

SERVICE MANUAL Level 1&2

Nokia 603

RM-779



Transceiver characteristics

Band

WCDMA 850/900/1700/1900/2100
GSM 850/900/1800/1900

Display

3.5" TFT Capacitive Touch nHD (16:9) 640 x 360

Camera

5Mpix with 4x digital zoom

Operating System

Symbian Belle

Connections

USB 2.0
3.5mm Jack
Micro USB
Bluetooth
Wi-Fi
FM Radio
GPS
NFC

Transceiver with BP-3L battery pack

Talk time	Standby
GSM: Up to 15 hours	GSM: Up to 360 hours
WCDMA: Up to 7 hours	WCDMA: Up to 400 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	13.10.2011	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.

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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.

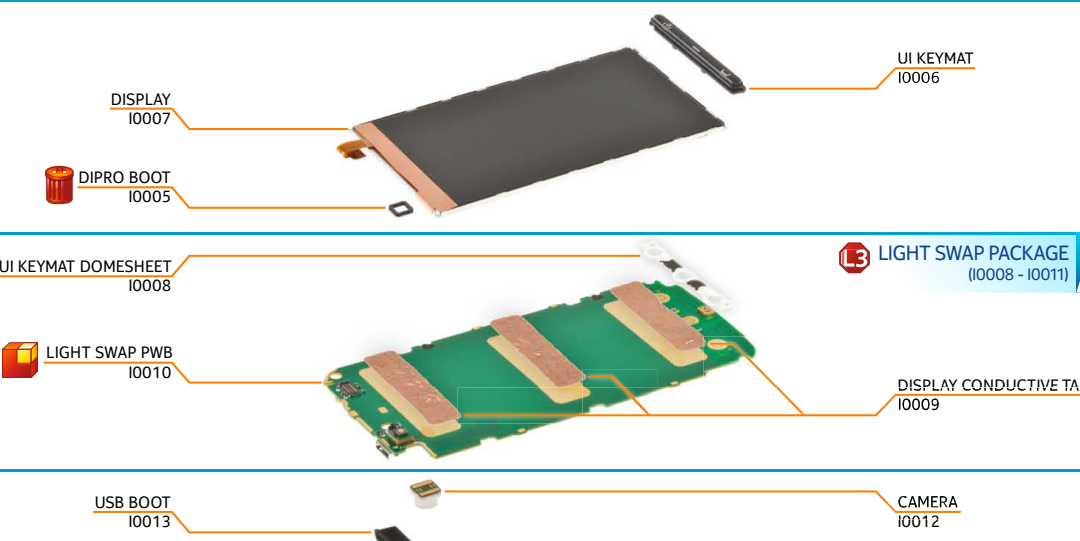
6. EXPLODED VIEW

NOKIA 603
Exploded view
Nokia Care Academy

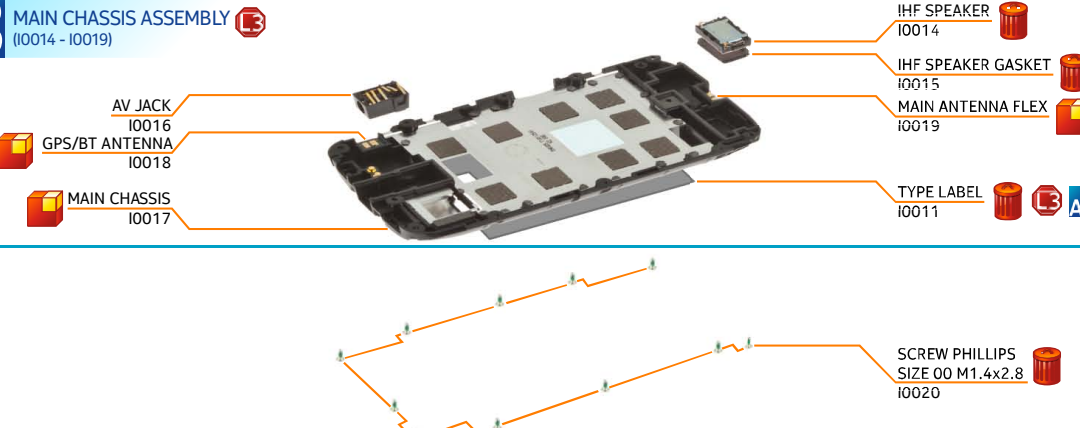
A1
A-COVER ASSEMBLY
(I0001 - I0004)




