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SERVICE MANUAL
Level 1&2

NOKIA 5500d

RM-86

Transceiver characteristics:

Band: Tri-band phone for GSM 900/1800/1900MHz

Camera: 2 Megapixel

Display: Active matrix color display with 262.144 colors,

resolution 208 x 208 pixel

IrDA

Bluetooth

FM radio

Push to talk (POC)

Connector: Pop-Port™ connector

Transceiver with BL-5B Li-Ion battery pack

Talk time	Standby	Note
2h to 4h	6 to 11days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

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CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	18.Jun.2006	Initial draft
Approved	1.0	6.Jul.2006	Approval
Approved	2.0	11.Jul.2006	Exploded view modified / Assembly instruction - Keymat added

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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.
5. 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 Online. Also see ESD Protection Requirements in this Service Manual.

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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/NOKIA Online).
- 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.
- A SIM card is needed for all GoNoGo tests.
- 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 NOL, 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 Online. 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 Software Service Bulletins
       etc,...

Use General SB-217 as a reference or overview.

Please also check NOKIA Online (NOL) for latest news and files on a regular basis.

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3. PATHFINDER FOR WORKSHOP STAFF

This is the NOL page (NOKIA Online) which is currently available in Europa, Middle East and Africa only!

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 Online** with the purpose of serving different multimedia content, like video clips or interactive tutorials.

It is mandatory to watch for newest technical and organizational information on a daily basis to be updated as required (see **"Latest files in Support Library"**). Every new information has to be processed and implemented as soon as possible.
When logged into NOL you can also find needed information in different folder like:

Support Library

Phones

Service Manuals
Service Bulletins
Software
Repair Information

Level 1&2 e-learning (former NOKIA CarePoint) on NOKIA Online

Former NOKIA CarePoint content, such as	• Online Troubleshooting • Product information • Videos – Disassembly/Assembly	can be found on **NOKIA Online**
		NOKIA Online Care Services Training Phone Models

Level 1&2 e-learning courses offer a quick overview of the NOKIA phone and support for how to repair and use the phone:

Overview & Guides	Disassembly & Assembly	Troubleshooting
Basic information about the phone, features and technologies	Instructions how to disassemble and assemble the phone	Step-by-step instructions on how to locate and repair the most common problems with the phone

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.

![NOKIA Connecting People]

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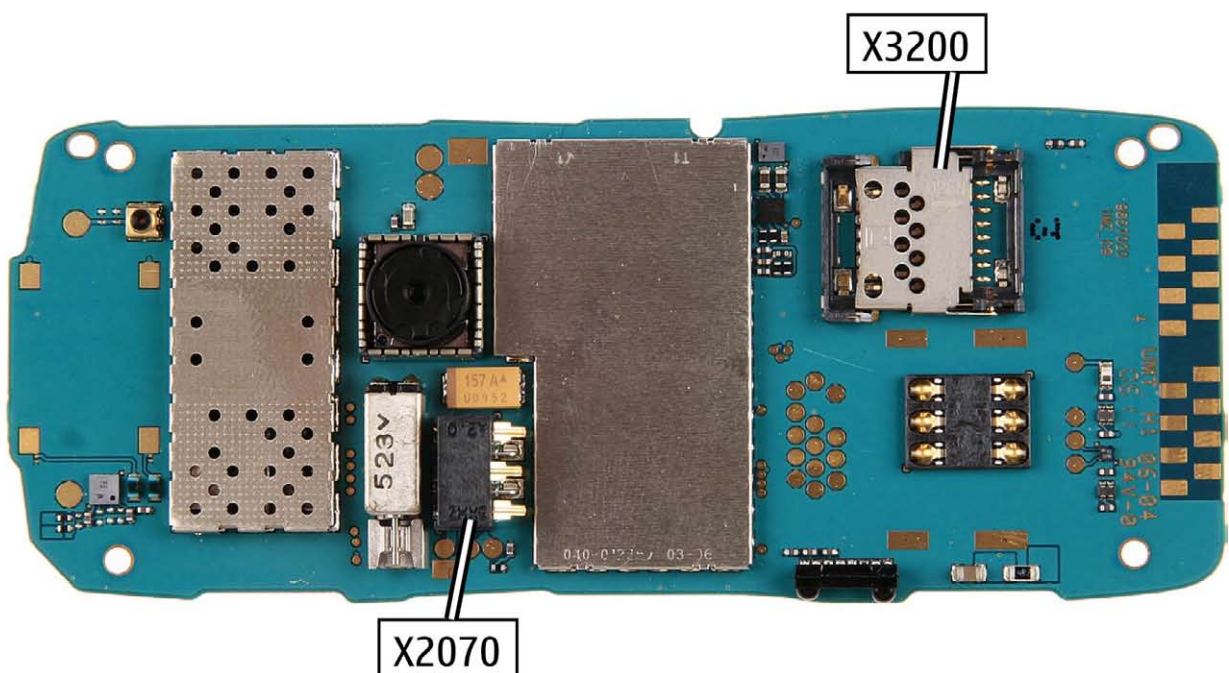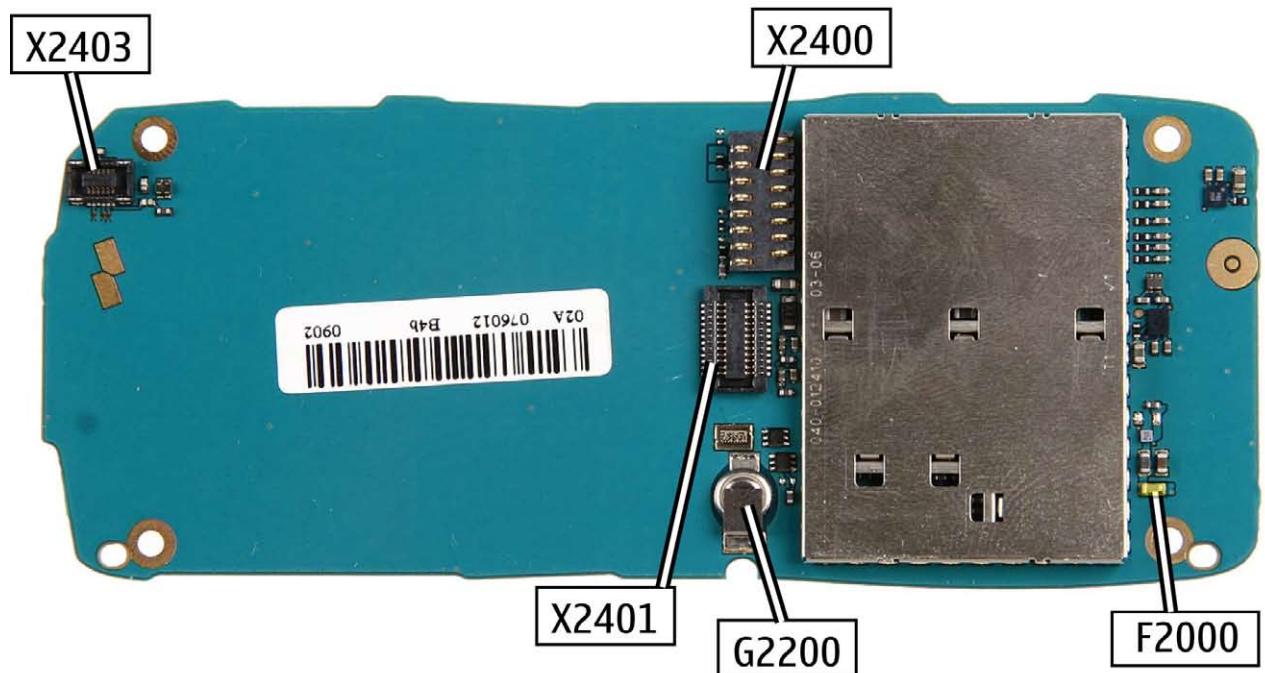
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4. EXPLODED VIEW AND COMPONENT DISPOSAL

