

SERVICE MANUAL

Level 1&2

NOKIA

6500

CLASSIC

RM-265



Transceiver characteristics:

Band:

EGSM: Quad-band 850/900/1800/1900MHz

WCDMA: 850/2100MHz

Display:

LCD: 5.08cm QVGA (2.0") (320x240 pixel); 16M colors

Camera:

Camera: 2.0 Megapixel, 8x digital zoom

Operating System:

Series 40

Connections:

Wireless: Bluetooth

Connector: Micro USB Connector

Memory:

1 GB internal

Transceiver with BL-6P Li-Ion battery pack

Talk time	Standby	Note
up to 5,5h	up to 12,5days	Depends on network parameters

TABLE OF CONTENTS

Page

1.	CHANGE HISTORY	3
2.	COPYRIGHT	3
3.	WARNINGS AND CAUTIONS	4
4.	ESD PROTECTION	4
5.	CARE AND MAINTENANCE	5
6.	BATTERY INFORMATION	5
7.	EXPLODED VIEW	6
8.	LEVEL 2 SOLDER COMPONENTS	7
9.	SERVICE TOOLS	8
10.	SW-UPDATE	9
11.	DISASSEMBLY INSTRUCTION	10
12.	ASSEMBLY INSTRUCTION	17

1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	27.Aug.2007	Initial draft
Approved	1.0	31.Aug.2007	Approval

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:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
<mailto:Service.Manual@nokia.com>

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

2. COPYRIGHT

Copyright © 2007 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.

3. WARNINGS AND CAUTIONS

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:

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.

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.

4. 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.



5. 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.

6. 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.

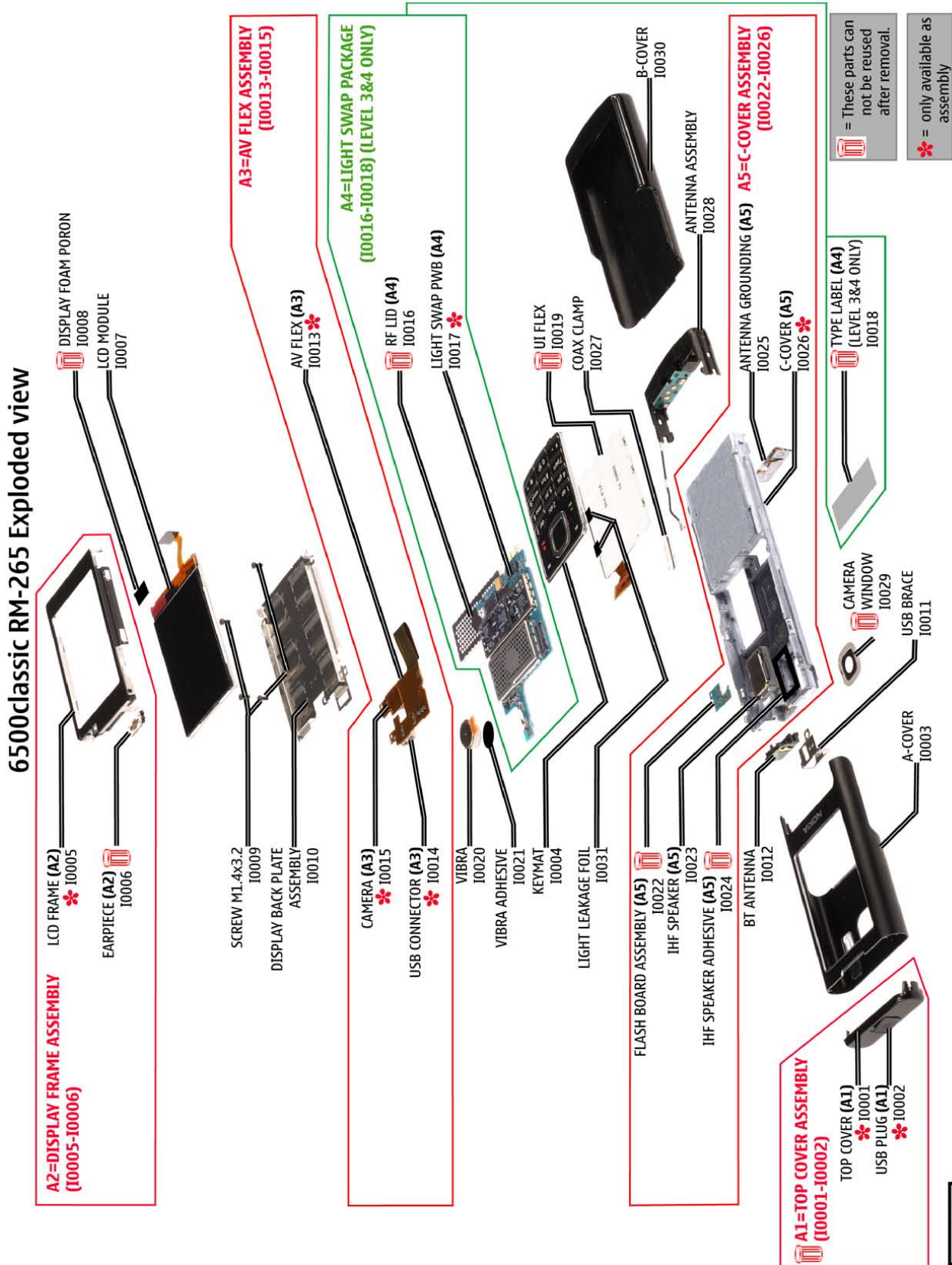
Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Short-circuiting the terminals 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.

