

SERVICE MANUAL

Level 1&2

NOKIA
N76-1

RM-135

NOKIA
N76-5

RM-149



Transceiver characteristics:

Band:

RM-139:-EGSM: Quad-band 850/900/1800/1900MHz

-WCDMA: 2100MHz

RM-149:-EGSM: Quad-band 850/900/1800/1900MHz

-WCDMA: -----

Display:

-Main LCD: 6.096cm QVGA (2.4 inch) (230x320 pixel); 16M colors

-Sub LCD: 3.4544cm (1.36 inch) (128x160 pixel); 262.144 colors

Camera:

-Main Camera: 2.0 Megapixel (1600x1200 pixels)

-Sub Camera: CIF+ (384x320)

Operating System:

Series 60

Connections:

Wireless: Bluetooth

Connector: Mini USB Connector; AV Connector

Memory:

MicroSD™ (max 2GB)

Transceiver with BL-4B Li-Ion battery pack

Talk time	Standby	Note
up to 2.0h	up to 8.5days	Depends on network parameters

1. CHANGE HISTORY

Status	Version No.	Date	Comments
Draft	0.1	13.Mrz.2007	Initial draft
Approved	1.0	28.Mrz.2007	Approval
Approved	2.0	13.Sept.2007	Disassy text modified; Page Pathfinder For Workshop Staff & General Repair Information removed
Approved	3.0	08.Oct.2007	Disassembly procedure upper block changed

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

CMO Operation & Logistics
Training and Vendor Development
Multimedia Creation & Support
<mailto:Service.Manuals@nokia.com>

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

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IMPORTANT

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

3. WARNINGS AND CAUTIONS

Warnings and Cautions

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

Warnings:

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

Cautions:

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

4. ESD PROTECTION

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

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

To replace the covers ESD protection must be applied.

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

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

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

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

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



5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMH batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose. Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F). A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling). Do not dispose as household waste.



BL-4B

Internal Battery BL-4B

Inserted under the back cover, this Li-Ion battery provides power in a lightweight package.

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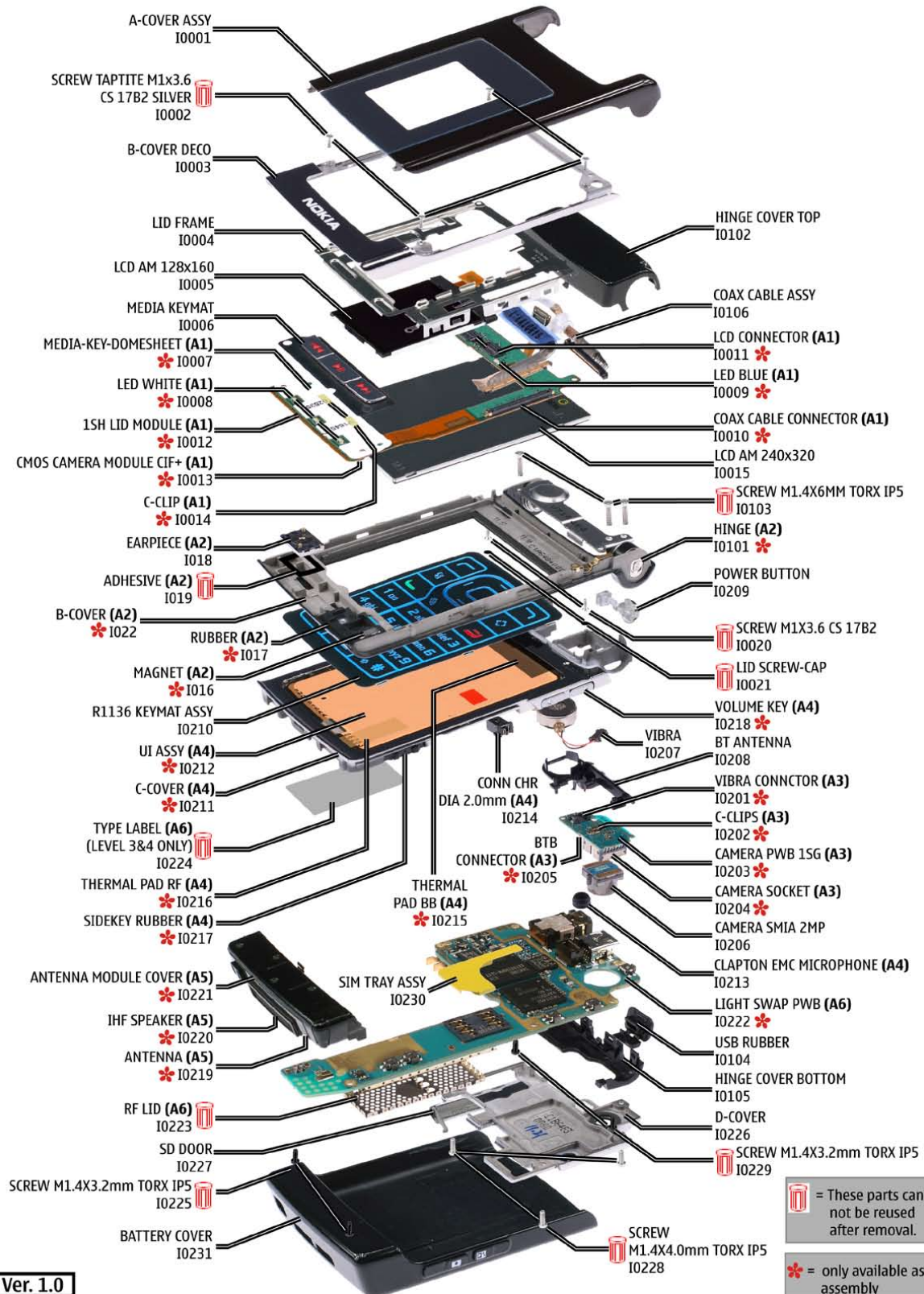
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7. EXPLODED VIEW

