

SERVICE MANUAL

Level 1&2

NOKIA NOKIA

93i-1 93i-5

RM-156

RM-157

**Transceiver characteristics:****Band:**

-**RM-156:** Dual Mode Tri-band phone for GSM 900/1800/1900MHz and WCDMA Band I

-**RM-157:** EGSM 900/1800/1900MHz (EDGE only)

Camera: -Main: CMOS, 3.2Mpix (2048x1536), Zoom 3x opt./ 8x digital

- Sub: CIF, (352x288)

Display: -Main LCD: 6,098cm (2.4") QVGA (240 x 320 pixels) TFT,

16 Million colors

- Sub LCD: 2.794cm (1,1") OLED (128x36) 65,536 colors

Operating System: Series 60

Bluetooth

IRDA

FM radio

Connector: Pop-Port™ Connector

Transceiver with BL-5F Li-Ion battery pack

Talk time	Standby	Note
up to 3h	up to 10days	Depends on network parameters

Environmental characteristics:

- Lead-free soldered

TABLE OF CONTENTS

Page

1.	INTRODUCTION	3
2.	EXPLODED VIEW - UPPER BLOCK	4
3.	EXPLODED VIEW - LOWER BLOCK	5
4.	SPARE PARTS OVERVIEW	6
5.	GENERAL RECYCLING RECOMMENDATION	7
6.	LEVEL 2 SOLDER COMPONENTS	8
7.	SERVICE DEVICES	9
8.	SW-UPDATE	11
9.	UPPER BLOCK DISASSEMBLY	12
10.	UPPER BLOCK ASSEMBLY	17
11.	LOWER BLOCK DISASSEMBLY	23
12.	LOWER BLOCK ASSEMBLY	33
13.	LEGEND FOR QUICK TROUBLE SHOOTER	45
14.	QUICK TROUBLE SHOOTER - POWER ON	46
15.	QUICK TROUBLE SHOOTER - CHARGING	47
16.	QUICK TROUBLE SHOOTER - NO SERVICE	48
17.	QUICK TROUBLE SHOOTER - WLAN/BLUETOOTH	49
18.	QUICK TROUBLE SHOOTER - EARPIECE	50
19.	QUICK TROUBLE SHOOTER - IHF SPEAKER	51
20.	QUICK TROUBLE SHOOTER - MAIN LCD	52
21.	QUICK TROUBLE SHOOTER - SUB LCD	53
22.	QUICK TROUBLE SHOOTER - MICROPHONE	54
23.	QUICK TROUBLE SHOOTER - CAMCORDER MICROPHONE	55
24.	QUICK TROUBLE SHOOTER - KEYMAT	56
25.	QUICK TROUBLE SHOOTER - ROTATOR SENSOR	57
26.	QUICK TROUBLE SHOOTER - SIDE KEY/ JOYSTICK	58
27.	QUICK TROUBLE SHOOTER - FLASHLIGHT	59
28.	QUICK TROUBLE SHOOTER - FLIP SOFT KEYS	60
29.	QUICK TROUBLE SHOOTER - ZOOM CAPTURE KEY	61
30.	QUICK TROUBLE SHOOTER - CAMERA	62
31.	QUICK TROUBLE SHOOTER - CMOS CAMERA	63

CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	24.Nov.2006	Initial draft
Approved	1.0	9.Jan.2007	Approval
Approved	2.0	05.Feb.2007	Lower Block Disassy/Assy updated
Approved	3.0	25.Apr.2007	Exploded view & Spare Parts overview updated

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.



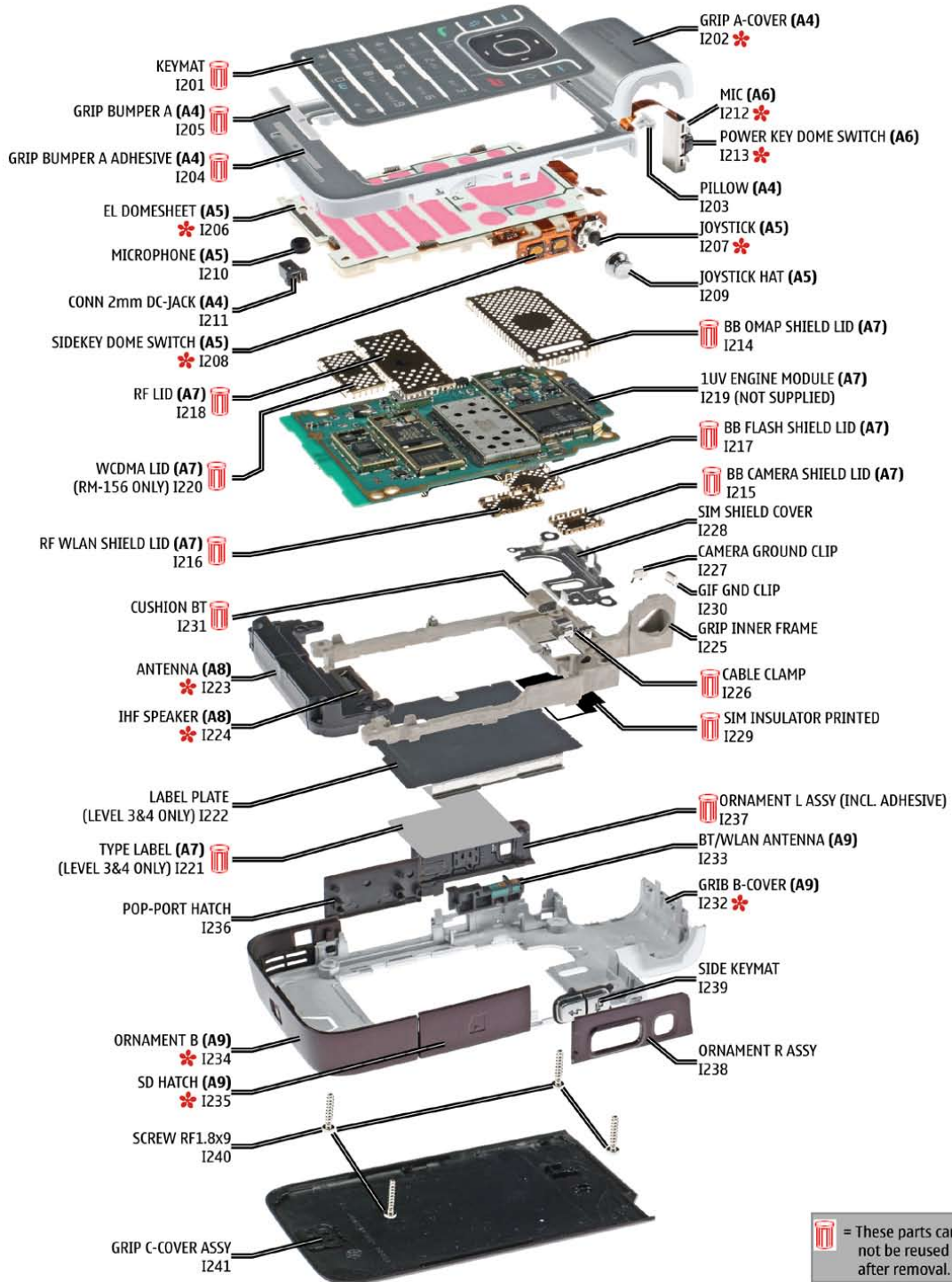
Electrostatic discharge can easily damage the sensitive components of electronic products. Therefore every Service Supplier has to take care of all precautions, which are mentioned in the service level related "Service Partner Requirements", available on NOKIA Online. Also see ESD Protection Requirements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

3. EXPLODED VIEW - LOWER BLOCK

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

N93i RM-156/RM-157 Exploded view

LOWER BLOCK



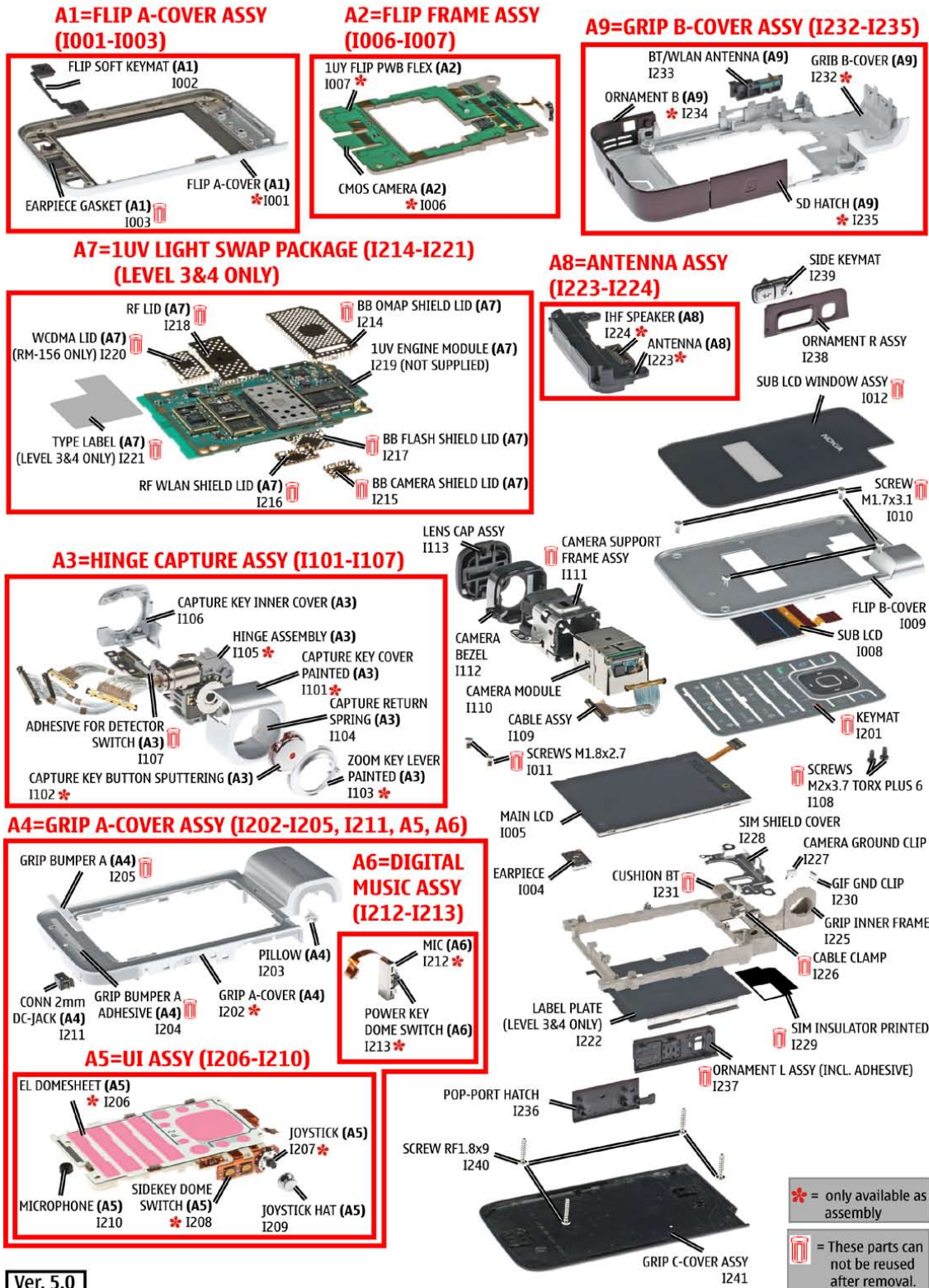
= These parts can not be reused after removal.
 = only available as assembly

Ver. 3.0

4. SPARE PARTS OVERVIEW

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

N93i RM-156/RM-157 Spare Parts overview



Ver. 5.0

5. 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)

METAL

PLASTIC

Mixed components
 (Example components)

ELECTRO-MIX

ELECTRO-MIX: Most components made of Glass, Ceramics, Glassfiberreinforced epoxy.
ALL fractions containing any copper should be send to ELECTRO-MIX!!!

METAL - MIX

METAL-MIX: Most components made of Metal

BATTERY

BATTERY: Chemicals, Plastic and Ceramics

PLASTIC-MIX

PLASTIC-MIX: Most components made of Plastic

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

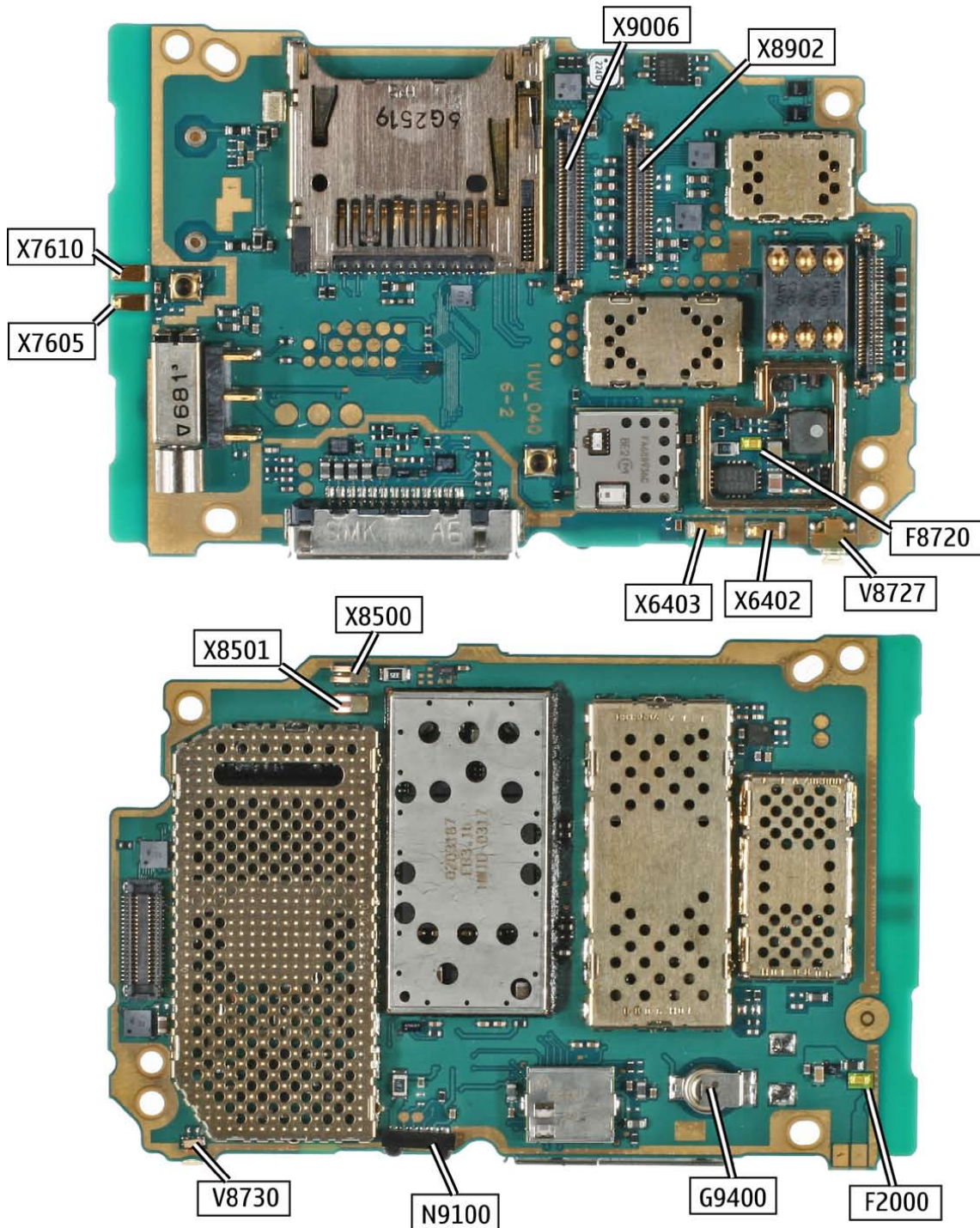
Ver. 3.0

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6. LEVEL 2 SOLDER COMPONENTS

N93 RM-156/ RM-157 Level 2 solder components

Solder components only for LEVEL 2



7. SERVICE DEVICES

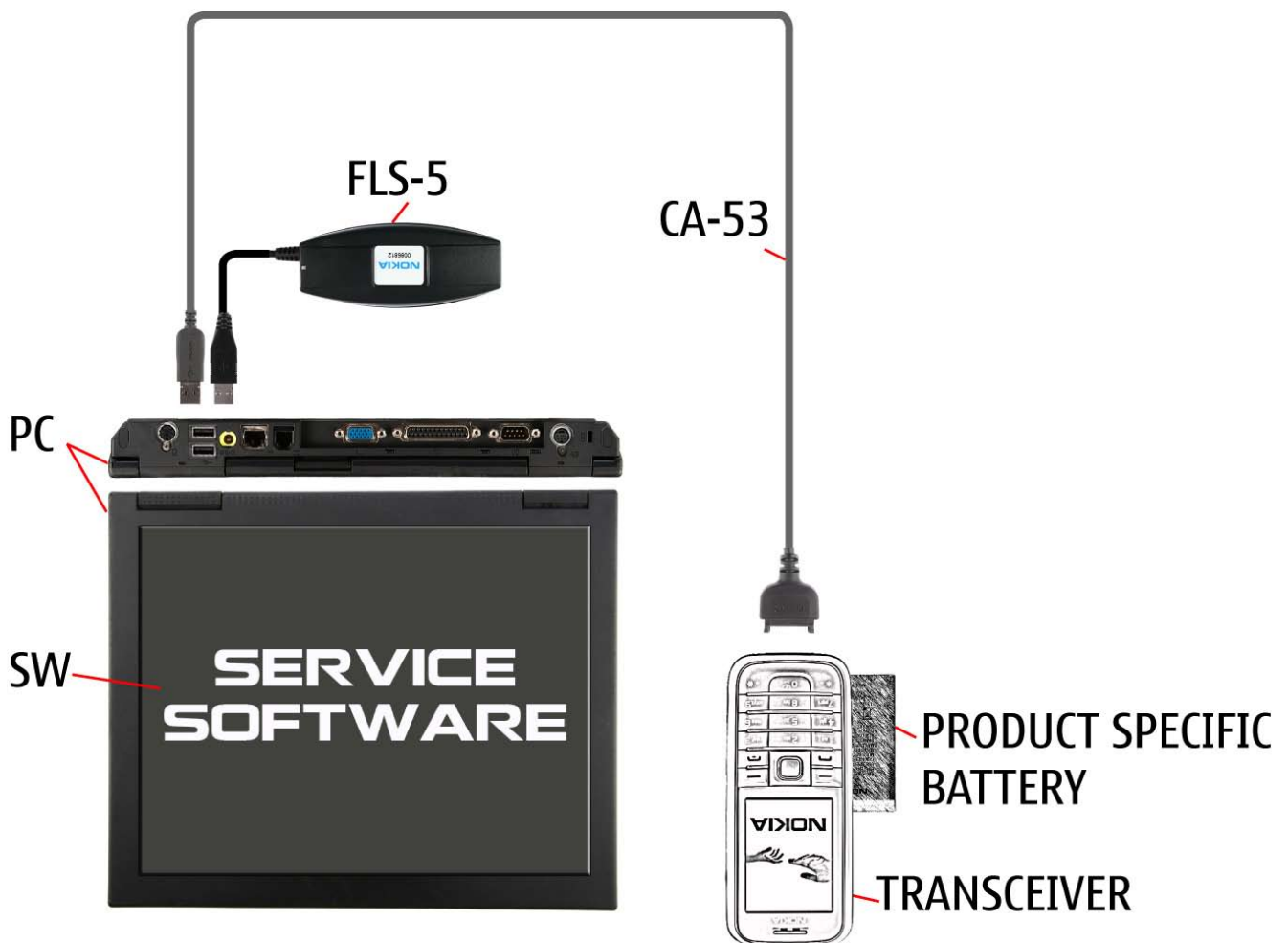
 <p>FLS-5</p>	<p>FLS-5 incl. ACF-8, Driver and User Guide Dongle and flash device incorporated into one package, developed specifically for POS use.</p>
	<p>ACF-8 Universal Power Supply is used to power FLS-4S.</p>
	<p>Travel Charger AC-4 Small and lightweight charger for fast charging of your phone battery.</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>SS-107</p>	<p>SS-107 Vacuum cap.</p>
	<p>CA-53 Service Cable to connect the PC with the Pop-Port™ connector.</p>

 <p>RJ-110</p>	<p>RJ-110 Soldering Jig</p>
	<p>Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).</p>
 <p>NOKIA Standard Toolkit V2</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>

8. 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](#).



9. UPPER BLOCK DISASSEMBLY



1. Needed tools: a torx driver, a torque driver, a torx plus size 6 bit, metal tweezers, angled tweezers, a dental pick, a flat bladed screwdriver, the SS-93, the SS-107 vacuum cap and the SRT-6.



2. Remove the battery if inserted.



3. Position the SS-107 on the SUB LCD WINDOW as shown.



4. Press down the lever to create vacuum in the cup.



5. Carefully, pull at the grip to lift a bit the SUB LCD WINDOW.



6. Place the SS-93 between the SUB LCD WINDOW and the FLIP B-COVER and separate the parts from each other.



7. Do not use the window again.



8. Remove the remaining adhesive.



9. Only discard the FLIP B-COVER when the adhesive is gluing strongly and can not be removed completely.



10. Undo the screws in the order shown...



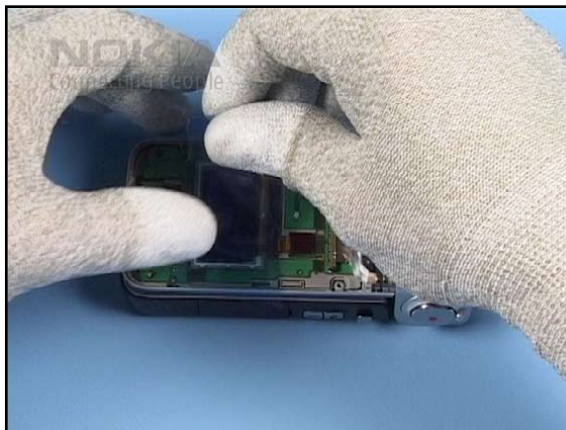
11. ...and remove them.



12. Slide the SRT-6 along the sides of the FLIP B-COVER to release all clips.



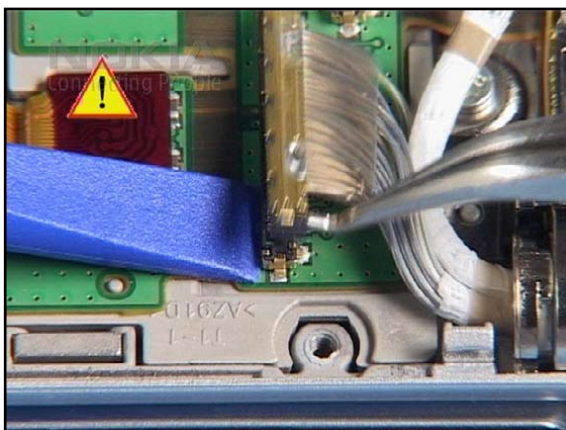
13. Remove the FLIP B-COVER.