A2
LIGHT SWAP PACKAGE
(I0008 - I0011)



A3
MAIN CHASSIS ASSEMBLY
(I0014 - I0019)



A4
BATTERY COVER ASSEMBLY
(I0021, I0022)



v1.0

Only available as assembly

Not reusable after removal

Repair/swap only in level 3

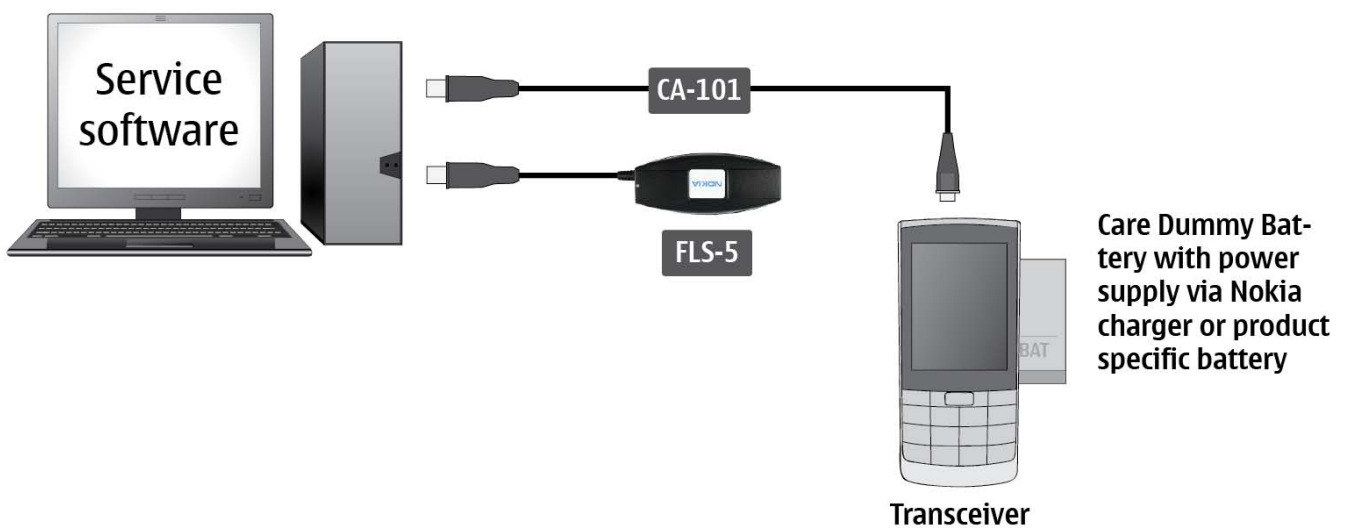
7. SERVICE DEVICES

 <p>CA-101 100cm</p> <p>CA-101 Service Cable</p>	 <p>AC-10 Travel Charger</p>	 <p>Battery BP-3L</p>
 <p>SS-276 Camera removal tool</p>	 <p>SS-195 Display removal tool</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 603 disassembly.



2) You must use the Nokia Standard Toolkit version 2. You will also need an AV plug, camera removal tool SS-276 and the display removal tool SS-195.



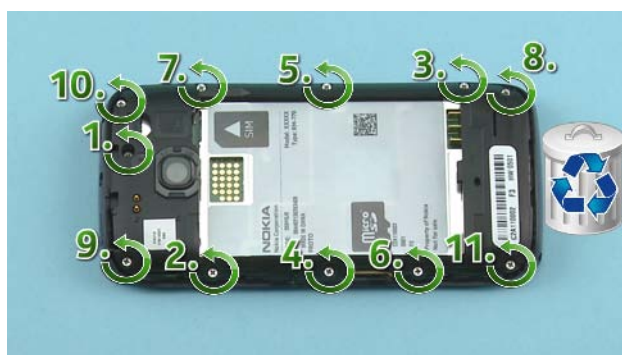
3) Protect the A-COVER with protective film.



