

## SERVICE MANUAL Level 1&2

# Nokia Asha 311 / 3110

RM-714



### Transceiver characteristics

#### Band

EGSM 850/900/ 1800/1900 MHz  
WCDMA 850/900/1700/1900/2100 MHz

#### Display

3.0" capacitive full touch, 240 x 400 pixels

#### Camera

3.2Mpix

#### Operating System

S40 full touch UI

#### Connections

GPRS  
Bluetooth 2.1 + EDR  
FM Radio  
IEEE 802.11 b/g/n WLAN  
3.5mm AV Jack  
2.0mm DC Jack  
Micro USB  
Micro SD card slot

Transceiver with BL-4U battery pack

Talk time	Standby
GSM-A: up to 7.2 h	GSM-A: up to 711 h
WCDMA: up to 4.5 h	WCDMA: up to 781 h

#### 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	27.06.2012	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](mailto: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).

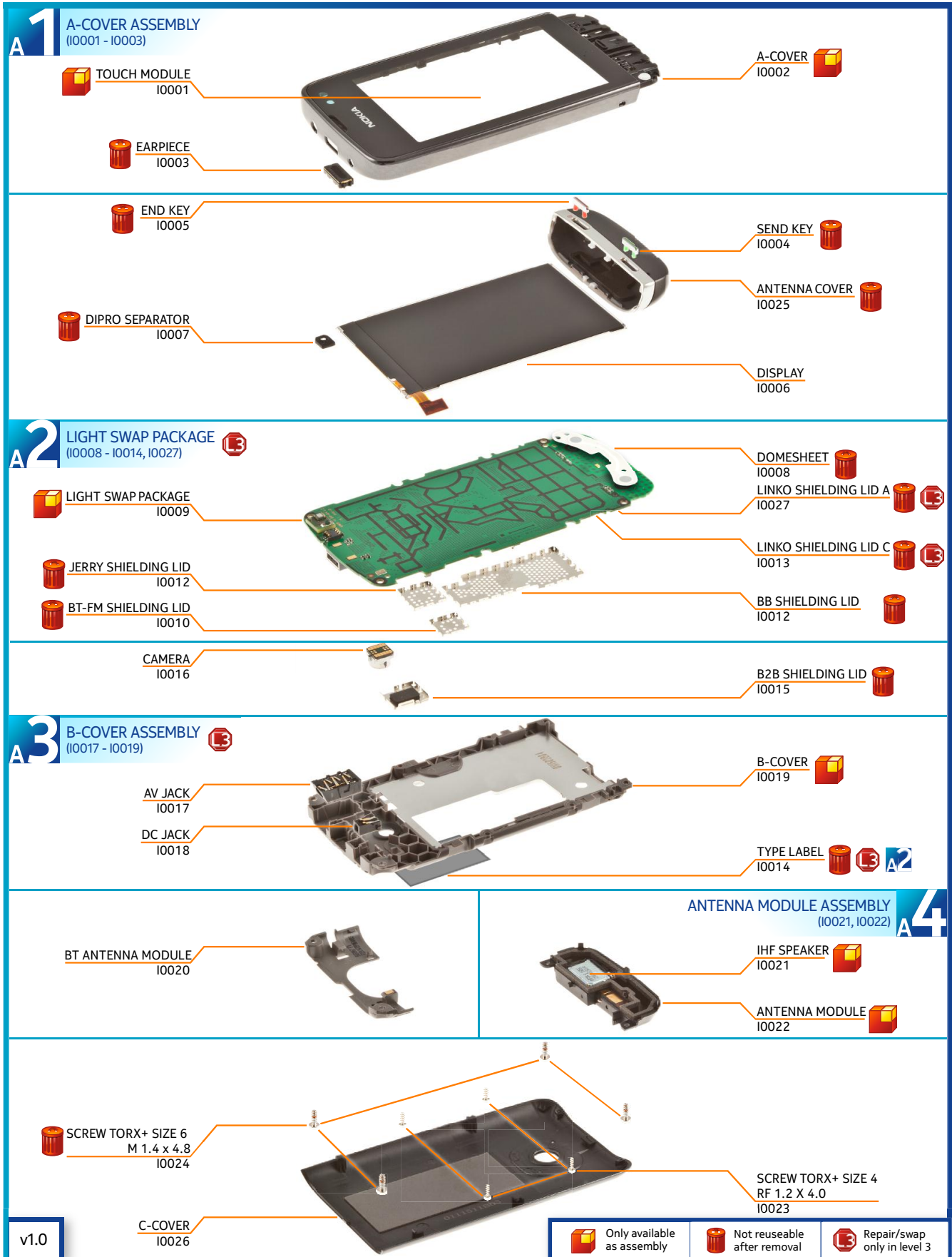
A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

