

SERVICE MANUAL

Level 1&2

NOKIA
N95

RM-159

RM-245

Transceiver characteristics:



Band: Dual Mode Quad-band phone for EGSM850/900 GSM1800/1900MHz and WCDMA band I

Camera:

- **Main:** 5Mpix with autofocus and Flash LED
- **Sub:** CIF for video calls

Display: TFT full transmissive, 24bit QVGA 6.604cm (2.6")
resolution 240x360 pixel

Operating System: Series 60

Bluetooth

WLAN

GPS

FM radio

Connector: mini USB Connector and AV Connector

Transceiver with BL-5F Li-Ion battery pack

Talk time	Standby	Note
up to 160/210h	up to 9days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

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CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	11.Dec.2006	Initial draft
Approved	1.0	08.Feb.2007	Approval

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.

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.

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



Service Manuals
Service Bulletins
Software
Repair Information

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

Former NOKIA CarePoint content, such as	<ul style="list-style-type: none"> • Online Troubleshooting • Product information • Videos – Disassembly/Assembly 	can be found on NOKIA Online
<p>NOKIA Online</p> <p>↓</p> <p>Care Services</p> <p>↓</p> <p>Training</p> <p>↓</p> <p>Phone Models</p>		

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

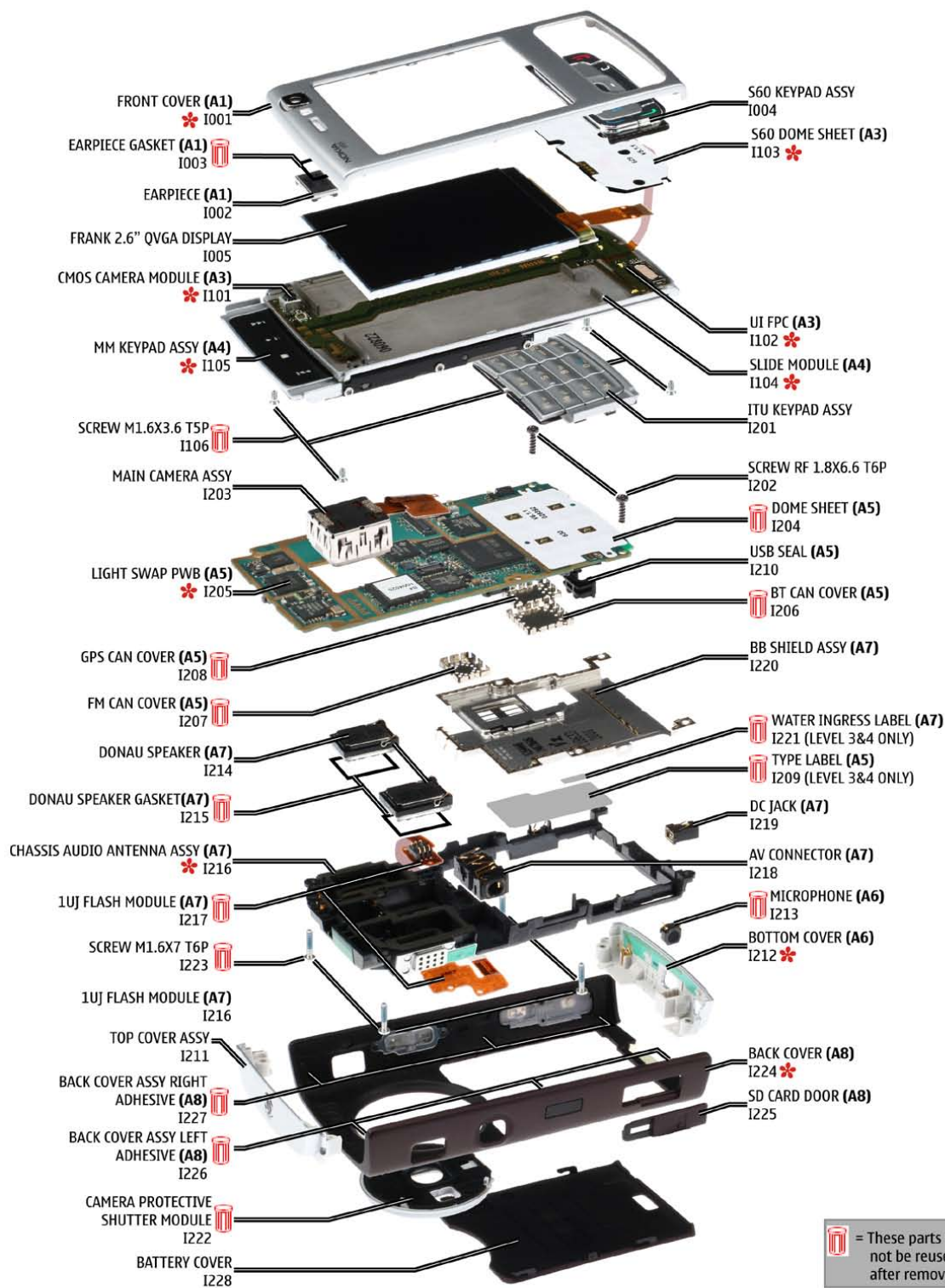
Overview & Guides	Disassembly & Assembly	Troubleshooting
Basic information about the phone, features and technologies	Instructions how to disassemble and assemble the phone	Step-by-step instructions on how to locate and repair the most common problems with the phone

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.

4. EXPLODED VIEW

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

N95 RM-159/-245 Exploded view



Ver. 4.0

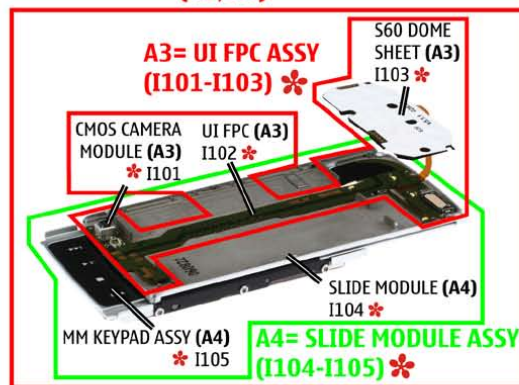
5. SPARE PARTS OVERVIEW

N95 RM-159/-245 Spare Parts overview

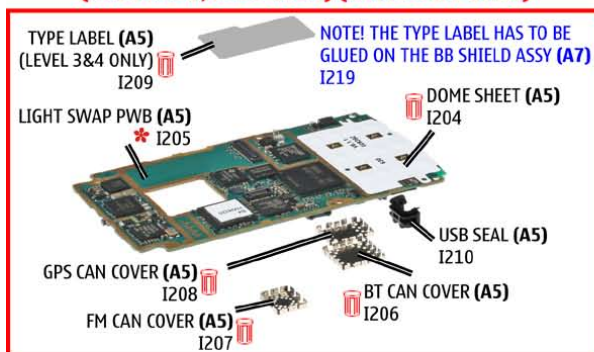
A1= FRONT COVER ASSY (I001-I003)



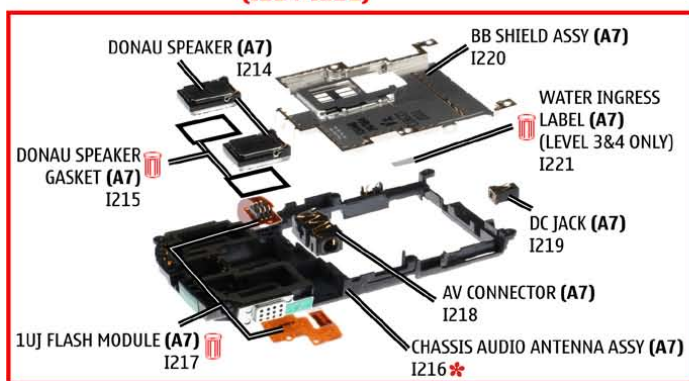
A2= SLIDE UNIT ASSY (A3, A4)



A5= 1TB LIGHT SWAP PACKAGE (I204-I210, I219-I220) (LEVEL 3&4 ONLY)



A7= CHASSIS ASSY (I214-I221)



A6= BOTTOM COVER ANTENNA ASSY (I212-I213)



A8= BACK COVER ASSY (I224-I227)



Ver. 5.0

= These parts can not be reused after removal.

= only available as assembly

6. GENERAL RECYCLING RECOMMENDATION

NOKIA

CMO Operations & Logistics
Training and Vendor Development
Multimedia Creation & Support

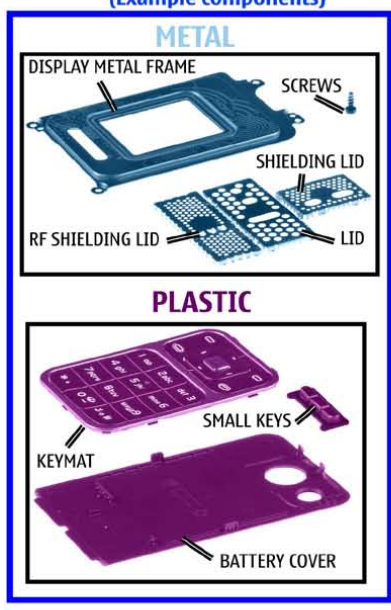
Confidential

13.11.2006

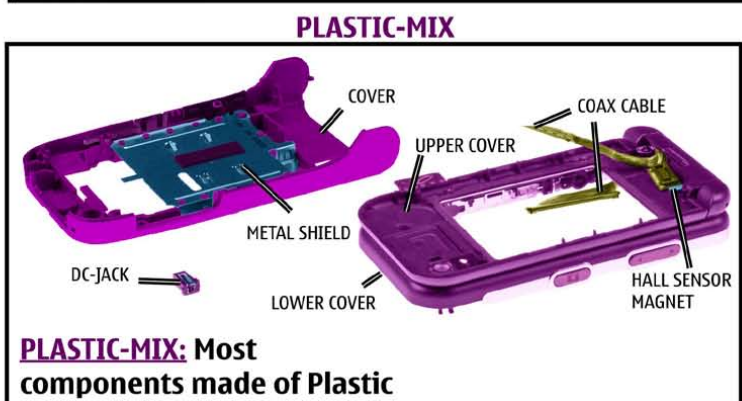
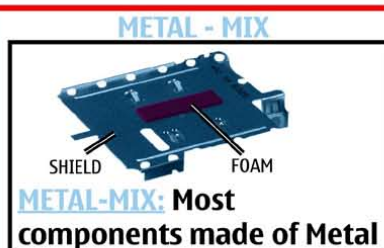
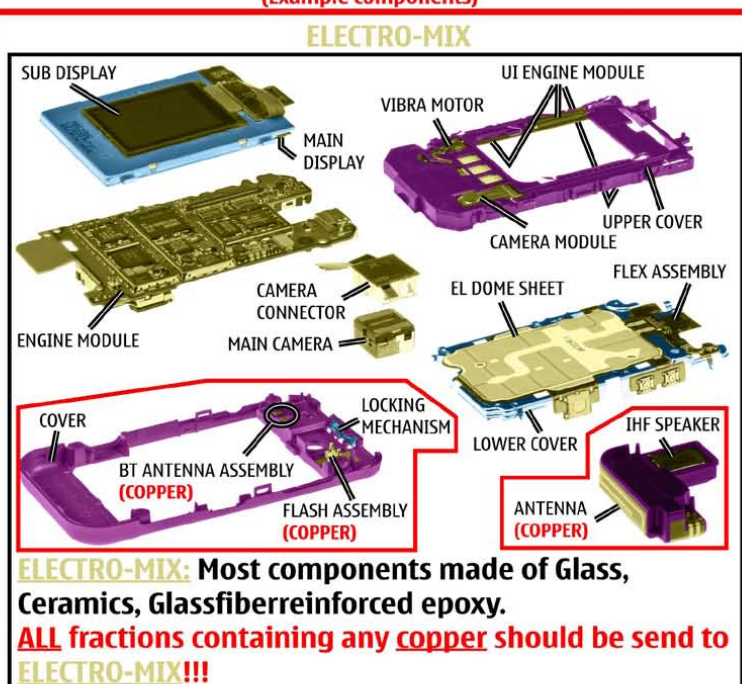
MGR

General Recycling recommendation

100% - only one Material
(Example components)



Mixed components
(Example components)



Some of these options can be utilized directly and some need pretreatment as for instance dismantling, grinding, milling, etc.
For sorting the waste into fractions for recycling, your recycler will offer you more specific information, but a **GENERAL RULE** is:

Electronic Equipment: There are recyclers that can process this "multimaterial" for high recycling yields.

Metals: Fractions containing metals must always be collected and sent for (metal) material recycling.

Plastics: Pure plastics fractions (i.e. covers) can be sent for (plastics) materials recycling.

Mixed Plastic/Metals: A metal fraction contaminated with plastics does not represent a problem for metal recycling/recovery whereas recycling/recovery of plastics is generally sensitive for contamination by other materials.

● ELECTRO ● METAL ● PLASTIC ● BATTERY

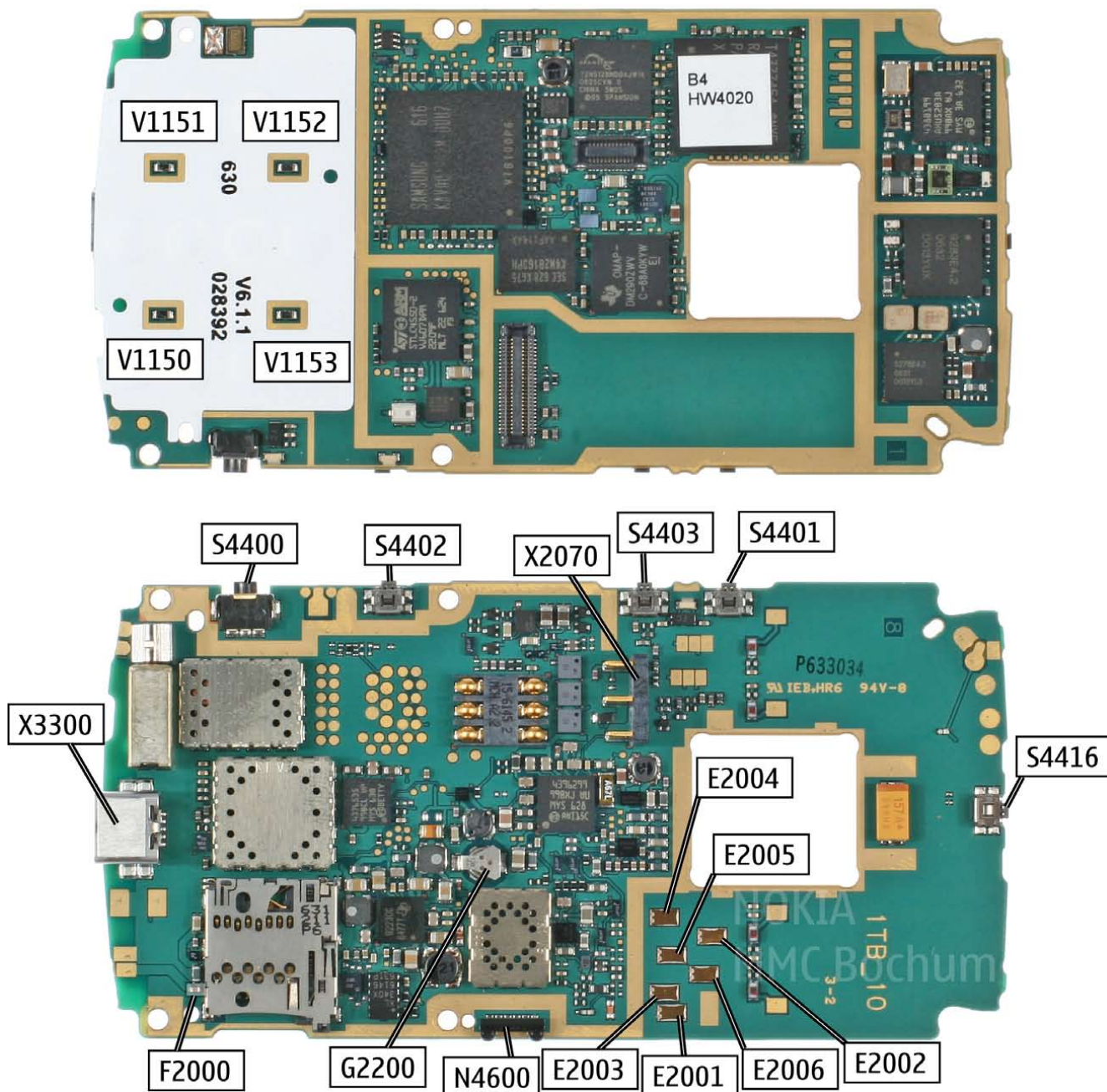
Ver. 3.0

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7. LEVEL 2 SOLDER COMPONENTS

N95 RM-159/-245 Level 2 solder components

Solder components only for LEVEL 2




8. NOKIA ONLINE (NOL)

NOL is the database where you can find the latest corresponding Service Bulletins (spare parts, SWAP units and service tools).

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.



