

NOKIA 6630

RM-1



Transceiver characteristics:

- Active matrix color display (176x208, 65k colors)
- 5-way scroll, two soft keys, application-key, edit and clear key, send& end + key matrix
- Integrated 1.0 Megapixel camera (1152 x 864)
- Integrated Bluetooth & USB 2.0 full speed (12Mbps)
- Support for 3GPP video streaming and video for recording (codec: h.263 baseline)
- Multimedia player with streaming support (Real Player)
- Dual Mode/Tri-band EDGE phone (EGSM 900/1800/1900+WCDMA 2GHz)
- GPRS , class B, multislot class 10, EGPRS cl. 6, WCDMA PS max speeds UL/DL 128/128 kbps, or 128/384kbps. WCDMA CS 64kbps U&D

Transceiver with BL-5c 900mAh Li-Ion battery pack

Talk time	Standby	Note
3h	11 days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered
- RoHS compliant (Restriction on Hazardous Substances, 2002/95/EC)

SERVICE MANUAL

Service Level 1&2

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CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	12.10.2004	Initial draft
Approved	1.0	26.10.2004	Approval
Approved	2.0	12.11.2004	New page – Spare Parts overview

1. INTRODUCTION

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:

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

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

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.
Ensure all cables and wires are repositioned correctly.



Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on Nokia Partner Web Site. Also see ESD Protection Requirements in this Service Manual.

2. GENERAL REPAIR INFORMATION

In this section the technician will get some general hints how to carry out repairs:

- To familiarize oneself with Nokia product read the tutorials or user guide on www.nokia.com -->Support--> Phones, by selecting the Phone Model.
- Before starting the repair you must take care of ESD precautions like being in your ESD Protected Area and connecting your wristband.
- Use gloves to avoid corrosion and fingerprints.
- Protect windows and displays with a film to avoid dust and scratches.
- When cleaning the LCD Module any lint free cloth can be used (e.g. Micro-Fibre cloth).
- When cleaning the pads you have to use a soft cloth/ESD brush and Isopropanol. It is not allowed to use a glass fiber pencil because it scratches the surface and will lead later on to corrosion.
- Mechanical parts (except shielding lids and bent parts), which didn't repair the failure, can be reused, if they are not soldered.
- When removing the shielding lids make sure to replace them with new ones, otherwise the high-frequency leakage can have an influence on the device.
Always use original Nokia spare parts.
Check the soldering joints of the parts, which are concerned regarding the indicated error (e.g. soldered connectors or switches) and resolder them if necessary (Level 2 only).
Remove redundant soldering flux after repair.
- Meet the torque requirements when assembling the unit (see also the document "torques for transceiver assembly" on Nokia Partner Web Site).
- Always use your own equipment for testing where you are sure that it works. E.g. if the customer complains about charger function, please test the phone with your own charger to be sure if phone or charger causes the malfunction.
- When doing the fault log entries, always note the Item code, which caused the malfunction. Also, fill in the appropriate part code from the assembly, if needed.
- Please be aware that some malfunctions could be software related and solved by an update.

- There are several documents available on PWS/CarePoint, which have to be followed:

- First, take care for the latest content pages of Service Bulletins, which are always available for each folder on Nokia Partner Web Site. This is also important to recognize, if existing documents have become invalid.

- The service level indicator at the bottom of each document tells the appropriate destination.

Downloads > Support Library >

1. Instructions
 2. General Service Bulletins
 3. Product related documents
 4. Spare Part Service Bulletins
 5. Service Tools Service Bulletins
 6. Common Softwares Service Bulletins
- etc,...


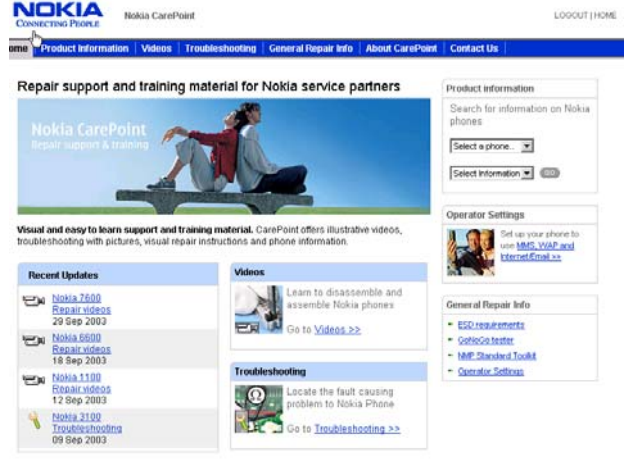
Use General SB-217 as a reference or overview.

Please also check Nokia Partner Web Site (PWS) for latest news and files on a regular basis.

3. PATHFINDER FOR WORKSHOP STAFF

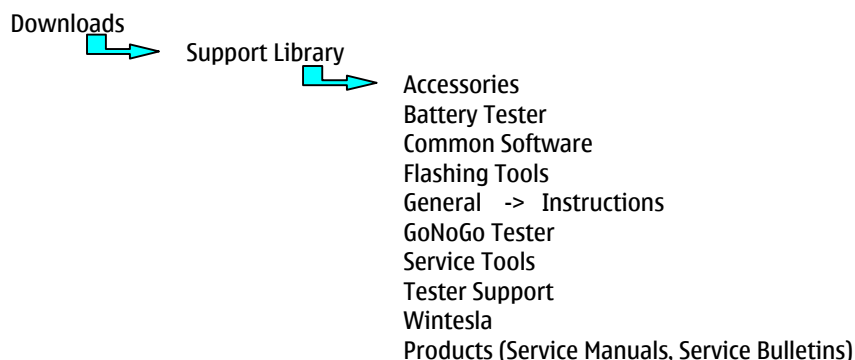
In addition to the information in this Service Manual, there are several instructions and information, which have to be followed.

Main documentation database is Nokia [Partner Website](#), which refers also to [Nokia Care Point](#) with the purpose of serving different multimedia content, like video clips or interactive tutorials.