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



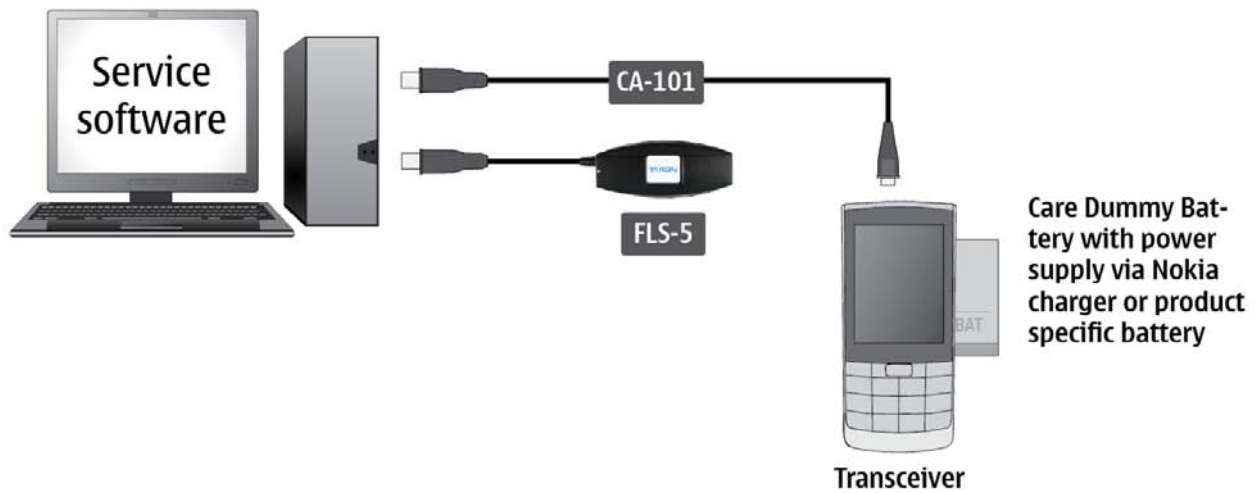
7. SERVICE DEVICES

 <p>CA-101 100cm</p> <p>CA-101 Service Cable</p>	 <p>AC-11 Travel Charger</p>	 <p>Battery BL-4U</p>
 <p>SS-276 Camera removal tool</p>	 <p><b>Nokia Standard Toolkit (v2)</b> 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 Asha 311 disassembly.



2) For disassembling you need the Nokia Standard Toolkit version 2. You will also need an AV plug, a DC plug and the camera removal tool SS-276.



3) Protect the TOUCH MODULE with protective film.



4) Push the C-COVER to the direction shown to open it. Remove the C-COVER.



5) Use the SS-93 to release the ANTENNA COVER from the shown places. Be careful not to damage the A-COVER!



6) Release the ANTENNA COVER from the front side as shown. Be careful not to damage the A-COVER!



7) Pull out and remove the ANTENNA COVER. The ANTENNA COVER is not reusable. Discard it.



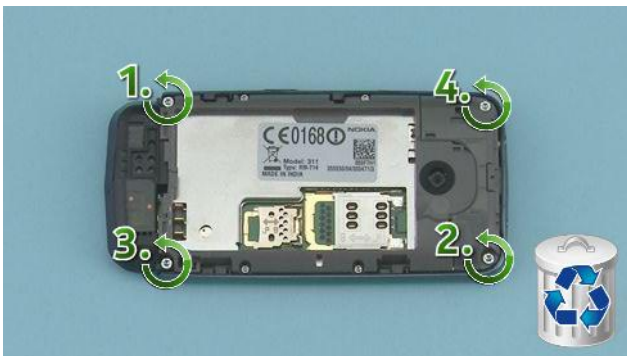
8) Check that the A-COVER hooks did not get damaged during disassembling of the ANTENNA COVER.