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 NOL.

5500d RM-86 Exploded view

CO LABEL I001
WINDOW (A1) I003
A-COVER METAL FRAME I004
PWB RIGID 1ND (A2) I008
A-COVER (A3) I010
A3=A-COVER ASSY (I010-I014)
SPEAKER GASKET (A3) I011
SPEAKER (A3) I012
A4=LCD MODULE ASSY (I015-I017)
COMPONENTS ON FLEX FOIL (A4) I017
LCD MODULE (A4) I015
A5=LIGHT SWAP ENGINE MODULE ASSY (LEVEL 3&4 ONLY) (I018-I023)
BB LID (A5) I021
RF LID (A5) I020
CAMERA MODULE I024
IHF SPEAKER DONAU (A6) I025
IHF MEMBRAN (A6) I026
DOMES (A7) I029
Flash LIGHT (A7) I030
ANTENNA MODULE (A6) I034
FLEX FOIL (A7) I028
A7=SIDE FLEX ASSY (I028-I030)
A6=C-COVER ASSY INCL A7 & A8 (I025-I035)
B-COVER ASSY I037
A9=BATTERY COVER ASSY (I039-I040)

KEYMAT (A1) I002
A1=KEYMAT ASSY (I002-I003)
LIGHT GUIDE (A2) I005
DOME SHEET (A2) I007
LED (A2) I006
A2=UI BOARD ASSY (I005-I010)
MICROPHONE MEMBRANE (A3) I014
MICROPHONE (A3) I013
SUPPORT FOAM (A2) I009
LCD CONNECTOR (A4) I016
RETU TAHVO LID (A5) I018
ENGINE MODULE (A5) (NOT SUPPLIED) I019
MICRO SD DOOR (A5) I022
SYSTEM CONNECTOR (A8) I032
CONNECTOR GASKET (A8) I031
DC JACK (A8) I033
A8=SYSTEM CONNECTOR ASSEMBLY (I031-I033)
C-COVER (A6) I035
SIM COVER (A6) I027
TYPE LABEL (A5) I023
SCREWS T6+ I038
SCREWS T6+ I036
BATTERY COVER I040
BATTERY COVER LOCKING SCREW I039

🗑 = These parts can not be reused after removal.

❋ = only available as assembly

Ver. 3.0   ● ELECTRO   ● SILICON   ● METAL   ● PLASTIC   ● PWB   ● COVER

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5. COMPONENT OVERVIEW

5500d RM-86 Components overview

X2403   X2400

X2401   G2200   F2000

X3200

X2070

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6. SPARE PARTS LIST

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

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

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

Home | User | Sitemap | | Log Out

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Nokia Online

Search [   ] GO

Care Services

Support Library Warranty Info Service Points Training

Support Library

Browse files

Latest files
» Browse files

Select category: Phones

Select subcategory: XXXX XXXX (XXXX)

Select subcategory Service Bulletins

Date range   from Month / Day / Year

until: Month / Day / Year

Search [   ] SEARCH

Files for Service level 2   Date:03.02.2005

▪ XXXXXXXXXXXXXXXXX

Files for Service level 1   Date:16.02.2005

▪ XXXXXXXXXXXXXXXXX
▪ XXXXXXXXXXXXXXXXX
▪ XXXXXXXXXXXXXXXXX

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7. SERVICE TOOLS

	FLS-4S incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.
	ACF-8 Universal Power Supply is used to power FLS-4S.
	Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.
	Internal Battery BL-5B Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.
	Headset HS-23 Small and lightweight stereo headset with handsfree call handling, volume control, push to talk support, and comfortable earpieces for listening to the FM radio or music player.
	SS-45 Camera removal tool.
	CA-53 Service Cable to connect the PC with the Pop-Port™ connector.

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	RJ-152 Soldering Jig
	Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).
	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.

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8. SW-UPDATE

Flash Concept – (Point of Sales)

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 Online](#).

