Nokia Care Academy

SERVICE MANUAL
Level 1&2

Nokia Asha 300

RM-781



Transceiver characteristics

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

Display
Monoblock Touch and Type 2.4” resistive touch display (240 x 320 pixels)

Camera
5 Mpix full focus EDoF

Operating System
S40

Connections:
Micro USB 2.0
3.5mm AV jack
2.0mm DC jack
Bluetooth
HSPA

Transceiver with BL-4U battery pack

Talk time	Standby
GSM: Up to 6,9h **WCDMA:** Up to 4,3h	**GSM:** Up to 550h **WCDMA:** Up to 597h

Note:
Talk times are dependent on network parameters
and phone settings

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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. EXPLODED VIEW....9
7. SERVICE DEVICES....10
8. SOFTWARE UPDATE....11
9. DISASSEMBLY INSTRUCTIONS....12
10. ASSEMBLY HINTS....19
11. SOLDER COMPONENTS....20

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CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	26.10.2011	

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.

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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

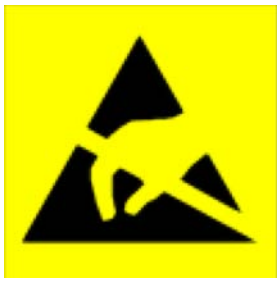
1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI–SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC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

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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.

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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.

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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).

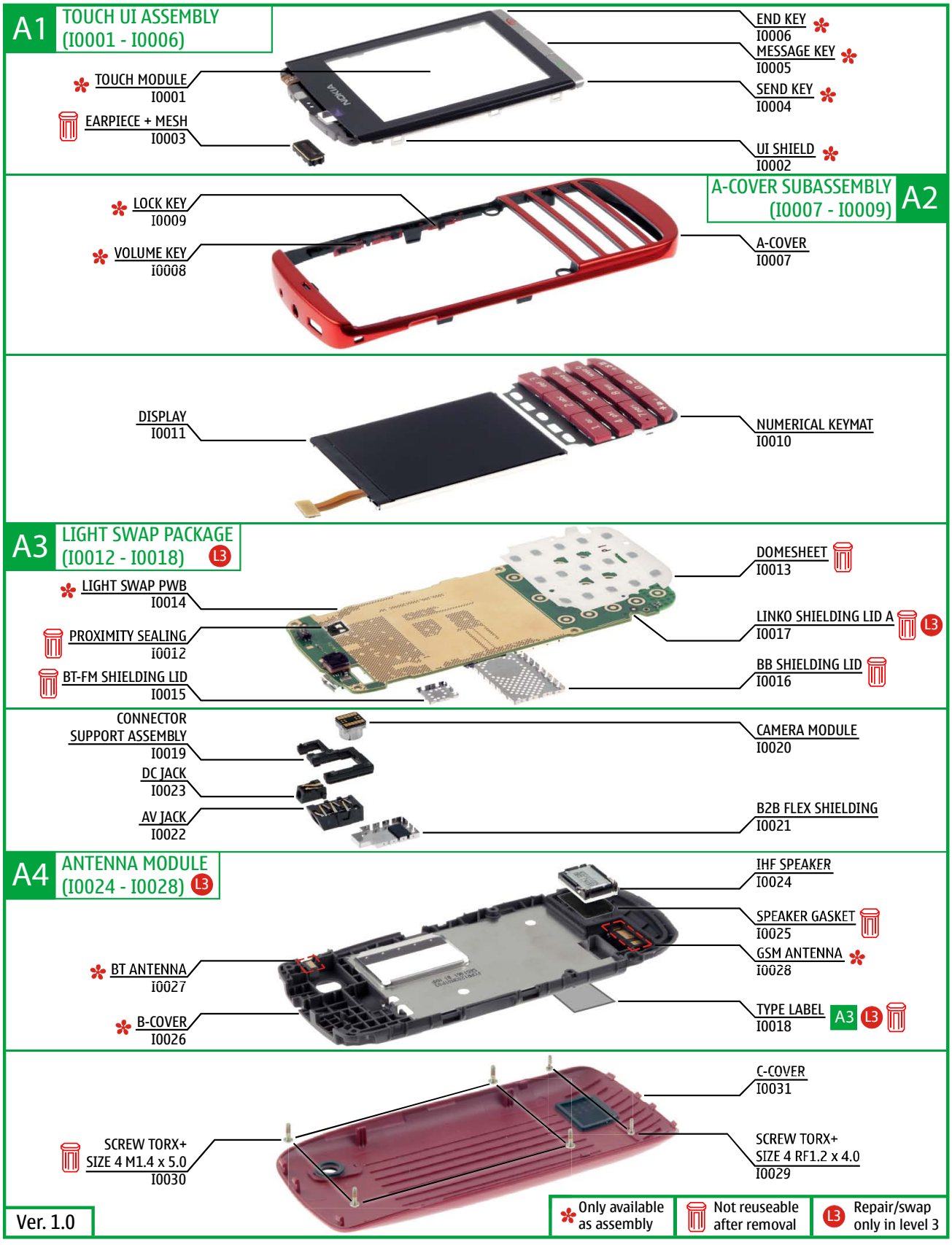
A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

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

Do not dispose as household waste.