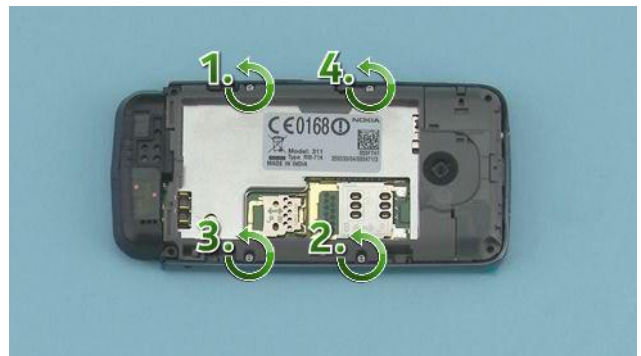
9) Remove the END KEY with tweezers. Do not use it again.



10) Remove the SEND KEY with tweezers. Do not use it again.



11) Unscrew the four Torx+ size 6 screws in the order shown. The screws are not reusable. Discard them.



12) Unscrew the four Torx+ size 4 screws in the order shown.

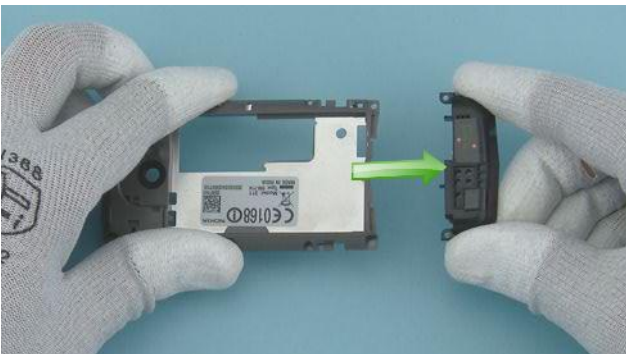




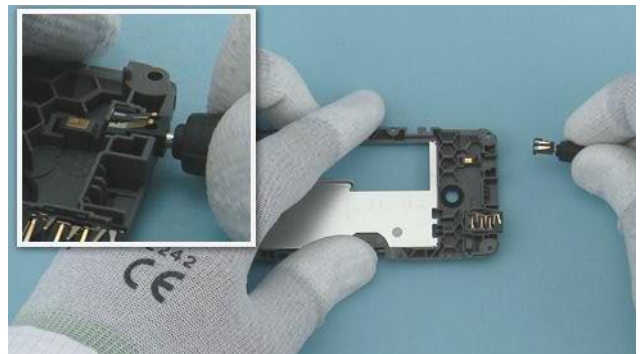
13) Use the SRT-6 to release the B-COVER.



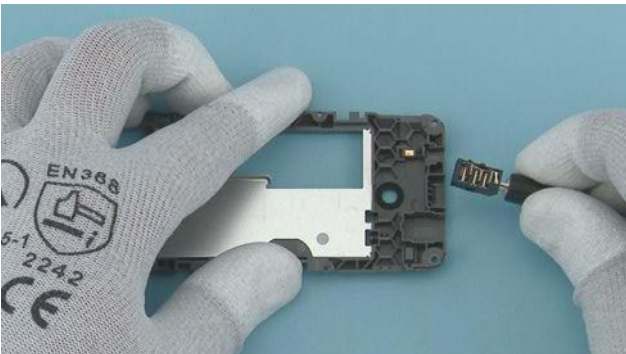
14) Remove the B-COVER and the ANTENNA MODULE ASSEMBLY.



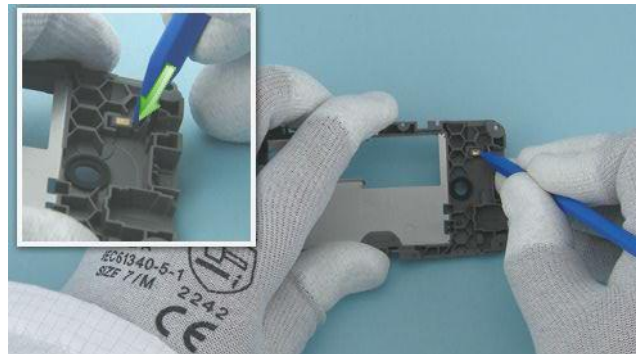
15) Pull the ANTENNA MODULE ASSEMBLY to direction shown to remove it from the B-COVER.



16) Use a DC plug to remove the DC JACK.