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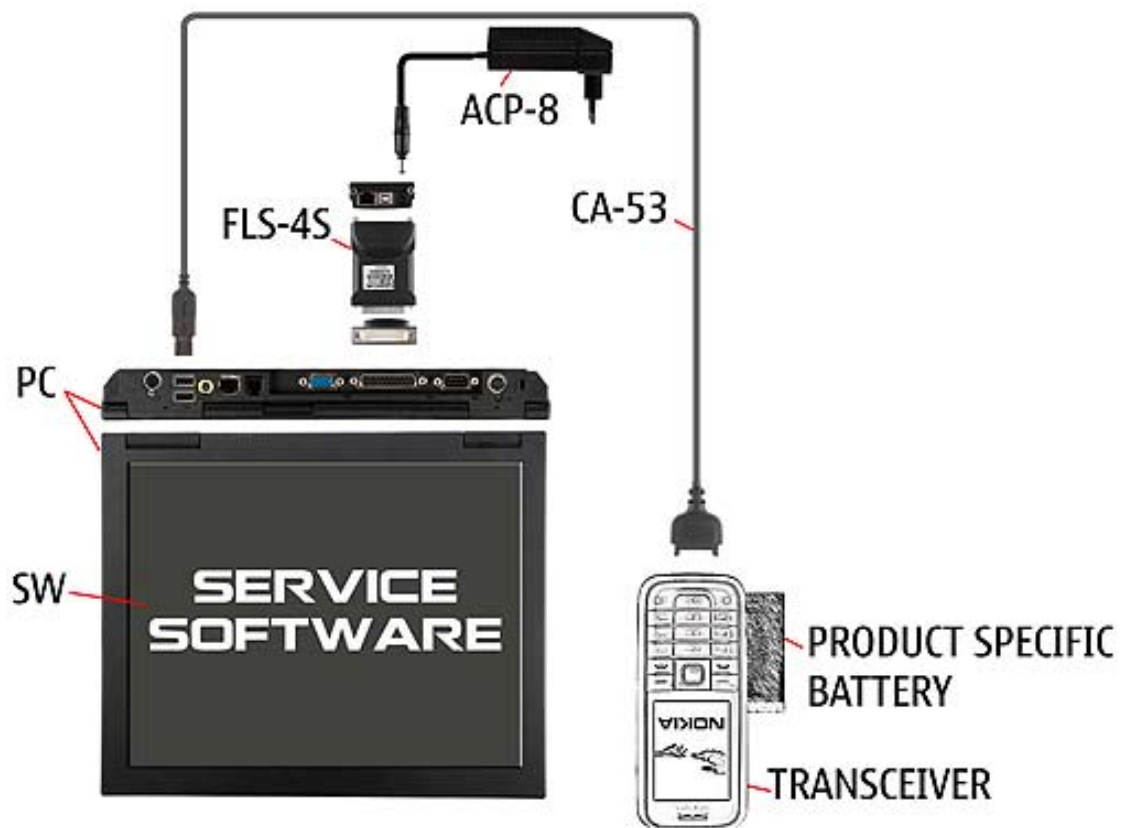
9. DISASSEMBLY INSTRUCTION

1. Needed tools : a Torx Plus size 6 screwdriver, metal tweezers, the dental pick, the SS-93 opening tool, a torque driver, a Torx size 6 plus bit, the SRT-6 and the SS-45 camera removal tool.

2. Unlock and remove the BATTERY COVER. Do not turn the BATTERY COVER LOCKING SCREW over 90°.

3. Undo the screws in the order shown.

4. Place the SRT-6 between the A-COVER METAL FRAME and the B-COVER ASSY.

5. Slide the SRT-6 along the edge to the middle of the cover.

6. To unlock the A-COVER METAL ASSY lever it out with SRT-6 as shown.

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7. Do the same on the other side.

8. Separate the parts from each other.

9. Undo the screws in the shown order.

10. Discard the screws.

11. Unlock the A-COVER ASSY...

12. ...and remove the A-COVER METAL FRAME.

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13. Remove the A-COVER ASSY.

14. Remove the EARPIECE with the dental pick.
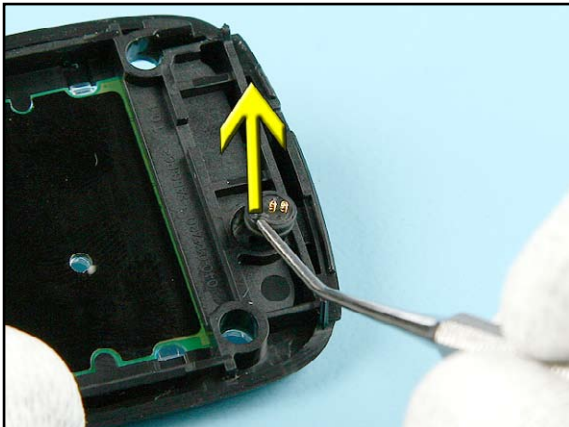
15. Remove the MICROPHONE with the dental pick.

