

SERVICE MANUAL Level 1&2

NOKIA C3-01/C3-01m RM-640 / RM-662



Transceiver characteristics

Band:

GSM bands: 850/900/1800/1900 (RM-640/RM-662)

WCDMA bands: 850/900/1900/2100 (RM-640)

Display:

QVGA 2.4" 240x320 touch screen with 262k colors

Camera:

5Mpx full focus
Led flash

Operating System:

Series 40 6th edition / Touch

Connections:

Micro USB connector/charger plug
2mm DC charging plug
3.5mm AV connector
Bluetooth version 2.1+EDR
MicroSD memory card

Transceiver with BL-5CT battery pack

Talk time	Standby
GSM: Up to 5.6 hours	GSM: Up to 405 hours
WCDMA: Up to 3.4 hours	WCDMA: Up to 440 hours

Note:

Talk times are dependent on network parameters and phone settings

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CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	24.09.2010	First approved version

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

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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

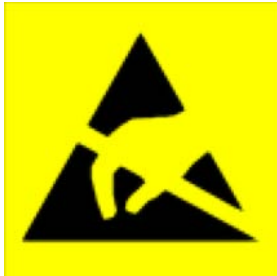
1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC 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.

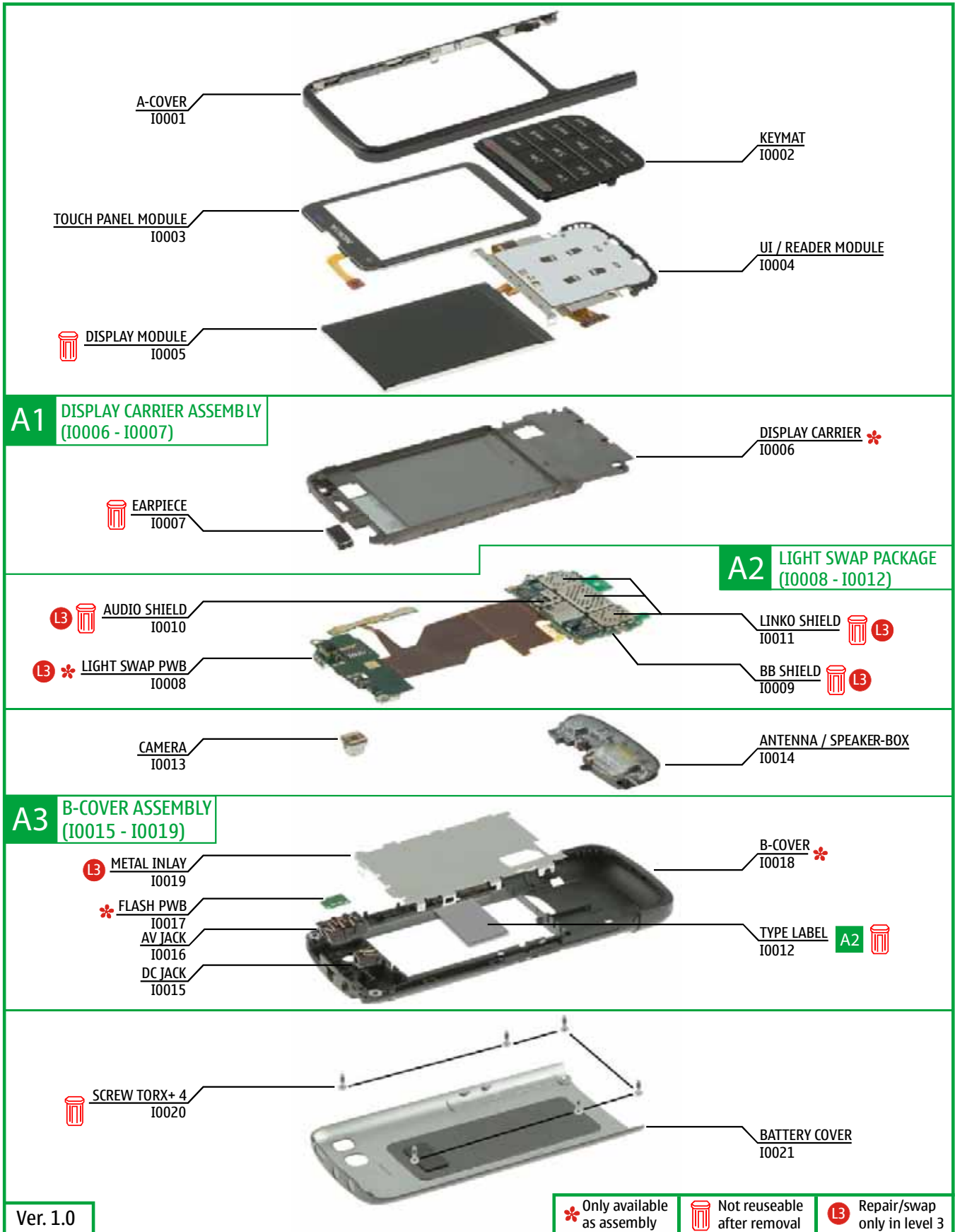
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

