

SERVICE MANUAL

Level 1&2

NOKIA
3250

RM-38



Transceiver characteristics:

Band: Tri-band phone for GSM/EDGE 900/1800/1900MHz
Camera: Integrated camera 2 Megapixel
Display: TFT Active matrix color display with 262.144 colors,
high resolution 176 x 208 pixel
Bluetooth
FM radio, MP3/eAAC+
Vibra Alert
Connector: Pop Port™ connector
Memory expandable up to 1GB (Micro SD card)
Twist- On design
USB 2.0

Transceiver with BP-6M 1100mAh Li-Ion battery pack

| Talk time | Standby | Note |
|-----------|---------------|-------------------------------|
| up to 3 h | up to 10 days | Depends on network parameters |

Environmental characteristics:

- Lead-free soldered

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CHANGE HISTORY

| Status | Version No. | Date | Comments |
|----------|-------------|--------------|---|
| Draft | 0.1 | 16.1.2006 | Initial draft |
| Approved | 1.0 | 13.3.2006 | |
| Approved | 2.0 | 16.3.2006 | Service Tools modified |
| Approved | 3.0 | 05.July.2007 | Exploded view & Spare Parts overview updated (I216 added) |

1. INTRODUCTION

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to service NOKIA products. This Service Manual must be used only by authorized NOKIA service suppliers. The content of it is confidential. Please note that NOKIA also provides other guidance documents (e.g. Service Bulletins) for service suppliers. Follow these regularly and comply with the given instructions.

While every effort 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:

<mailto:cc-ts-rc.documentation@nokia.com>

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

Warnings and Cautions

Please refer to the phone's user's guide for instructions relating to operation, care, and maintenance, which include 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
2. THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY. THE CELLULAR 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.

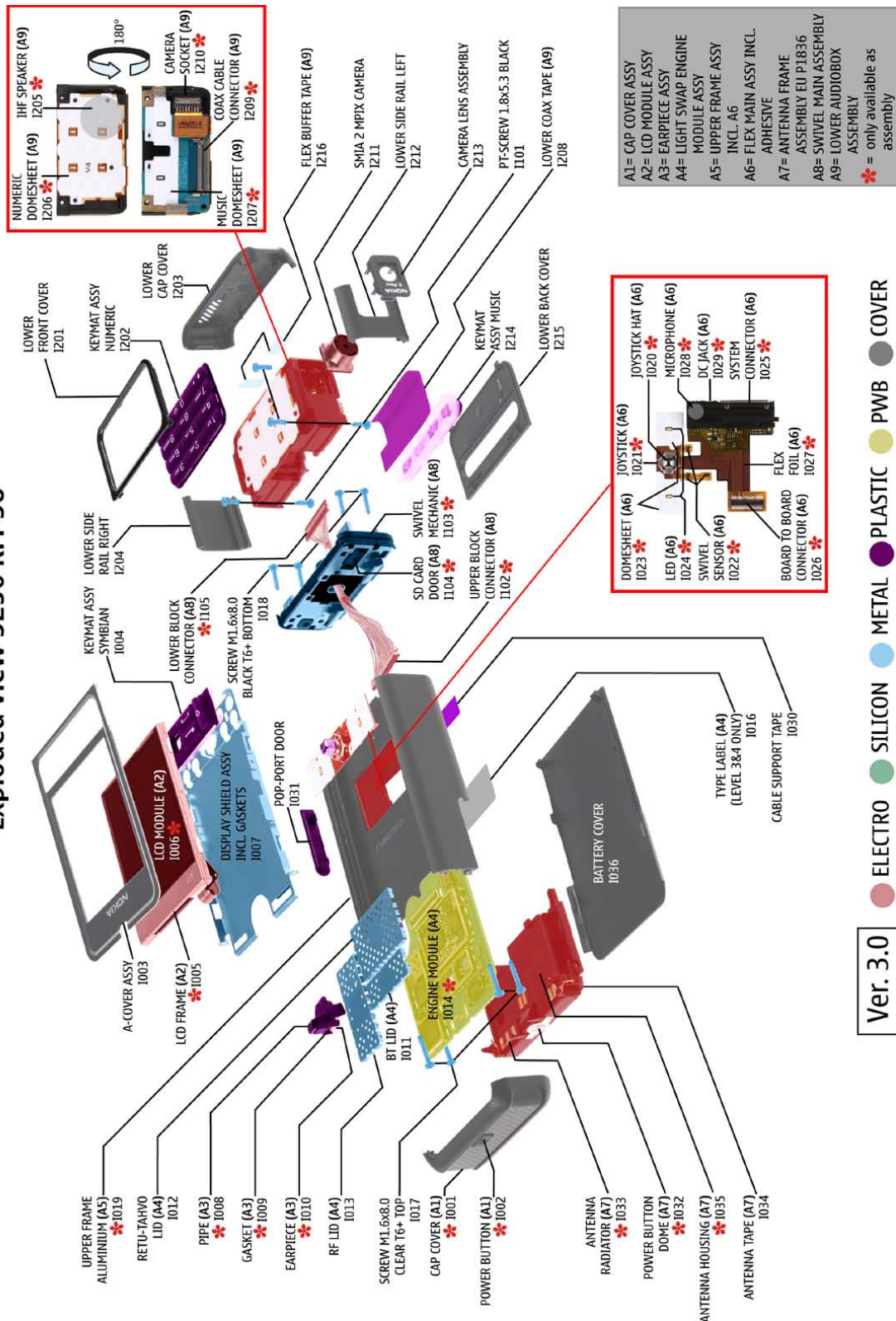


Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore, every Service Supplier must observe the precautions, mentioned in the appropriate "Service Partner Requirements", available on NOKIA Online. Also see ESD Protection Requirements in this Service Manual.

2. EXPLODED VIEW AND COMPONENT DISPOSAL

Recommendation for the ecologically friendly disposal of components. Colorized components show the various categories. See the corresponding ITEM/CIRCUIT REF in the Spare Parts Service Bulletins on NOL.

Exploded view 3250 RM-38



Ver. 3.0

3. SPARE PARTS OVERVIEW

3250 RM-38 Spare Parts overview

A1 = CAP COVER ASSY



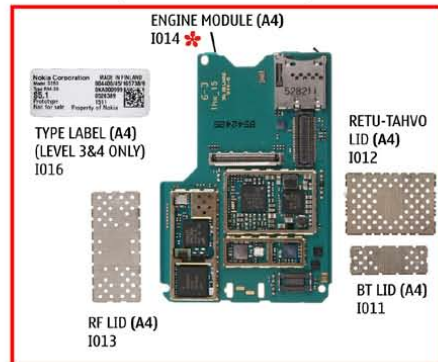
A3 = EARPICCE ASSY



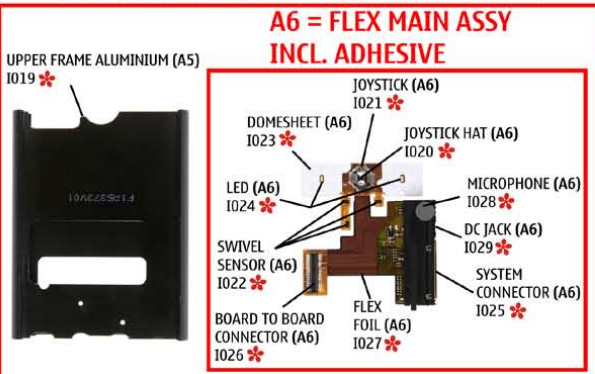
A2 = LCD MODULE ASSY



A4 = LIGHT SWAP ENGINE MODULE ASSY (LEVEL 3&4 ONLY)

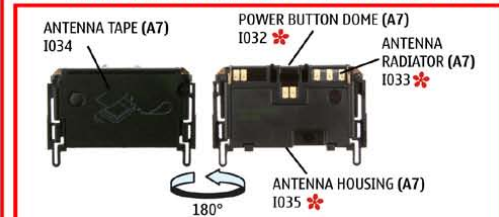


A5 = UPPER FRAME ASSY (LEVEL 3&4 ONLY)

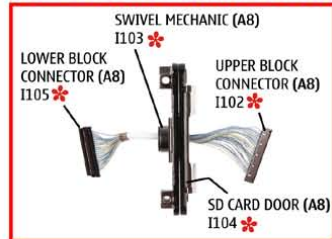


A6 = FLEX MAIN ASSY INCL. ADHESIVE

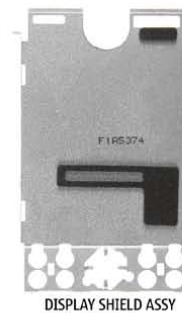
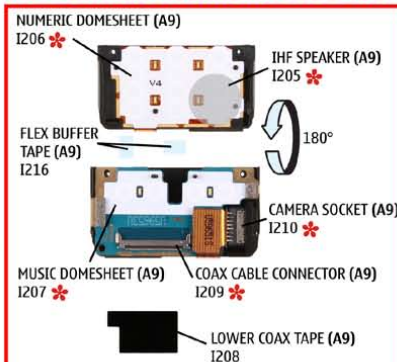
A7 = ANTENNA FRAME ASSEMBLY EU P1836