16. Gently, open the LCD CONNECTOR...
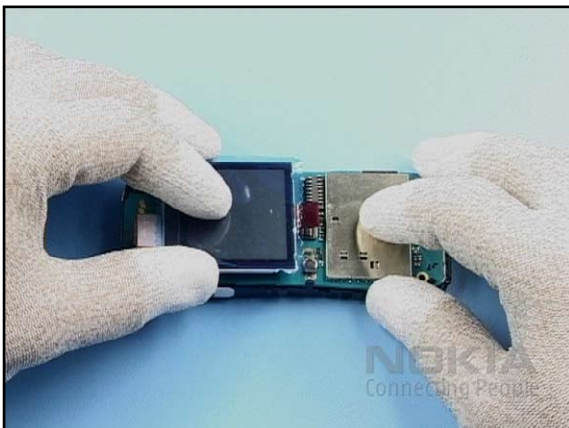
17. ...and remove the LCD MODULE ASSY.

18. Open the SIDE FLEX connector.

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19. Now, remove the ENGINE MODULE.
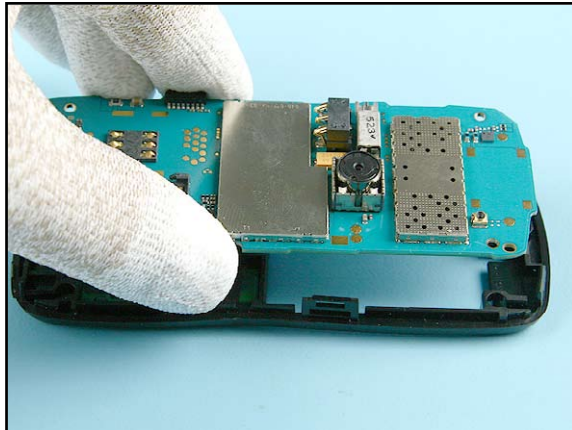
20. Use the A-COVER ASSY as an support when removing the CAMERA MODULE.
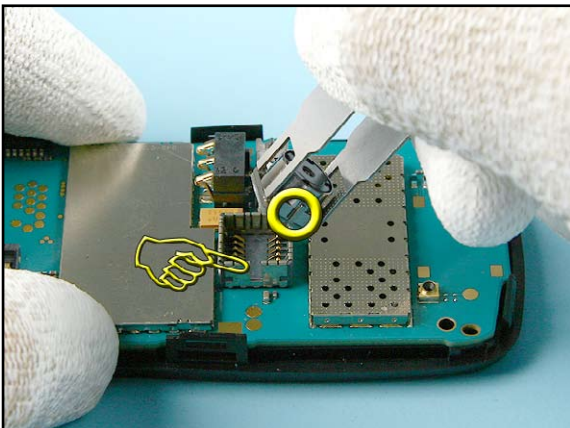
21. Remove the CAMERA MODULE with the SS-45 camera removal tool. Note the guide pin for the reassembling procedure.
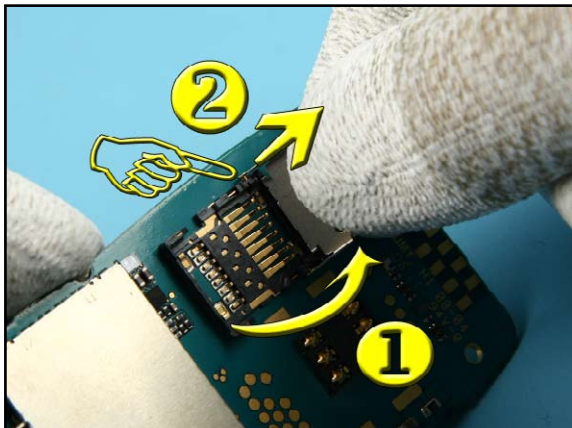
22. Remove the MICRO SD DOOR in the shown order.
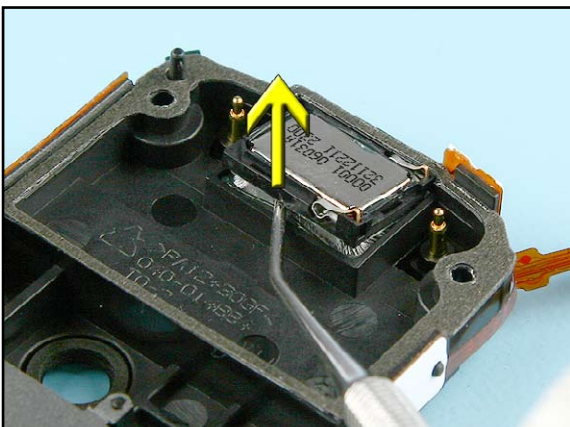
23. Remove the IHF SPEAKER DONAU with the dental pick.
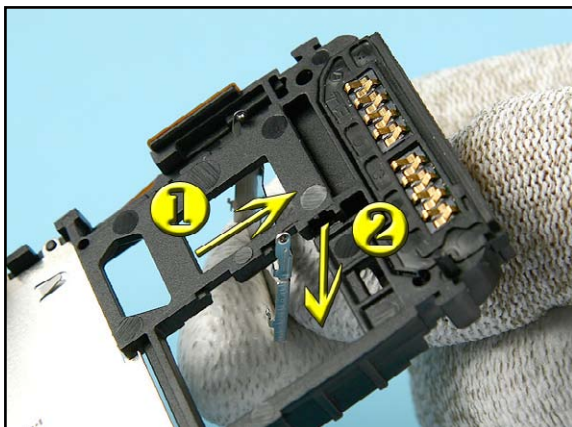
24. Remove the SIM COVER in the shown order.

10. ASSEMBLY INSTRUCTION - KEYMAT

1. Note the holes in the A-COVER METAL FRAME (left pic.) and the guide pins on the back of the KEYMAT (right pic.).

2. Remove the protective film from the A-COVER METAL FRAME.
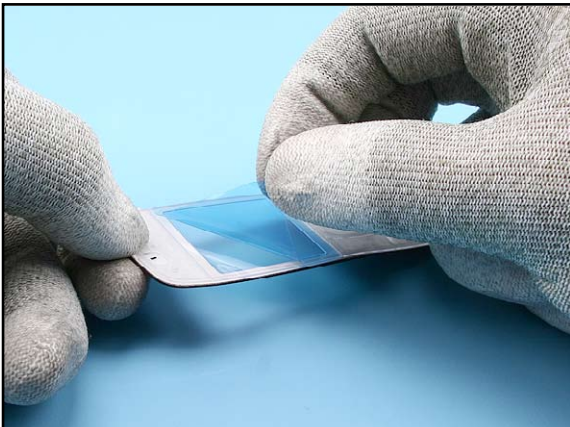
3. Remove the protective film from the KEYMAT.

4. Hold the KEYMAT horizontally over the A-COVER METAL FRAME and align the four guide pins on the KEYMAT with the four holes in the A-COVER METAL FRAME.