7. EXPLODED VIEW

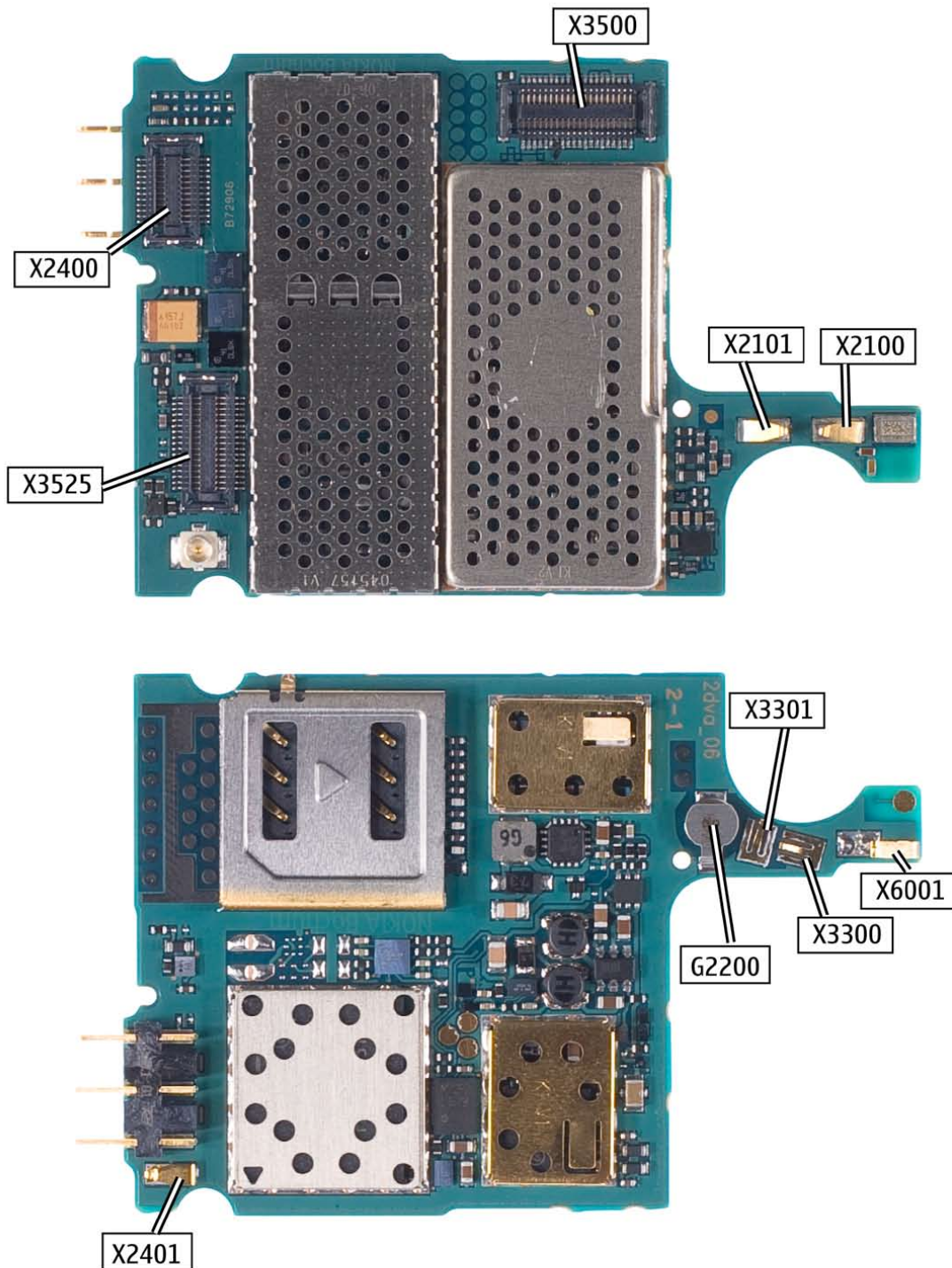
See corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.



