

SERVICE MANUAL Level 1&2

NOKIA 6700 CLASSIC



Transceiver characteristics

Band:

RM-470: WCDMA 900/1900/2100; GSM 850/900/1800/1900

Display:

LCD active matrix 2.2" display, 16.7 million colours, 320 x 240 pixels (QVGA), active area 33.48 mm x 44.64 mm

Camera: 5.0 Mpix with autofocus

Operating System: Series 40 6th edition

Connections:

Micro USB connector, USB 2.0 FS, Bluetooth supporting BT2.1 + EDR & stereo audio

Transceiver with BL-6Q battery pack

Talk time	Standby	Note
Up to 8 h 2G	Up to 300 h 2G/3G	Depends on network parameters and phone settings
Up to 4 h 3G		

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1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	25.2.2009	First draft
Approved	1.0	6.4.2009	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:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
<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.

3. 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:

3.1 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.

3.2 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

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.

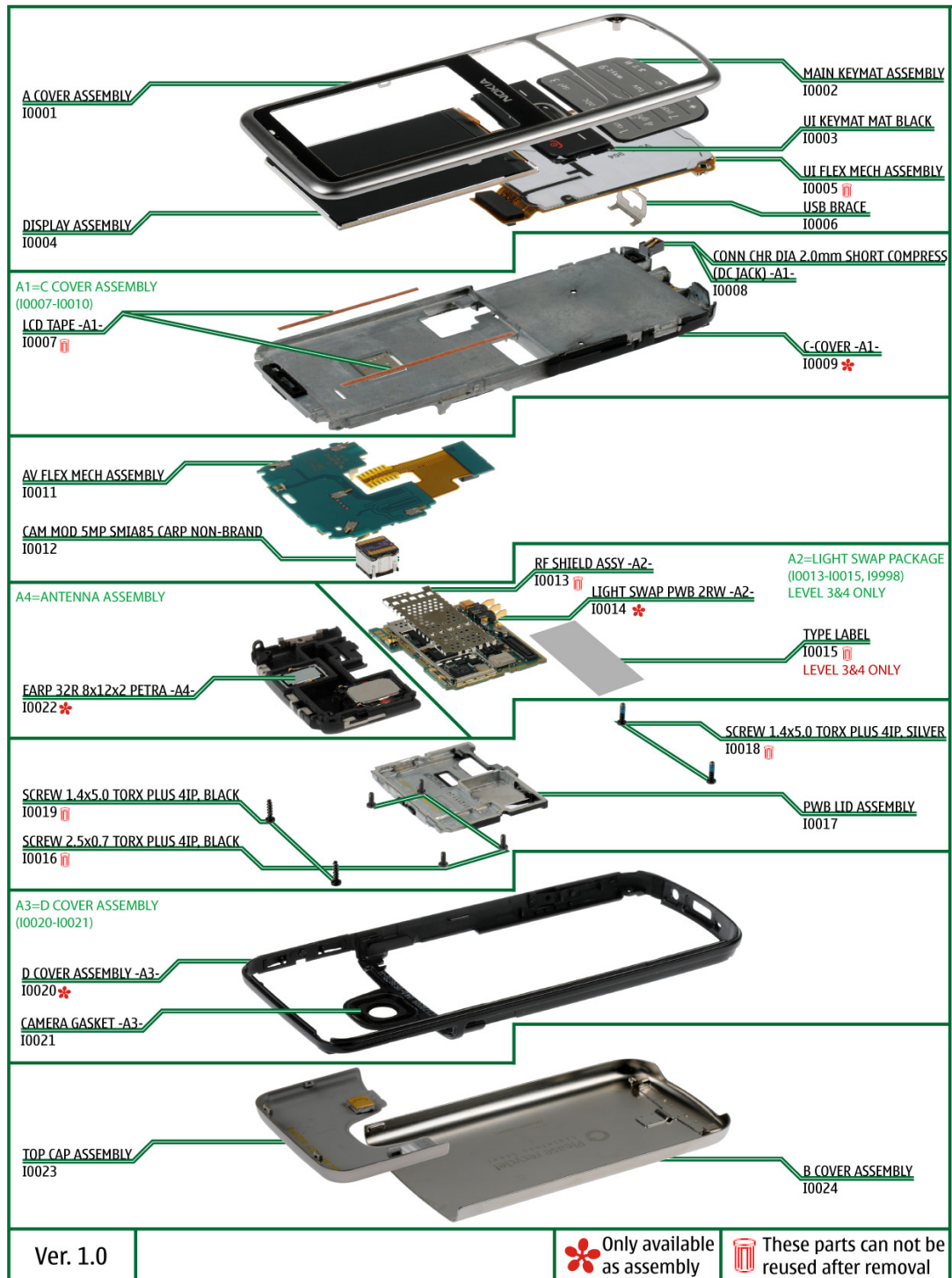
Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.