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

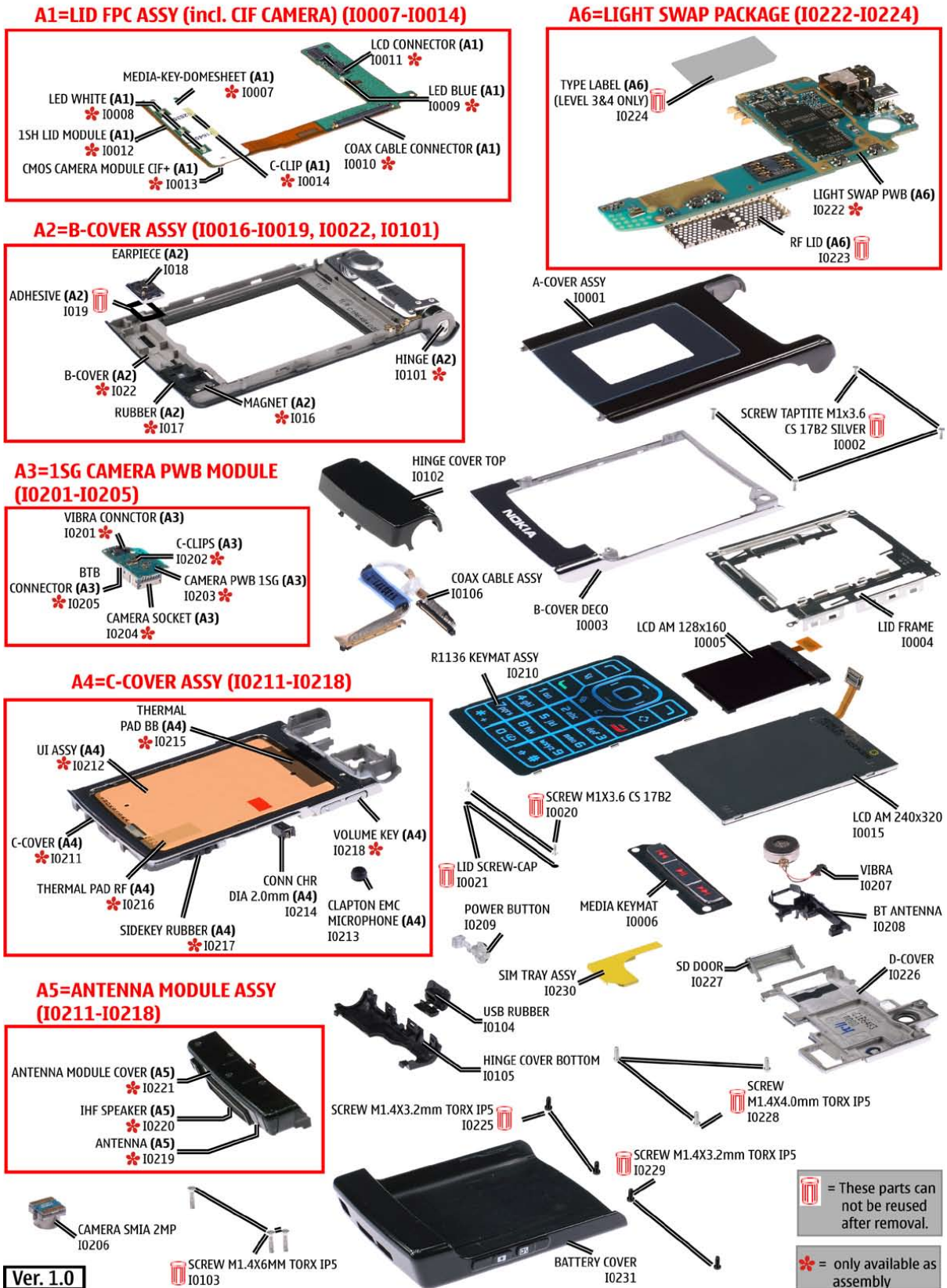
N76 RM-135/RM-149 EXPLODED VIEW



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8. SPARE PARTS OVERVIEW

N76 RM-135/RM-149 SPARE PARTS OVERVIEW



Ver. 1.0

9. GENERAL RECYCLING RECOMMENDATION

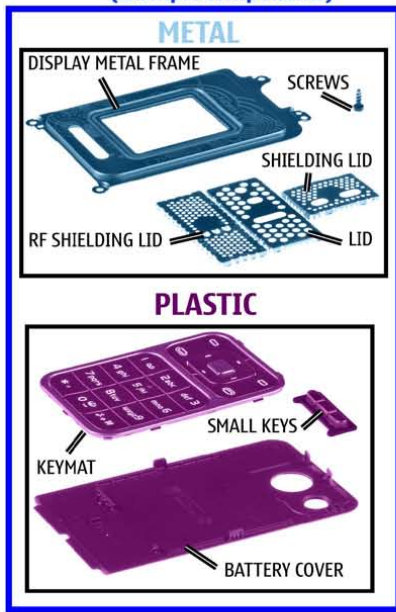
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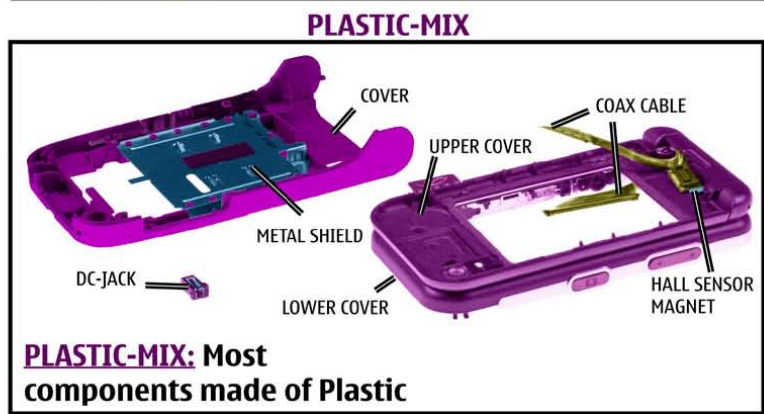
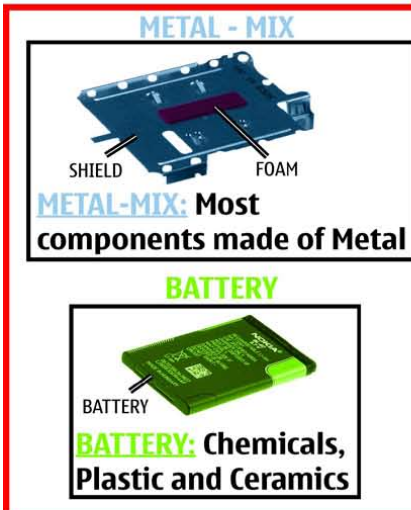
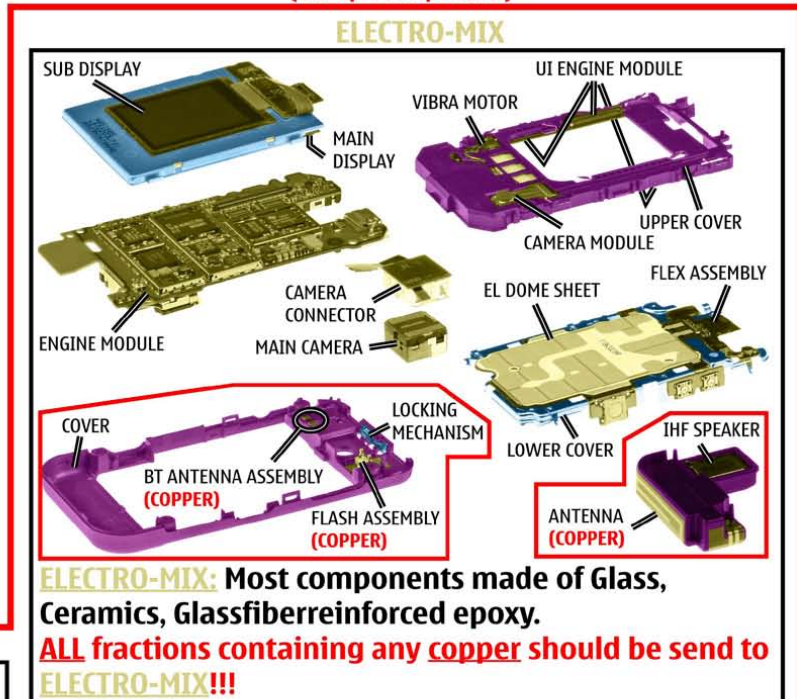
13.11.2006
MGR

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

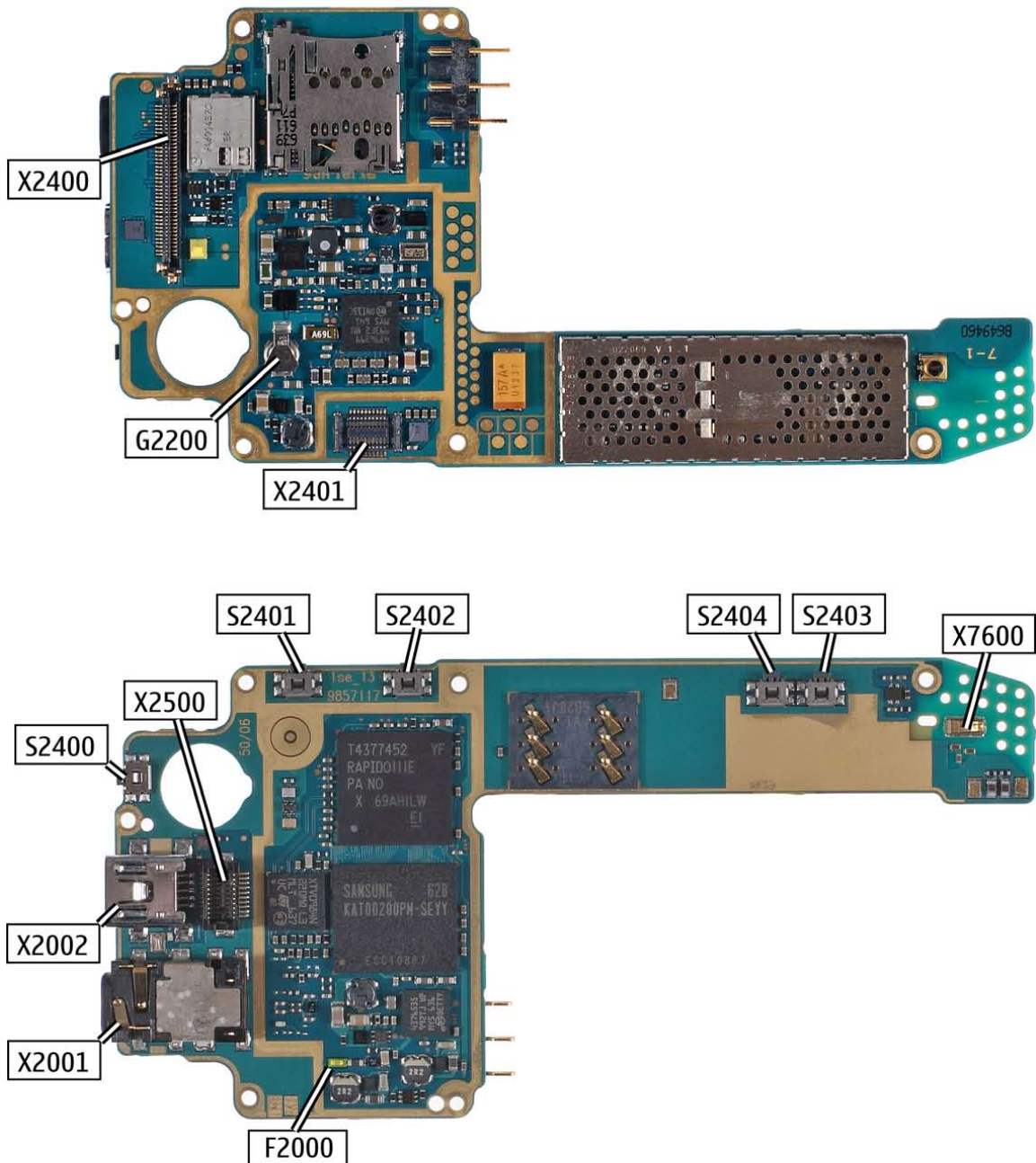
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10. LEVEL 2 SOLDER COMPONENTS