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6. EXPLODED VIEW



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7. SERVICE DEVICES

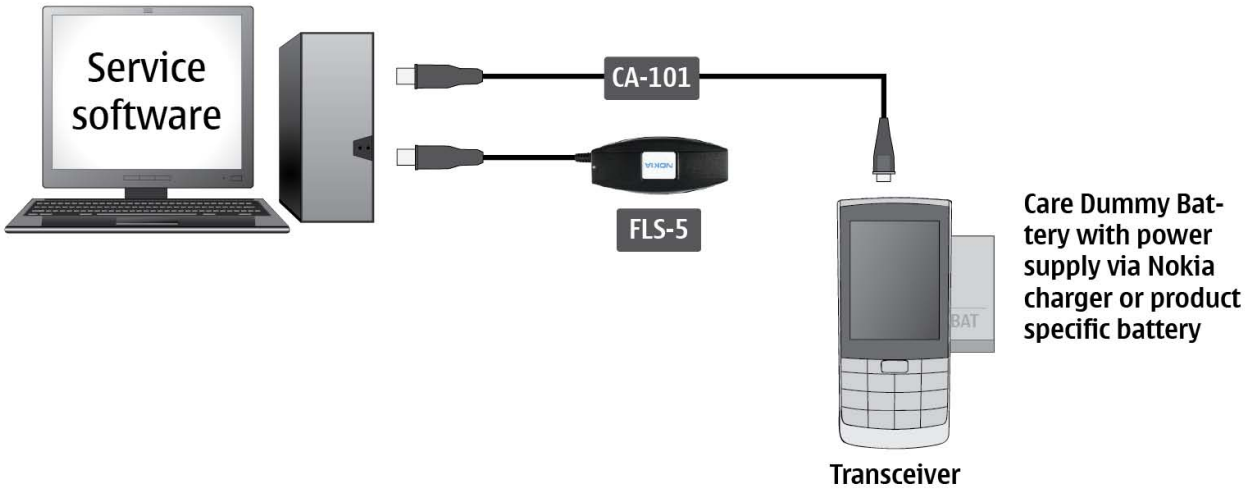
 CA-101 Service Cable	 AC-8 Travel Charger	 BL-4U Battery
	 Camera removal tool SS-88	 **Nokia Standard Toolkit (v2)** For more information, refer to the Service Bulletin (SB-011) on Nokia Online. Supplier or manufacturer contacts for tool re-order can be found in "Recommended service equipment" document on Nokia Online.

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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.



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9. DISASSEMBLY INSTRUCTIONS



1) Nokia Asha 300 disassembly.



2) You must use the Nokia Standard Toolkit version 2. You will also need the camera removal tool SS-88.



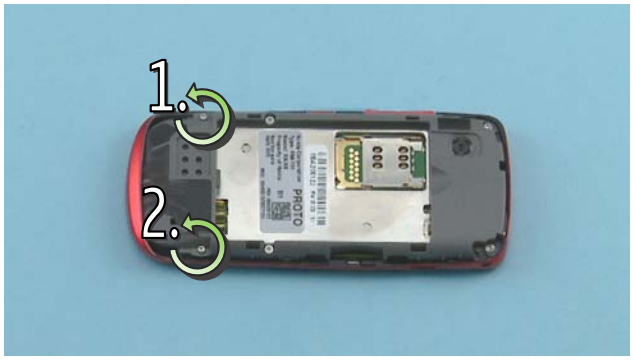
3) Protect the TOUCH MODULE with protective film.



4) Open the BATTERY COVER by using the release notch.

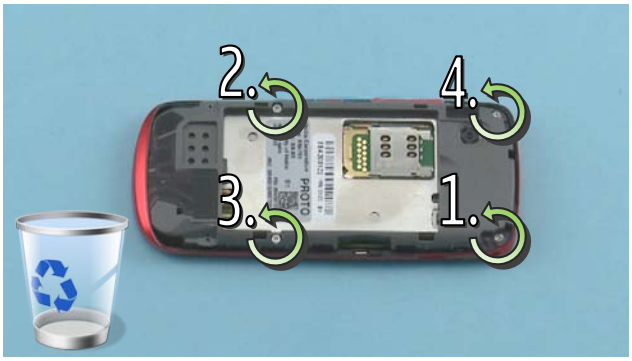


5) Remove the BATTERY COVER.

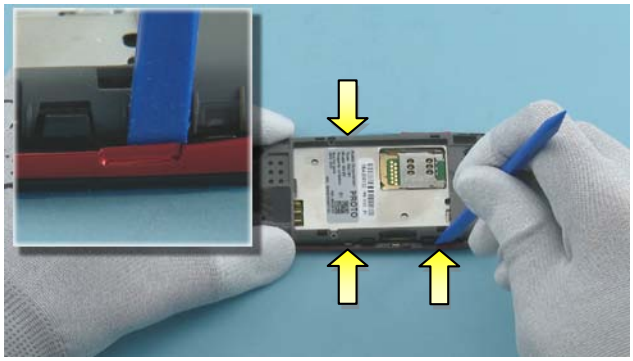


6) Unscrew the two TORX+ size 4 screws in the order shown.