7. EXPLODED VIEW

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

6700 classic RM-470 EXPLODED VIEW



8. SERVICE DEVICES



FLS-5

FLS-5 Flash Device



AC-8 Charger



BL-6Q Internal Battery



CA-101
100cm

CA-101 Service Cable



SS-209 camera removal tool



RJ-230

RJ-230 Universal Soldering Jig



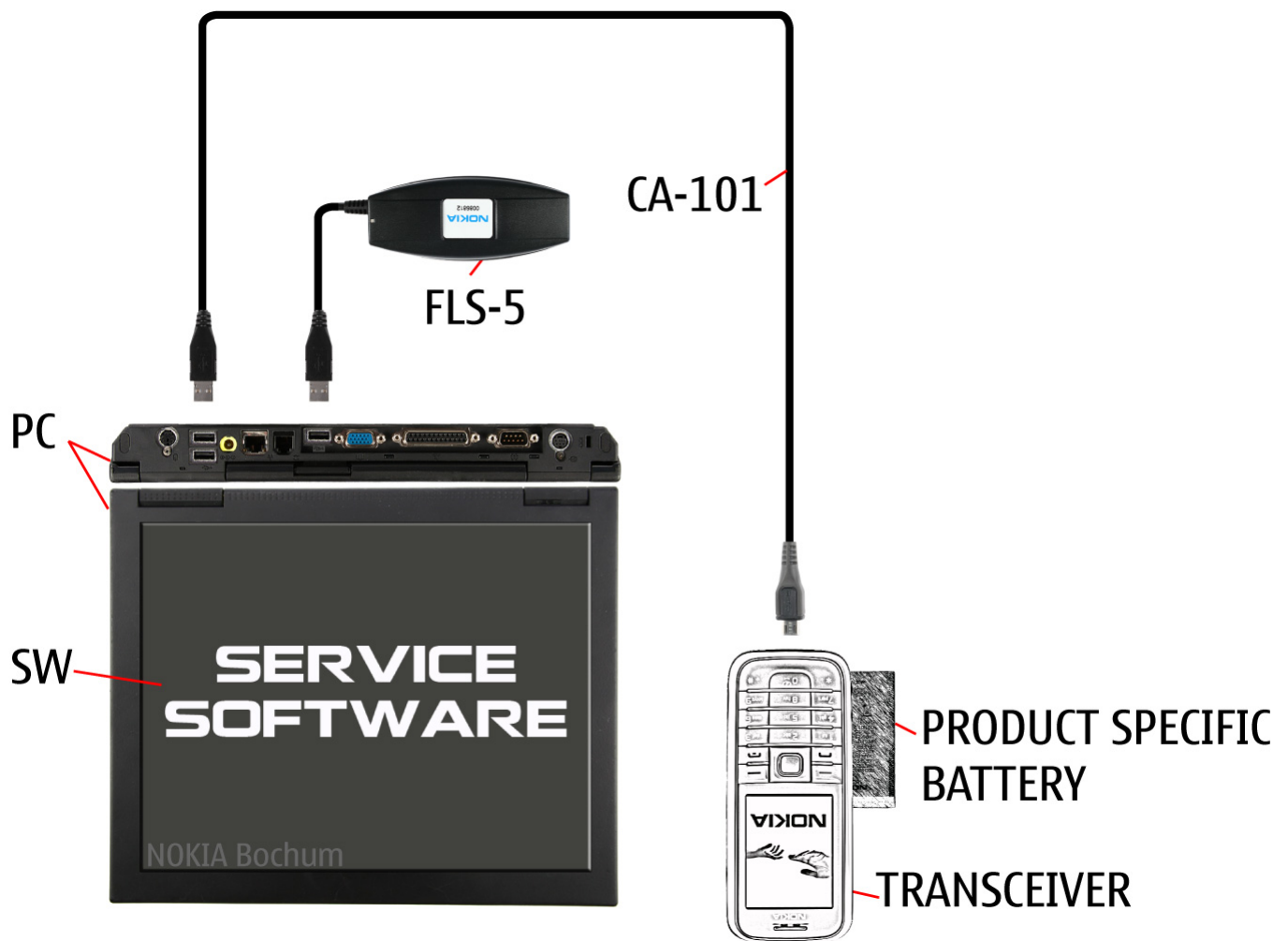
Nokia Standard Toolkit (v2)

For more information, refer to the Service Bulletin (SB-011) on Nokia Online. Supplier or manufacturer contacts for tool reorder can be found in the "Recommended service equipment" document in Nokia Online.