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. EXPLODED VIEW



Ver. 1.0

7. SERVICE DEVICES



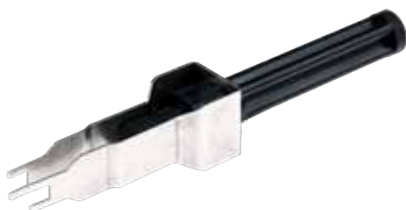
BL-5CT Battery



CA-101



AC-8 Travel Charger



SS-88 Camera Removal tool



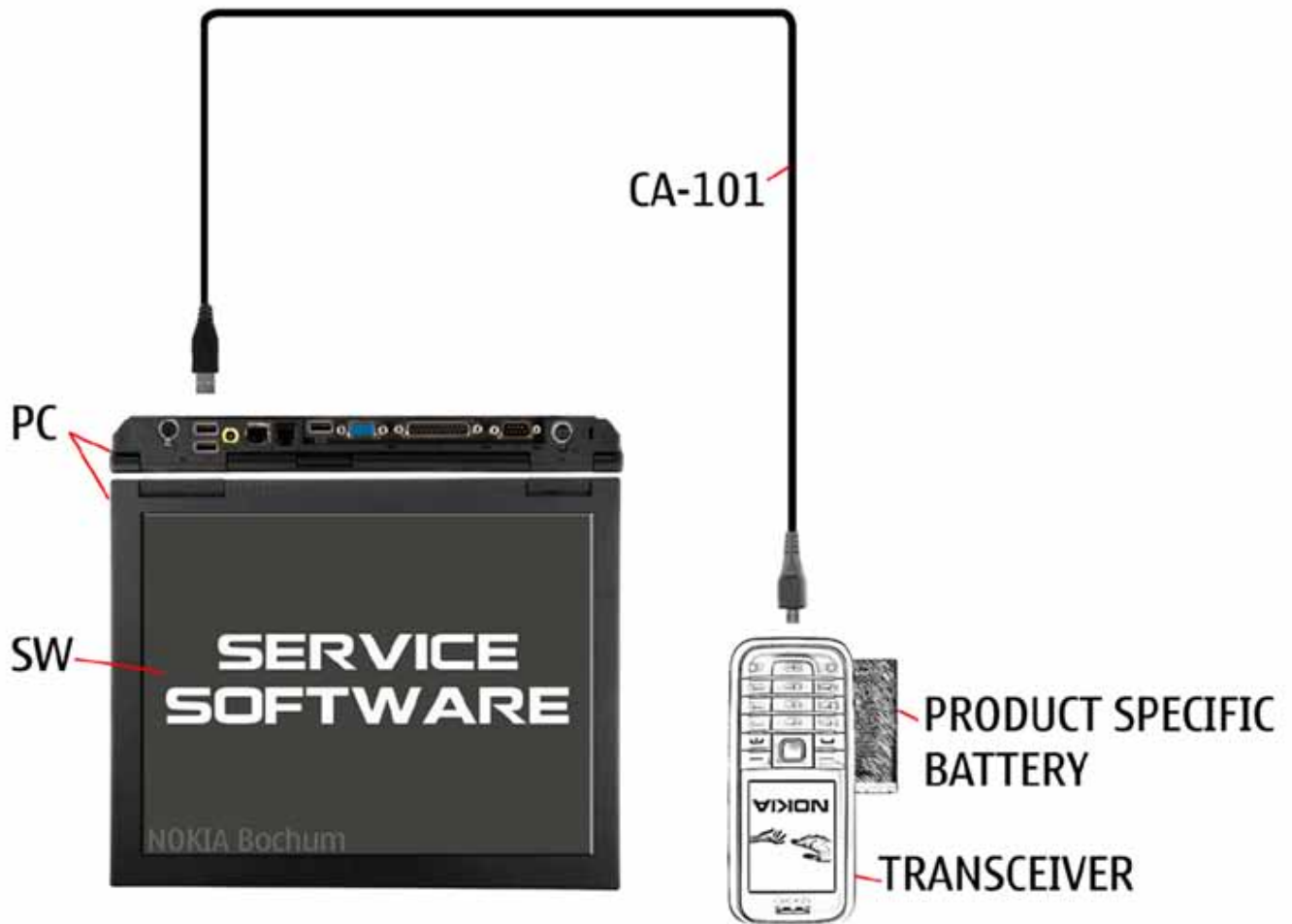
Nokia Standard Toolkit (v2)

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.

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 C3-01 disassembly.



2) For disassembling you need the Nokia Standard Toolkit version 2, the camera removal tool SS-88, an AV plug and a DC plug.



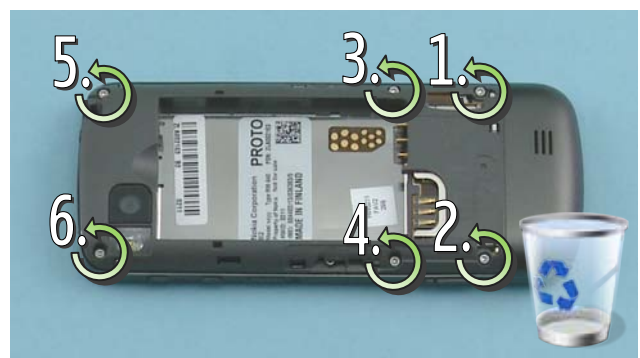
3) Protect the TOUCH PANEL with protective film.



4) Push the BATTERY COVER to the direction shown.



5) Remove the BATTERY COVER. If there is a battery inserted, remove it also.



6) Unscrew the six TORX+ size 4 screws in the order shown. Do not use them again!



7) To detach the A-COVER, insert the SRT-6 to the place shown, and slide it along the edge.



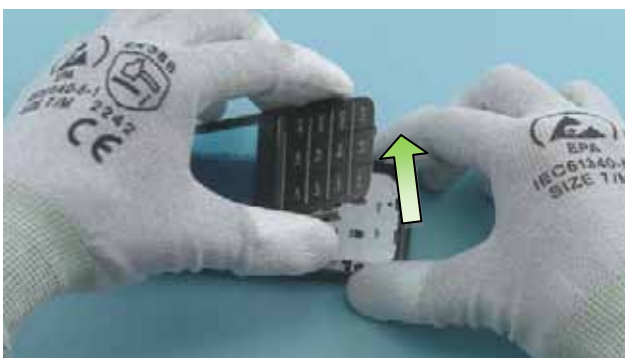
8) Use the same procedure on the other side.



9) Release the KEYMAT clip with the SRT-6 as shown.



10) Release also the clip on the other side of the KEYMAT.



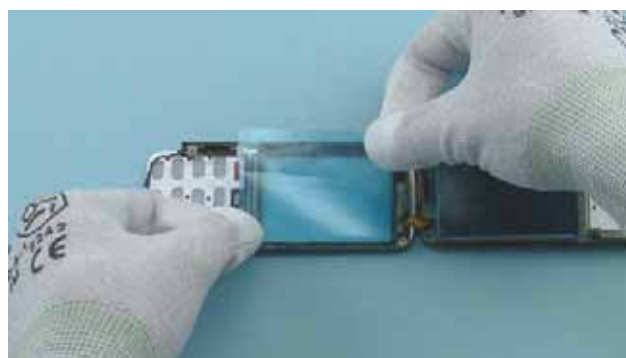
11) Lift the A-COVER from the bottom end.