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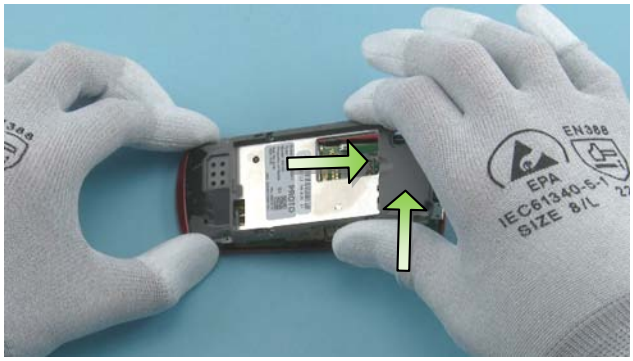
7) Unscrew the four TORX+ size 4 screws in the order shown. Do not use them again. Discard them.



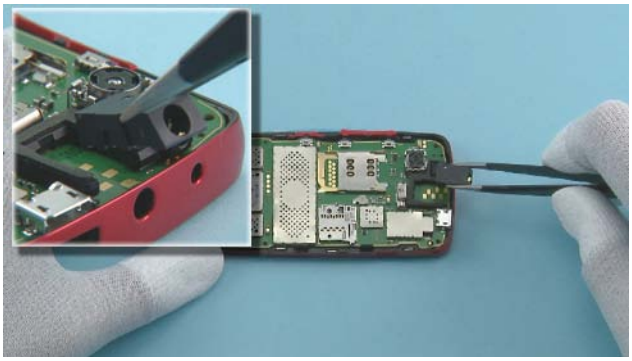
8) Use the SS-93 to release the B-COVER from both sides.



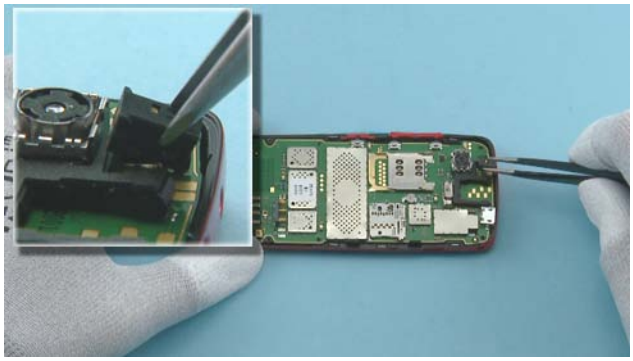
9) Slightly lift up the B-COVER from the top side with the SS-93.



10) Lift up the B-COVER from the top side and remove it to direction shown.

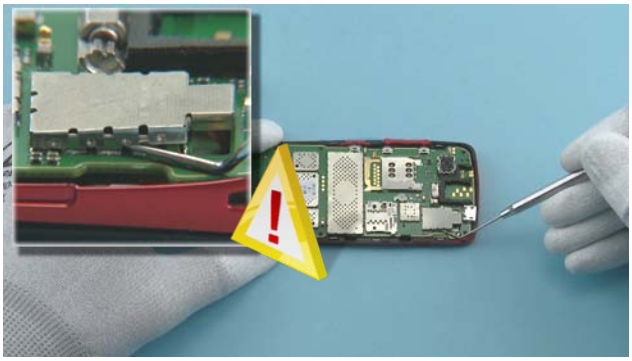


11) Remove the AV JACK with tweezers.

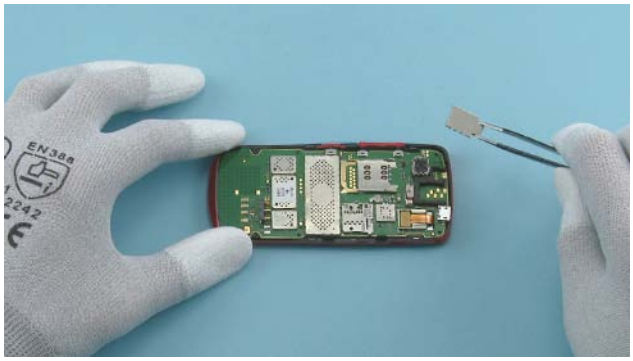


12) Remove the DC JACK with tweezers.

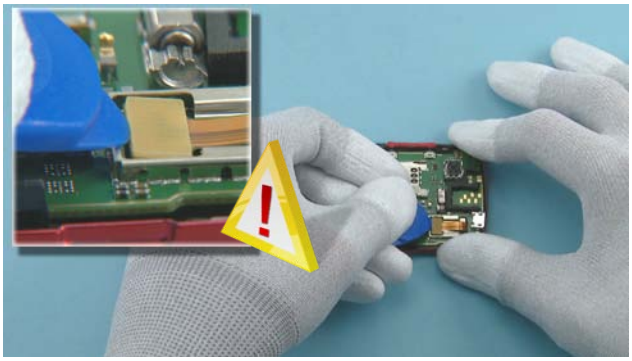
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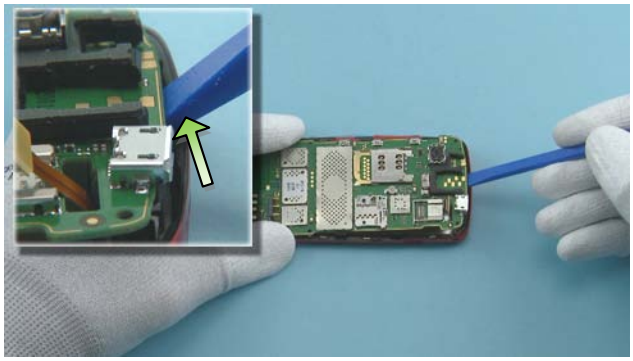
13) Lift up the B2B FLEX SHIELDING with the dental tool. Be careful not to damage yourself or any nearby components with the sharp end of the dental tool.