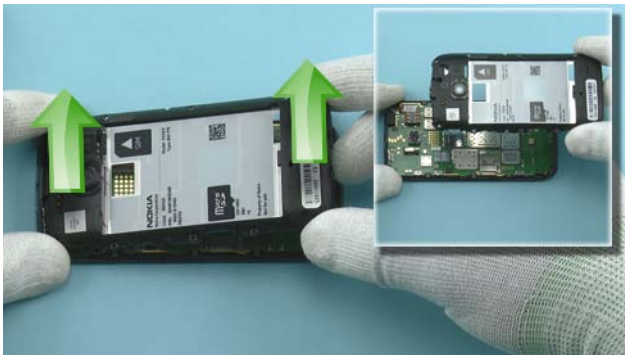
4) Open the BATTERY COVER by using the shown notch on the left side of the device.



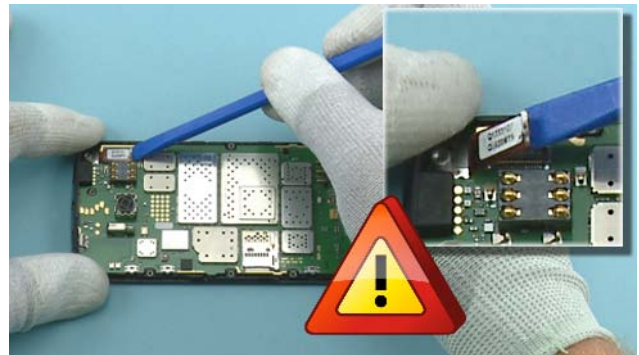
5) Remove the BATTERY COVER.



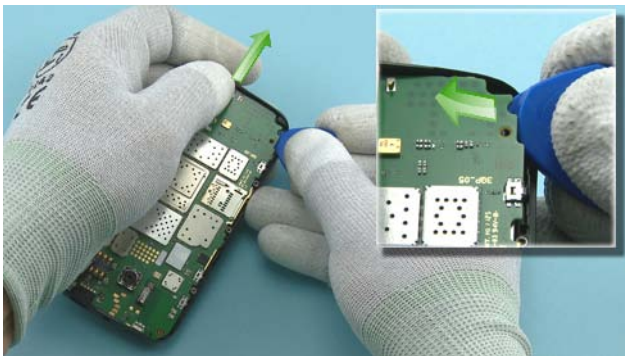
6) Unscrew the eleven Phillips size 00 screws in the order shown. Do not use them again. Discard them.



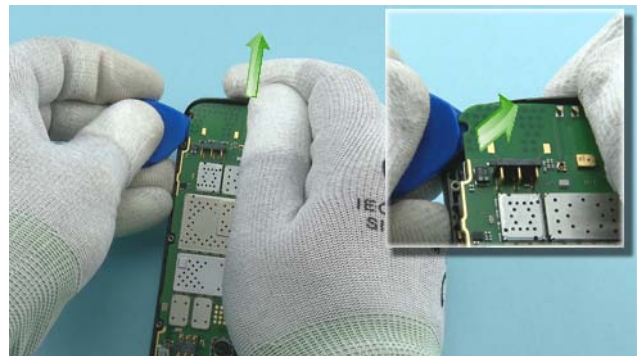
7) Lift up and remove the MAIN CHASSIS.