12) Turn carefully the A-COVER as shown. Be careful not to damage the flex while turning the A-COVER.



13) Protect the DISPLAY with protective film.



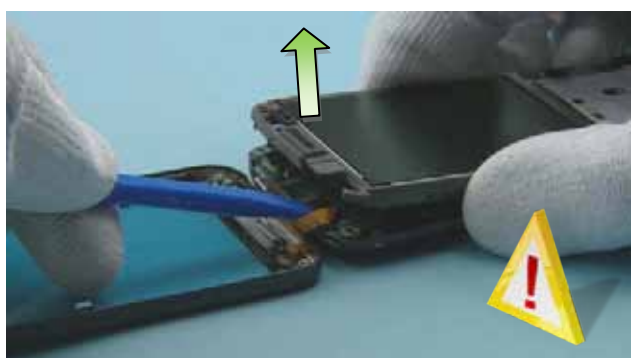
14) Protect also the other side of the TOUCH PANEL with protective film.



15) Use the SS-93 to detach the top end of the DISPLAY CARRIER.



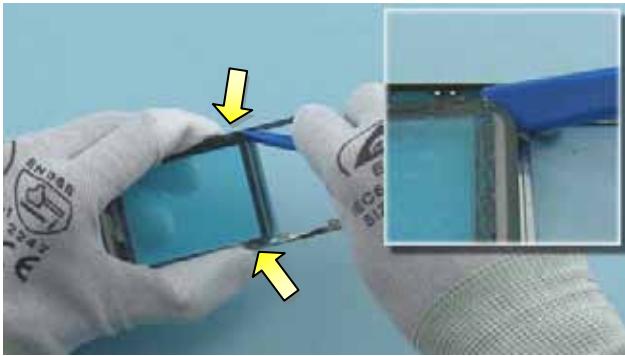
16) Detach also the other side of the top end.



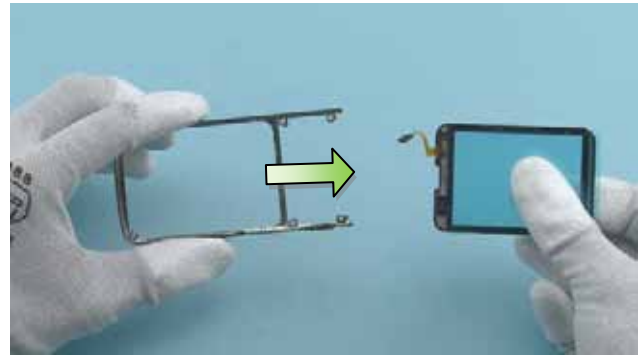
17) Hold the DISPLAY CARRIER in a lifted position as shown. Disconnect the touch panel connector carefully with the SS-93. Be careful not to damage the connector or nearby components.



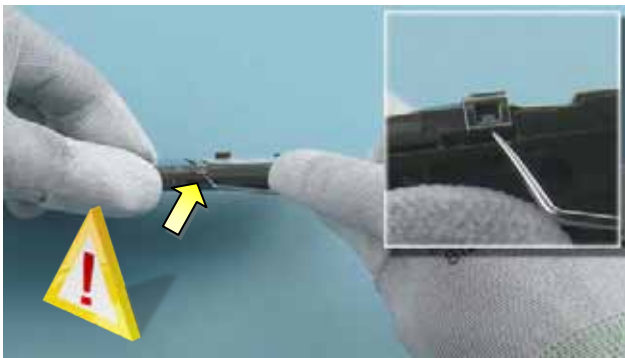
18) Push the corner of the KEYMAT as shown to detach the clip holding it. Release also the clip on the other corner. Pull out the KEYMAT and remove it.



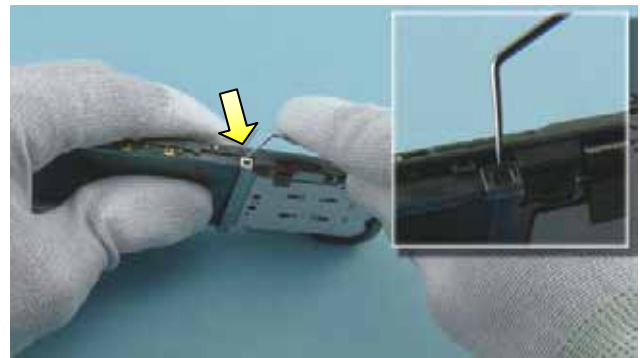
19) Use the SS-93 to release the TOUCH PANEL MODULE from the clips holding it on the A-COVER.



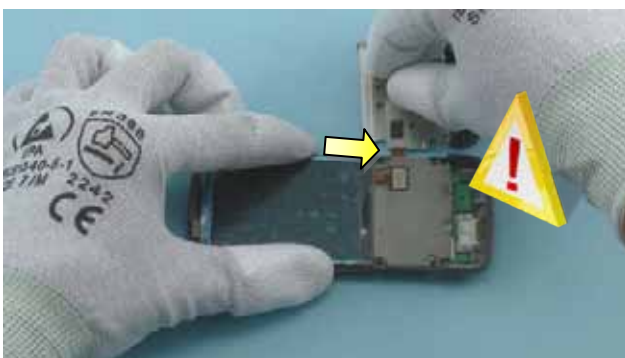
20) Pull out the TOUCH PANEL MODULE to the direction shown. The TOUCH PANEL MODULE and the A-COVER can now be removed.



21) Detach the UI/READER MODULE clip using the dental tool. Be careful not to injure yourself with the sharp end of the dental tool!