Nokia Online

Home | User | Sitemap | Log Out

Care Services

Support Library

Warranty Info

Service Points

Training

Search GO

Support Library

Latest files

⇒ Browse 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

- XXXXXXXXXXXXXXXXXXXX

Files for Service level 1

Date: 16.02.2005

- XXXXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXXXX
- XXXXXXXXXXXXXXXXXXXX

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9. SERVICE TOOLS

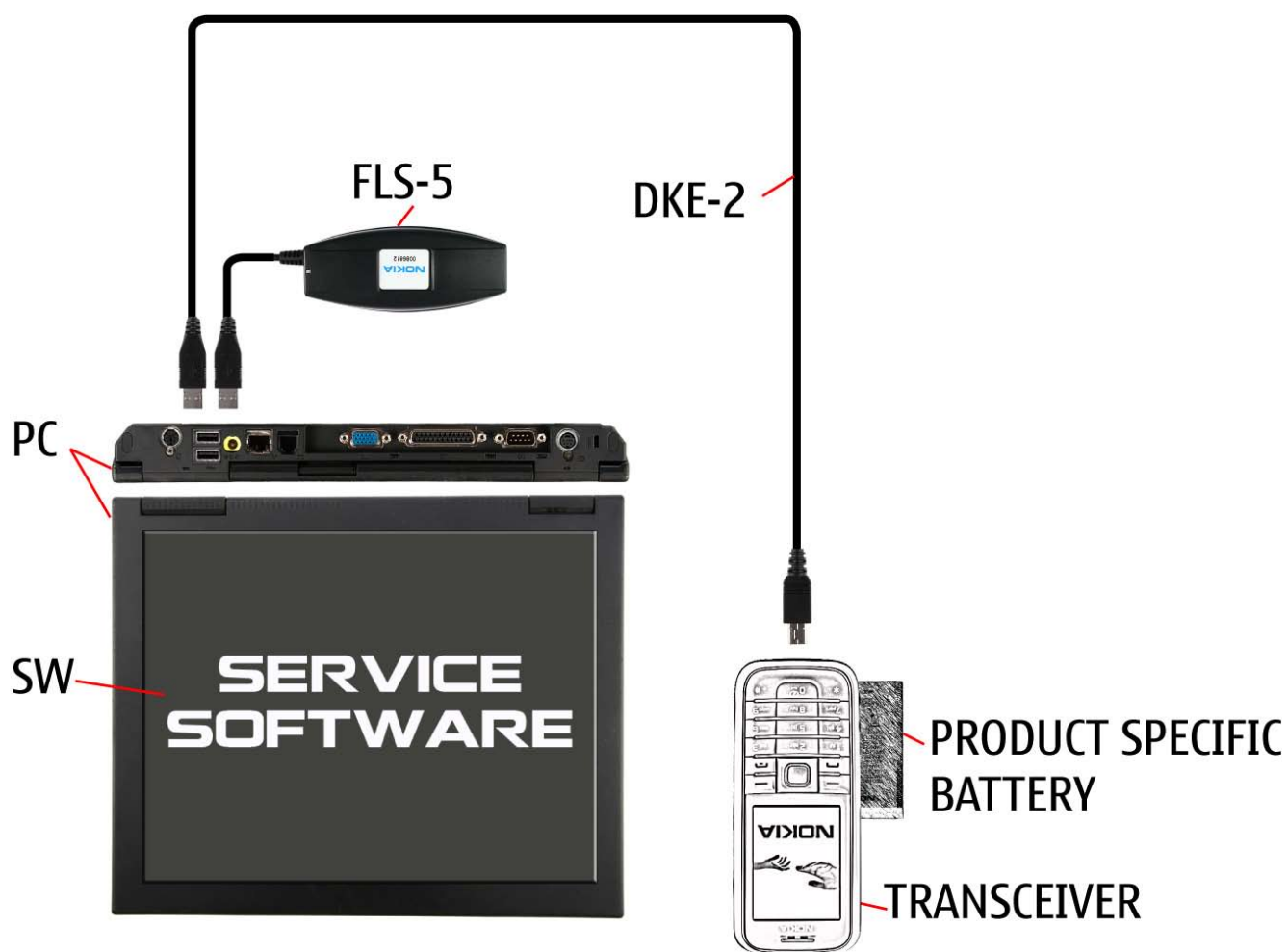
 <p>FLS-5</p>	<p>FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.</p>
	<p>ACF-8 Universal Power Supply is used to power FLS-4S.</p>
	<p>Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.</p>
 <p>BL-5F</p>	<p>Internal Battery BL-5F Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.</p>
 <p>CA-75U 150cm</p>	<p>CA-75U Video connectivity cable for TV-out testing</p>
	<p>DKE-2 Service Cable to connect the PC with the phone connector.</p>

	<p>RJ-118 Soldering Jig</p>
	<p>Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).</p>
	<p>0772040 NMP Standard Toolkit (V2)</p> <p>For more informations refer to the Service Bulletin (SB-011) on NOKIA Online.</p> <p>Supplier or manufacturer contacts for tool re-order can be found in “Recommended service equipment” document on NOKIA Online.</p>

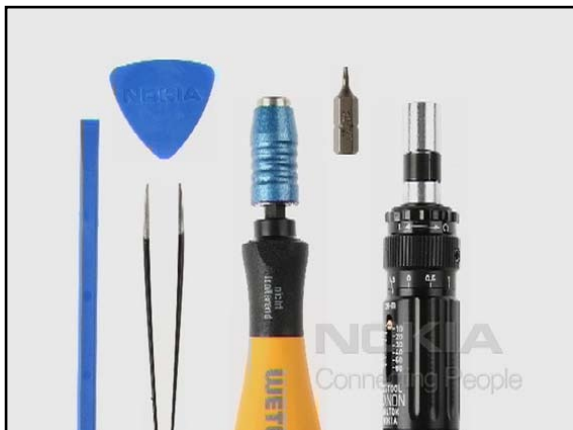
10.SW-UPDATE

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](#).



11. UPPER BLOCK DISASSEMBLY



1. Needed tools: SS-93, the SRT-6, the bit holder with a torx plus size 5 bit and a torque driver.



2. Cover the display with a protective film.



3. Check that no battery is still inserted before going on.



4. Shift open the assembly.



5. Unscrew these 2 screws.



6. Discard them, they can't be reused.



7. Shift the slider into the other position.



8. Unscrew these 2 screws in the order shown and discard them, too.



9. Do not use them again.



10. Unlock these middle metal clips, hidden under the FRONT COVER.



11. Turn the unit and release the second connector, too.



12. Peel up the protection film.



13. Now, lift up the FRONT COVER.



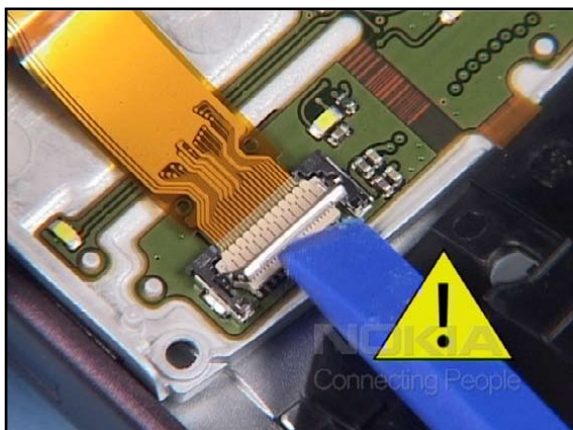
14. Remove the S60 KEYPAD.



15. Cover the display with a protective film.



16. Flip over the keypad.



17. Be double careful while opening this connector. The whole SLIDE MODULE must be replaced if damaged.



18. Lift up the display.



19. Gently release the adhesive of the EARPIECE. The gasket will be destroyed while removal.



20. ...and must be replaced when reassemble.



21. The disassembly procedure is now complete.

12. UPPER BLOCK ASSEMBLY



1. Assembly



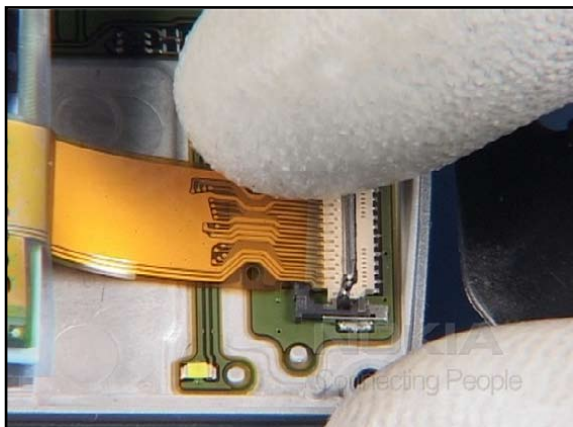
2. Fit a new gasket and place the EARPIECE into the FRONT COVER.



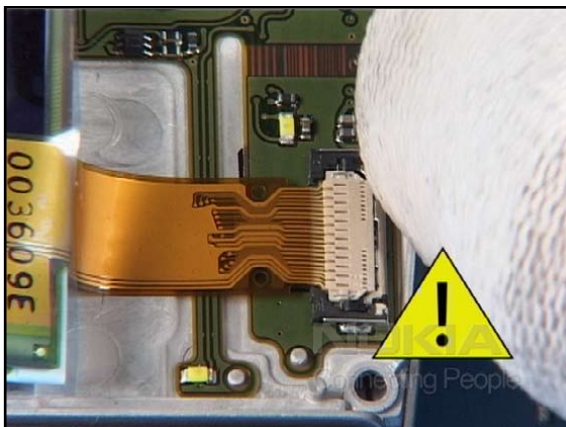
3. Flip over the keypad.



4. Insert the flex foil of the display into the connector evenly.



5. Open the connector if necessary while inserting.



6. Carefully close the connector. Again, when destroying this connector or parts of it, the whole SLIDE MODULE must be replaced.



7. Place the display into its compartment.



8. Flip over the keypad.



9. Peel up the protection film.



10. Place the S60 KEYPAD.



11. Check that the window and camera are clean, otherwise clean it up before going on.



12. Place the FRONT COVER and smooth it down evenly.



13. Protect the display again.



14. Shift open the slider.



15. Insert two new screws.



16. Set the correct torque.



17. Tighten both screws in the order shown.



18. Slide the assembly into the second position to access the next treads.



19. Insert the next 2 screws.

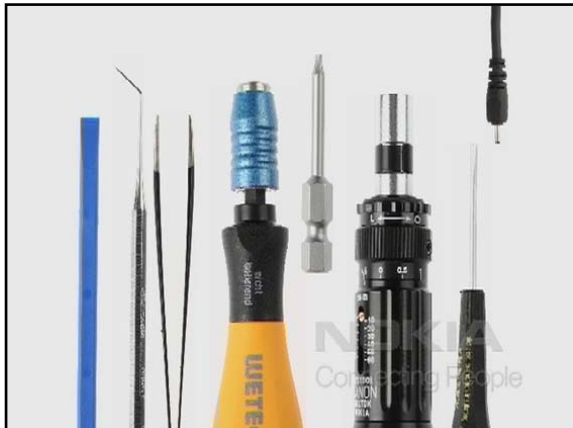


20. Tighten them to the correct torque in the order shown.



21. Check the functionality of the slider.

13. LOWER BLOCK DISASSEMBLY



1. Needed tools: SS-93, the dental pick, metal tweezers, a bit holder with a Torx plus size 6 bit, a torque driver, a straight bladed screwdriver and a DC plug.



2. Always cover the windows with a protective film.



3. Unlock and remove the BATTERY COVER.



4. Shift open the assembly.



5. Bend open the BACK COVER ASSEMBLY carefully.



6. The removal of the SD CARD DOOR becomes easy now.



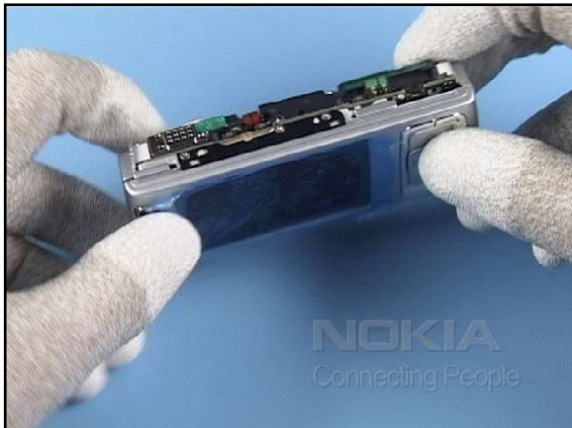
7. Keep all 6 adhesives of the BACK COVER clean, otherwise you have to change them before re-assembly.



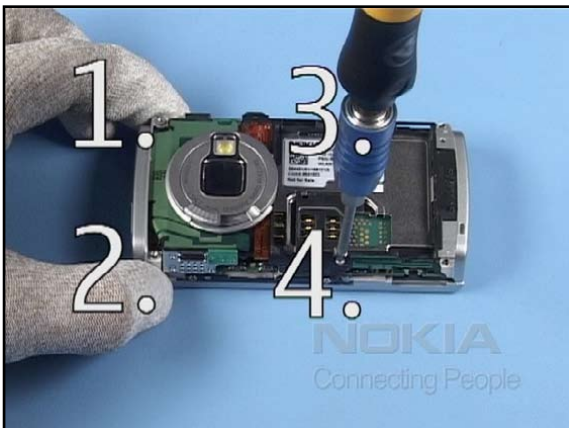
8. Gently pry open both plastic clips of the ITU KEYPAD.



9. Lift it up now and remove it.



10. Shift the assembly together and turn it to access the screws.



11. Unscrew the 4 torx plus size 6 screws in the order shown.



12. Remove all screws and discard them. Do not use them again.



13. Lift up the TOP COVER ASSY first, then remove it.



14. Shift out the assembly in order to gain the maximum flex foil length.



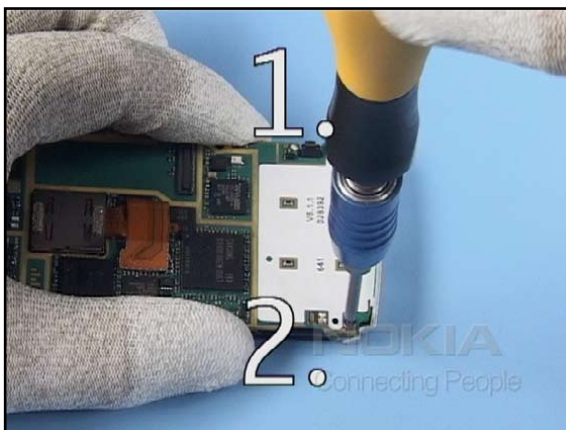
15. Separate the assemblies, keep in mind that the flex foil is still connected.



16. Be double careful while opening this connector. Do not destroy the hidden components underneath.



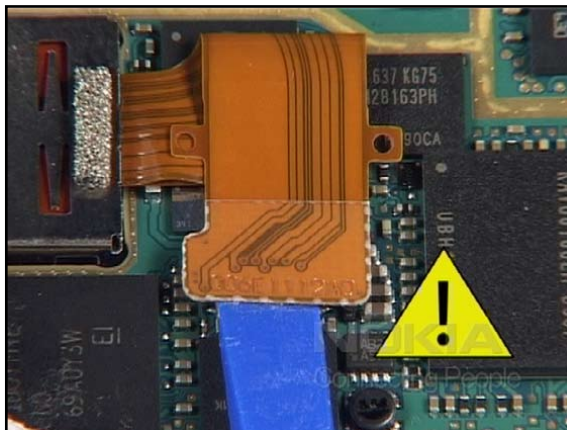
17. Now the parts can be separated.



18. Unscrew both screws in the order shown and remove them.



19. Lift up the LIGHT SWAP PWB together with the MAIN CAMERA.



20. To separate the camera, disconnect the flex connector first. Do not lever out against the components.



21. Remove the USB SEAL.



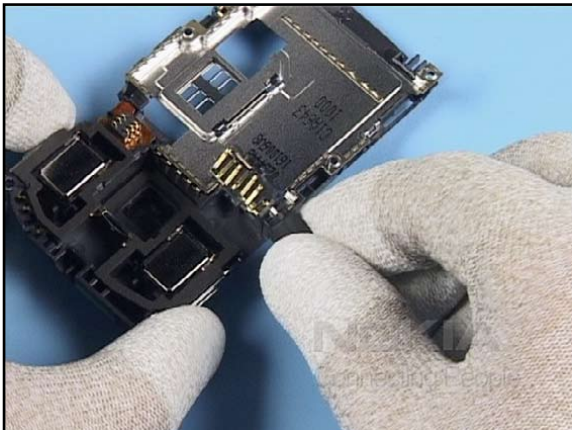
22. The BOTTOM COVER can be separated easily.



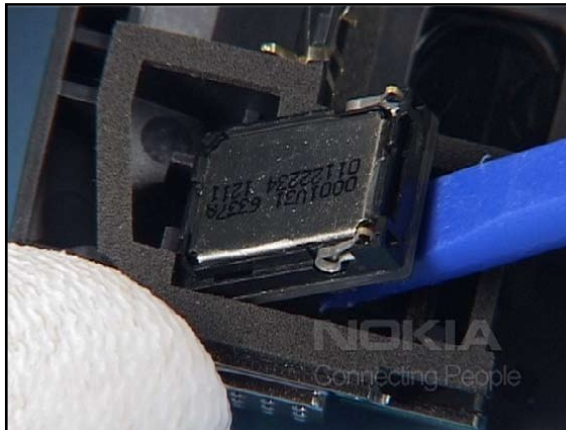
23. Ease out the MICROPHONE and discard it, use a new one when reassembling.



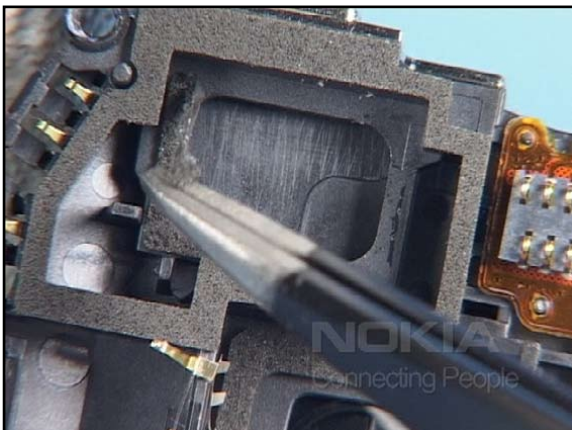
24. Remove the DC Jack...



25. ...and the AV CONNECTOR with the DC plug.



26. Gently lever out the glued in DONAU SPEAKERS.



27. The gaskets will be destroyed. Remove all residues before reassembling.



28. Lever up the first metal latch of the BB SHIELD



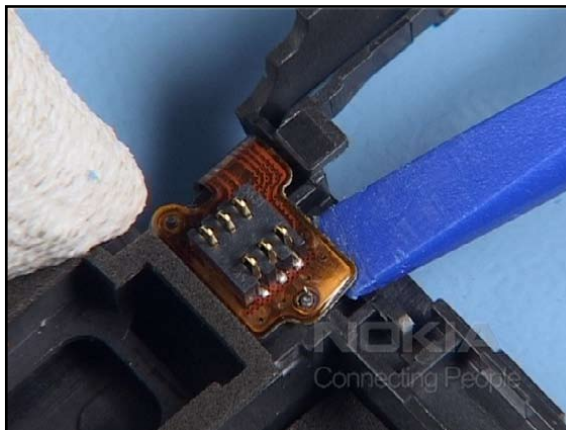
29. and then the second one. Do not touch or bend the gasket. Keep it together with the PWB.



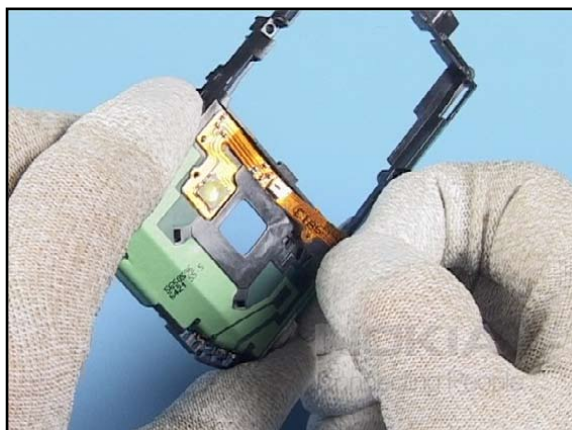
30. Gently release the adhesive of the CAMERA PROTECTIVE SHUTTER MODULE. Mind the hidden switch underneath!



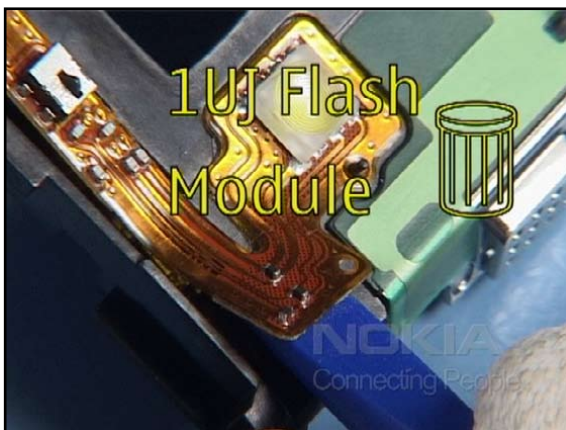
31. Remove it now. It can't be reused again.