N76 RM-135/RM-149 Level 2 solder components

Solder components only for LEVEL 2



Ver. 2.0

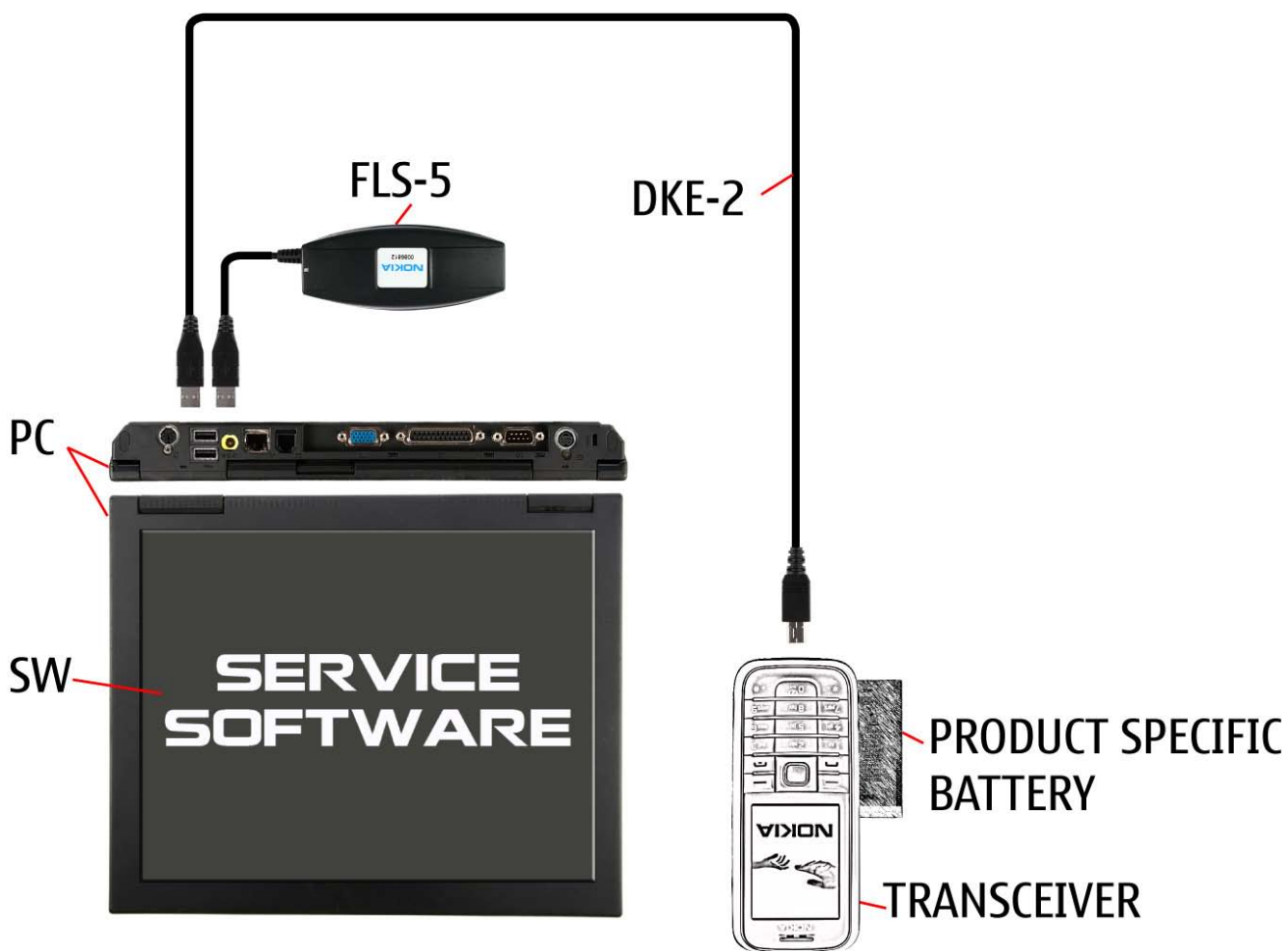
11. SERVICE TOOLS

 <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>DKE-2 Service Cable to connect the PC with the mini USB connector.</p>	 <p>SS-45 Camera removal tool. One side is for disassembly, the other side for assembly.</p>	 <p>SS-112 Philips bit</p>
 <p>RJ-111 Soldering Jig</p>	 <p>Lead-free Solder Wire Mandatory for lead-free products (Level 2 only).</p>	 <p>0772040 NMP Standard Toolkit (V2) For more informations refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in “Recommended service equipment” document on NOKIA Online.</p>

12. SW-UPDATE

Flash Concept – (Point of Sales)

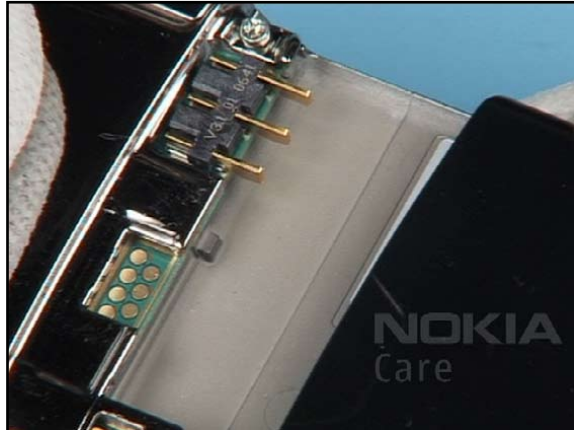
To use FLS-5 Flash Dongle you have to follow the user guide inside the sales package. Please check always for the latest version of flash software, which is available on [NOKIA Online](#).



13. UPPER BLOCK DISASSEMBLY



1. Needed tools: The SS-93, the dental pick, a straight bladed screw driver, metal tweezers, a bit holder with the SS-112 and a torque driver. Keep your tools in good condition, Always replace them if worn out.



2. Ensure that no battery is still inserted before starting repair.



3. Open the assembly. Ease out and remove the SCREW CAPS with the dental pick.



4. Carefully unscrew and remove the screws. Be double careful not to scratch the delicate surface while removing.



5. Do not use these screws again.



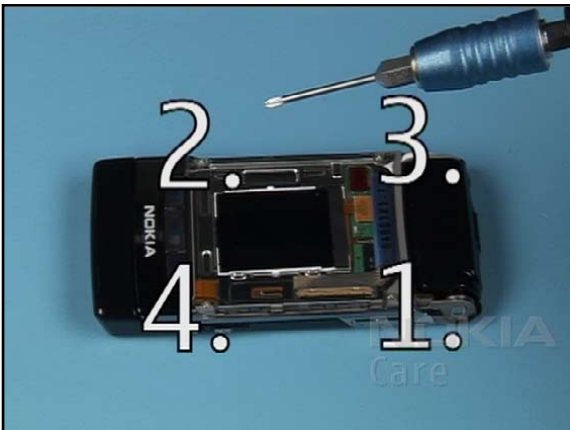
6. Gently pry open the A-COVER at the top side first with the SS-93.



7. Mind the coax cable.



8. Lift up and remove the A-COVER.



9. Unscrew these four screws in the shown order and discard them.



10. Do not use them again.



11. Lever up the B-COVER DECO.



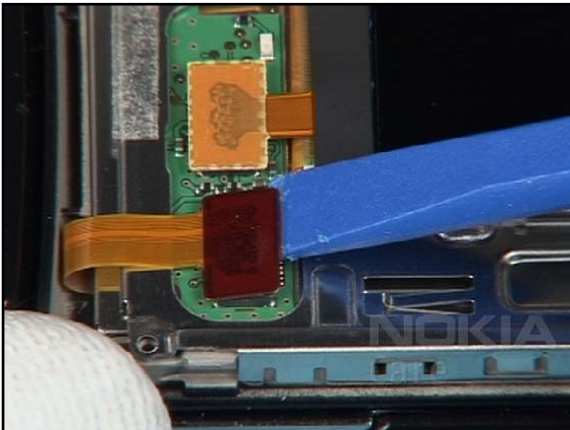
12. ...and remove it.