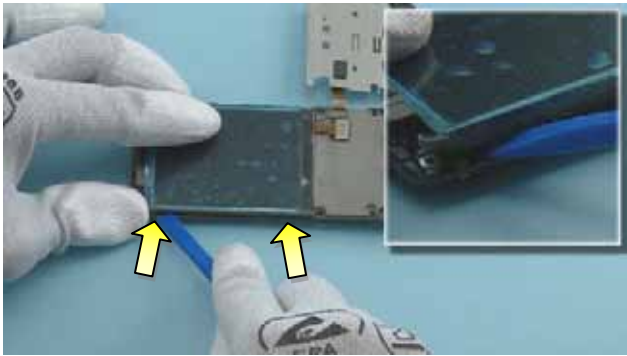
22) Detach also the second clip on the other side.



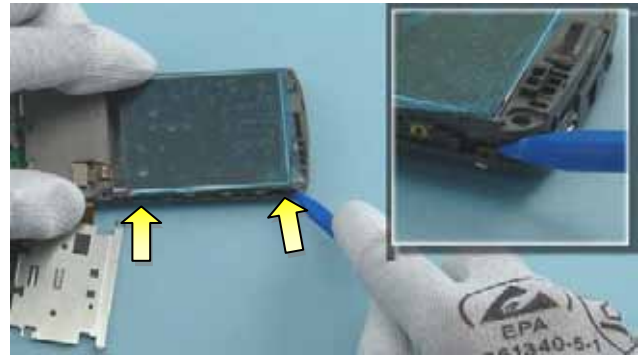
23) Turn the UI/READER MODULE as shown. Be careful not to damage the flex.



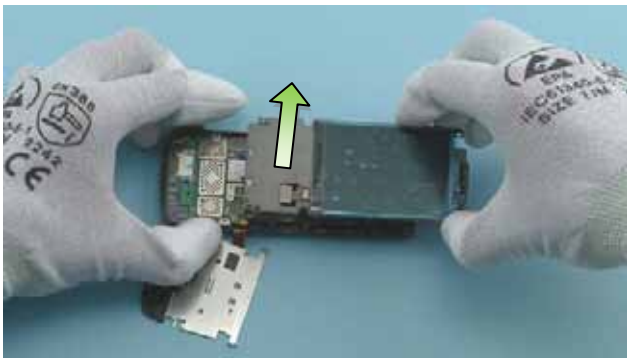
24) Disconnect the DISPLAY connector carefully with the SS-93. Be careful not to damage the connector!



25) Detach the two clips holding the DISPLAY CARRIER on the B-COVER by using the SS-93.



26) Detach also the two clips on the other side with the sharp end of the SS-93.



27) Lift up the DISPLAY CARRIER.



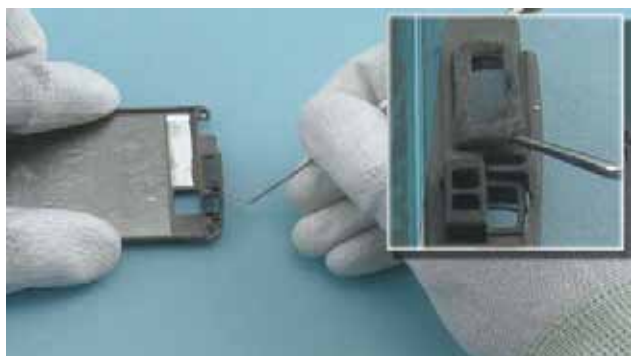
28) Use the dental tool to detach the EARPIECE.



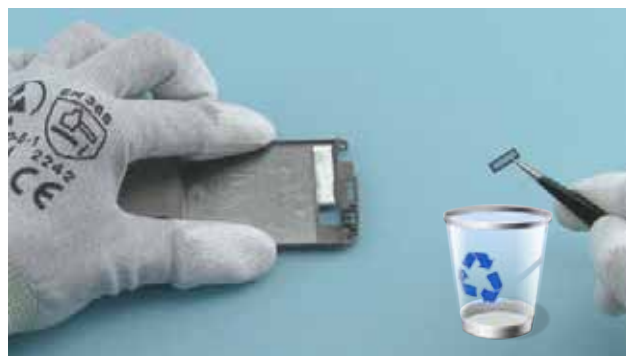
29) Remove the EARPIECE with the tweezers. Discard it.



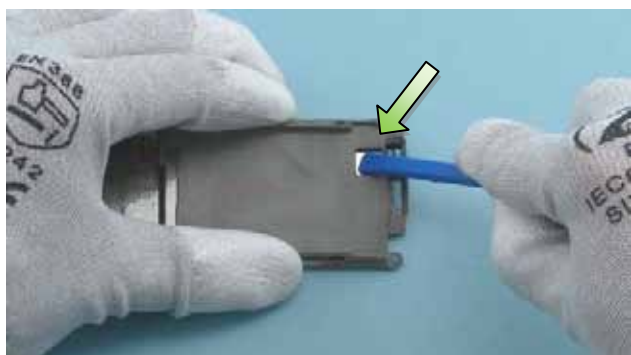
30) Use the tweezers to peel off the EARPIECE ADHESIVE. Discard it.



31) Use the dental tool to detach the EARPIECE NET.



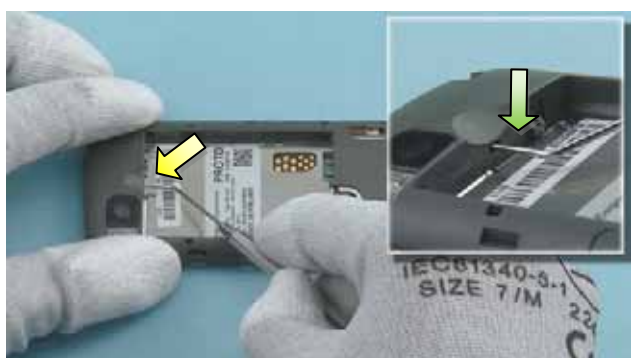
32) Remove the EARPIECE NET with the tweezers. Discard it.