32. Release the flex of the 1UJ FLASH MODULE, beginning at the connector's side.



33. Now peel up the flex.



34. Now release the still fixed side with the SS-93. The module can't be used again.



35. Check that no residues of the adhesive remain.



36. The disassembly procedure of the lower block is now completed.

14. LOWER BLOCK ASSEMBLY



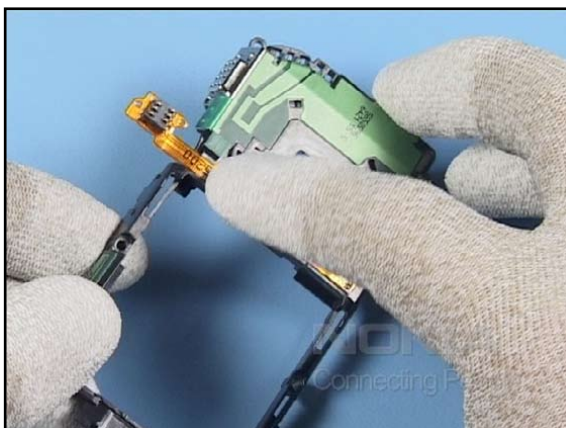
1. Assembly.



2. Remove the protective film from the 1UJ FLASH MODULE.



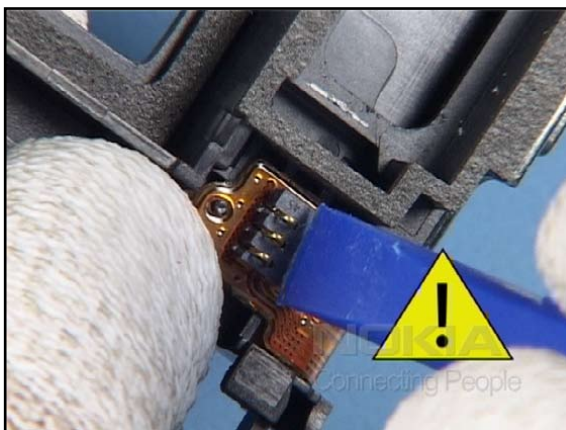
3. Align the module exactly to the alignment tabs.



4. Smooth it down evenly. Note the components.



5. Now position the connector side.



6. Do not bend the connector springs while pushing down.



7. Remove the protection film from the CAMERA PROTECTIVE SHUTTER.



8. Align it and push down the assembly as shown evenly to fix the adhesive.



9. Place the BB SHIELD into the CHASSIS.



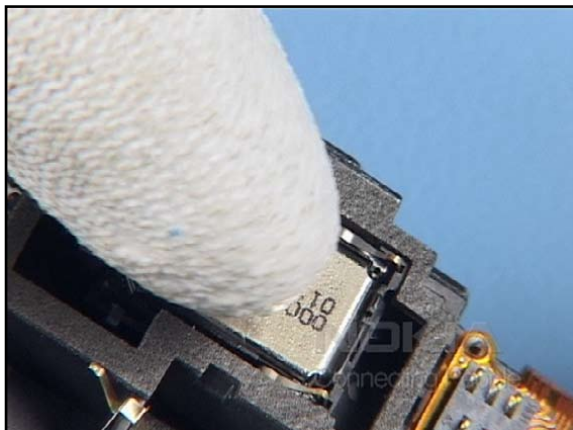
10. Do not bend the HF gasket.



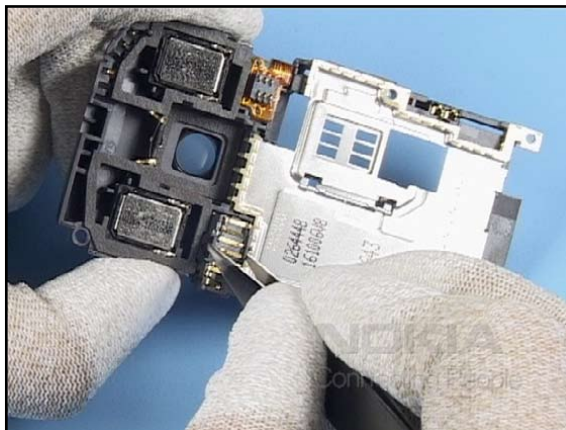
11. Complete the DONAU SPEAKERS with new adhesives.



12. Mind the correct positioning before placing the speakers into the CHASSIS.



13. Push them down evenly.



14. Insert the AV CONNECTOR.



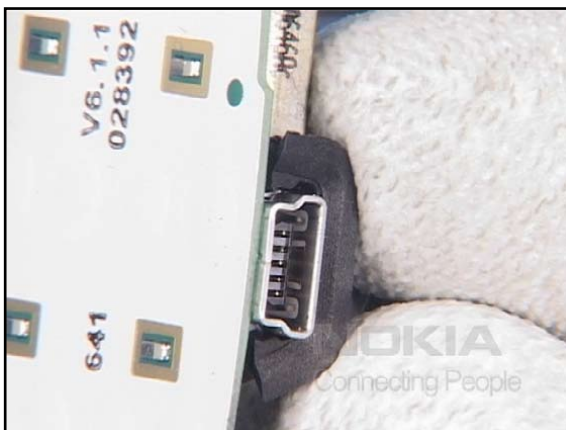
15. ...and the DC JACK.



16. Insert the MICROPHONE.



17. Fit the BOTTOM COVER to the CHASSIS now.



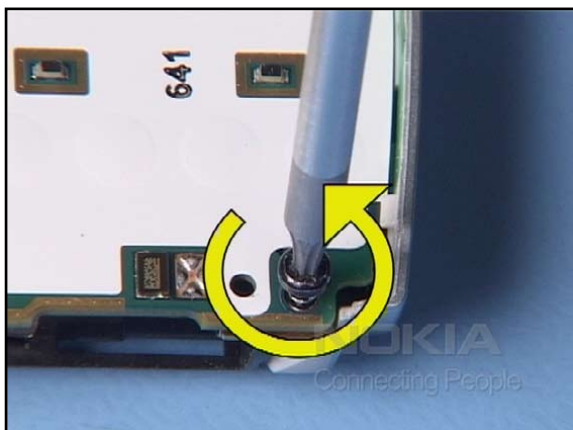
18. Place the USB SEAL.



19. Insert the PWB into the CHASSIS, beginning from the bottom.



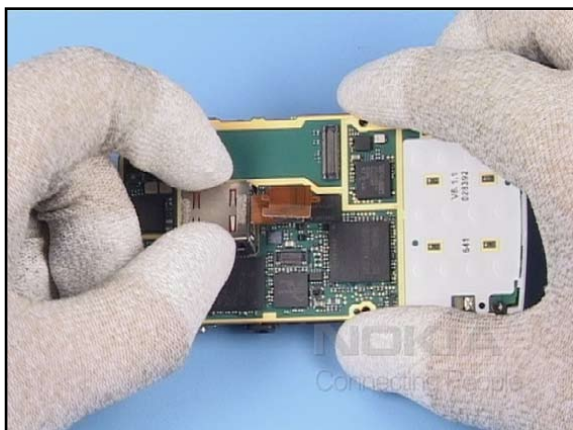
20. Insert the screws of the BOTTOM COVER.



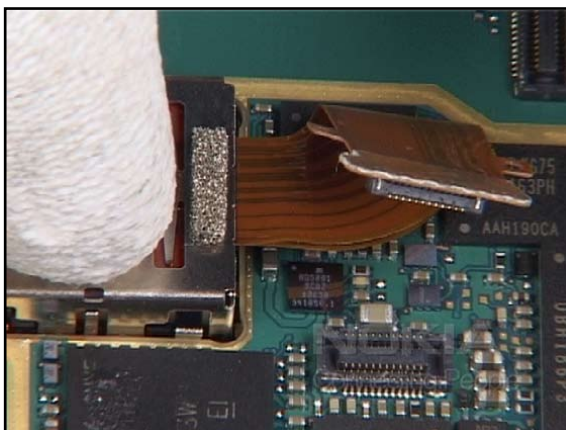
21. To prevent damaging the plastic threads, turn the screws to the left first. Then tighten them slightly.



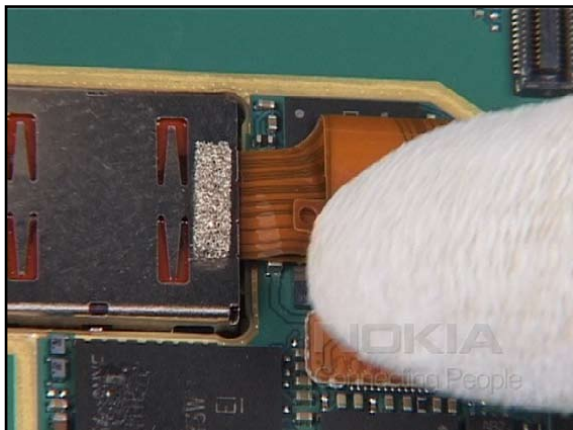
22. Check the camera and the window for cleanness before going on.



23. Position the MAIN CAMERA over its recess.



24. Push down the camera.



25. Close the flex connector.



26. Set the correct torque.



27. Apply the torque in the order shown.



28. Position the upper block below the PWB.



29. Close the flex connector.



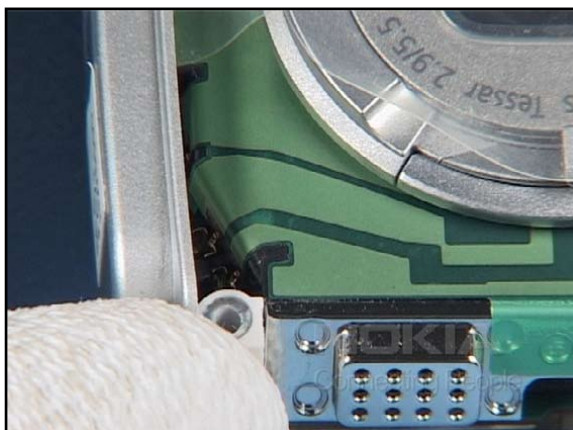
30. Bring the slider into position shown while placing it over the lower part.



31. Insert the 2 new screws.



32. Tighten these screws slightly.



33. Now place the TOP COVER.



34. Insert the next 2 new screws.



35. Close the slider.



36. Set the correct torque.



37. Apply the correct torque to the screws in the order shown.



38. Ensure that the protection film is still fitted, otherwise protect it with a plastic film.



39. Turn the unit.



40. Insert the ITU KEYMAT.



41. Smooth it down evenly, click the snaps into their places.



42. Complete the BACK COVER with the SD CARD DOOR.



43. Check all 6 adhesives for cleanness. Replace them if there are dirty, destroyed or missing.



44. Remove the protective film and close the shutter.



45. Place the BACK COVER over the assembly.



46. Click all snaps into their places.






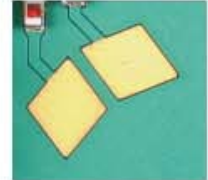














47. Check that no gaps remain and that all keys operate.




48. Complete the assembly with the BATTERY COVER.


15.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.    
	<p>Explanation</p> <div>  Symtom (3) Zoom position (Note! First zoom starts with ) Fault name Count of fault positions </div>

16. QUICK TROUBLE SHOOTER - POWER ON



1.2

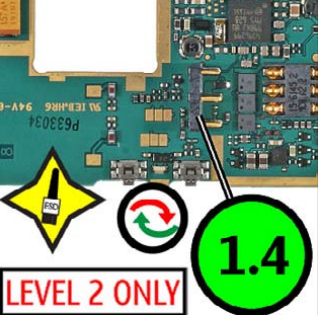


LEVEL 2 ONLY

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

MEASURE OPEN AND PRESSED STATE ON BOTH SIDES OF THE SWITCH

1.3



LEVEL 2 ONLY

1.4

Explanation

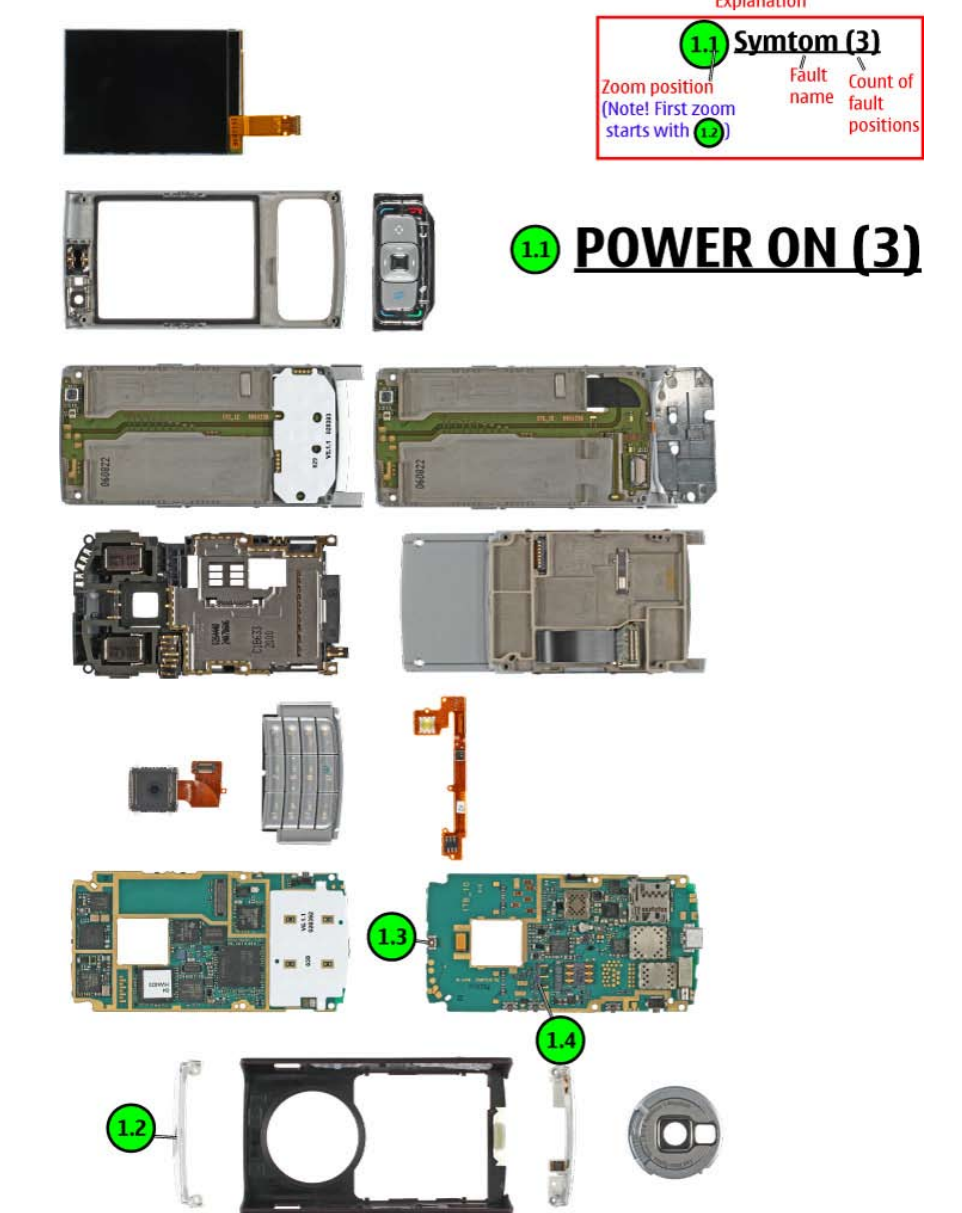
1.1 Symptom (3)

Zoom position (Note! First zoom starts with 1.2)

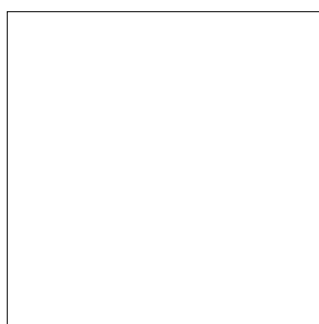
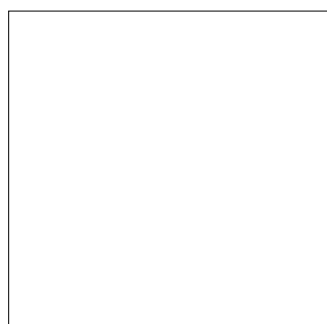
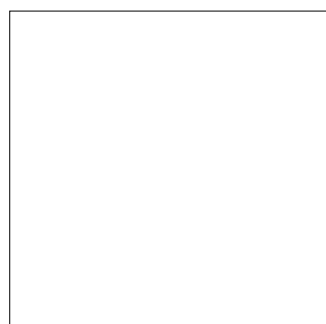
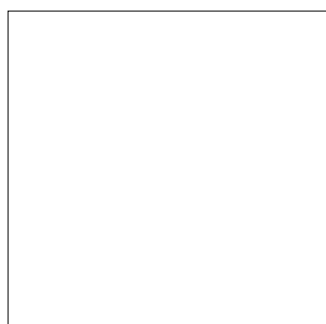
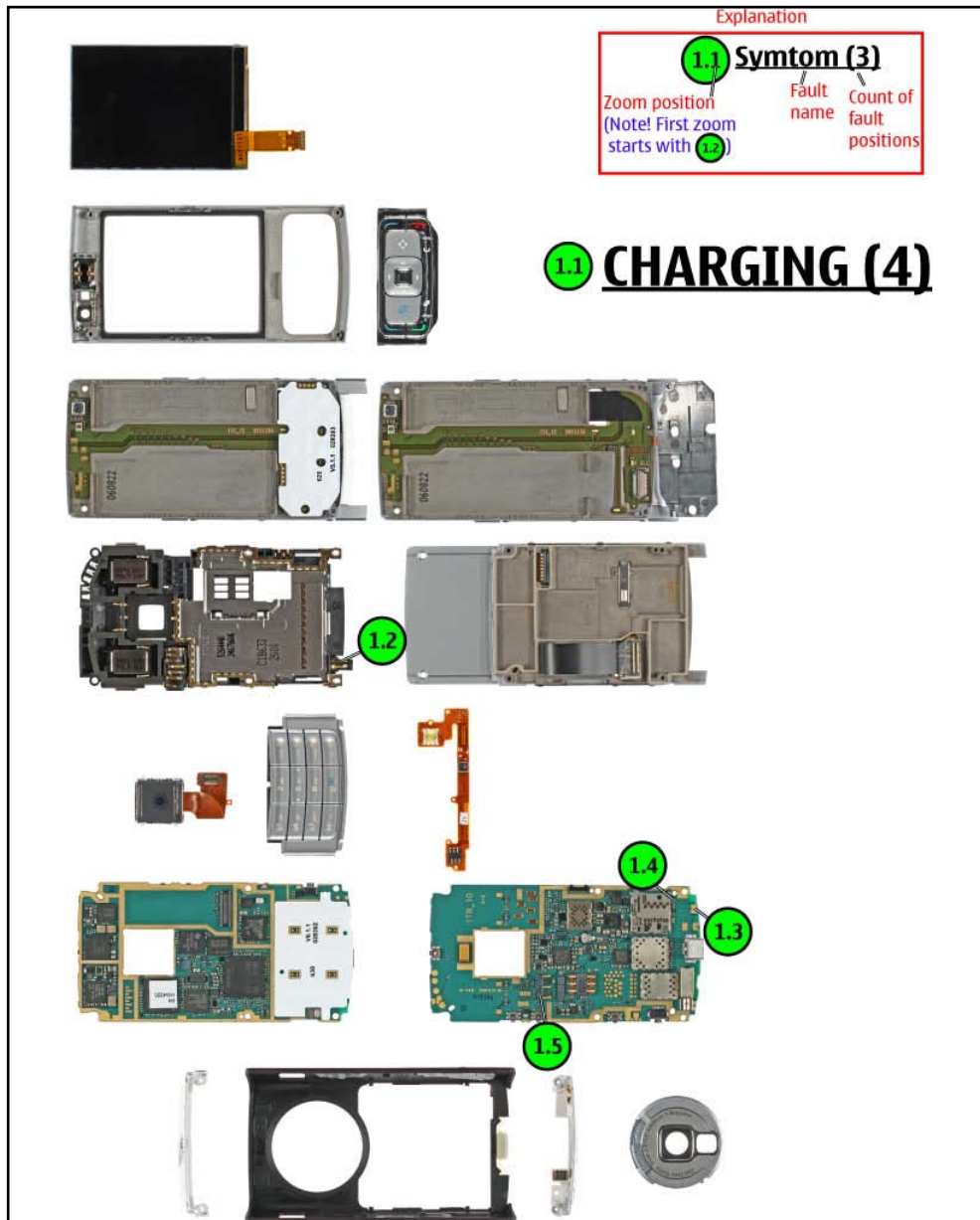
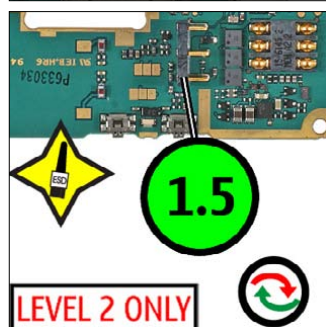
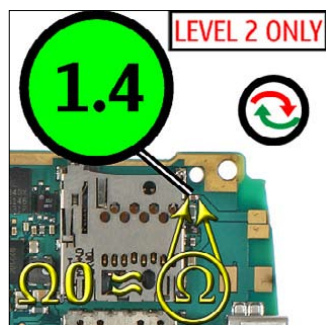
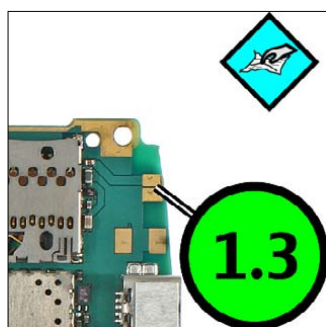
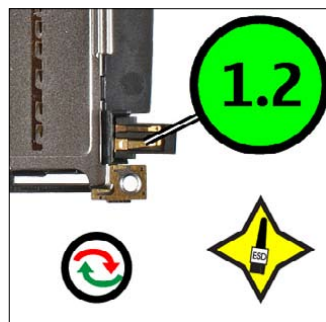
Fault name

