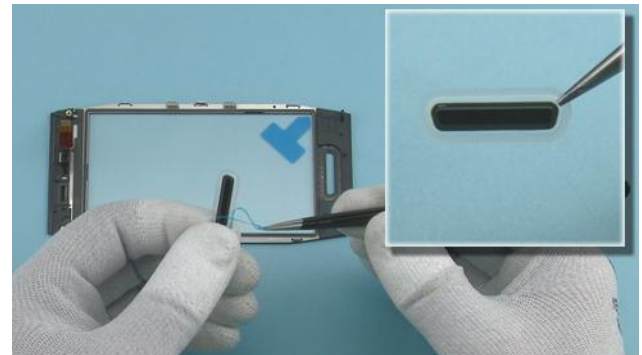
41) Unlock and open the jig and remove the device from it. Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



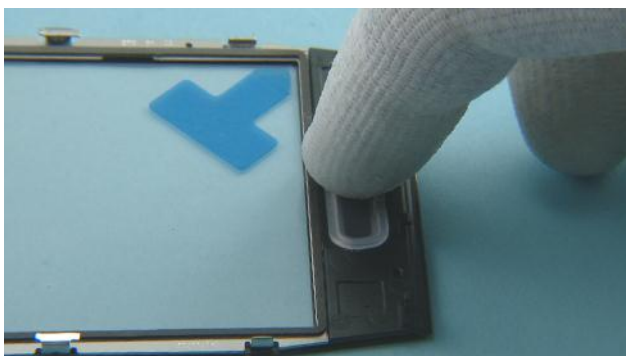
42) Remove the DIPRO LED protective film.



43) Remove the DISPLAY protective film.



44) Remove the adhesive protective film from the MENU / HOME KEY. Hold the MENU / HOME KEY as shown with tweezers to avoid scratches. If possible use plastic tweezers or tweezers with rubber tips.



45) Place the MENU / HOME KEY to the A-COVER TOUCH ASSEMBLY as shown. Press the MENU / HOME KEY very gently so that the adhesive does not activate completely.



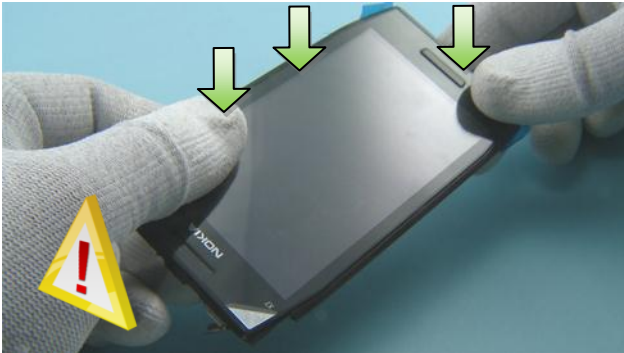
46) Check that the MENU / HOME KEY is aligned correctly in to the A-COVER TOUCH ASSEMBLY. The MENU / HOME KEY should be located on the center. Press the MENU / HOME KEY for 3 seconds to activate the adhesive.



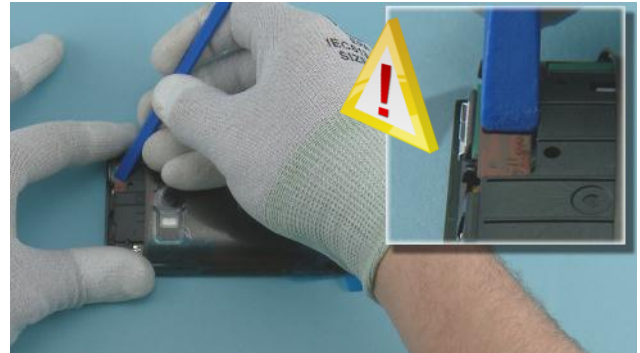
47) Remove the inner A-COVER TOUCH ASSEMBLY protective film.