9. SW-UPDATE

Flash concept – (Point of Sales)

To use the 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.

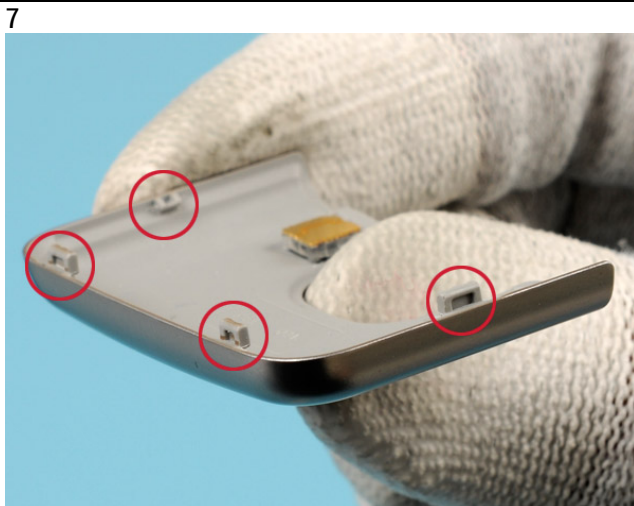


10. DISASSEMBLY INSTRUCTIONS

1 	2 
Slide the BATTERY COVER into the direction shown in the picture.	Remove the BATTERY COVER.
3 	4 
If necessary, also remove the battery...	... and memory card.

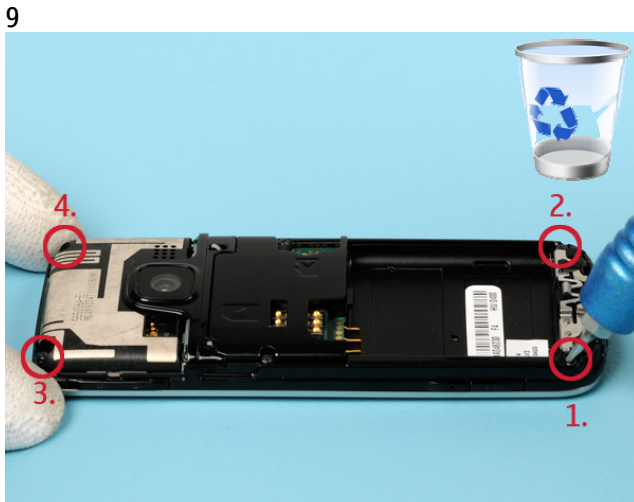


Release the TOP COVER with the SRT-6 tool.



Note that there are 4 clips in the TOP COVER.

Remove the TOP COVER.



Unscrew the 4 Torx 4 + screws on the top and on the bottom.

Release the D COVER ASSEMBLY using the SRT-6 tool. Start at one of the bottom edges.

11



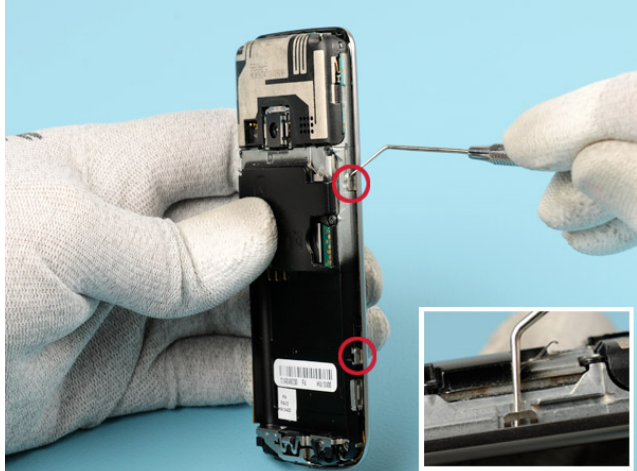
Work around the whole D COVER to release it. Be careful of the key connectors when opening the D-COVER.

12



Remove the D COVER.

13



14



Release the A COVER clips on both sides using the Dental Tool.

15



Remove the A COVER ASSEMBLY .

16



Separate the UI KEYMAT by gently pushing from the A COVER ASSEMBLY outwards.