8. LEVEL 2 SOLDER COMPONENTS

6500classic RM-265 Components overview

Solder components only for LEVEL 2



Ver. 1.0

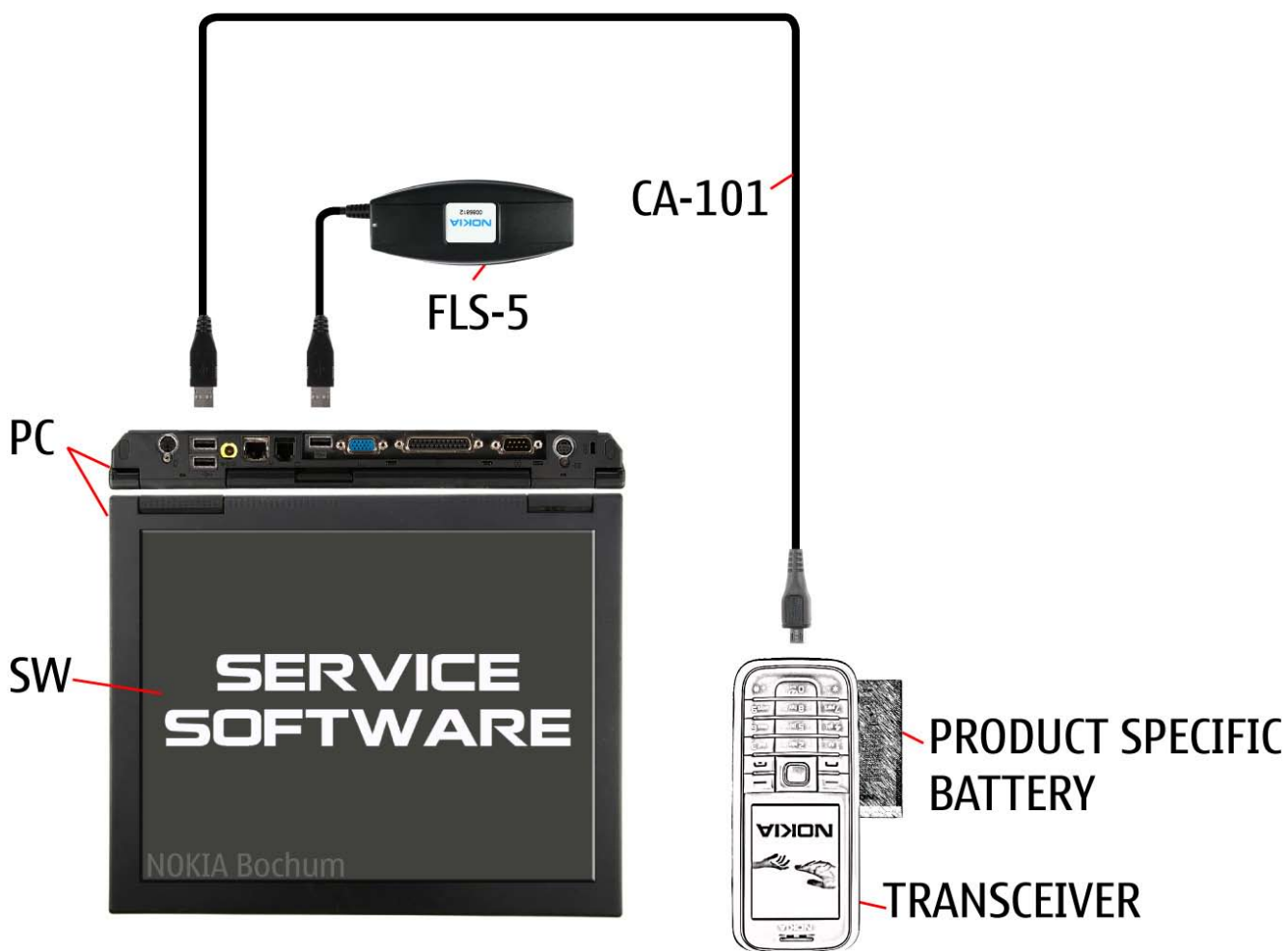
9. SERVICE TOOLS

 <p>FLS-5</p> <p>FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.</p>	 <p>ACF-8 Universal Power Supply is used to power FLS-4S.</p>	 <p>AC-6E</p> <p>Travel Charger AC-6 Small and lightweight charger for fast charging of your phone battery.</p>
 <p>CA-101 100cm</p> <p>CA-101 Service Cable to connect the PC with the micro USB connector.</p>		 <p>RJ-181</p> <p>RJ-181 Soldering Jig</p>
 <p>BL-6P</p> <p>Internal Battery BL-6P Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.</p>		 <p>0772040 NMP Standard Toolkit (V2) For more informations 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>

10.SW-UPDATE

Flash Concept – (Point of Sales)

To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on [NOKIA Online](#).



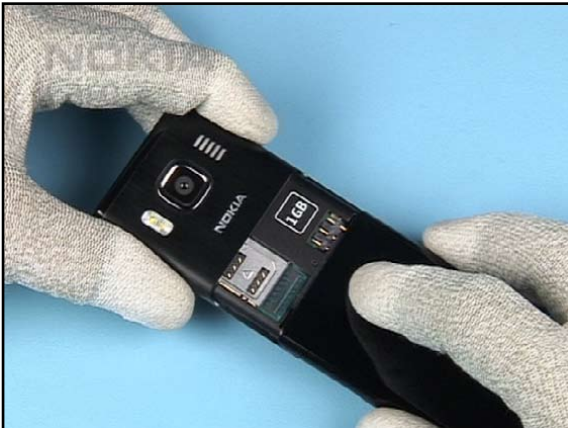
11. DISASSEMBLY INSTRUCTION



1. Nokia 6500 Classic. Disassembly.



2. You will need the Nokia Standard Toolkit version 2. Also refer to the General Mechanical Guideline Video for additional hints about the tools and component handling.



3. Always cover all sensitive surfaces with a protective film. Slide the B-COVER in the shown direction and remove it. Remove the battery if inserted.



4. Unlock the clips of the TOP COVER ASSEMBLY on both sides with the SRT-6.



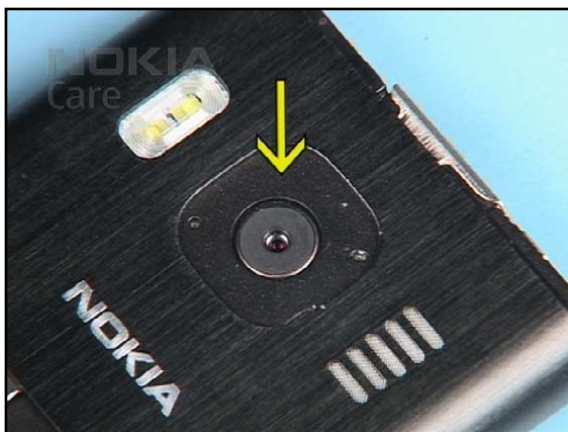
5. Remove the TOP COVER and discard it.



6. To remove the CAMERA WINDOW, first remove the frame with the dental pick and discard it.



7. Then remove the window with the SRT-6 and discard it, too.



8. Make sure that no adhesive remains.



9. Carefully pull out the A-COVER.



10. Remove the KEYMAT.



11. Release the LCD FRAME with the SS-42.



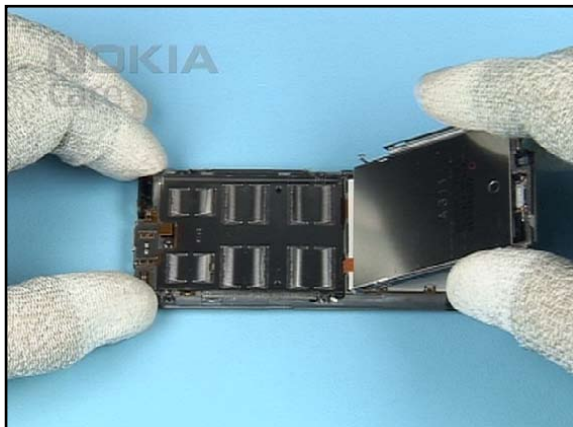
12. Place the SS-42 between the LCD FRAME and the C-COVER.
Gently lever out the LCD FRAME.



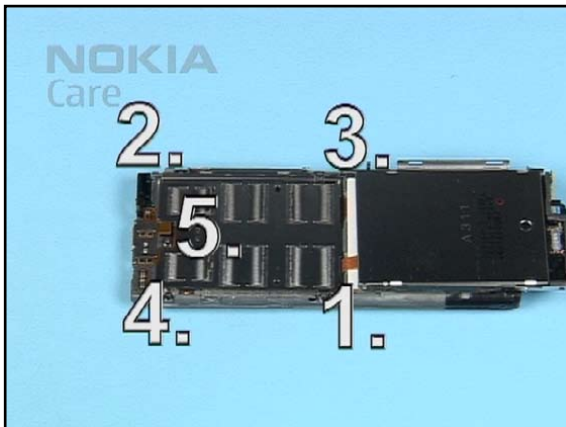
13. Open the clip on the top with the dental pick.