14. Protect the SUB LCD with a protective film.



15. Use the SS-93 as a support when opening the HINGE connectors.



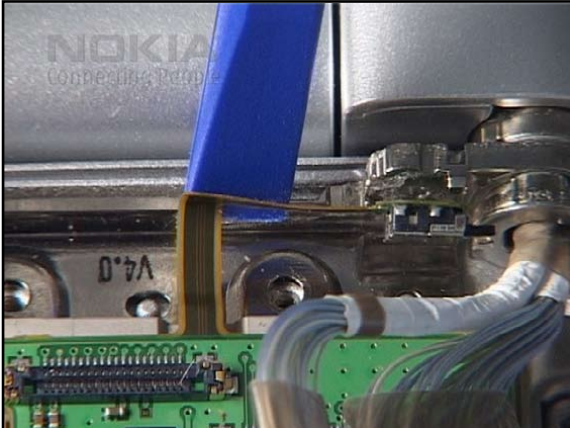
16. Carefully lever up both connectors with angled tweezers.



17. Undo the screws in the order shown...



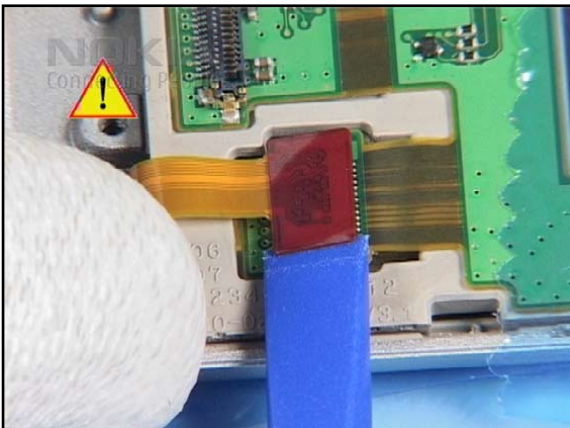
18. ...and discard them.



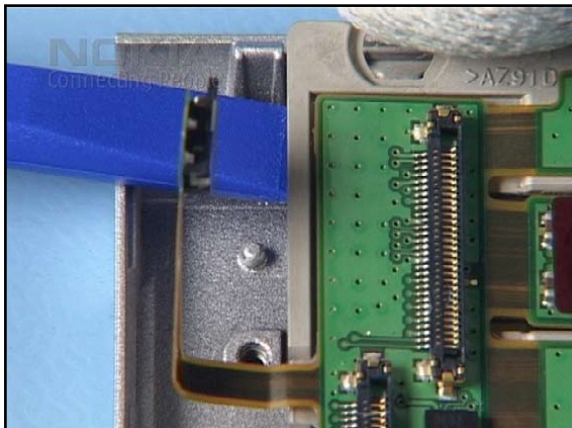
19. Loosen the flex of the DETECTOR SWITCH.



20. Open a bit the HINGE as shown and separate the upper parts from the LOWER BLOCK.



21. Open the MAIN LCD connector.



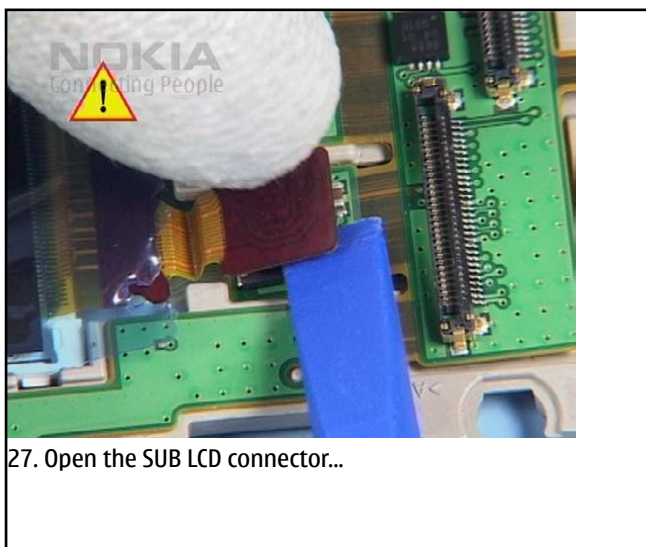
22. Lever up the FLIP FRAME ASSY and remove it from the FLIP A-COVER.



23. Remove the MAIN LCD.



24. Now, lever the EARPIECE from its guidance...



10. UPPER BLOCK ASSEMBLY



1. Assembly



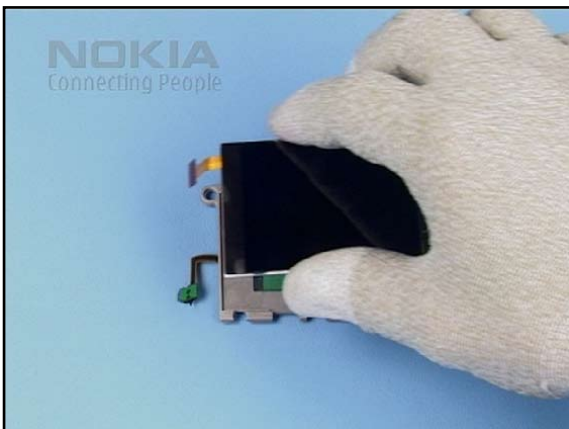
2. Carefully place the FLIP SOFT KEYMAT into its place.



3. Always use a new EARPIECE GASKET when replacing the EARPIECE.



4. Mind the spring contacts while handling the EARPIECE.



5. Place the MAIN LCD on to the FLIP FRAME ASSY.



6. Align the FLIP A-COVER with the FLIP FRAME ASSY...



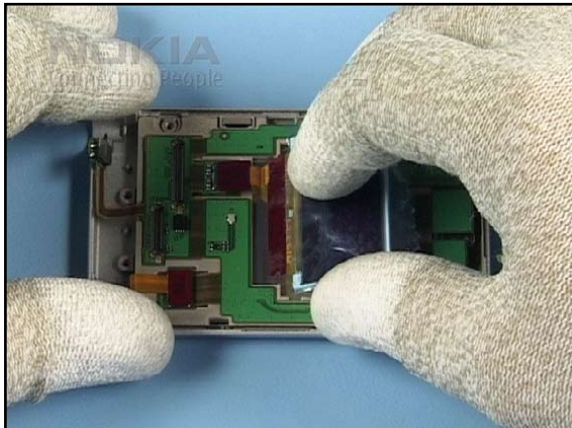
7. ...and cover the MAIN LCD with a protective film.



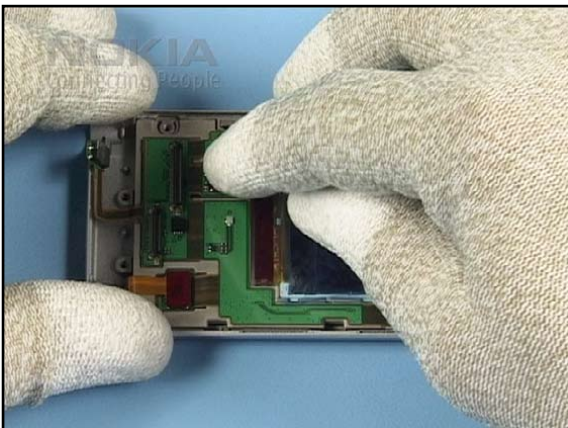
8. Gently turn the assembly as shown and ensure that the FLIP FRAM ASSY and the MAIN LCD are correctly placed onto the FLIP A-COVER.



9. Close the MAIN LCD connector.



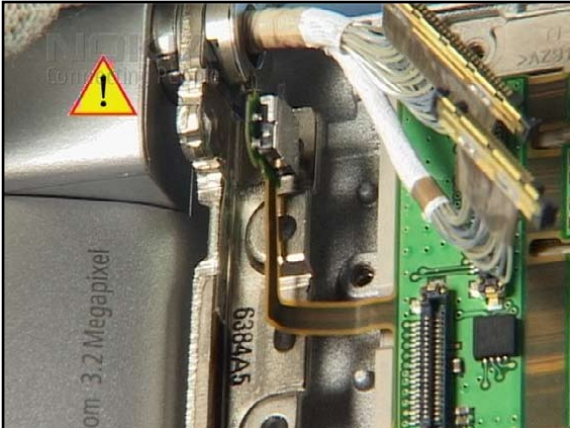
10. Place the SUB LCD on to the FLIP FRAME ASSY...



11. Close the SUB LCD connector.



12. Align the FLIP A-COVER with the HINGE ASSEMBLY.



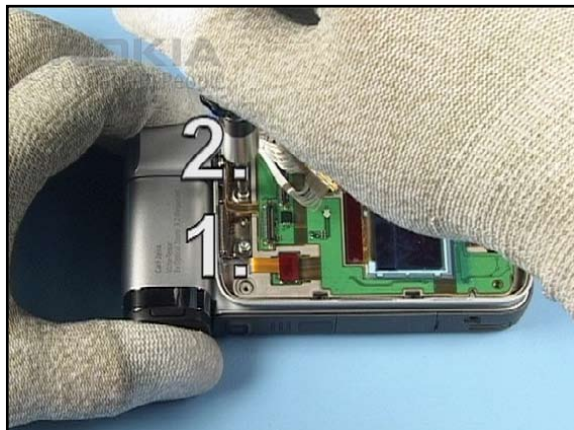
13. Take special care to the flex of the DETECTOR SWITCH.



14. Set the correct torque.



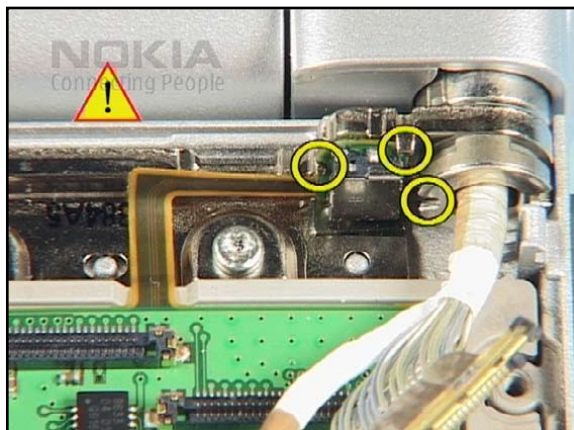
15. Always use new screws...



16. ...and tighten them to the correct torque in the order shown.



17. Fix the DETECTOR SWITCH to its place and adhere the flex as shown.



18. Check its correct position.



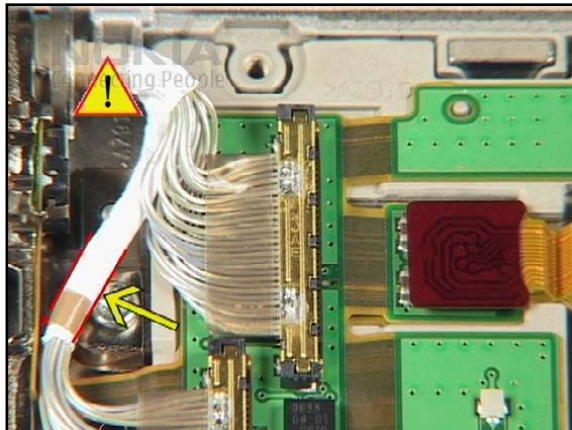
19. Open the unit as shown...



20. ...and check the functionality of the switch by turning the FLIP A-COVER to both directions.



21. Very gently, close the both HINGE connectors.



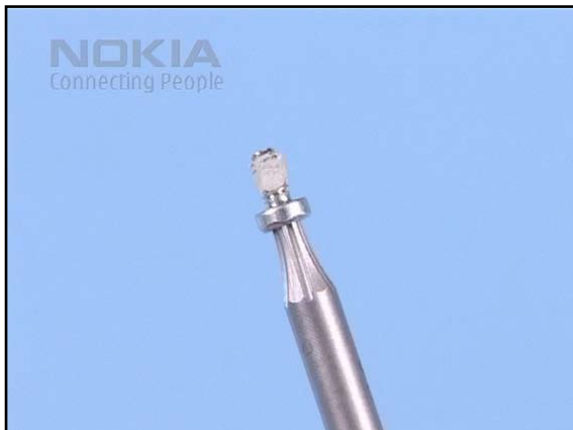
22. Ensure that the cable is not positioned over the screw.



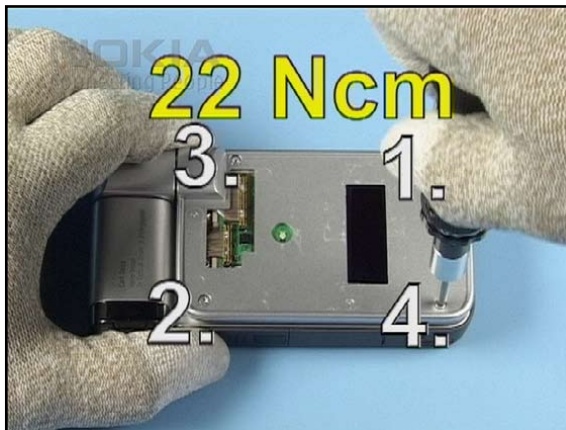
23. Remove the protective film.



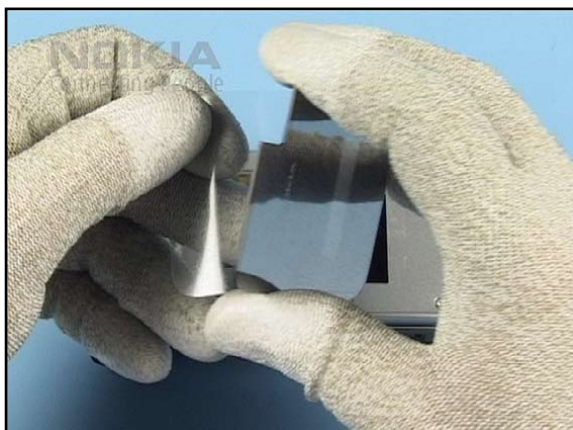
24. Align the FLIP B-COVER with the FLIP A-COVER and press them together.



25. Always use new screws...



26. ...and tighten them to the correct torque in the order shown.



27. Remove the protective film from the new SUB LCD WINDOWS ASSY...



28. and align it exactly with the FLIP B-COVER.



29. Secure the window by pressing it into the FLIP B-COVER.



30. Check that no gaps remain.



31. Finally fit the GRIP C-COVER ASSY.

11. LOWER BLOCK DISASSEMBLY



1. Needed Tools: a Torx driver, a torque driver, a Torx Plus size 6 bit, a flat bladed screwdriver, a dental pick, metal tweezers, angled tweezers, the SS-93 and the DC-plug.



2. Cover all windows with a protective film.



3. Optionally the KEYMAT can be removed now. Lift the KEYMAT with the SS-93 as shown.



4. Loosen it from the GRIP A-COVER...



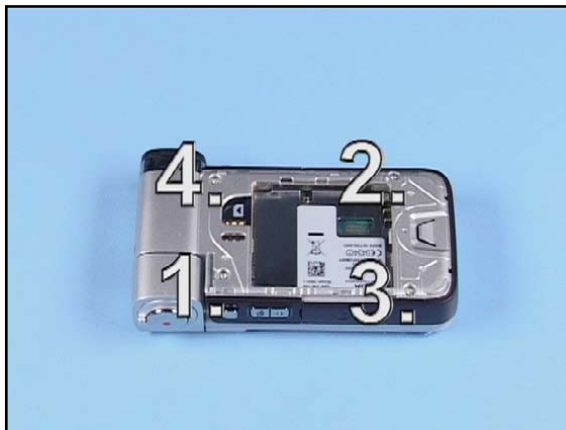
5. ...and discard it.



6. Ensure that no adhesive residue.



7. Unlock and remove the GRIP C-COVER.



8. Undo the four Torx Plus size 6 screws in the order shown.



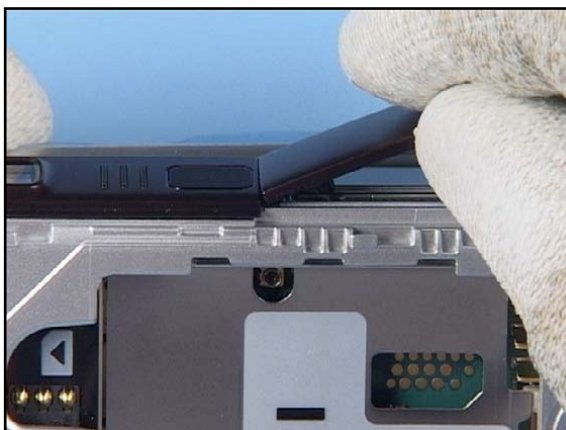
9. Remove the screws.



10. Open the SD-HATCH.



11. Unlock and remove the ORNAMENT R ASSY with the SIDE KEYMAT.



12. Open the POP-PORT HATCH.



13. Use the SS-93 as a lever to unglue the ORNAMENT L ASSY (INCL. ADHESIVE). Do not reuse it.



14. Remove the adhesive remain.



15. Open the unit.



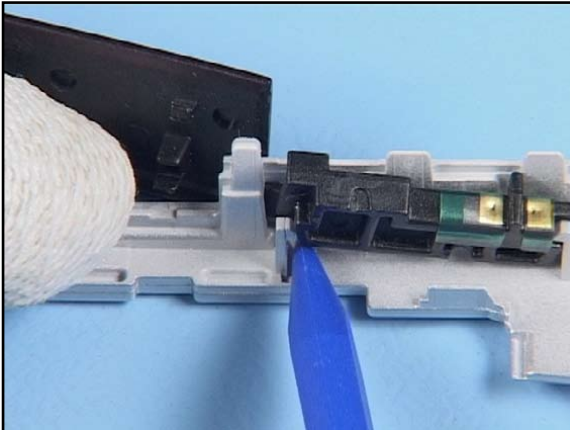
16. Unlock all snaps of the GRIP B-COVER.



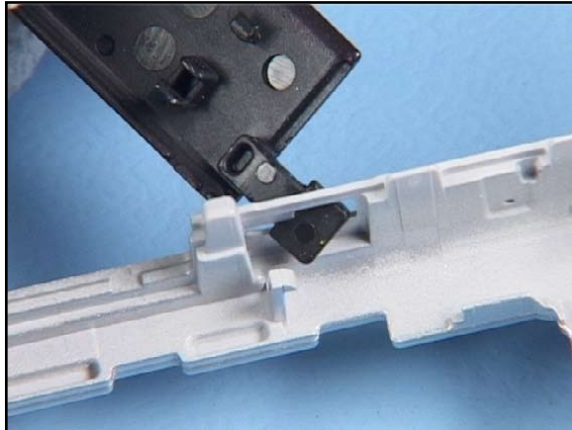
17. Close the unit.



18. Unlock the last two snaps on the hinge side and remove the GRIP B-COVER.



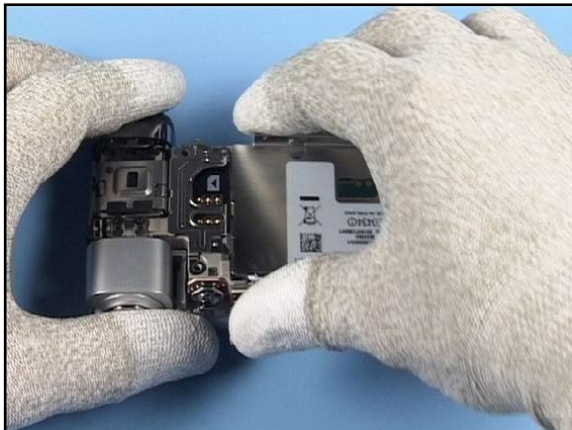
19. Unsnap and remove the BT/WL ANTENNA.



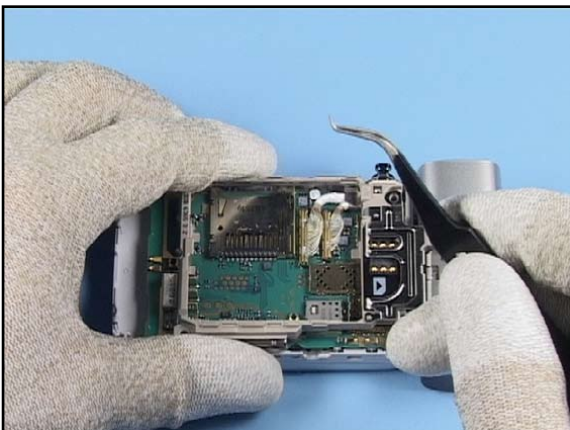
20. Remove the POP-PORT HATCH.



21. Lift the GRIP INNER FRAME a bit and remove the ANTENNA ASSY.



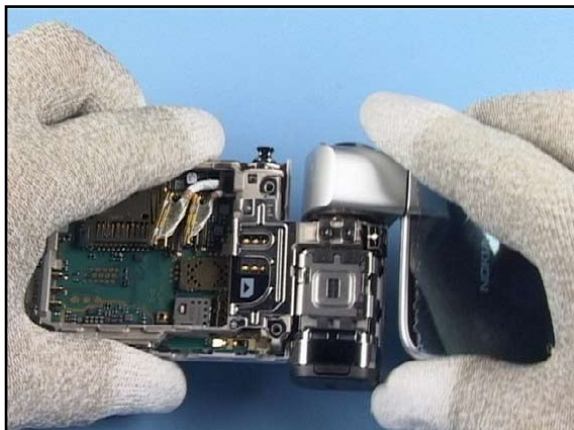
22. Lift up the LABEL PLATE and remove it.



23. Use angled tweezers to open the HINGE connectors.



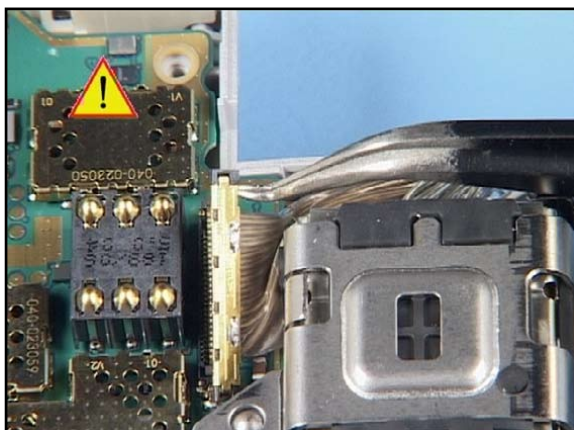
24. Place the tip of the tweezers exactly under the connector plug and carefully lever it up as shown.



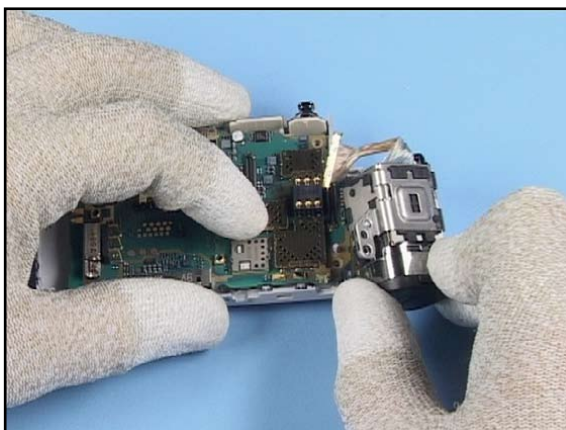
25. Open the handset...



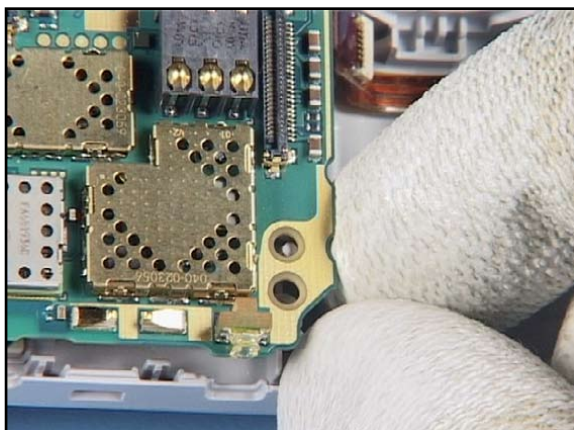
26. ...and gently separate the Upper Block from the Lower parts.