5. Press down the KEYMAT on the A-COVER METAL FRAME.

6. Ensure that the KEYMAT is also glued correctly around the window area.

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11.ASSEMBLY HINTS

1. Always use new screws when assembling the unit.

2. Set the torque driver to the torque value of 19Ncm.

3. Tighten the screws in the order shown.

4. Set a torque value of 17Ncm for the last two screws.
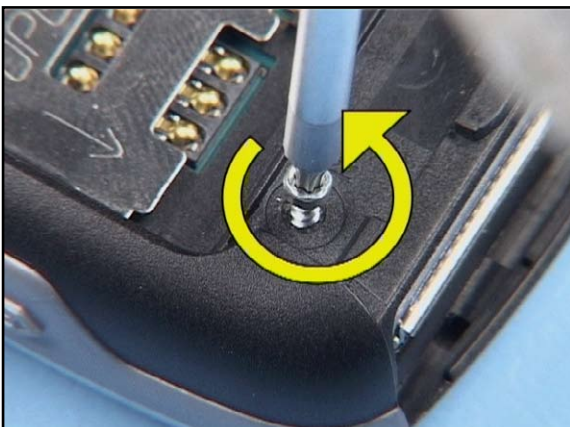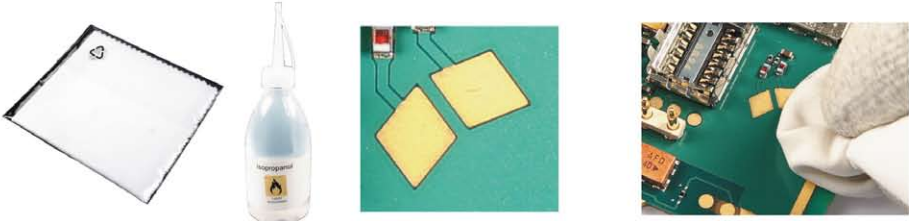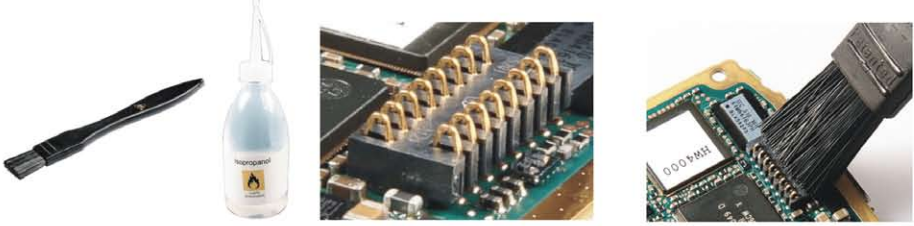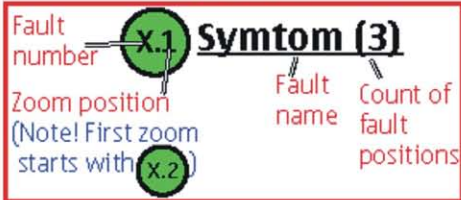
5. To avoid damaging the plastic threads, first turn the screws slightly left to engage the thread and then tighten them lightly.

6. Tighten the screws in the order shown.

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12. LEDGEND FOR 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.

	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components can be replaced.
	Cloth usage: Check pads or contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Measure component for electrical functionality and change, if needed. (Level 2 only)
	ESD Brush usage: Check contacts for optical and mechanical condition particularly regarding to corrosion. Clean it if necessary.
	Explanation Fault number — X.1 **Symtom (3)** Zoom position (Note! First zoom starts with X.2) — Fault name — Count of fault positions

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13. QUICK TROUBLE SHOOTER - MAIN OVERVIEW

5500d RM-86 Quick Trouble Shooter

Explanation

Fault number — **X.1** **Symtom (3)**

Zoom position
(Note! First zoom starts with **X.2**)

Fault name — Count of fault positions

- **1.1** POWER (5)
- **2.1** Charging (4)
- **3.1** No Service (2)
- **4.1** Bluetooth (2)
- **5.1** SIM (2)
- **6.1** IHF Speaker (2)
- **7.1** Keypad (4)
- **8.1** Display (2)
- **9.1** Microphone (2)
- **10.1** Earpiece (2)
- **11.1** LEDs (3)
- **12.1** Volume (4)
- **13.1** POC Key (4)
- **14.1** Edit Key (4)
- **15.1** Instant Swap Key (4)
- **16.1** Camera (2)
- **17.1** Card Reader (1)

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14. QUICK TROUBLE SHOOTER - ZOOMS PART 1