A8 = SWIVEL MAIN ASSEMBLY




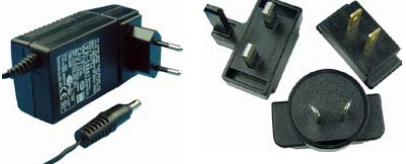





A9 = LOWER AUDIOBOX ASSEMBLY



- A1= CAP COVER ASSY
- A2= LCD MODULE ASSY
- A3= EARPICCE ASSY
- A4= LIGHT SWAP ENGINE MODULE ASSY
- A5= UPPER FRAME ASSY INCL. A6
- A6= FLEX MAIN ASSY INCL. ADHESIVE
- A7= ANTENNA FRAME ASSEMBLY EU P1836
- A8= SWIVEL MAIN ASSEMBLY
- A9= LOWER AUDIOBOX ASSEMBLY
- * = only available as assembly

Ver. 4.0

4. SERVICE DEVICES

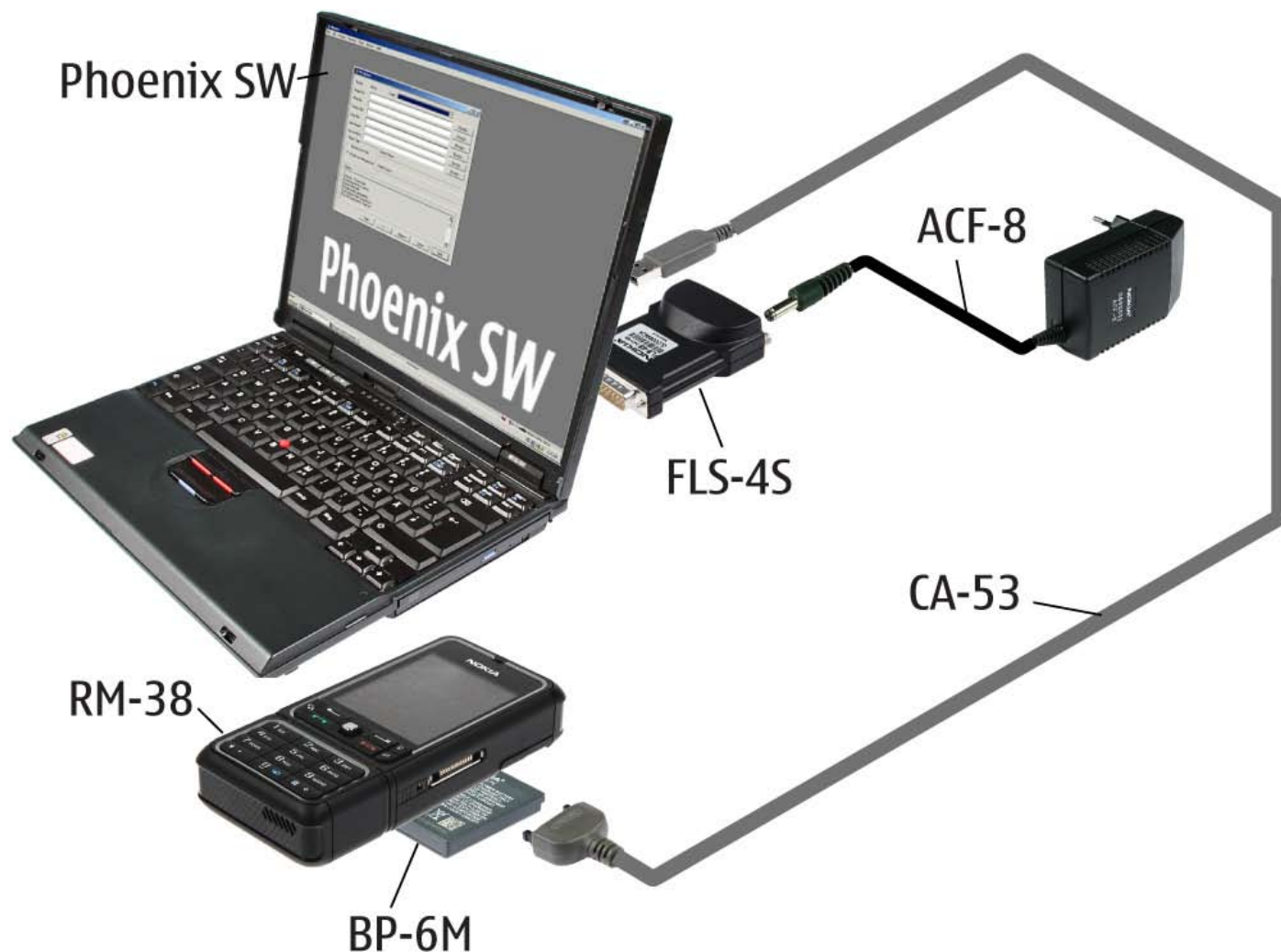
| | |
|--|---|
|  | <p>FLS-4S incl. ACF-8, Driver and User Guide Dongle and flash device combined, developed specifically for POS use.</p> |
|  | <p>ACF-8 Universal Power Supply for FLS-4S.</p> |
|  | <p>Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.</p> |
|  | <p>Internal Battery BP-6M Inserted under the back cover, this Li-Ion 1100 mAh battery provides power in a lightweight package.</p> |
|  | <p>Headset HS-3 Provides convenient handsfree use and the pleasure of listening to music in stereo from your compatible Nokia phone. Available in black and white.</p> |
| <p>SS-45</p>  | <p>SS-45 Camera Removal Tool.</p> |
|  | <p>CA-53 Service Cable to connect the PC with the Pop-Port™ connector.</p> |

| | |
|---|--|
|  | <p>SS-93 Opening Tool</p> |
|  | <p>RJ-113 Soldering Jig</p> |
|  | <p>Lead-free Soldering Wire Mandatory for lead-free products (Level 2 only).</p> |
|  | <p>0772040 NMP Standard Toolkit</p> <ul style="list-style-type: none"> • NOKIA opening tool SRT-6 NOKIA No. 0770431 • Tonichi torque driver NOKIA No. 6901525 • Hoya micro fiber cloth MX304 • Dastex gloves S, M, XL • Artlux goggles AH166 • Wera bit T5 867/4TX 5x50 • Wera 867/4 6IP; 50mm (Torx 6 PLUS®) • Wera bit T6 867/4TX 6x50 • Wera 867/1 5IP; 25mm (Torx 5 PLUS®) • Wera bit T6 PLUS® 867/4TX 6IP • Facom side cutter 416E • Facom T5 driver SP.14032 • Facom T6 driver SP.14033 • Facom slot screwdriver AEF. 2x35.E • Wetec tweezers 7abb SA-ESD • Wetec tweezers 22 SA-ESD • Wetec tweezers 13 SA-SMD ESD • Wetec tweezers PSF SA-ESD • Wetec ESD brush E1211 • Kaiser Fototechnik airbrush 6315 • Wetec dental tool DEM83266/0 • RS Components scissors 323-5732 |

5. SW-UPDATE

Flash Concept – (Point of Sales)

To use the FLS-4S Flash Dongle you should follow the user's guide inside the sales package. Always check for the latest version of flash software, which is available on [NOKIA Online](#).



6. DISASSEMBLY INSTRUCTION UPPER BLOCK



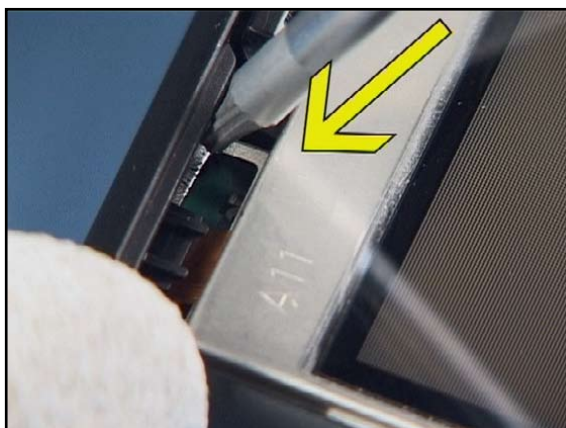
1. You will need the following tools: The SRT-6, metal tweezers, a Torx plus size 6 driver, the SIM Tool, a torque driver with a torx plus size 6 bit, and a DC Plug.