Count of fault positions

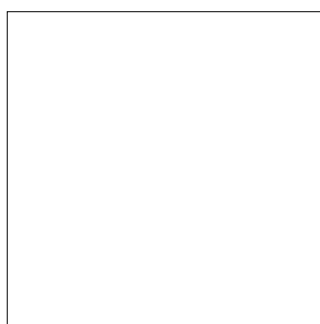
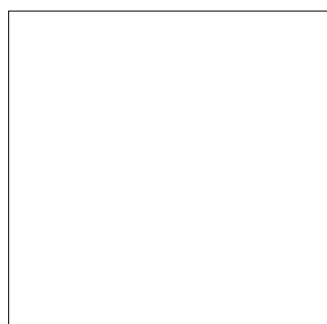
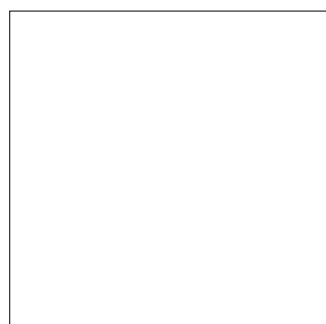
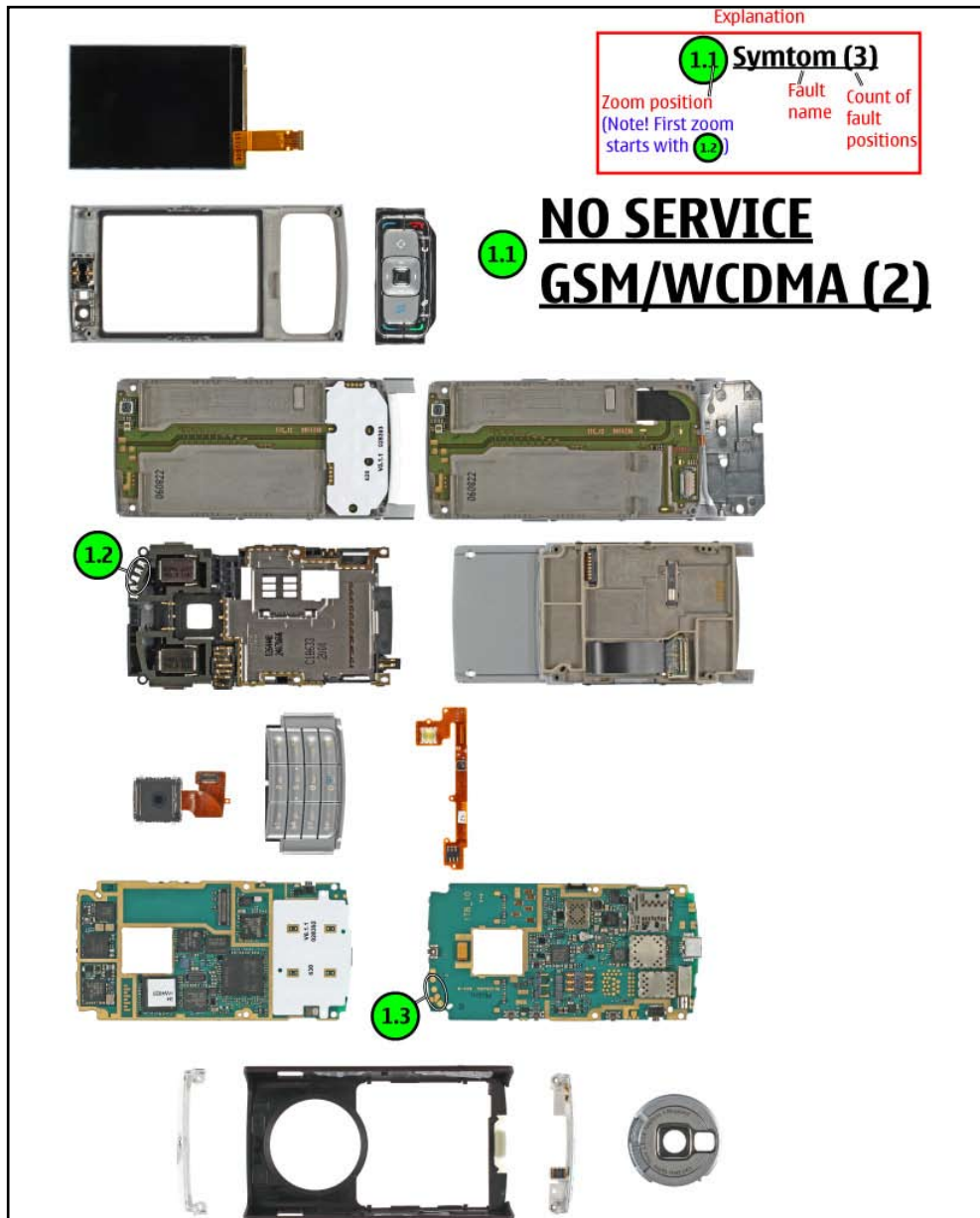
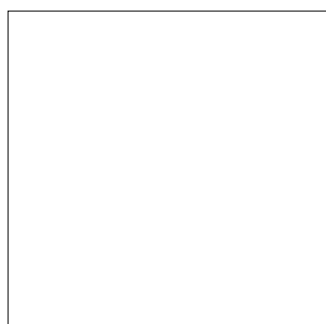
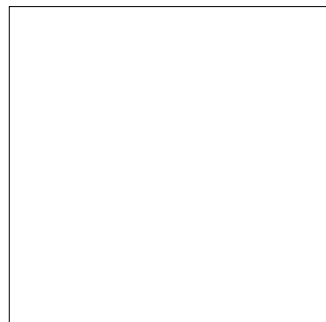
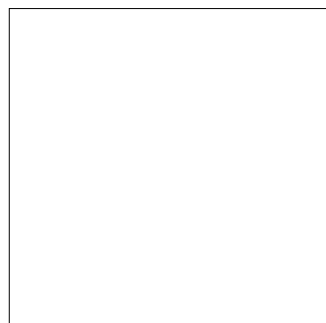
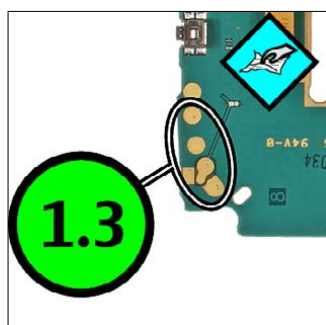
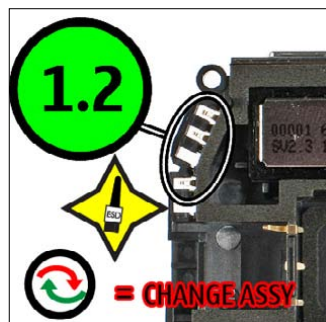
1.1 POWER ON (3)



17. QUICK TROUBLE SHOOTER - CHARGING




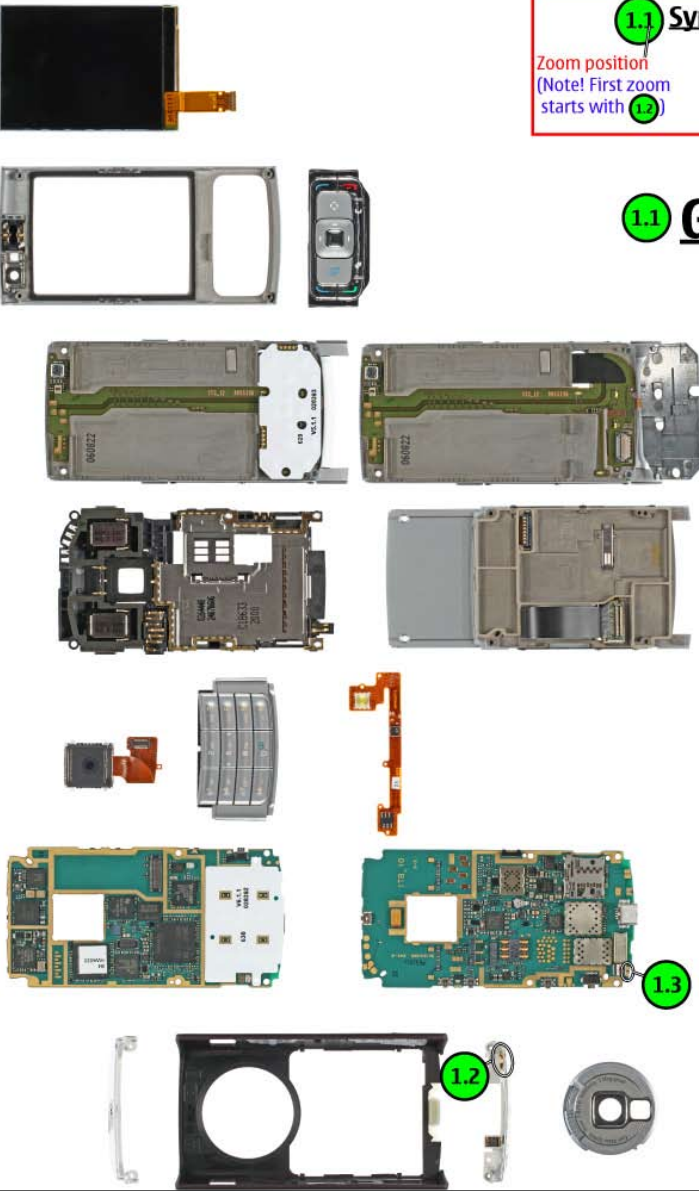
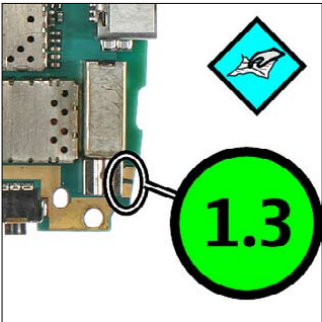
18. QUICK TROUBLE SHOOTER - NO SERVICE (GSM/WCDMA)



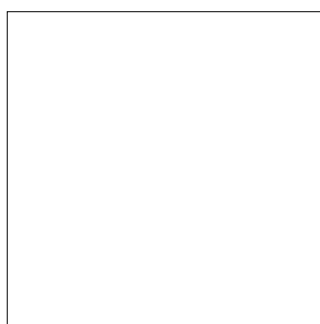
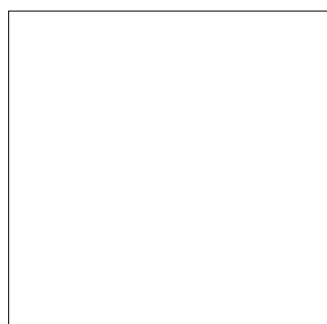
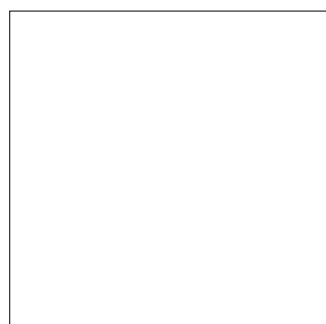
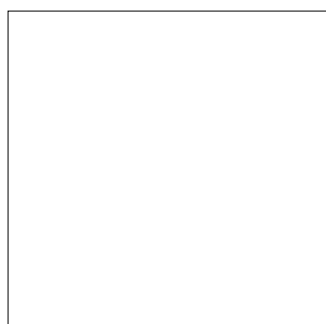
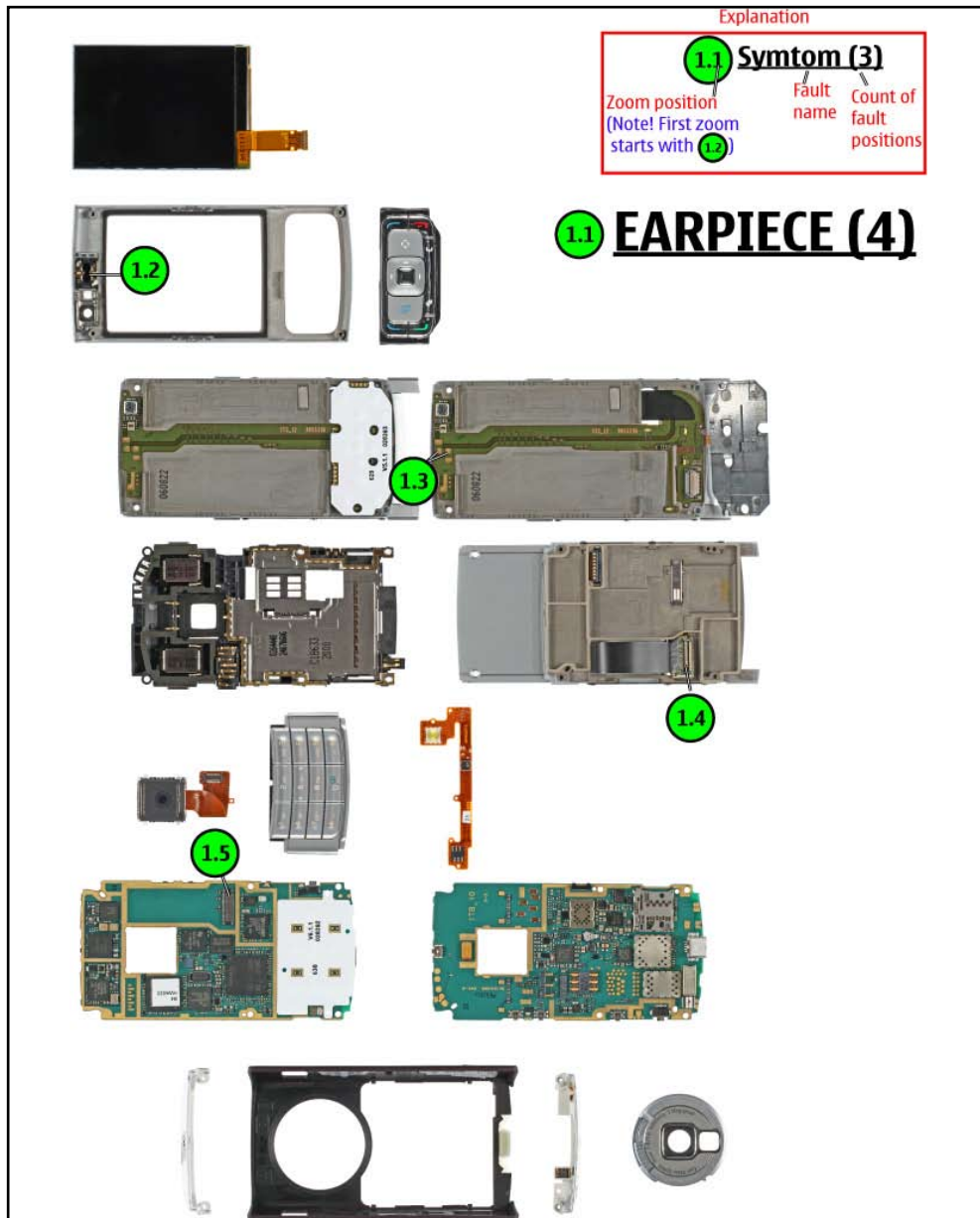
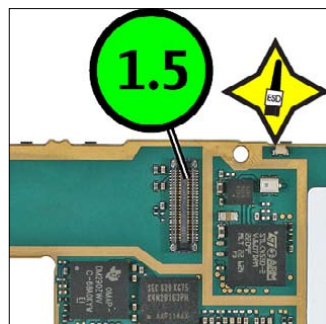
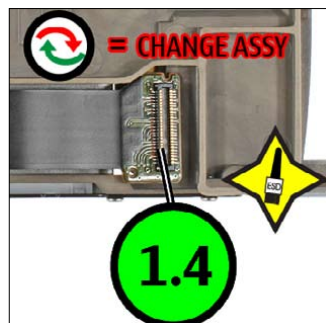
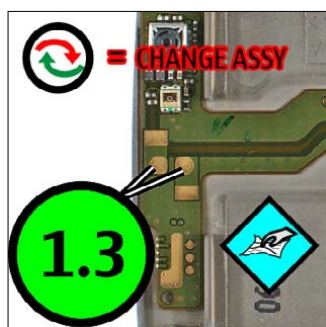
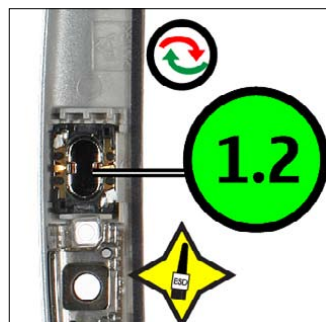
19. QUICK TROUBLE SHOOTER - WLAN/BLUETOOTH