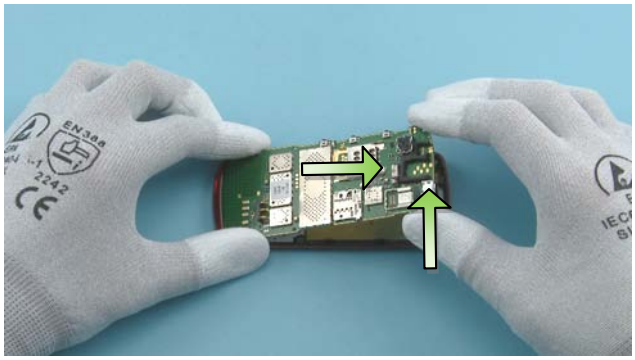
14) Remove the B2B FLEX SHIELDING with tweezers.



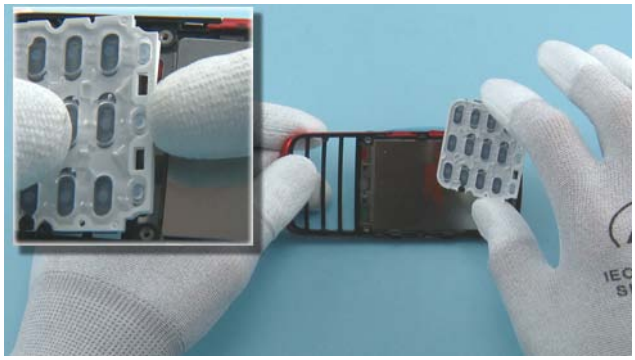
15) Open the DISPLAY connector with the SRT-6. Be careful not to damage the connector or any nearby components.



16) Use the SS-93 to release the ENGINE BOARD from the top side.



17) Lift up the ENGINE BOARD from the top side and remove it to direction shown.

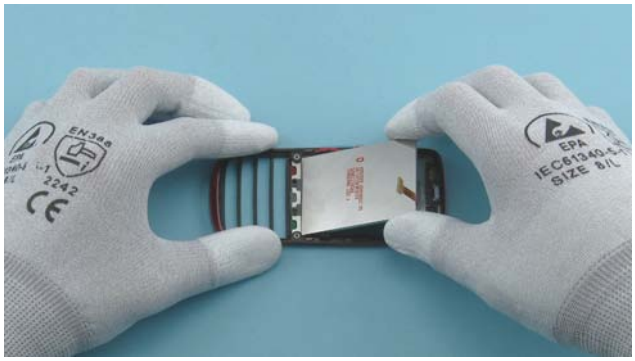


18) Push the NUMERICAL KEYMAT out of the A-COVER and remove it.

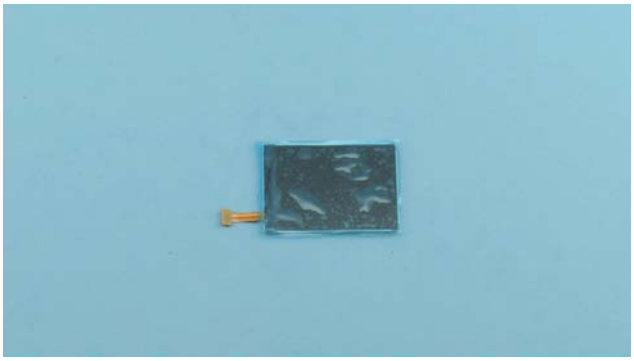
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19) Release the DISPLAY with the SS-93 from the top side.



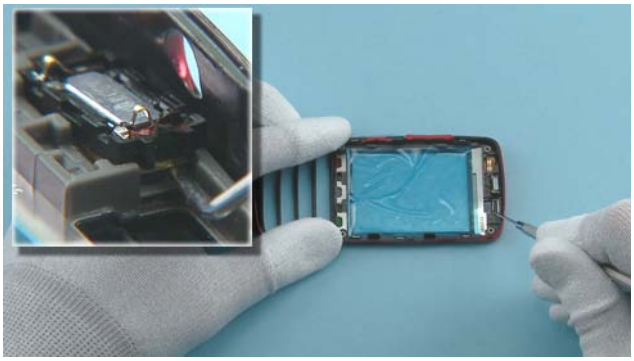
20) Lift up the DISPLAY and remove it.



21) Protect the DISPLAY with protective film.