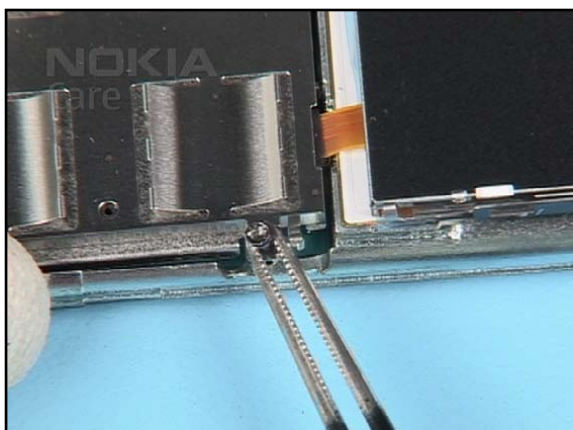
14. Now, continue on the other side of the LCD FRAME.



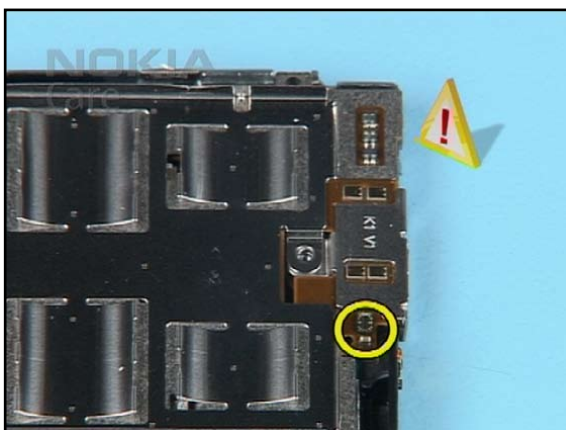
15. Place the LCD FRAME and the LCD MODULE on the UI interface.



16. Undo the five screws in the order shown....



17. ...and remove them.



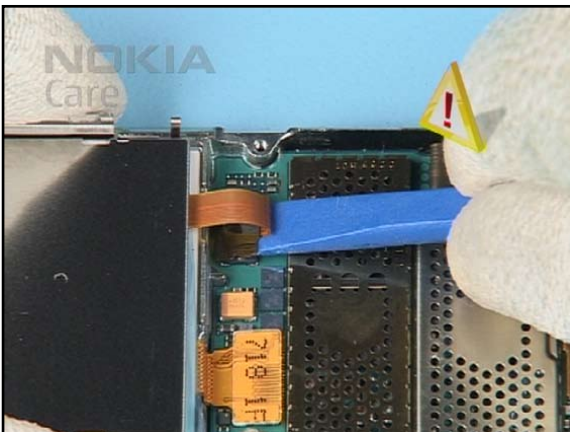
18. Take special care to the electric components on the AV FLEX.



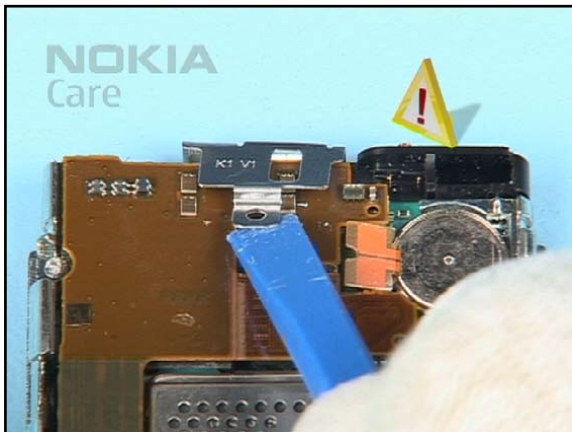
19. Hold of the assembly as shown...



20. ...and very carefully separate the DISPLAY BACK PLATE from the AV FLEX.



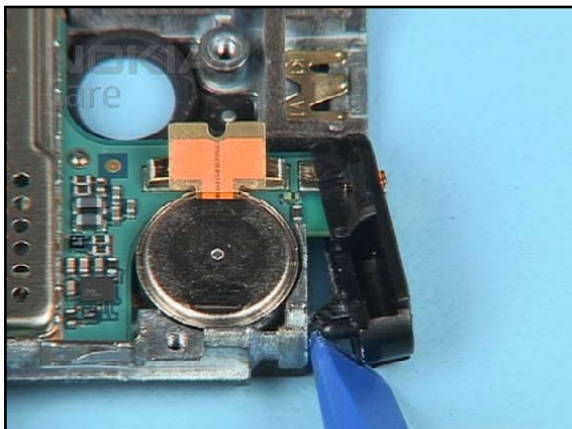
21. Disconnect the LCD MODULE from the PWB.



22. Gently lift the USB BRACE. Take care to the surrounding components.



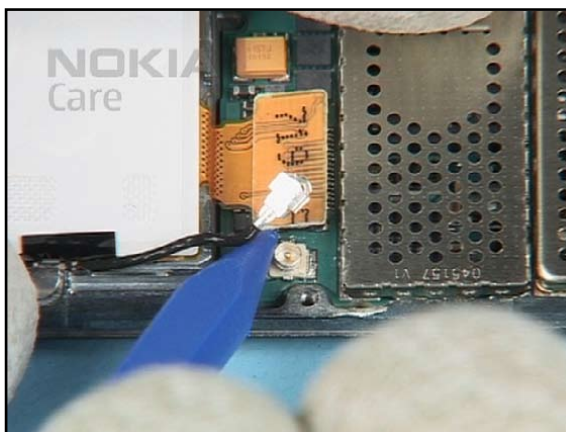
23. Open the AV FLEX connector and remove the AV FLEX ASSEMBLY.



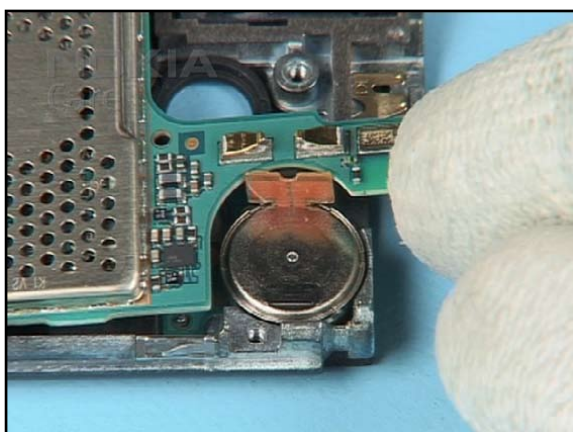
24. Remove the BT ANTENNA.