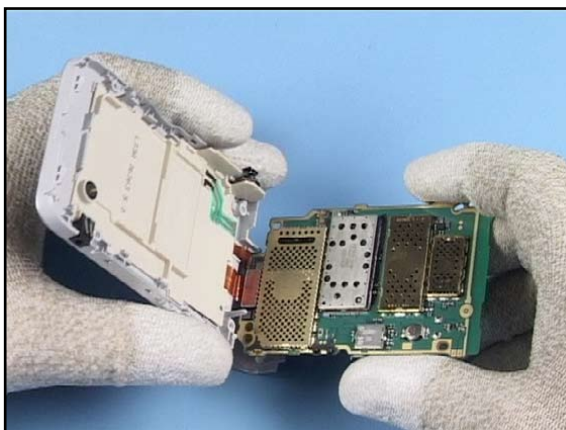
27. Now, open the Camera CABLE ASSY carefully...



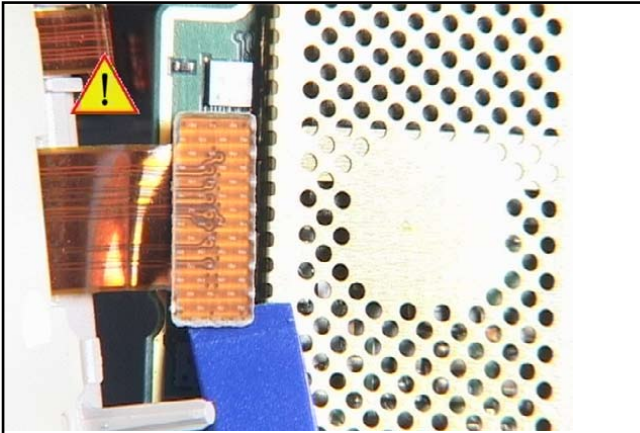
28. ...and remove the CAMERA ASSEMBLY.



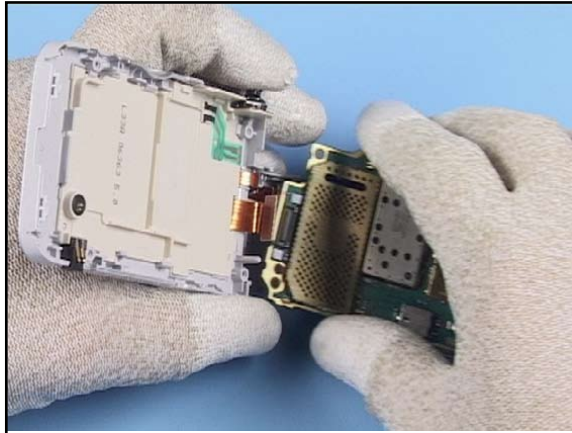
29. Lift the ENGINE MODULE from the GRIP A-COVER...



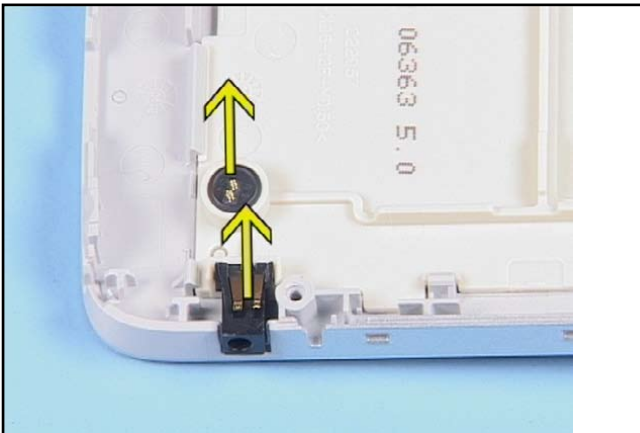
30. ...and turn it to the angle of 90°.



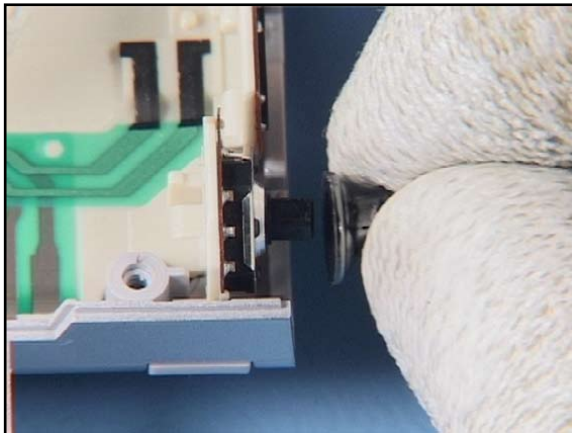
31. Gently open the UI ASSY connector...



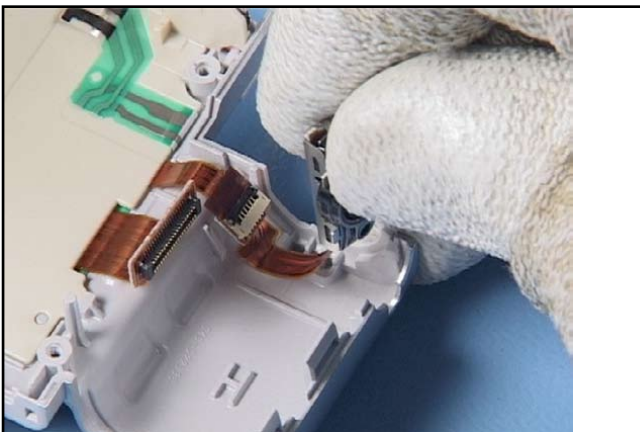
32. ...and remove the ENGINE MODULE.



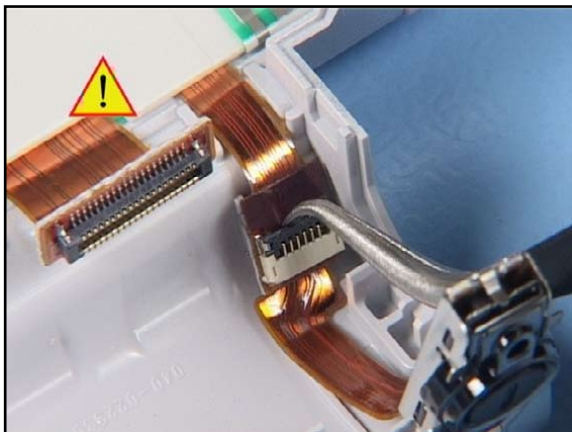
33. The MICROPHONE and the DC-JACK can be removed easily.



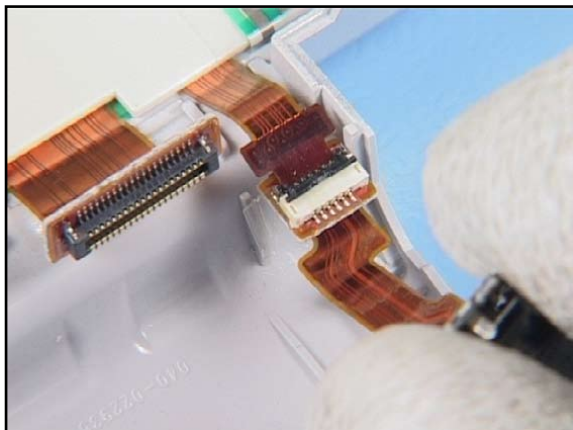
34. Remove the JOYSTICK HAT.



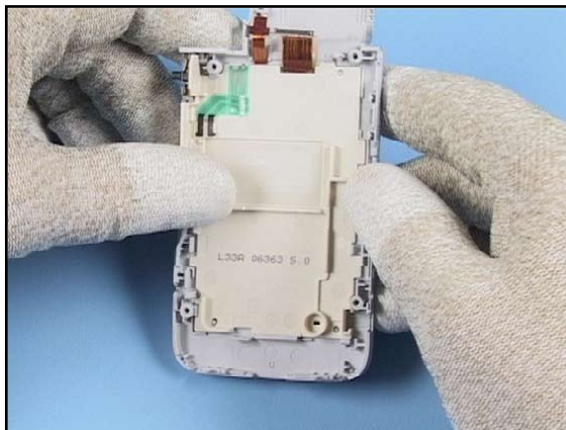
35. Loosen the flex of the DIGITAL MUSIC ASSY...



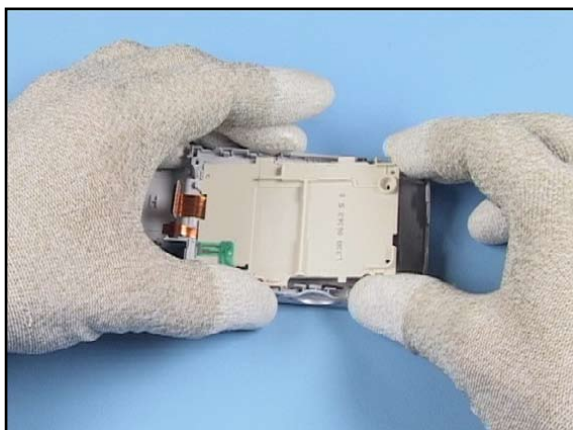
36. ...and gently open the connector.



37. Separate the parts from each other.



38. Bend a bit the GRIP A-COVER to unsnap the UI ASSY.



39. Lift the UI ASSY from the GRIP A-COVER and remove it.



40. Separate the KEYMAT from the GRIP A-COVER and discard it.



41. Remove the PILLOW with the SS-93.



42. Remove the GRIP BUMPER by pushing it out from the inner side of the cover.



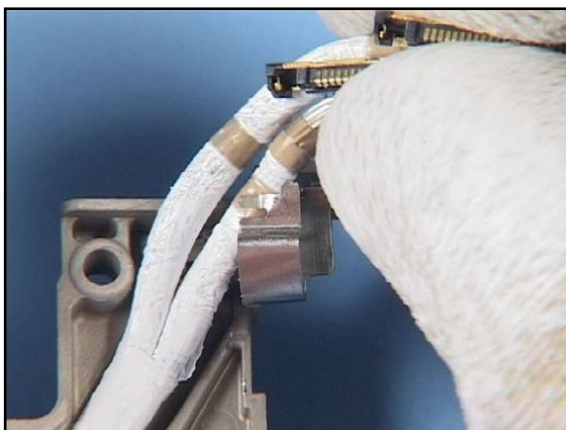
43. Unlock the SIM SHIELD COVER with the dental pick...



44. ... and remove it.



45. Open the CABLE CLAMP...



46. ...and take out the hinge cables from their guide.



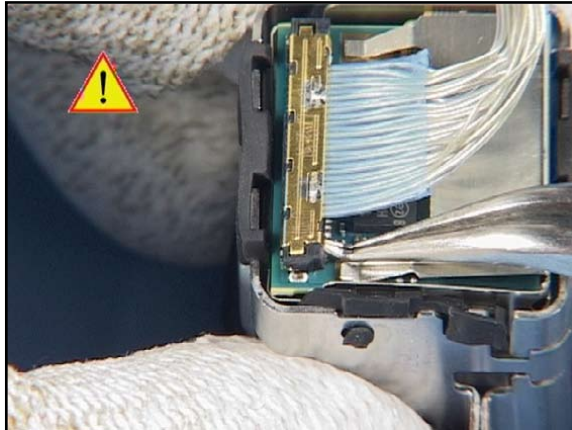
47. Undo the two Torx Plus size 6 screws in the order shown...



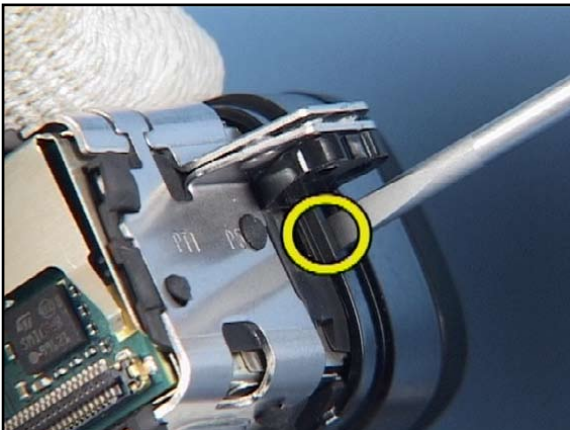
48. ...and discard them.



49. Gently separate the GRIP INNER FRAME from the UPPER BLOCK.



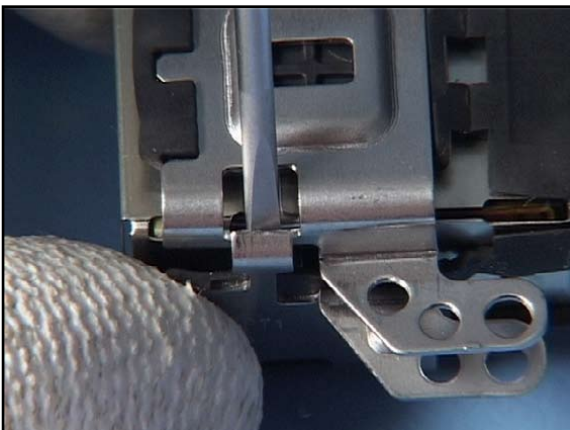
50. Carefully open the CABLE ASSY connector and remove it.



51. Press on the metal hooks on both sides of the CAMERA MODULE.



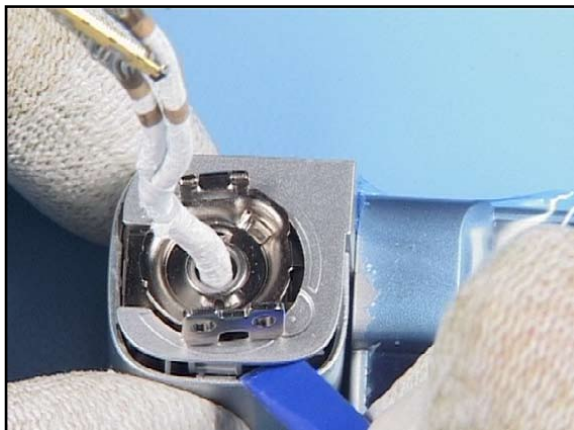
52. Pull out the CAMERA BEZEL with the LENS CUP ASSY from the CAMERA SUPPORT FRAME ASSY.



53. Unlock the snap...



54. ...and separate the CAMERA MODULE from the SUPPORT FRAME ASSY. Do not reuse the CAMERA SUPPORT FRAME ASSY.



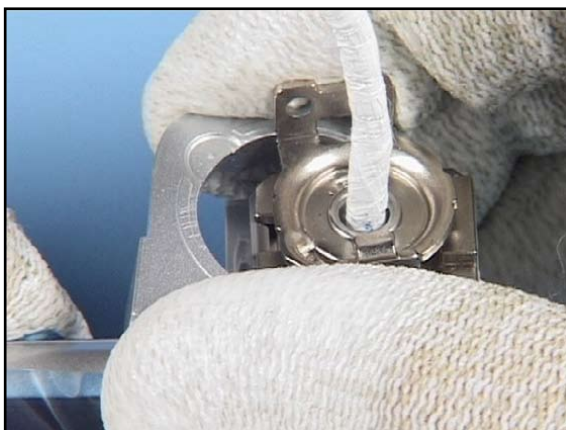
55. Release the snaps of the CAPTURE KEY INNER COVER.



56. Now, remove the CAPTURE KEY COVER PAINTED.



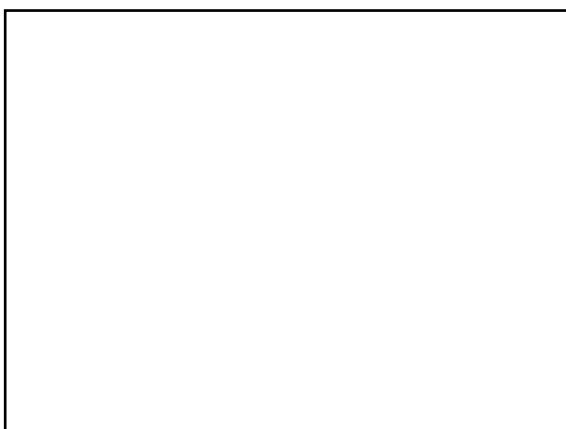
57. Remove the CAPTURE KEY BUTTON, ZOOM KEY LEVER and the CAPTURE RETURN SPRING.



58. Remove the CAPTURE KEY INNER COVER.



59. Now, the disassembly procedure is complete.



60.

12. LOWER BLOCK ASSEMBLY



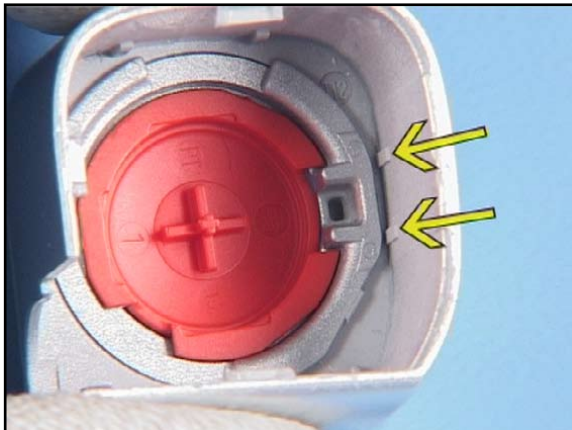
1. Assembly



2. Place the ZOOM KEY LEVER PAINTED into the CAPTURE KEY COVER PAINTED as shown.



3. Place the CAPTURE KEY BUTTON in to its place.



4. Set the recess of the ZOOM KEY LEVER in position shown.



5. Place the CAPTURE RETURN SPRING in to its place.



6. Carefully, press the HINGE ASSEMBLY into the CAPTURE KEY COVER.



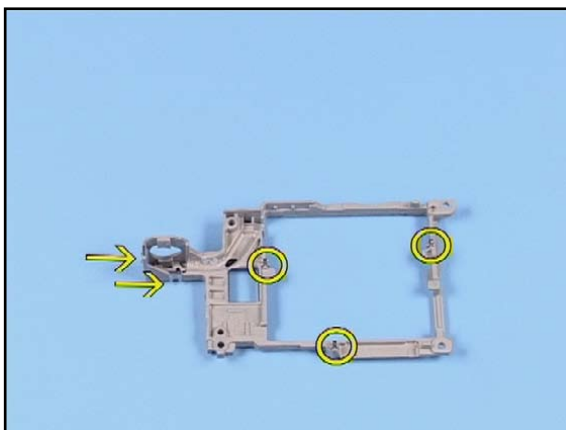
7. Fit the CAPTURE KEY INNER COVER as shown.



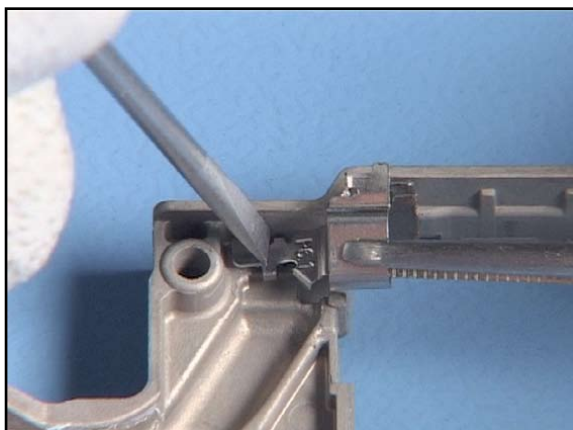
8. Now, check the correct position of the ZOOM KEY LEVER...



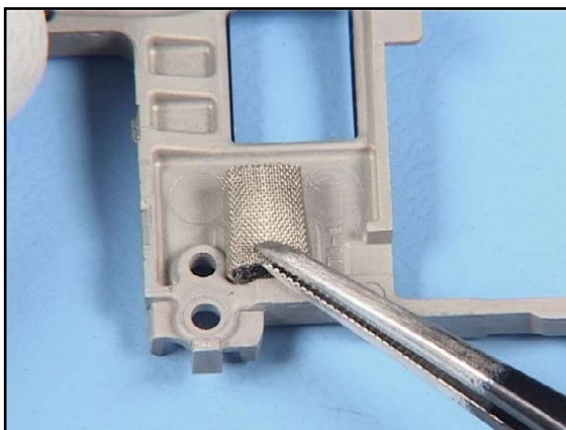
9. ...and secure the parts by pressing them together.



10. Be sure that all GROUND CLIPS are into their places.



11. Always use a new CABLE CLAMP. Align the CABLE CLAMP with the GRIP INNER FRAME and push it into its place.



12. Fit a new CUSHION.



13. Feed the HINGE cables into the opening of the GRIP INNER FRAME.



14. Position the GRIP INNER FRAME onto the HINGE ASSEMBLY.



15. Set torque driver to the correct torque.



16. Always use new screws.



17. Tighten the SCREWS in the order shown.



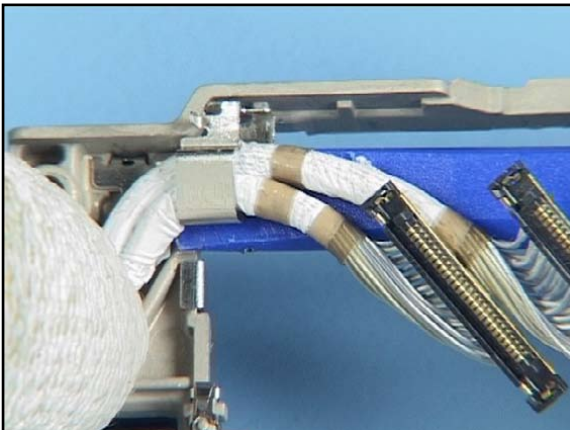
18. Fit the SIM SHIELD COVER.



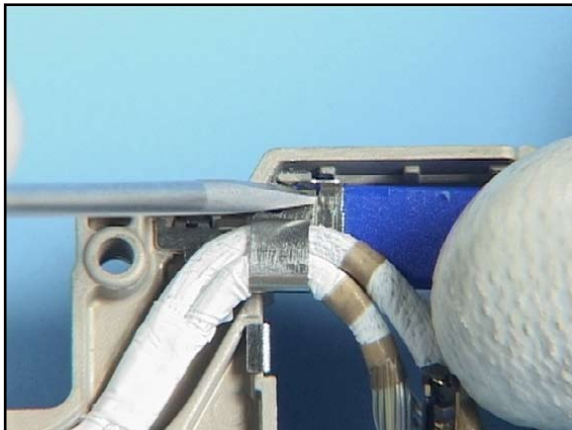
19. Ensure that the adhesive is glued into the shown place.



20. Place the HINGE cables into the guide of the GRIP INNER FRAME.



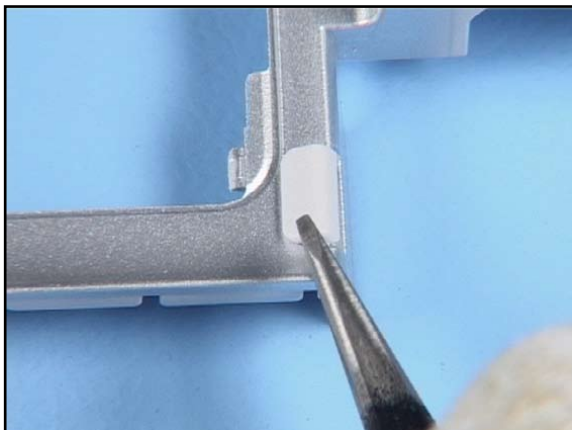
21. Place the SS-93 as a support between the CABLE CLAMP and the GRIP INNER FRAME...