Nokia Partner Web Site	Nokia Care Point (access through Partner Web Site)
<p>Nokia Partner Web Site for EMEA region is the most important document database for all service suppliers (level 1-4). All service relevant information like e.g. Service Manuals, Service Bulletins or general instructions are available. Content is restricted according your access level. To be kept up-to-date also concerning newest software updates, a daily check of "latest updates in support library" is needed.</p>	<p>Nokia Care Point is repair support and training channel for Nokia service suppliers (mainly for service levels 1 and 2). By providing visual and easy to learn support and training material, such as illustrative repair videos, troubleshooting with pictures, product information and general repair information, Nokia Care Point offers user-friendly channel for service suppliers to learn technical issues.</p>
	

It is mandatory to watch for newest technical and organizational information on a daily basis to be updated as required (see **"Latest Updates in support Library"**). Every new information has to be processed and implemented as soon as possible.

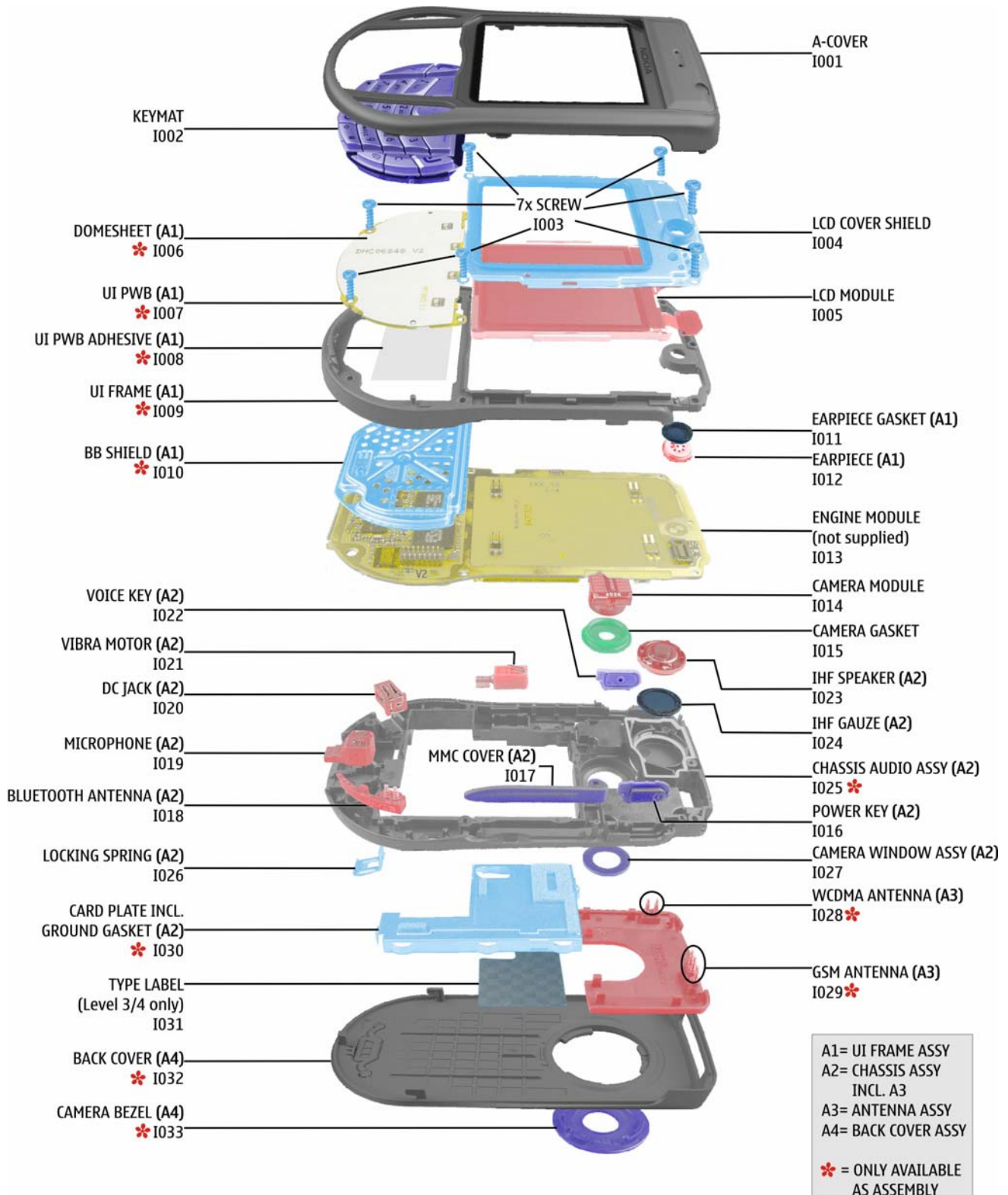
When logged into PWS you can also find needed information in different folder like:



To reduce the server traffic it is recommended to download newest version of huge files like videos, Phoenix packages or Service Manuals only once and distribute it internally for further use.