17

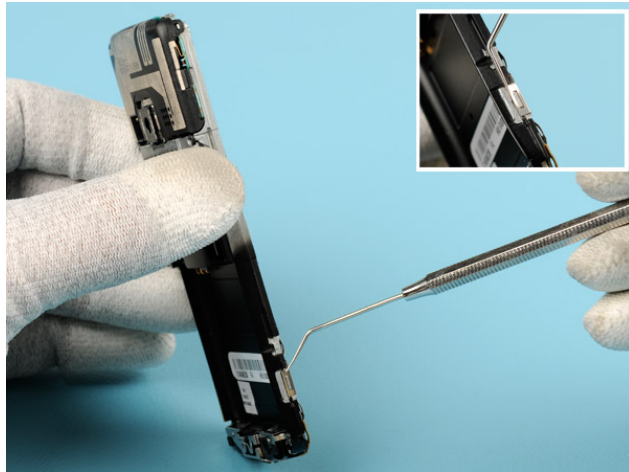
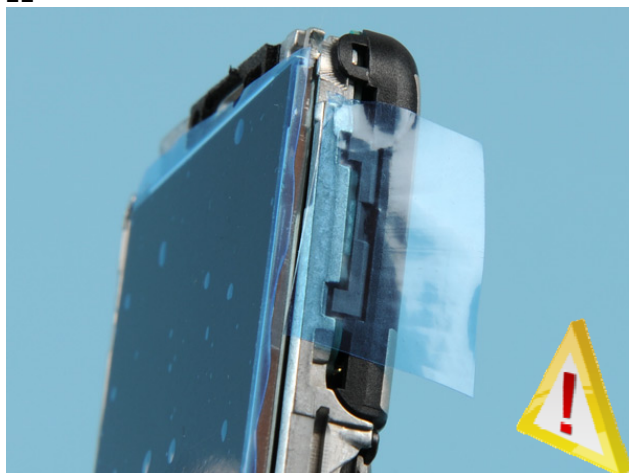


Remove the UI KEYMAT by lifting it upwards.

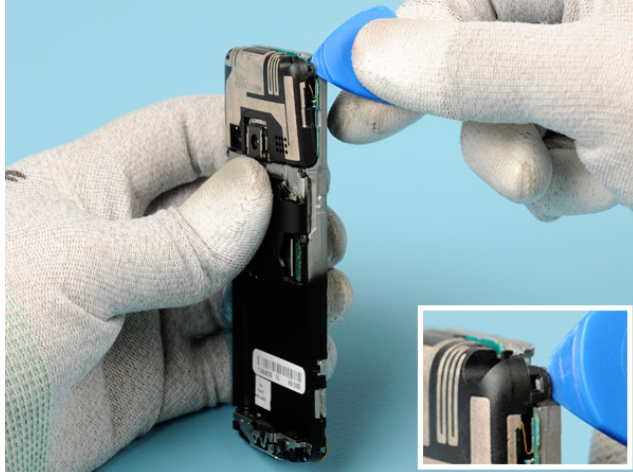
18



Separate the MAIN KEYMAT from the A COVER ASSEMBLY.

19 	20 
Remove the MAIN KEYMAT.	Release the NUMERIC KEYMAT GROUNDING on the left side of the phone...
21 	22 
...and remove it.	Fix the VOLUME KEY ROCKER ARM with a protection foil. NOTE: Also protect the LCD with a protection foil to avoid scratches.

23



24



Release the snaps of the ANTENNA ASSEMBLY on both sides...

25



...and remove it.

26



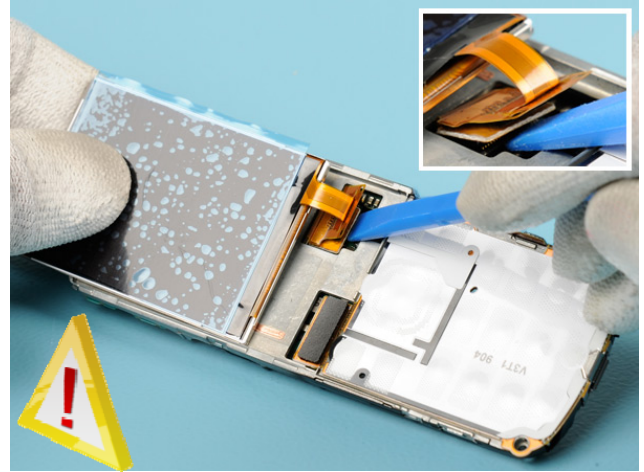
Release the LCD carefully from both the left and the right side with the Dental Tool as shown in the picture.