	<div style="text-align: right;"> <p>Explanation</p> <table border="1"> <tr> <td>1.1</td> <td>Symtom (3)</td> </tr> <tr> <td>Zoom position (Note! First zoom starts with 1.2)</td> <td>Fault name</td> </tr> <tr> <td></td> <td>Count of fault positions</td> </tr> </table> </div> <div style="text-align: center;"> <p>1.1</p> <h3><u>WLAN/BLUETOOTH (2)</u></h3> </div>			1.1	Symtom (3)	Zoom position (Note! First zoom starts with 1.2)	Fault name		Count of fault positions
1.1	Symtom (3)								
Zoom position (Note! First zoom starts with 1.2)	Fault name								
	Count of fault positions								

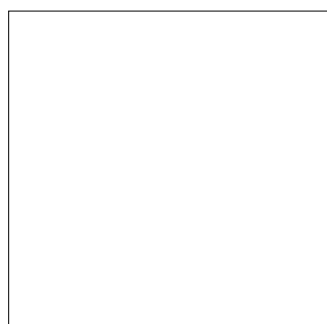
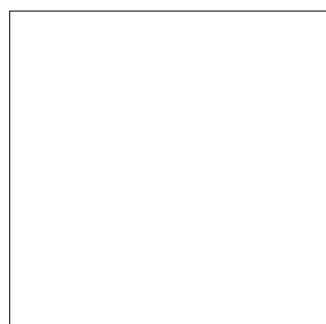
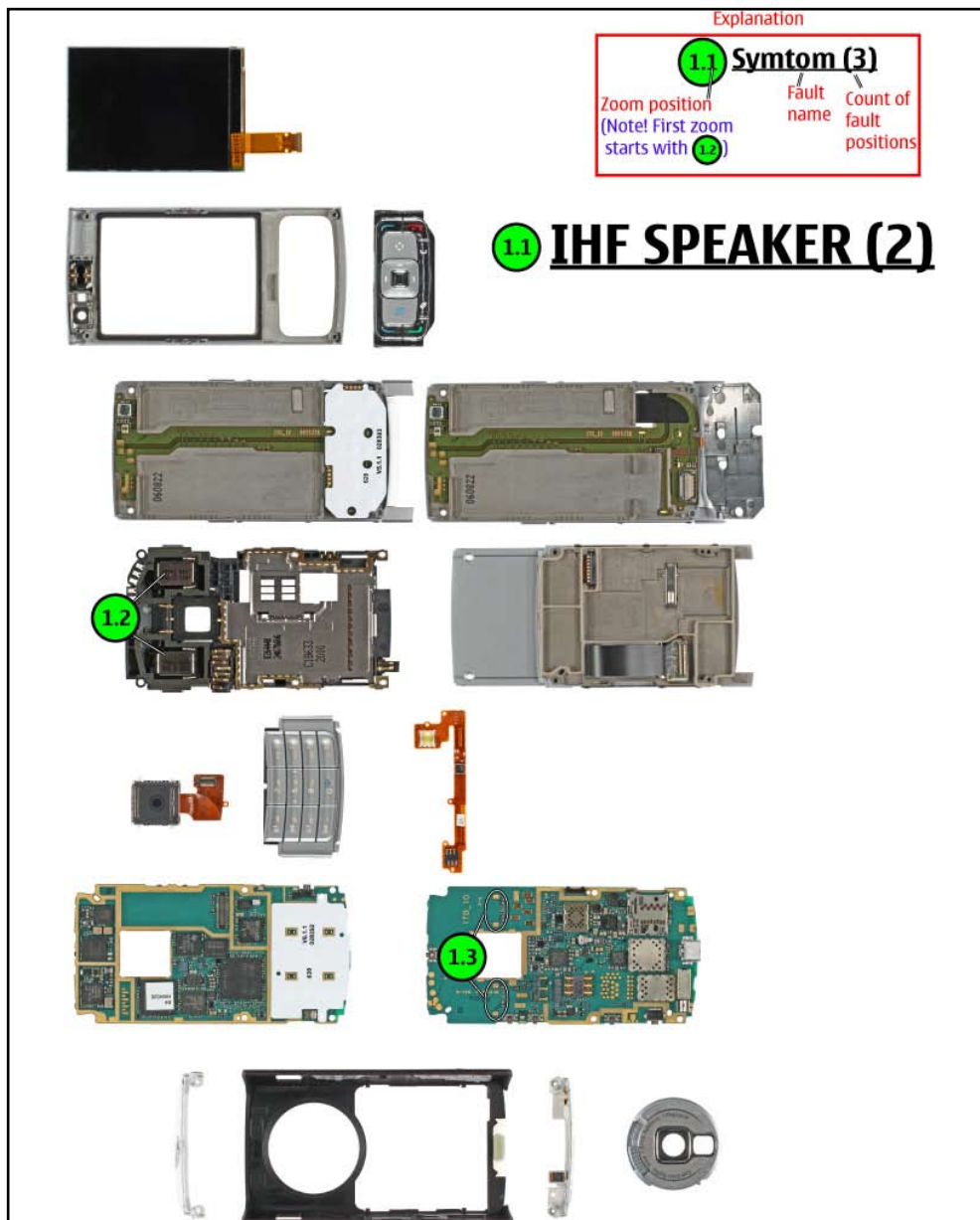
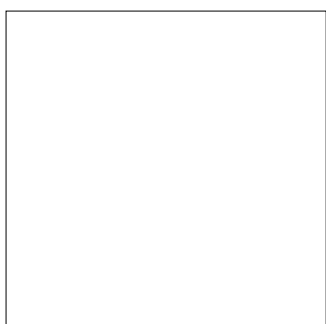
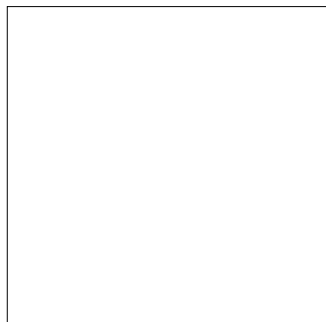
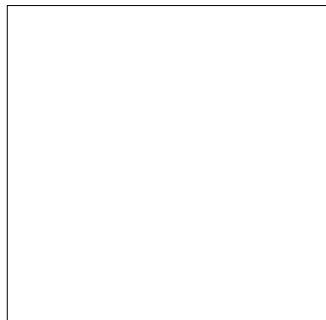
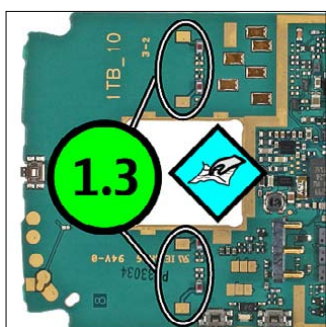
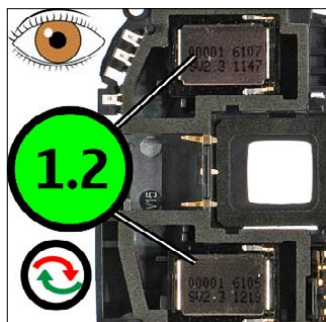
20. QUICK TROUBLE SHOOTER - GPS

	<div data-bbox="1082 387 1410 551"> <p>Explanation</p> <p>1.1 Symtom (3)</p> <p>Zoom position (Note! First zoom starts with 1.2)</p> <p>Fault name</p> <p>Count of fault positions</p> </div> <div data-bbox="1171 607 1410 663"> <p>1.1 GPS (2)</p> </div> 
	

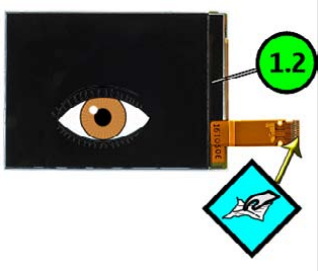
21. QUICK TROUBLE SHOOTER - EARPIECE




22. QUICK TROUBLE SHOOTER - IHF SPEAKER




23. QUICK TROUBLE SHOOTER - DISPLAY

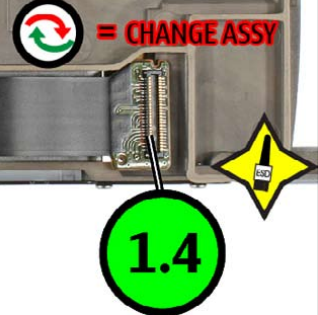


1.2




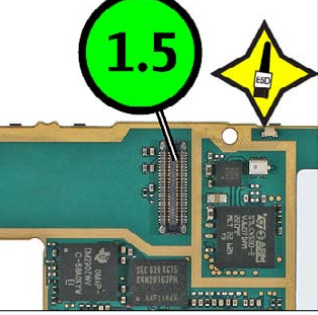
1.3

 = CHANGE ASSY



1.4

 = CHANGE ASSY



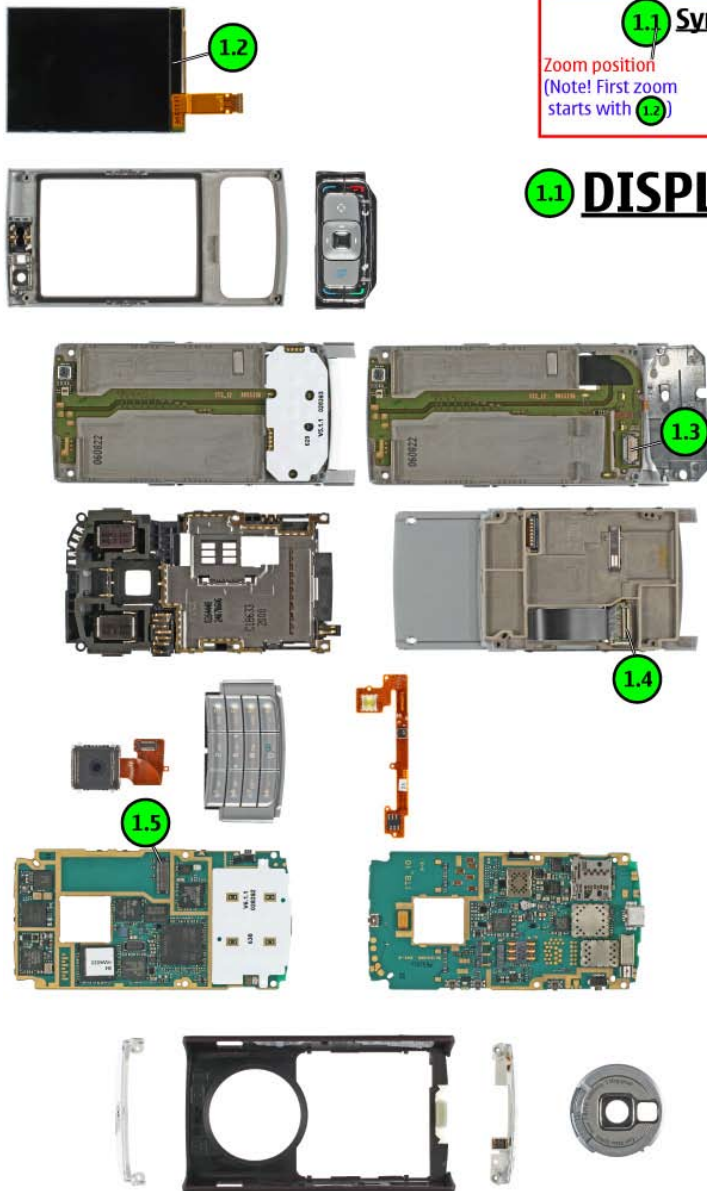
1.5

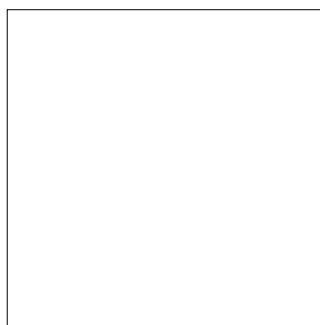
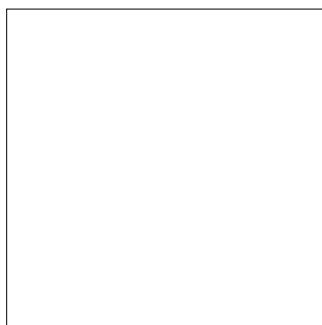
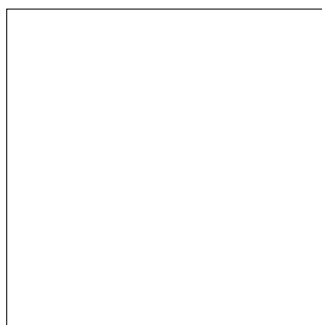
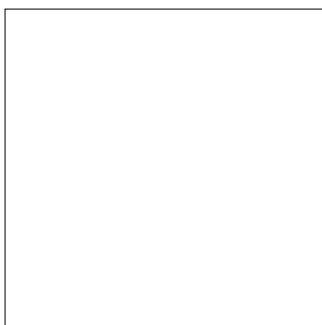
Explanation

1.1 Symtom (3)

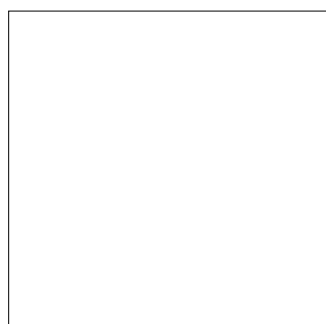
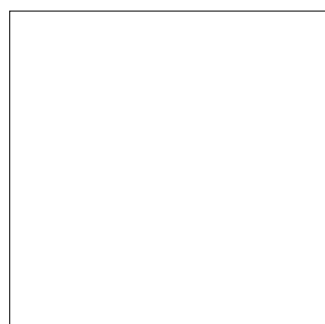
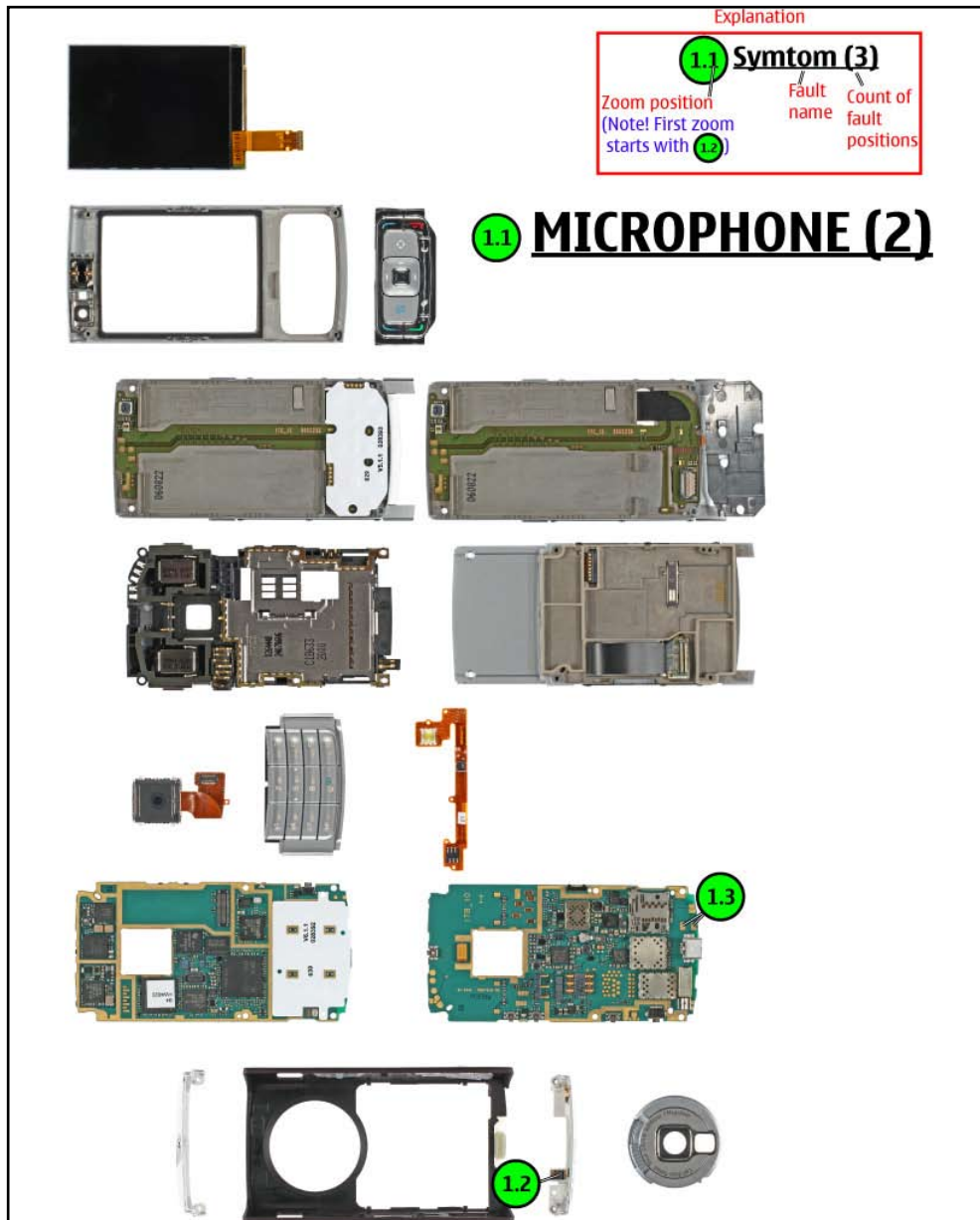
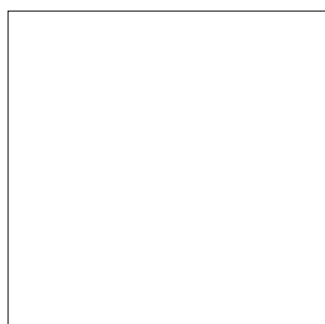
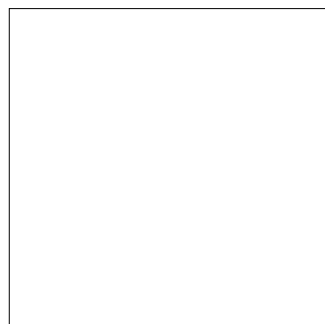
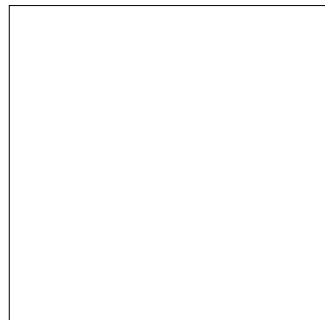
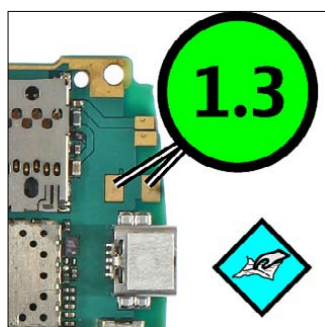
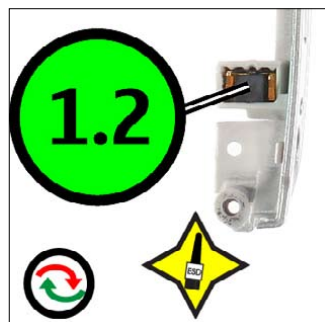
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