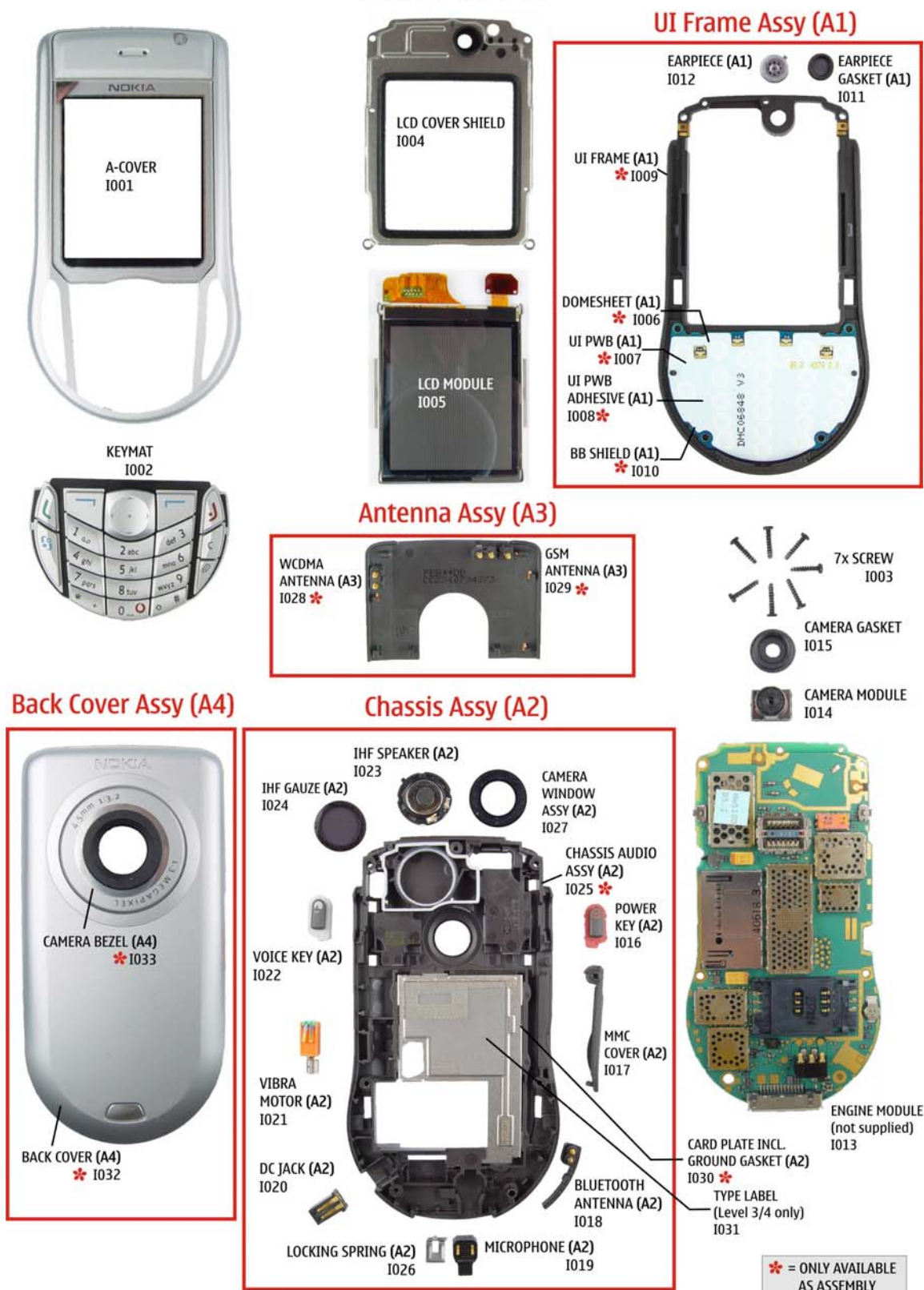
4. EXPLODED VIEW AND COMPONENT DISPOSAL

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



5. SPARE PARTS OVERVIEW

Spare Parts overview 6630 RM-1











6. SPARE PARTS LIST

Please exchange this page (placeholder) with latest corresponding Service Bulletins (spare parts, SWAP units and service tools) from PWS!

This will ensure, that you are using up-to-date order codes only.

Therefore Service Bulletins have to be checked from PWS on daily basis.

7. SERVICE TOOLS

	<p>FLS-4S incl. ACF-8, Driver and User Guide is a 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>Internal Battery BL-5C Inserted under the back cover, this Li-Ion 850 mAh battery provides power in a lightweight package.</p>
	<p>Travel Charger ACP-12 Small and lightweight charger for fast charging of your phone battery.</p>
	<p>Headset HDS-3 Small and lightweight stereo headset for handsfree functionality and listening to FM radio.</p>
	<p>DKU-2 USB Flash Cable</p>
	<p>SS-15 Camera removal tool. One side is for disassembly, the other side for assembly.</p>
	<p>RJ-48 Soldering Jig</p>



Lead-free Solder Wire

Mandatory for lead-free products (Level 2 only).



0772040 NMP Standard Toolkit

- Nokia opening tool SRT-6 Nokia No. 0770431
- Tonichi torque driver Nokia No. 6901525
- [Hoya](#) micro fibre cloth MX304
- [Dastex](#) gloves S, M, XL
- [Artlux](#) goggles AH166
- [Wera](#) bit T5 867/4TX 5x50
- Wera bit T6 867/4TX 6x50
- 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

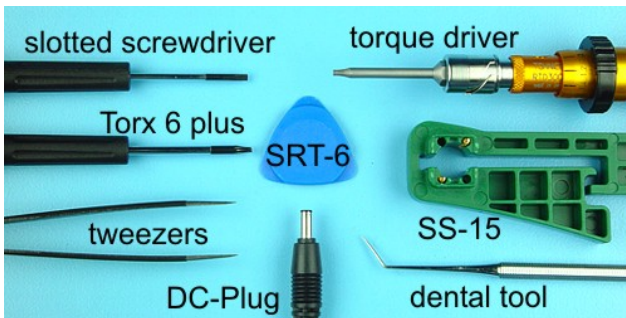
8. SW-UPDATE

To use FLS-4S 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 [Partner Web Site](#).

Flash Concept – (Point of Sales)



9. DISASSEMBLY INSTRUCTIONS (ALSO SEE THE VIDEO CLIPS ON CARE POINT)



1) Needed tools for disassembly/assembly.



2) Protect the window with a protective film.



3) To remove the **Back Cover** press the release button.



4) Remove the **A-Cover**.



5) Protect the inner side of the window with a protective film.



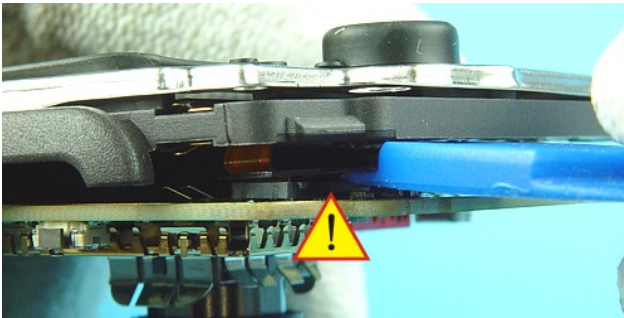
6) Remove the **Keymat**.



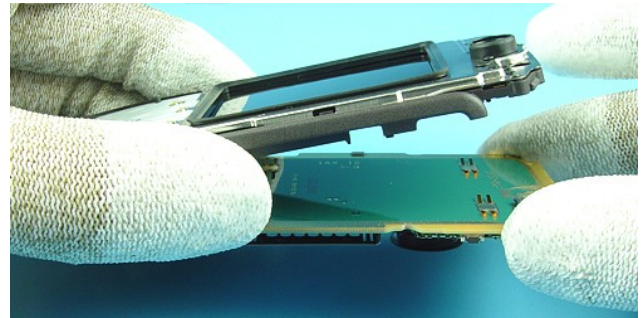
7) Unscrew the seven Torx Plus® size 6 screws. **For assembly, the reverse order and a torque driver with a torque of 25Ncm has to be used.**



8) Lift up both parts, the **UI Frame Assy** and the **Engine Module** simultaneously from the **Chassis Audio Assy** to prevent mechanical stress from the LCD connector.