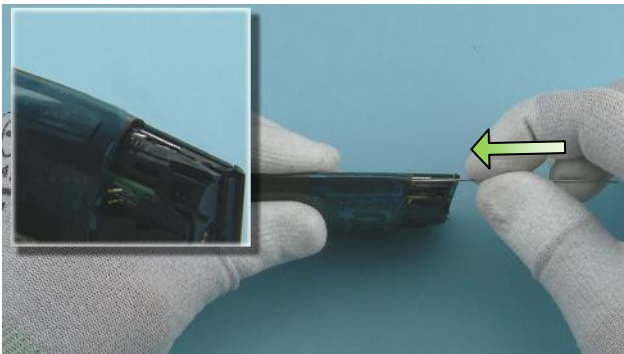
48) Guide the TOUCH FLEX to its gap as shown. Be careful not to damage the flex! Start placing the A-COVER TOUCH ASSEMBLY to its place from the shown side. Note that the A-COVER TOUCH ASSEMBLY has to be assembled in a slight angle.



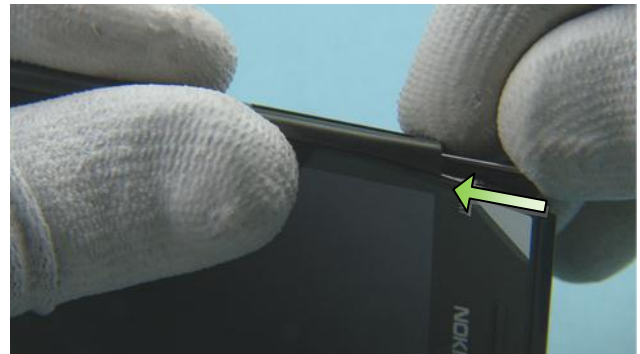
49) Lower down the other side of the A-COVER TOUCH ASSEMBLY. Be careful not to damage the B-COVER water seal with the A-COVER TOUCH ASSEMBLY hooks. Press the side and the bottom end of the A-COVER TOUCH ASSEMBLY into place.



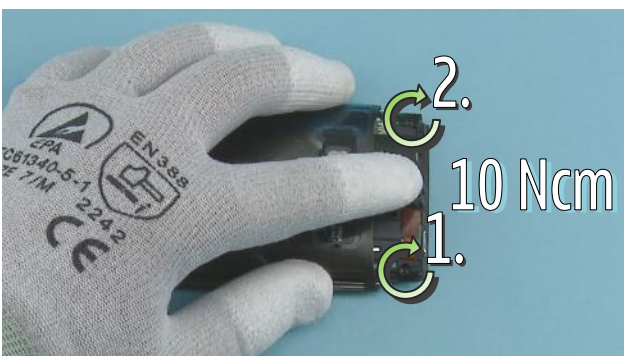
50) Connect the TOUCH FLEX connector with the SS-93. Be careful not to damage the connector.



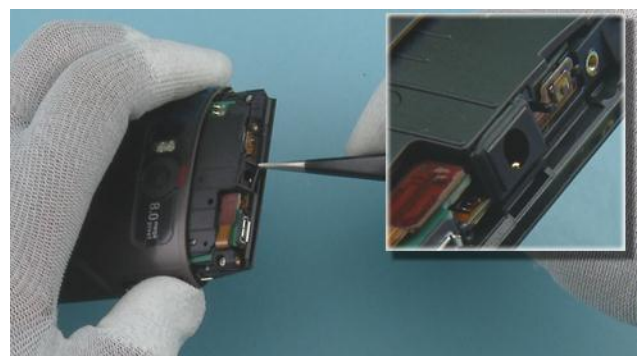
51) Hold tightly from the side of the device and push the SIDE LOCKING PIN in as shown.