1.1 POWER (5)
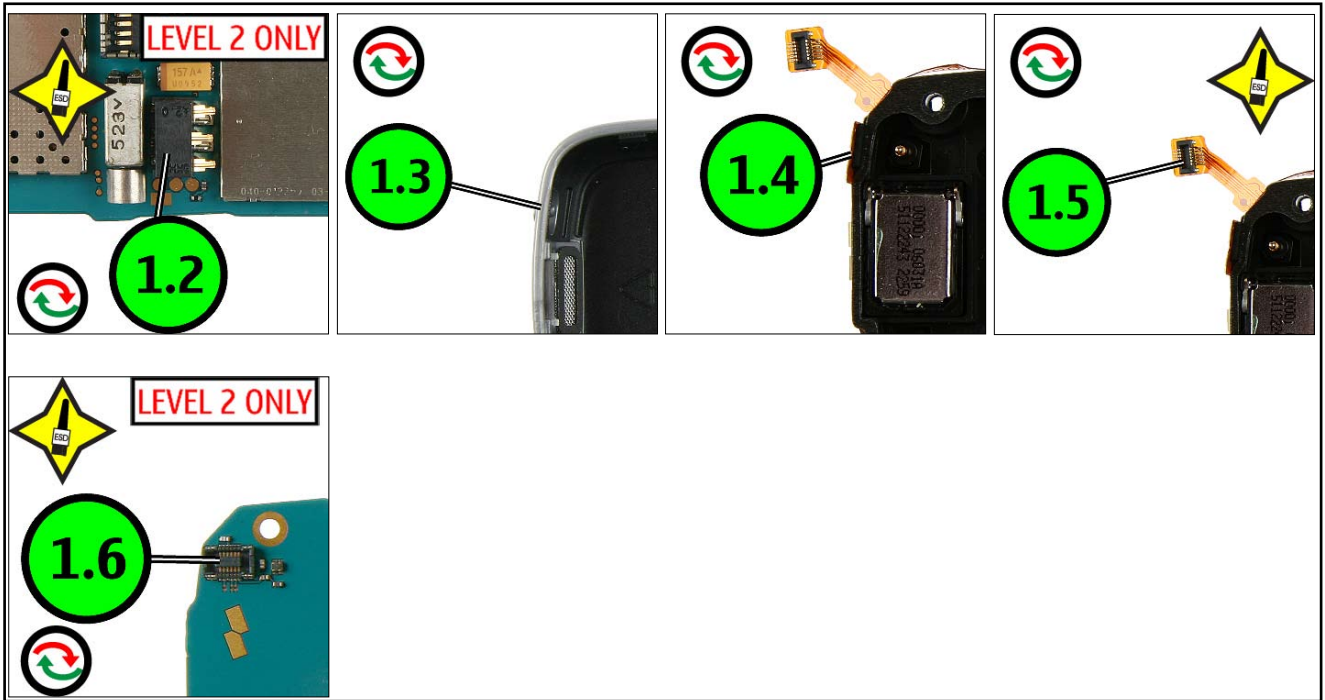
2.1 CHARGING (4)
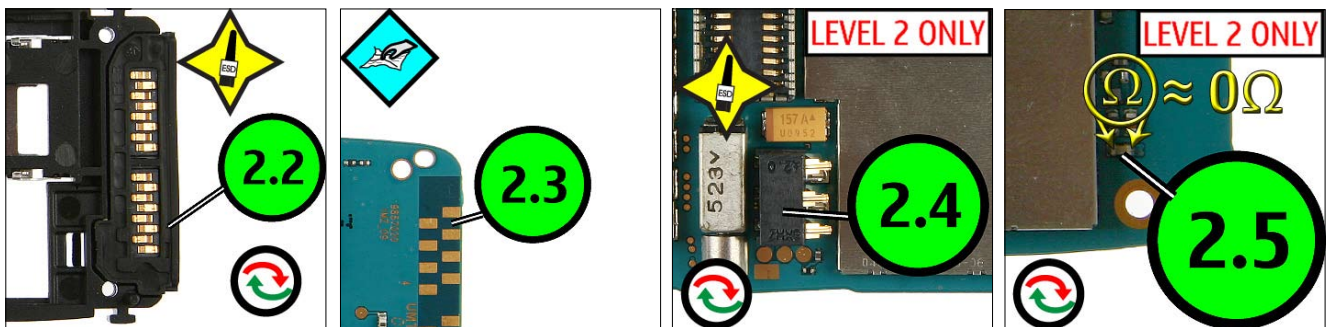
3.1 NO SERVICE (2)
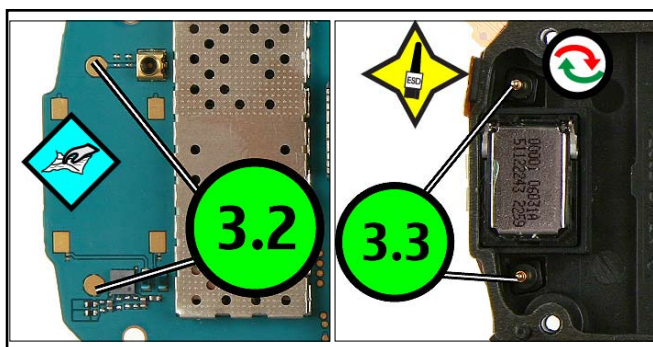
4.1 SIM (2)
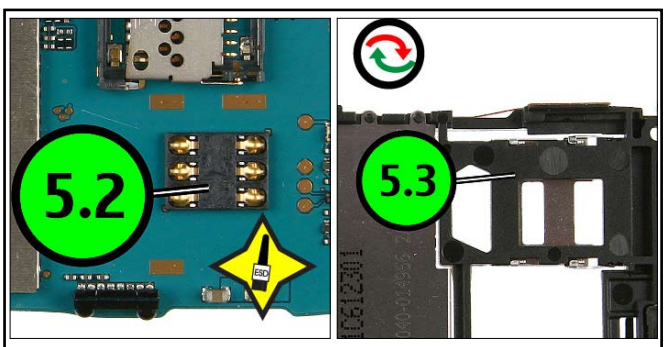
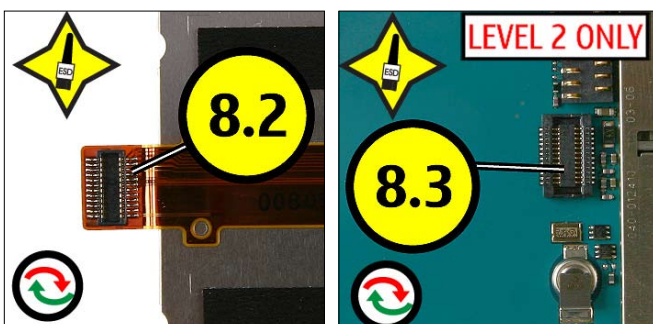## 15. QUICK TROUBLE SHOOTER - ZOOMS PART 2
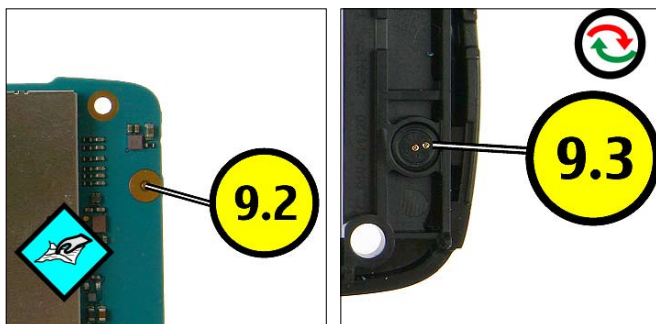
5.1 BLUETOOTH (2)