2. Unlock and remove the BATTERY COVER.



3. Gently pry open the A-COVER ASSEMBLY with the SRT-6 and discard it. Do not use it again.



4. Push down both metal latches to unlock the snaps of the CAP-COVER.



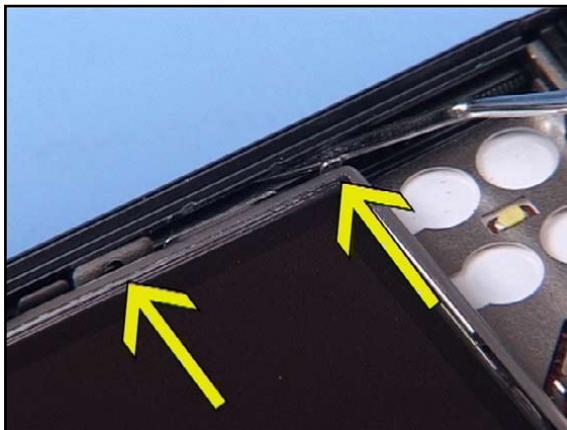
5. Release both screws in the order shown.



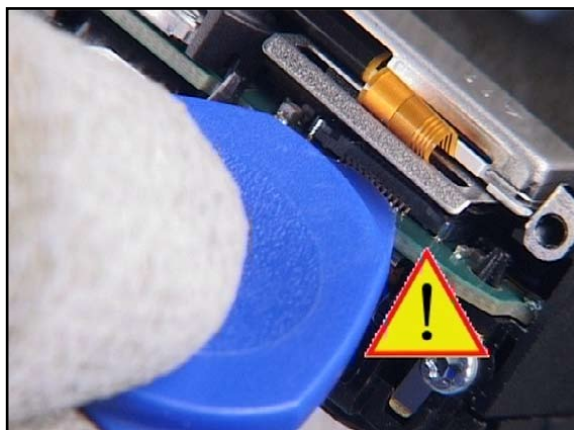
6. Do not mismatch these screws with the other ones.



7. Remove the KEYMAT ASSEMBLY SYMBIAN.



8. Carefully bend open the 2 metal snaps of the DISPLAY SHIELD ASSEMBLY on the left side.



9. Gently open the flex connector with the SRT-6.



10. When the clips are released properly, the shield can be lifted up easily.



11. Separate the LCD MODULE by releasing the 4 snaps with the SRT-6.



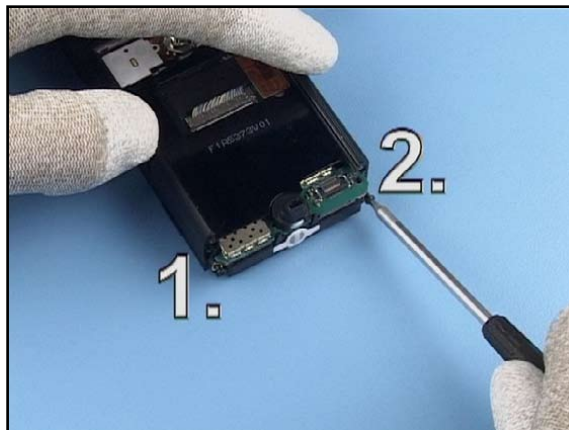
12. Carefully slot through the flex connector. Always use a new DISPLAY SHIELD ASSEMBLY when reassembling.

Display Shield Assy

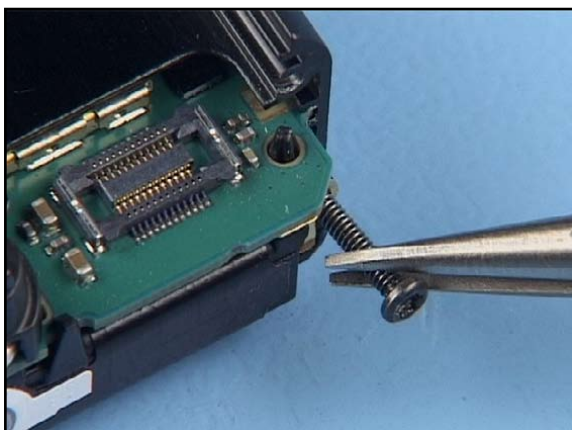




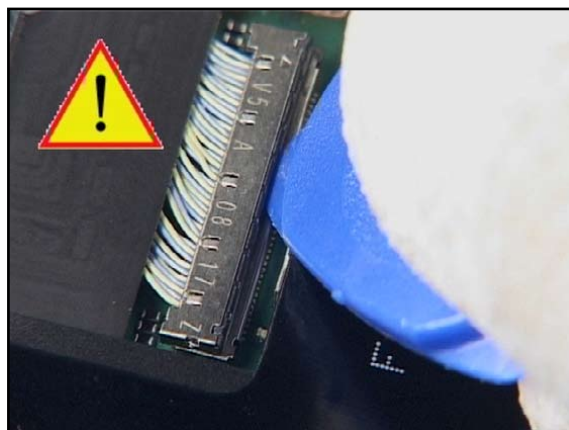
13. Cover the display with a protective film.



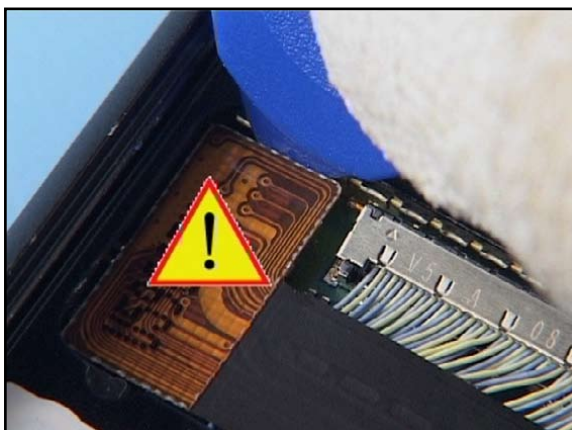
14. Release the next both screws in the order shown.



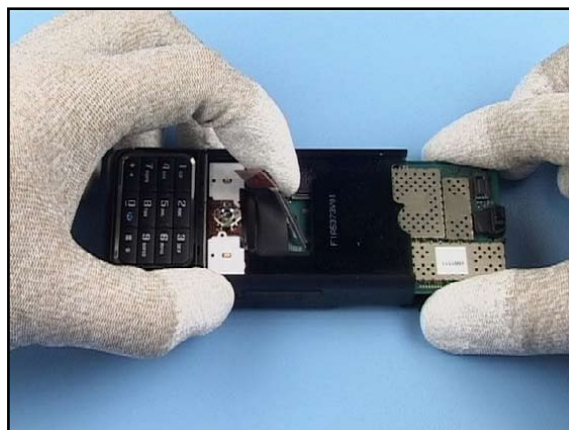
15. Remove the screws. Do not mismatch these screws with the other ones.



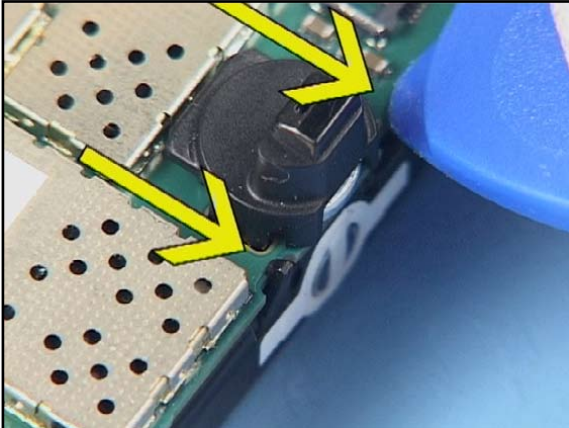
16. Carefully open the UPPER BLOCK CONNECTOR.



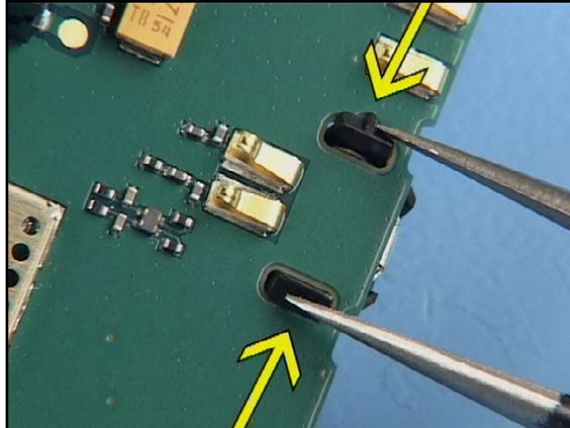
17. Also open the BOARD TO BOARD CONNECTOR with the SRT-6



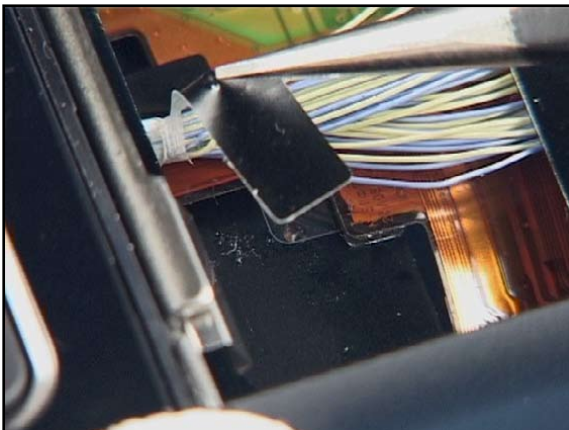
18. Lift up both connectors and shift out the ENGINE MODULE ASSEMBLY.



