

SERVICE MANUAL

Level 1&2

NOKIA
6300i

RM-337

NOKIA
6301

RM-322

NOKIA
6301b

RM-323

Transceiver characteristics:

Band:

EGSM:

-**RM-322:** Tri-band EDGE phone for EGSM 900/1800/1900MHz

-**RM-323:** Tri-band EDGE phone for EGSM 850/1800/1900MHz

-**RM-337:** Tri-band EDGE phone for EGSM 900/1800/1900MHz

WCDMA: -----

Display:

LCD: 5.08cm (2inch) QVGA display with 16.7M true colors,
resolution 240 x 320 pixel

Camera:

Camera: 2.0 Megapixel, 8x digital zoom

Operating System:

Series 40

Connections:

Wireless: Bluetooth, WLAN

Connector: Mini USB Connector, AV Connector 2.5mm

Memory:

MicroSD™



Transceiver with BL-4c Li-Ion battery pack

Talk time	Standby	Note
up to 3.5h	up to 14.5days	Depends on network parameters and phone settings

Environmental characteristics:

- Lead-free soldered

TABLE OF CONTENTS

	Page
1. CHANGE HISTORY	3
2. COPYRIGHT	3
3. WARNINGS AND CAUTIONS	4
4. ESD PROTECTION	4
5. PCI OVERVIEW	5
6. EXPLODED VIEW	6
7. LEVEL 2 SOLDER COMPONENTS	7
8. SERVICE DEVICES	8
9. SW-UPDATE	9
10. DISASSEMBLY - HINTS	10
11. ASSEMBLY - HINTS	17
12. LEGEND FOR QUICK TROUBLE SHOOTER	20
13. QUICK TROUBLE SHOOTER - POWER ON	21
14. QUICK TROUBLE SHOOTER - CHARGING	22
15. QUICK TROUBLE SHOOTER - NO SERVICE	23
16. QUICK TROUBLE SHOOTER - EARPIECE	24
17. QUICK TROUBLE SHOOTER - IHF SPEAKER	25
18. QUICK TROUBLE SHOOTER - DISPLAY	26
19. QUICK TROUBLE SHOOTER - MICROPHONE	27
20. QUICK TROUBLE SHOOTER - KEYMAT	28
21. QUICK TROUBLE SHOOTER - AV CONNECTOR	29
22. QUICK TROUBLE SHOOTER - VOLUME KEYS	30
23. QUICK TROUBLE SHOOTER - CARD READER	31
24. QUICK TROUBLE SHOOTER - CAMERA	32

1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	11.Oct.2007	Initial draft
Approved	1.0	12.Oct.2007	Approved
Approved	2.0	26.Mrz.2008	Approved

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.

2. COPYRIGHT

Copyright © 2008 Nokia. All rights reserved.

Reproduction, transfer, distribution or storage of part or all of the contents in this document in any form without the prior written permission of Nokia is prohibited.

Nokia, Nokia Connecting People, and Nokia X and Y are trademarks or registered trademarks of Nokia Corporation. Other product and company names mentioned herein may be trademarks or tradenames of their respective owners.

Nokia operates a policy of continuous development. Nokia reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Under no circumstances shall Nokia be responsible for any loss of data or income or any special, incidental, consequential or indirect damages howsoever caused.

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy, reliability or contents of this document. Nokia reserves the right to revise this document or withdraw it at any time without prior notice. The availability of particular products may vary by region.

IMPORTANT

This document is intended for use by qualified service personnel only.

3. WARNINGS AND CAUTIONS

Warnings and Cautions

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

Warnings:

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

Cautions:

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly.

4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.

Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

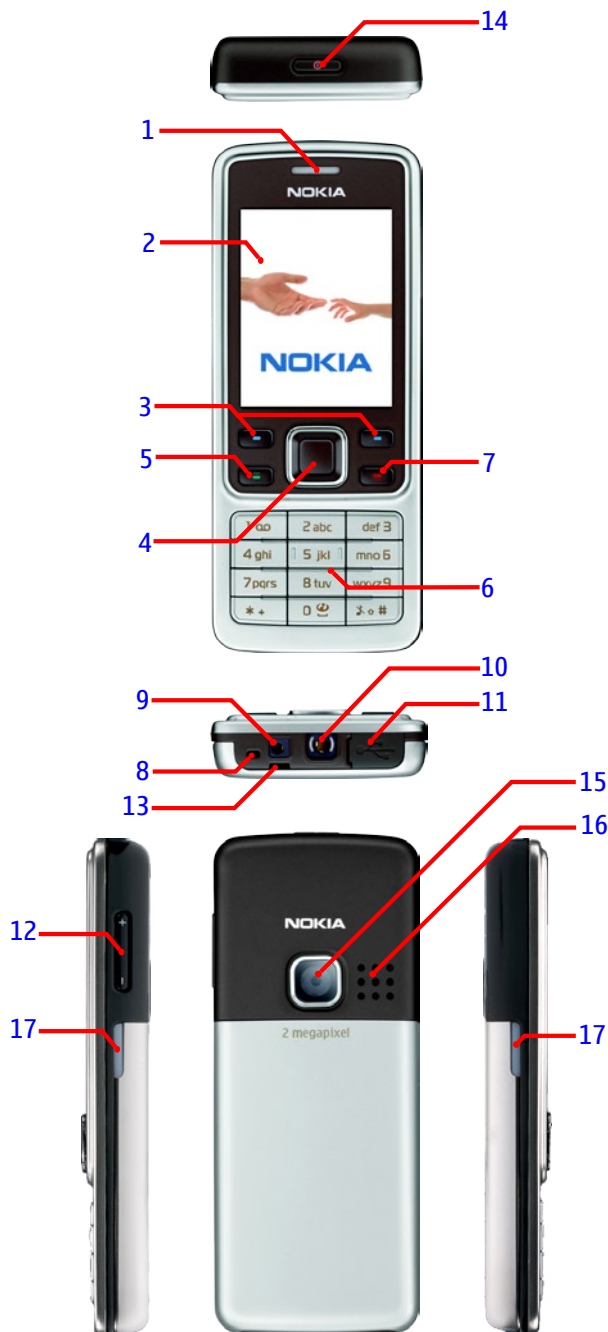
ESD protected spare part packages MUST NOT be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.



5. PCI OVERVIEW

6301 RM-322 / 6301b RM-323 / 6300i RM-337 Product Controls & Interfaces



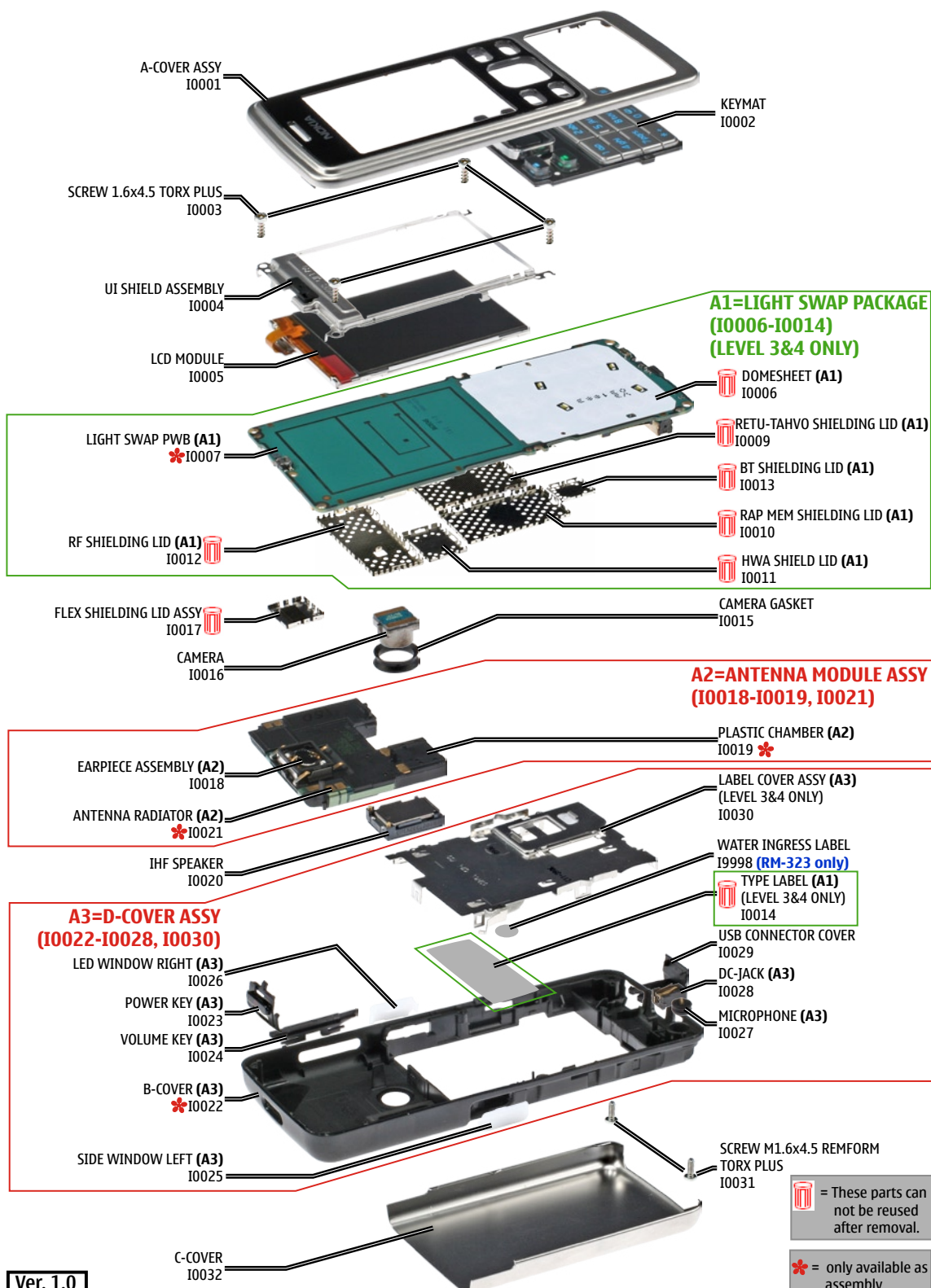
- 1 — Earpiece
- 2 — Display
- 3 — Left and right selection keys
- 4 — Navi™ key. 4-way scroll key and middle selection key.
- 5 — Call key
- 6 — Keypad
- 7 — End key
- 8 — Microphone
- 9 — Charger connector
- 10 — Nokia AV 2.5 mm connector
- 11 — Mini USB cable connector
- 12 — Volume keys
- 13 — Strap holder
- 14 — Power key
- 15 — Camera lens
- 16 — Loudspeaker
- 17 — Reminder LED's