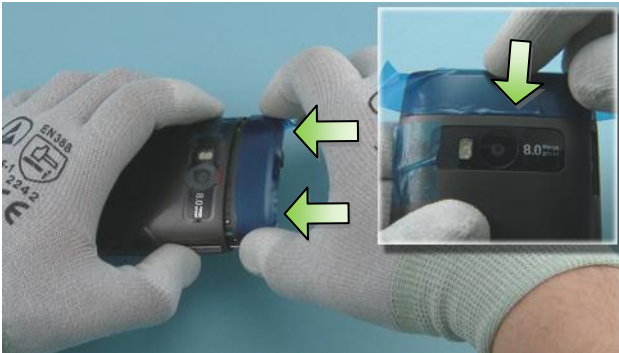
52) Use the same procedure and push in also the second SIDE LOCKING PIN.



53) Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown. Press the B-COVER down while tightening these screws.



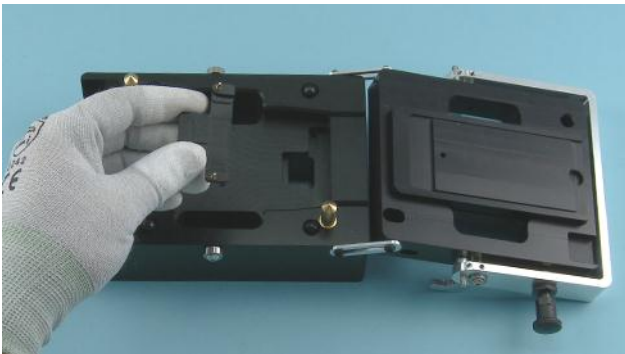
54) Place the AV FRONT SEAL to the AV JACK as shown. Then press the AV FRONT SEAL to its place with finger and make sure it is aligned correctly.



55) Place the TOP END CAP and push it from the top side and from the back side to lock it in its place.



56) Test that the device can be powered up properly. If the device does not power up, this may be caused by the Dipro LED short circuit. In this case please follow the instructions how to reset a short-circuited Nokia X7-00 on page 47.



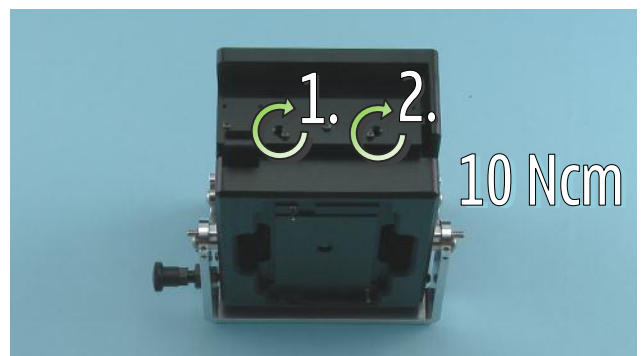
57) Remove the pin guide from the jig.



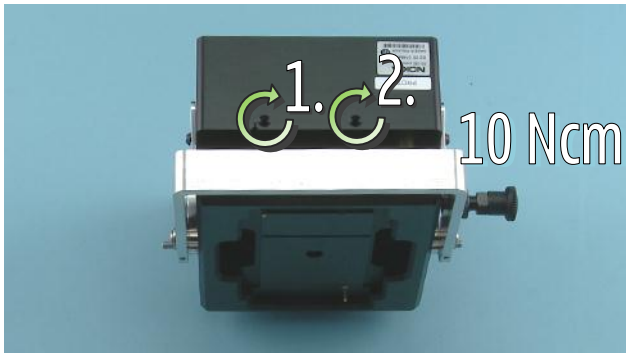
58) Turn over the press plate so that rubber bumps are on top.