27



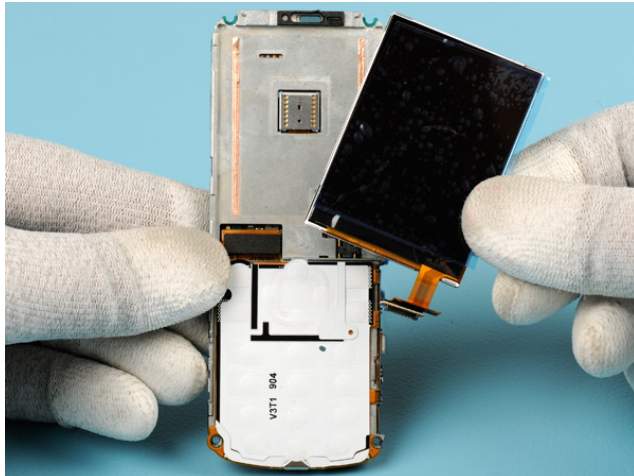
Note that the LCD is still attached to the C COVER with the LCD Connector.

28



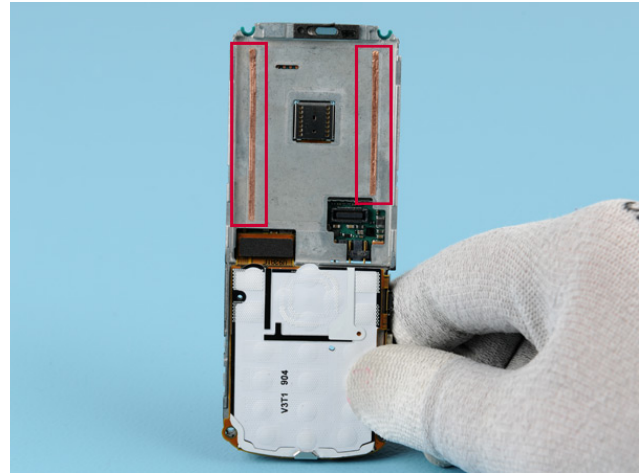
Lift up and slide the LCD carefully as shown in the picture to get access to the LCD Connector. Then release the Connector with the SS-93 tool.

29



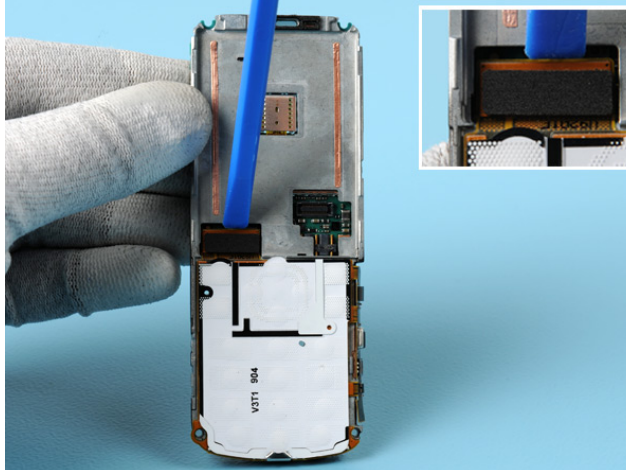
Remove the LCD.

30



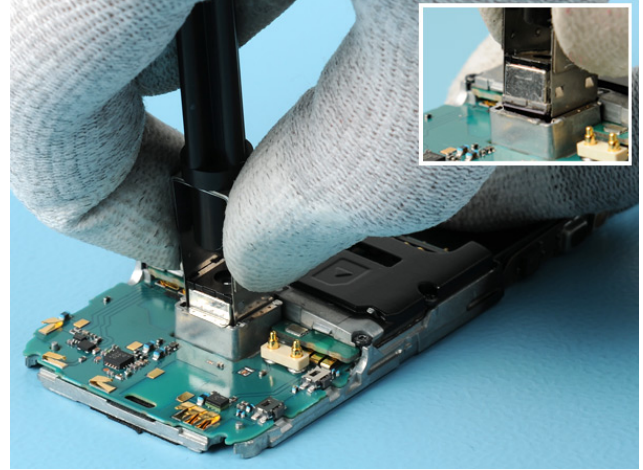
In case the copper tracks between the C COVER and the display are damaged after removing the display, a foil including new tracks is available as a spare part (9406181). This spare part includes the LCD adhesives which should not be replaced. It is therefore necessary to transfer the copper tracks from the spare foil to the C COVER. The tracks can be straightened out using the flat end of the SS-93 tool.

31



Release the connector of the UI FLEX MECH ASSEMBLY using the SS-93 tool.