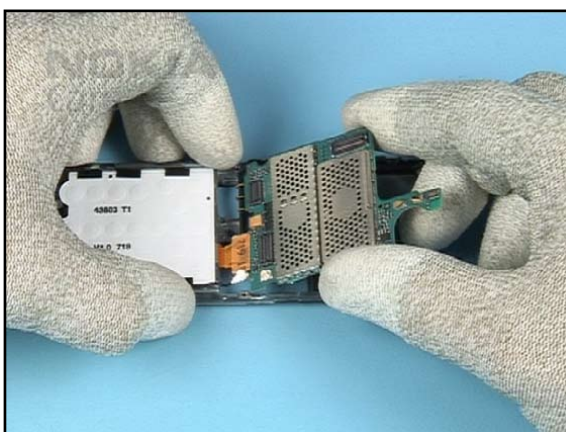
25. Carefully open the coax connector with tweezers.



26. Open the UI FLEX connector.



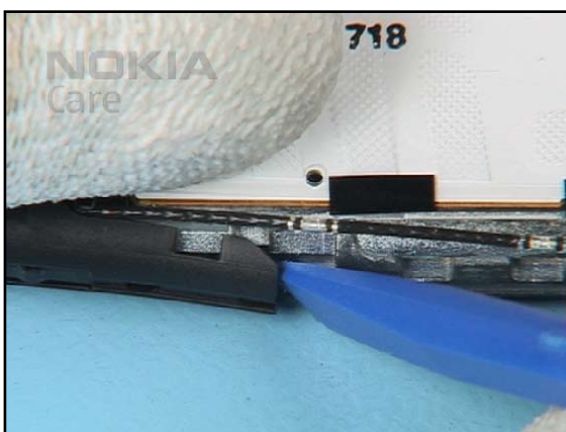
27. Lift the PWB on the shown side paying attention to the flex contacts of the VIBRA.



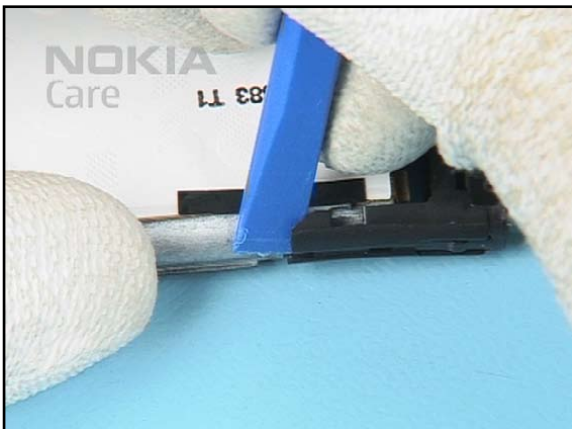
28. Remove the LIGHT SWAP PWB.



29. Unlock and remove the COAX CLAMP.



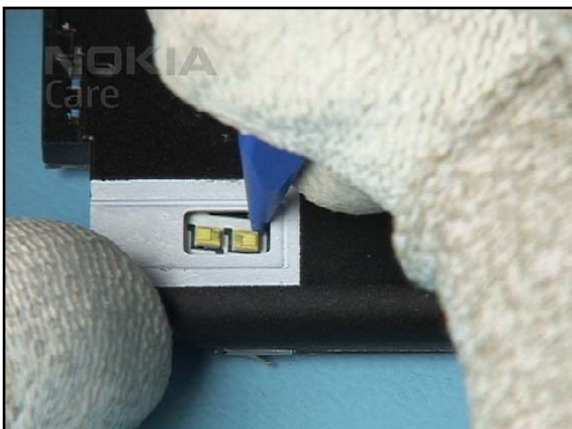
30. Unlock the clip of the ANTENNA ASSEMBLY.



31. Do the same at the other side and remove the ANTENNA ASSEMBLY.



32. Remove the VIBRA and ensure that no adhesive remains.



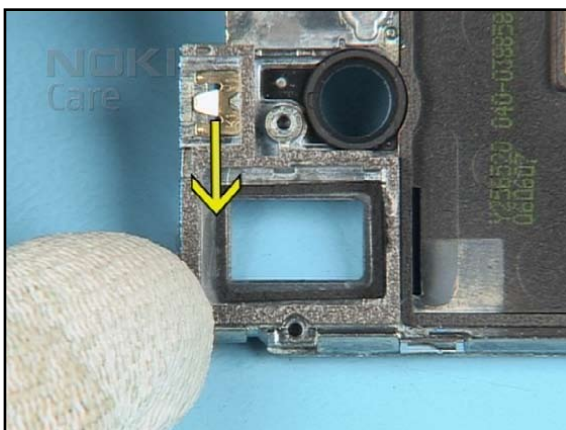
33. Slightly push on the FLASH BOARD ASSEMBLY to release the adhesive.



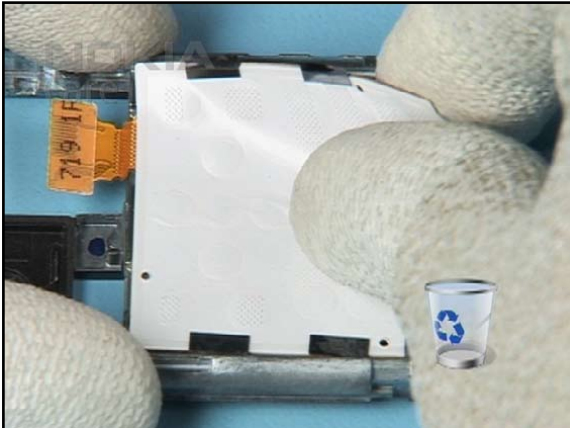
34. Discard the FLASH BOARD ASSEMBLY and also ensure that no adhesive remains.