13. Carefully release the connector as shown. Avoid bending the connector.



14. The coax cable is glued to the LID FRAME.



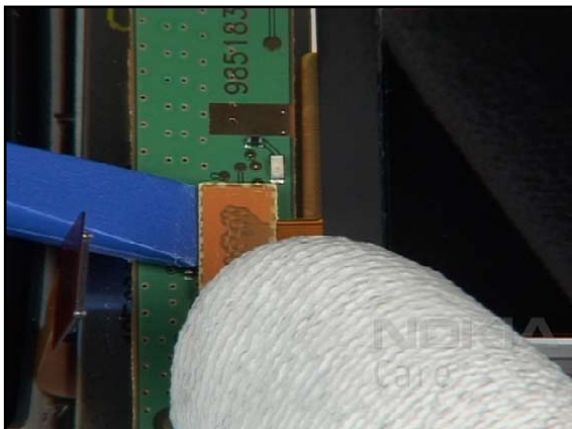
15. Open the flex connector.



16. Open these 2 metal latches. Do not over bend these clips.



17. Remove the LID FRAME.



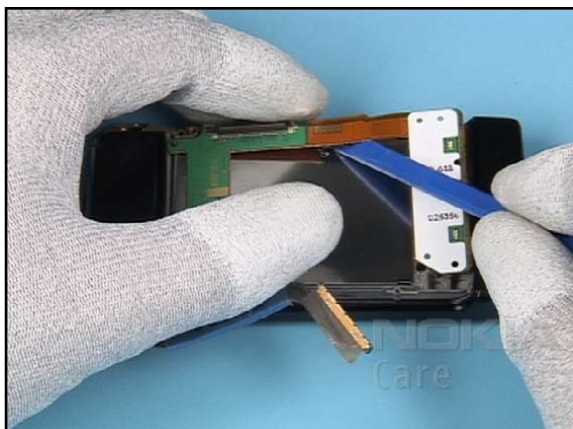
18. Carefully open the flex connector of the LCD. Mind the components close to the connector.



19. Cover the display with a protective film and remove it.



20. Gently peel of the MEDIA KEYMAT. Remove the adhesive residues.



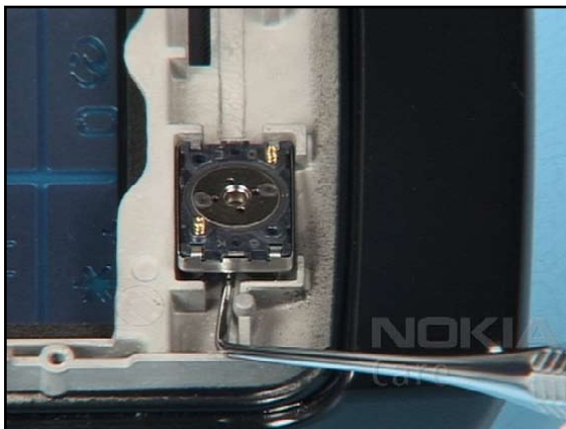
21. Release the adhesive of the LID FPC ASSEMBLY and remove it. This adhesive is required for production only and must not be renewed when reassemble.



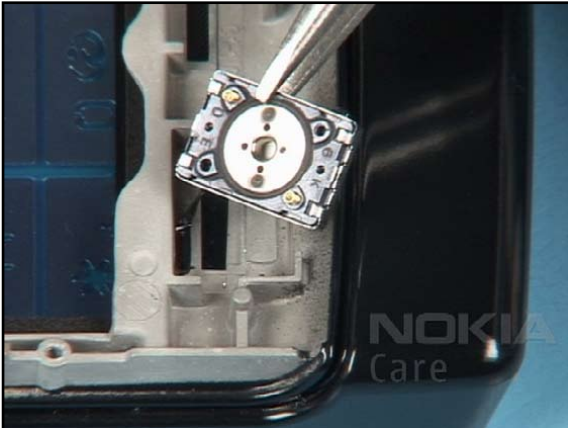
22. Carefully lift up the LCD and shift it into direction shown.



23. Cover the display with a protective film.



24. Ease out and remove the EARPIECE.



25. Use a new gasket when reassembling.



26. The disassembling procedure is now complete.

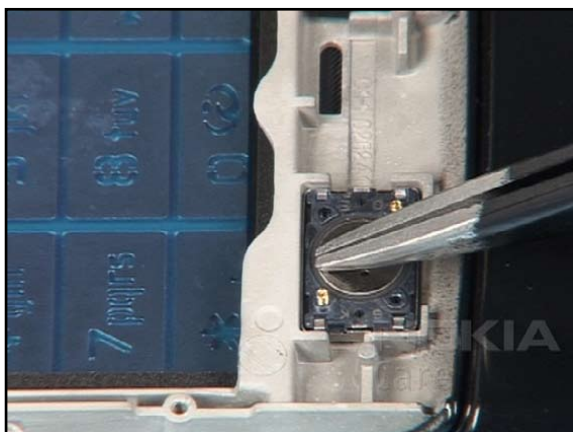
14. UPPER BLOCK ASSEMBLY



1. Assembly.



2. Fit a new gasket to the EARPIECE.



3. Place the EARPIECE into its compartment. Push it down carefully.



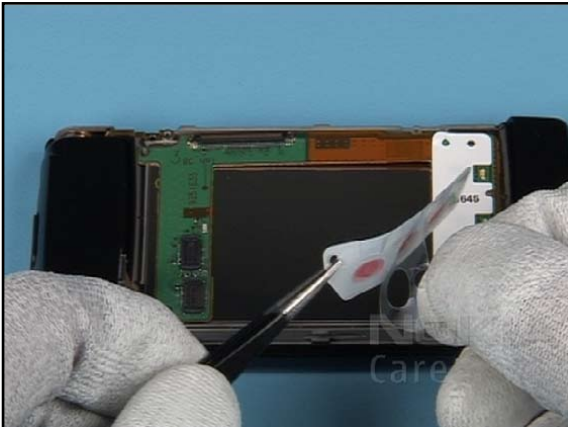
4. Remove the protection film and place the LCD.



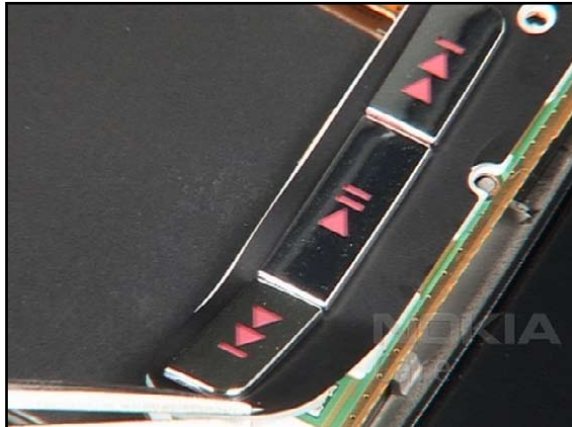
5. Place the LID FPC ASSEMBLY.



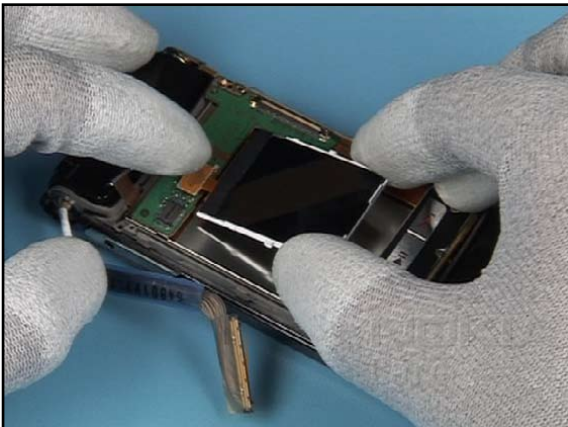
6. Mind the correct positioning before continuing.



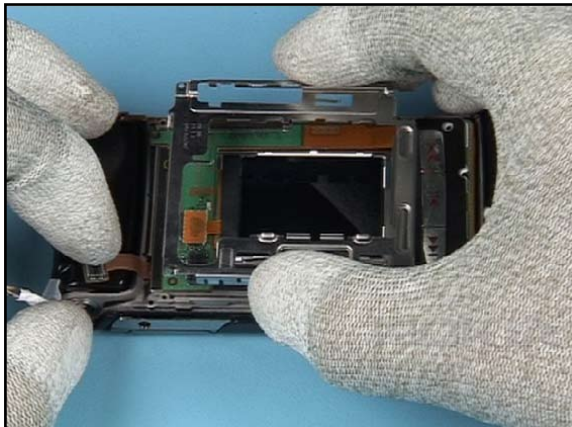
7. Remove the protection film of the MEDIA KEYMAT.



8. Align it and smooth it down evenly.



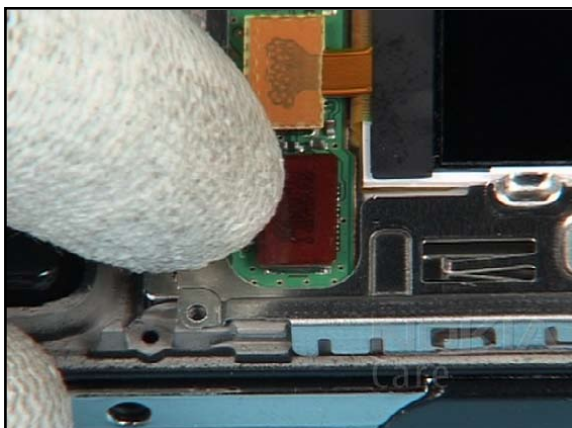
9. Remove the protection film from the LCD AM 128x160 first. Close the Flex connector of the LCD AM 128x160.