19. Carefully release the clips of the ANTENNA FRAME ASSEMBLY. These clips are very delicate and can easily be damaged.



20. Prevent scratching the PWB surface while unlocking the clips of the EARPIECE ASSEMBLY.



21. Peel up the CABLE SUPPORT TAPE.



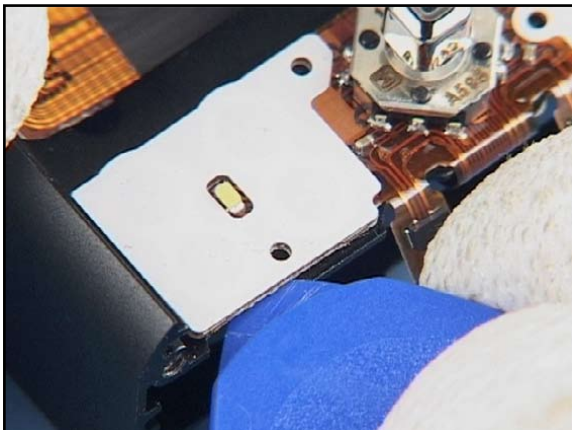
22. Unscrew the 4 screws in the order shown.



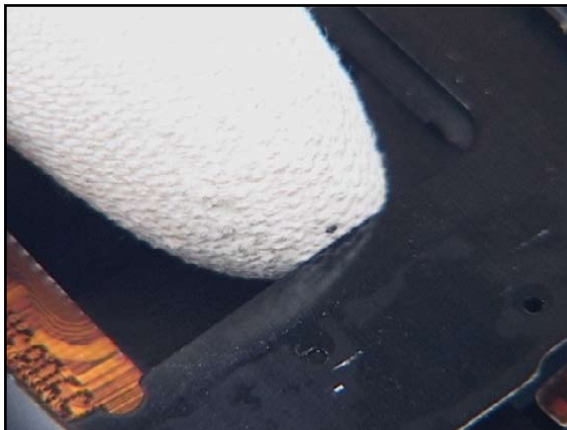
23. These 4 screws are different . Do not mismatch these screws with the other ones.



24. Carefully separate the lower block, but remember the UPPER BLOCK CONNECTOR.



25. Release the adhered DOMESHEET with the SRT-6.



26. Push down the MAIN FLEX ASSEMBLY with your thumb to release the adhesive tape from the UPPER FRAME ALUMINIUM.



27. Shift out the MAIN FLEX ASSEMBLY and discard it. Do not use it again when assemble.

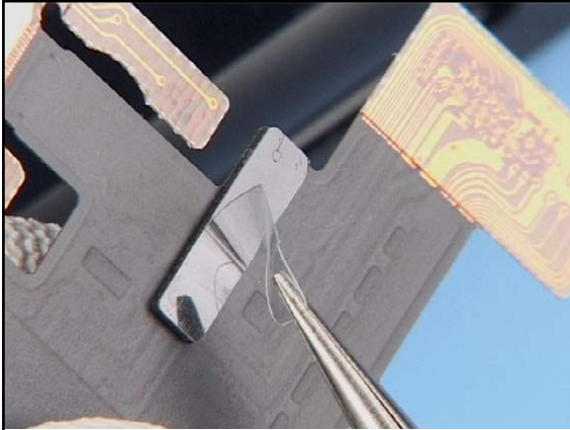


28. The POP PORT DOOR can be pulled out easily. Always use a new MAIN FLEX ASSEMBLY when reassembling.



29. The disassembling procedure is now complete.

7. ASSEMBLY INSTRUCTION UPPER BLOCK



1. Remove the cover tape from the MAIN FLEX ASSEMBLY...



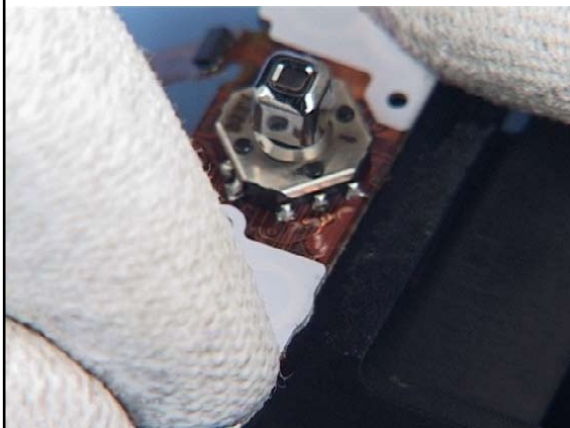
2. Shift the MAIN FLEX ASSEMBLY into the UPPER FRAME ALUMINIUM.



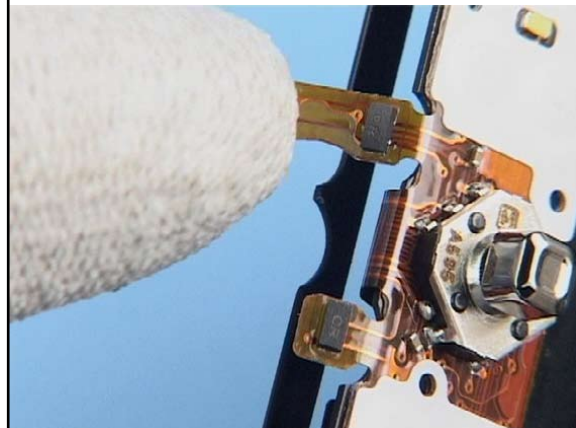
3. Peel up the cover tape from the DOMESHEET.



4. Align the DOMESHEET with the SIM Tool, mind the surrounding components.



5. Now fix the MAIN FLEX ASSEMBLY to the UPPER FRAME ALUMINIUM using finder pressure.



6. Carefully bend down both SWIVEL SENSOR flex foils.



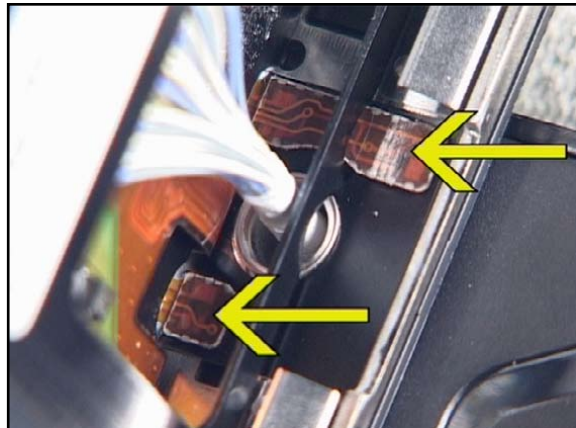
7. Bring the Lower Block into position above the UPPER FRAME ALUMINIUM and align the 2 SWIVEL SENSORS into their guides.



8. Insert the screws with tweezers, note the different screw types.



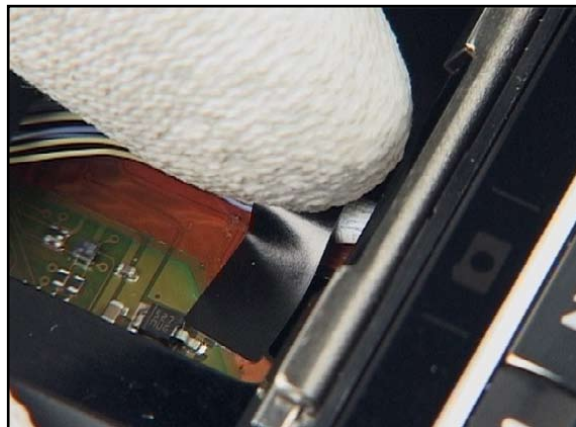
9. Tighten the 4 screws slightly.



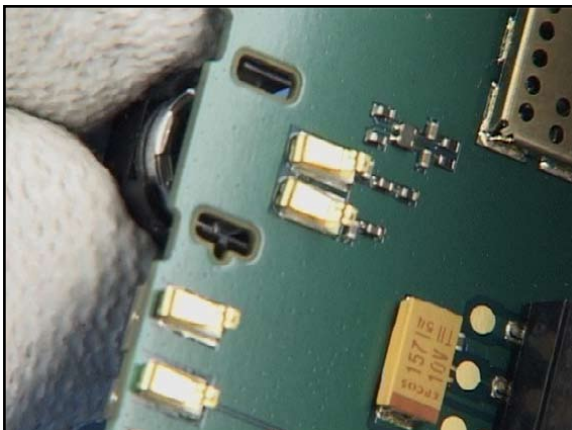
10. Check the correct positioning of the SWIVEL SENSORS.