Ver. 1.0

6. EXPLODED VIEW

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

6301 RM-322 / 6301b RM-323 / 6300i RM-337 EXPLODED VIEW

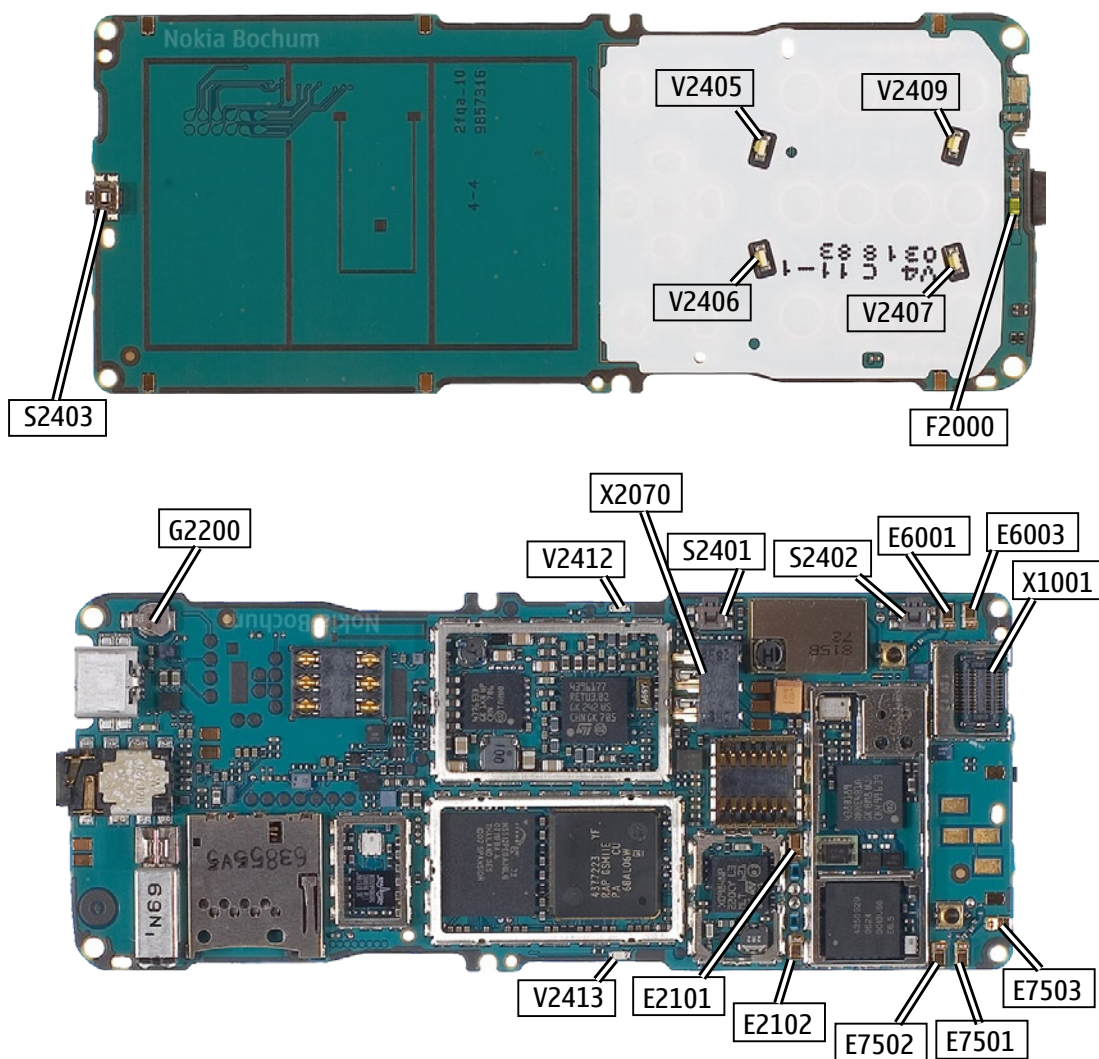


Ver. 1.0

7. LEVEL 2 SOLDER COMPONENTS

N6301 RM-322/ 6301b RM-323 / 6300i RM-337
Components overview

Solder components only for LEVEL 2



Ver. 1.0

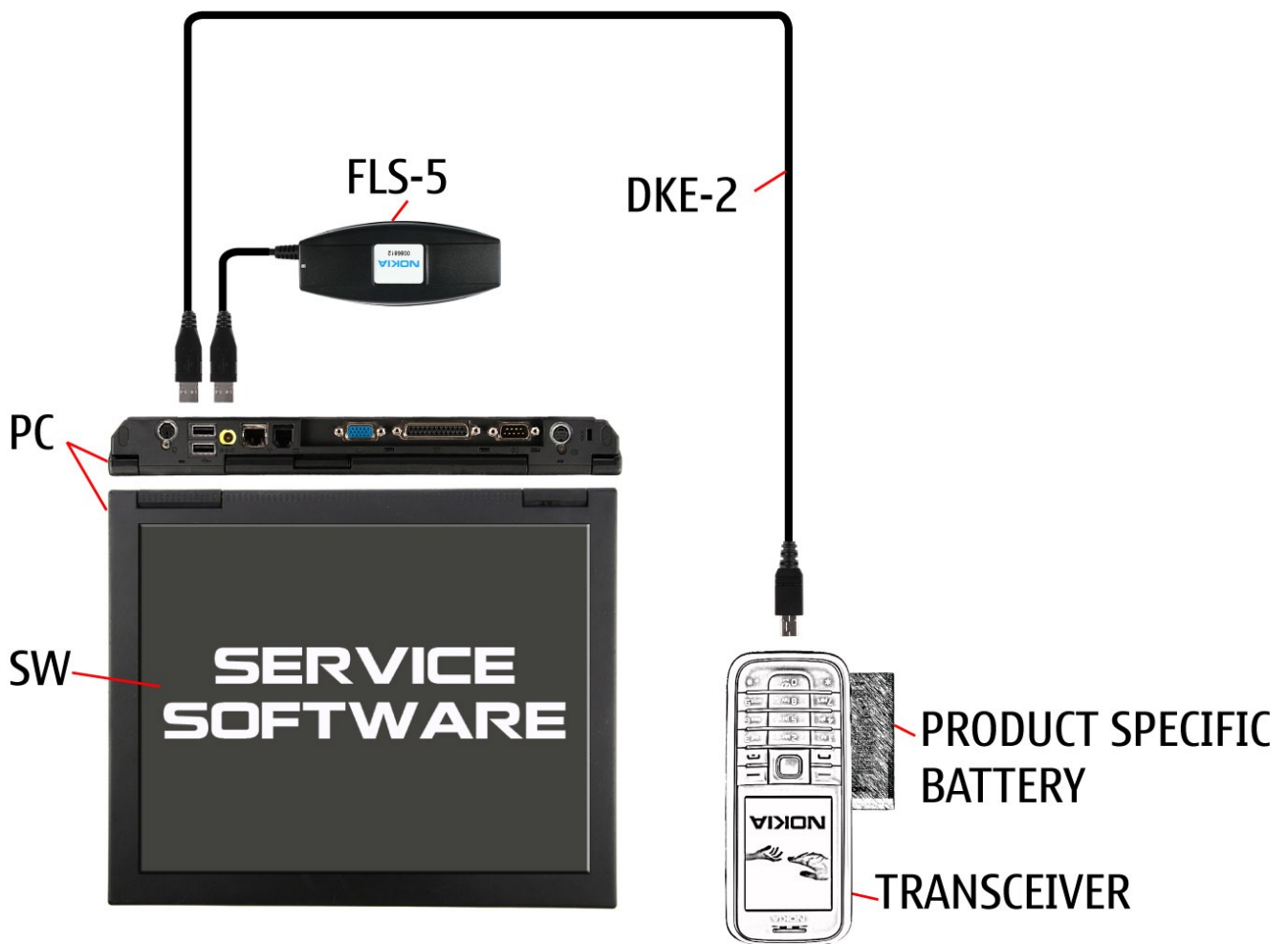
8. SERVICE DEVICES

 FLS-5 FLS-5 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-5.	 Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.
 DKE-2 Service Cable to connect the PC with the mini USB connector.	 SS-45 Camera removal tool. One side is for disassembly, the other side for assembly.	 RJ-148 Soldering Jig
 RJ-230 Universal Soldering Jig. Order code: 0780264	 BL-4C Internal Battery BL-4c Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.	 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. Order code: 0772040

9. SW-UPDATE

Flash Concept – (Point of Sales)

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



10. DISASSEMBLY - HINTS



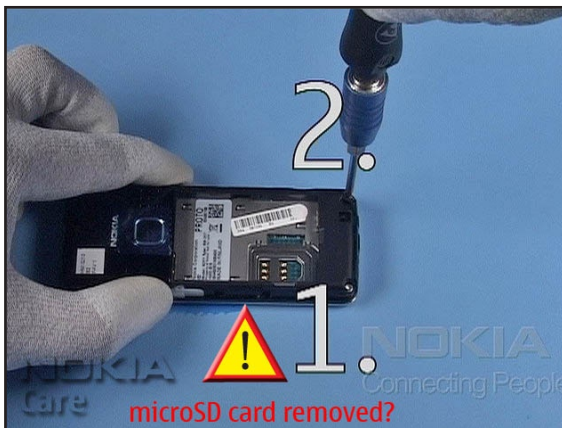
1. Needed tools: SRT-6, metal tweezers, SS-93, SS-45 camera removal tool, a straight bladed screwdriver, dental pick, bit holder with a torx plus size 6 bit, a torque driver, DC plug



2. Always cover the windows with a protective film.



3. Shift out the C-COVER.



4. **Note! Before disassembling the phone, make sure that the micro SD card has been removed.** Remove both screws in the order shown.



5. Remove the screws.



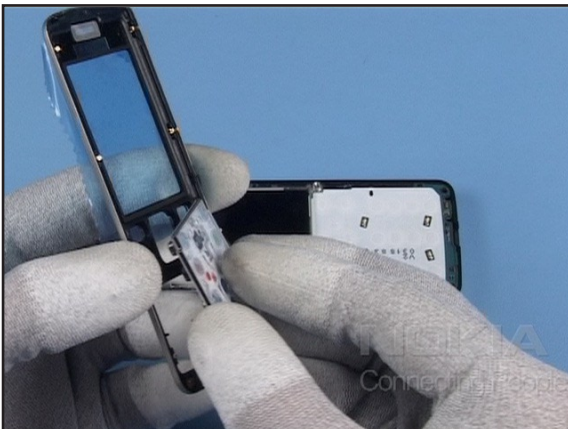
6. Unlock the plastic clips of the A-COVER with the SRT-6...



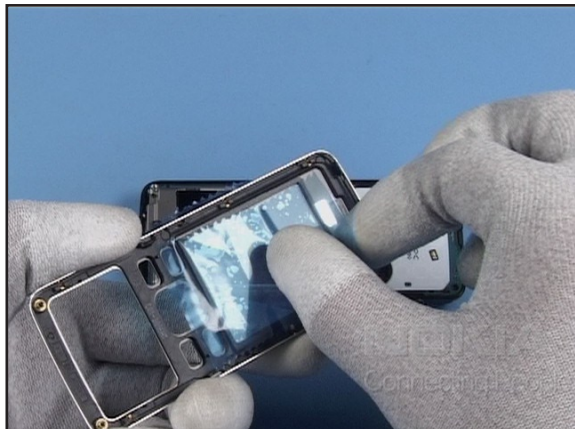
7. ...on both sides.



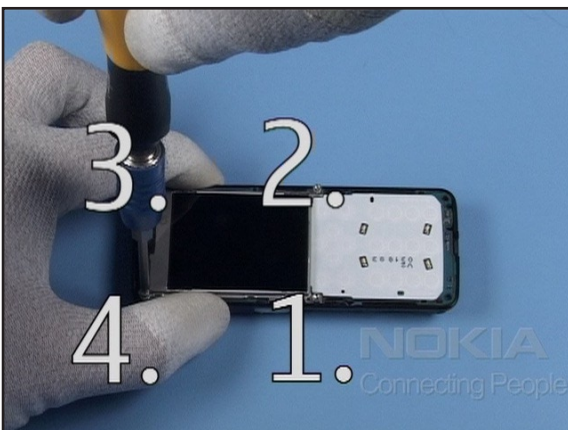
8. Lift up the cover now.