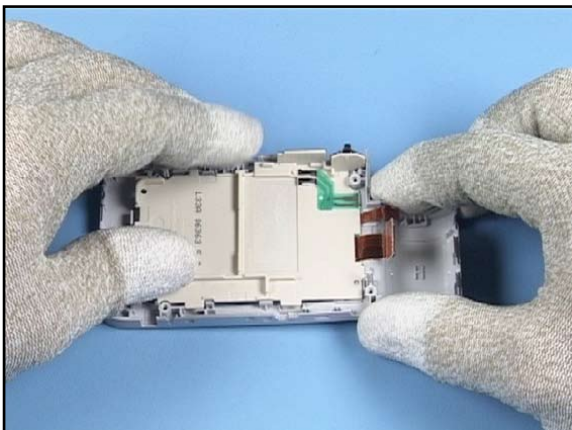
22. ...and close the CABLE CLAMP.



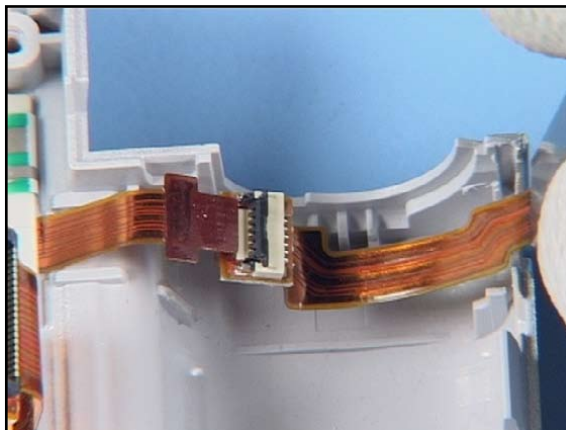
23. Fit a new GRIP BUMPER and secure it by pressing into place.



24. Fit the PILLOW.



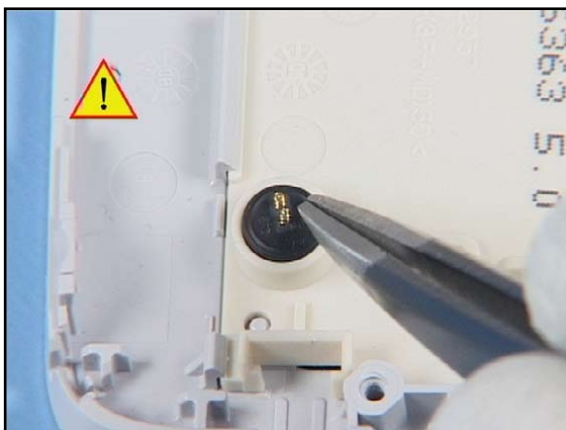
25. Insert the UI ASSY and secure it by closing all snaps.



26. Fit the DIGITAL MUSIC ASSY into the GRIP A-COVER.



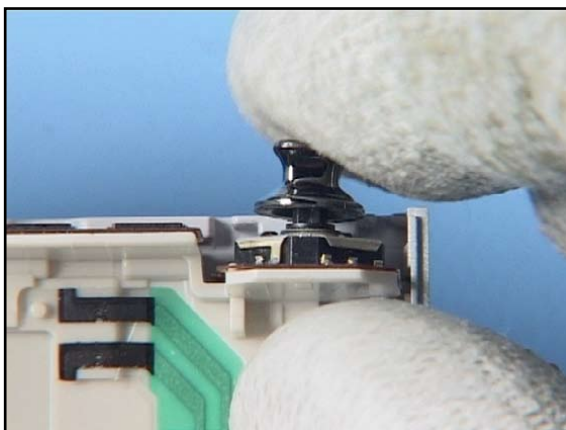
27. Very gently, close the connector with the SS-93.



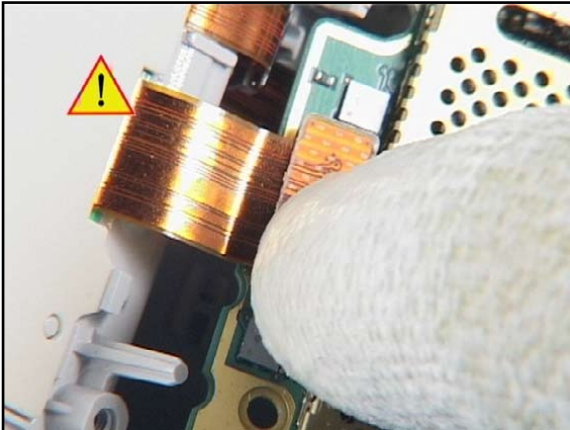
28. Insert the MICROPHONE avoiding bending the spring contacts.



29. Fit the DC-JACK with the DC-plug.



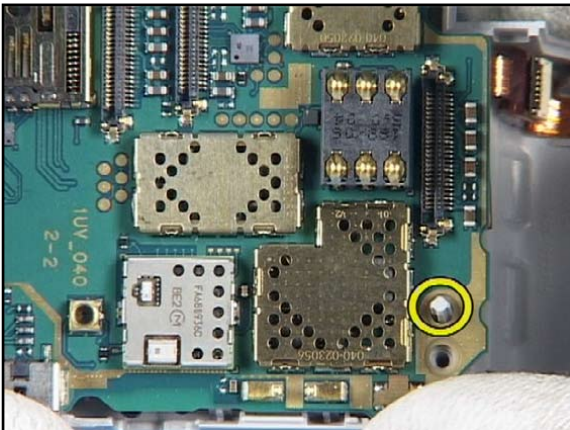
30. Fit the JOYSTICK HAT.



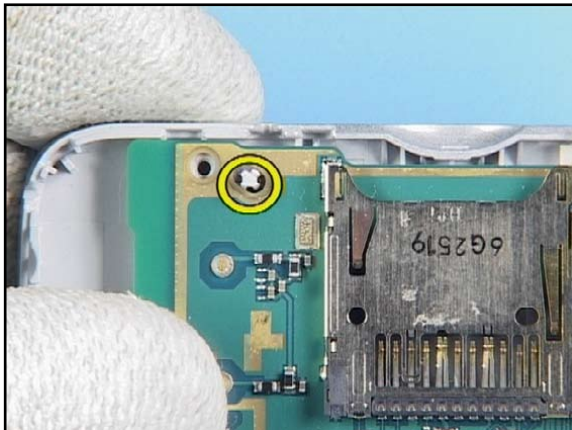
31. Carefully connect the UI ASSY to the ENGINE MODULE.



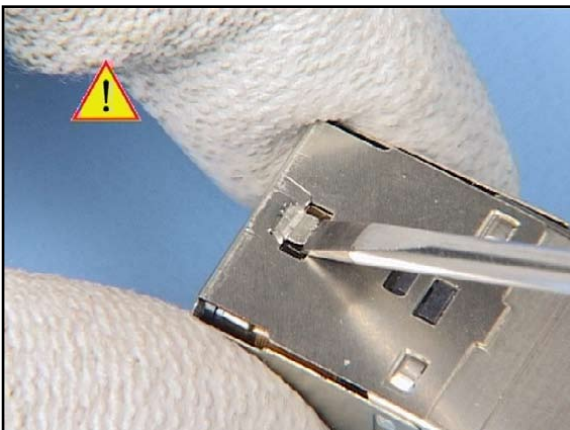
32. Turn the ENGINE MODULE as shown and align it with the GRIP A-COVER.



33. Note the correct position of the guide pin at the camera side...



34. ...and at the card holder side.



35. Gently, bend the hooks back into its position as shown.



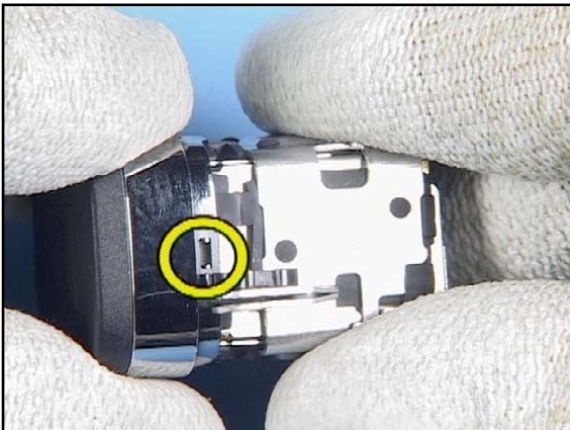
36. Always use a new CAMERA SUPPORT FRAME ASSY.



37. Insert the CAMERA MODULE into the FRAME.



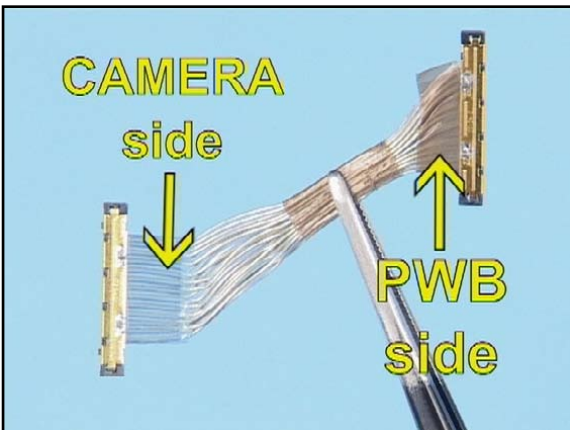
38. Squeeze the CAMERA SUPPORT FRAME ASSY until it close.



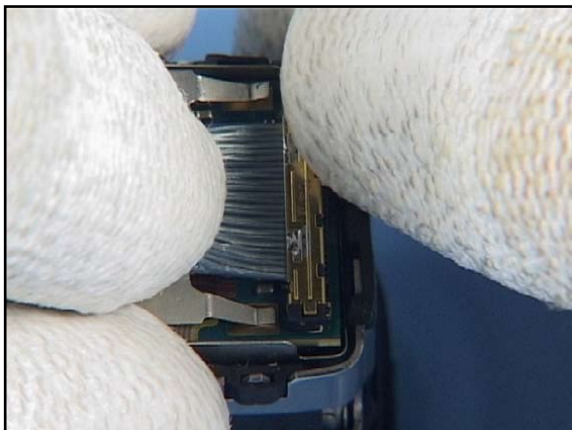
39. Fit the CAMERA BEZEL with the LENS CAP ASSY.



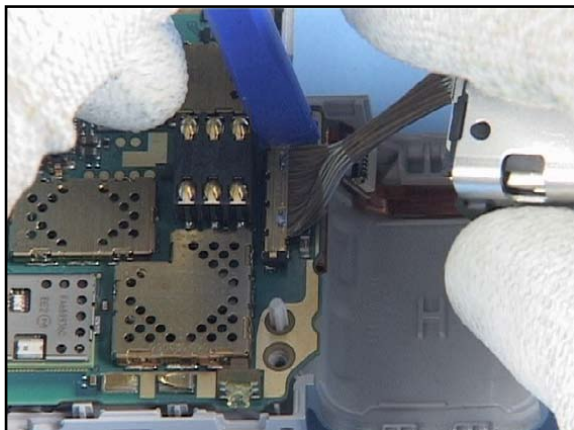
40. Ensure that the hooks hold well the CAMERA BEZEL.



41. Note the correct direction of the CABLE ASSY.



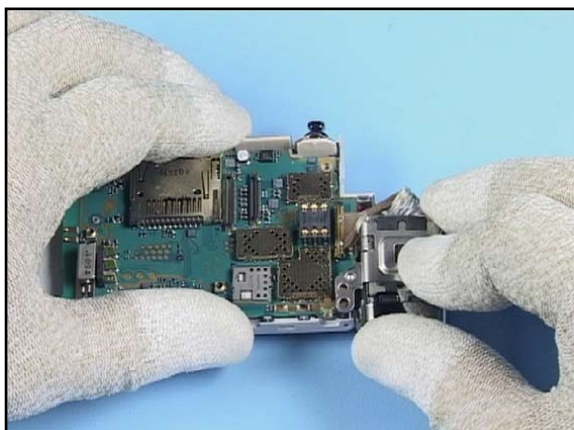
42. Connect the cable side with blue mark to the CAMERA MODULE...



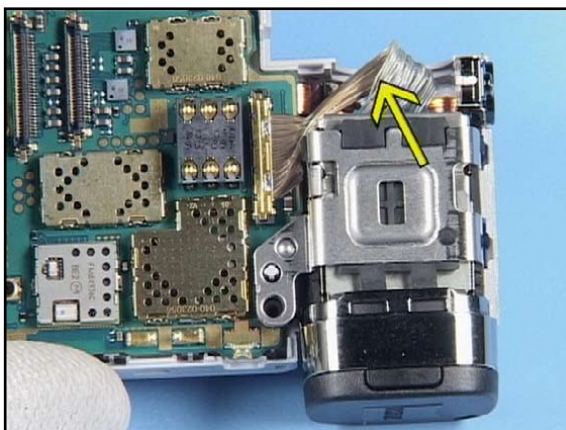
43. ...and the other side of the cable to the ENGINE MODULE.



44. Turn the CAMERA MODULE as shown...



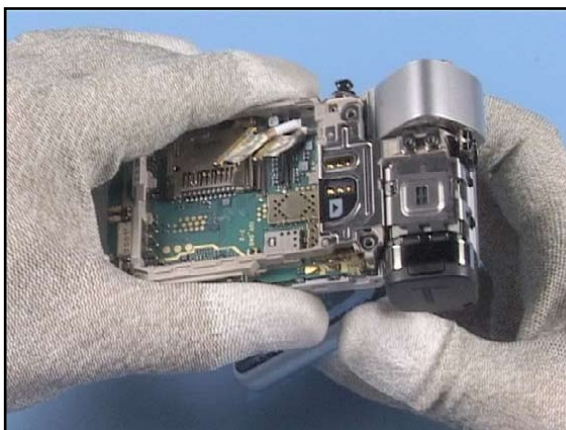
45. ...and place it into position.



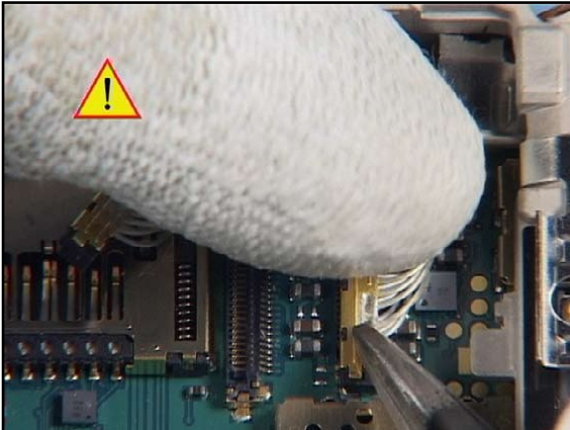
46. Check the correct position of the CABLE ASSY.



47. Align the GRIP INNER FRAME with the GRIP A-COVER avoiding squeezing the CABLE ASSY.



48. Close the unit...



49. ...and carefully close the connectors.



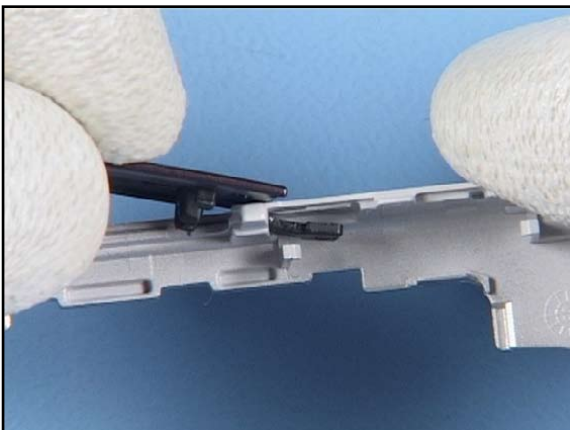
50. Ensure that the cable is positioned correctly to avoid squeezing it when assembling the LABEL PLATE.



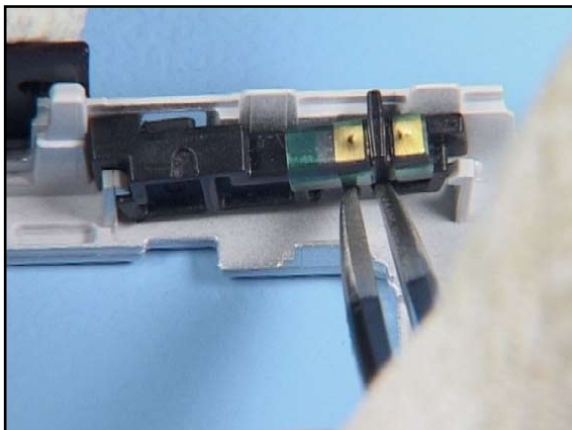
51. Fit the LABEL PLATE.



52. Lift the GRIP INNER FRAME a bit and gently place the ANTENNA into its position.



53. Fit the POP-PORT HATCH.



54. Fit the BT WL ANTENNA into its place.



55. Align the GRIP B-COVER with the GRIP A-COVER.



56. First close the snaps on the hinge side.



57. Open the unit...



58. ...and then close the remaining snaps.



59. Insert the screws.



60. Set the torque driver to the correct torque.



61. To prevent damaging the plastic threads, first turn the screws to the left...



62. ... and then tighten them to the correct torque in the order shown.



63. Fit the ORNAMENT R ASSY with the SIDE KEYMAT.



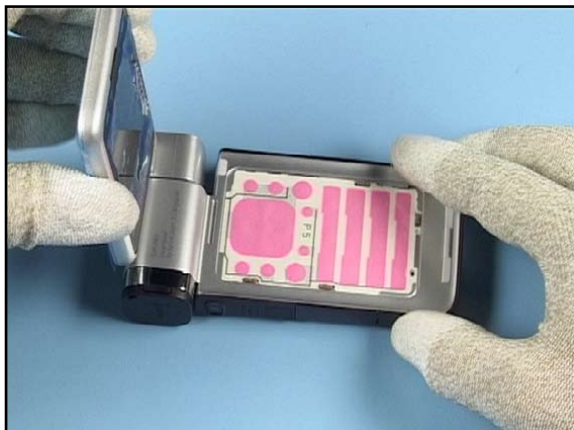
64. Close the SD HATCH.



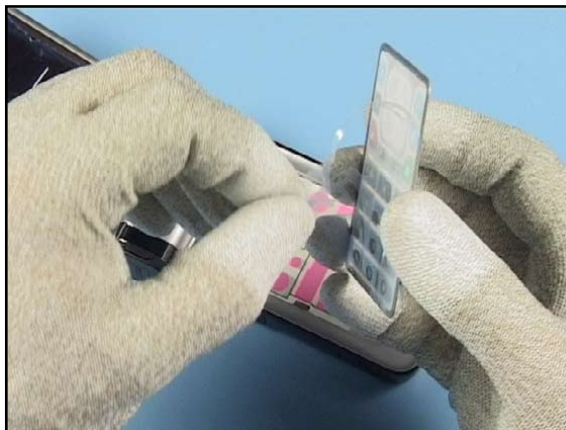
65. Remove the protective film of the ORNAMENT L ASSY...



66. ...and fit the ORNAMENT L ASSY into its place.



67. Open the unit...



68. Always use a new KEYMAT when assembling the unit.



69. Place it exactly into its place...



70. ...and secure by pressing evenly.












71. Check that no gaps remain.

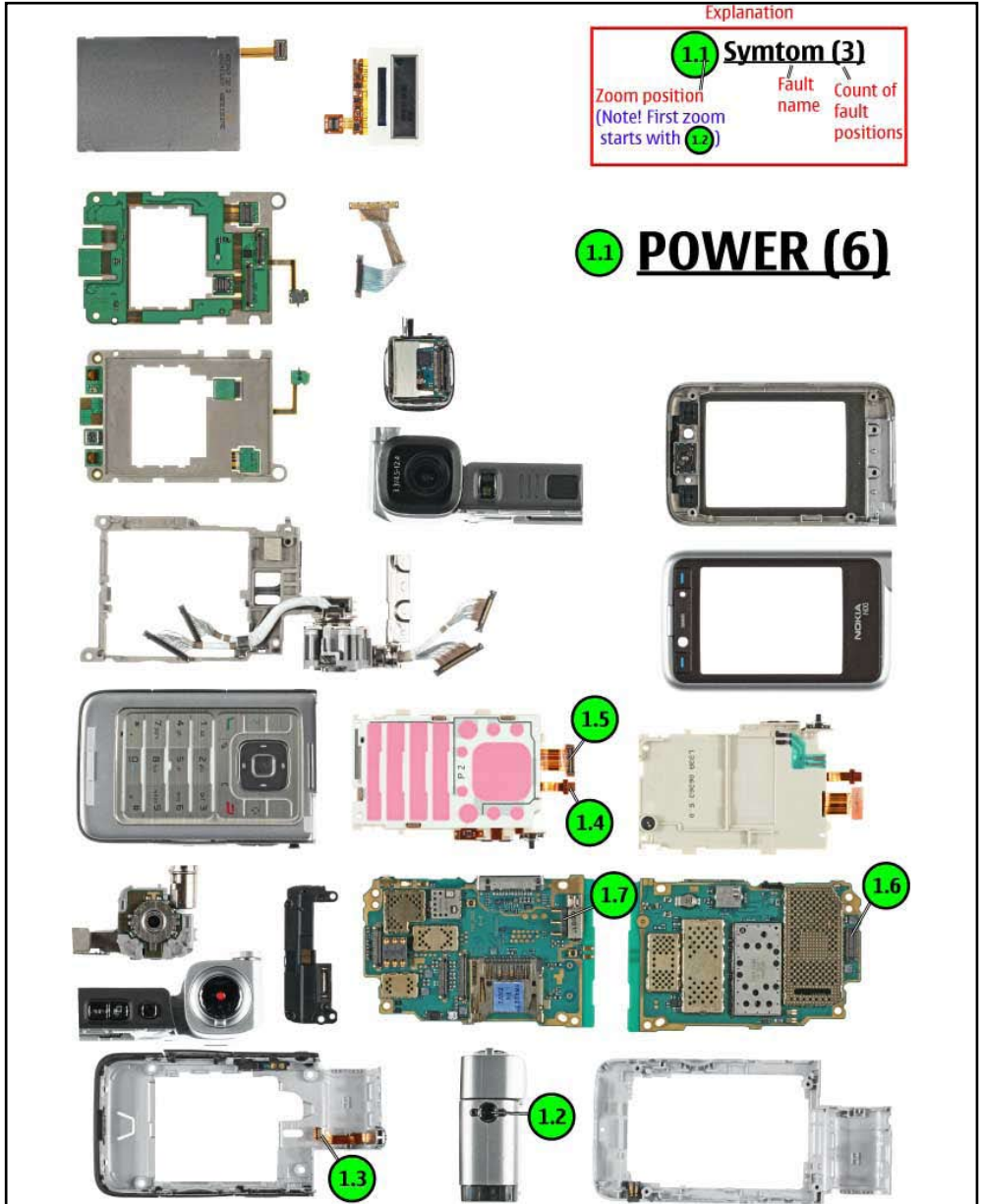
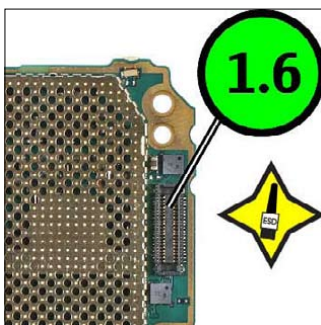