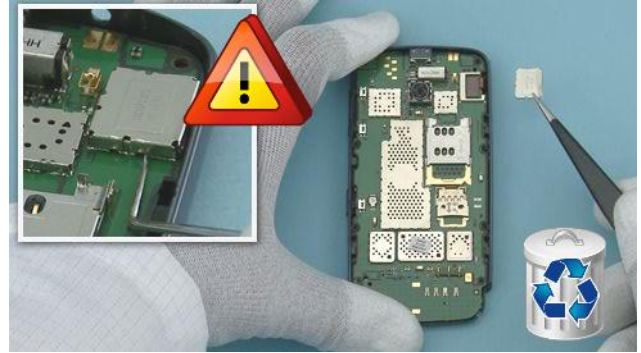
17) Use an AV plug to remove the AV JACK.



18) Push the shown clip with the sharp end of the SS-93 to release the BT ANTENNA MODULE.



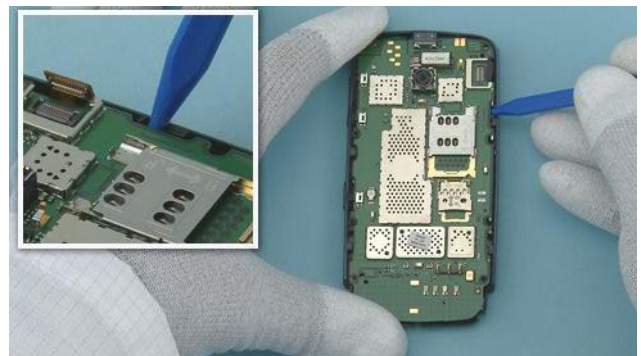
19) Release also the second clip with the sharp end of the SS-93. The B-COVER and the BT ANTENNA MODULE can now be separated.



20) Release the B2B SHIELDING LID with the dental tool. Be careful not to injure yourself or any components on the ENGINE BOARD! Do not use the B2B SHIELDING LID again. Discard it.



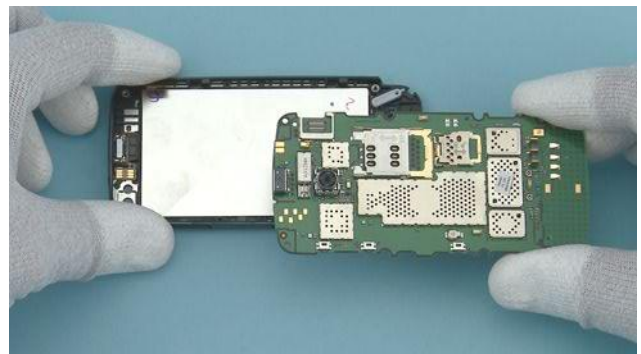
21) Open the DISPLAY CONNECTOR with the SRT-6. Be careful not to damage the connector.



22) Use the sharp end of the SS-93 to release the ENGINE BOARD from the shown place.

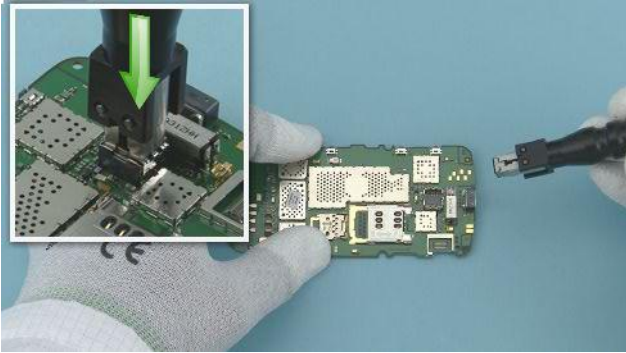


23) Release also the other side of the ENGINE BOARD with the SS-93.

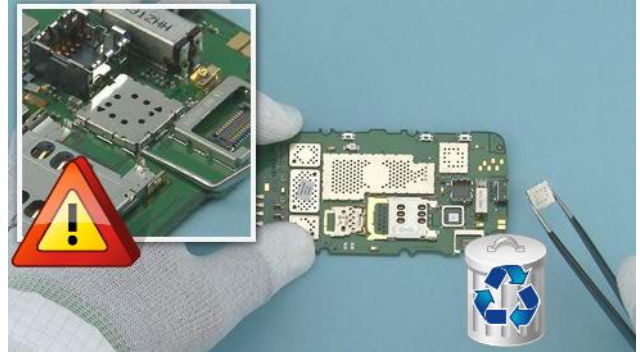


24) The ENGINE BOARD can now be separated.