9. Remove the KEYMAT



10. Protect the window from inner side.



11. Unscrew the four screws in the order shown.



12. Remove the screws. Separate these screws, do not mismatch them with the others.

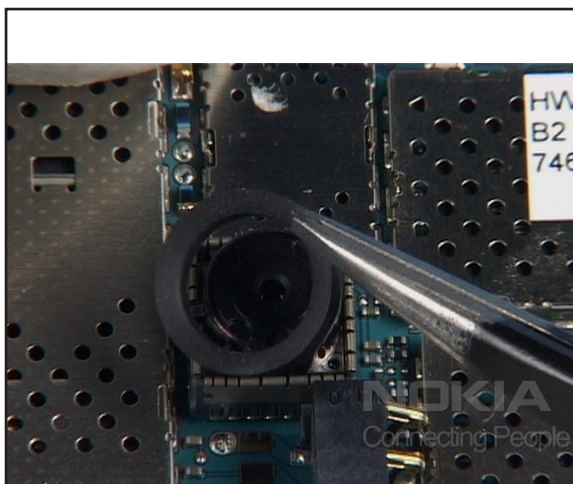


13. Cover the display with a film.

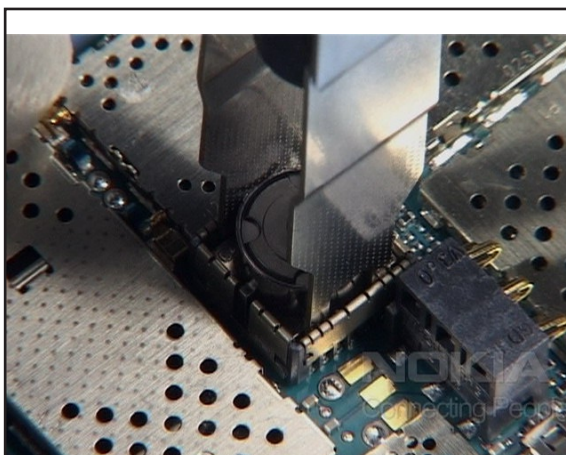


microSD card removed?

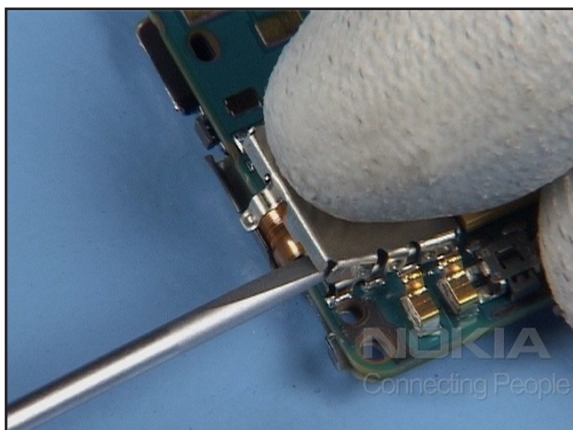
14. **Note! Before removing the B-COVER, make sure that the micro SD card has been removed.** Turn the assembly, lift up the B-COVER.



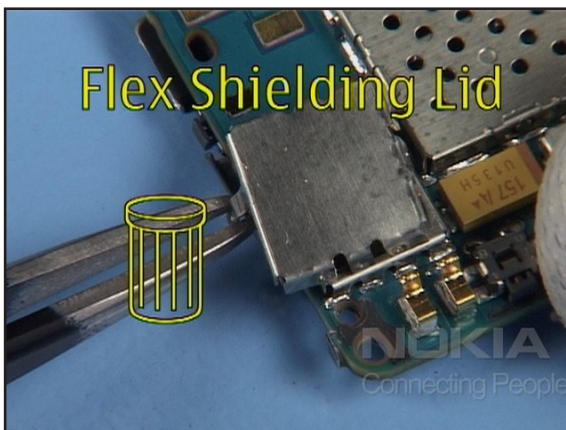
15. Remove the CAMERA GASKET.



16. Unlock and remove the CAMERA with the SS-45.



17. Release the FLEX SHIELDING LID and discard it.



18. Do not use it again.



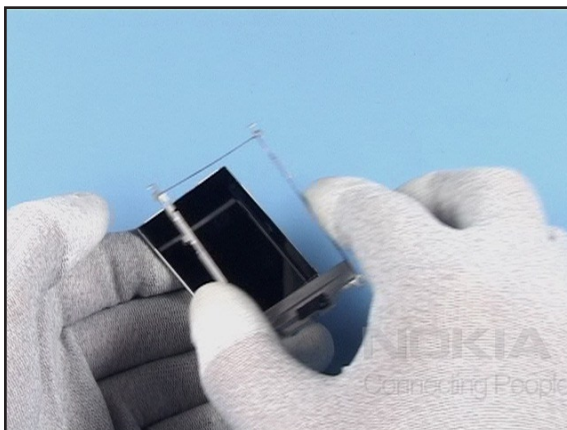
19. Unlock both metal clips of the UI SHIELD.



20. Carefully unlock the flex connector of the LCD MODULE.



21. Peel up the protective film.



22. Now separate the parts as shown.



23. Cover the display with a film again.



24. Remove the MICROPHONE and the DC JACK.



25. Carefully lever out the EARPIECE ASSEMBLY.



26. Carefully unlock the clip securing the PLASTIC CHAMBER.



27. Now remove it.



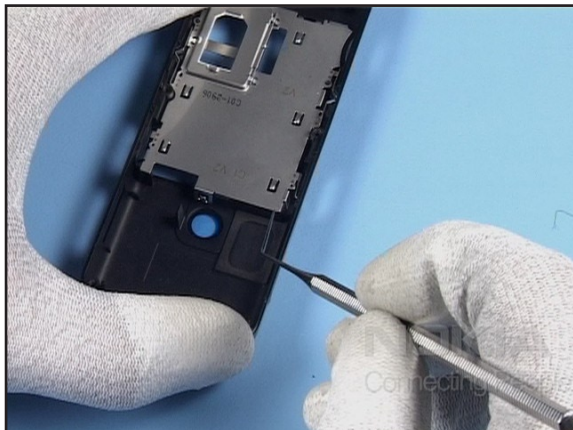
28. The IHF SPEAKER is not glued and can be removed easily.



29. Carefully release the clips of the LED- and the SIDE WINDOW.



30. The POWER- and the VOLUME KEY can be removed easily.



31. Release the shown metal snaps of the LABEL COVER ASSY with the dental pick.



32. Turn the assembly and open the SIM lid.



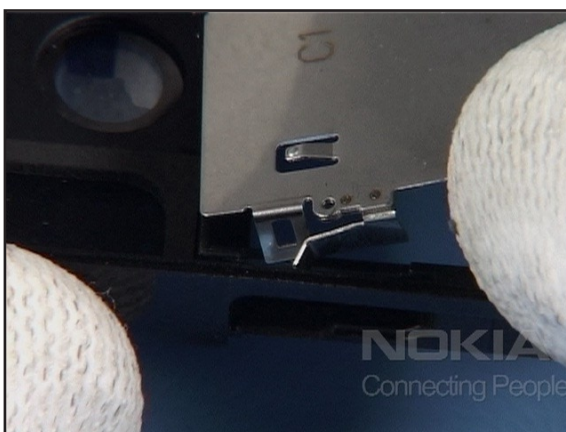
33. Now release these two latches.



34. Use the dental tool to push out the last clips.



35. Release the LABEL COVER ASSEMBLY, beginning from the bottom side.



36. Mind these clips.

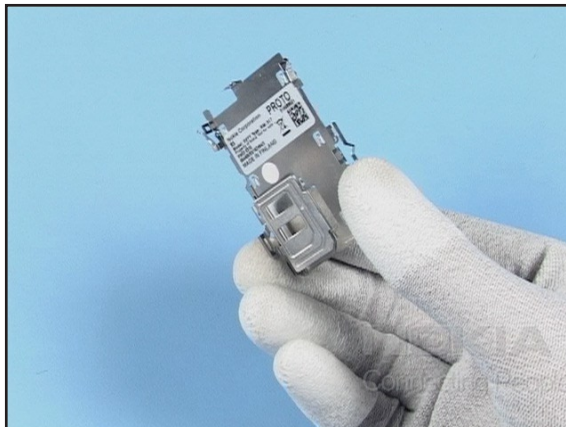


37. The disassembly procedure is now completed.

11. ASSEMBLY - HINTS



1. Assembly hints:



2. Keep in mind that the LABEL COVER ASSEMBLY with the TYPE LABEL must always be assembled together with the corresponding engine module.



3. Insert the LABEL COVER ASSEMBLY into the B-COVER as shown.



4. Carefully push all latches into their places.



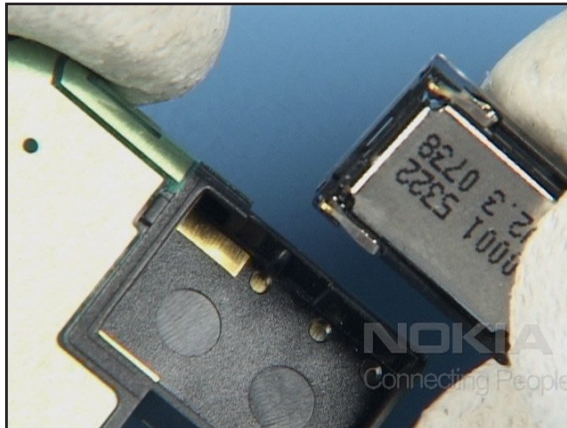
5. Close the SIM lid.



6. Check the correct positioning of all these latches.



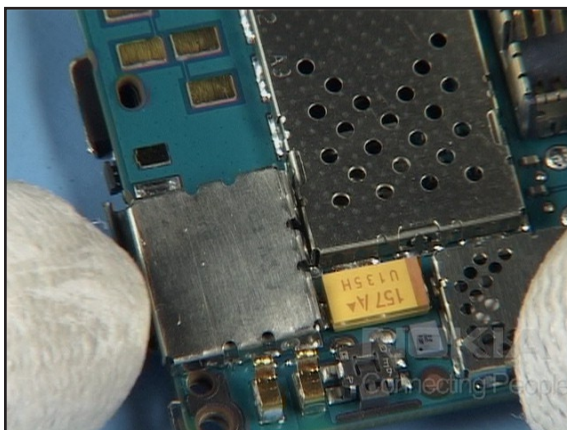
7. Insert the LED- and the SIDE- WINDOW. Note that they can't be interchanged.



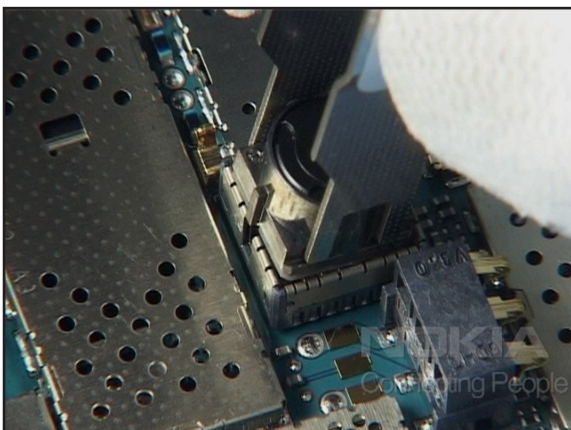
8. Note that the IHF SPEAKER contacts belongs to their pads.