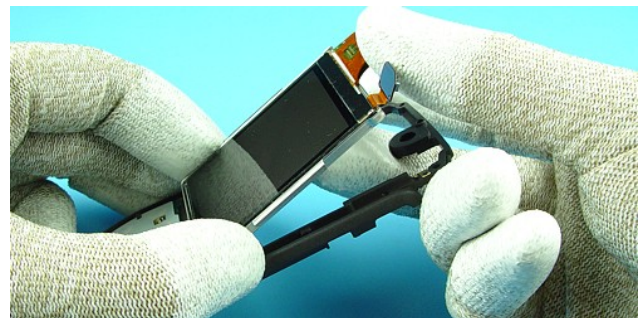
9) Before removing the **LCD Module** open the LCD connector with SRT-6. **Note! Be careful not to damage surrounding components.**



10) Remove the **UI Frame Assy** from **Engine Module**.



11) To remove the **LCD Cover Shield** from **UI Frame Assy** open the two snaps by using a slotted screwdriver.



12) Remove the **LCD Module** from the **UI Frame Assy**.



13) Protect the **LCD Module** window with a protective film.



14) First place the **UI Frame Assy** back to the **Chassis Audio Assy** and then connect the LCD connector before placing the **LCD Module** in the **UI Frame Assy**.

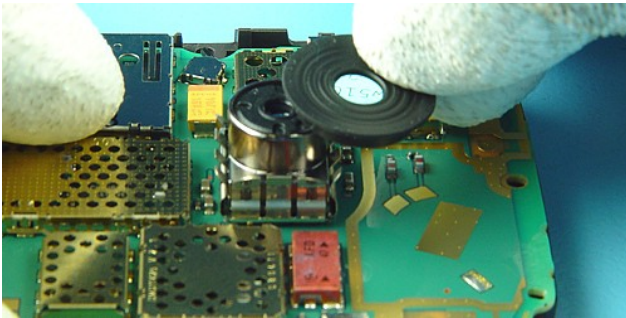
For assembly only!!!



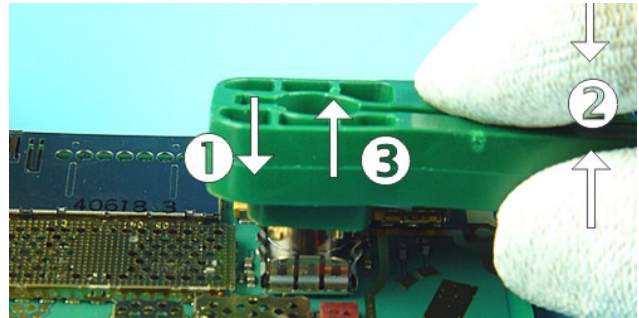
15) Hold the **LCD Cover Shield** horizontal above the **UI Frame Assy** and place it on it. Make sure that the side snaps connect correctly.



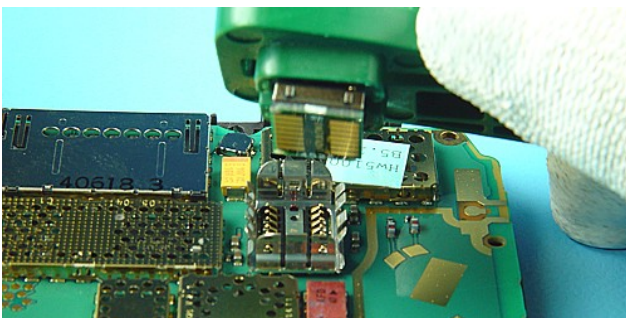
16) Remove the **Earpiece** with a torx driver. **Note! Mind the guide pin during assembly.**



17) Remove the **Camera Gasket**.



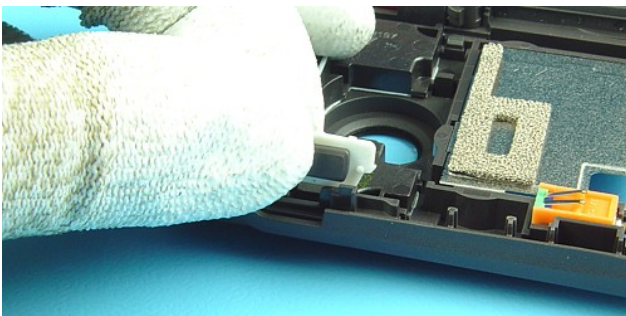
18) To remove the **Camera Module** place the Camera removal tool SS-15 on the **Camera Module** and press down until the metal springs of the connector opens. Now press the SS-15 together and lift it up.



19) Remove the **Camera Module**.



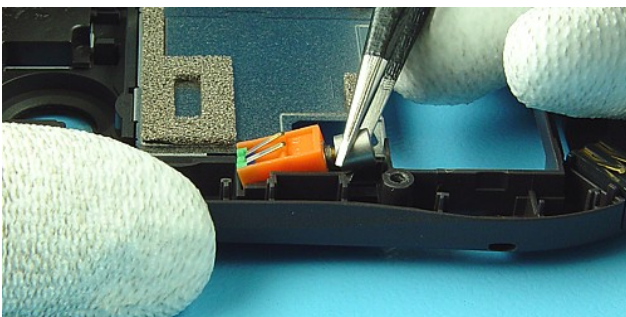
20) For **Camera Module** assembly use the backside of the Camera removal tool SS-15 and mind the three guide pins.



21) Remove the **Voice Key**.



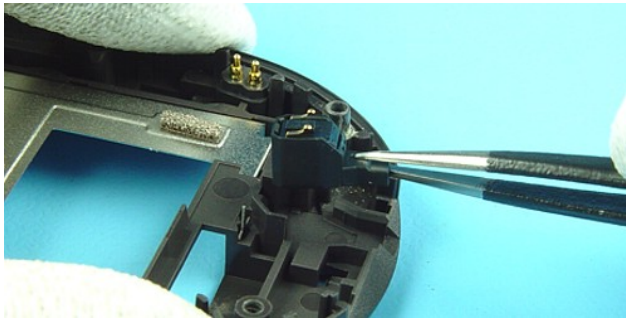
22) Remove the **Power Key**.