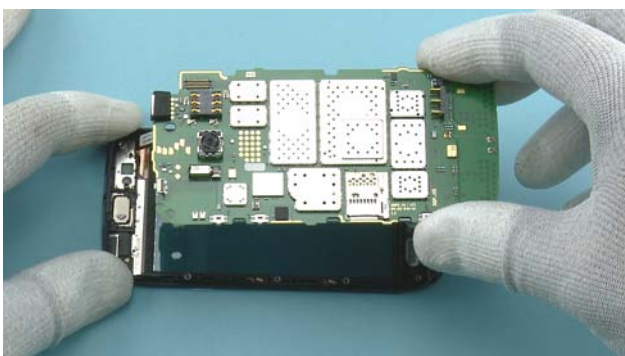
8) Open the TOUCH WINDOW connector with the SS-93. Be careful not to damage the connector or any nearby components.



9) Push the bottom end of the A-COVER to the direction shown and use the SRT-6 to lift up the ENGINE BOARD.



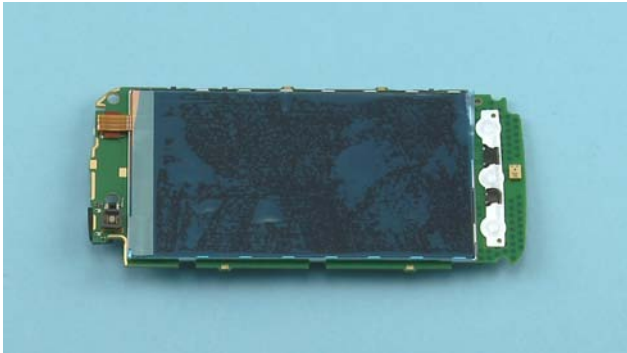
10) Do the same procedure on the opposite side of the device to completely release the bottom end of the ENGINE BOARD.



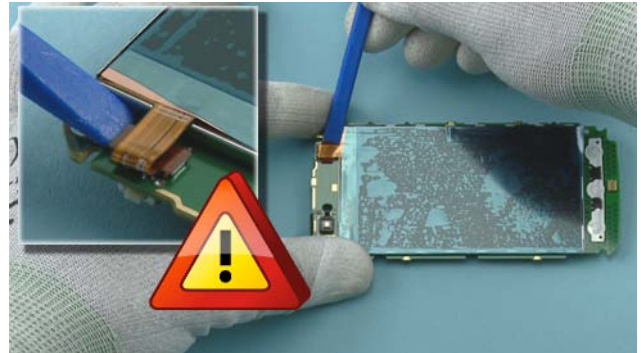
11) The A-COVER can now be separated from the ENGINE BOARD.



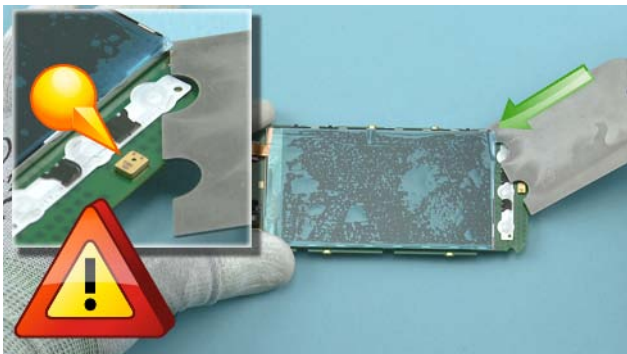
12) Protect the other side of the A-COVER with protective film.



13) Protect the DISPLAY with protective film.



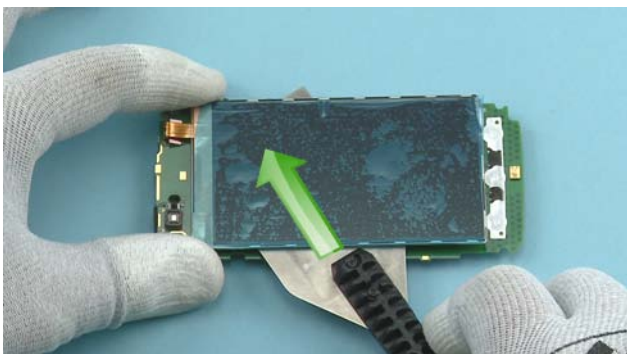
14) Open the DISPLAY connector with the SS-93. Be careful not to damage the connector.