10. Place the LID FRAME.



11. Note the correct positioning and click the snaps into their places.



12. Close the LCD AM 240x320 flex connector.



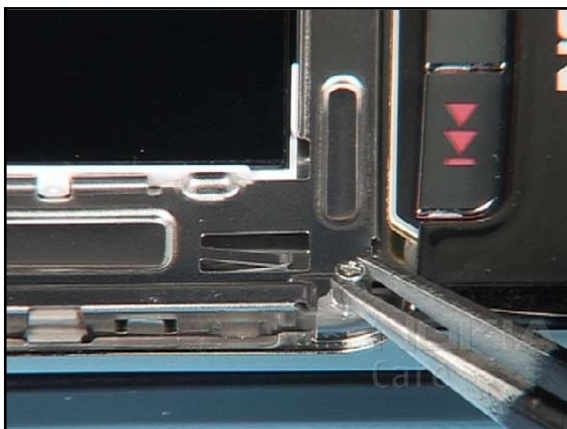
13. Align the coax cable and close the connector.



14. Place the B-COVER DECO as shown.



15. Note the correct positioning of the coax cable before going on.



16. Insert 4 new screws.



17. Set the correct torque.



18. Apply the torque to the screws in the order shown.



19. Place the A-COVER.



20. Click the snaps into their places.



21. Insert 2 new screws.



22. Set the correct torque.



23. Tighten both screws.



24. Cover the screws with new SCREW CAPS.

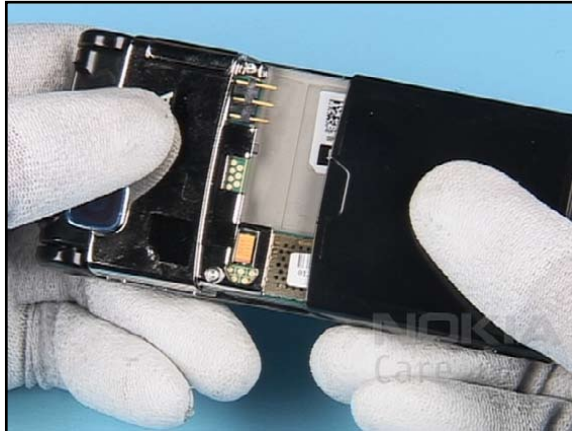


25. Finally, check the windows and displays for cleanness.

15. LOWER BLOCK DISASSEMBLY



1. Needed tools: The SS-93, metal tweezers, the SS-45 camera removal tool, a bit holder with a Torx Plus bit and a torque driver. Keep your tools in good condition, Always replace them if worn out.



2. Check that no battery is inserted before starting disassembling.



3. Flip open the assembly. Shift the SS-93 under the menu key of the KEYMAT as shown.



4. Now, lever out the KEYMAT carefully and discard it. Do not use it again.



5. Carefully insert the flat bladed screwdriver and lever out the clips of the HINGE COVER TOP.



6. Lift up the HINGE COVER BOTTOM.



7. Remove the USB RUBBER.



8. Another option for SD DOOR removal is shown here. Remove the BATTERY COVER.



9. Unscrew this screw and discard it. Do not use it again.



10. Open the SD DOOR. Carefully lever up and hold the D-COVER into position shown with your fingers.



11. Move the left tab of the SD DOOR to the recess of the D-COVER.



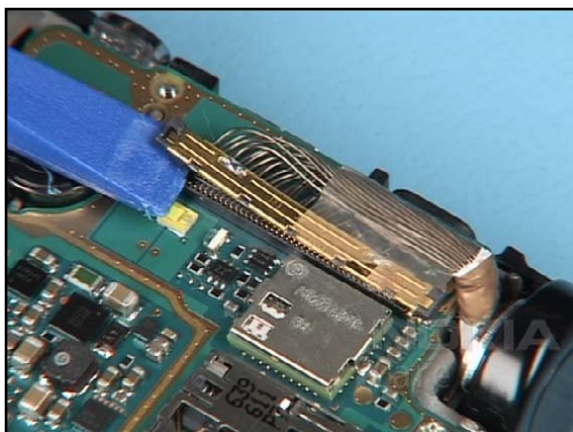
12. Now it can be removed.



13. Remove the BATTERY COVER, unscrew the 3 screws of the D-COVER and discard them.



14. Do not use them again.



15. Carefully lever up the coax connector.



16. Open the flex foil connector.



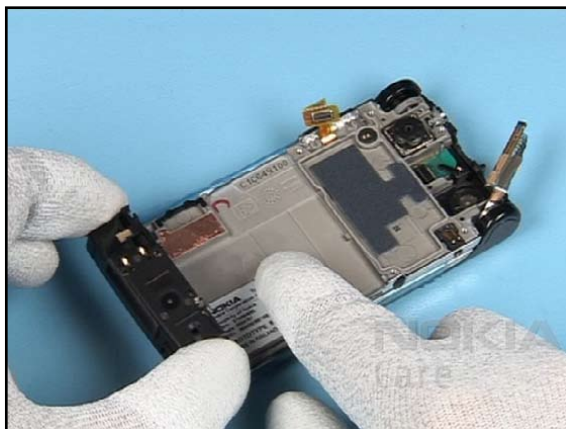
17. Unscrew the 4 screws and discard them.



18. Do not use them again.



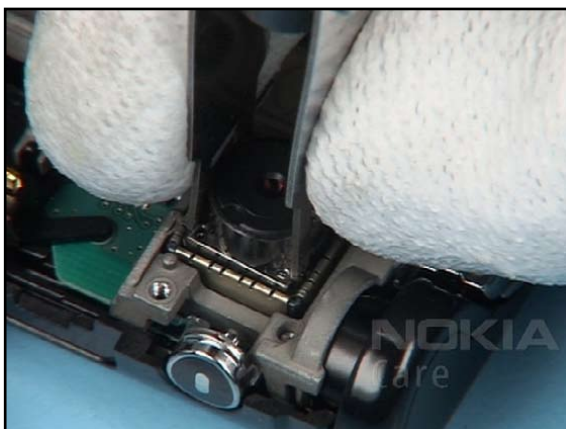
19. Lift up the ENGINE MODULE vertically. Note that this module is connected with a hidden connector.



20. Lift up the ANTENNA MODULE.



21. Remove the DC-JACK.



22. Use the SS-45 camera removal tool to remove the CAMERA MODULE as shown.



23. Remove the MICROPHONE and discard it.



24. Gently pry open the HINGE COVER TOP and remove it.



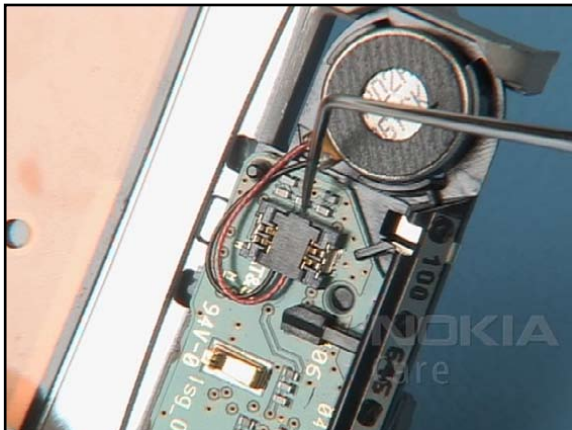
25. Unscrew the 3 screws in the order shown and discard them.



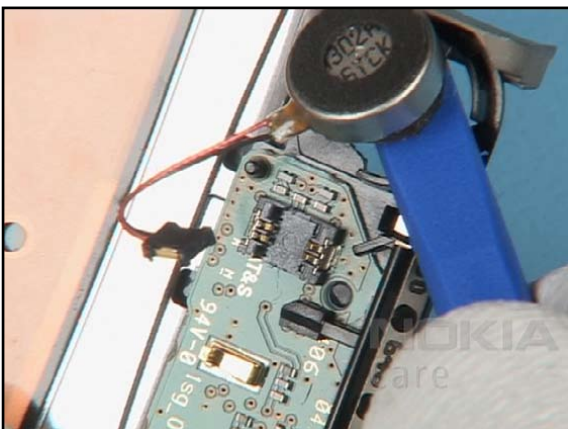
26. Do not use them again.



27. Separate the parts now.



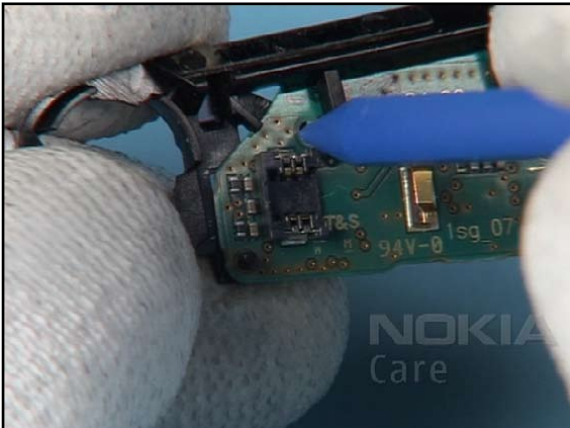
28. Carefully open the connector of the VIBRA.