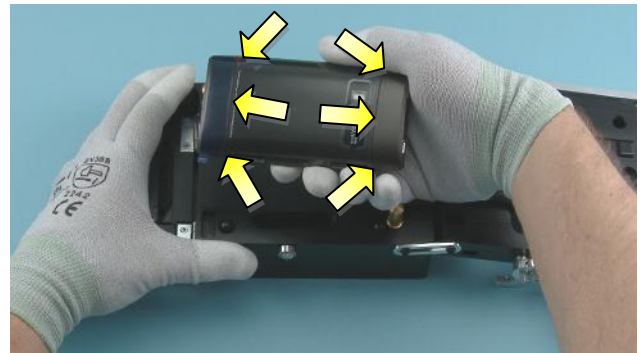
59) Place the device in the jig as shown and lock the bottom end of the jig. Then close the top part of the jig and lock it.



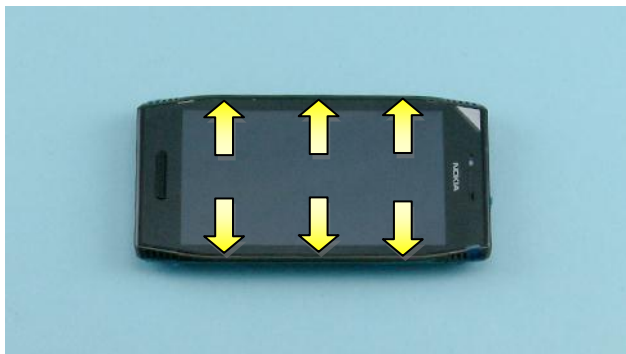
60) Turn the jig so that the bottom end is facing upwards. Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown.



61) Turn around the jig. Tighten these two TORX+ size 4 screws to the torque of 10 Ncm in the order shown.



62) Open the jig and remove the device from it. Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



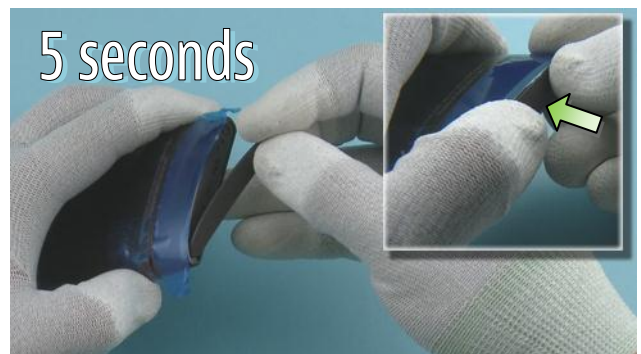
63) Check the shown gaps for defects in installation. Please refer to the gap specification document for accurate values.



64) Note that this step is for Level 3 only! Take the second TYPE LABEL and attach it to the BOTTOM END CAP in the shown place.



65) Peel out the BOTTOM END FACE PLATE adhesive protective film.



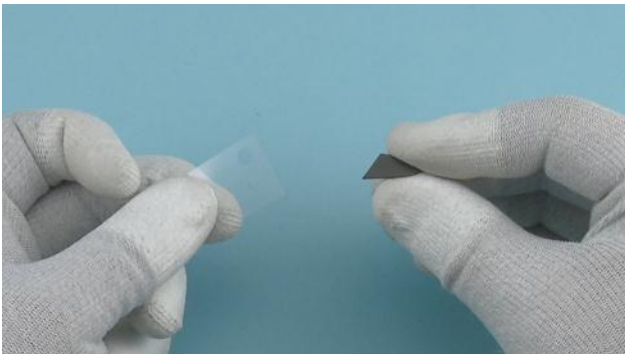
66) Place the BOTTOM END FACE PLATE to the BOTTOM END CAP and press it gently for 5 seconds to activate the adhesive.



67) Peel out the AV FACE PLATE adhesive protective film.



68) Place the AV FACE PLATE to the TOP END CAP and press it gently for 5 seconds to activate the adhesive.