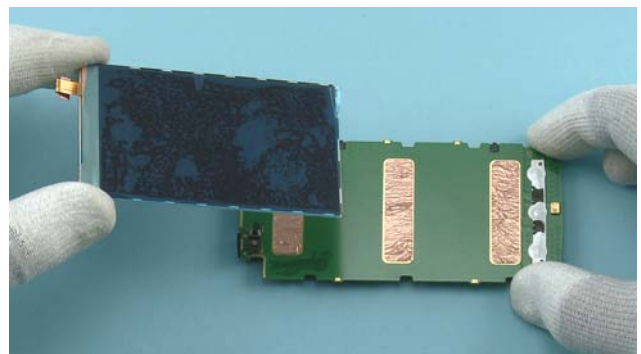
15) Push the SS-195 under the DISPLAY from the shown place. While pushing in the SS-195 be careful not to damage the MICROPHONE in the bottom end of the ENGINE BOARD.



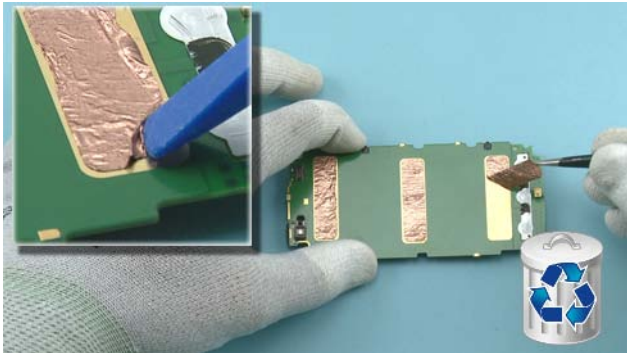
16) Carefully push the SS-195 to direction shown to release the DISPLAY.



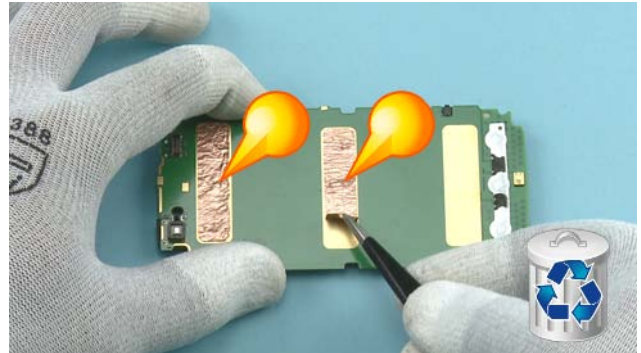
17) Rotate the SS-195 as shown. Carefully push the SS-195 to direction shown to release the top part of the DISPLAY.



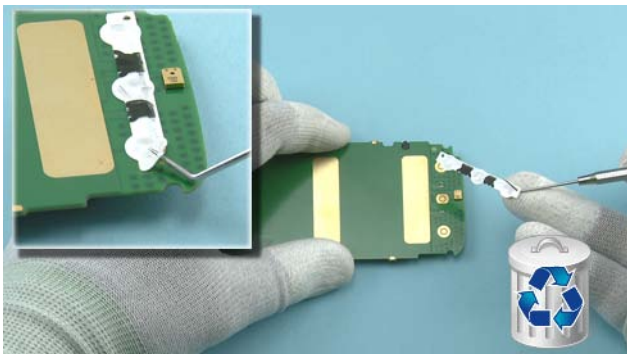
18) Remove the DISPLAY.



19) Peel off the DISPLAY CONDUCTIVE TAPE with the SS-93 and remove it with the tweezers. Do not use it again. Discard it



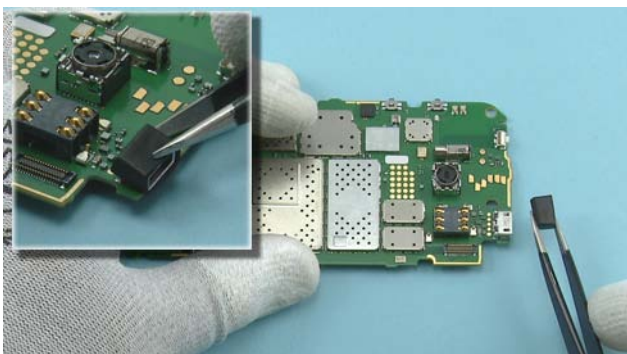
20) Peel off and remove also the two remaining DISPLAY CONDUCTIVE TAPES and discard them.