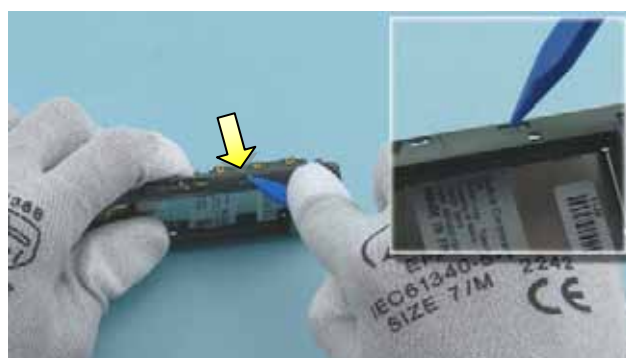
33) Push the SS-93 through the opening on the back side of the DISPLAY CARRIER to release the DISPLAY.



34) Discard the DISPLAY. Do not use it again.



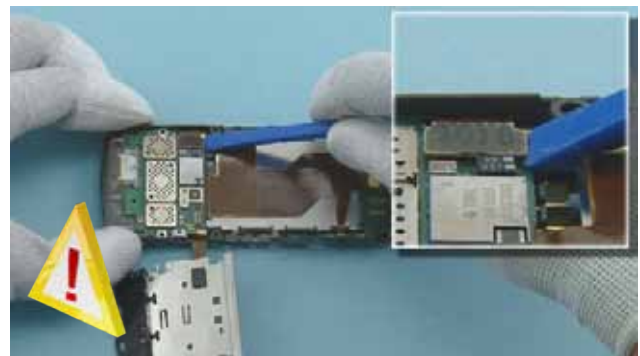
35) Place the tip of the dental tool through the hole in the B-COVER. Push down to detach the clip holding the ENGINE BOARD.



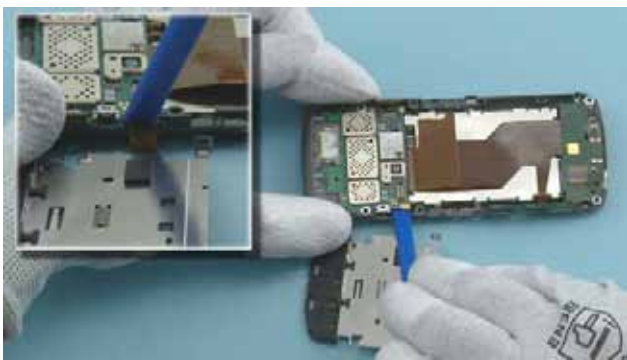
36) Release the SIDE-KEY PWB by pushing the clip shown with the sharp end of the SS-93.



37) Pull the SIDE-KEY PWB out with the tweezers. Do NOT try to detach it from the ENGINE BOARD!



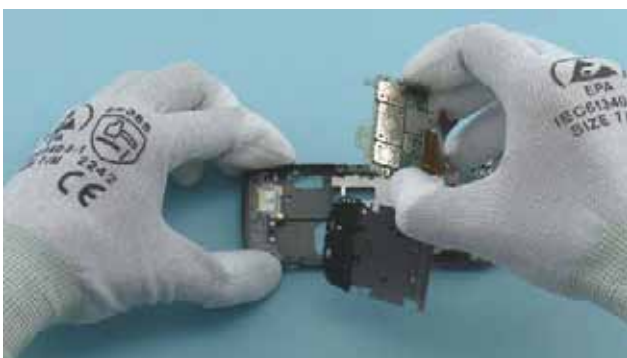
38) Carefully disconnect the UI/READER MODULE connector from the ENGINE BOARD with the SS-93. Be careful not to damage any nearby components.



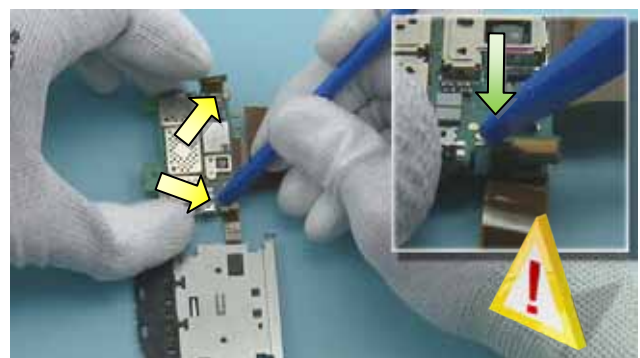
39) Place the SS-93 between the ENGINE BOARD and the B-COVER as shown. Lever out the ENGINE BOARD carefully, beginning from one side.



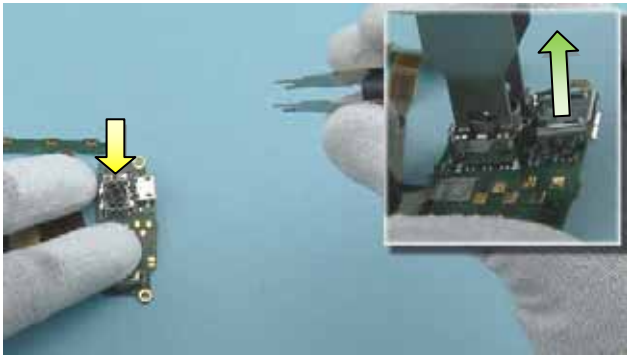
40) Lever out also the other side of the ENGINE BOARD.



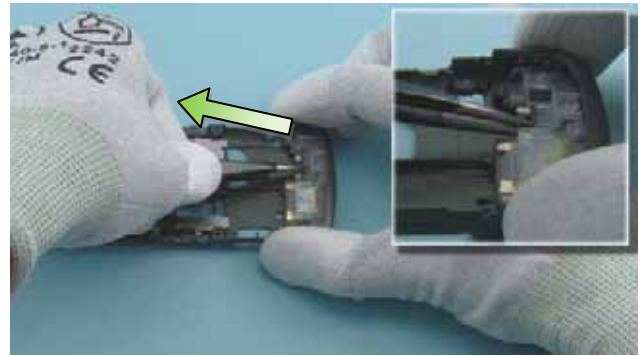
41) The ENGINE BOARD can now be removed.