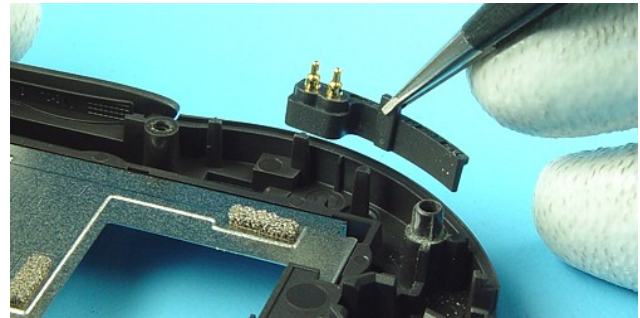
23) Remove the **Vibra Motor** with tweezers.



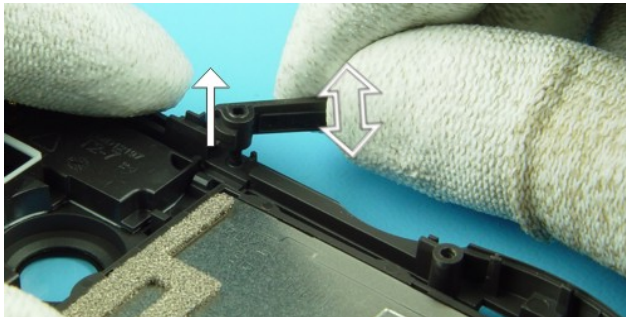
24) Remove the **DC Jack** by using a **DC Plug**.



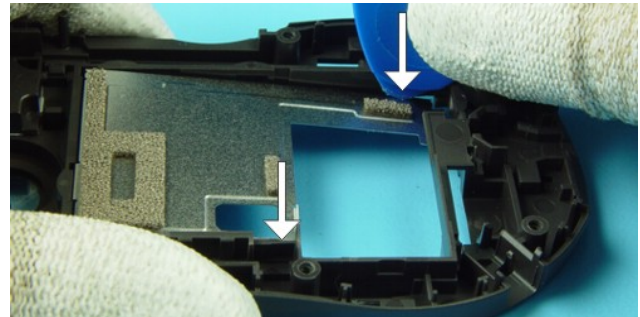
25) Remove the **Microphone** with tweezers.



26) Remove the **Bluetooth Antenna** with tweezers.

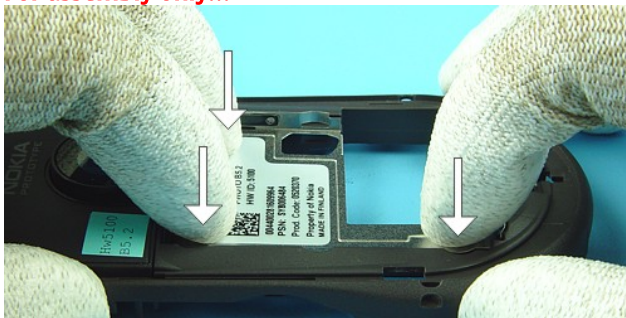


27) Remove the **MMC Cover** by wobble it out.



28) To remove the **Card Plate incl. Ground Gasket** use the SRT-6 at the shown places.

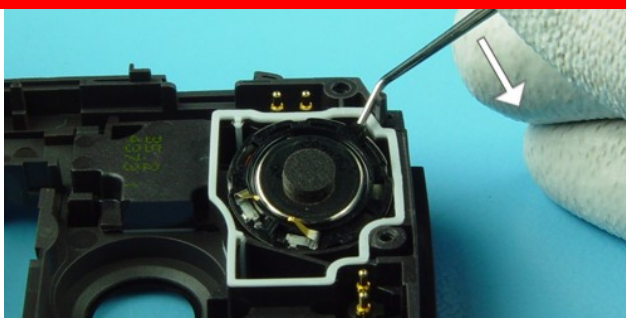
For assembly only!!!



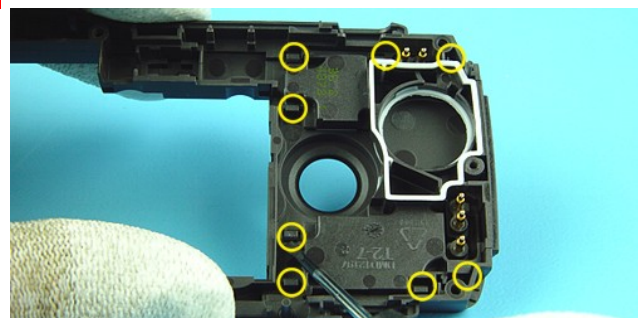
29) For assembly place the **Card Plate incl. Ground Gasket** on the backside of the **Chassis Audio Assy** and press it down at the shown positions.



30) Remove the **Card Plate incl. Ground Gasket**.



31) Remove the **IHF Speaker** with dental tool.









32) To remove the **Antenna Assy** unlock the 8 snaps with a slotted screwdriver.