32



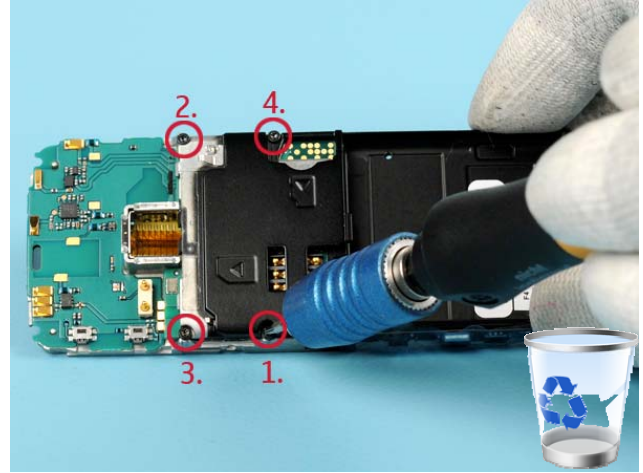
Release the CAMERA using the camera removal tool SS-209.

33



Remove the CAMERA.

34



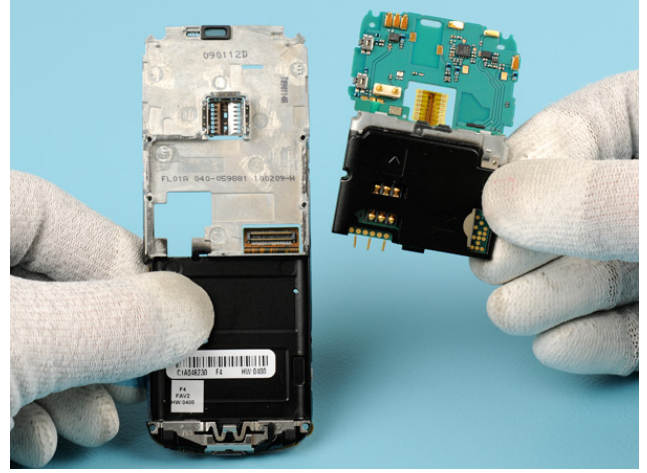
Remove the 4 screws holding the PWB shield.

35



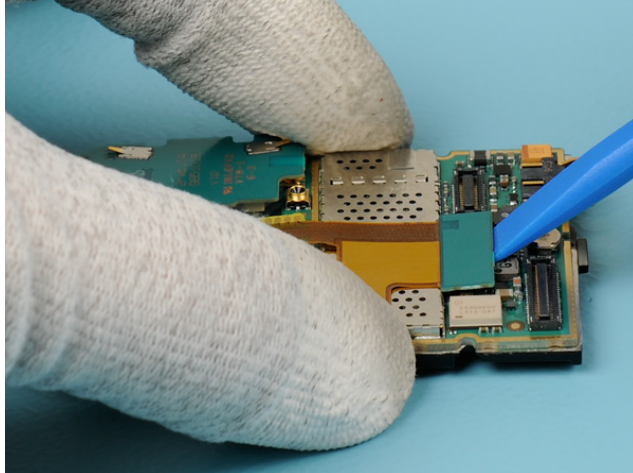
Release the PWB from both sides using the SRT-6 tool.

36



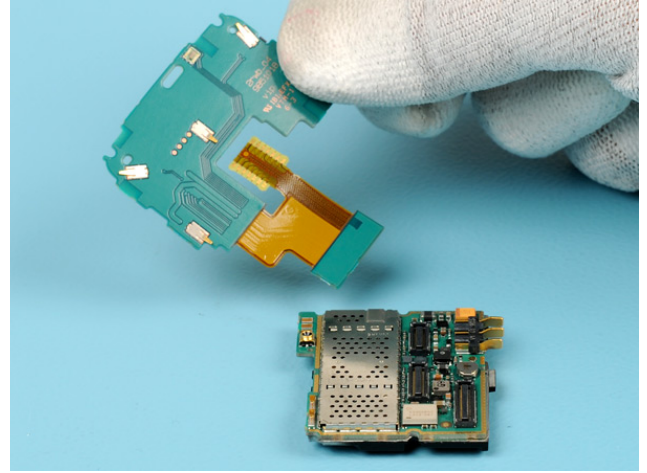
Lift up the PWB together with the PWB LID ASSEMBLY and AV Flex Mech Assembly.

37



Release the AV FLEX MECH ASSEMBLY connector using the SS-93 tool.

38



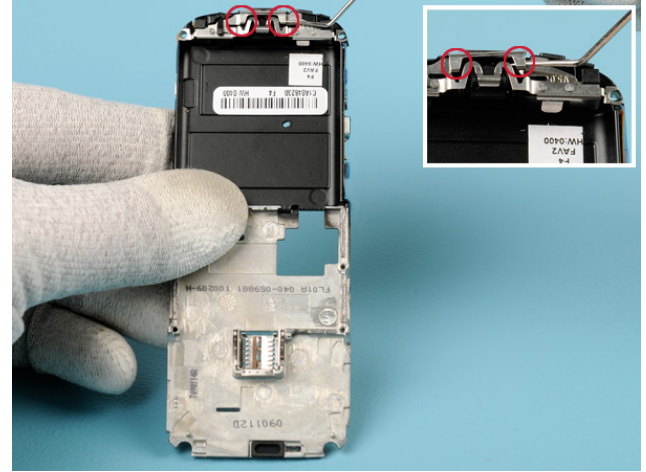
Separate the AV FLEX MECH ASSEMBLY from the PWB.