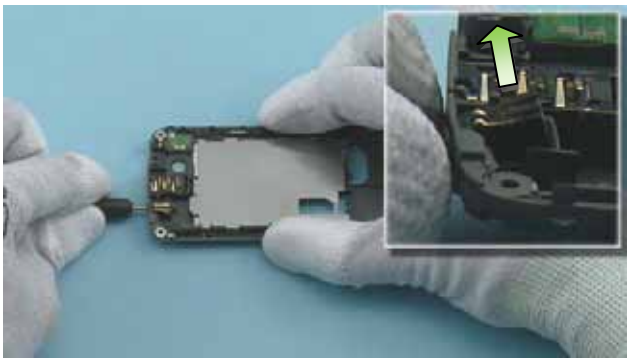
42) Push the SS-93 outwards as shown to detach the two shown clips holding the ENGINE BOARD on the UI/READER MODULE. Be careful not to damage any nearby components. The UI/READER MODULE can now be removed.



43) Use the SS-88 camera removal tool to remove the CAMERA from the ENGINE BOARD.



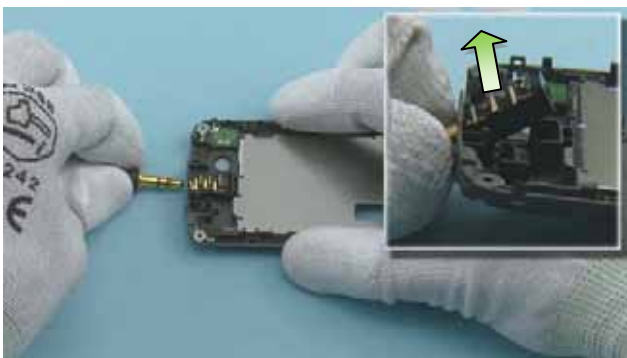
44) Pull out and remove the ANTENNA/SPEAKER BOX with the tweezers.



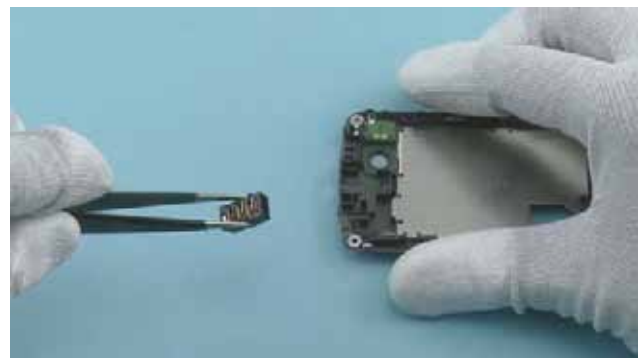
45) Use the DC plug to lift the DC JACK from its socket.



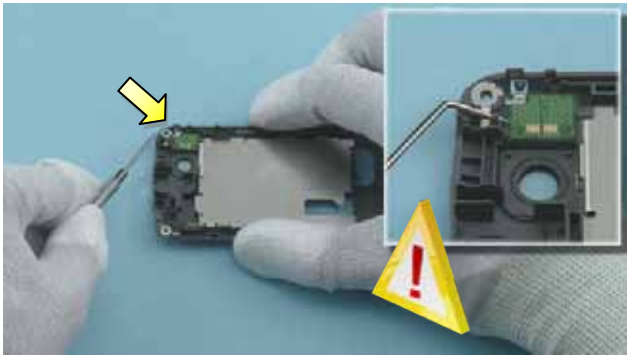
46) Remove the DC JACK with the tweezers.



47) Use the AV plug to lift the AV JACK from its socket.



48) Remove the AV JACK with the tweezers.



49) Use the dental tool to detach the FLASH PWB from the B-COVER. Be careful not to damage the FLASH PWB or any nearby components.



50) Remove the FLASH PWB with the tweezers.



51) Detach the first clip of the METAL INLAY with the dental tool as shown.



52) Detach the second clip of the METAL INLAY with the dental tool as shown.



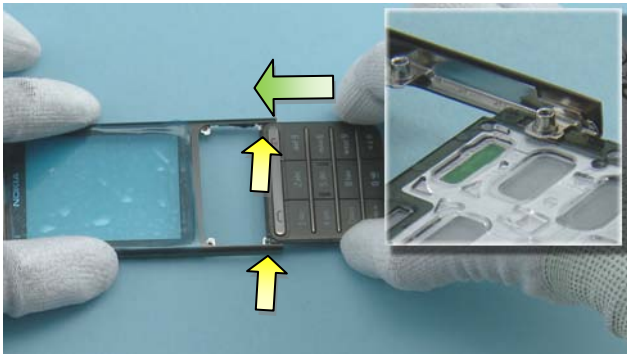
53) Detach the third clip of the METAL INLAY with the dental tool as shown. The METAL INLAY can now be removed.



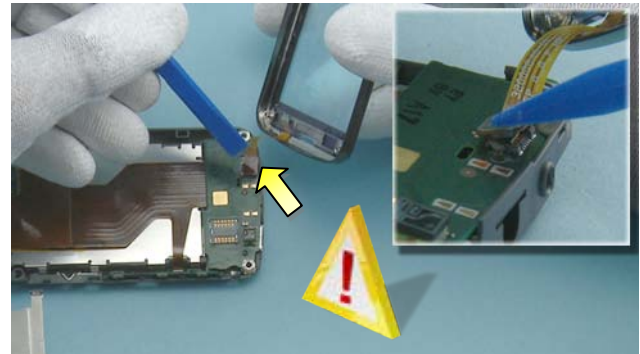
54) Nokia C3-01 disassembly is now complete.