1.1 DISPLAY (4)

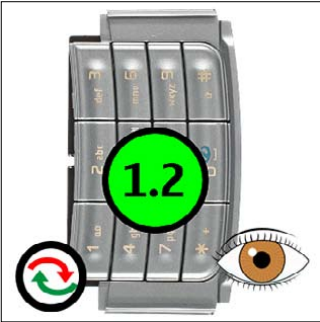
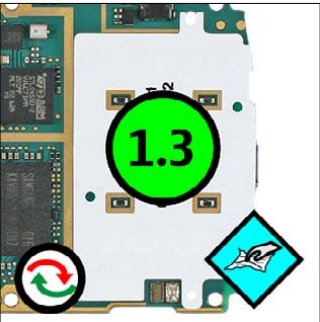




24. QUICK TROUBLE SHOOTER - MICROPHONE



25. QUICK TROUBLE SHOOTER - ITU KEYPAD

Explanation

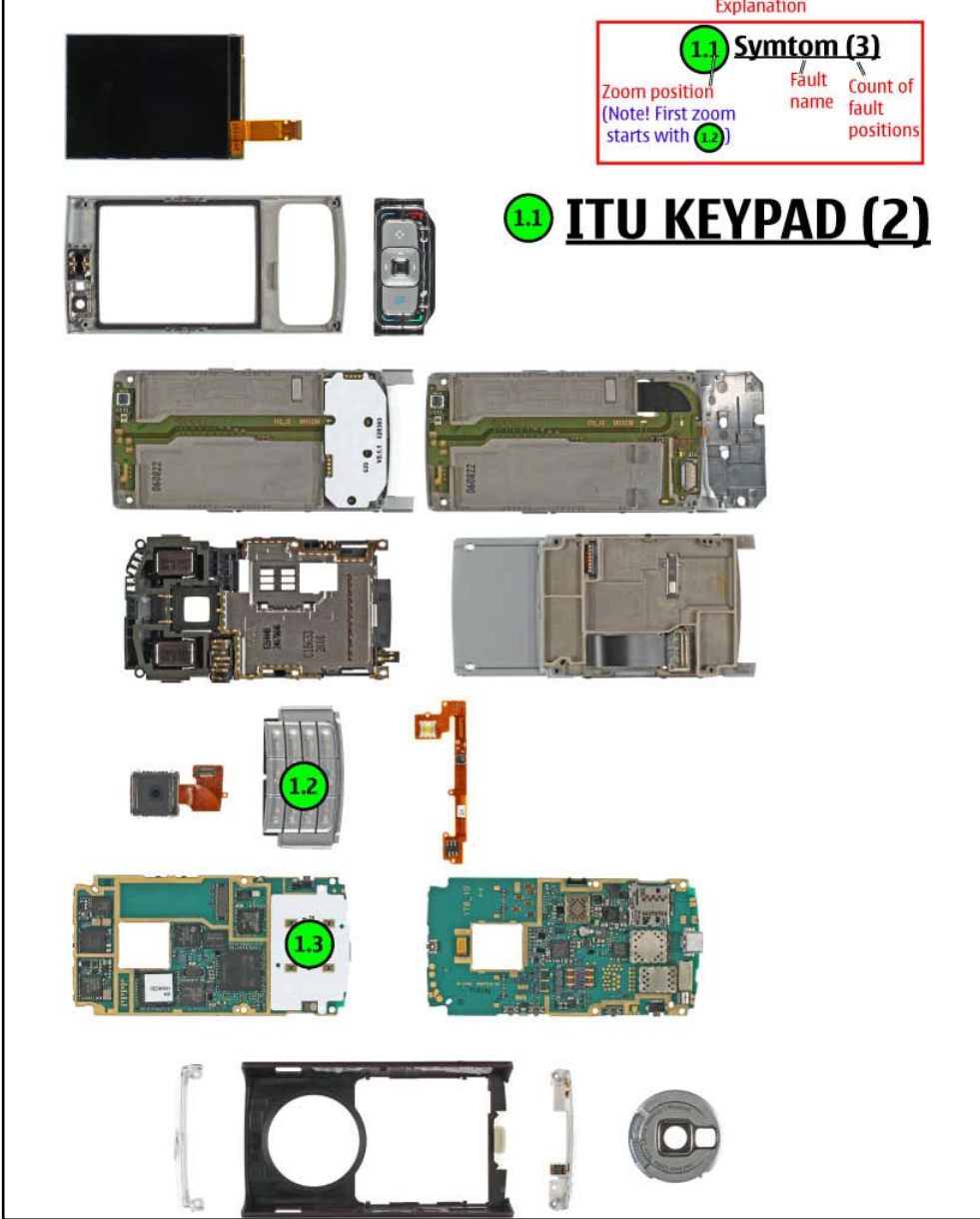
1.1 Symptom (3)

Zoom position (Note! First zoom starts with 1.2)


Fault name

Count of fault positions


1.1 ITU KEYPAD (2)



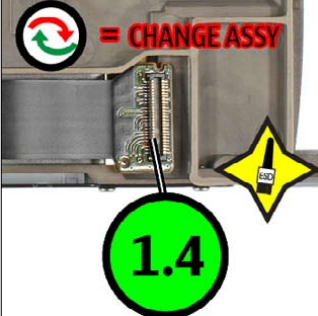
26. QUICK TROUBLE SHOOTER - S60 KEYPAD



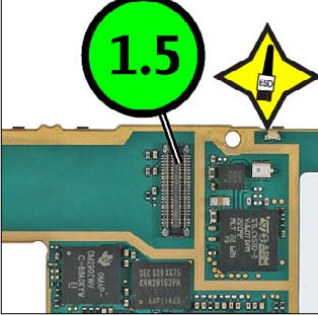
1.2



1.3



1.4



1.5

Explanation

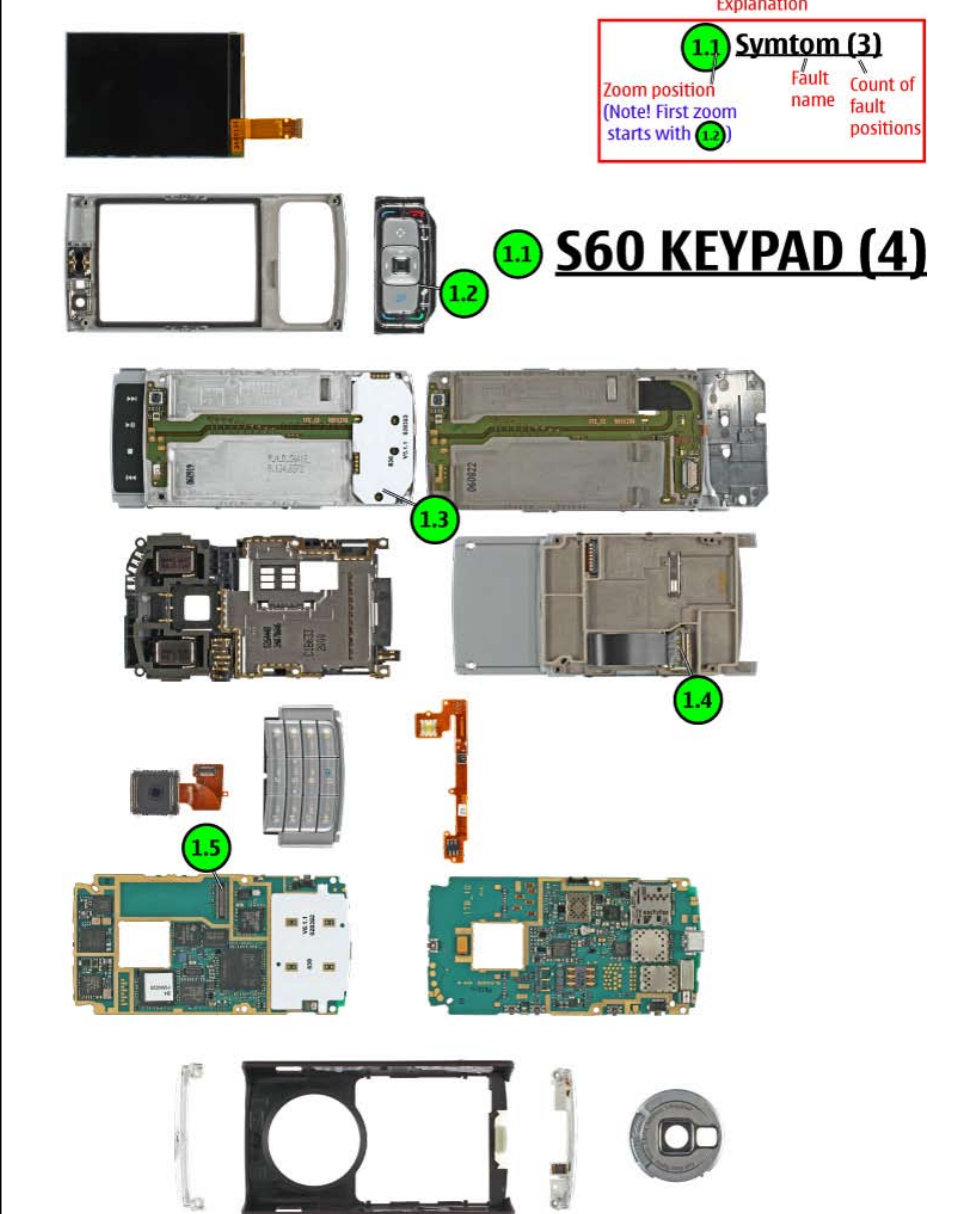
1.1 Symptom (3)

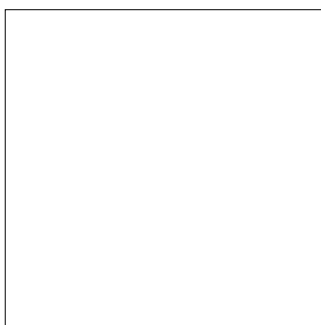
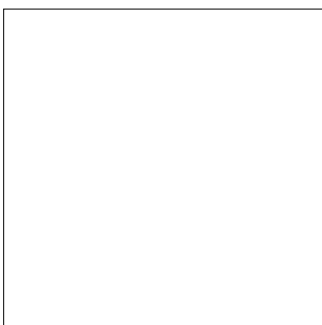
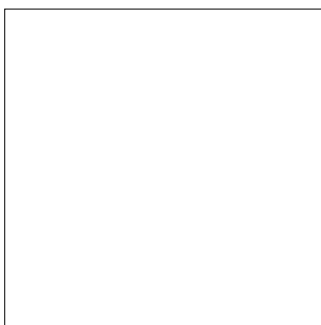
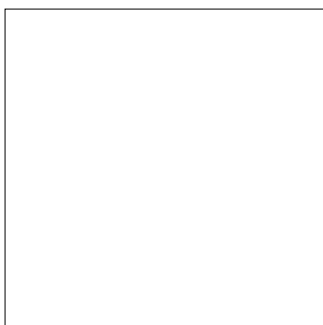
Zoom position (Note! First zoom starts with 1.2)

Fault name

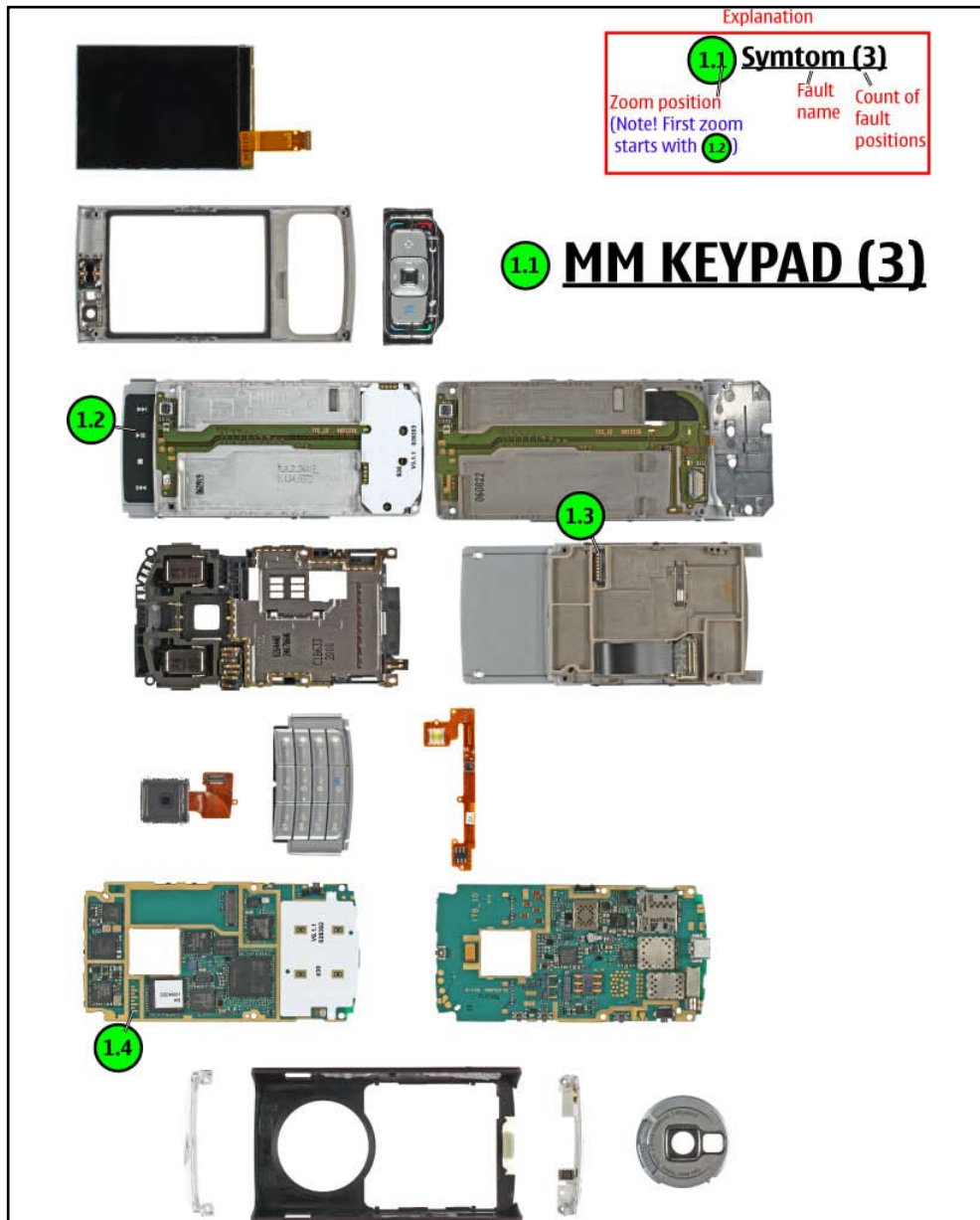
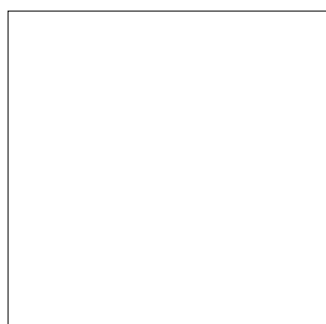
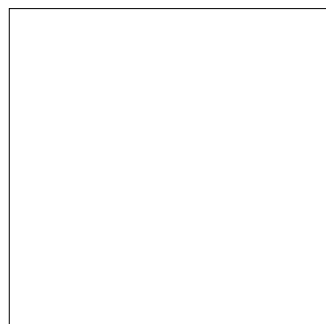
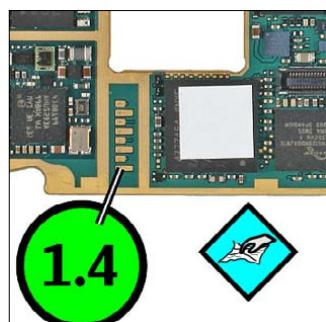
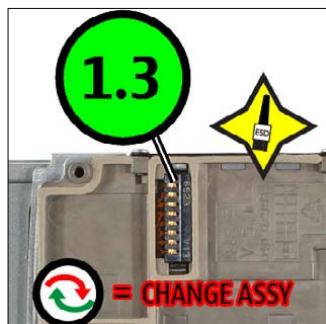
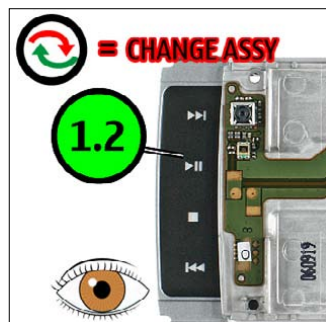
Count of fault positions