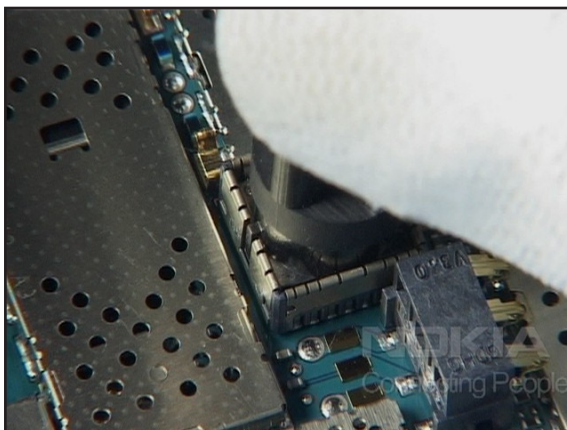
9. Secure all clips of the PLASTIC CHAMBER before going on.



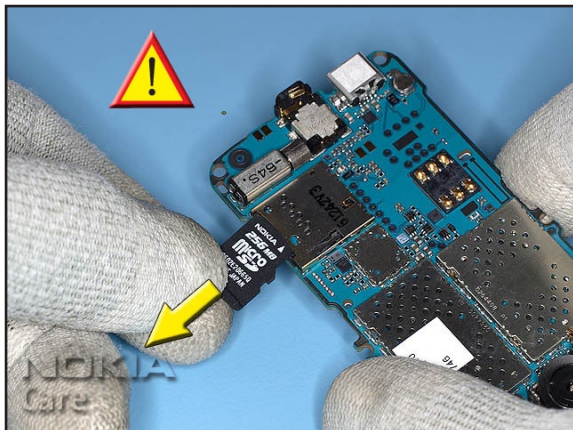
10. Always use a new FLEX SHIELDING LID.



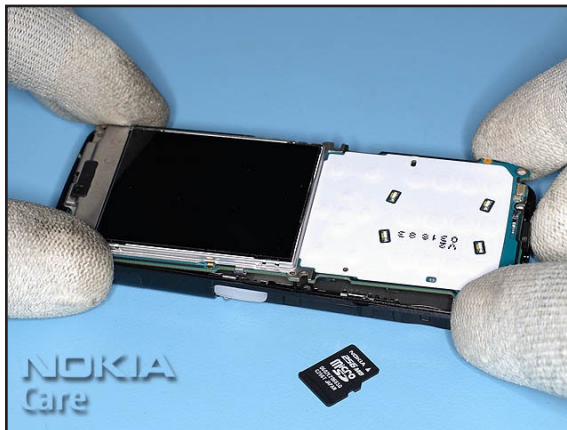
11. Mind the guiding tab while replacing the CAMERA.



12. Push it into its place.



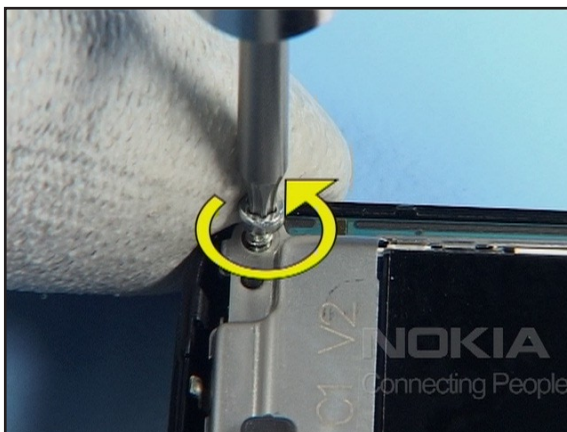
13. Make sure that the microSD card is not inserted, otherwise remove them.



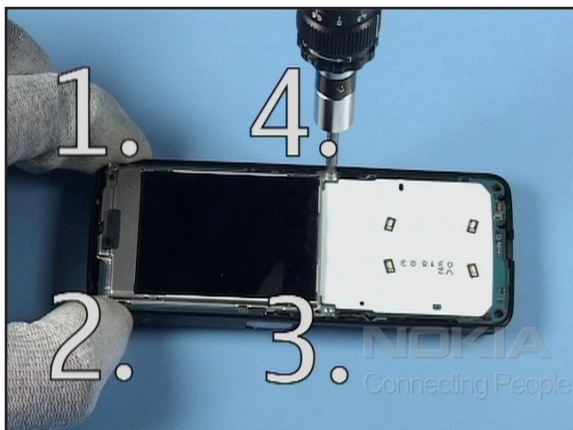
14. Place the assembly onto the B-COVER.



15. Set the correct torque.



16. Turn the screws to the left first to engage the threads, then tighten them slightly.

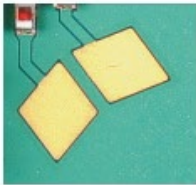
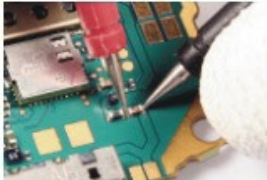
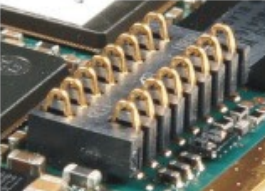
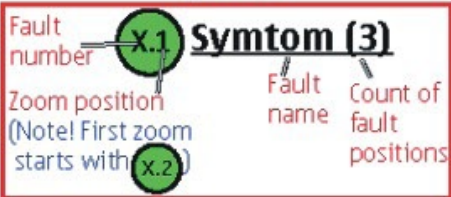


17. Apply the correct torque to all screws in the order shown.

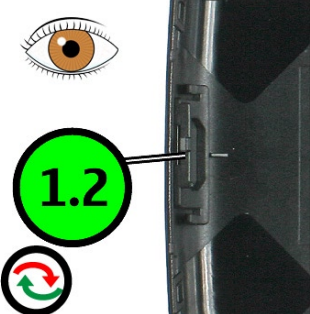


18. Tighten both screws of the C-COVER in the order shown, too.

12. LEGEND FOR QUICK TROUBLE SHOOTER

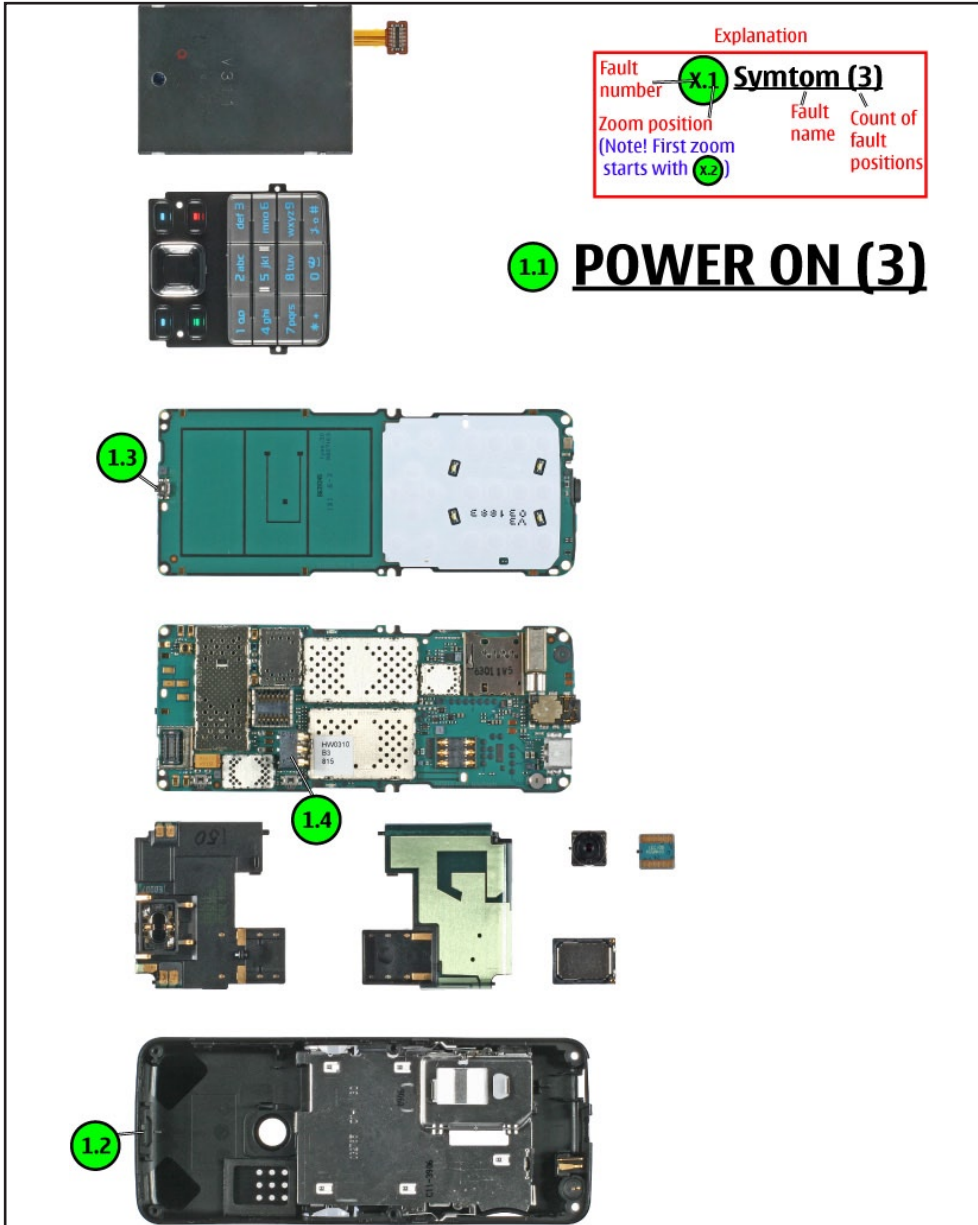
Legend for Quick Trouble Shooter	
This legend is valid for all parts of the Quick Trouble Shooter	
Follow the steps until the problem is solved. If this doesn't help, you are not authorized to go forward.	
	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components can be replaced. If additionally " =CHANGE ASSY " appears, then change the whole assembly (e.g. A4=D-COVER ASSEMBLY).
	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 

13. QUICK TROUBLE SHOOTER - POWER ON



1.2





Explanation

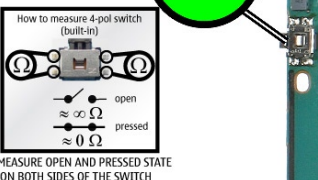
Fault number	Symptom (3)	Fault name	Count of fault positions
X.1			

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

1.1 POWER ON (3)

LEVEL 2 ONLY

1.3



How to measure 4-pin switch (built-in)