6.1 IHF SPEAKER (2)

7.1 KEYPAD (4)

8.1 DISPLAY (2)

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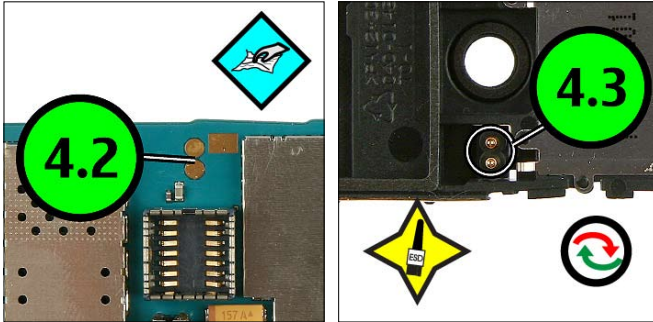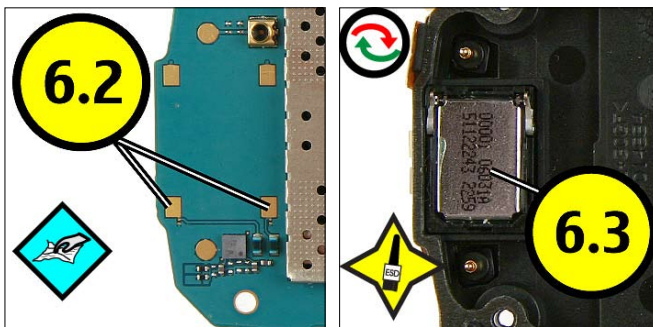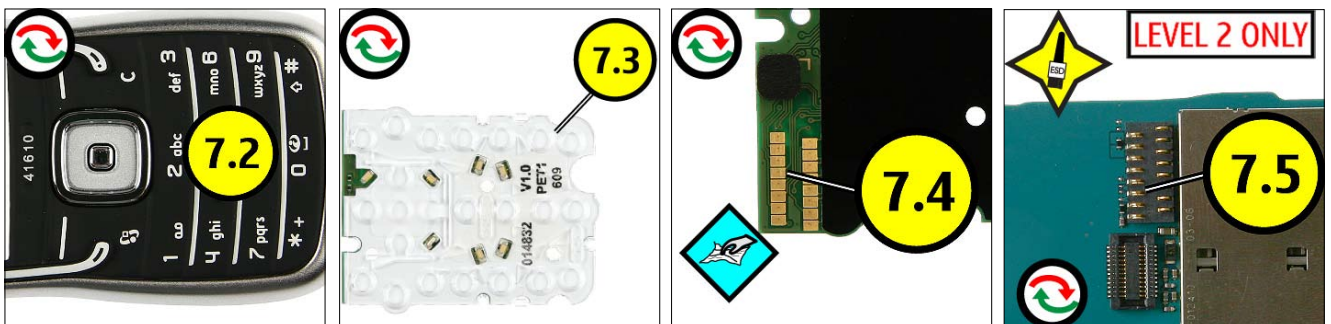
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16. QUICK TROUBLE SHOOTER - ZOOMS PART 3

9.1 MICROPHONE (2)

10.1 EARPIECE (2)

11.1 LEDs (3)

12.1 VOLUME (4)
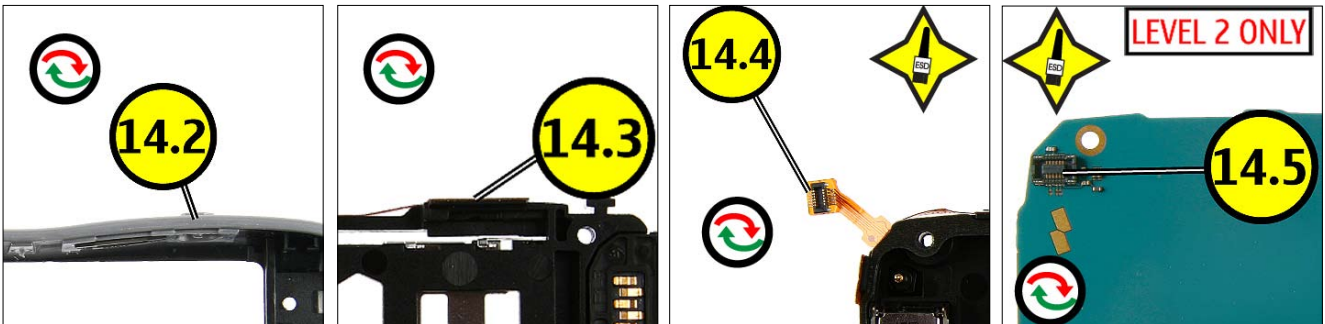
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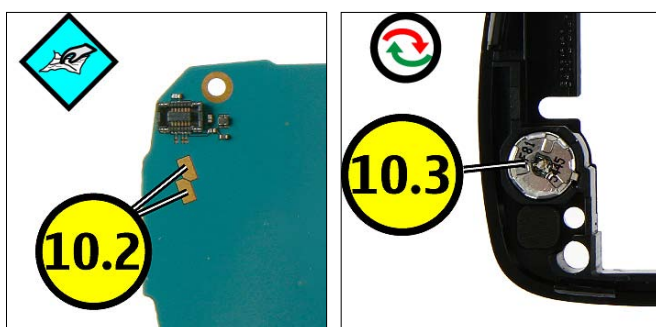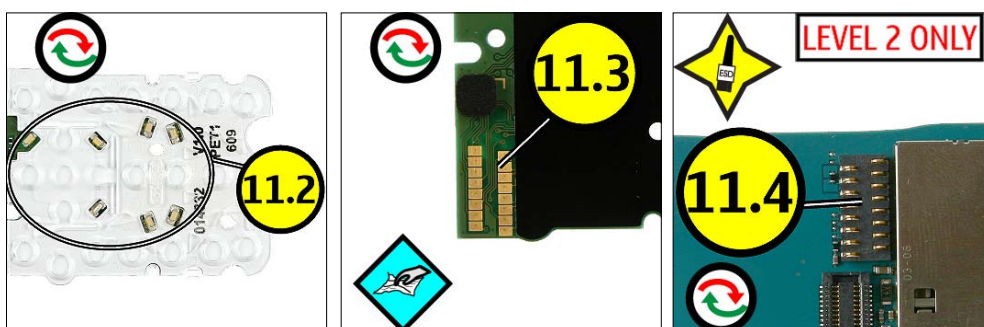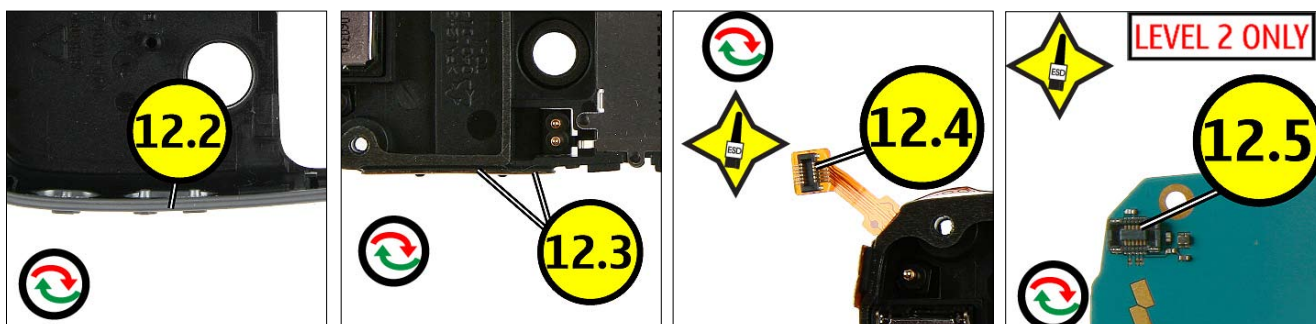
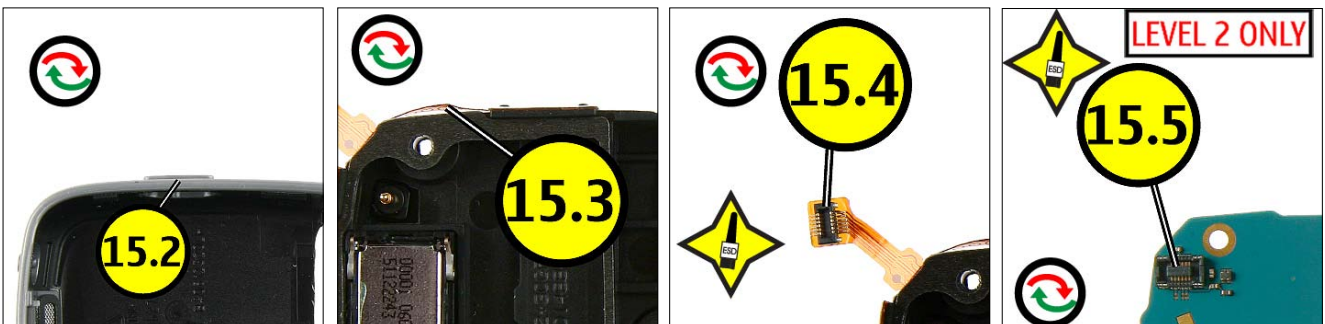## 17. QUICK TROUBLE SHOOTER - ZOOMS PART 4
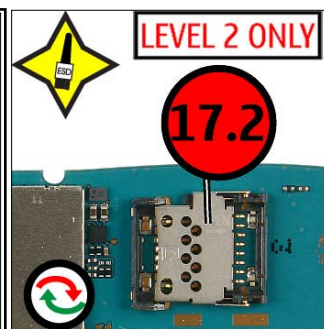
13.1 POC KEY (4)