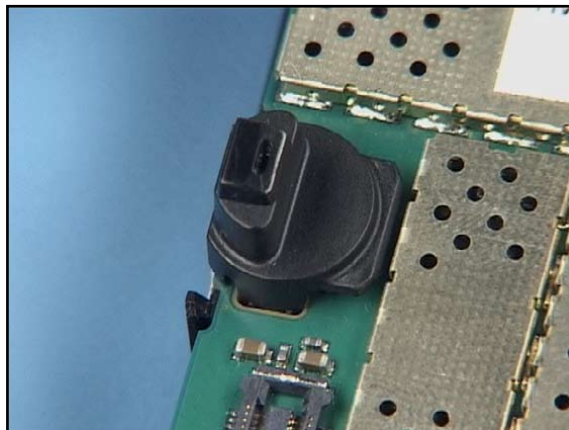
11. Now, tighten the screws with the correct torque in the order shown, using a torque of 18 Ncm .



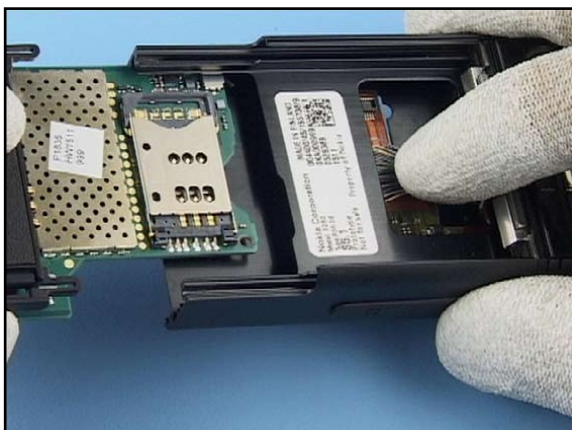
12. Fix the cables with a new Cable Support Tape.



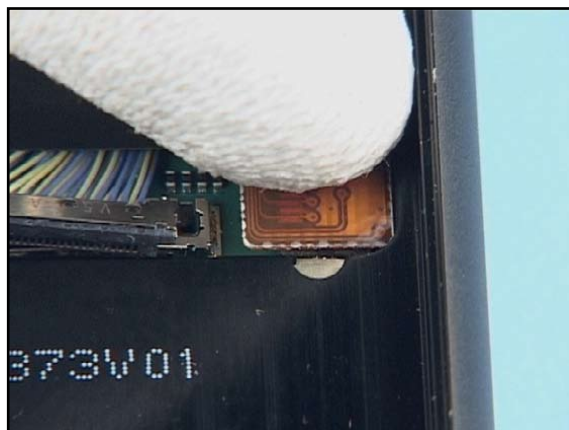
13. Align the EARPIECE ASSEMBLY and click it into its place.



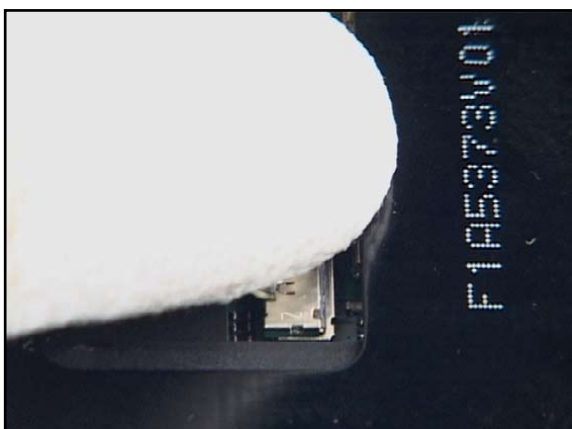
14. Mind the guiding pins while fixing the ENGINE MODULE to the ANTENNA FRAME ASSEMBLY. Ensure that all snaps are engaged.



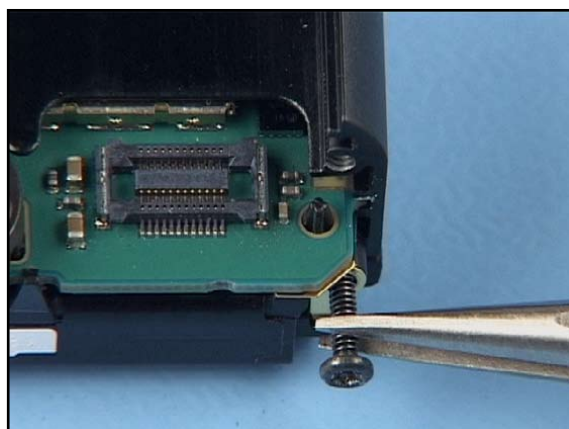
15. Push down the Cables while shifting the assembly into the UPPER FRAME ALUMINIUM.



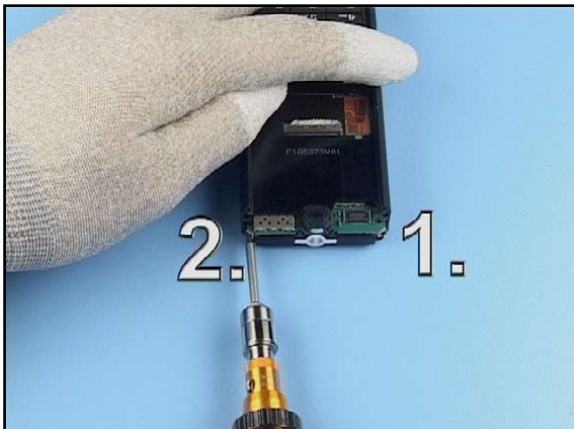
16. Close the BOARD TO BOARD CONNECTOR.



17. Close the UPPER BLOCK CONNECTOR by using finger pressure.



18. Place the screws, note the different used screw types.



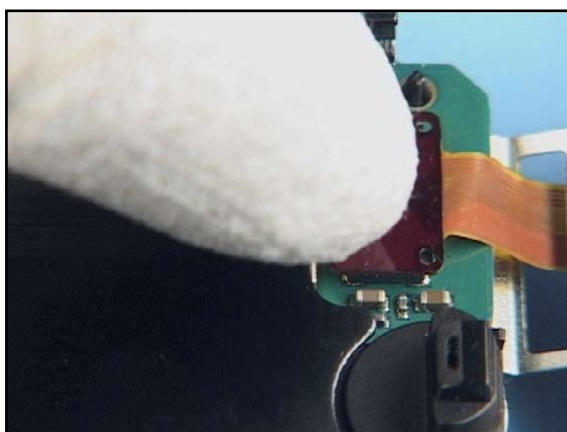
19. Tighten the screws in the order shown, using a torque of 18Ncm.



20. Slot through the flex foil of the LCD MODULE.



21. Fix all metal latches of the DISPLAY SHIELD ASSY.



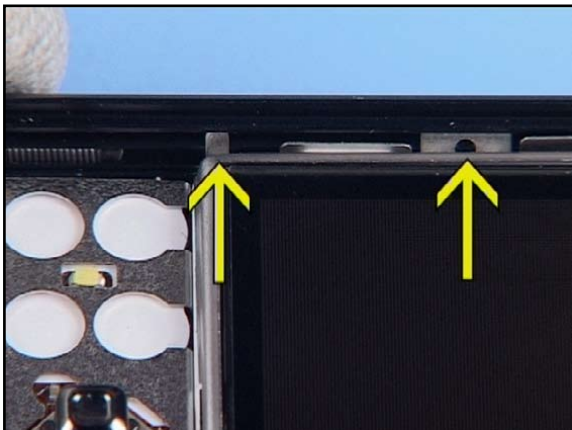
22. Close the flex connector.



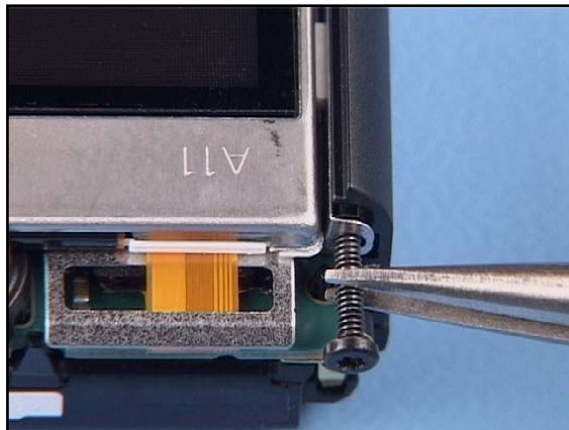
23. Flip over the DISPLAY SHIELD ASSEMBLY and push it into its place.