35. Carefully remove the IHF SPEAKER.



36. Remove the IHF SPEAKER ADHESIVE from the C-COVER.



37. Remove the UI FLEX and discard it.



38. Unlock and remove the ANTENNA GROUNDING. The disassembly procedure is now finished.

12. ASSEMBLY INSTRUCTION



1. Nokia 6500 Classic. Assembly hints.



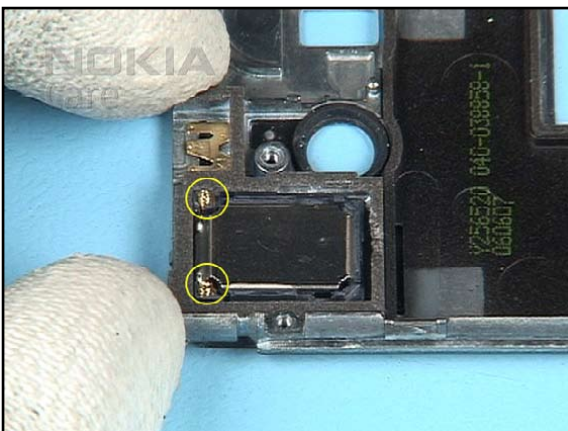
2. You will need the Nokia Standard Toolkit version 2. Also refer to the General Mechanical Guideline Video for additional hints about the tools and component handling.



3. Fit the ANTENNA GROUNDING to the C-COVER.



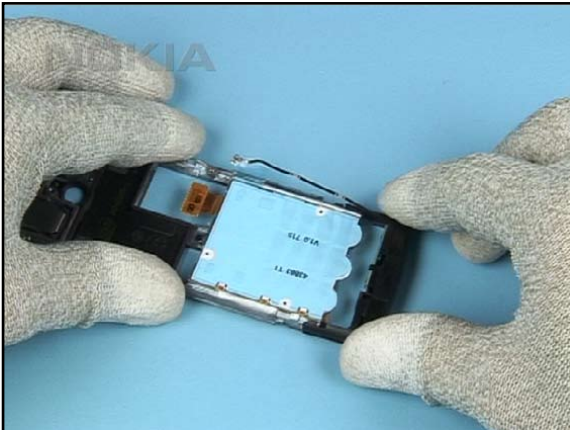
4. Take special care to the microphone flex when replacing the UI FLEX.



5. Place the IHF SPEAKER with the new IHF SPEAKER ADHESIVE into the C-COVER. Pay attention to the correct position of the spring contacts.



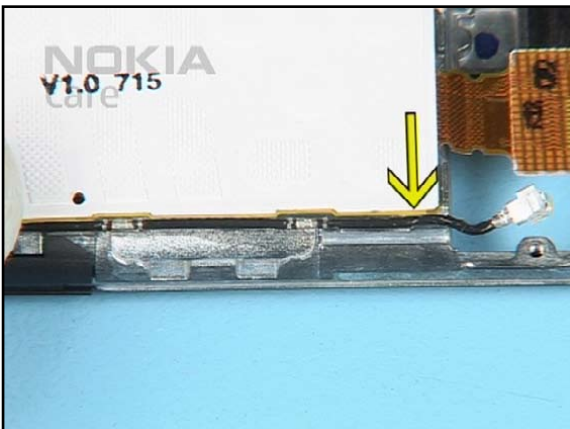
6. Fit a new FLASH BOARD ASSEMBLY.



7. Fit the ANTENNA ASSEMBLY onto the C-COVER.



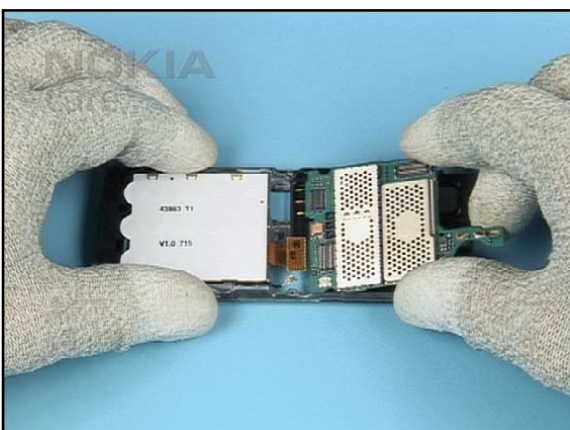
8. Remove the protection film from the UI FLEX.



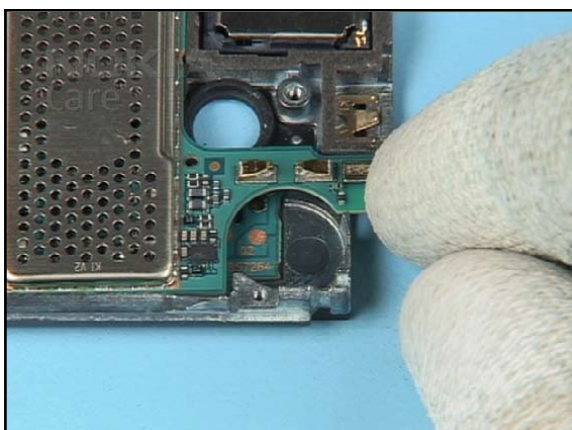
9. Pass the coax cable as shown. Ensure that the cable is not damaged.



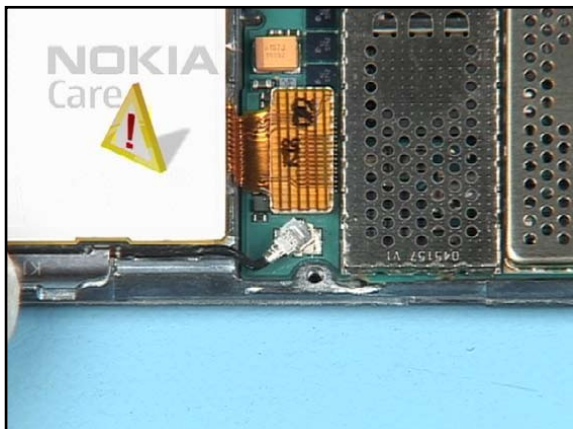
10. Fit the COAX CLAMP.