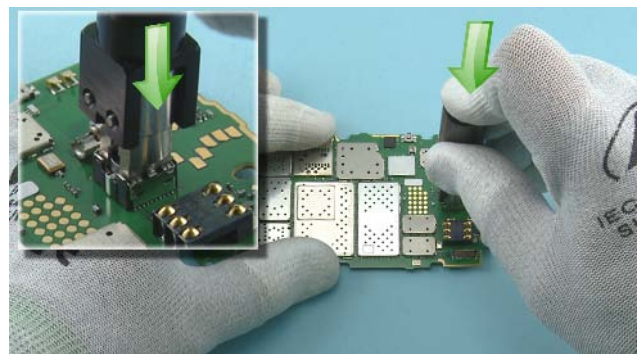
21) Remove the UI KEYMAT DOMESHEET with the dental tool. Do not use it again. Discard it.



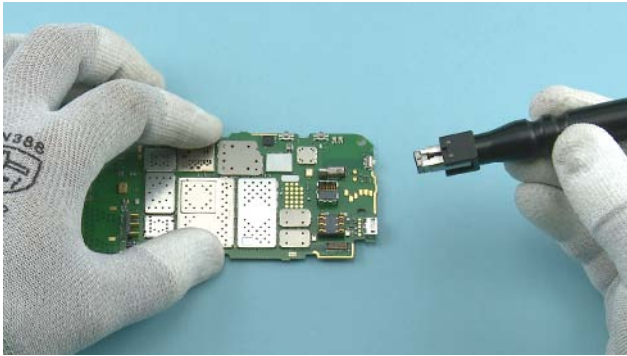
22) Remove the DIPRO BOOT with the tweezers. Be careful not to damage the components nearby. Do not use the DIPRO BOOT again. Discard it



23) Remove the USB BOOT with the tweezers.



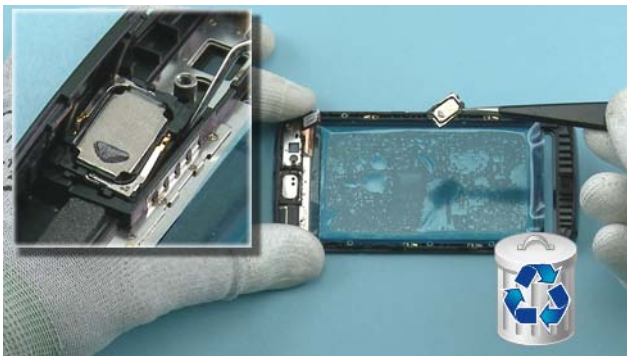
24) Push down the camera removal tool SS-276. Push the button on top of the SS-276 to lock the tool to the CAMERA.



25) Keep the button on the SS-276 pushed and lift up and remove the CAMERA.



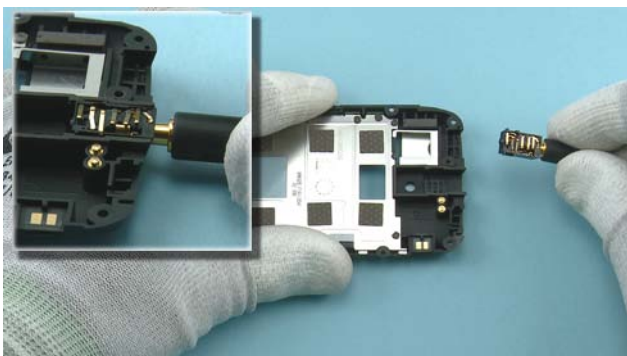
26) Remove the UI KEYMAT with the tweezers.