24. Fix it using finger pressure.



25. Ensure that all snaps on both sides are well locked. The left side is shown here.



26. Insert the screws with tweezers, note the different screw types.



27. Tighten the screws in the order shown, using a torque of 18 Ncm.



28. Place the CAP COVER and fix both latches.



29. Insert the KEYMAT ASSEMBLY SYMBIAN.



30. Remove the cover tape and place the new A-COVER ASSEMBLY, beginning from the top.



31. Fix all the plastic clips.



32. Complete the assembly by placing the BATTERY COVER.

8. DISASSEMBLY INSTRUCTION LOWER BLOCK



1. You will need the following tools: The SRT-6, metal tweezers, the SS-45 Camera removal tool, a dental tool, a torque driver with a Torx Plus ® size 6 bit, and a Torx Plus ® driver size 6.



2. Always cover the windows with protective film. Remove the battery if still inserted.



3. Carefully pry open the CAMERA LENS ASSEMBLY and remove it.



4. Unlock and remove the SMIA 2MPIX CAMERA with the SS-45.



5. Unlock the LOWER CAP COVER with the SRT-6.



6. Remove the LOWER FRONT COVER and the KEYMAT ASSY NUMERIC.



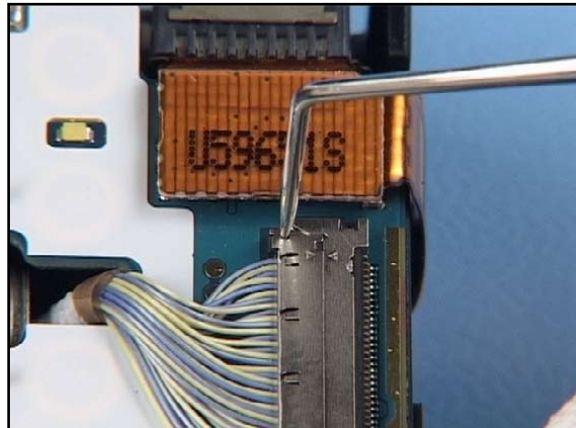
7. Turn the assembly and remove the LOWER BACK COVER.



8. Lift up the KEYMAT ASSY MUSIC.



9. Peel up the COAX CABLE SUPPORT TAPE



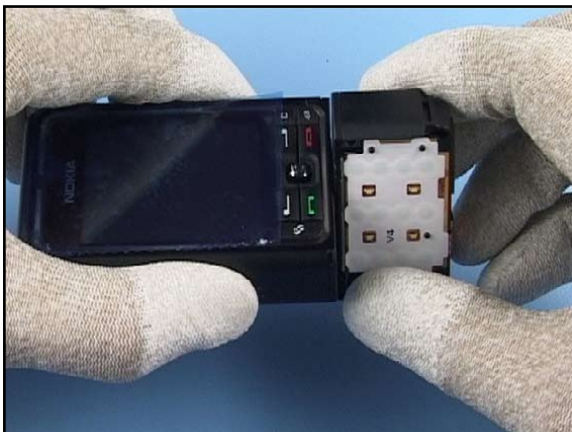
10. Carefully open the LOWER BLOCK CONNECTOR with the dental tool. Do this evenly on both sides of the connector.



11. Turn the upper block in order to prevent mechanical stress to the joystick while unscrewing the screws.



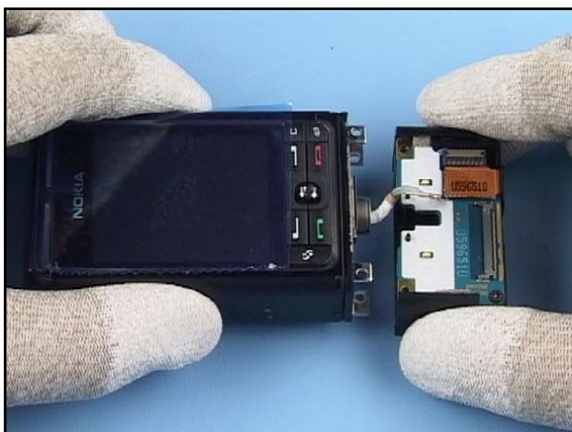
12. Release the screws in the order shown.



13. Now turn around the upper block.



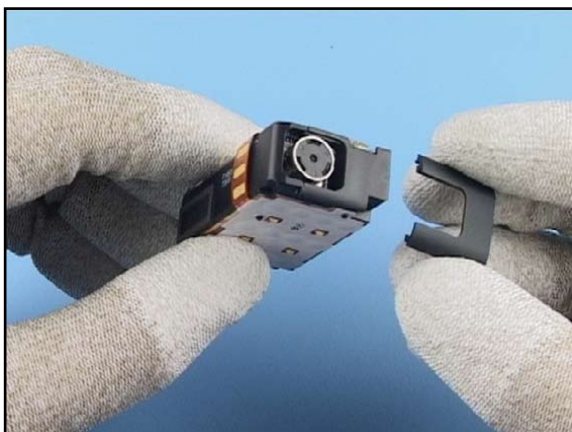
14. Continue with the next screws in the order shown.



15. Carefully separate the parts.



16. Pass out the LOWER SIDE RAIL RIGHT.

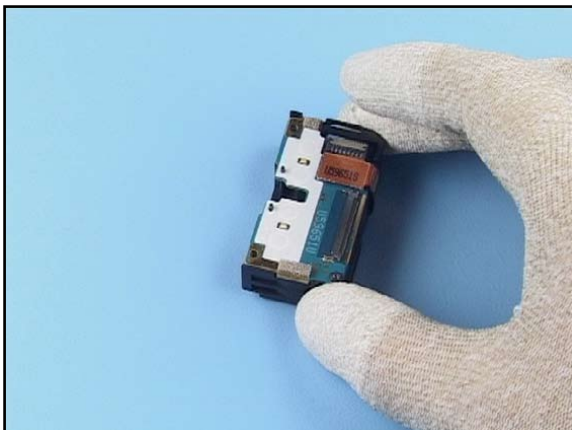


17. Remove the LOWER SIDE RAIL LEFT, too.

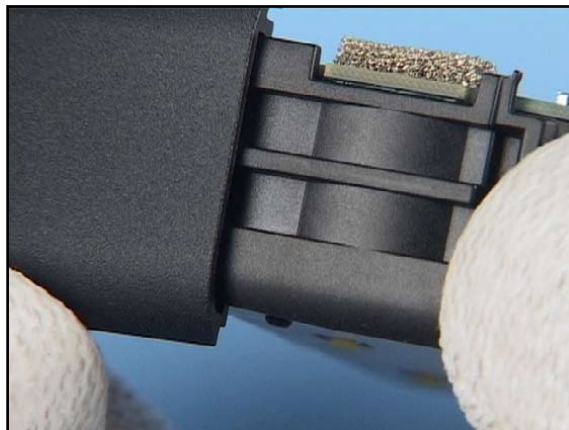


18. The disassembly procedure of the upper block is now completed.

9. ASSEMBLY INSTRUCTIONS LOWER BLOCK



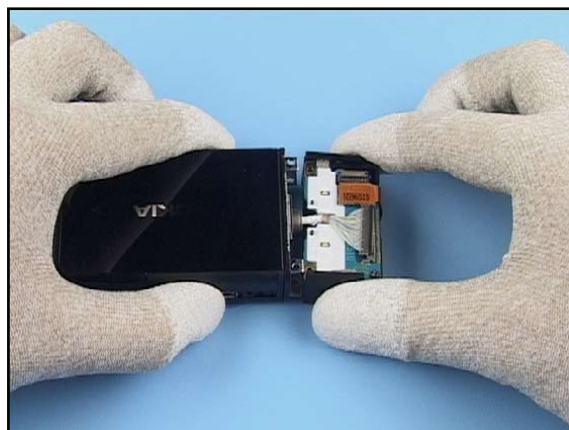
1. Start with the LOWER AUDIOBOX ASSEMBLY.



2. Place the LOWER SIDE RAIL RIGHT.



3. Place the LOWER SIDE RAIL LEFT, too.



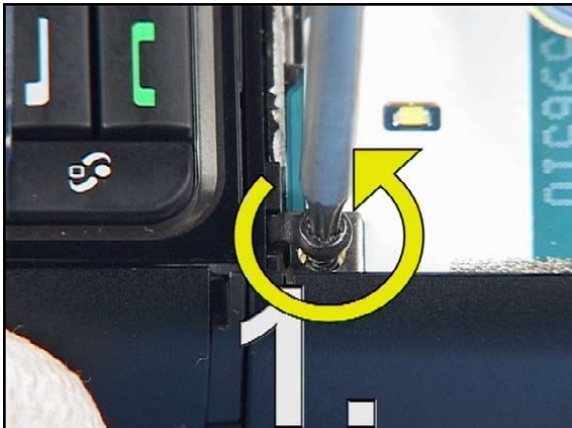
4. Bring the parts together, positioning as shown. Mind the correct positioning of the LOWER BLOCK CONNECTOR.