1.1 S60 KEYPAD (4)






27. QUICK TROUBLE SHOOTER - MM KEYPAD




28. QUICK TROUBLE SHOOTER - REVIEW KEY



1.2

= CHANGE ASSY



1.3

LEVEL 2 ONLY

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

open $\infty \Omega$

pressed $\approx 0 \Omega$

MEASURE OPEN AND PRESSED STATE ON BOTH SIDES OF THE SWITCH

Explanation

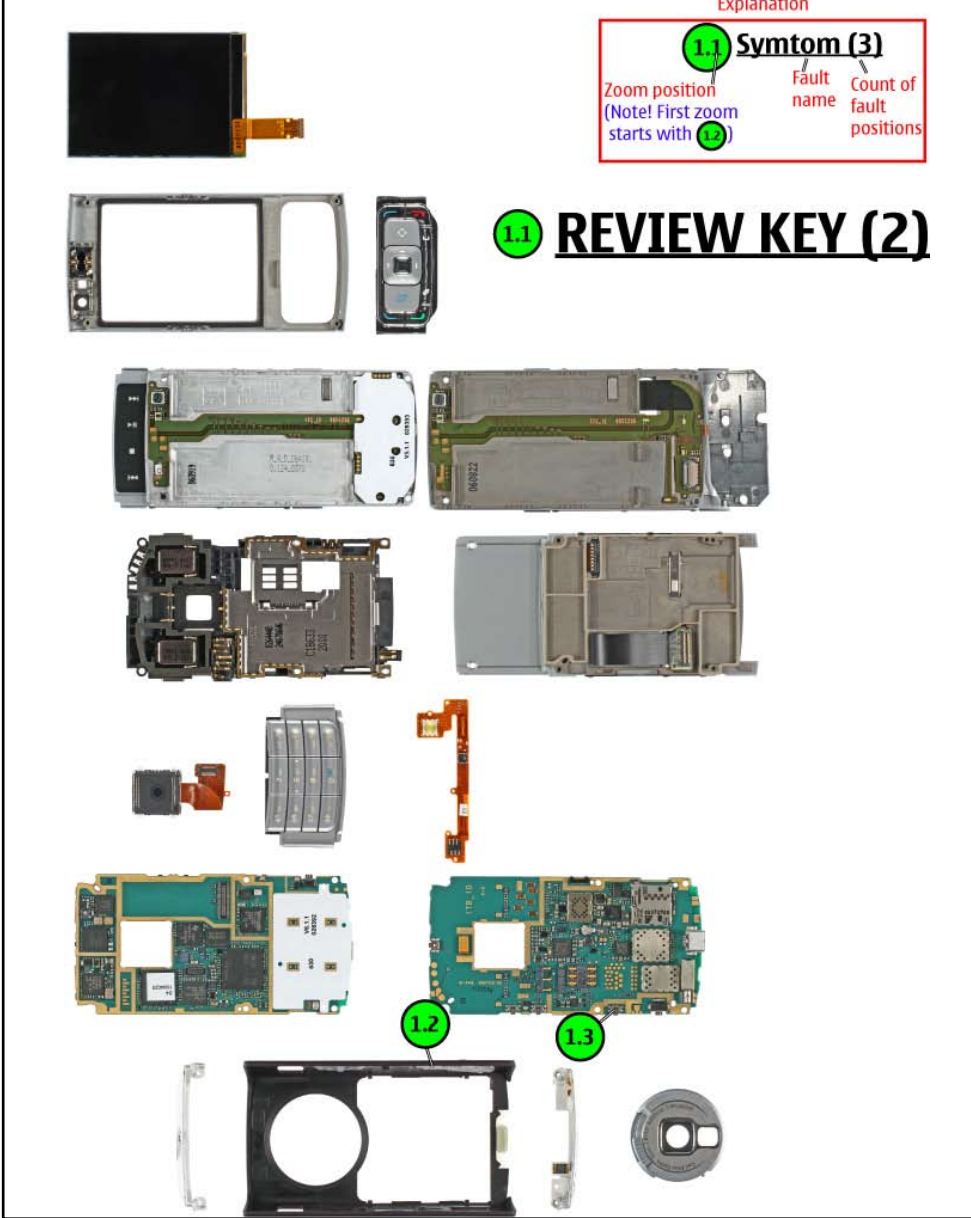
1.1 Symtom (3)

Zoom position (Note! First zoom starts with 1.2)


Fault name

Count of fault positions

1.1 REVIEW KEY (2)



29. QUICK TROUBLE SHOOTER - VOLUME KEYS



1.2

= CHANGE ASSY

Explanation

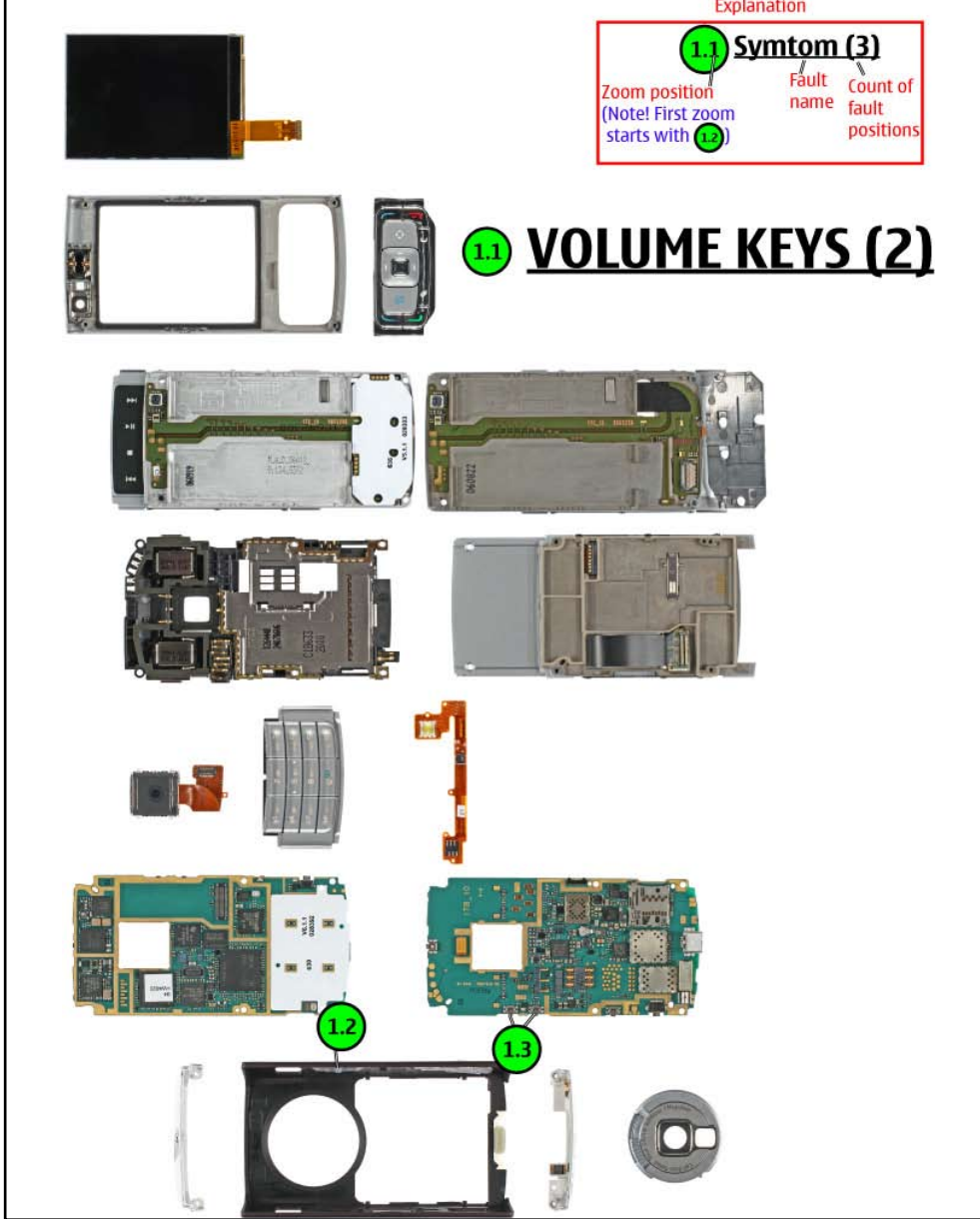
1.1 Symtom (3)

Zoom position (Note! First zoom starts with 1.2)

Fault name

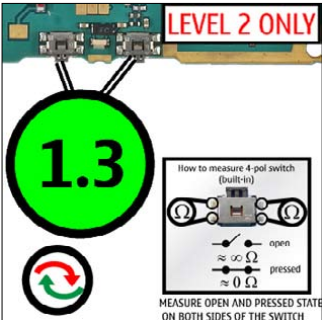
Count of fault positions

1.1 VOLUME KEYS (2)



LEVEL 2 ONLY

1.3




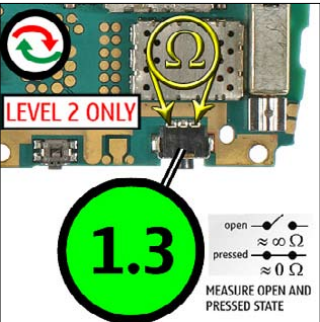
How to measure 4-pin switch (built-in)

open

pressed

MEASURE OPEN AND PRESSED STATE ON BOTH SIDES OF THE SWITCH

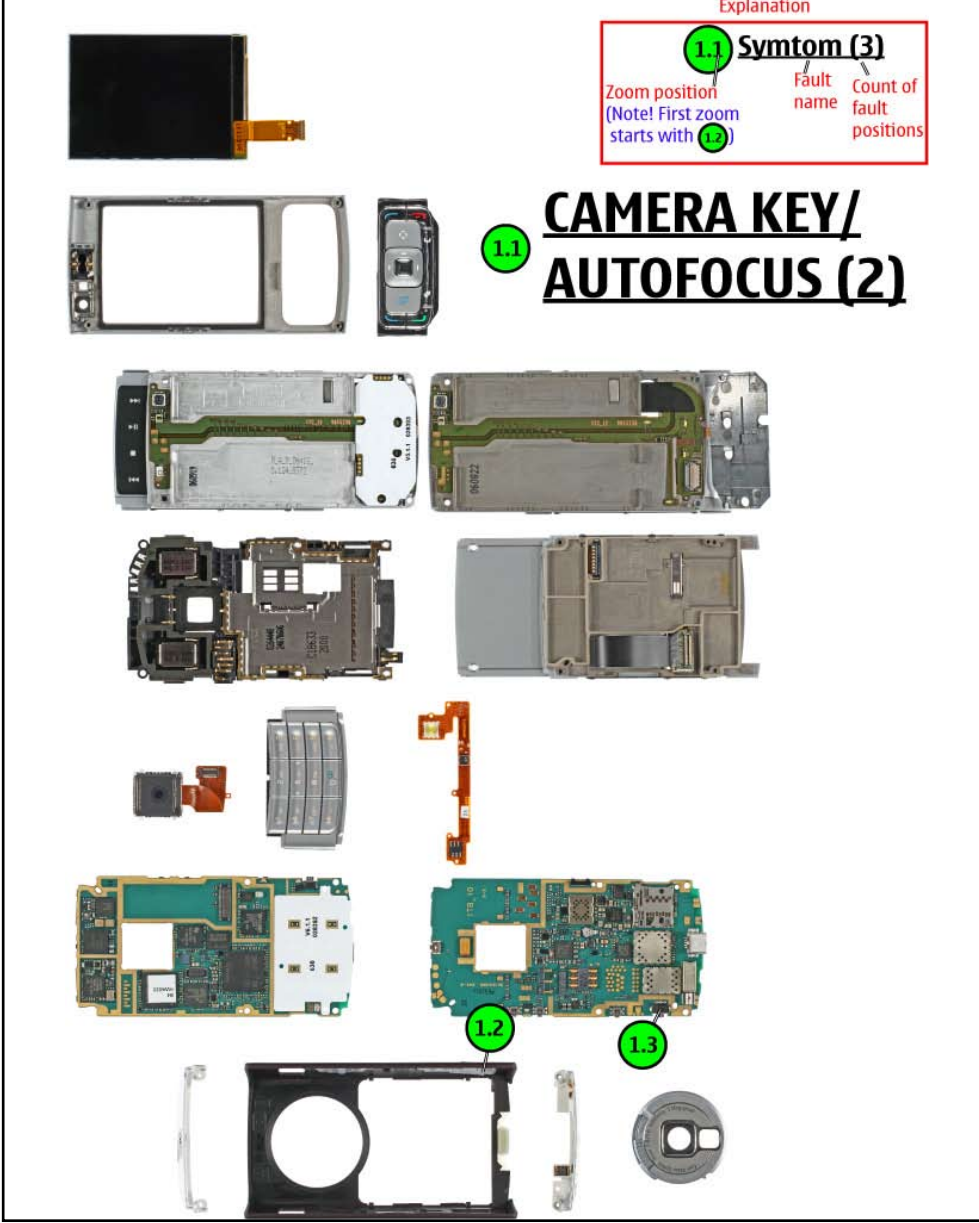
30. QUICK TROUBLE SHOOTER - CAMERA KEY/ AUTOFOCUS



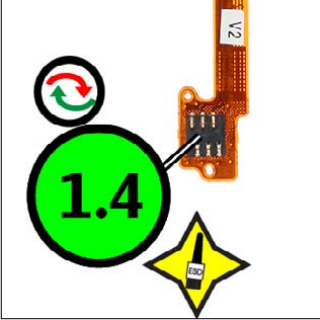
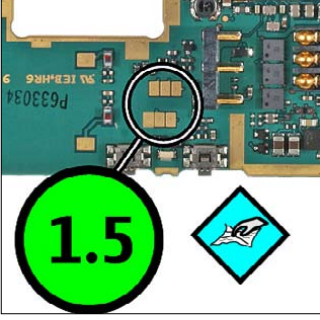
Explanation

Symtom (3)	Fault name	Count of fault positions
1.1	Zoom position (Note! First zoom starts with 1.2)	1.2

1.1 CAMERA KEY/ AUTOFOCUS (2)



31. QUICK TROUBLE SHOOTER - FLASHLIGHT

Explanation

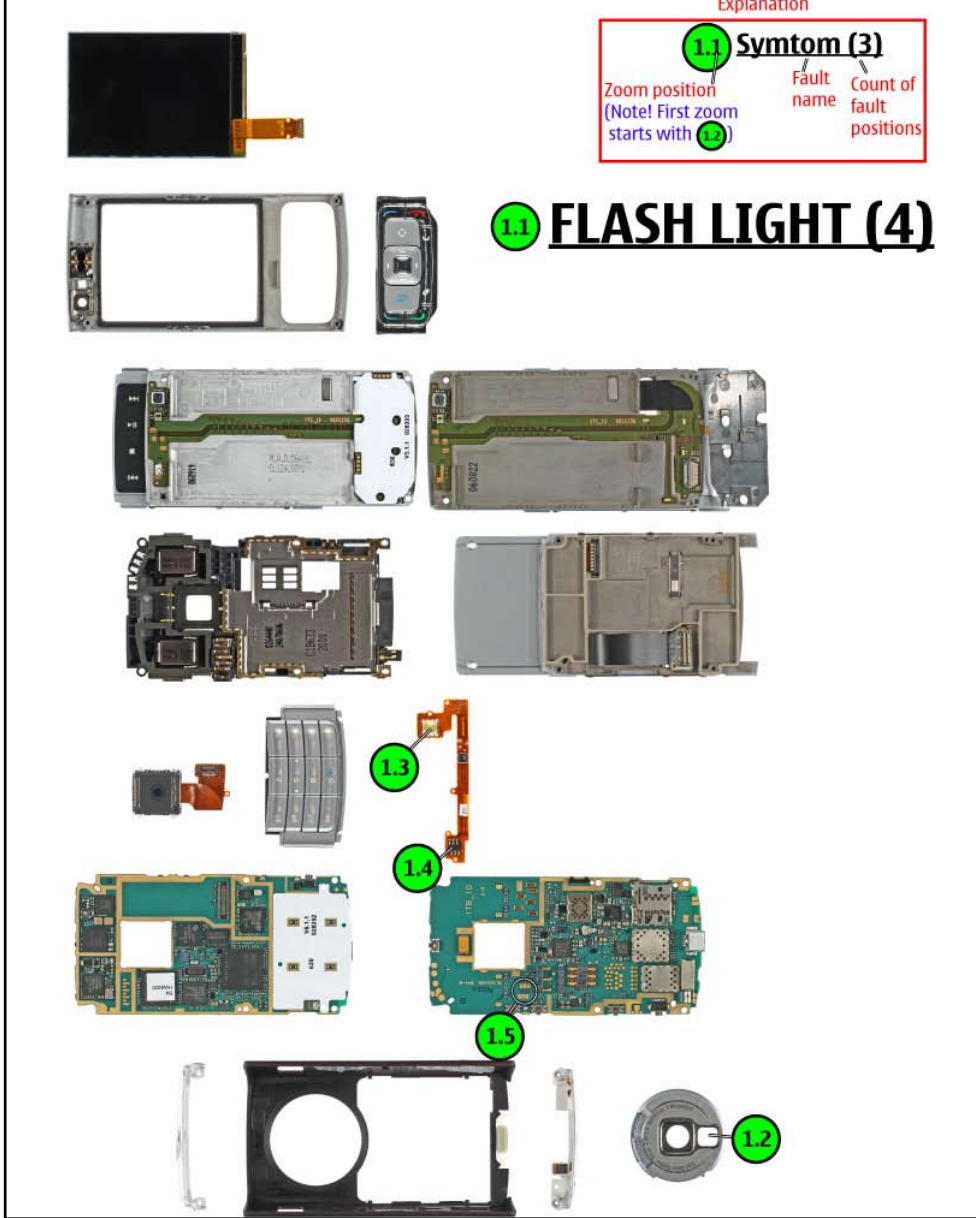
1.1 Symtom (3)

Zoom position (Note! First zoom starts with 1.2)