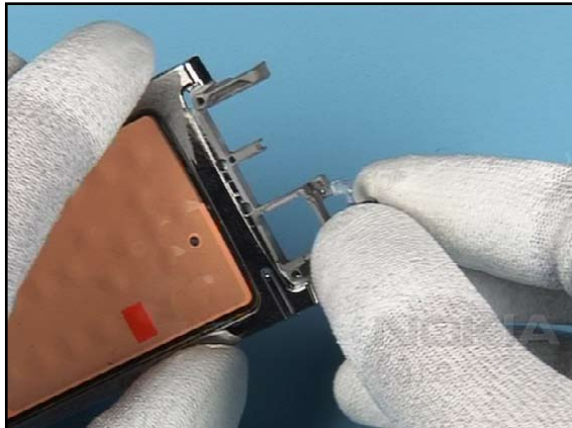
29. Lever out the VIBRA with the SS-93.



30. Remove the CAMERA PWB ASSEMBLY.



31. Unlock and separate the CAMERA PWB from the BLUETOOTH ANTENNA.



32. Remove the POWER BUTTON.

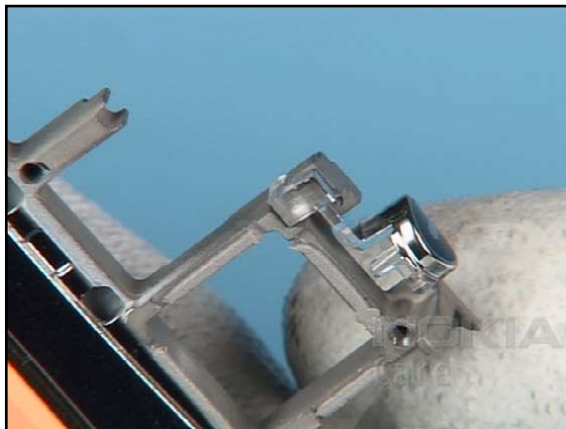


33. The disassembly procedure is now completed.

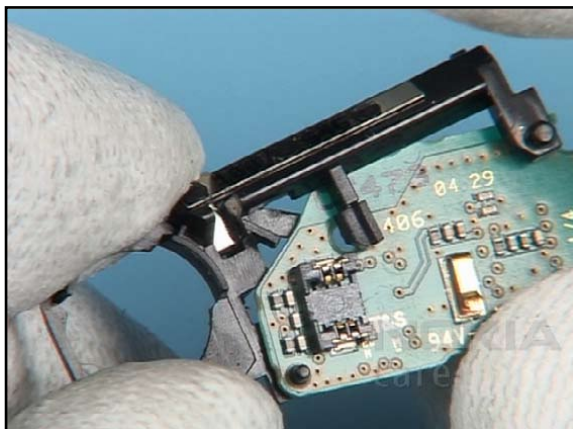
16. LOWER BLOCK ASSEMBLY



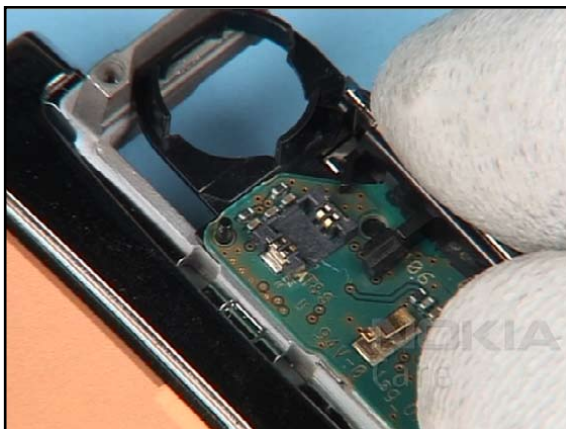
1. Assembly.



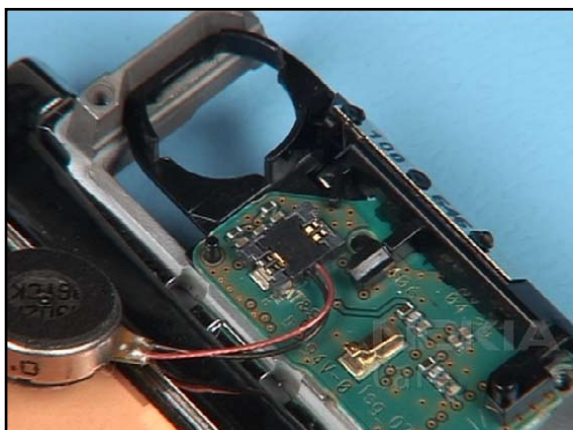
2. Fit the POWER BUTTON.



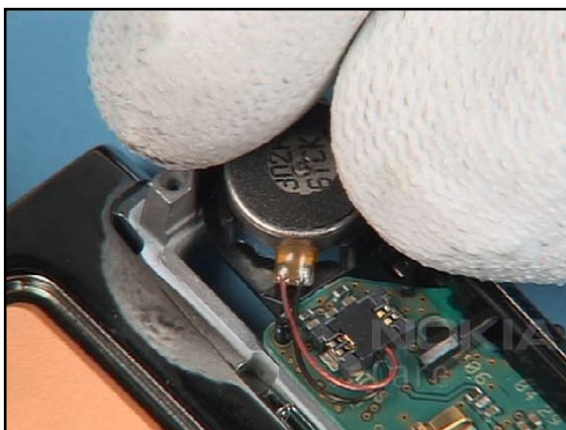
3. Place the CAMERA PWB ASSEMBLY into the BLUETOOTH ANTENNA. Mind the guide.



4. Insert the CAMERA PWB ASSEMBLY into the B-COVER now.



5. Close the connector of the VIBRA.



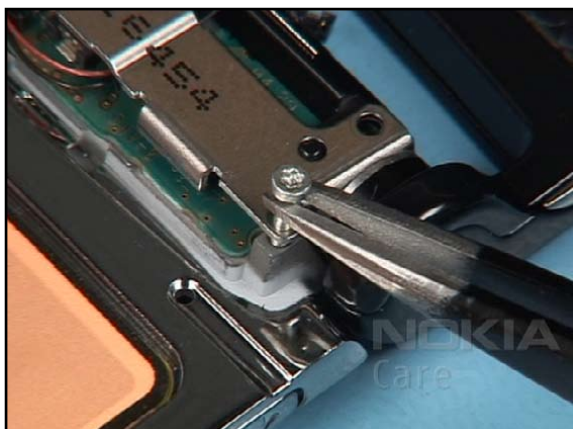
6. Place the VIBRA into its compartment.



7. Bring the upper and lower block into position as shown.



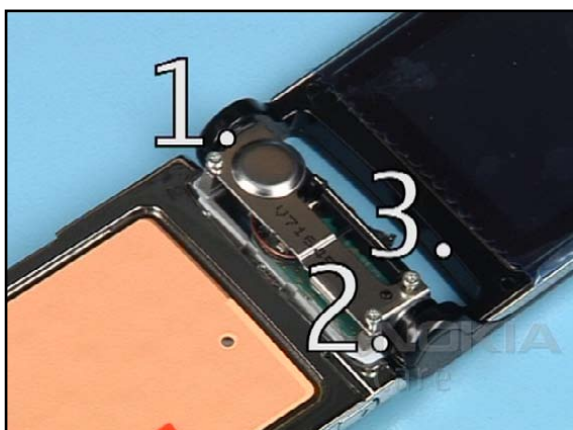
8. Take the 3 longest ones of the new screws.



9. Insert the 3 screws.



10. Set the correct torque.



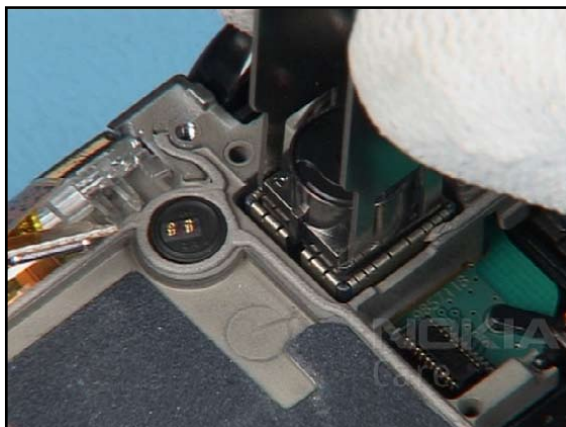
11. Apply the torque in the order shown.