5. Insert the screws.



6. Turn the unit to prevent mechanical stress to the joystick.



7. To prevent damaging the plastic threads, turn the screws left first, then tighten them slightly.



8. Apply the torque of 18Ncm to the screws in the order shown.



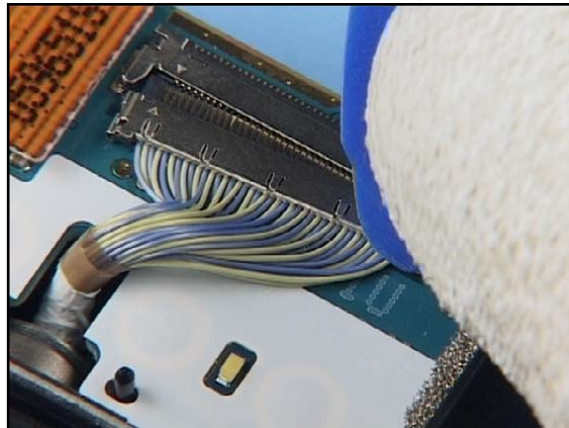
9. Turn over the lower block.



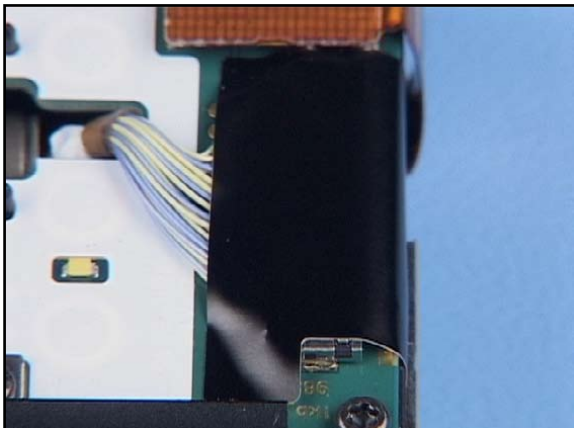
10. Continue tightening the next screws with the torque of 18 Ncm in the order shown.



11. Turn back the lower block.



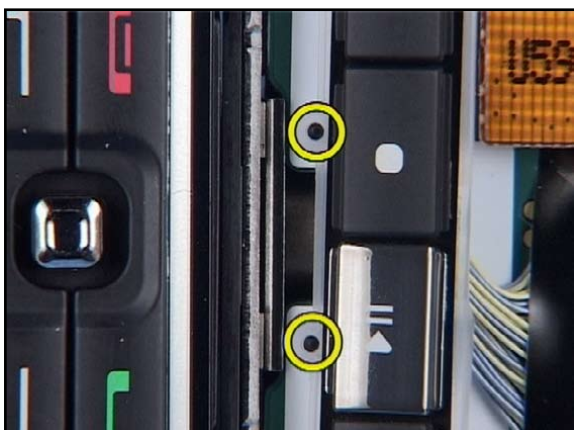
12. Carefully close the connector. Do this evenly side by side.



13. Protect the connector with a new COAX CABLE SUPPORT TAPE.



14. Position the KEYMAT ASSY MUSIC.



15. Mind the guiding pins.



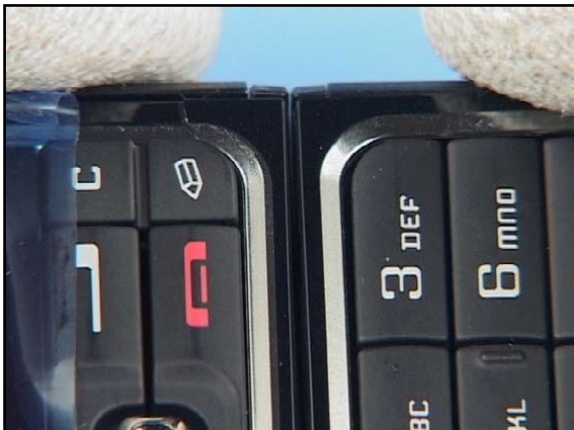
16. Insert the LOWER BACK COVER and fix the snaps.



17. Turn the lower block.



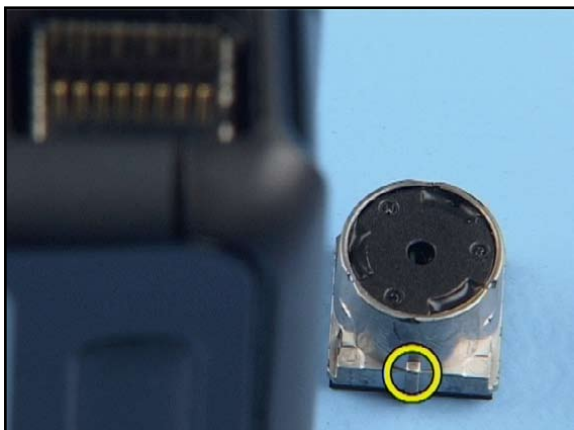
18. Insert the KEMAT ASSY NUMERIC and fix the snaps.