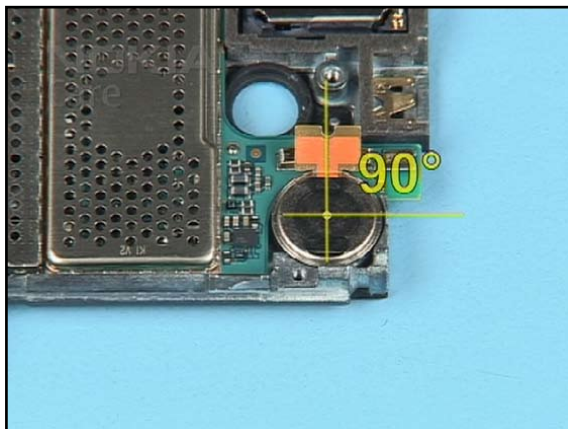
11. Place the LIGHT SWAP PWB into the C-COVER.



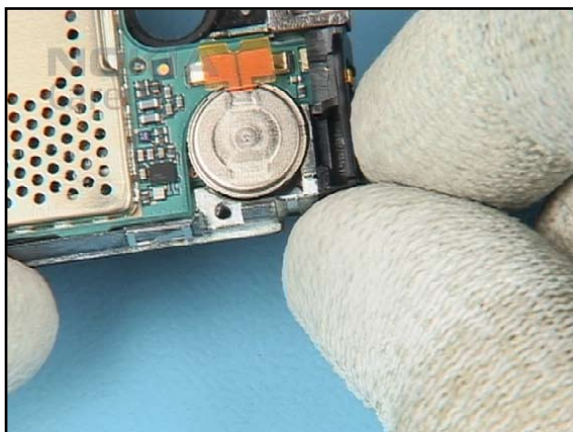
12. Check the correct position of the PWB before going on.



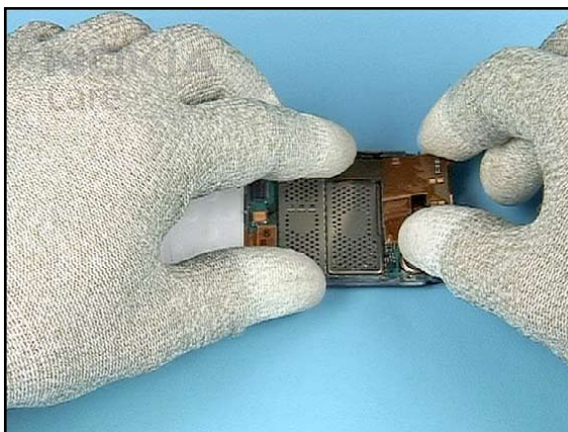
13. Carefully close the UI FLEX connector and the coax connector.



14. Fit the VIBRA with the new VIBRA ADHESIVE into its place. Pay attention to the correct position.



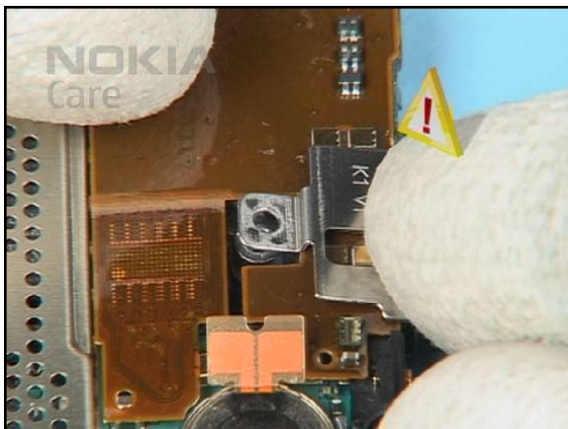
15. Fit the BT ANTENNA.



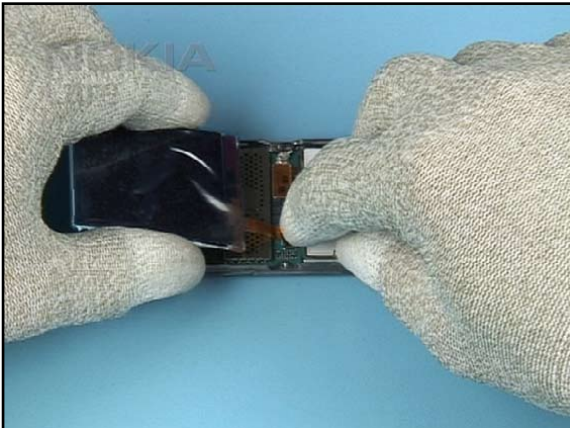
16. Gently close the AV FLEX connector.



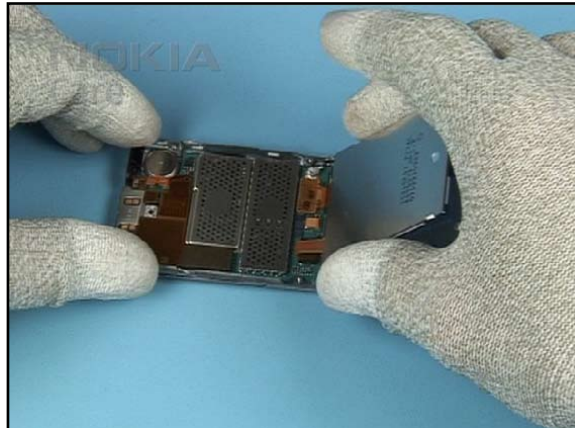
17. Fit the USB BRACE into the C-COVER at the shown side first...



18. ...and then carefully push it into its position.



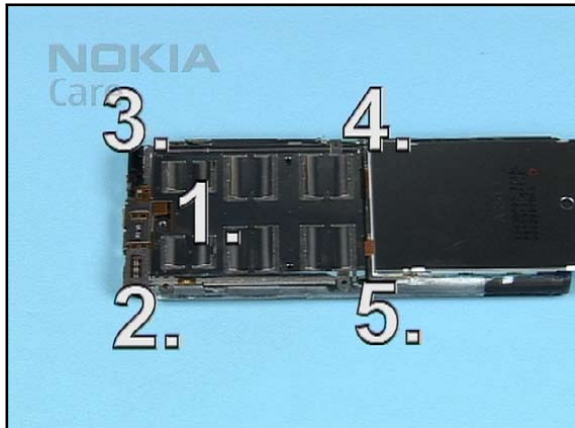
19. Connect the LCD MODULE to the PWB.