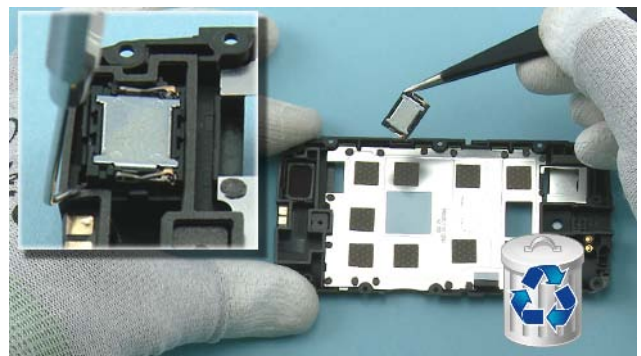
27) Lever out the EARPIECE with the dental tool and remove it with the tweezers. Do not use it again. Discard it.



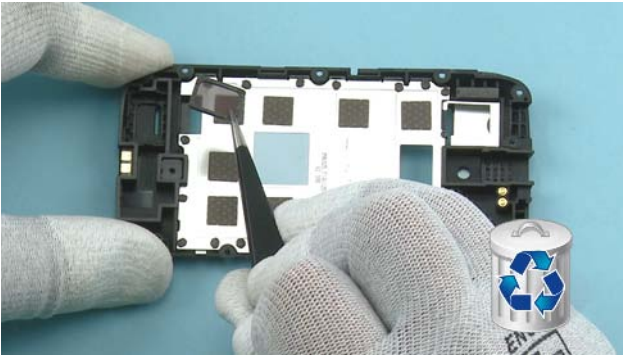
28) Remove the EARPIECE GASKET with the dental tool. Discard it.



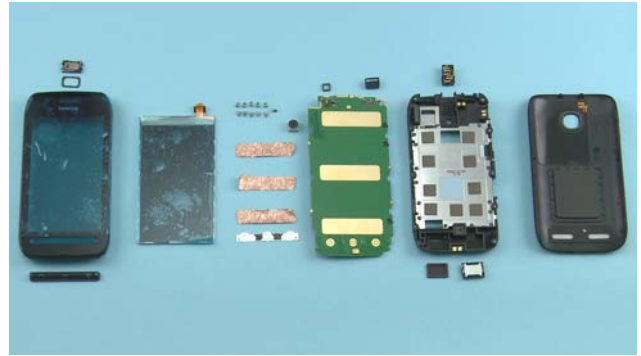
29) Use an AV plug to lift up remove the AV JACK.



30) Lever out the IHF SPEAKER with the dental tool. Remove it with the tweezers and discard it.



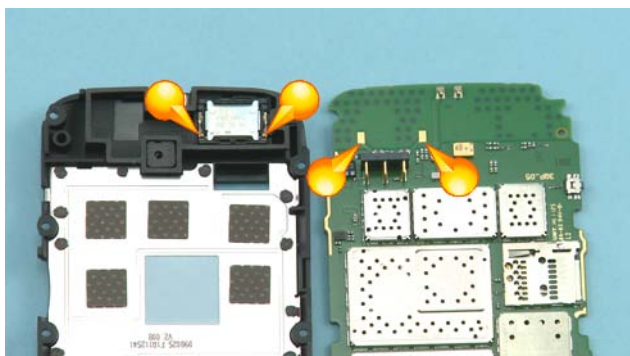
31) Remove the IHF SPEAKER GASKET with the tweezers and discard it.



32) Nokia 603 disassembly is now complete.