19. Place the LOWER FRONT COVER.



20. Fix all the parts while placing the LOWER CAP COVER.



21. Mind the guide pin before positioning of the SMIA 2 MPIX CAMERA.



22. Grip the camera with the SS-45.



23. Place the camera into its housing.



24. Push down the Camera evenly.















25. Place the CAMERA LENS ASSEMBLY and fix it.

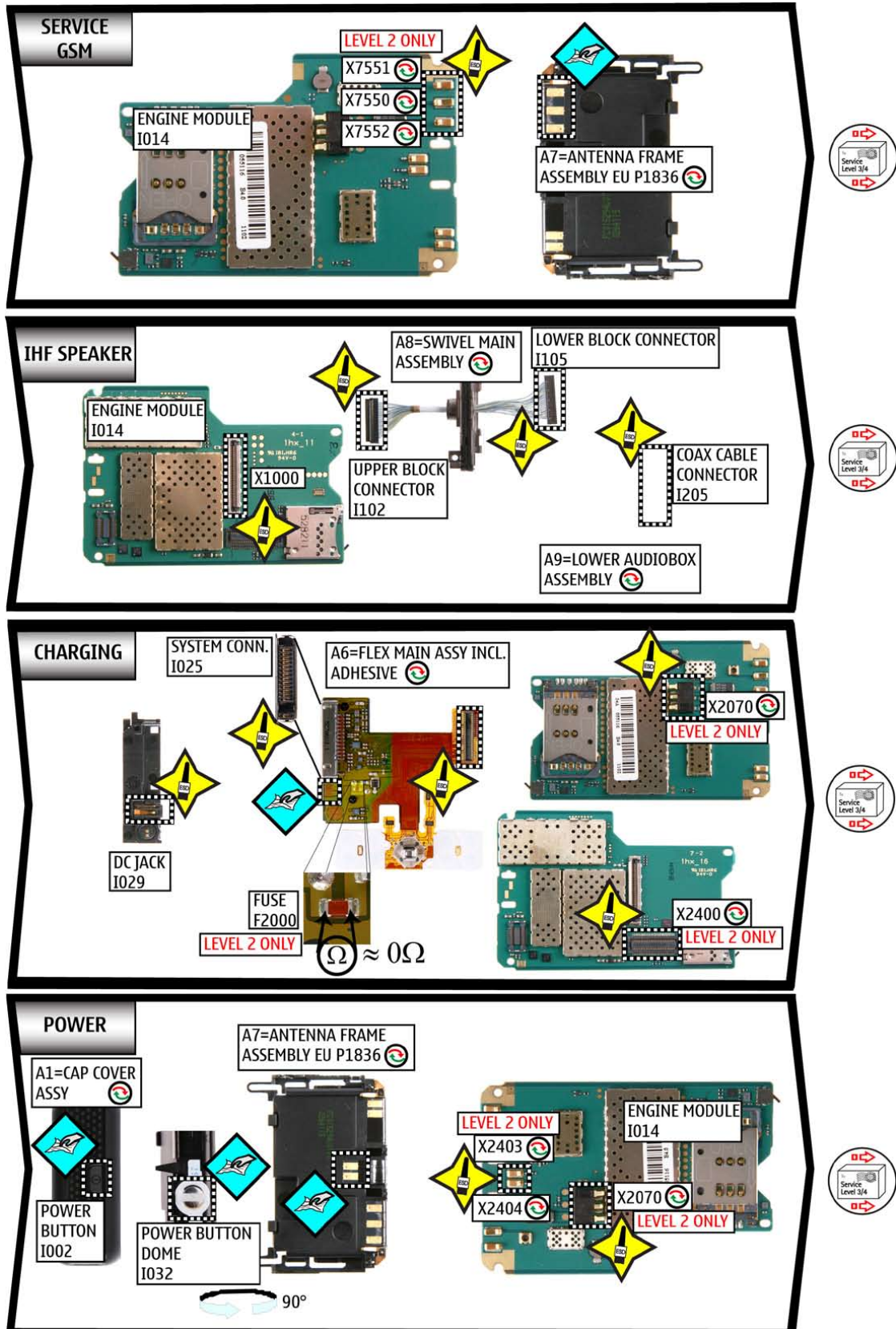


26. Check the window for correct positioning and cleanness.

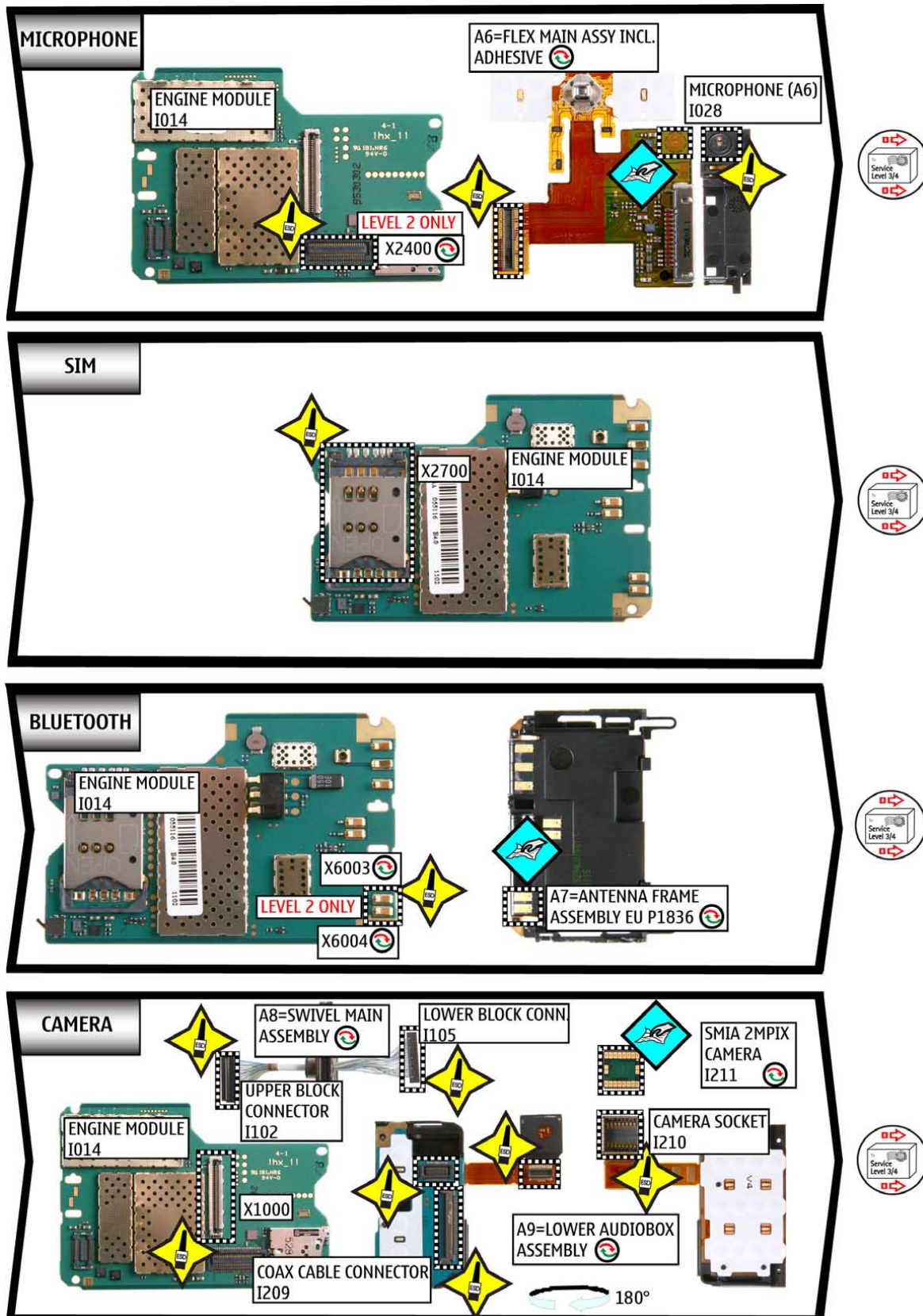
10. LEGEND OF QUICK TROUBLE SHOOTER

| Legend for Quick Trouble Shooter | |
|---|---|
| This legend is valid for all parts of the Quick Trouble Shooter | |
| Follow the steps until the problem is solved. If this doesn't help, you are not authorized to go forward. | |
|  | The start point of repair activities regarding the appeared fault symptoms. |
|  | Only marked components (e.g. I002 ) can be replaced. |
|  | <p><u>Cloth usage:</u> Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.</p>   |
|  | <p>Measure component for electrical functionality and change, if needed. (Level 2 only)</p>  |
|  | <p><u>ESD Brush usage:</u> Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.</p>   |
|  | No more action possible - send product to the appropriate service supplier with higher service level. |

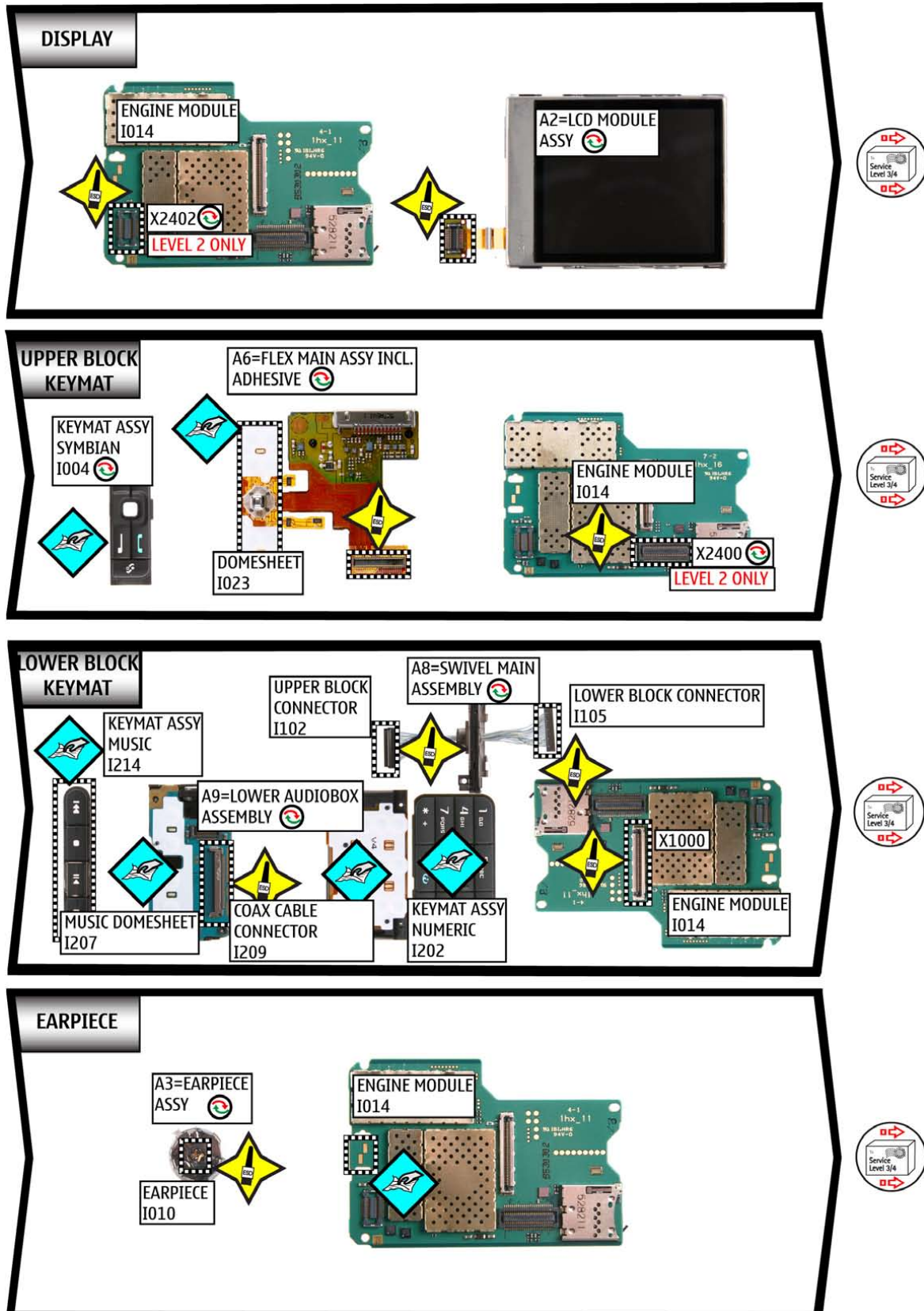
11. QUICK TROUBLE SHOOTER PART 1



12. QUICK TROUBLE SHOOTER PART 2



13. QUICK TROUBLE SHOOTER PART 3



14. QUICK TROUBLE SHOOTER PART 4