72. Finally fit the GRIP C-COVER ASSY.

13.LEGEND FOR QUICK TROUBLE SHOOTER

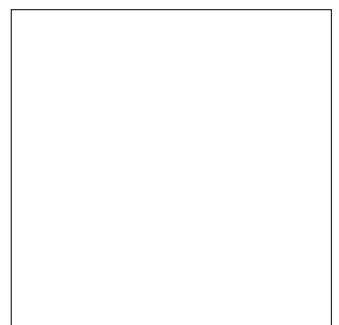
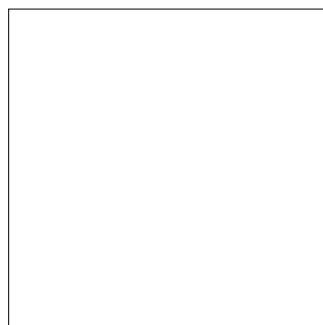
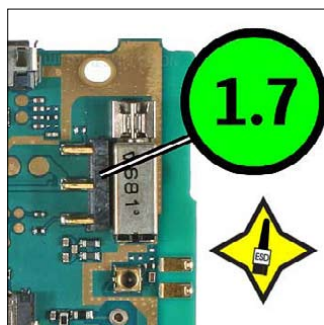
Legend for Quick Trouble Shooter	
This legend is valid for all parts of the Quick Trouble Shooter	
Follow the steps until the problem is solved. If this doesn't help, you are not authorized to go forward.	
	Check the mechanical condition of the component (bent, broken or missing).
	Only marked components 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 style="border: 1px solid red; padding: 5px;"> <p>1.1 Syntom (3)</p> <p>Zoom position (Note! First zoom starts with 1.2)</p> <p>Fault name</p> <p>Count of fault positions</p> </div>

14. QUICK TROUBLE SHOOTER - POWER ON

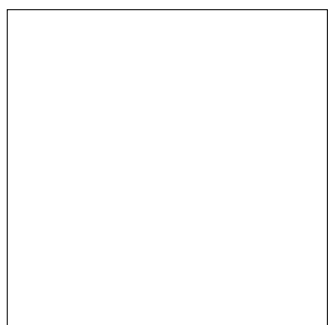
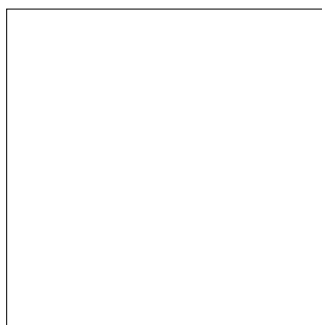
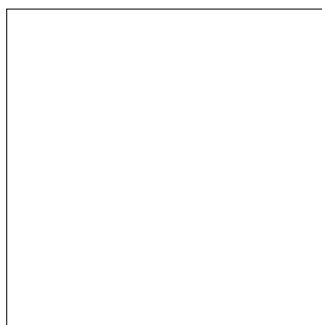
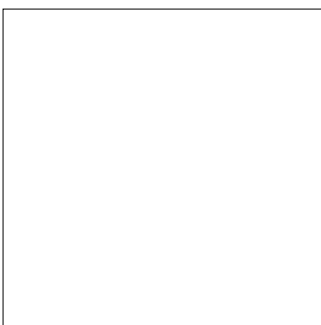
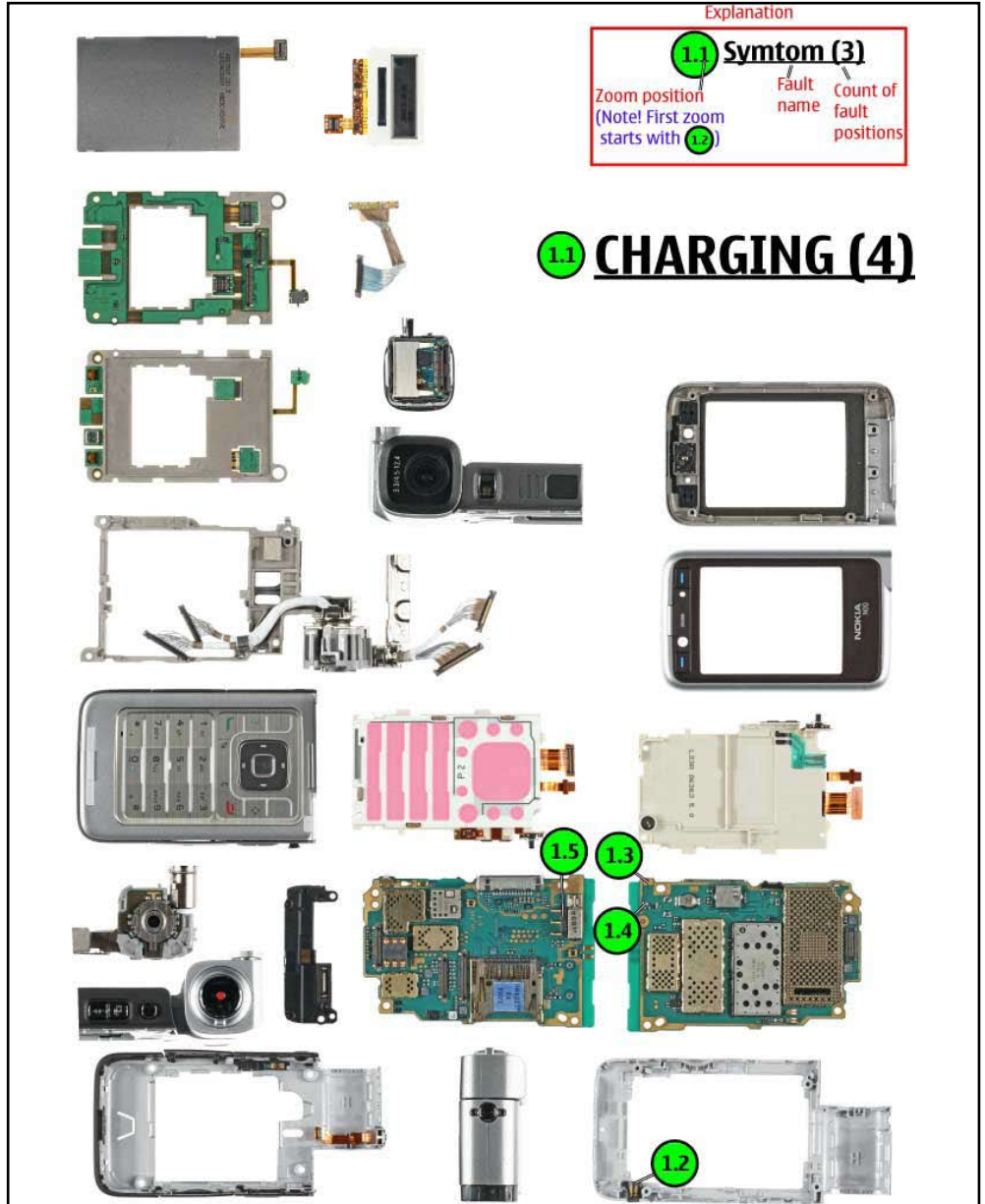
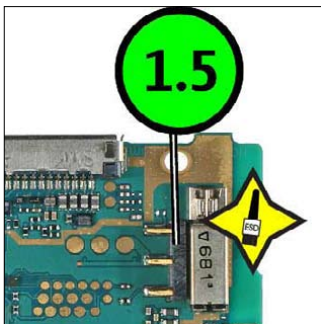
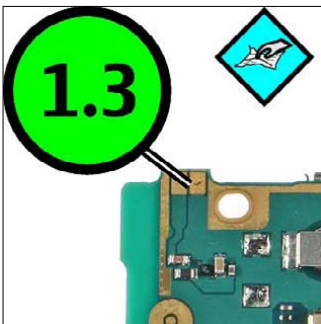
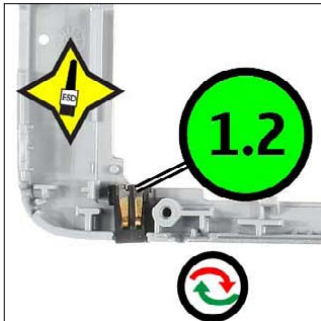


Explanation		
1.1	Symtom (3)	
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

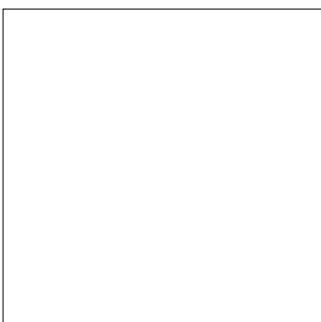
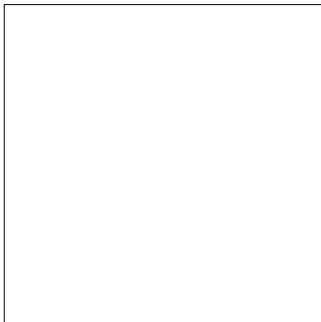
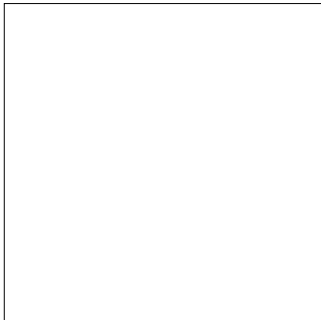
1.1 POWER (6)



15. QUICK TROUBLE SHOOTER - CHARGING



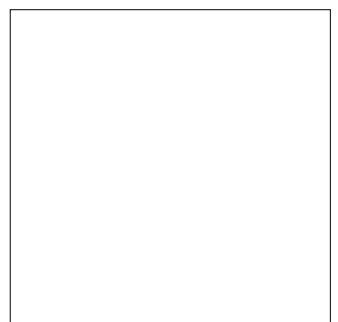
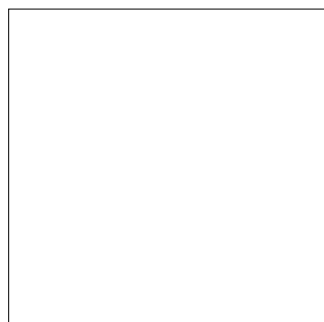
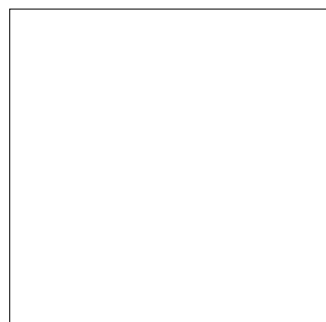
16. QUICK TROUBLE SHOOTER - NO SERVICE



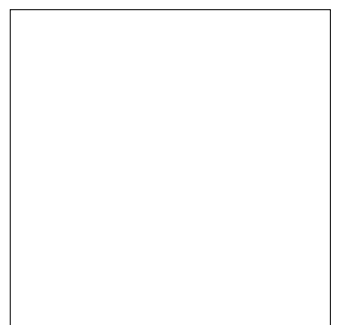
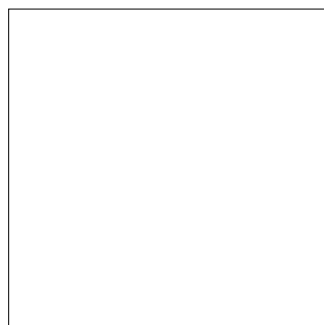
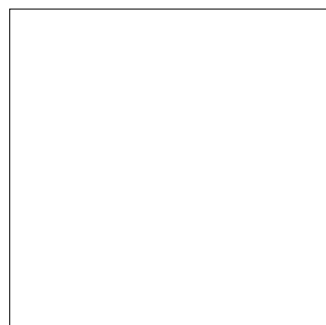
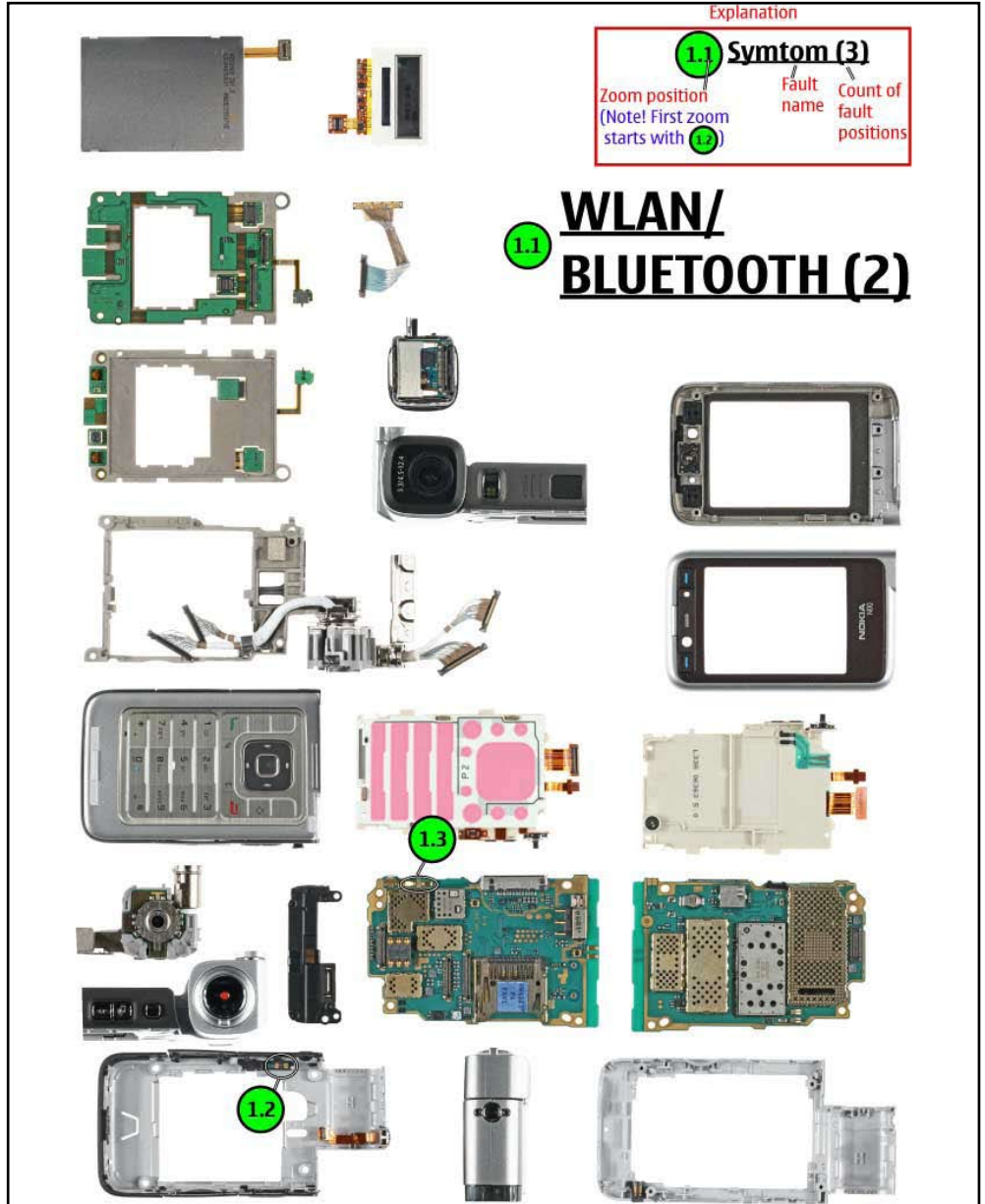
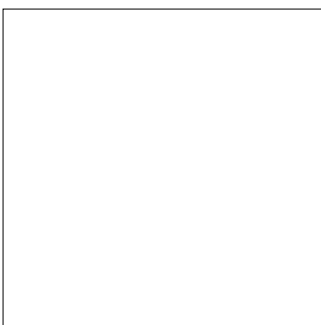
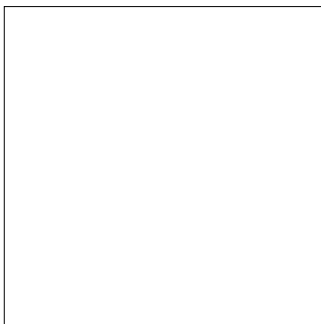
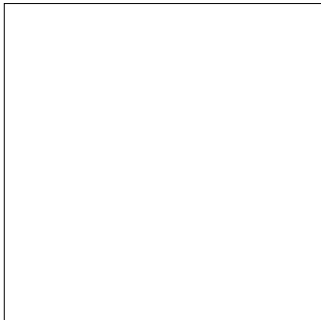
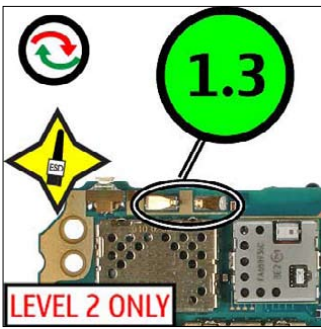
Explanation

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

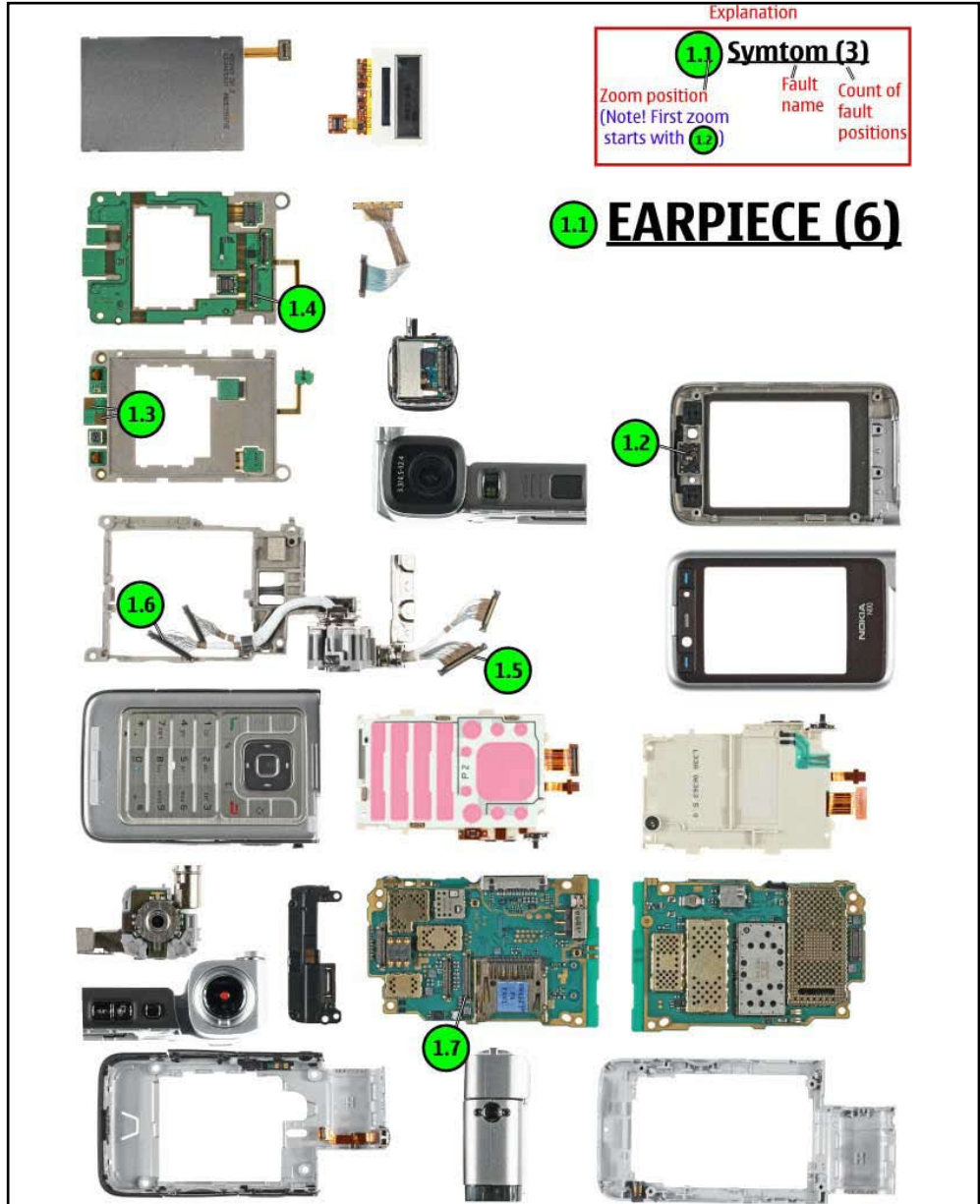
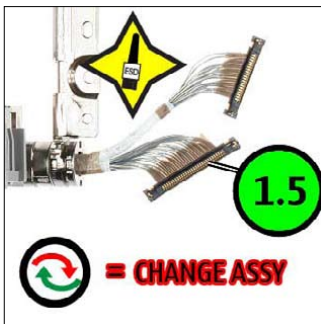
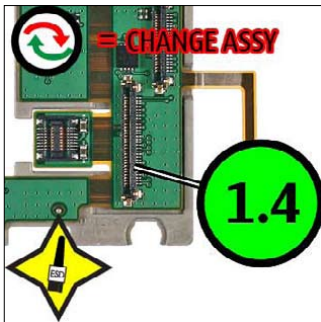
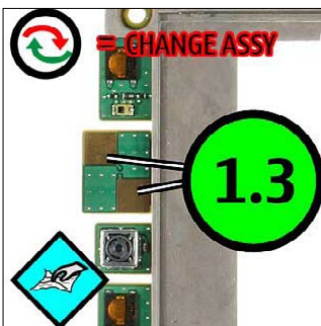
1.1 NO SERVICE (2)