39



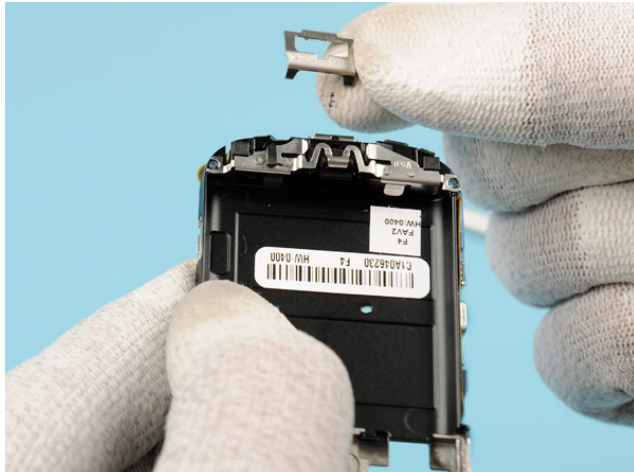
Lift up the PWB LID ASSEMBLY from the PWB.

40



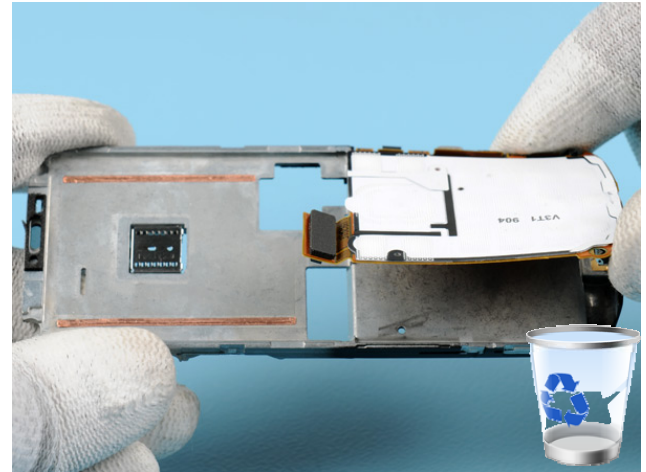
Release the USB Support metal with the Dental Tool...

41



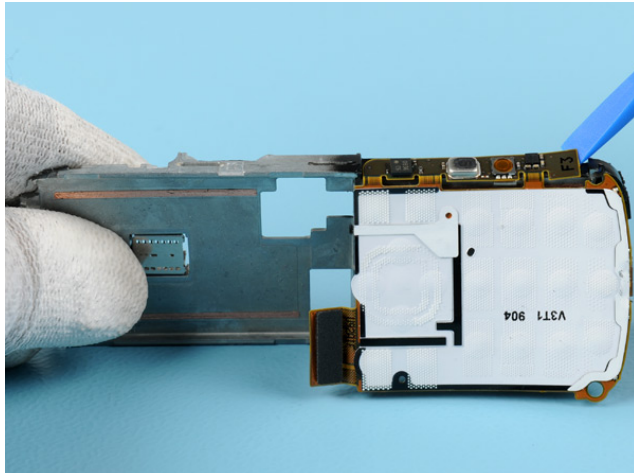
... and remove it.

42



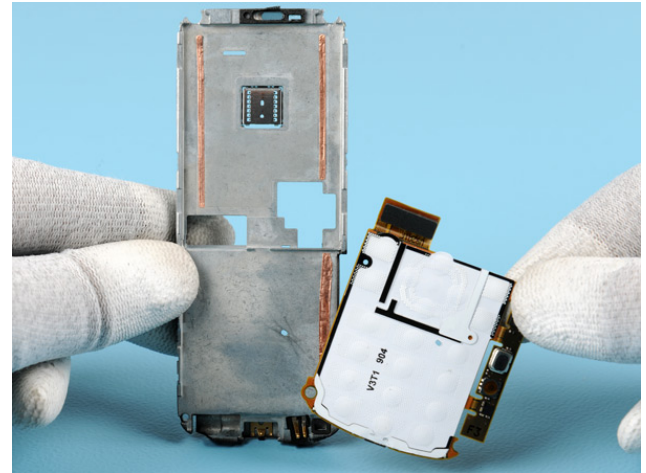
Peel off the UI FLEX MECH ASSEMBLY.