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

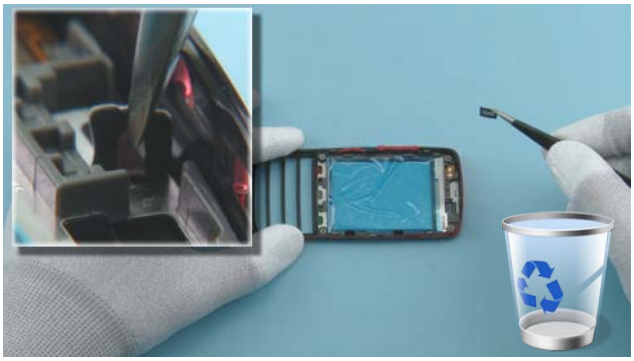


23) Lever out the EARPIECE with the dental tool.



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

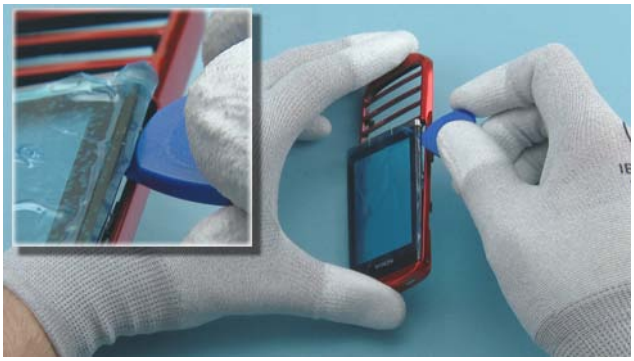
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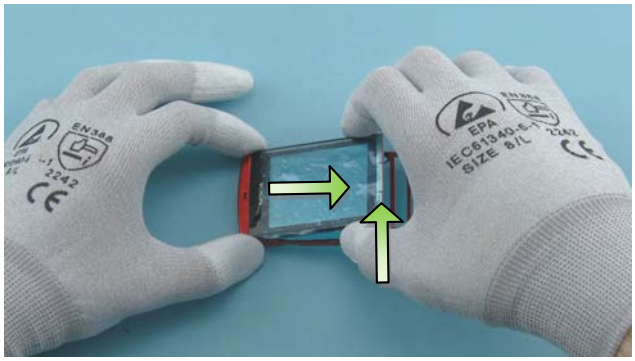
25) Remove the EARPIECE adhesive with tweezers. Do not use it again. Discard it.



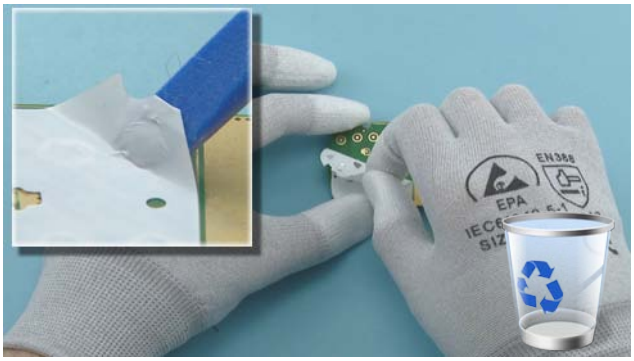
26) Use the SRT-6 to release the TOUCH MODULE first from the lower right corner.



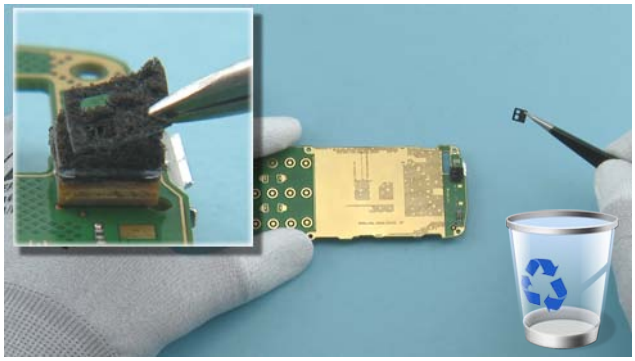
27) Then from the lower left corner.



28) Lift up the TOUCH MODULE from the bottom side and remove it to direction shown.

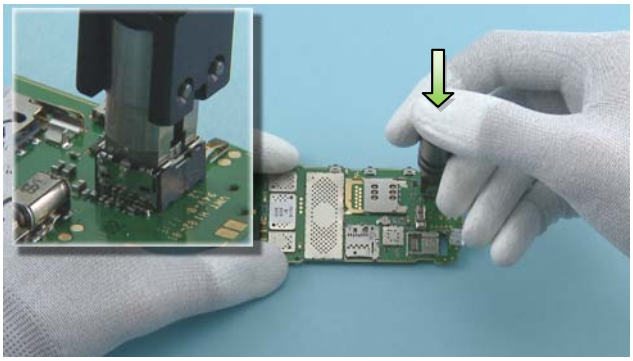


29) Release one corner of the DOMESHEET with the SS-93 and peel off the DOMESHEET. Do not use it again. Discard it.