17. QUICK TROUBLE SHOOTER - WLAN/BLUETOOTH



18. QUICK TROUBLE SHOOTER - EARPIECE

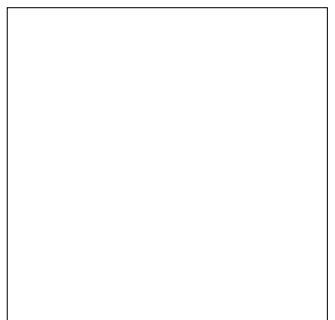
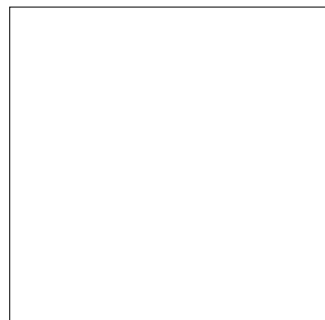
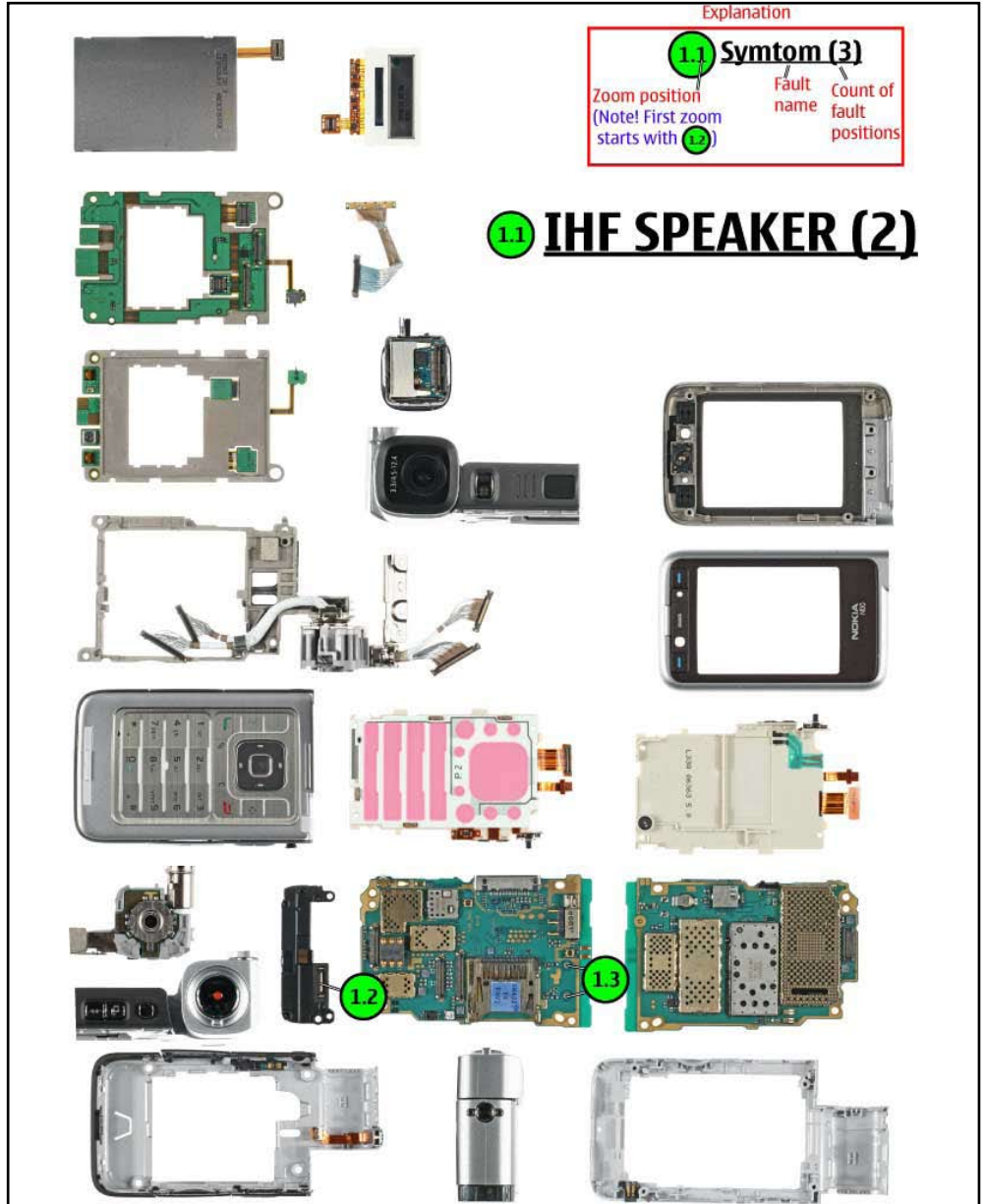
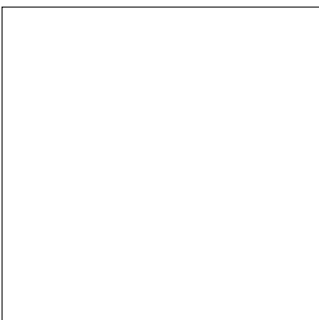
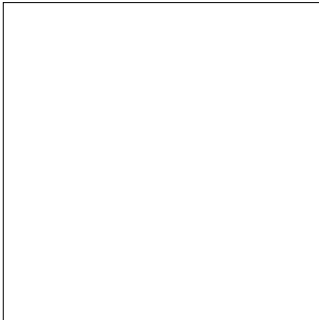
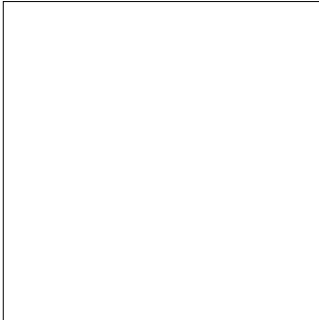
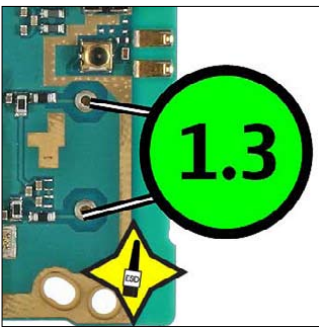


Explanation		
1.1	Symtom (3)	
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

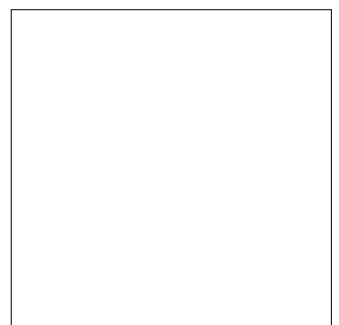
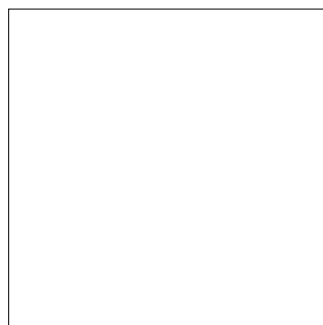
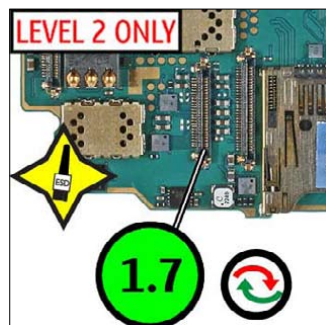
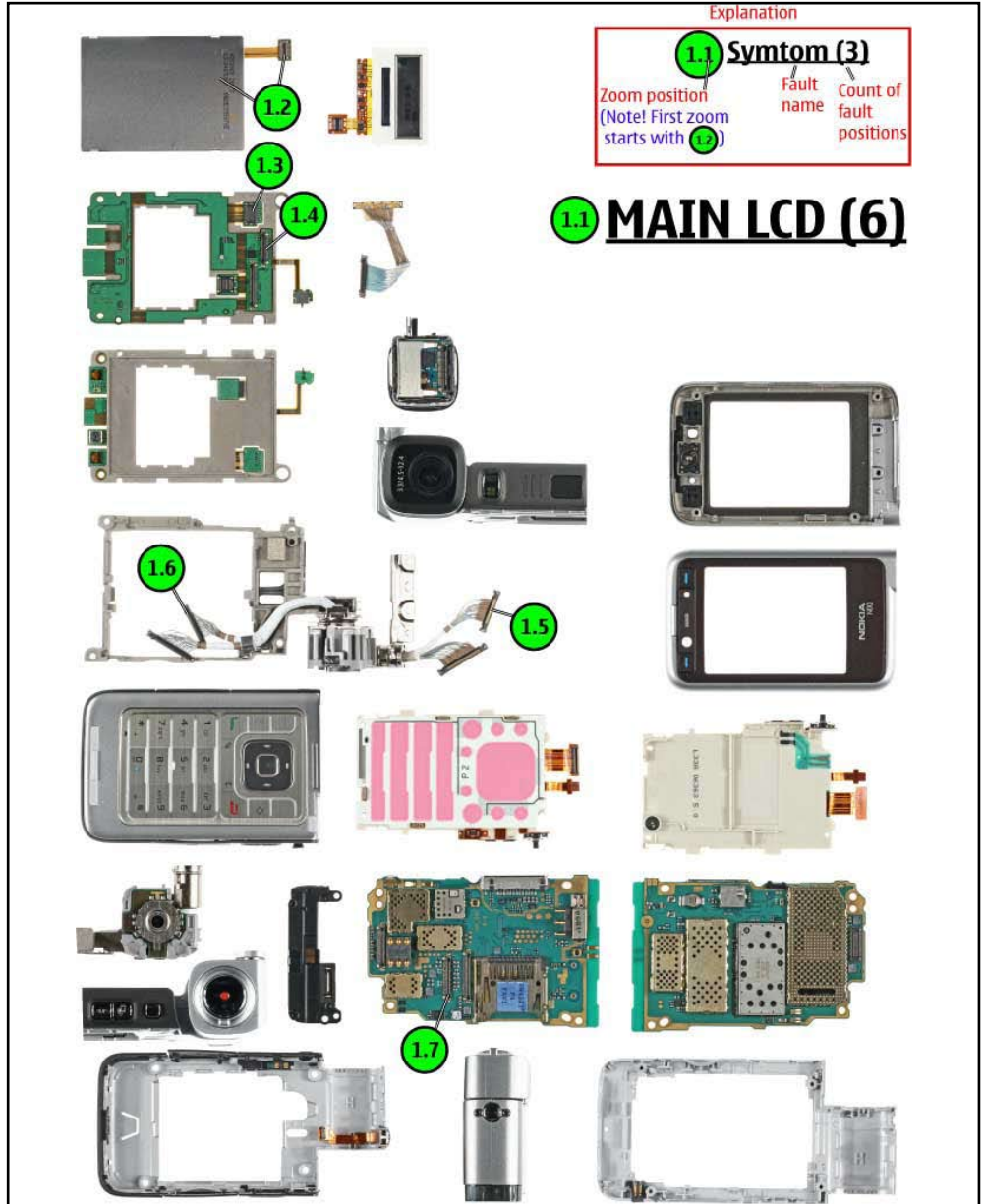
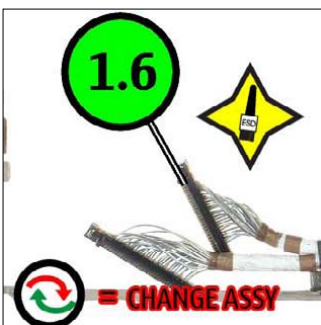
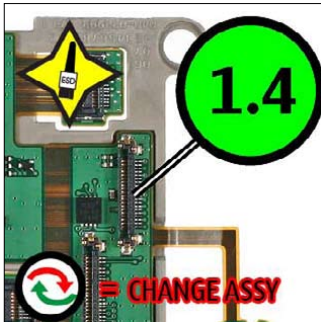
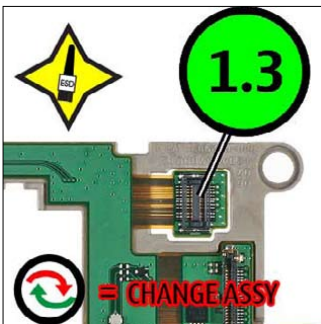
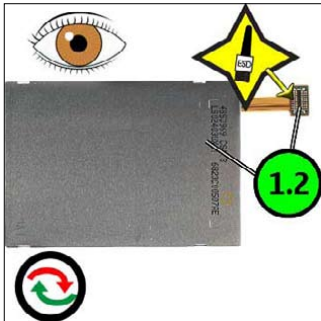
1.1 EARPIECE (6)



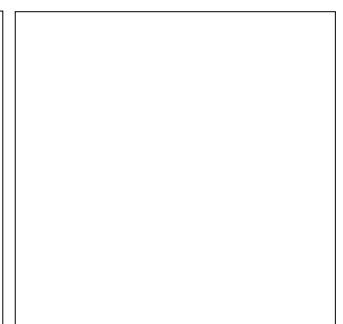
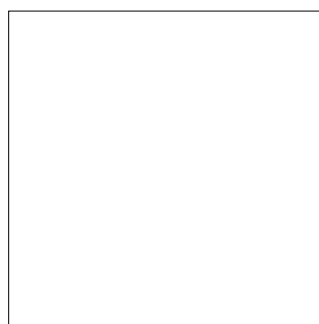
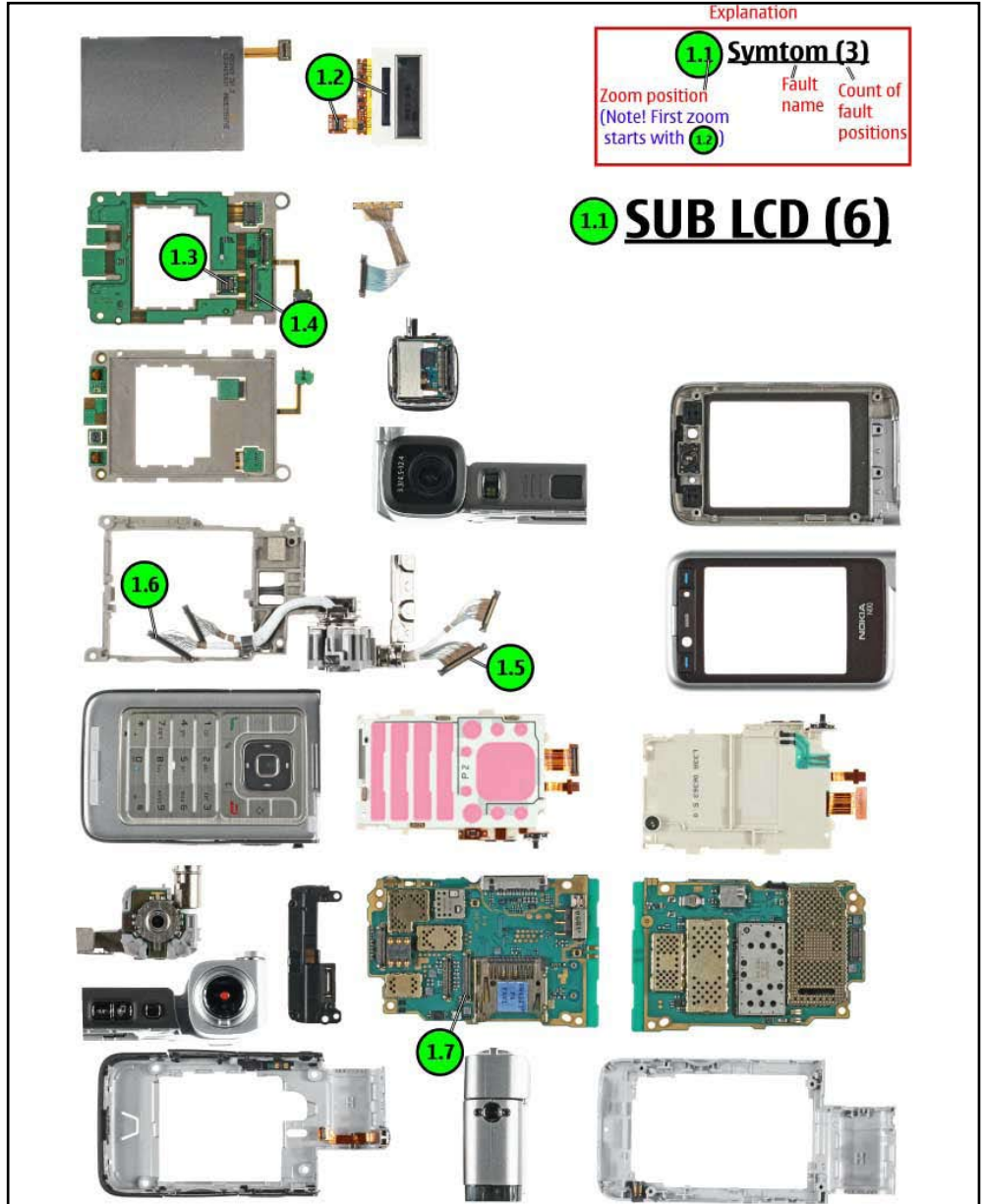
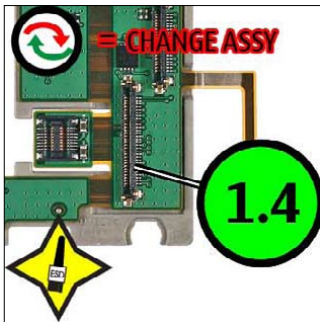
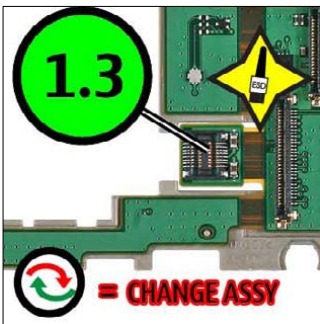
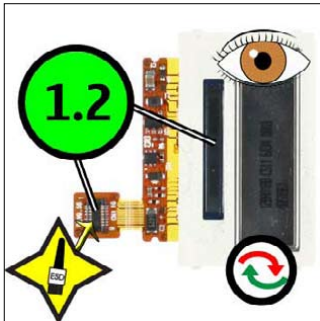
19. QUICK TROUBLE SHOOTER - IHF SPEAKER



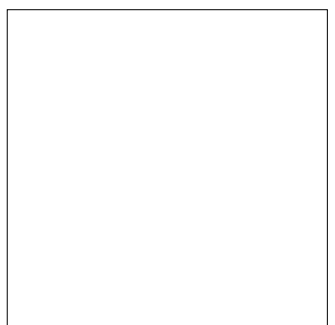
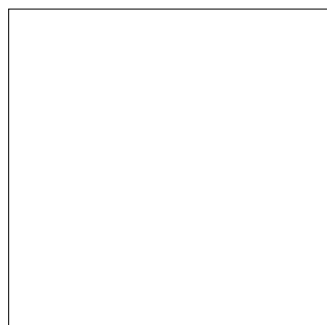
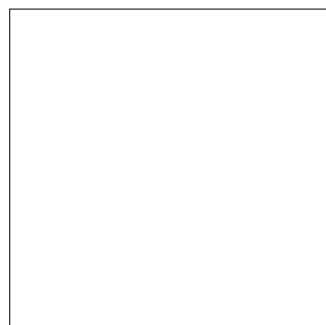
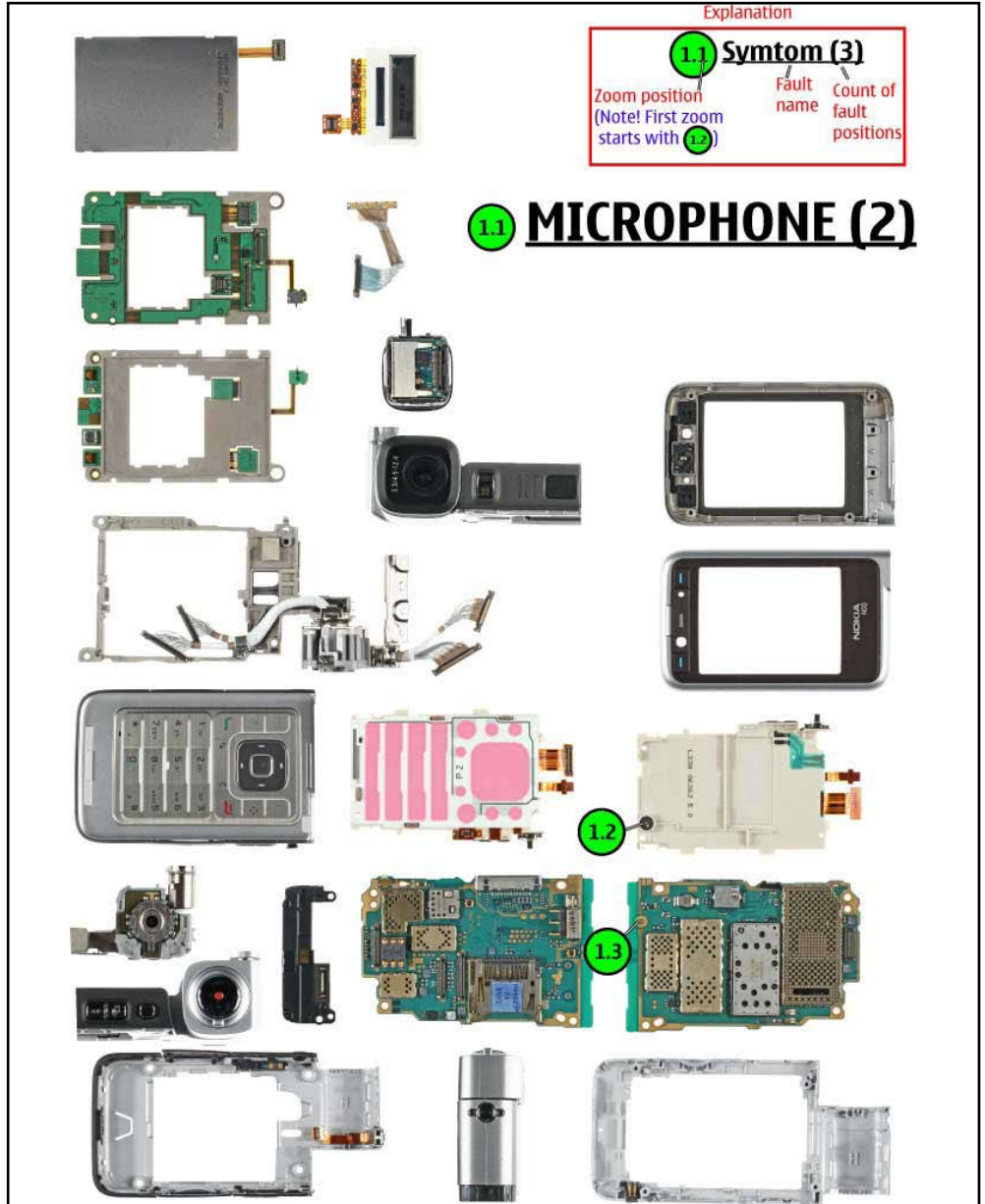
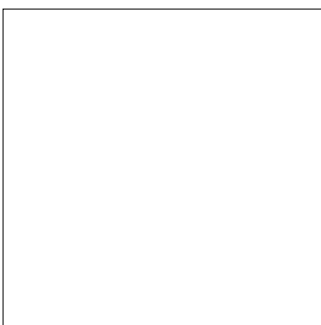
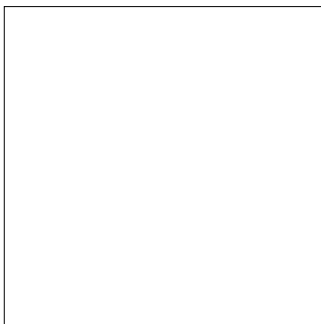
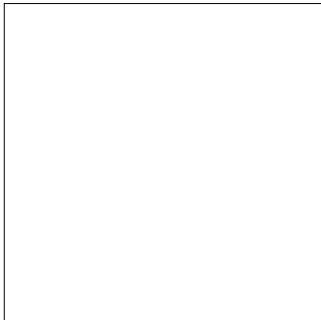
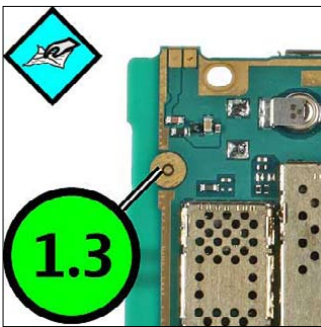
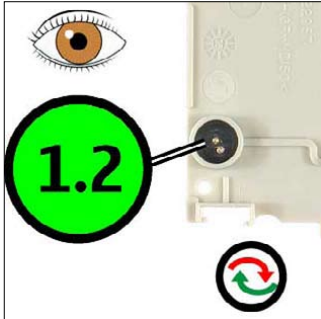
20. QUICK TROUBLE SHOOTER - MAIN LCD