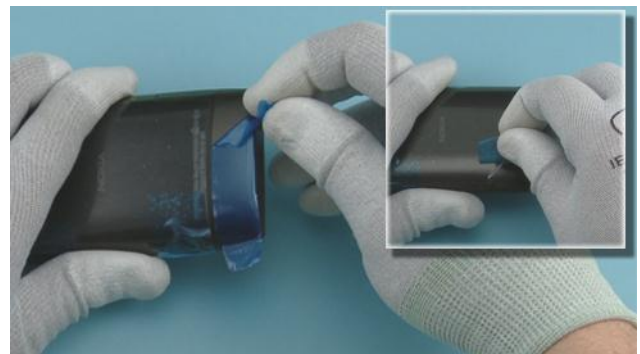
69) Peel out the LOCK KEY FACE PLATE adhesive protective film.



70) Place the LOCK KEY FACE PLATE to the TOP END CAP and press it gently for 5 seconds to activate the adhesive.



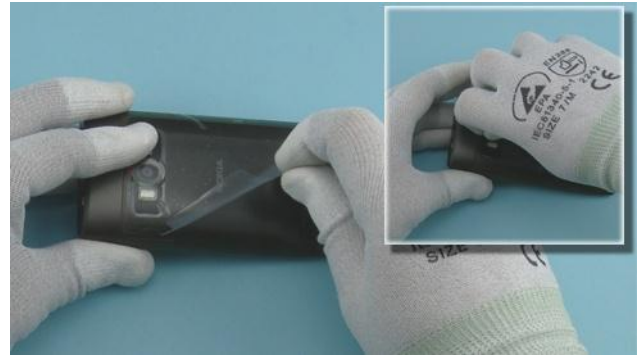
71) Insert the SIM TRAY and the MICRO SD TRAY.



72) Remove the BOTTOM END CAP and the CAMERA KEY protective films.



73) Remove the VOLUME KEY and the TOP END CAP protective films.



74) Remove the B-COVER and the CAMERA protective films.



75) Now the Nokia X7-00 assembly procedure is complete.

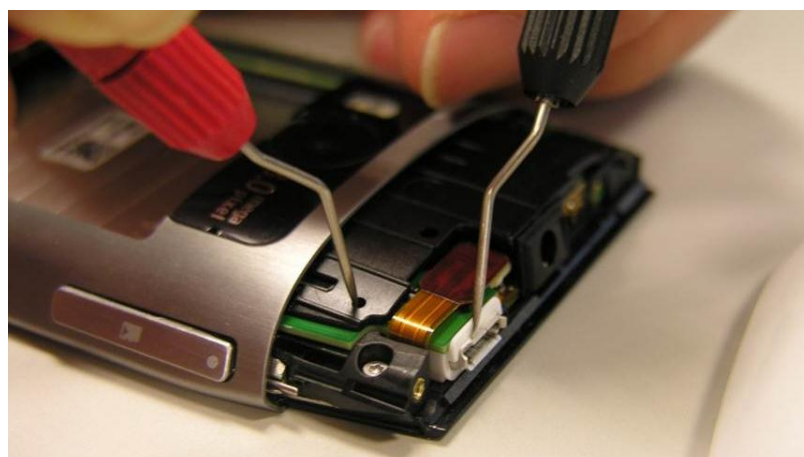
12. RESETTING A SHORT-CIRCUITED X7-00

Nokia X7-00 is susceptible to shorting of the VBAT line during display assembly due to exposed VBAT at the Dipro IR LED. This results in the battery protection circuit opening. The following instructions will close the battery protection circuit.

1. In order to get access to VBAT test pad, remove the top end cap as described in disassembly instructions.



2. Set the power supply to 3.8VDC with current limited to 500mA. Put the negative side of power supply to micro USB connector casing and positive side of power supply to VBAT test pad (J2070). The power supply should show the current draw when battery protection circuit closes. Phone should then power up provided VBAT level is high enough for SW to start up. If phone does not power on, at this point a charger can be connected into the phone and it should start charging and when VBAT reaches the proper level it should power on.



Negative side of power supply connected to micro USB casing (black probe) and positive side of power supply is connected to VBAT test pad (red probe).

13. SOLDER COMPONENTS