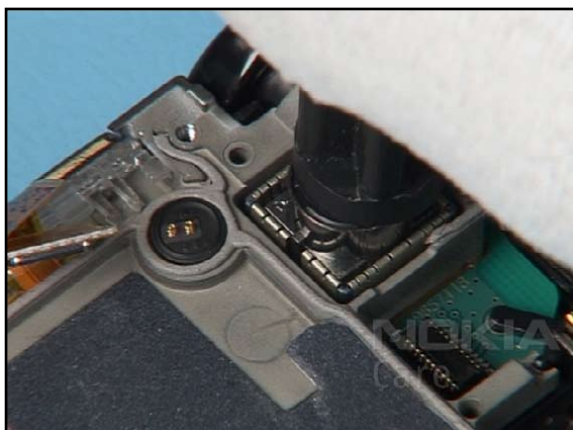
12. Place the HINGE COVER TOP. Mind the hooks!



13. Insert the MICROPHONE.



14. Insert the CAMERA MODULE with the SS-45. Note the correct positioning of the alignment tab.



15. Push it down slightly with the back of the SS-45.



16. Insert the DC jack.



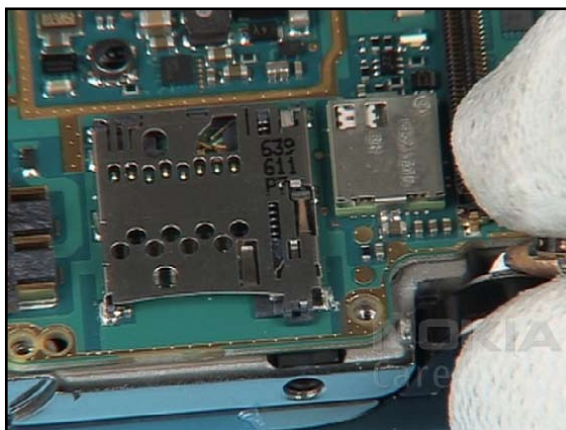
17. Mind the SIDEKEY RUBBER.



18. Place the ANTENNA MODULE. Mind the guides.



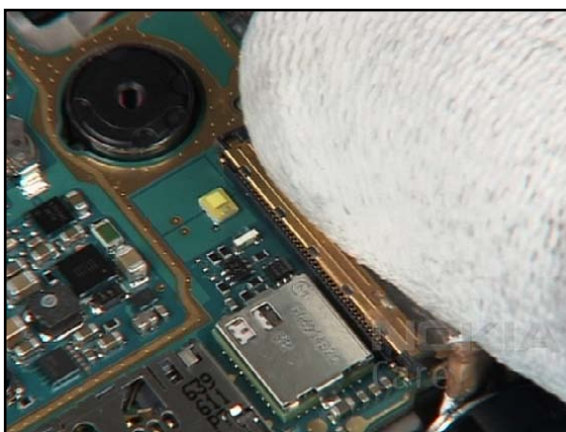
19. Bring the ENGINE MODULE into position as shown. Push it slightly into place vertically, ensure that the hidden connector is correctly positioned before continue.



20. Note the correct positioning of the cable.



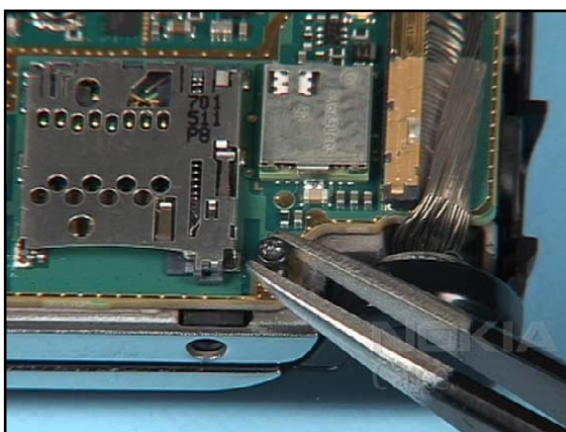
21. Close the flex foil...



22. ...and the coax cable connector.



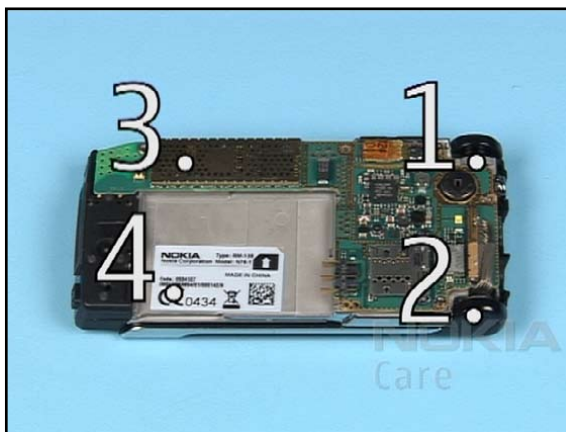
23. Use the black and shortest ones of the new screws.



24. Insert the 4 screws.



19. Set the correct torque.



20. Tighten the screws in the order shown.



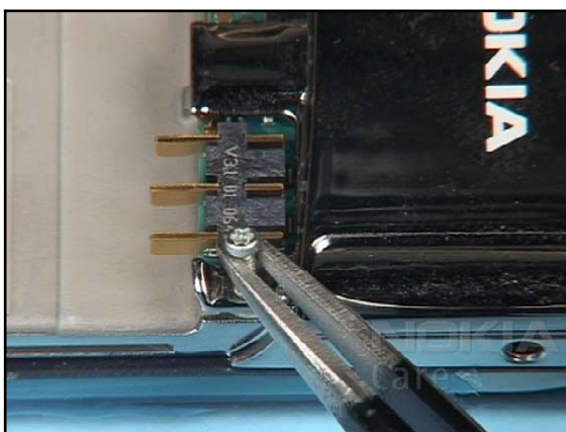
21. Insert the SD CARD DOOR as shown.



22. Place the D-COVER over the engine module.



23. Use the medium lengths of the new screws.



24. Insert the 3 screws



25. Set the correct torque.



26. Tighten the screws in the shown order.



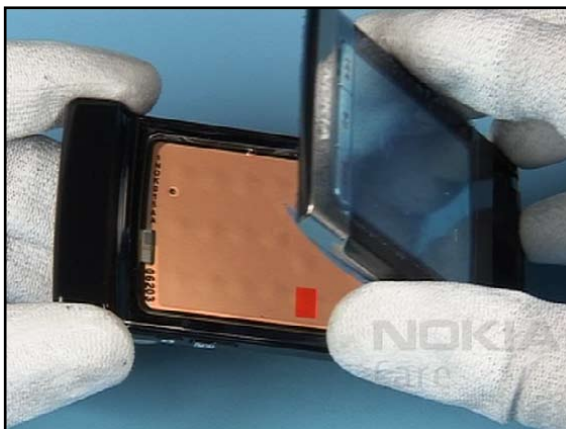
27. Place the USB RUBBER.



28. Align the HINGE COVER BOTTOM first. Slightly click the snaps into their places.



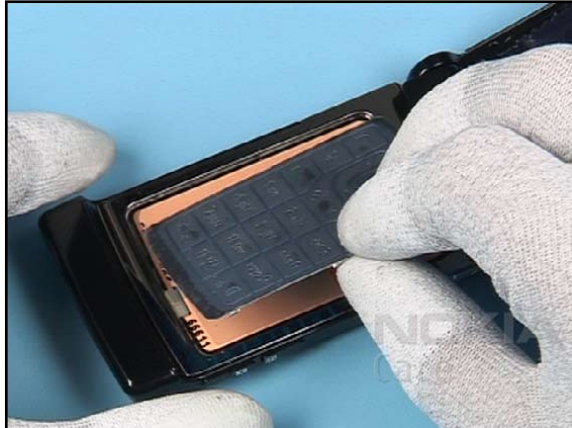
29. Place the BATTERY COVER.