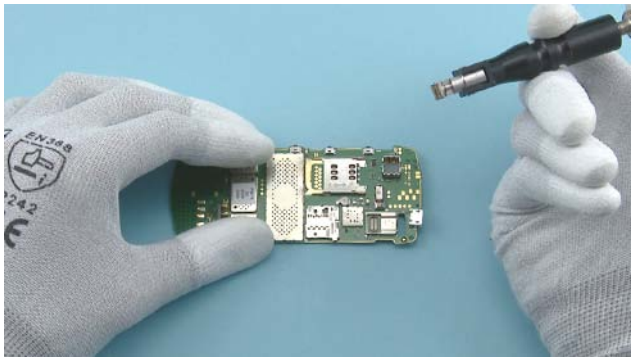


30) Remove the PROXIMITY SEALING with tweezers. Do not use it again. Discard it.

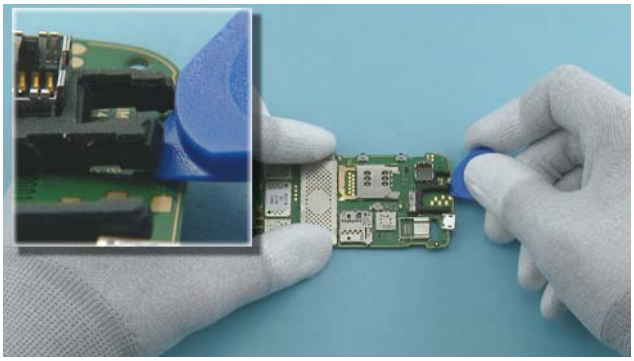
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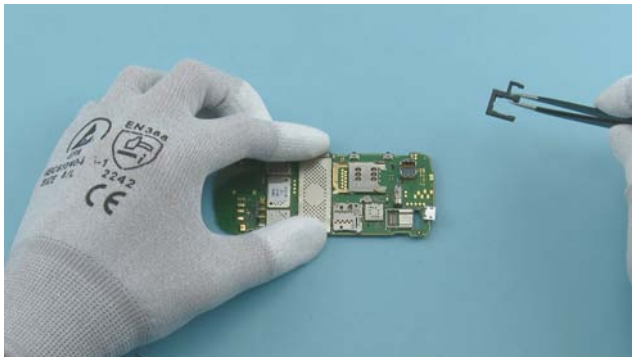
31) Place the camera removal tool SS-276 on top of the CAMERA MODULE and press down the button on the SS-276 to release the CAMERA MODULE.



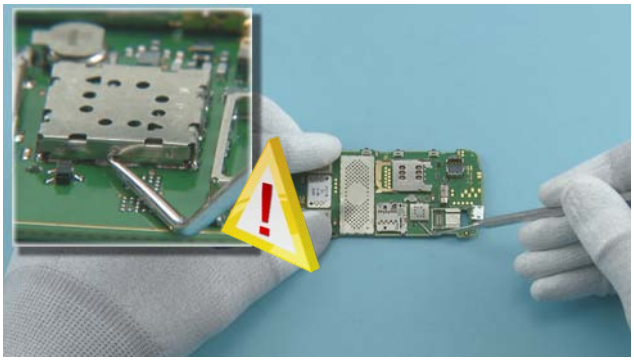
32) While holding down the button, lift up the SS-276 and remove the CAMERA MODULE.



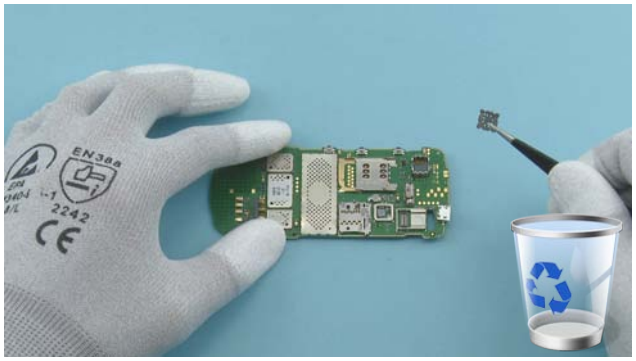
33) Release the CONNECTOR SUPPORT ASSEMBLY with the SRT-6.



34) Remove the CONNECTOR SUPPORT ASSEMBLY with tweezers.

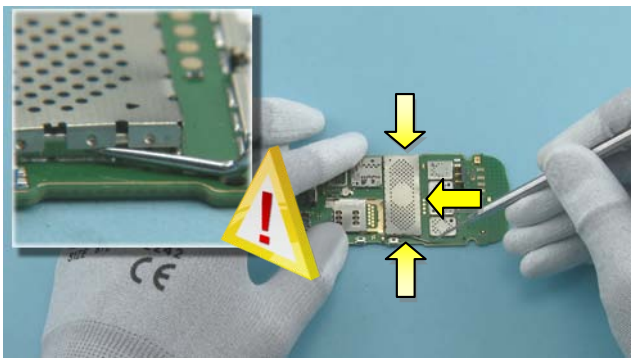


35) Lever out the BT-FM SHIELDING LID with the dental tool. Be careful not to damage any nearby components.