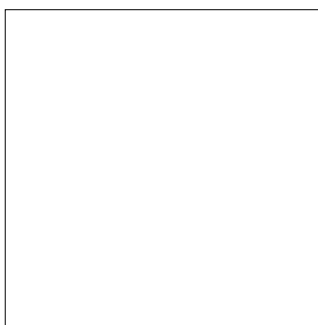
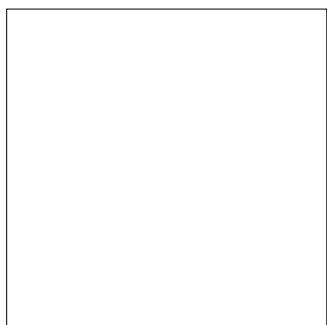
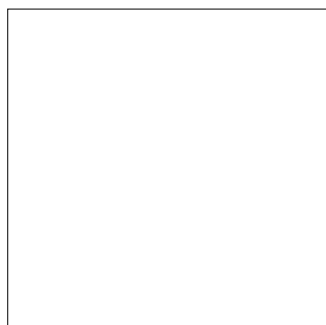
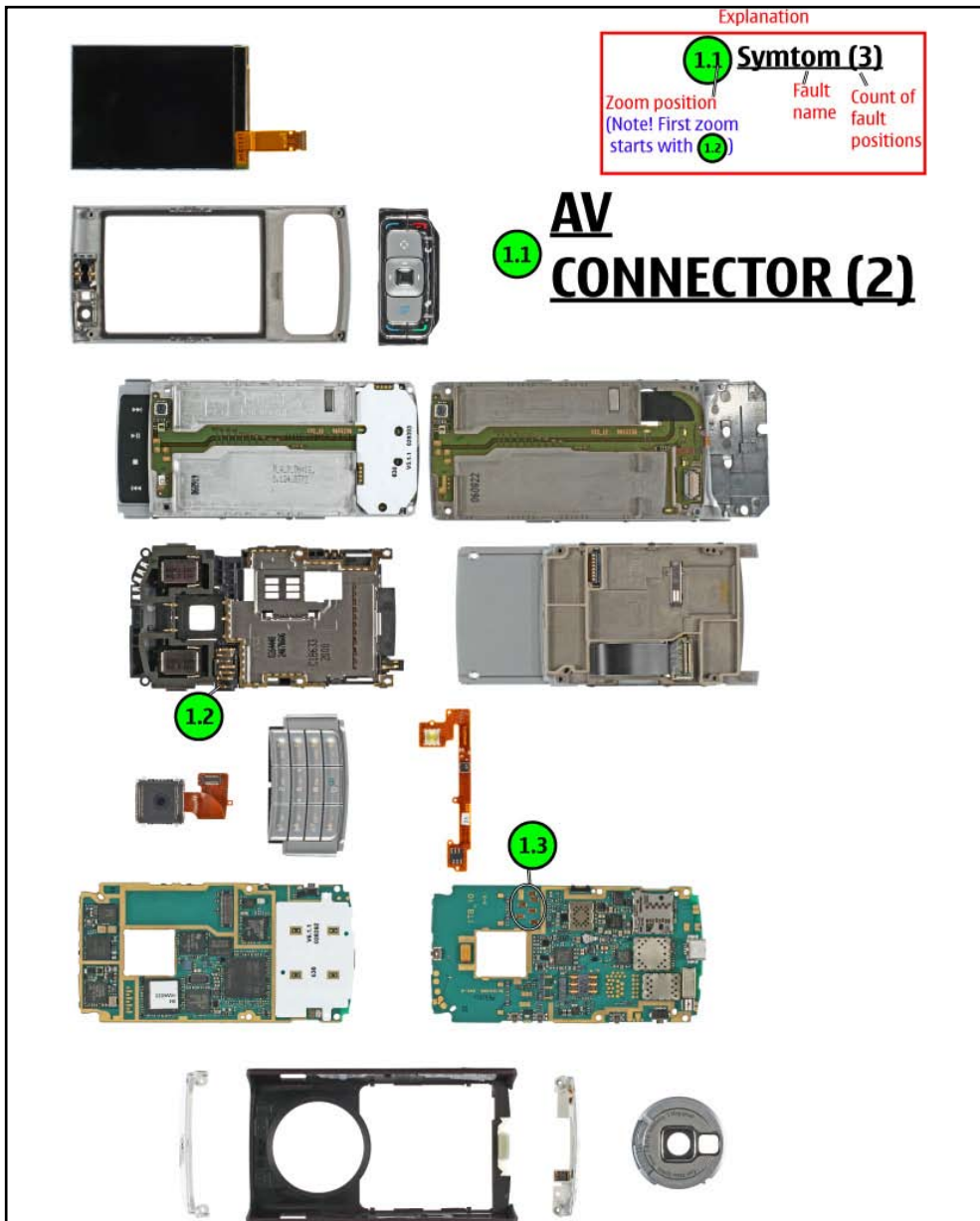
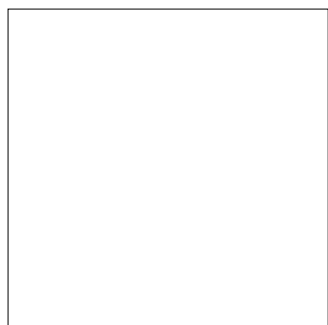
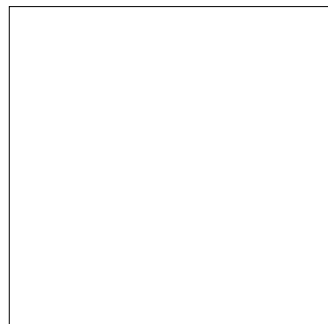
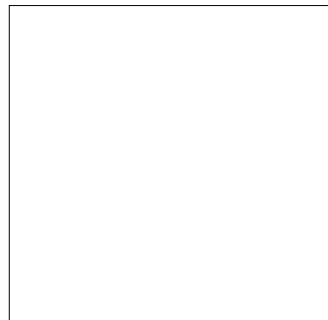
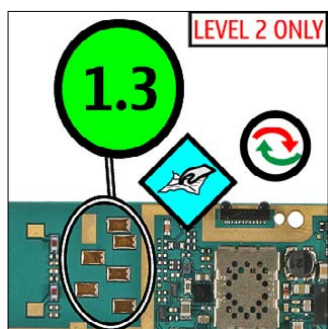
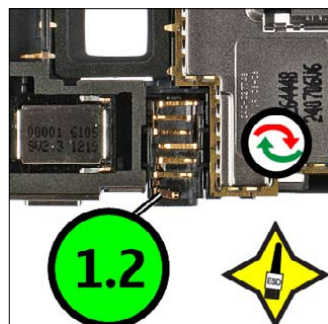
Fault name

Count of fault positions

1.1 FLASH LIGHT (4)

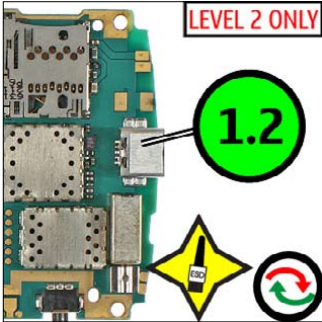


32. QUICK TROUBLE SHOOTER - AV CONNECTOR



33. QUICK TROUBLE SHOOTER - USB

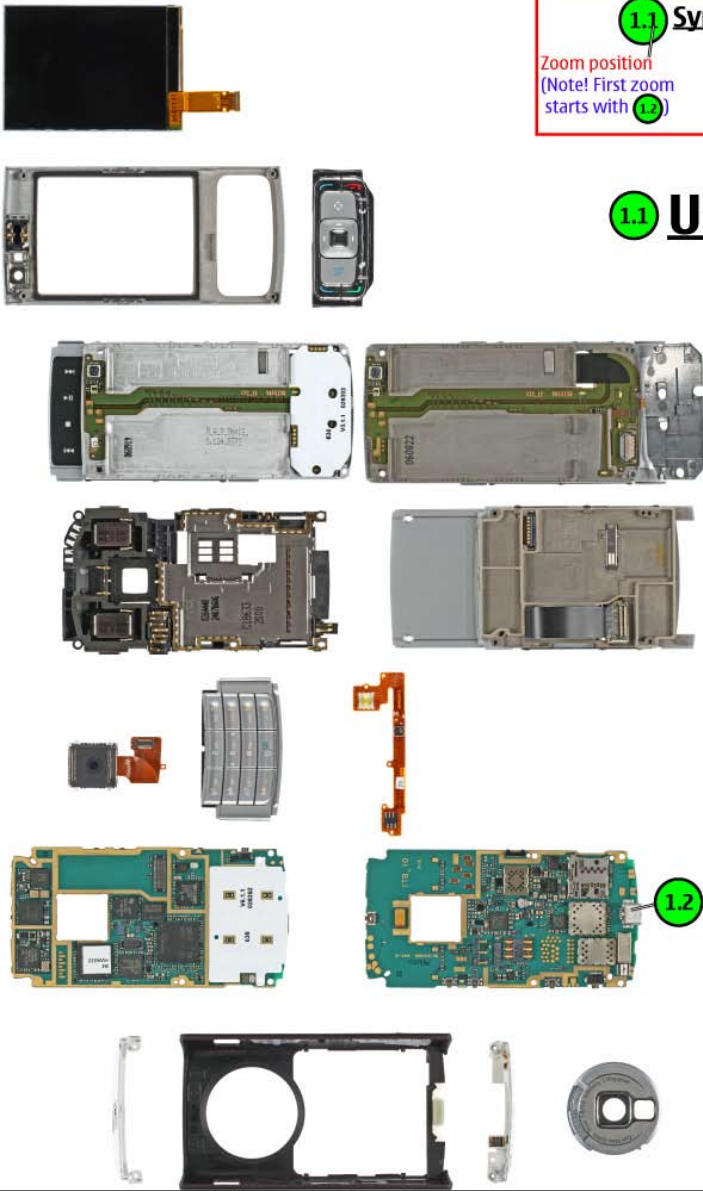
LEVEL 2 ONLY



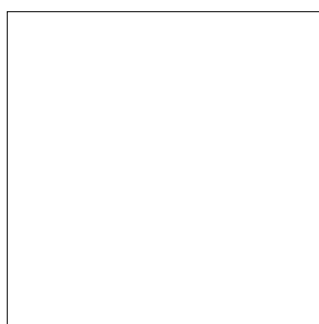
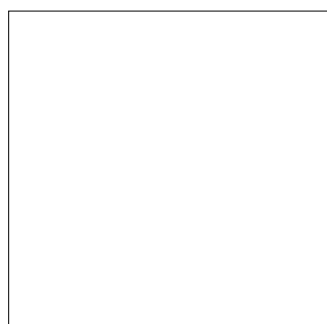
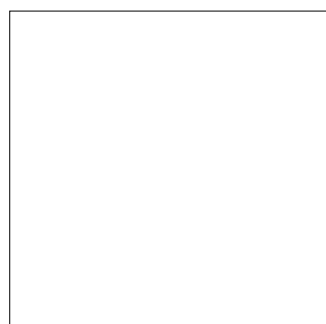
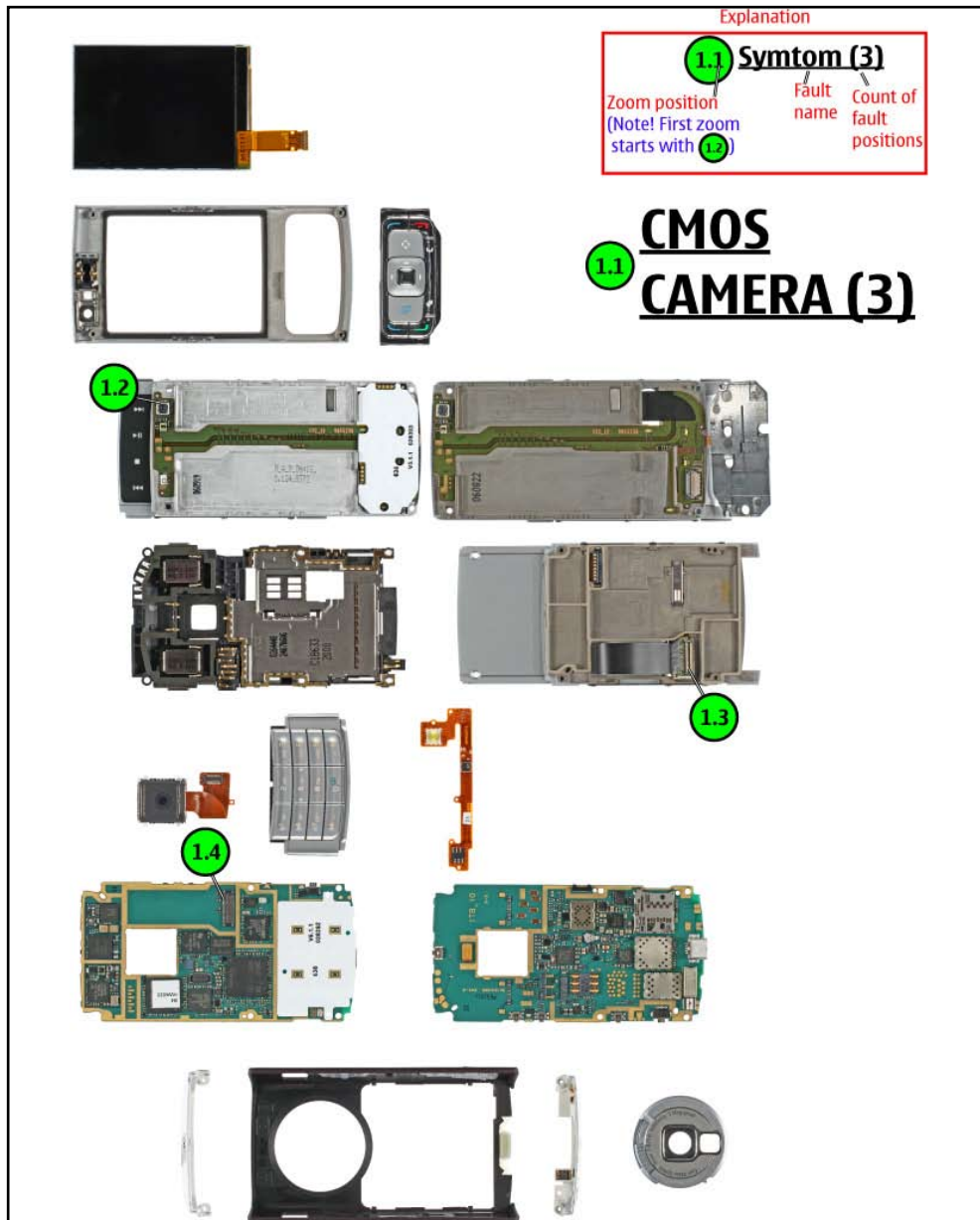
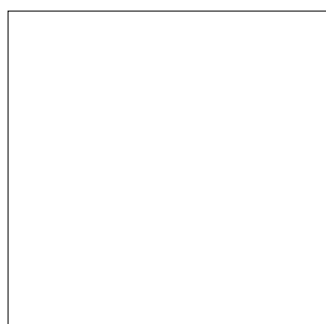
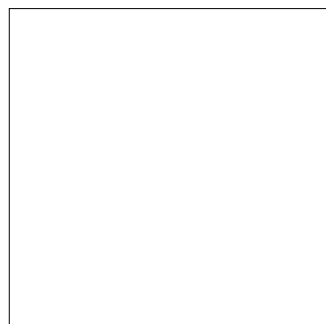
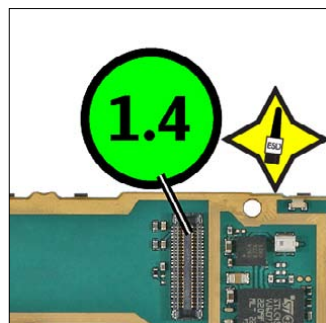
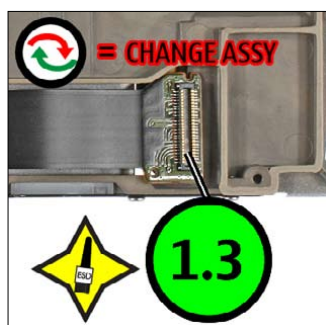
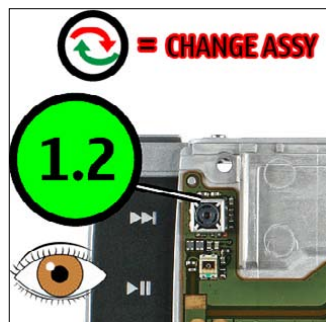
Explanation

<p>1.1</p> <p>Zoom position (Note! First zoom starts with 1.2)</p>	<p>Symtom (3)</p>	<p>Fault name</p>	<p>Count of fault positions</p>
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1.1 USB (1)



34. QUICK TROUBLE SHOOTER - CMOS CAMERA



35. QUICK TROUBLE SHOOTER - MAIN CAMERA



1.2

Explanation

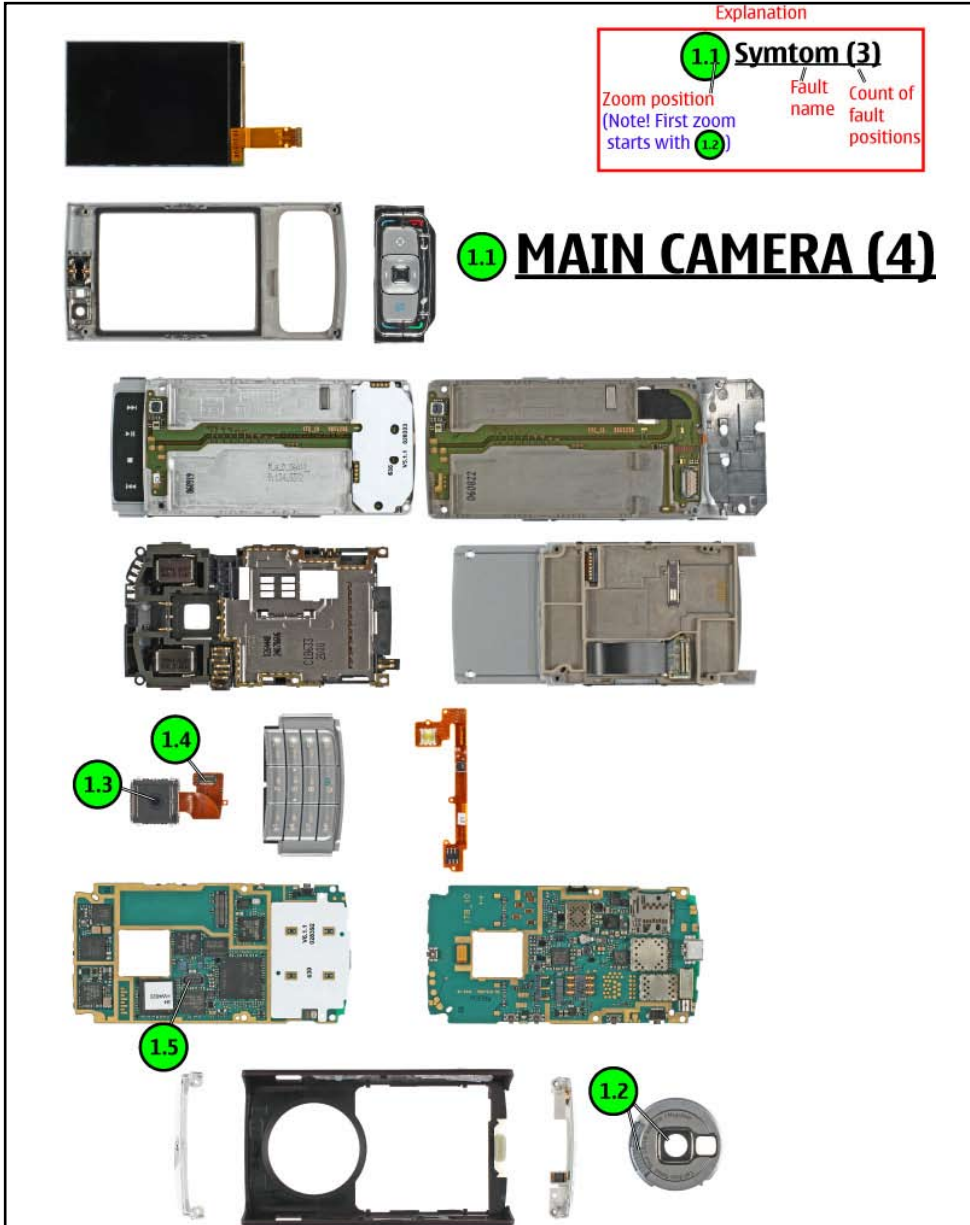
1.1 Symtom (3)

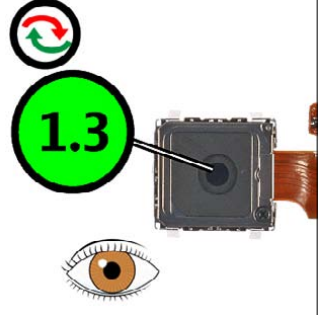
Zoom position (Note! First zoom starts with 1.2)

Fault name


Count of fault positions

1.1 MAIN CAMERA (4)

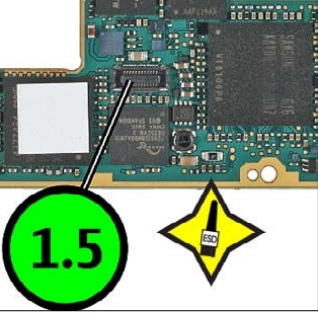




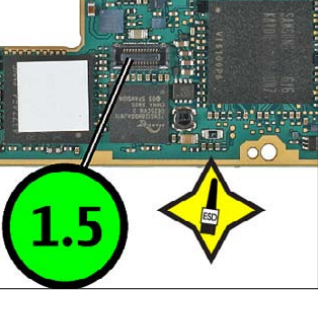
1.3



1.4



1.5



1.2

36.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.



Bluetooth
connection



infrared
connection



Test unit

Reference unit, Bluetooth /infrared activated

37. 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/>