14.1 EDIT KEY (4)

15.1 INSTANT SWAP KEY (4)

16.1 CAMERA (2)

17.1 CARD READER (1)

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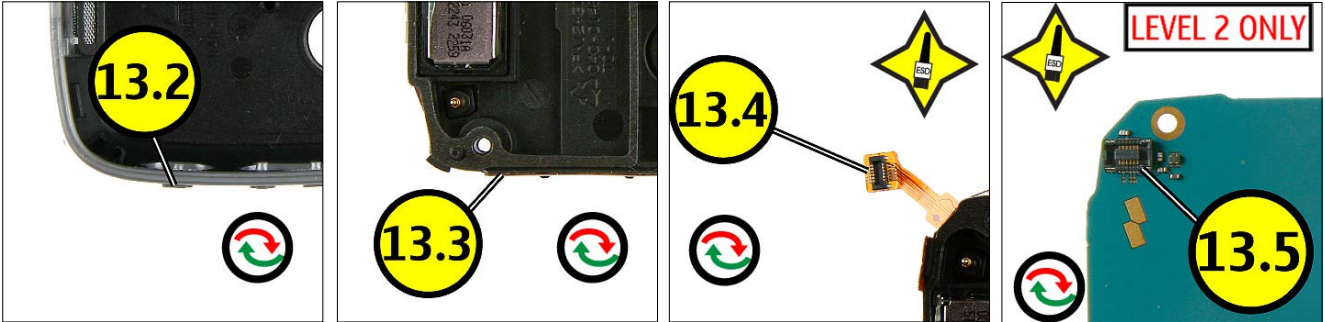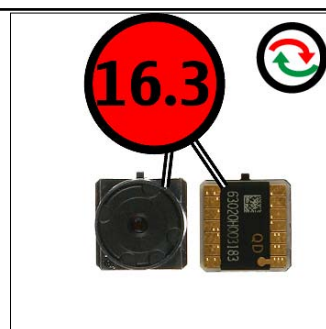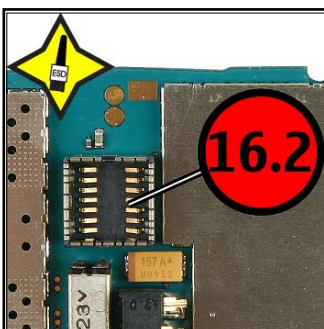
18.GONOGO TEST

To test the Camera, Bluetooth and IRDA functionality refer to the phone User`s

guide.

The User´s Guide is available on **www.nokia.com.**

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

Bluetooth test
You need another Bluetooth device (e.g. 6230) 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.

Infrared test
You need another infrared device (e.g. 6230) to do a GoNoGo test. The infrared windows of the devices must be
directed to each other and should have a distance of approximate 15 cm. Make sure that infrared is activated in
receiver device.

Warning: Do not point the IR (infrared) beam at anyone's eye or allow it to interfere with other IR devices. This
device is a Class 1 Laser product.

Reference unit, Bluetooth /infrared activated

Test unit

Service Manual 5500 d RM-86

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19. BATTERY TEST

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

Please refer to the actual information on NOKIA Online.

http://www.astratec.co.uk/   http://www.cadex.com/