-END OF DISASSEMBLY-

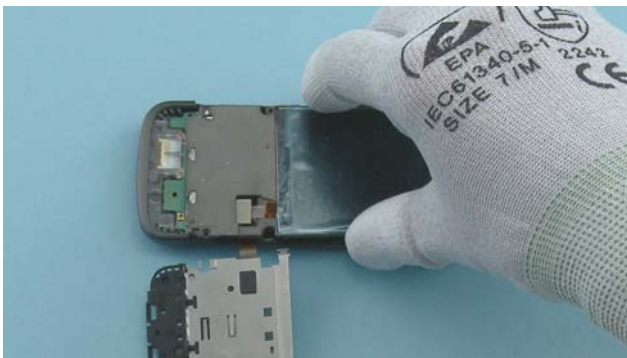
10. ASSEMBLY HINTS



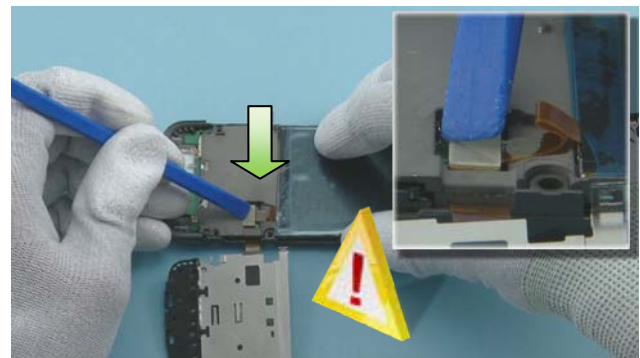
1) Attach the KEYMAT to the A-COVER as shown. Note the location of the pins in the A-COVER.



2) Hold the A-COVER as shown and use the SS-93 to connect the TOUCH PANEL connector to the ENGINE BOARD. Be careful not to damage any nearby components.



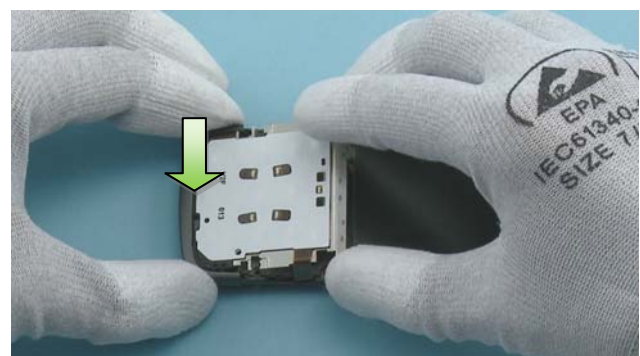
3) Place the DISPLAY and the DISPLAY CARRIER on the ENGINE BOARD.



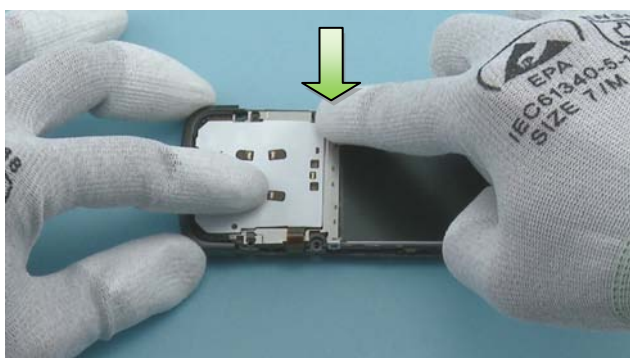
4) Attach the DISPLAY connector with the SS-93. Be careful not to damage the connector.



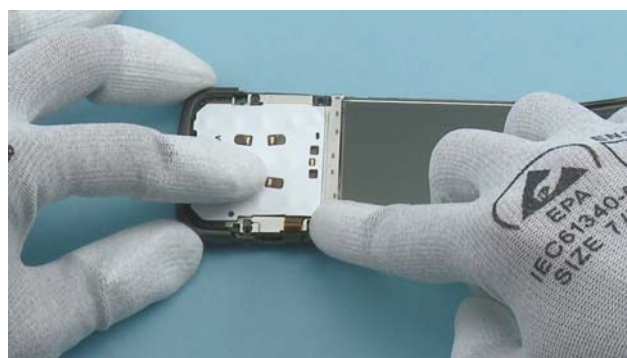
5) Remove the protective film from the DISPLAY.



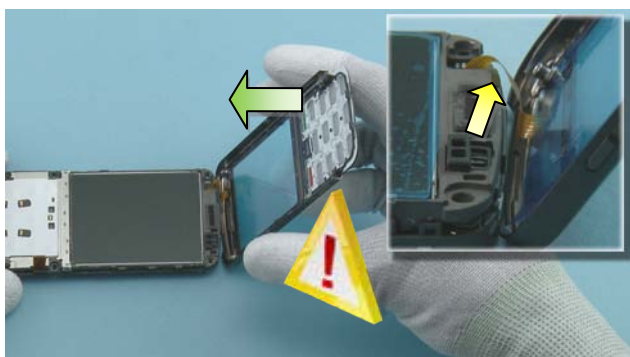
6) Turn the UI/READER MODULE over as shown and insert the bottom in the B-COVER by pressing it carefully.



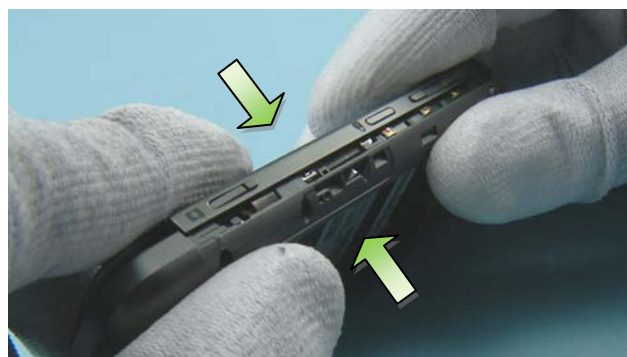
7) Press down from the corner to attach the UI/READER MODULE clip.



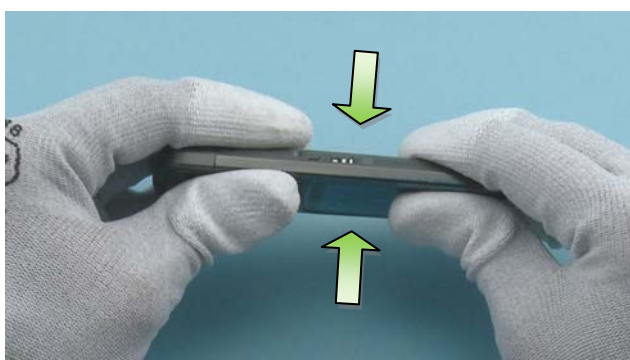
8) Attach also the clip on the other side.