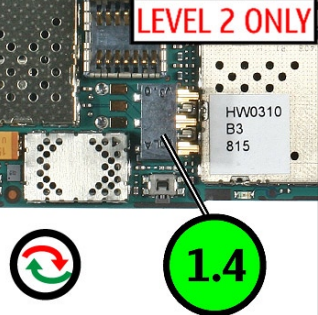
open $\approx \infty \Omega$

pressed $\approx 0 \Omega$

MEASURE OPEN AND PRESSED STATE ON BOTH SIDES OF THE SWITCH

LEVEL 2 ONLY

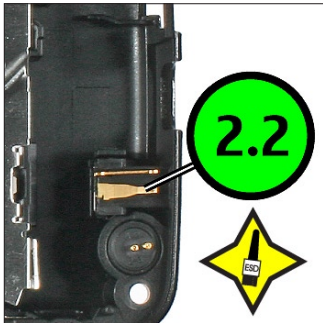
1.4



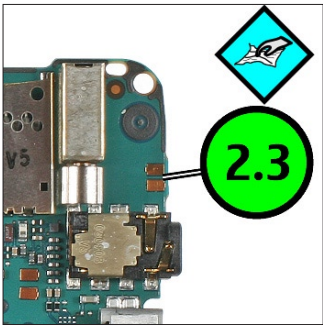
HW0310 B3 815



14. QUICK TROUBLE SHOOTER - CHARGING



2.2

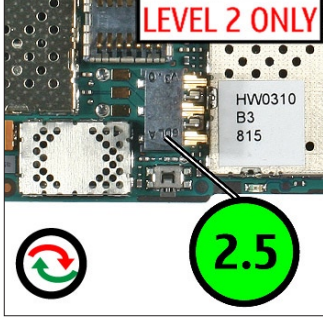


2.3



LEVEL 2 ONLY

2.4

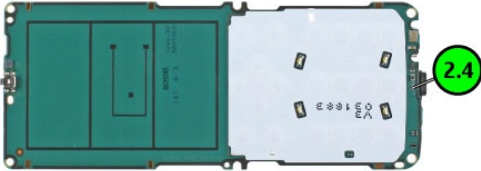


LEVEL 2 ONLY

2.5



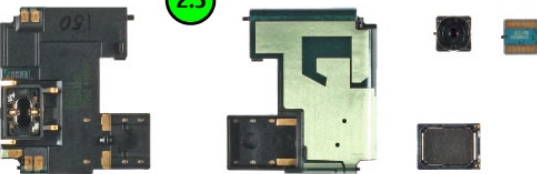
2.1



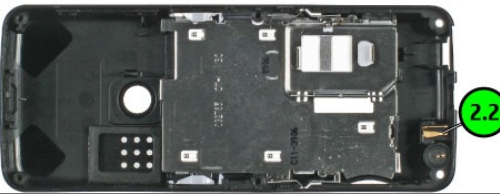
2.4



2.3



2.5



2.2

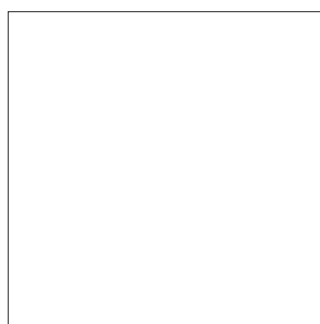
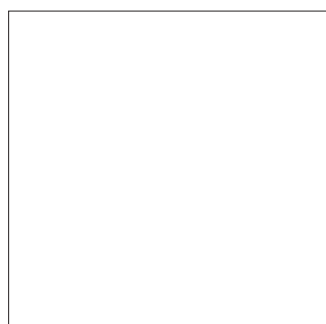
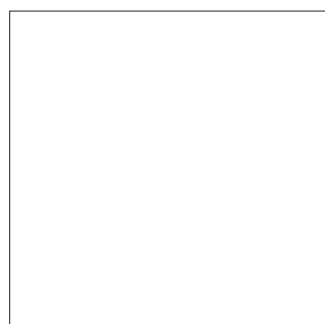
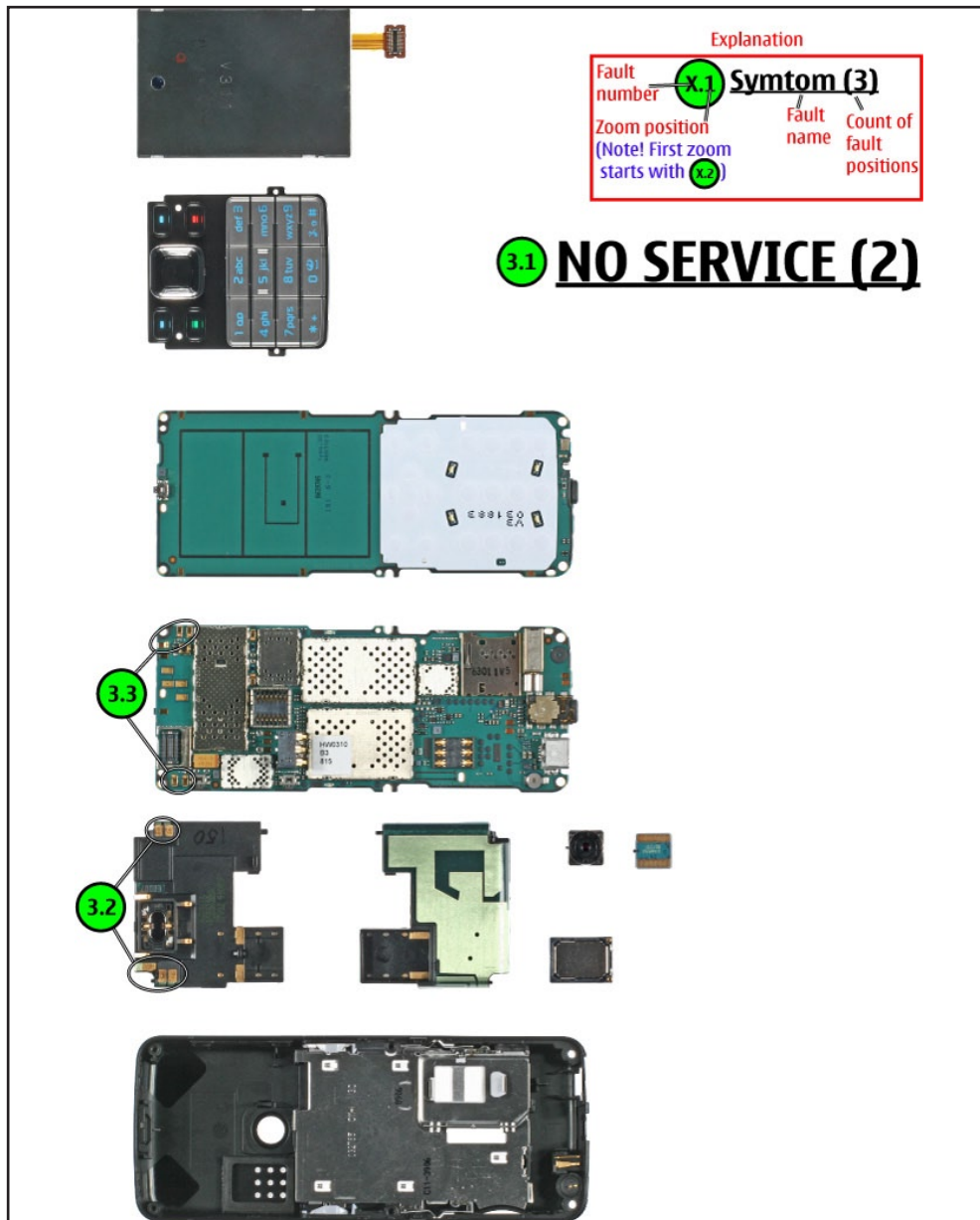
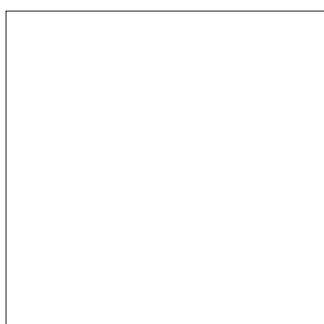
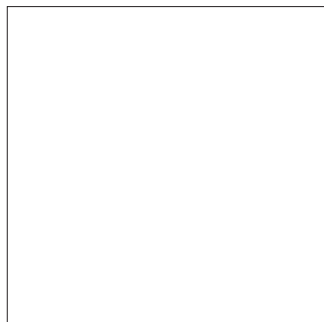
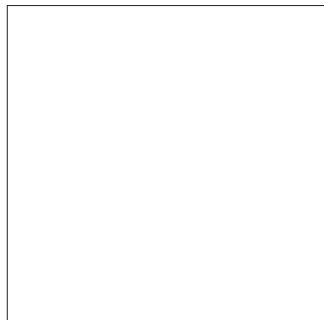
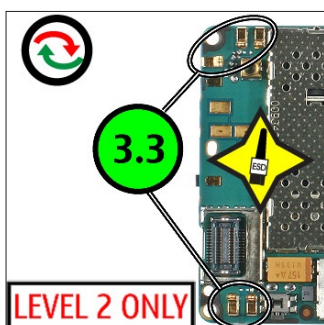
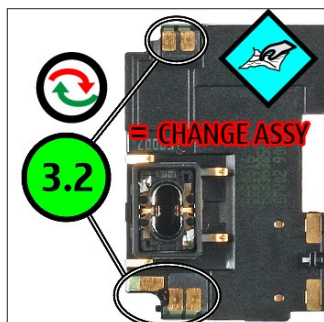
Explanation