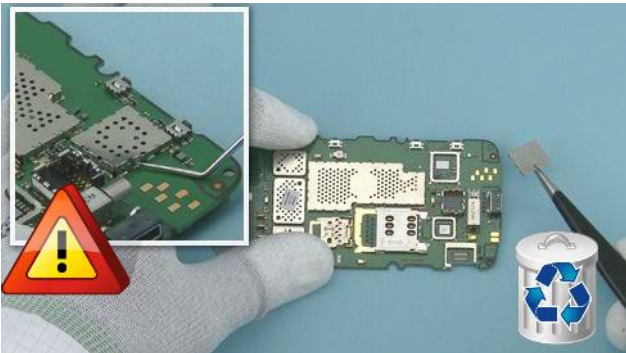




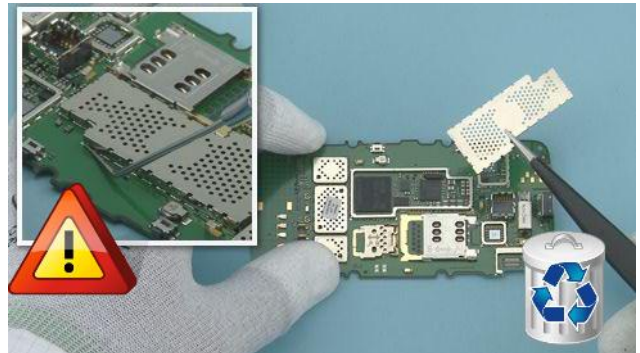
25) Place the camera removal tool SS-276 on top of the CAMERA and push down the button on top of the SS-276. Lift the SS-276 up and remove the CAMERA.



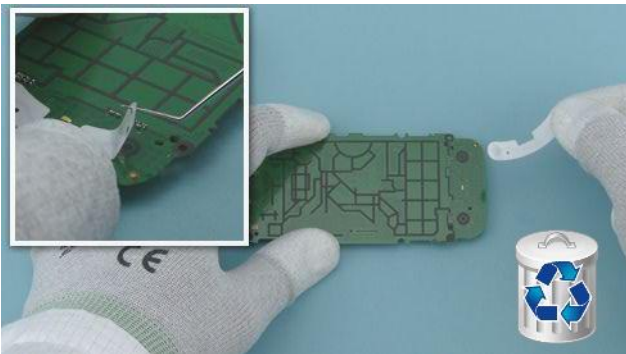
26) Use the dental tool to detach the BT-FM SHIELDING LID. Be careful not to damage any nearby components. Do not use the BT-FM SHIELDING LID again. Discard it.



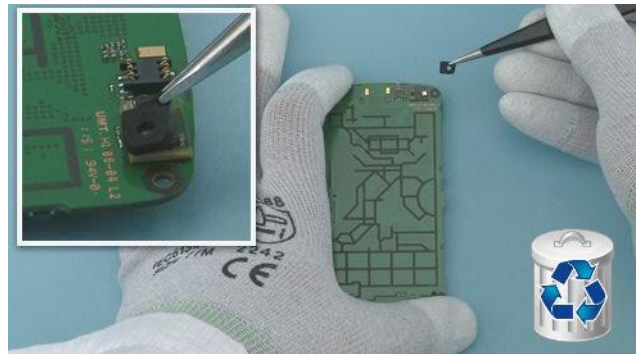
27) Use the dental tool to detach the BB SHIELDING LID. Be careful not to damage any nearby components. Do not use the BB SHIELDING LID again. Discard it.



28) Use the dental tool to detach the JERRY SHIELDING LID. Be careful not to damage any nearby components. Do not use the JERRY SHIELDING LID again. Discard it.



29) Lift up the DOMESHEET from the shown place with the dental tool. Peel out and remove the DOMESHEET. Discard it.



30) Remove the DIPRO SEPARATOR with the tweezers. Do not use it again. Discard it.





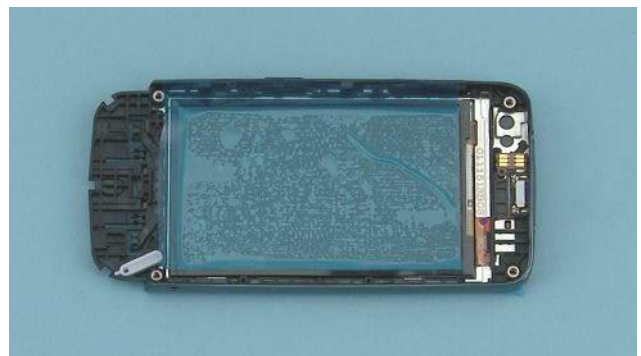
31) Lever up carefully the DISPLAY with the SS-93.