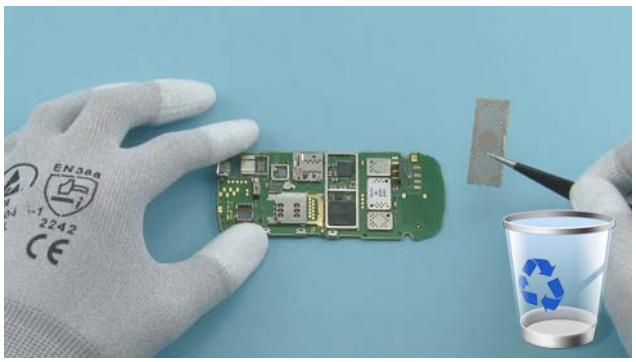


36) Remove the BT-FM SHIELDING LID with tweezers. Do not use it again. Discard it.

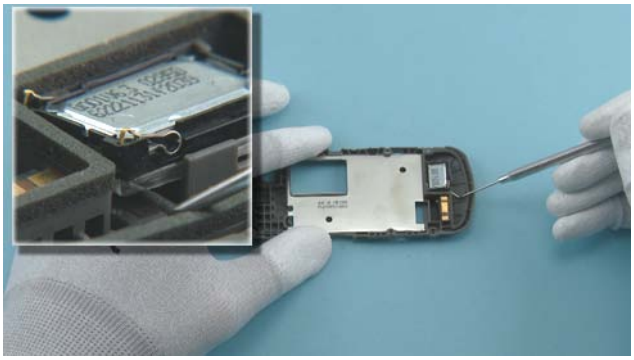
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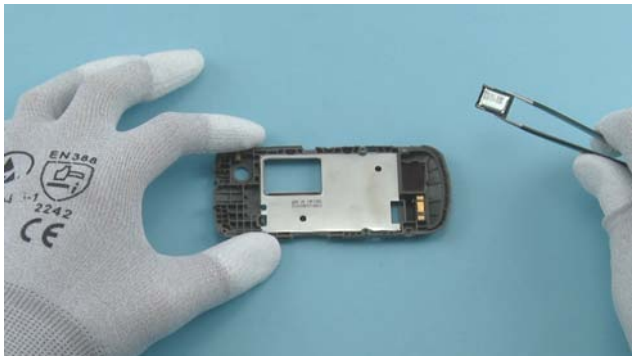
37) Lever out the BB SHIELDING LID with the dental tool from the three shown sides. Be careful not to damage any nearby components.



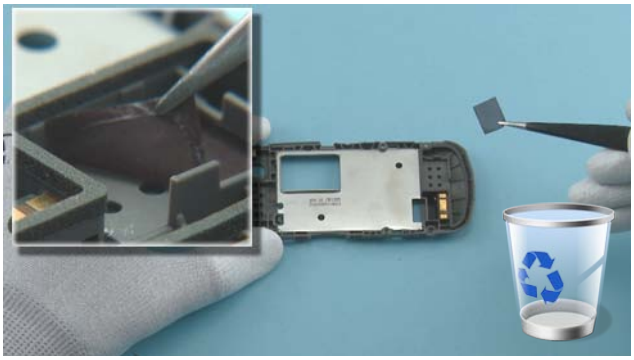
38) Remove the BB SHIELDING LID with tweezers. Do not use it again. Discard it.



39) Lever out the IHF SPEAKER with the dental tool.



40) Remove the IHF SPEAKER with tweezers.



41) Remove the SPEAKER GASKET with tweezers. Do not use it again. Discard it.

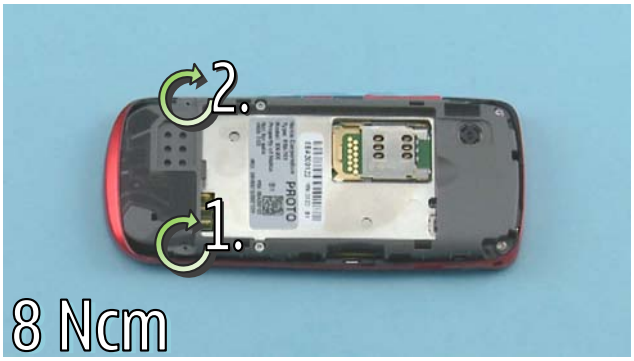


42) The Nokia Asha 300 disassembly is now complete.

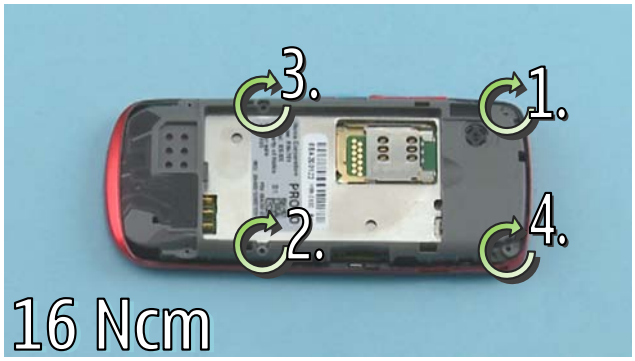
-END OF DISASSEMBLY-

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10. ASSEMBLY HINTS



1) Tighten the two TORX+ size 4 screws to the torque of 8 Ncm.