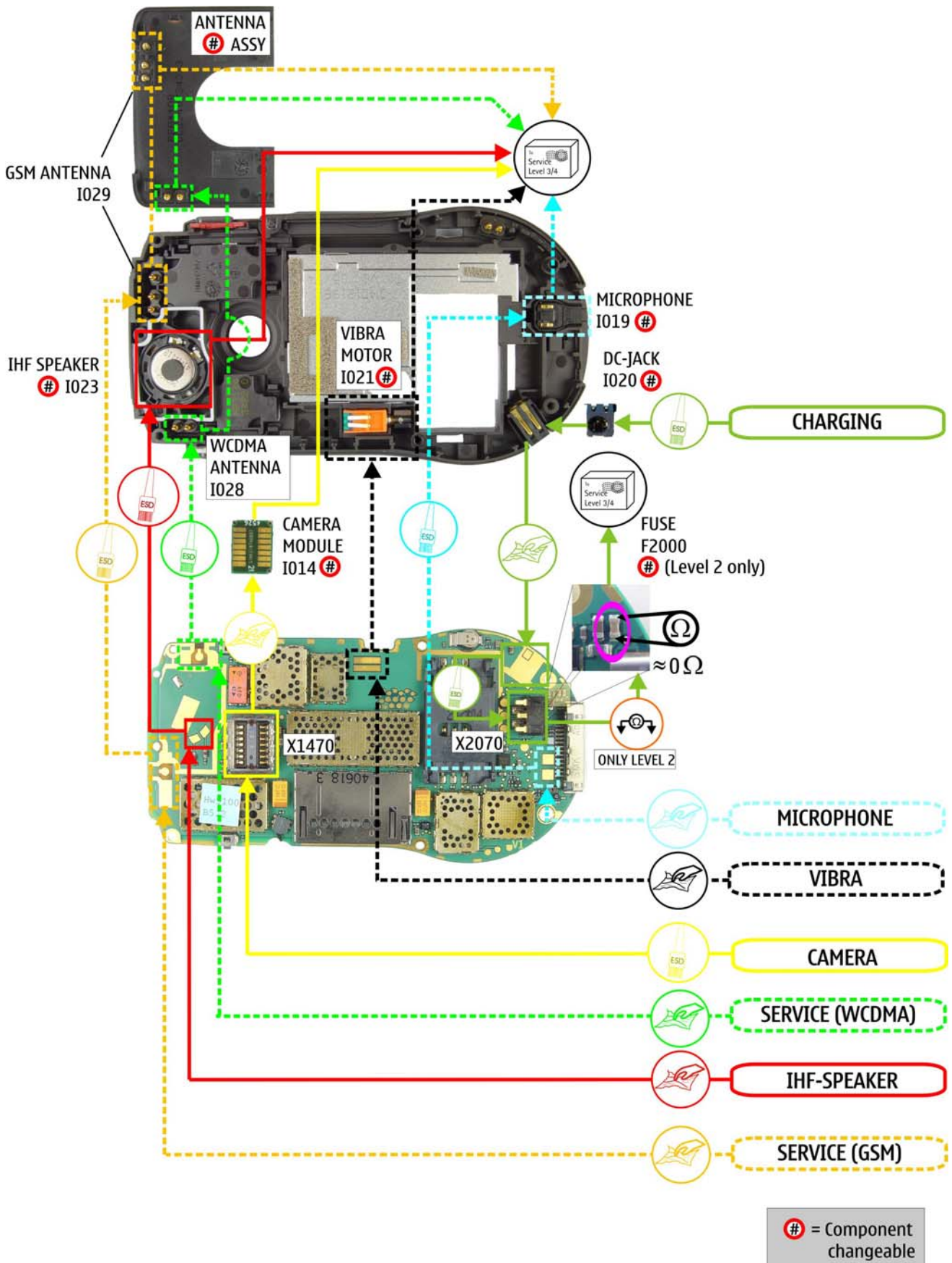
33) Remove the Antenna Assy

10. LEGEND FOR QUICK TROUBLE SHOOTER

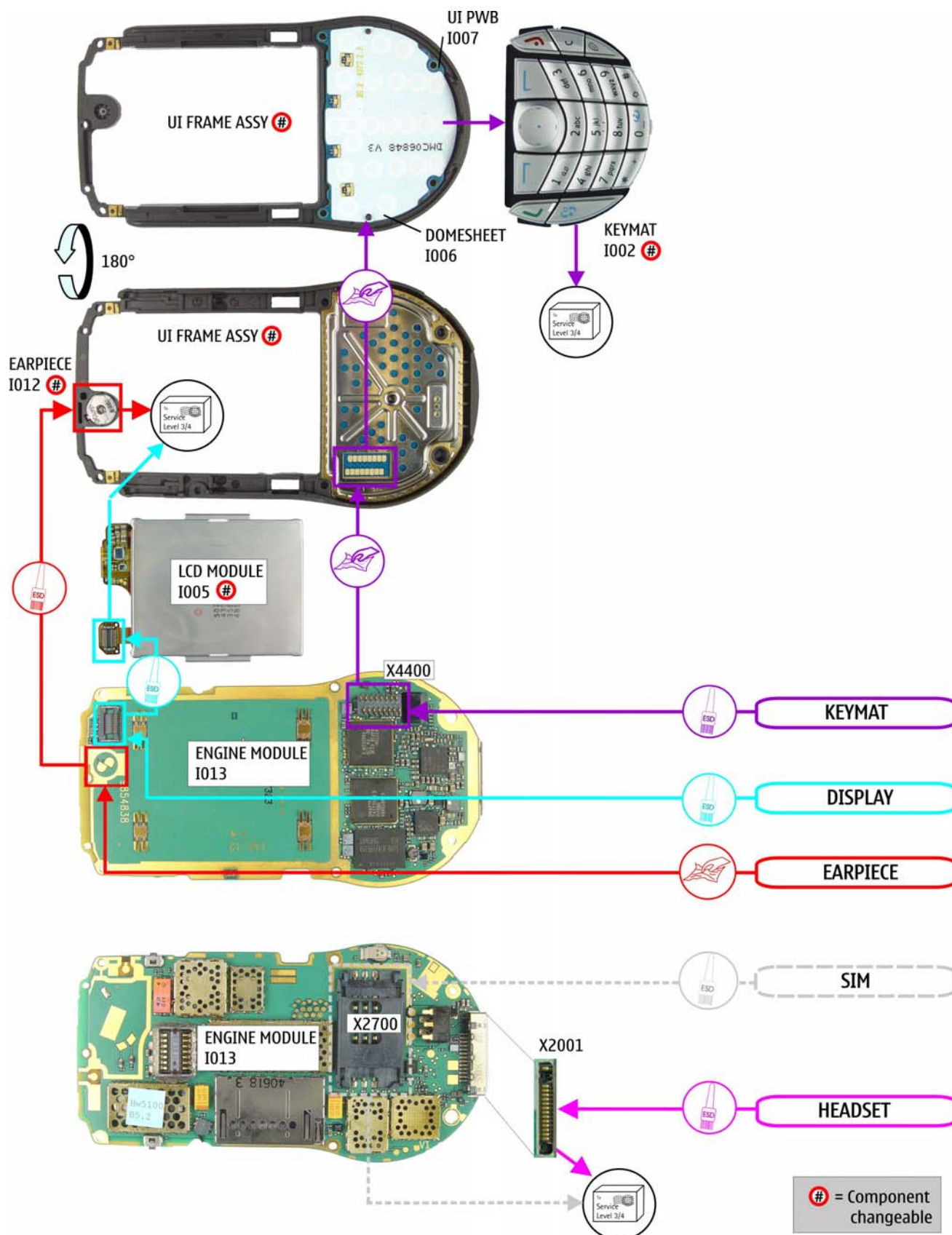
This legend is valid for all parts of the **Quick Trouble Shooter**

Fault symptom	The start point of repair activities regarding the appeared fault symptoms.
	Only marked components with this symbol can be changed.
	Follow the arrows step by step
	Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean if necessary.
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	Pads or contacts: Check optical and mechanical condition particularly regarding to corrosion. Clean with ESD brush only, if necessary.
	No more actions possible send product to the appropriate service supplier with higher service level.