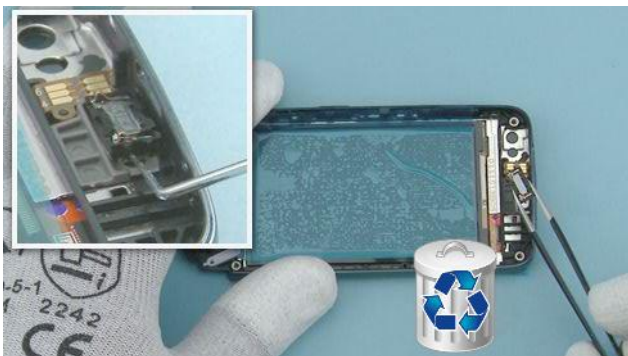
32) Remove the DISPLAY.



33) Protect the DISPLAY with protective film.



34) Protect the other side of the TOUCH MODULE with protective film.



35) Release the EARPIECE with the dental tool. Remove it with tweezers. Do not use the EARPIECE again. Discard it.



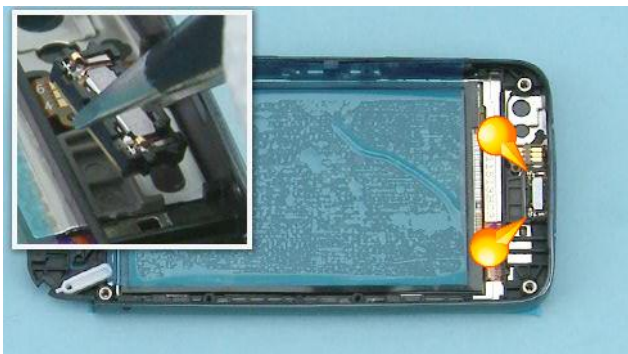
36) Remove also the EARPIECE residues from the A-COVER.



-END OF DISASSEMBLY-

37) Now the Nokia Asha 311 disassembly procedure is complete.

10.ASSEMBLY HINTS



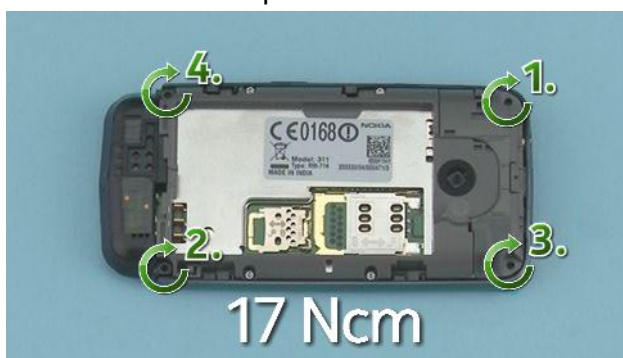
1) Place the EARPIECE to the A-COVER with tweezers. Note the correct alignment of the EARPIECE!



2) When assembling the IHF SPEAKER to the ANTENNA MODULE, check that the springs are aligned as shown. Press the IHF SPEAKER gently with the SS-93 to its place.



3) Tighten the four Torx+ size 4 screws to the torque of 8 Ncm in the order shown.



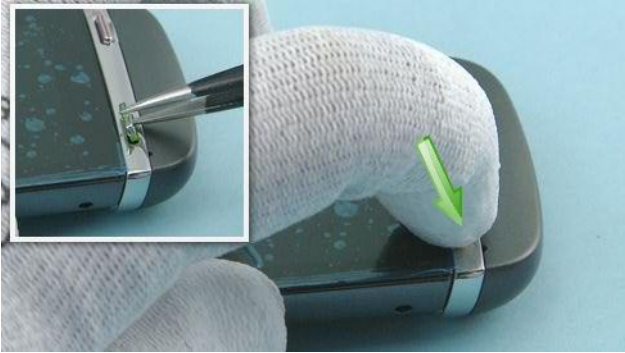
4) Tighten the four Torx+ size 6 screws to the torque of 17 Ncm in the order shown.



5) Push the ANTENNA COVER to its place and check that it is aligned correctly.



6) Place the END KEY with tweezers. Push the END KEY with finger until it snaps to its place.



7) Place the SEND KEY with tweezers. Push the SEND KEY with finger until it snaps to its place.



11.SOLDER COMPONENTS