43



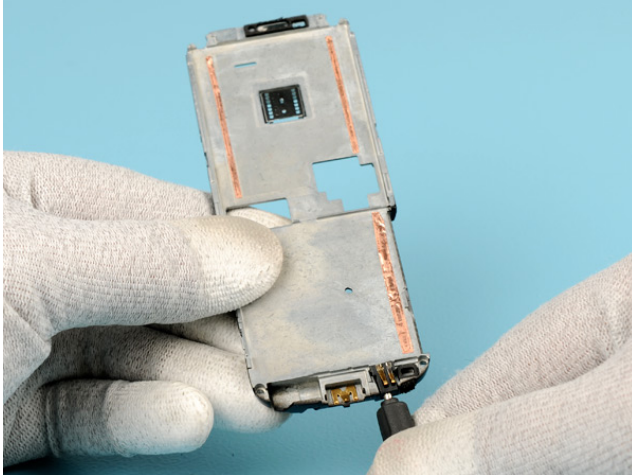
You can use the SS-93 tool to release the connectors as show in the picture.

44

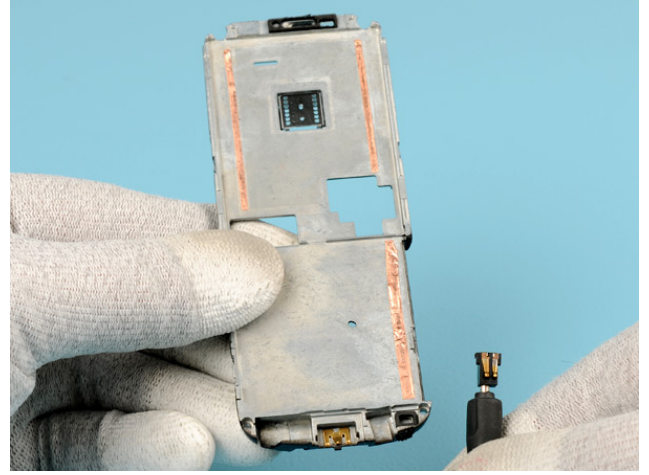


Remove the UI FLEX MECH ASSEMBLY.

45



46



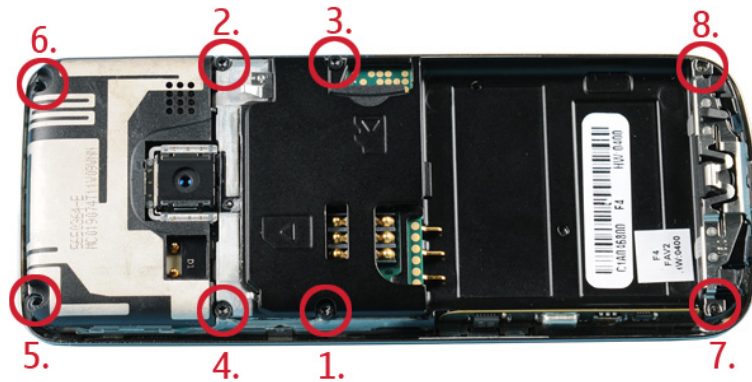
Release the DC Connector using a charger plug.

End of disassembly

11. ASSEMBLY HINTS

- The D-cover should be mounted **after** the A COVER. Be careful that the sides of the D COVER fit into the A COVER.
- You might need to slightly bend the keymat shield locks inwards to make them hook on to the C COVER.
- The camera gasket has glue on both sides and might break in two when the D COVER is removed (half stays on the D COVER and the other half on the camera). If this happens, remove the old parts of the gasket from both the D COVER and the camera using a pair of tweezers and mount a new gasket on the D COVER. If the gasket is not damaged during disassembly, it can be reused.
- If the camera has been removed, you can wait to replace it until just before the antenna cover is mounted. In this way, it is protected during re-assembly.
- If the UI FLEX has been completely removed, it **must** be replaced with a new one. It is possible to replace the DC connector just by carefully lifting up the corner of the UI FLEX.
- In general, be **very** careful not to damage the microphone located on the side of the UI FLEX (next to the camera switch).
- When replacing the UI FLEX, it can be aligned by holding the C COVER up and then aligning the UI FLEX (before attaching it) by looking through the holes in the FLEX and C COVER. Attach the FLEX when the holes fit (light shines through the holes).

11.1 Screw order and torque



Tighten the screws to the torque of 10 Ncm in the order shown.

12. SOLDER COMPONENTS

6700 classic RM-470 components overview

Solder components only for Level 2