Fault number	Symptom (3)	Fault name	Count of fault positions
X.1			

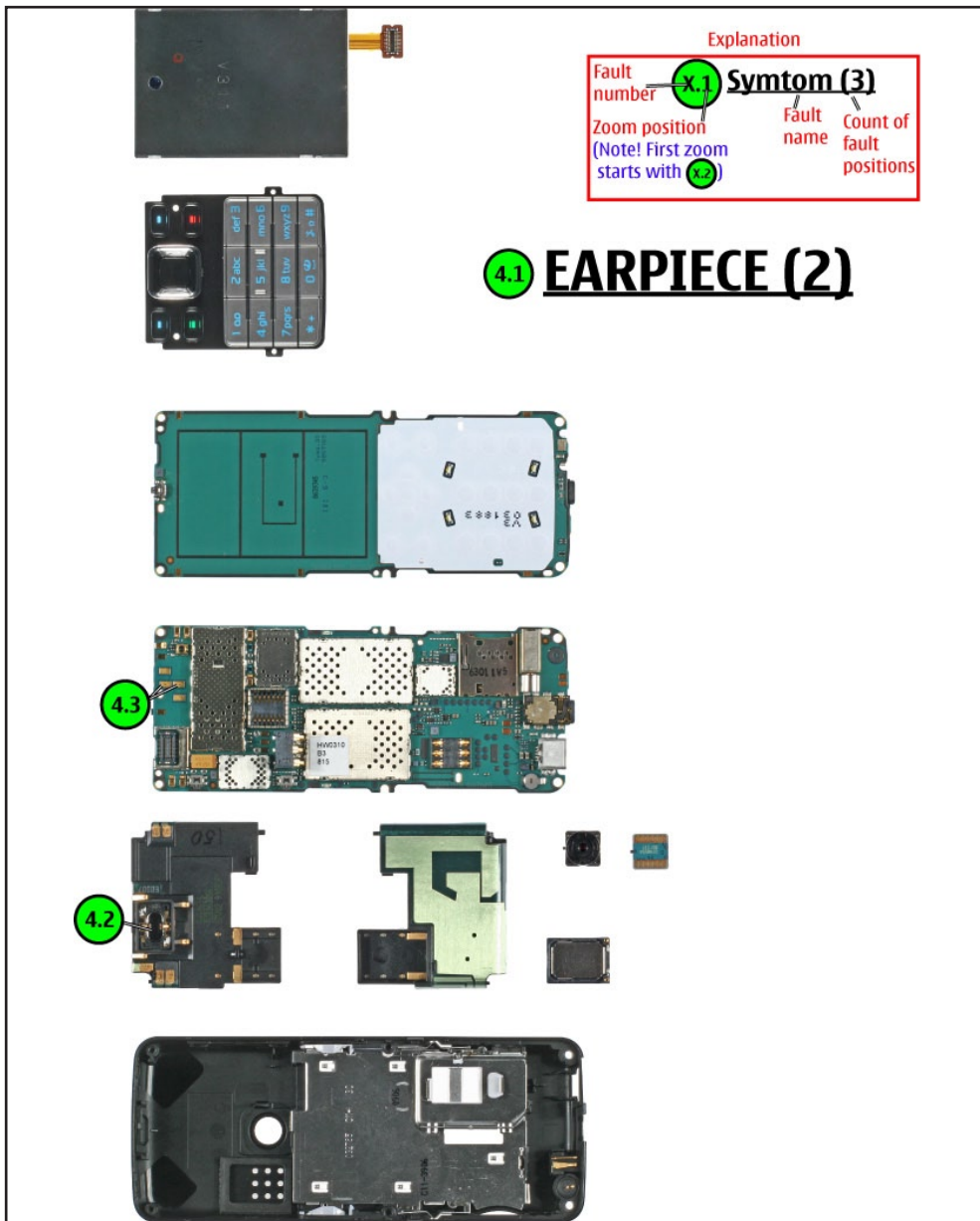
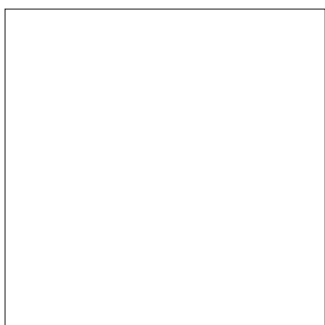
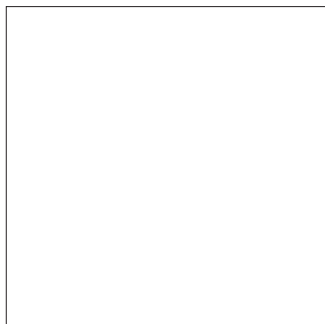
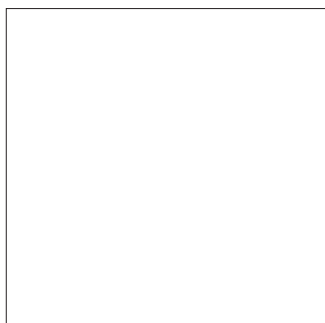
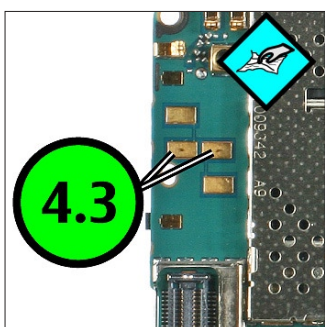
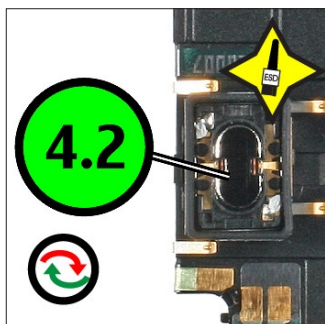
Zoom position (Note! First zoom starts with X.2)

2.1 CHARGING (4)

15. QUICK TROUBLE SHOOTER - NO SERVICE



16. QUICK TROUBLE SHOOTER - EARPIECE



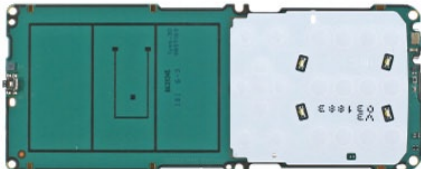
17. QUICK TROUBLE SHOOTER - IHF SPEAKER

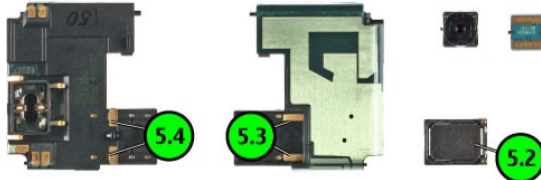
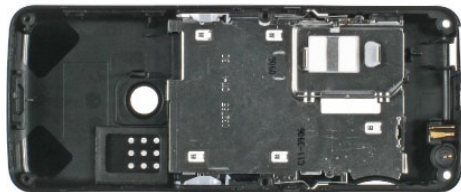



5.2







Explanation

Fault number	Symptom (3)	Fault name	Count of fault positions
X.1			

Zoom position (Note! First zoom starts with X2)

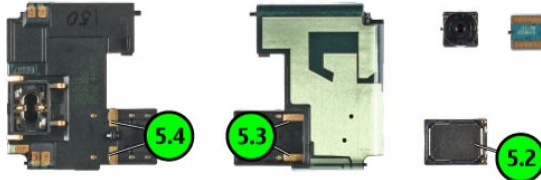
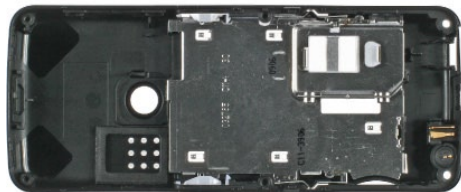
5.1 IHF SPEAKER (4)



5.3



= CHANGE ASSY

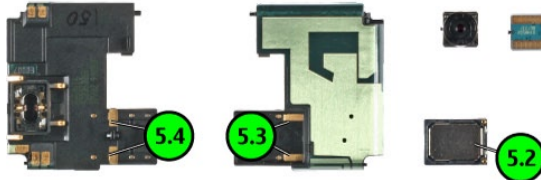
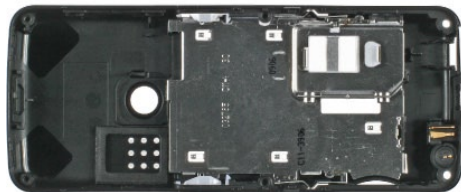
5.5



5.4



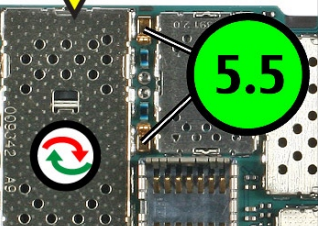
= CHANGE ASSY

5.5

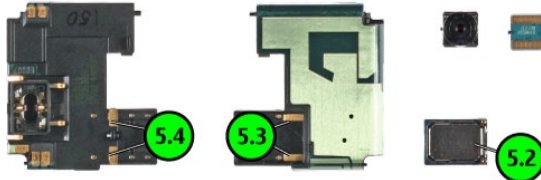
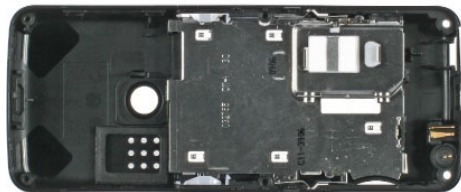


LEVEL 2 ONLY



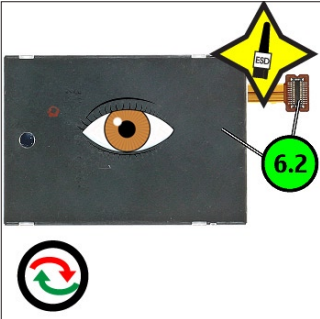
5.5



5.5

18. QUICK TROUBLE SHOOTER - DISPLAY



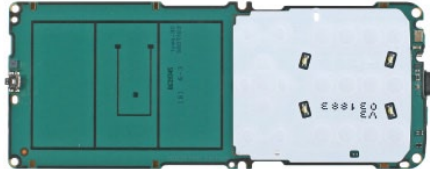

LEVEL 2 ONLY

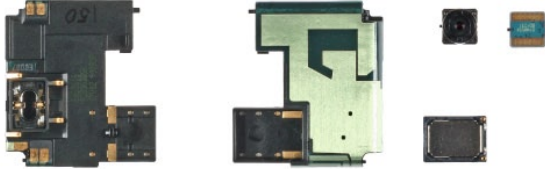
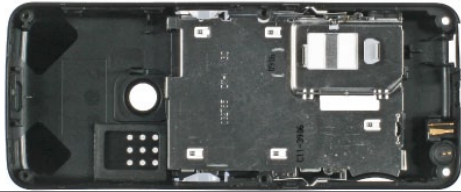