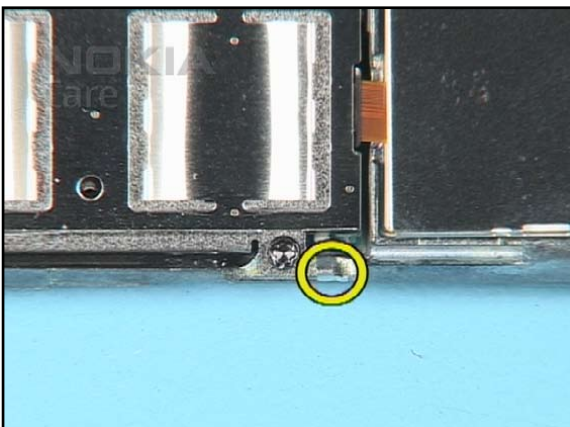
20. Place the LCD MODULE onto the UI FLEX.



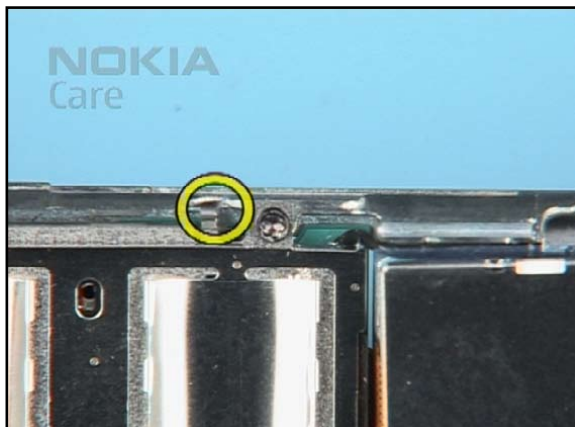
21. Align the DISPLAY BACK PLATE with the C-COVER.



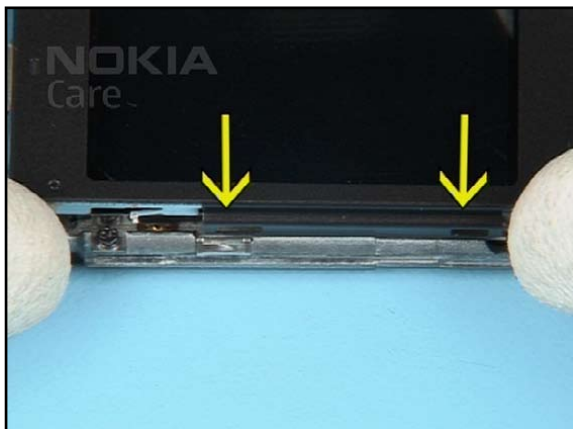
22. Insert the screws and tighten them to the torque of 10Ncm in the order shown.



23. Do not bend the grounding hook of the DISPLAY BACK PLATE.



24. Check also the other side.



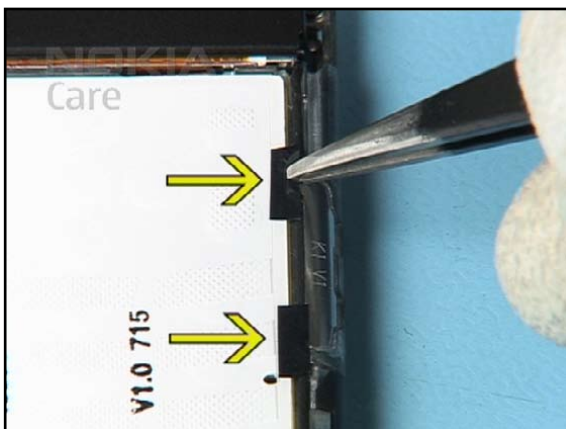
25. Align the DISPLAY FRAME ASSEMBLY with the C-COVER...



26. ...and push into place to secure it.



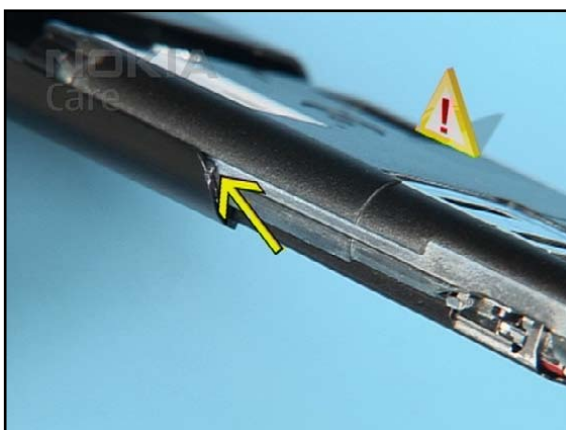
27. Close the clip on top of the unit.



28. Place the two LIGHT LEAKAGE FOILS onto the UI FLEX as shown.



29. Align the A-COVER with the C-COVER. Do not slide the parts together yet.



30. Ensure that the tongue of the A-COVER is positioned exactly in the rail of the C-COVER.



31. Check it also on the other side.



32. Fit the KEYMAT...



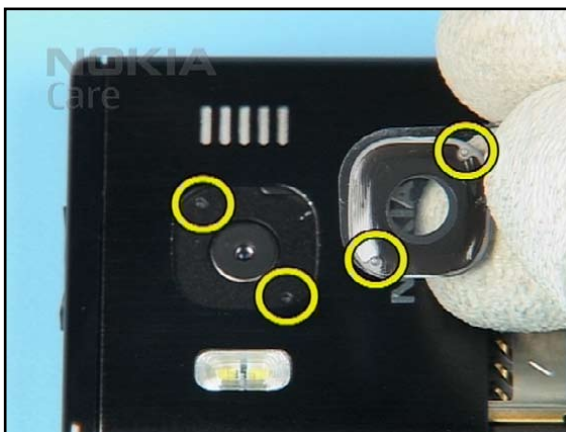
33. ...and carefully slide the A-Cover into its position.



34. Always use a new TOP COVER ASSEMBLY. Pay attention to the correct position of the TOP COVER...



35. Close the other side.



36. Fit a new CAMERA WINDOW paying attention to its correct position.



37. Close the B-Cover.



38. Check that no gaps remain.