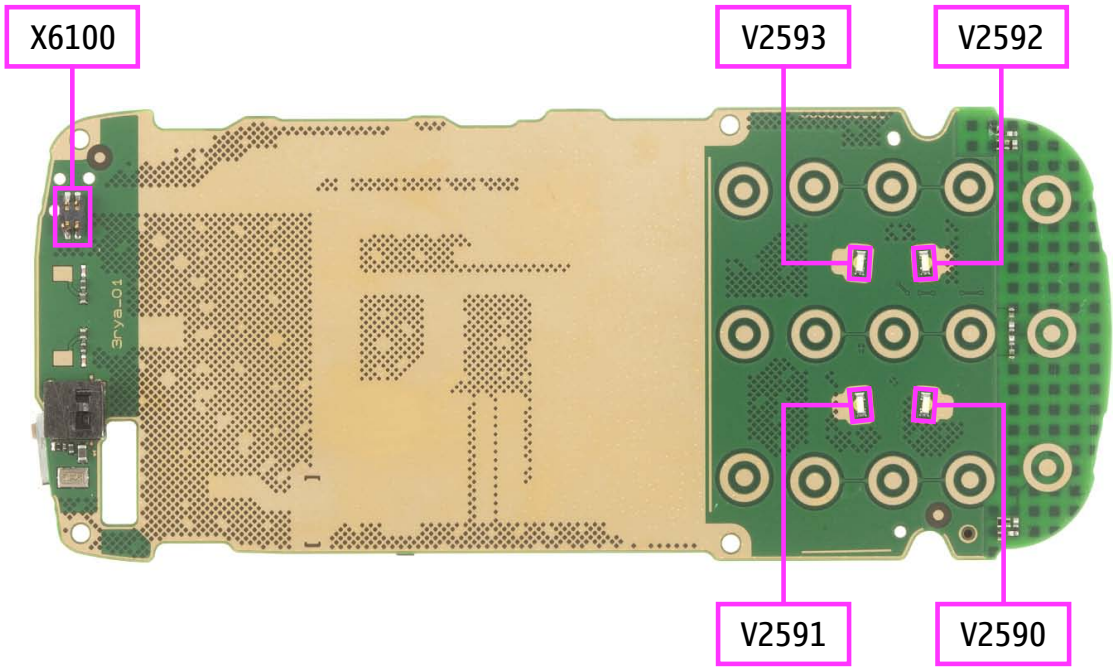


2) Tighten the four TORX+ size 4 screws to the torque of 16 Ncm.

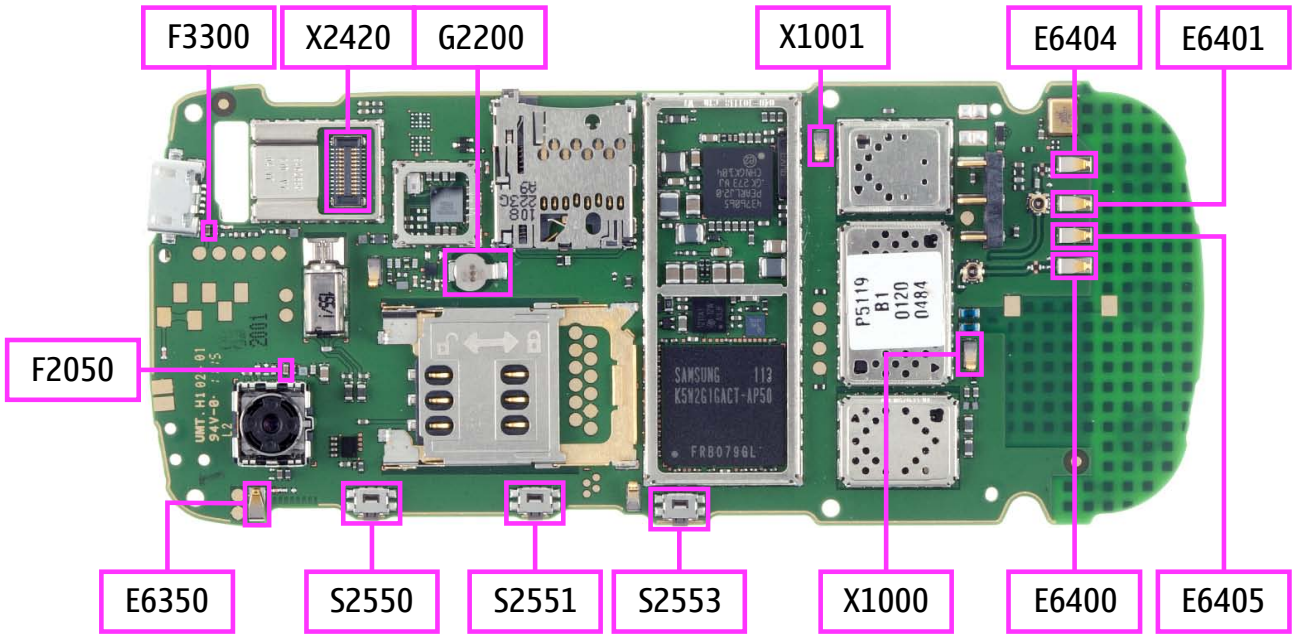
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11. SOLDER COMPONENTS

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