Explanation

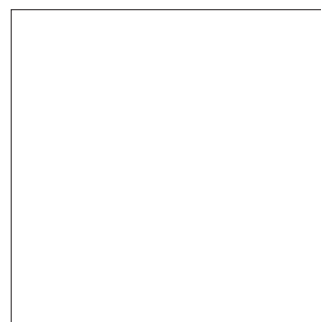
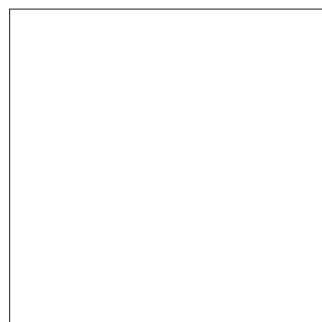
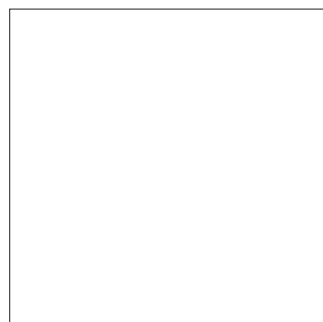
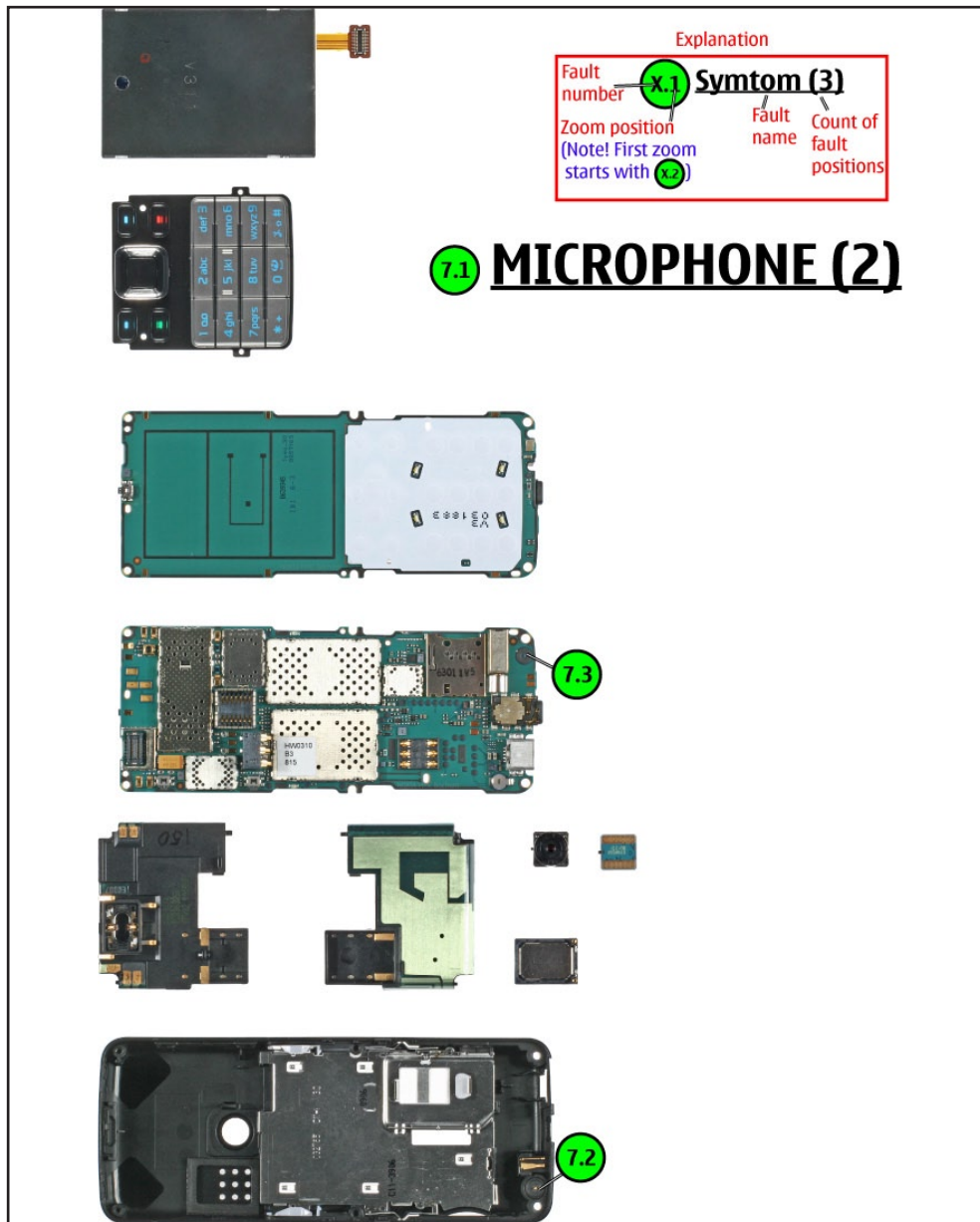
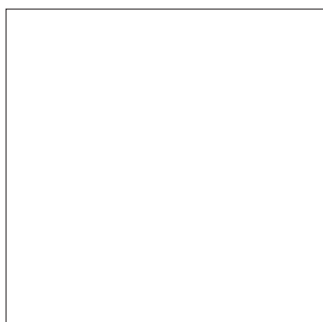
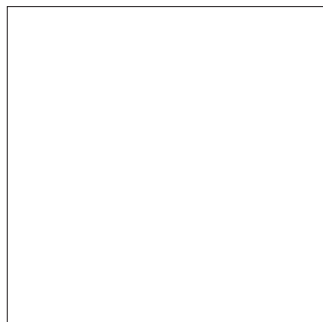
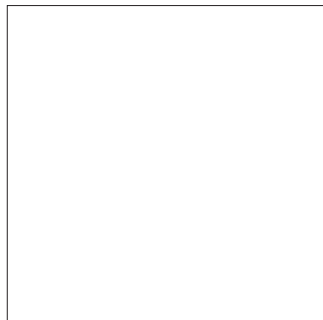
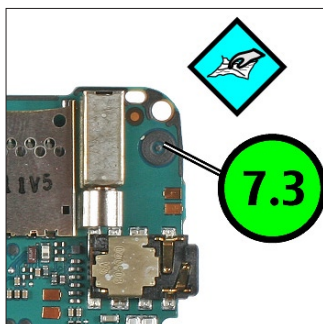
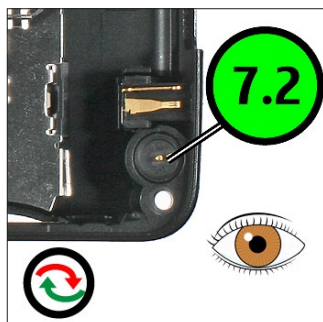
Fault number	X.1	Symptom (3)	Fault name	Count of fault positions
Zoom position (Note! First zoom starts with X2)				

6.1 DISPLAY (2)

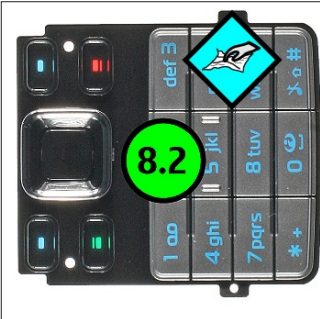
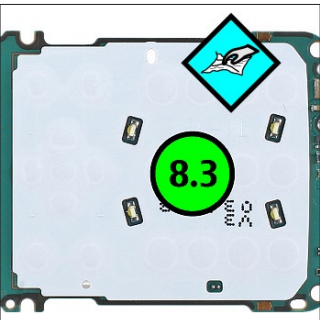



19. QUICK TROUBLE SHOOTER - MICROPHONE



20. QUICK TROUBLE SHOOTER - KEYMAT

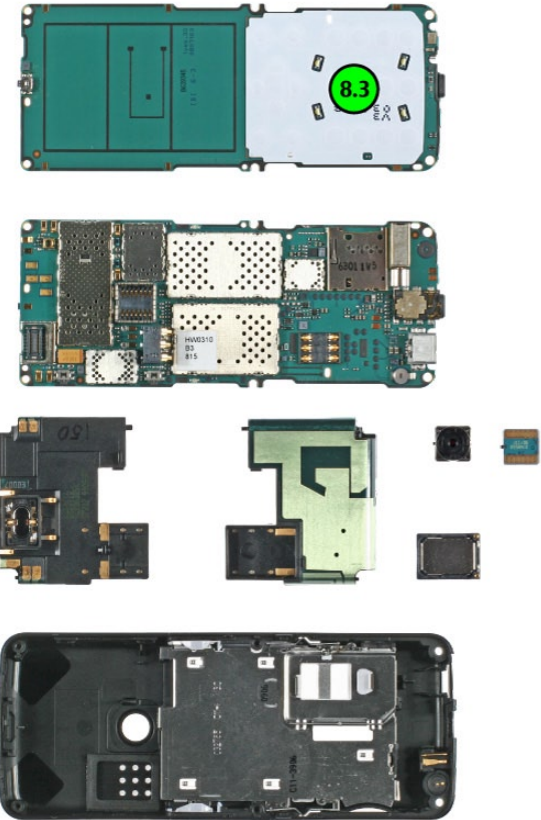





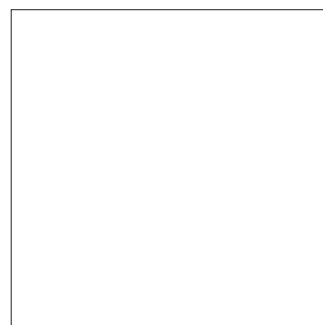
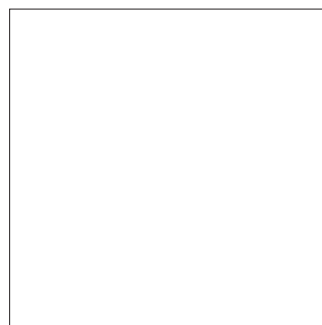
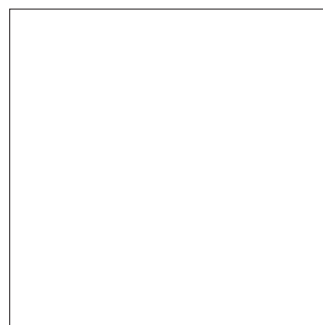
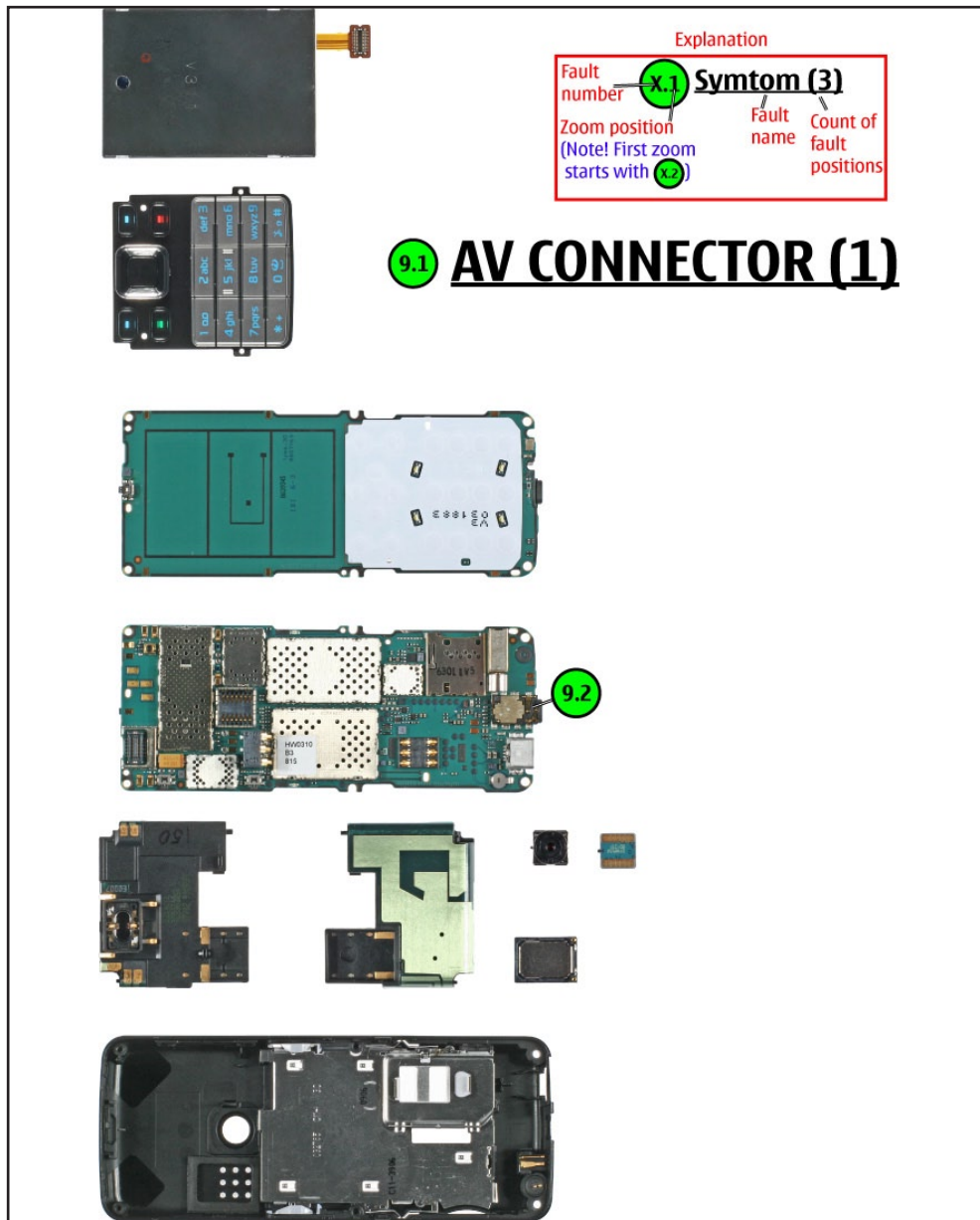
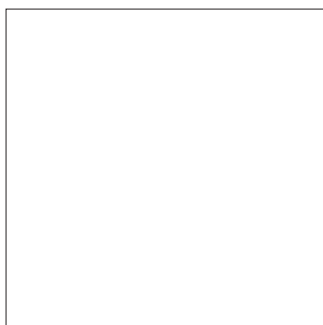
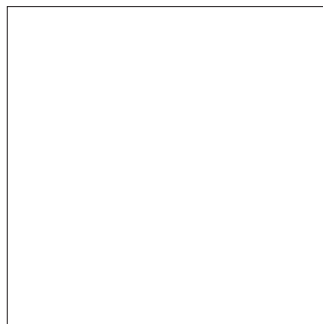
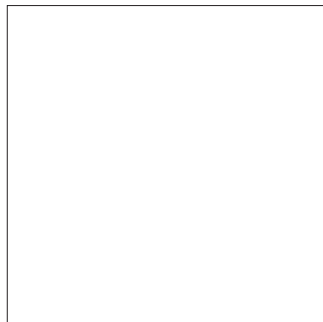
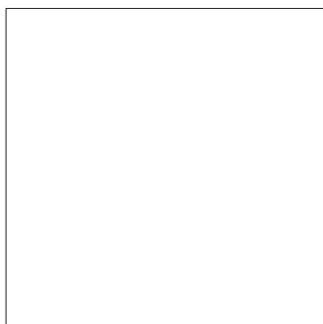
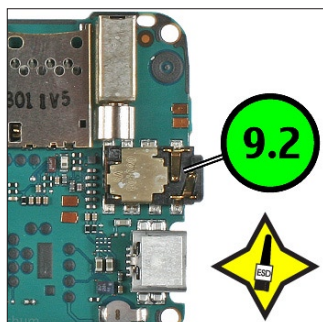
Explanation