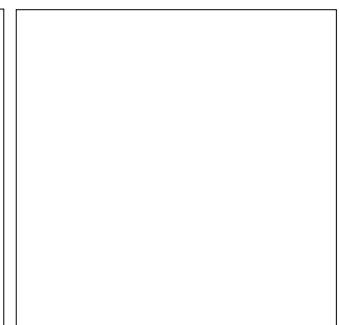
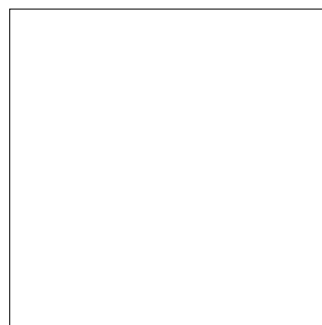
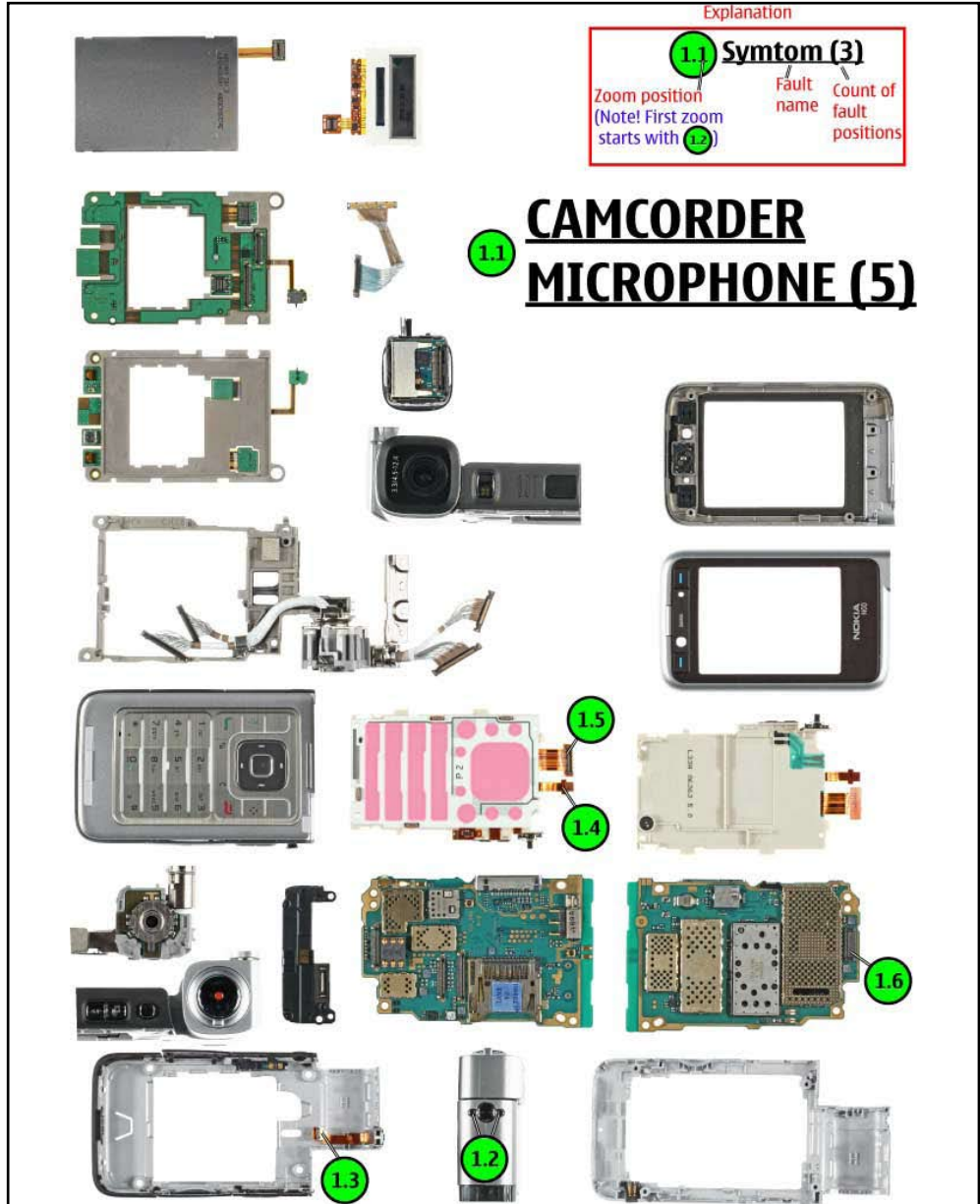
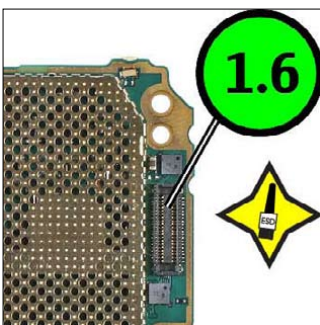
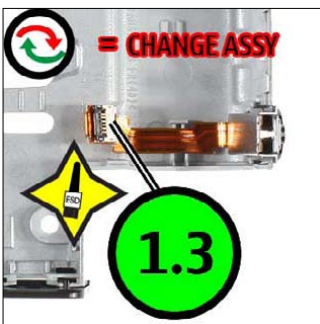
21. QUICK TROUBLE SHOOTER - SUB LCD



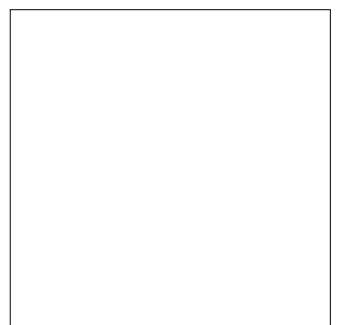
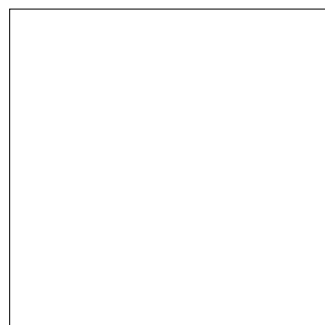
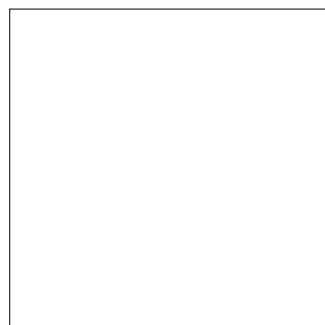
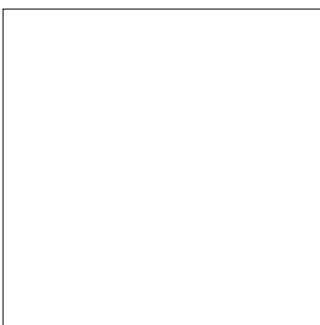
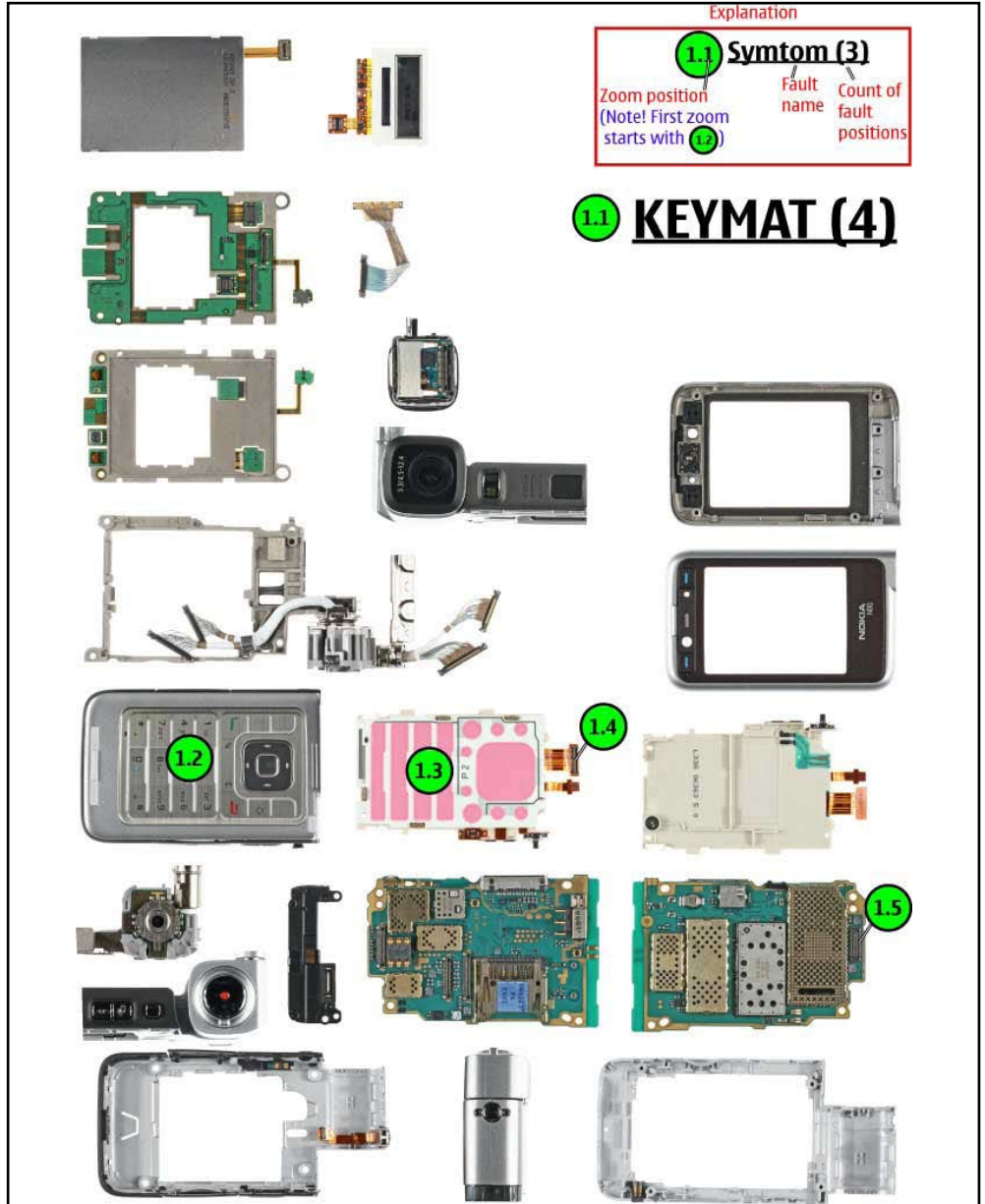
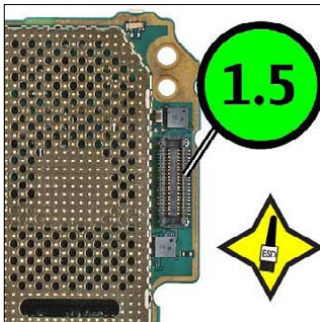
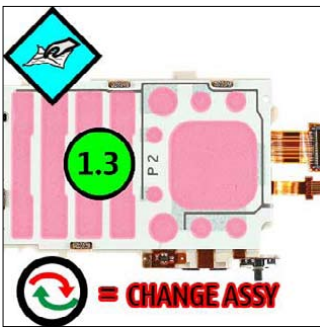
22. QUICK TROUBLE SHOOTER - MICROPHONE



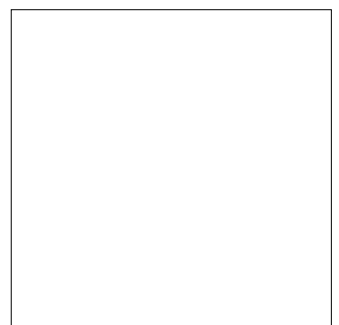
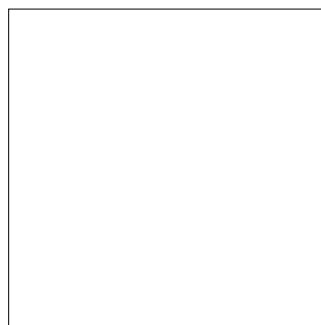
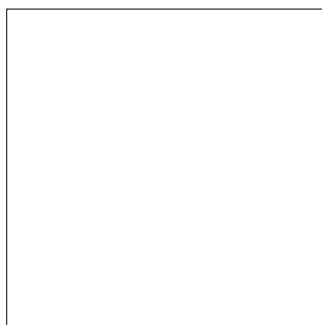
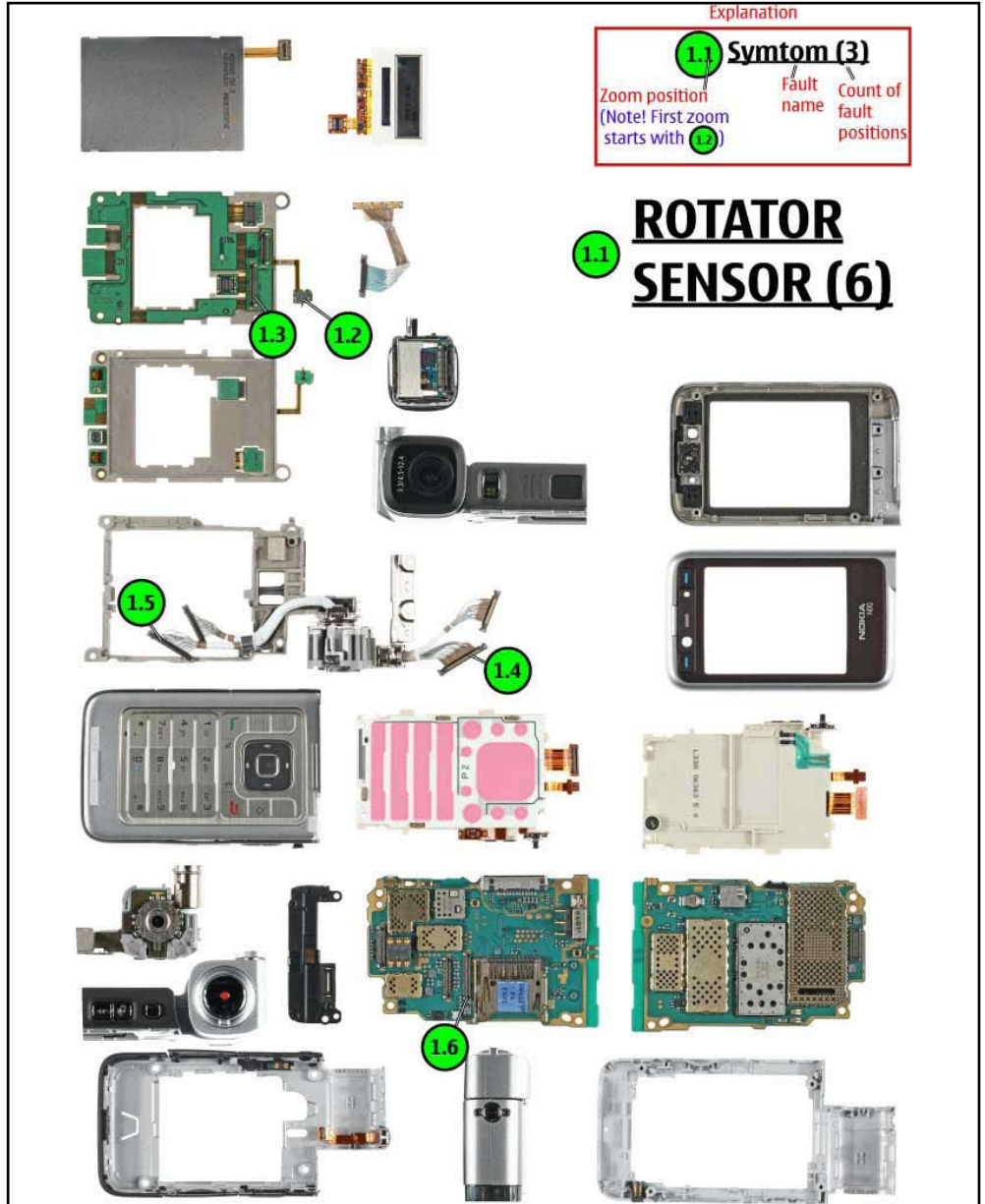
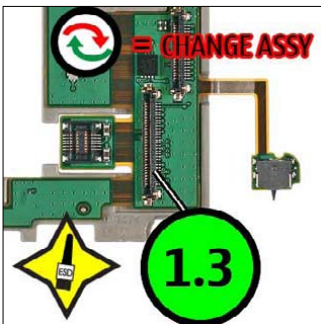
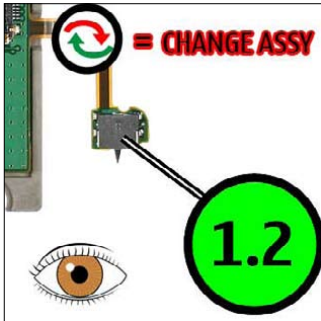
23. QUICK TROUBLE SHOOTER - CAMCORDER MICROPHONE



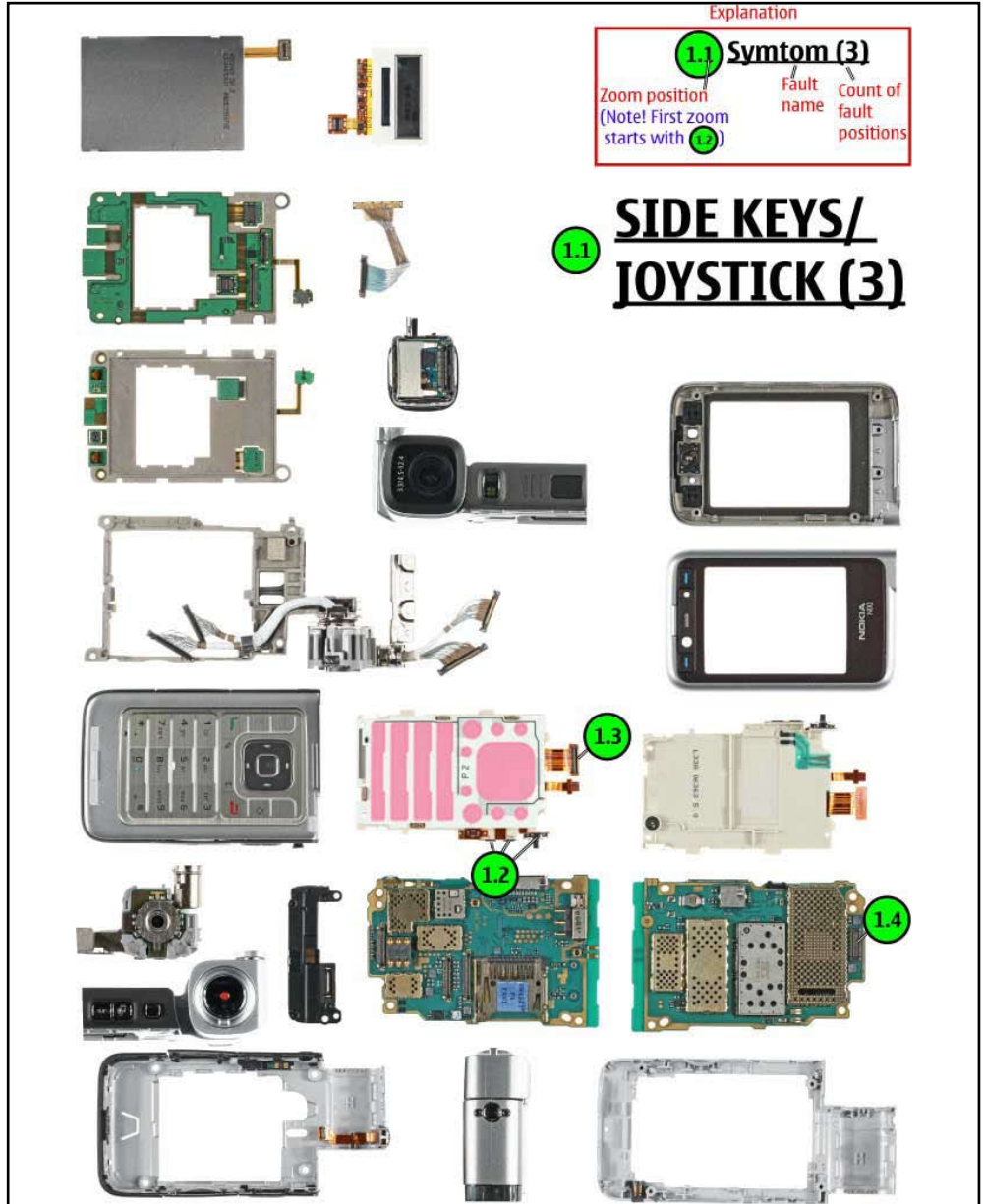
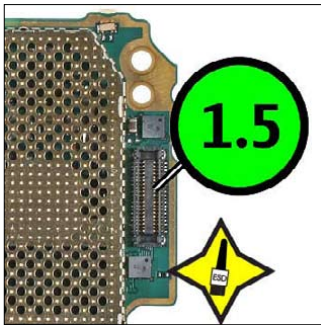
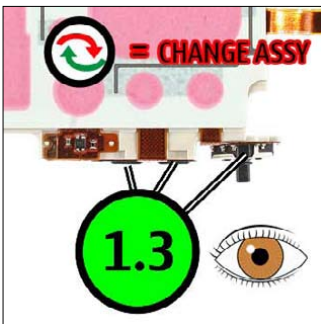
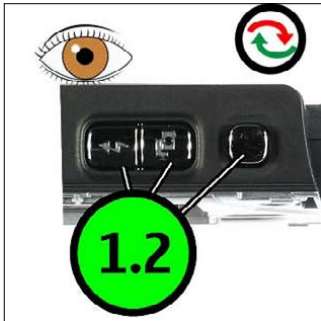
24. QUICK TROUBLE SHOOTER - KEYMAT



25. QUICK TROUBLE SHOOTER - ROTATOR SENSOR

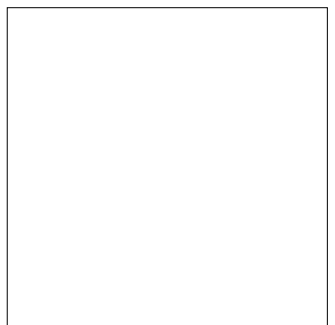
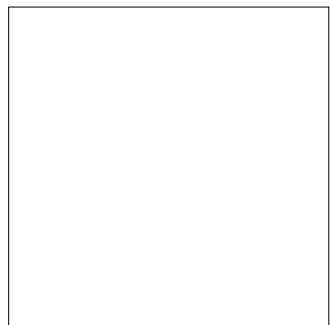
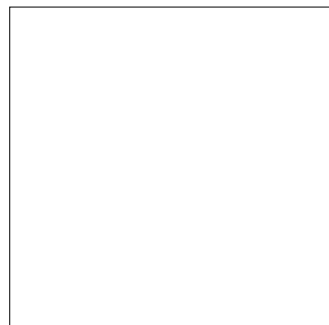
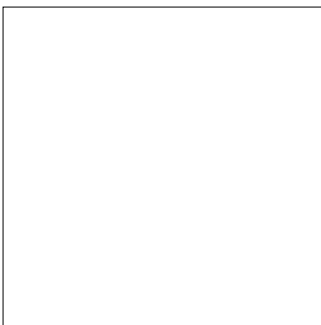