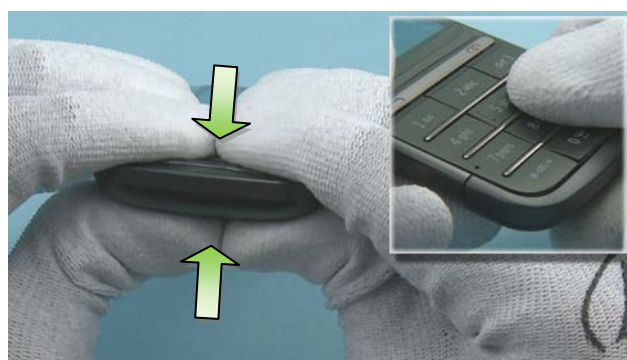
9) Turn the A-COVER to the top of the DISPLAY CARRIER. Be careful not to damage the flex.



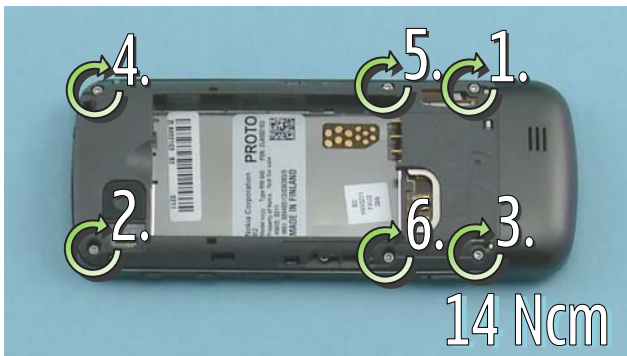
10) Apply pressure from the both sides to attach the A-COVER to the B-COVER.



11) Repeat the procedure on the other side.

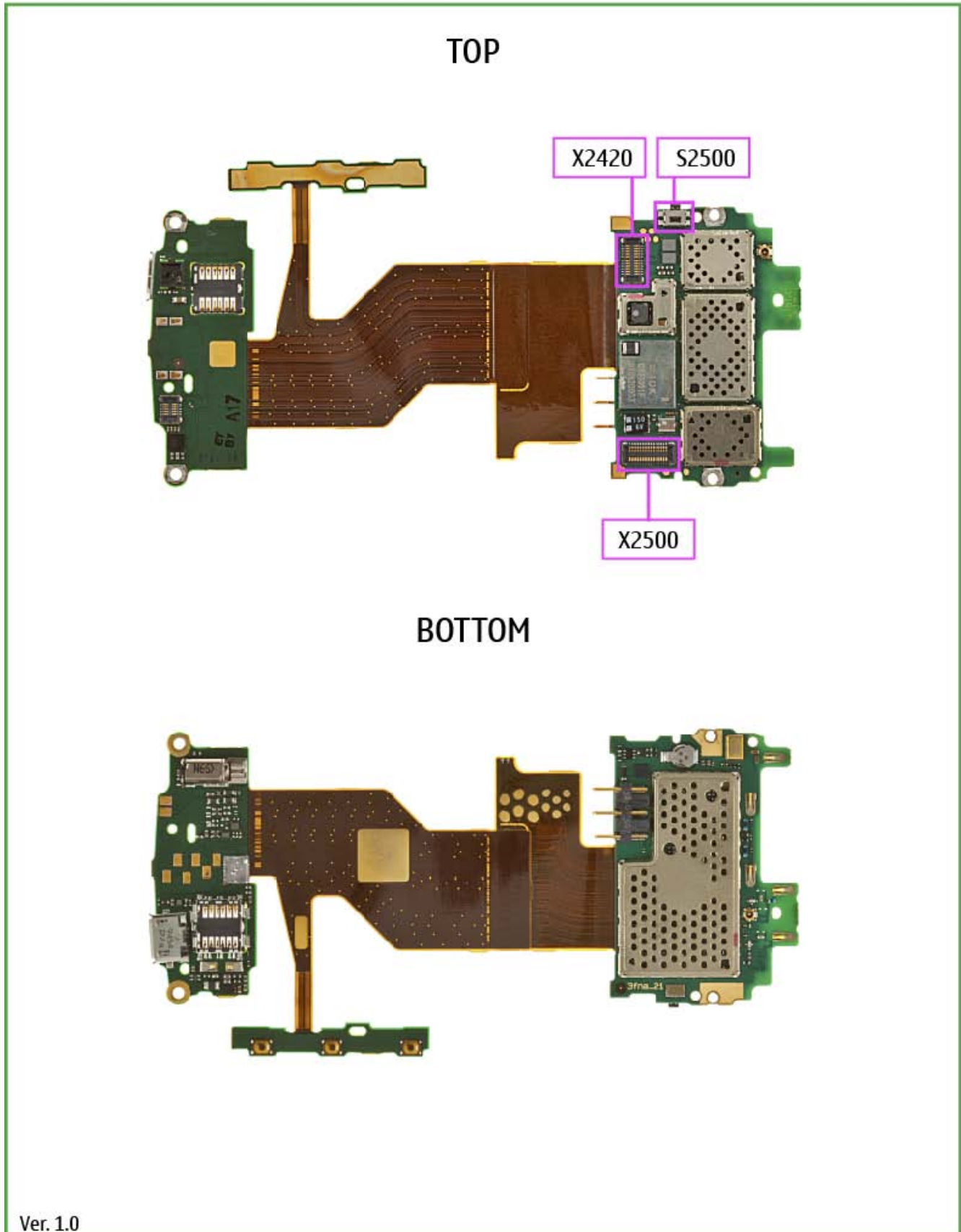


12) Press also from the bottom to fix the KEYMAT to the B-COVER.



13) Tighten the six TORX+ size 4 screws to the torque of 14 Ncm in the order shown.

11. SOLDER COMPONENTS



Ver. 1.0