Fault number Zoom position (Note! First zoom starts with (x2))	Symptom (3) Fault name Count of fault positions
---	---

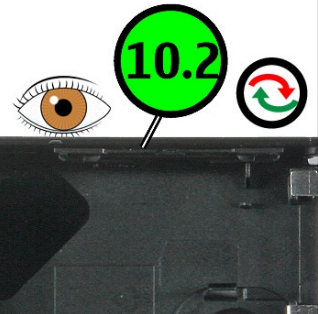
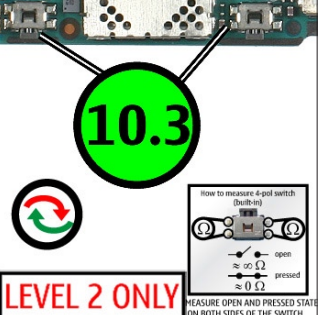
8.1 KEYMAT (2)



21. QUICK TROUBLE SHOOTER - AV CONNECTOR



22. QUICK TROUBLE SHOOTER - VOLUME KEYS

10.2

10.3

LEVEL 2 ONLY

How to measure 4-pole switch (Built-in)

open
≈ 50 Ω
pressed
≈ 0 Ω

MEASURE OPEN AND PRESSED STATE ON BOTH SIDES OF THE SWITCH



Explanation

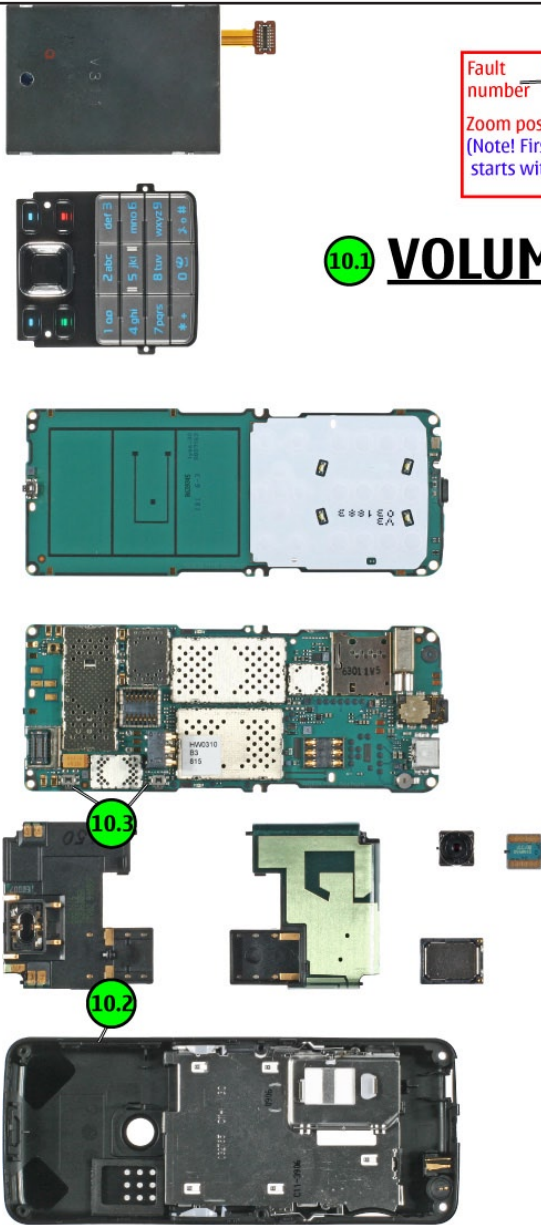
Fault number **Symptom (3)**

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

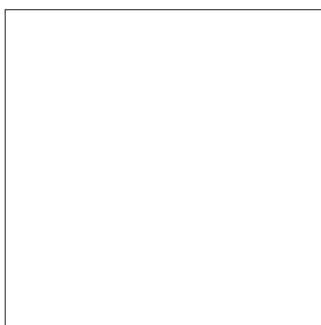
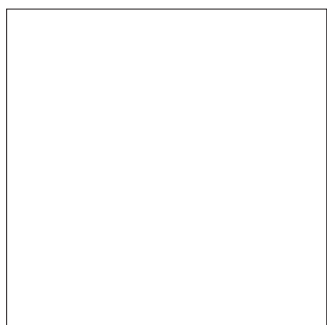
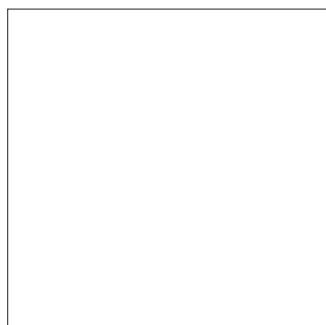
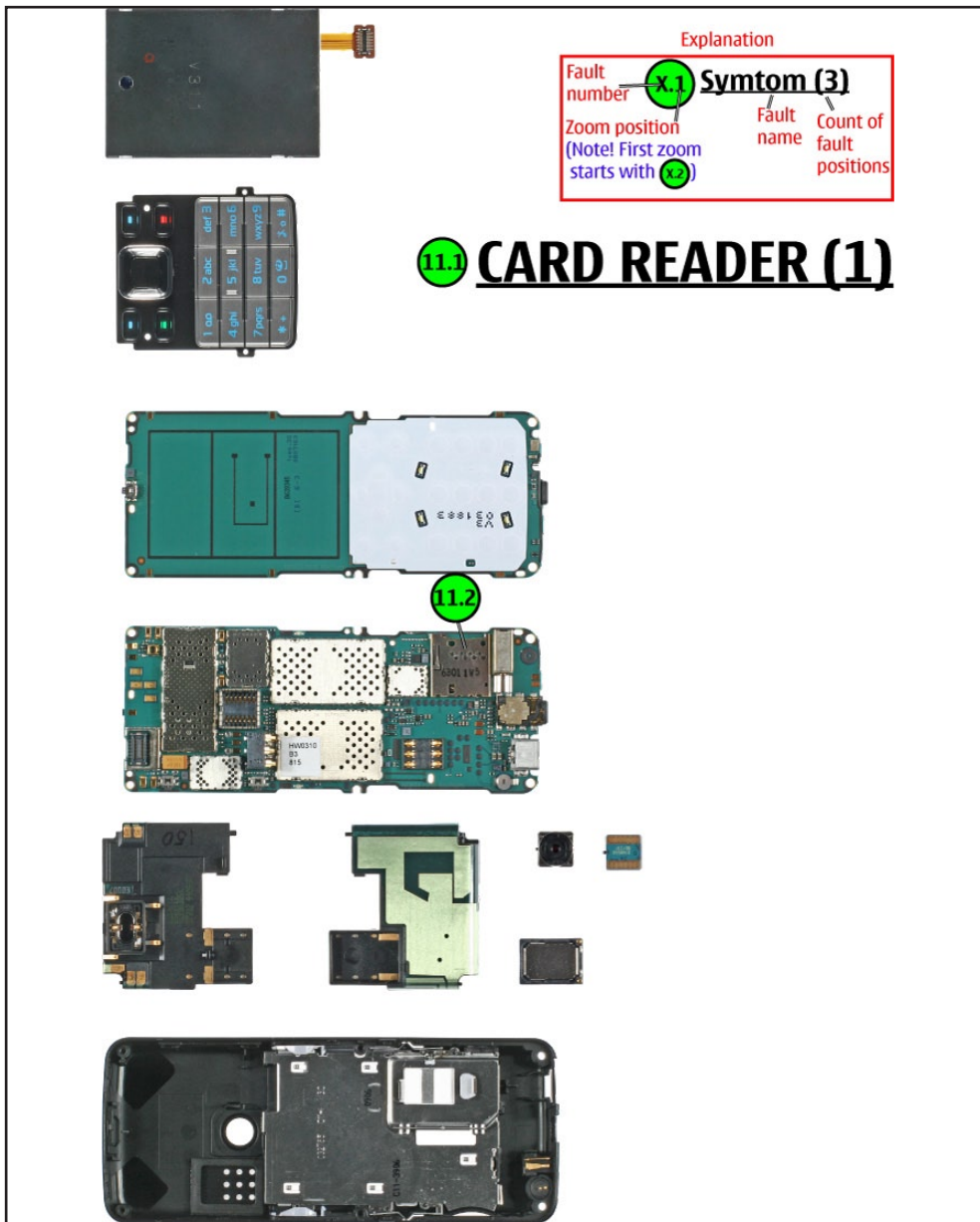
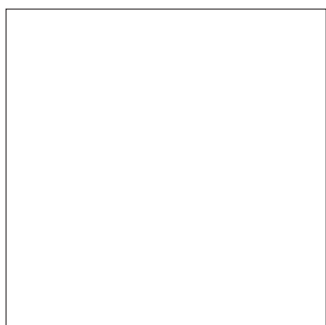
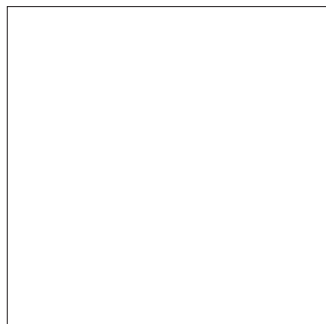
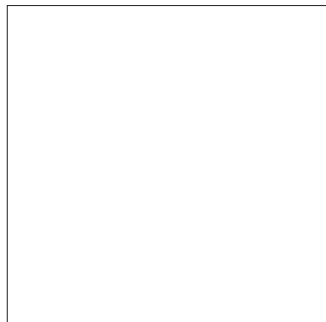
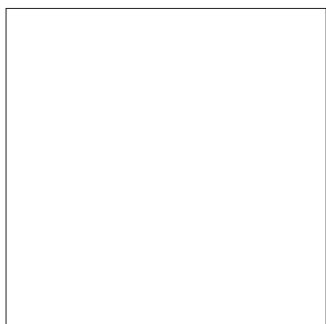
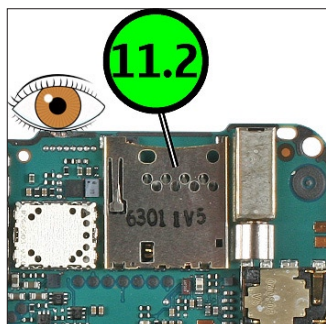
Fault name

Count of fault positions

10.1 VOLUME KEYS (2)



23. QUICK TROUBLE SHOOTER - CARD READER



24. QUICK TROUBLE SHOOTER - CAMERA