-END OF DISASSEMBLY-

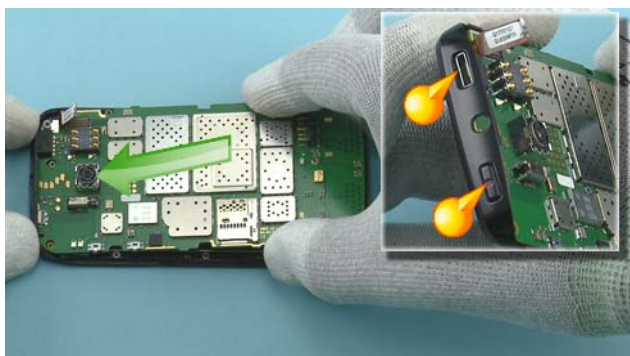
10. ASSEMBLY HINTS



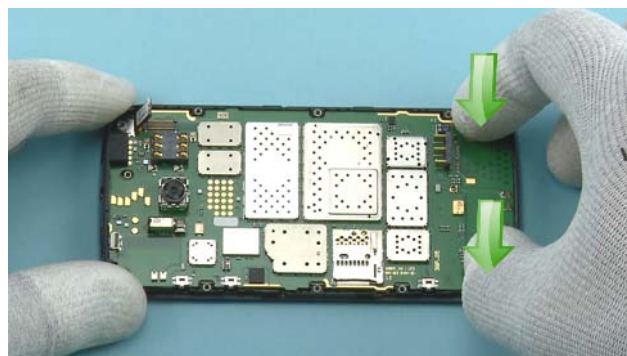
1) While placing the IHF SPEAKER make sure that the pins are aligned as shown.



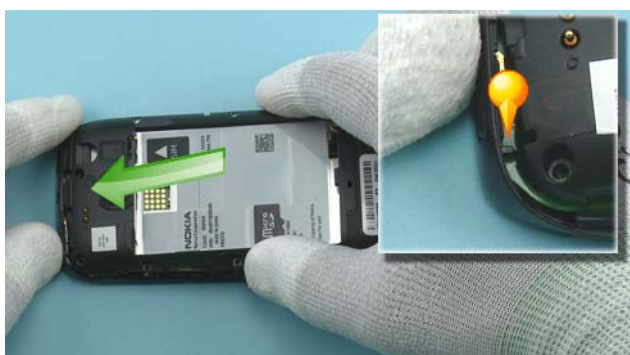
2) Place the DISPLAY to the A-COVER. Then connect the DISPLAY connector to the ENGINE BOARD. Be careful not to damage the connector.



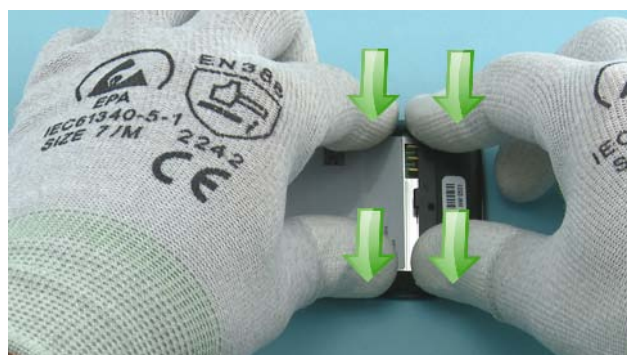
3) Then push in the top part of the ENGINE BOARD to the A-COVER. Make sure that the USB connector and the power switch are correctly aligned.



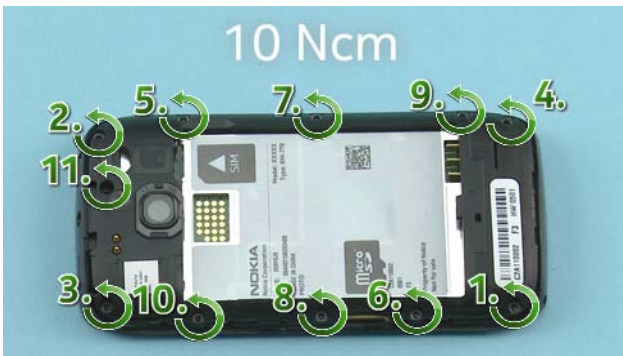
4) Gently push from the shown places of the ENGINE BOARD to attach it to the A-COVER.



5) Push in the top part of the MAIN CHASSIS to the A-COVER. Check that shown guiding pin is aligned with the gap on the MAIN CHASSIS.



6) Push down from the shown places to attach the MAIN CHASSIS to the A-COVER.



7) Tighten the eleven Phillips size 00 screws to the torque of 10 Ncm in the order shown.

11. SOLDER COMPONENTS