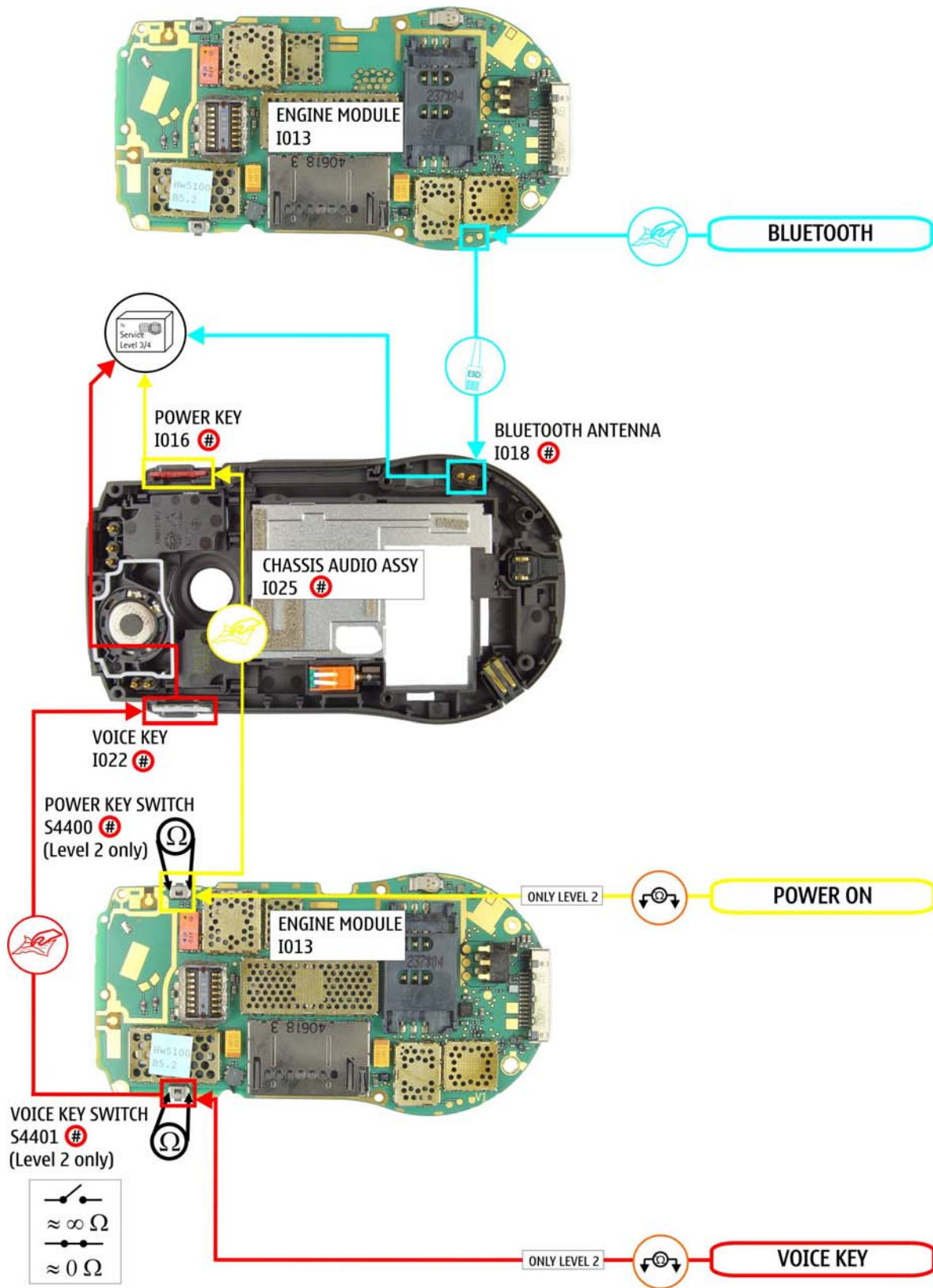
11. QUICK TROUBLE SHOOTER PART 1



12. QUICK TROUBLE SHOOTER PART 2



13. QUICK TROUBLE SHOOTER PART 3




= Component changeable

14. CAMERA GONOGO TEST

Before starting the GoNoGo test,
check that camera window is clean.
If not, clean the window with cloth.



- Press the red receiver button to reach the Home Menu.
- From Home Menu, press the  Menu key up.
- To take a picture press middle of the Menu key.
- This Image will be saved to Gallery into the Photos folder automatically.
- Test was successful, if the Image appears on your Display. The camera is ok.
- Select **Option**
- Select **Delete**
- Select **Yes**
- Select **EXIT** for Home Menu
- If the test is failed see Quick Trouble Shooter.

15. BLUETOOTH

Bluetooth test

You need another Bluetooth device (e.g. 6310i) to do a GoNoGo test.

Make sure that Bluetooth is activated in the reference unit. The distance of the devices should be not more than 5m from each other.





Test unit



Reference unit, Bluetooth activated

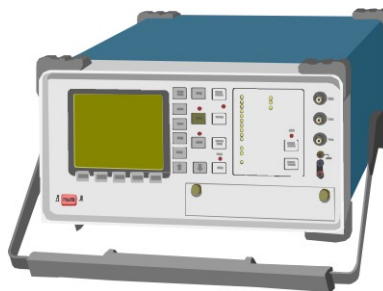
Settings on the test unit:

- Press the red receiver button to reach the Home Menu.
- From Home Menu, push the  Menu key down. This displays Phonebook entries (Contacts).
- If phone and SIM memory is empty, create one new entry.
- Choose one phonebook entry and select **Options**.
- Select **Send** .
- Select **Via Bluetooth** (If the Bluetooth device is not active a message appears on display--> select **yes**)
Search window appears, if all Bluetooth devices in range will be displayed, the test is successful!
- Press red receiver button for Home Menu.
- Note! **Bluetooth is activated!**

16. GONOGO TEST

After the optical check a GoNoGo test has to be carried out if the unit has been unscrewed to guarantee the functionality of the phone.