26. QUICK TROUBLE SHOOTER - SIDE KEY/ JOYSTICK

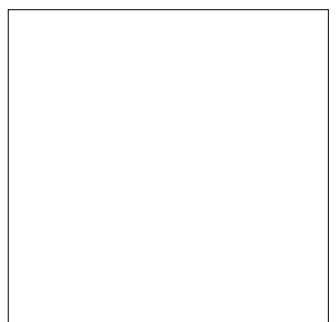
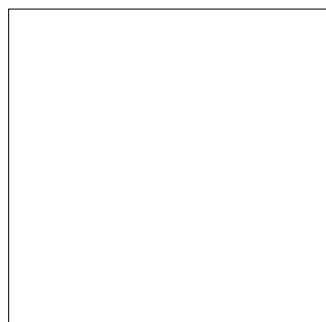
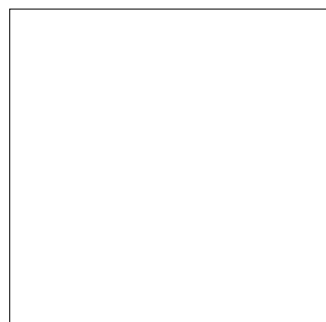
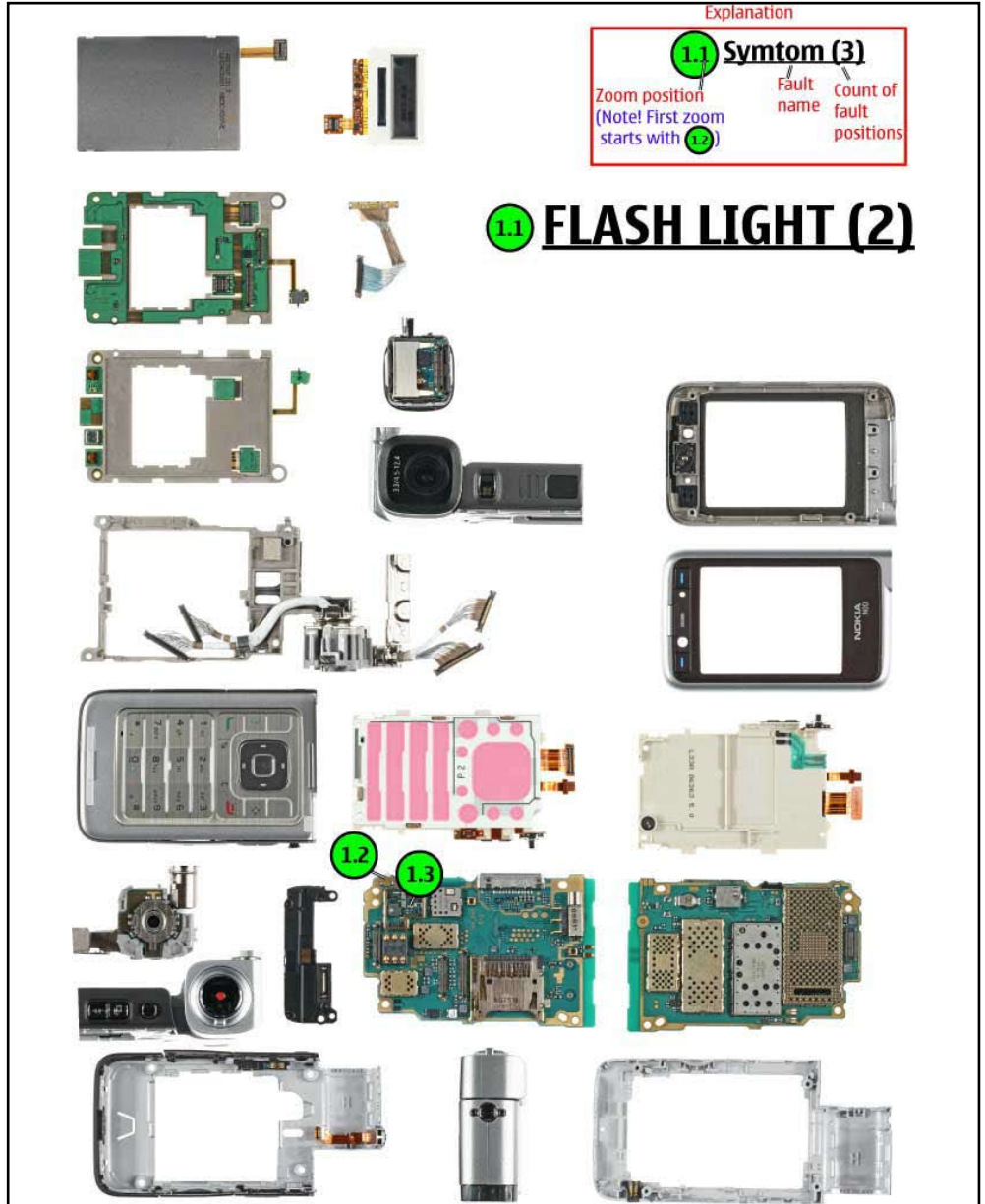
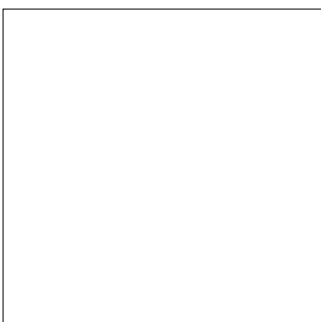
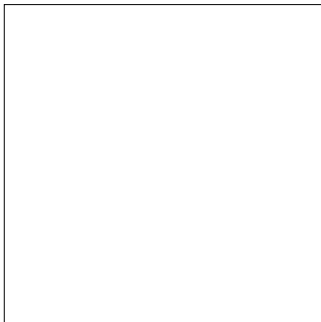
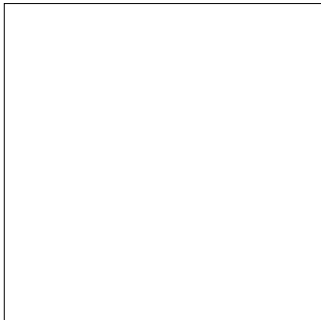
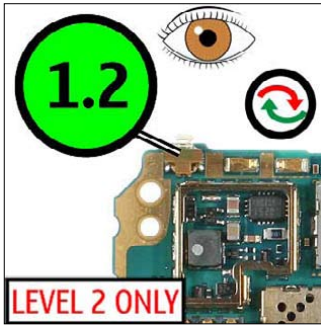


Explanation		
1.1	Symtom (3)	
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

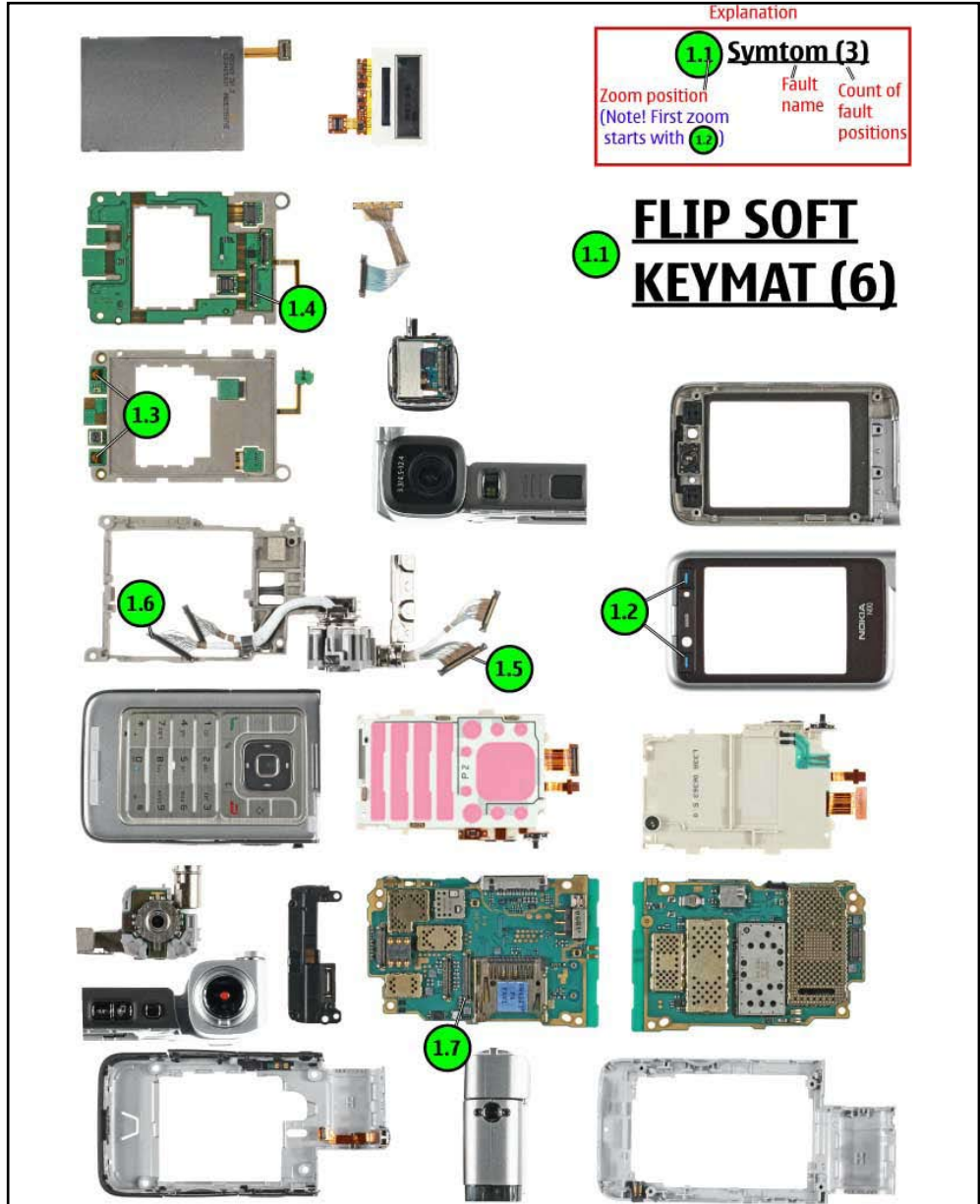
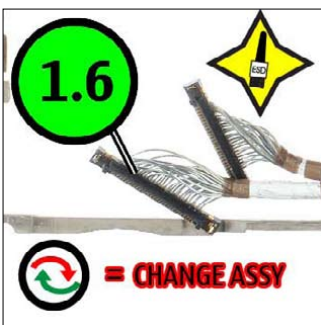
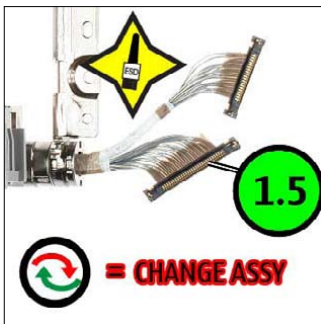
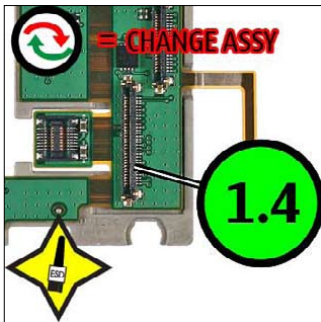
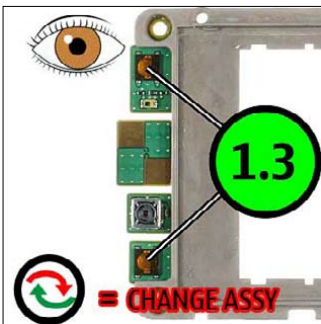
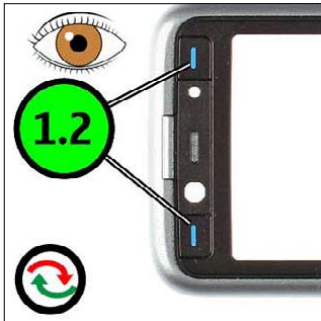
1.1 SIDE KEYS/ JOYSTICK (3)



27. QUICK TROUBLE SHOOTER - FLASHLIGHT

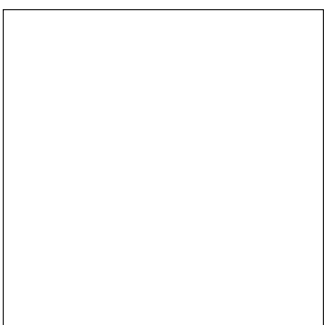
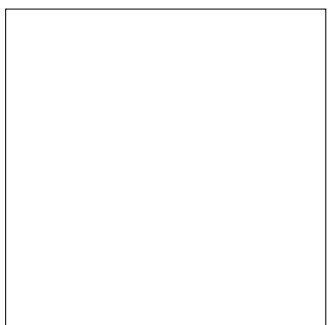


28. QUICK TROUBLE SHOOTER - FLIP SOFT KEYS




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

1.1 FLIP SOFT KEYMAT (6)



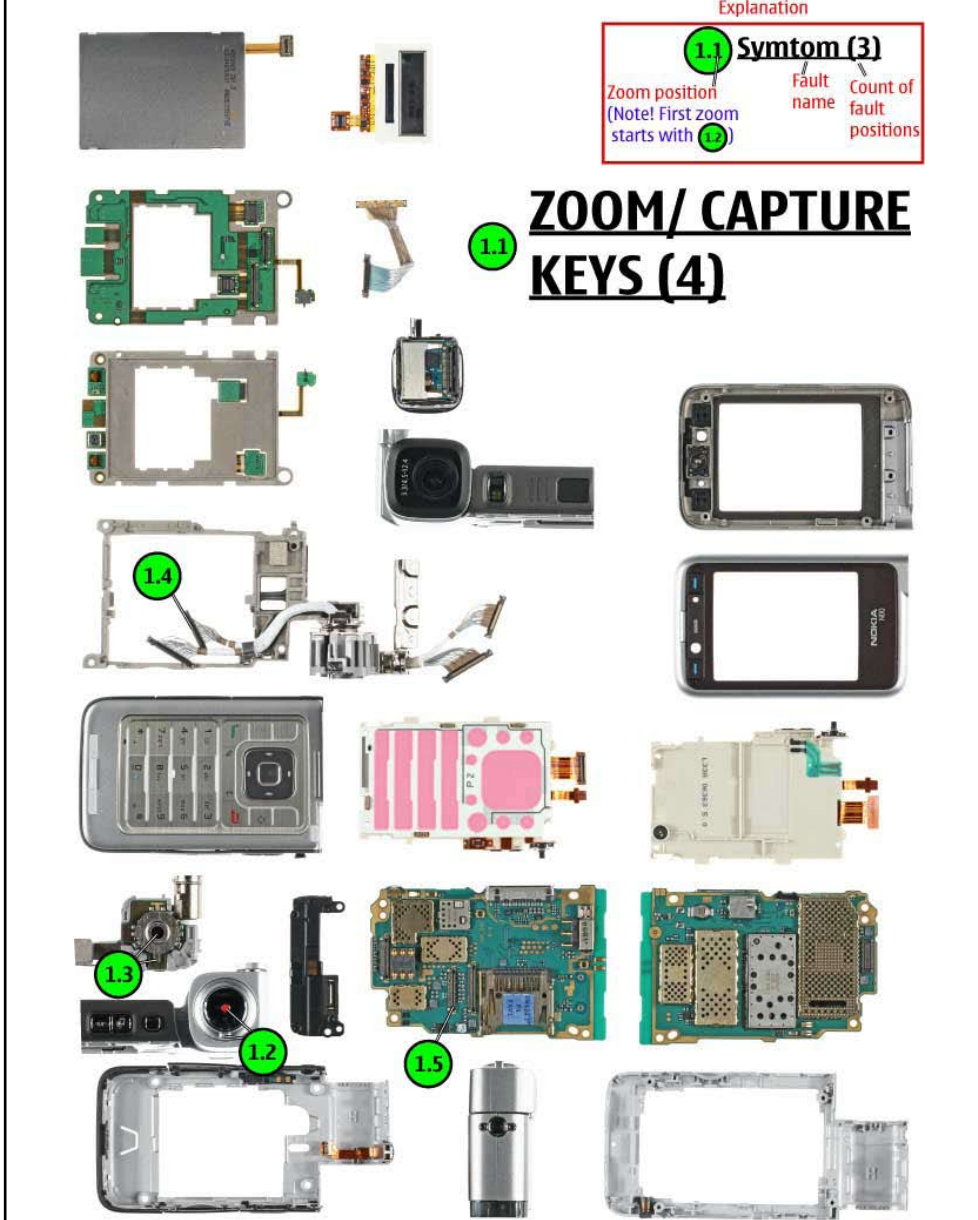
29. QUICK TROUBLE SHOOTER - ZOOM CAPTURE KEY




1.2

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


ZOOM/ CAPTURE KEYS (4)



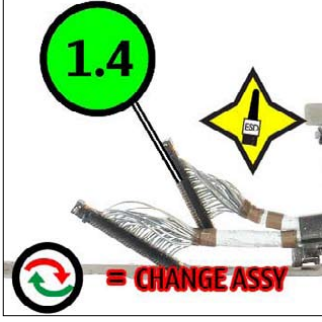


1.3

= CHANGE ASSY




1.4




1.4

= CHANGE ASSY




1.5

LEVEL 2 ONLY

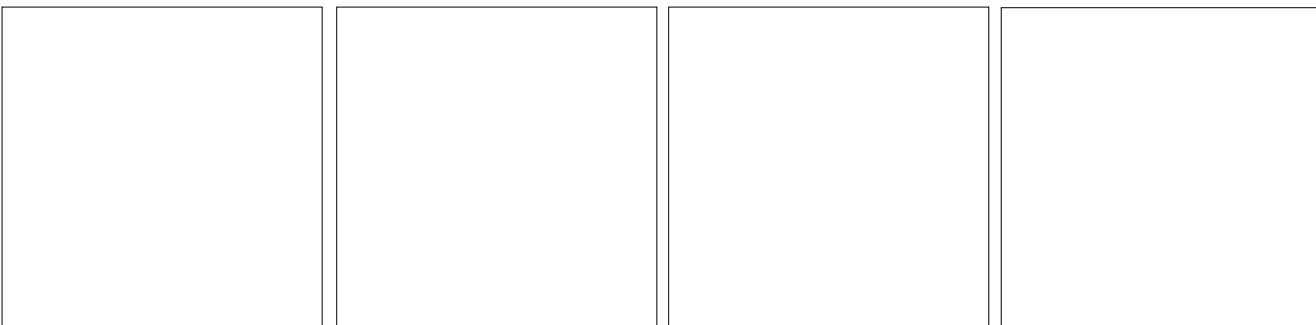


1.5

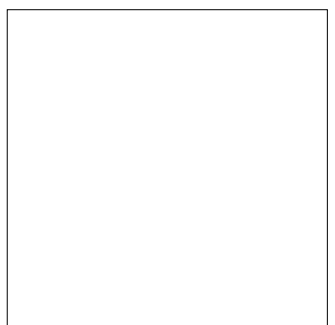
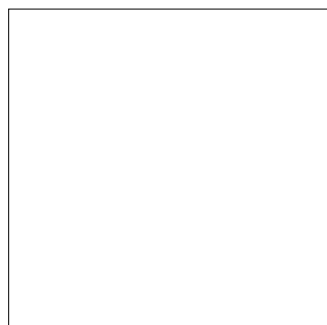
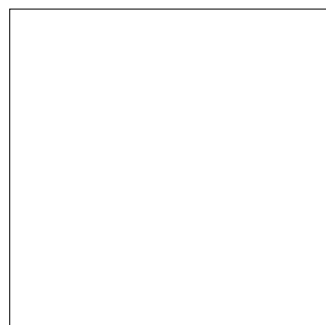
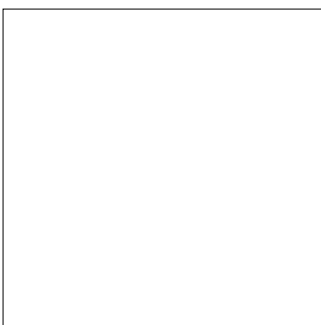
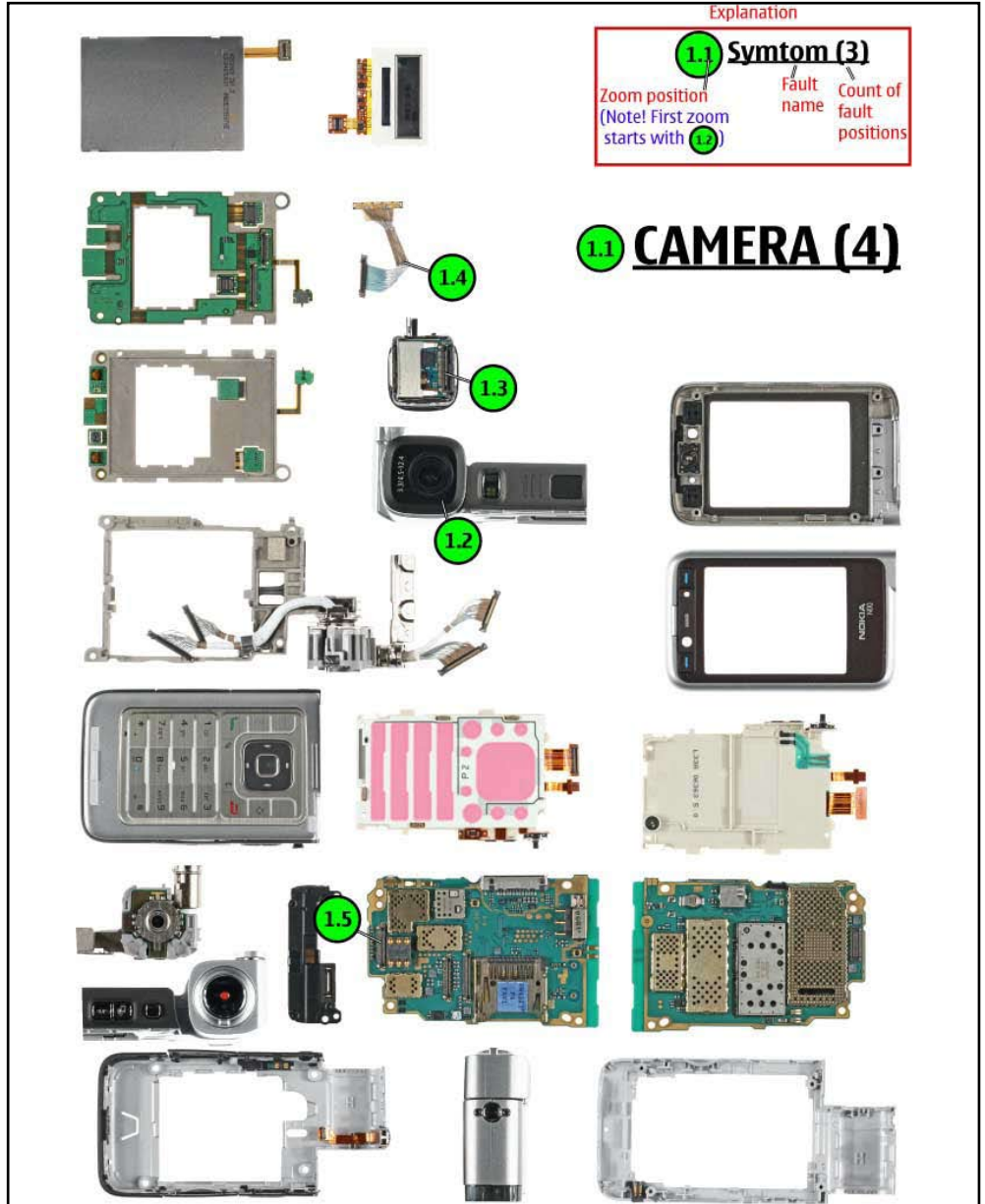
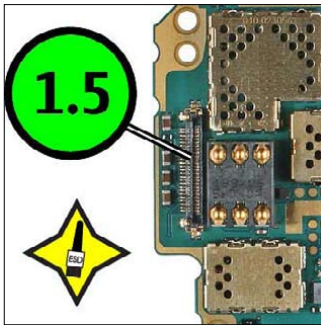
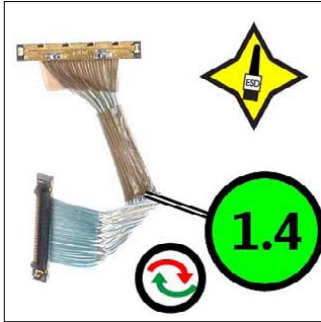
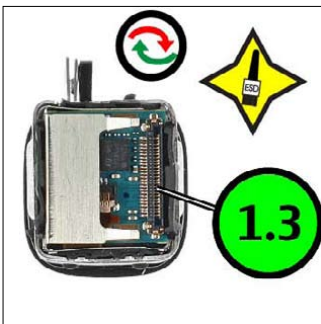


1.3

= CHANGE ASSY



30. QUICK TROUBLE SHOOTER - CAMERA



31. QUICK TROUBLE SHOOTER - CMOS CAMERA