Please refer to the actual information on Partner Web Site and Nokia Care Point. When using delivered tester support files, take care of the right setup according to the tester type and product type. Please refer to "Recommended Service Equipment" on Nokia Partner Web Site.



Mobile Phone Tester

17. BATTERY TEST

A battery tester lets you test the capacity of Nokia batteries.

Please refer to the actual information on Partner Web Site.



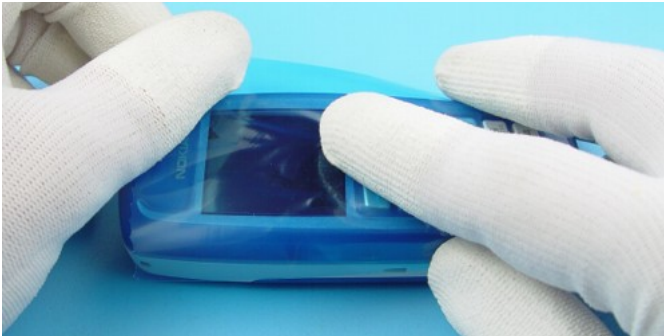
<http://www.astratec.co.uk/>



<http://www.cadex.com/>

18. FOR FORWARDING OF REPAIRS

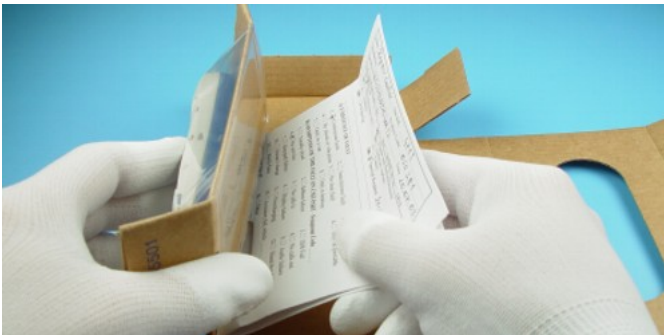
When it is necessary to forward of repairs to appropriate service supplier with higher service level we recommend using the offered swap phone cartons as described in Spare Parts SB-004.



Always Protect the window with a protection film.



Put the unit under the stretch film.



Add repair documentation e.g. filled-in service note into the swap carton.



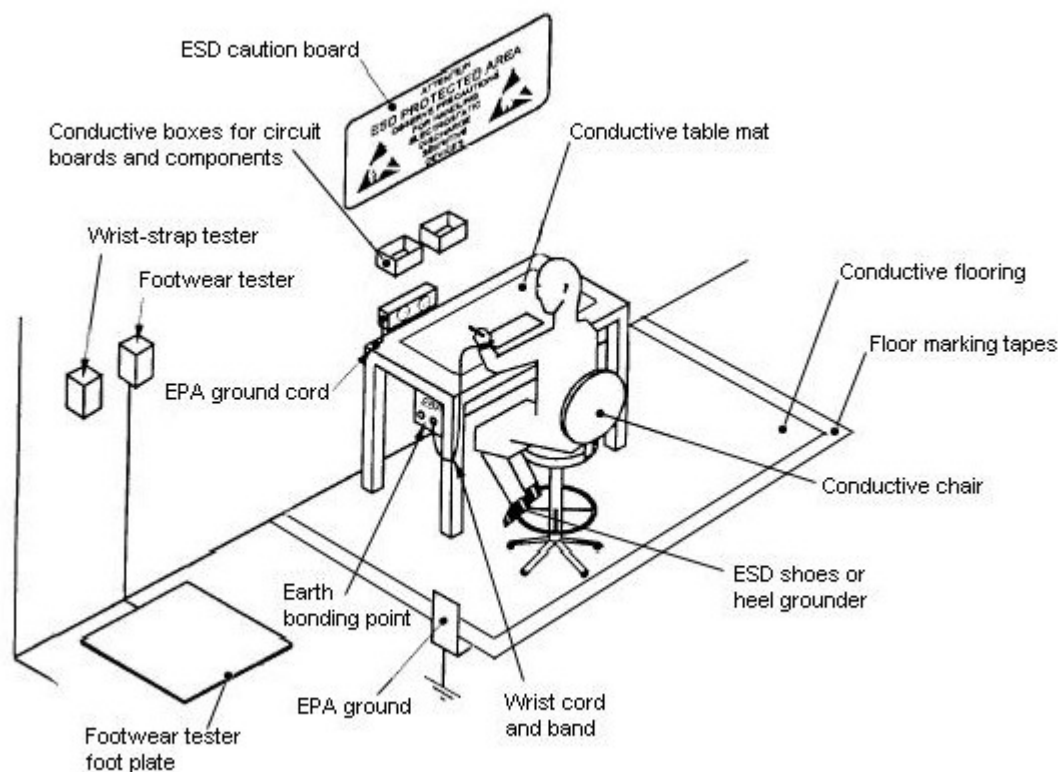
Fold the swap carton as shown in Spare Parts SB-004.



There are two different sizes of swap cartons for common mobile phones.

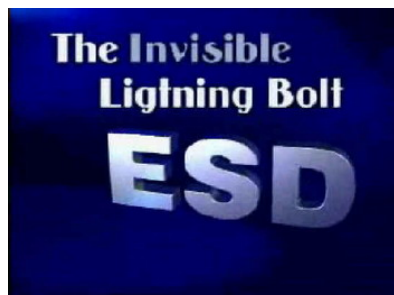
19. ESD PROTECTION REQUIREMENTS

Please refer to the Partner Web Site document
[Service Supplier Requirements](#) in folder General instructions.



- USE** Conductive bags and boxes
- USE** ESD compatible service tools
- USE** Conductive wastebaskets
- USE** ESD gloves when handling PWBs/PCBs
- USE** Cleaning material without changing el. Characteristics
- USE** Grounded service equipment, i.e. soldering station
- USE** ESD clothes such as coat or frock

- NO** Smoking
- NO** Drinking
- NO** Eating
- NO** Dust
- NO** Useless Items
- NO** Normal pressured air for cleaning modules/displays



The video covers general issues concerning Electro-Static Discharge (ESD)
source: Nokia Care Point