30. Turn and open the assembly.



31. Peel up the protection film of the new KEYMAT.



32. Fit the latches of the opposite side into their recesses.



33. Use the old KEYMAT for assembling the new one.












34. Smooth the KEYMAT into center position.

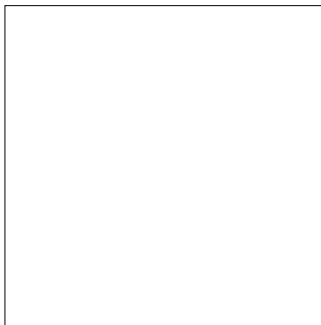
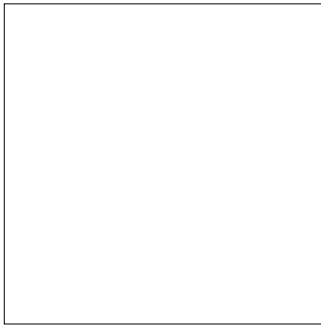
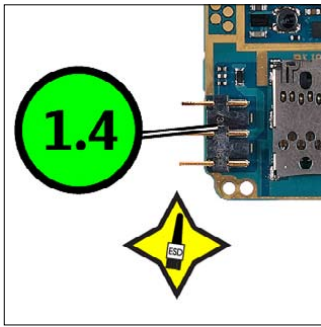
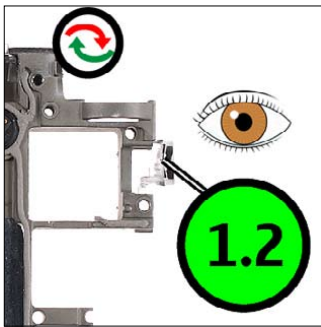


35. Remove the protective film.

17. 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; display: inline-block;"> <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>

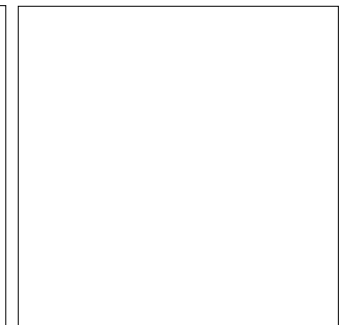
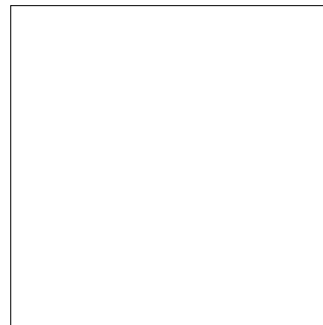
18. QUICK TROUBLE SHOOTER - POWER ON



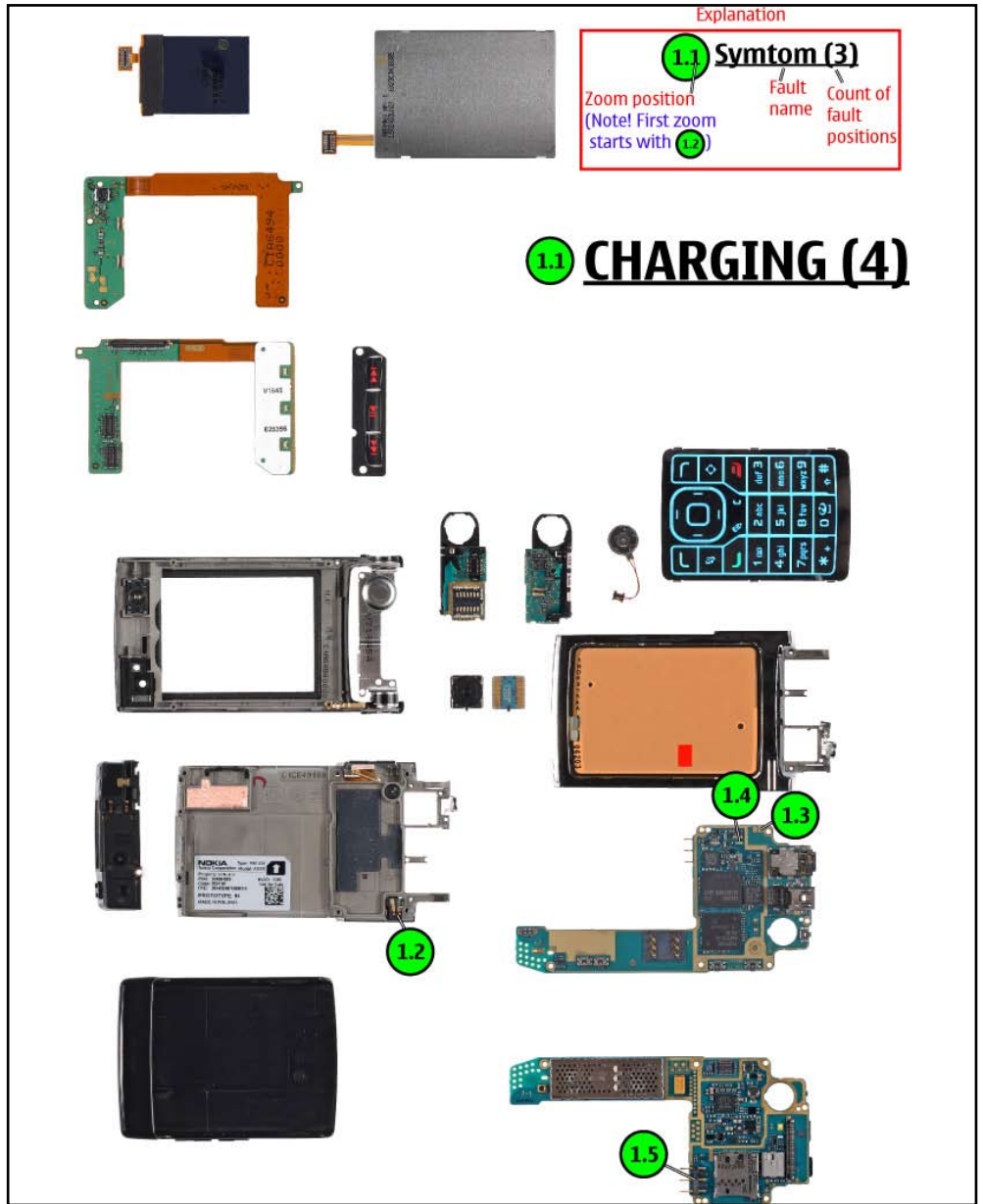
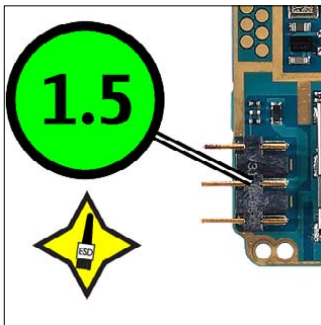
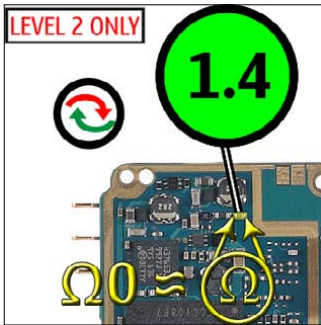
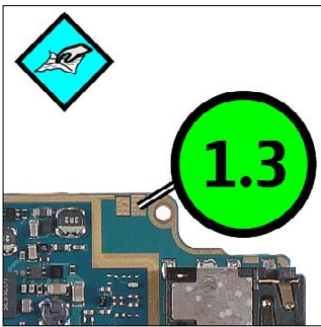
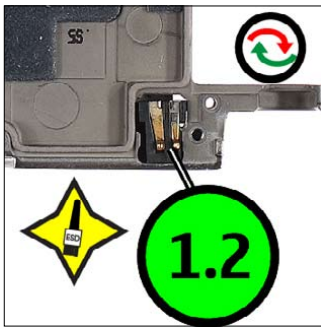
Explanation

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

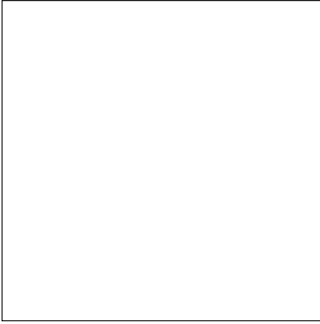
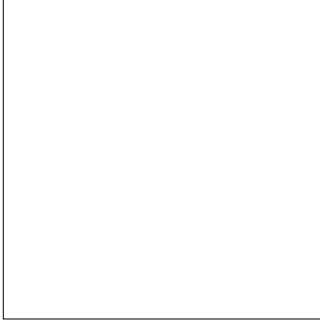
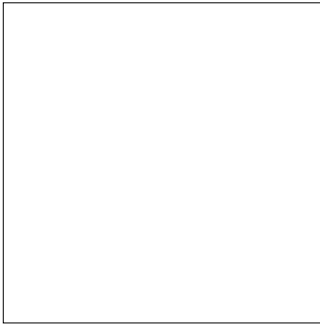
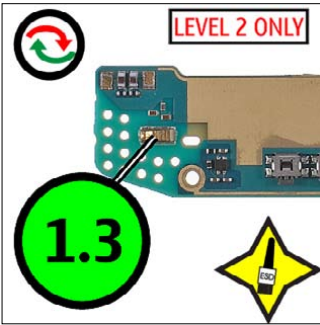
1.1 POWER (3)



19. QUICK TROUBLE SHOOTER - CHARGING

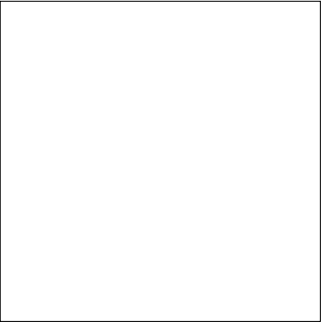
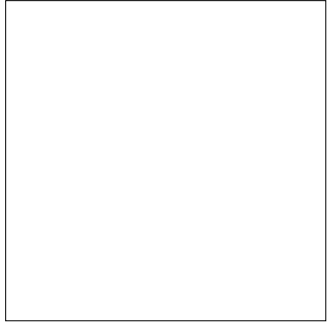
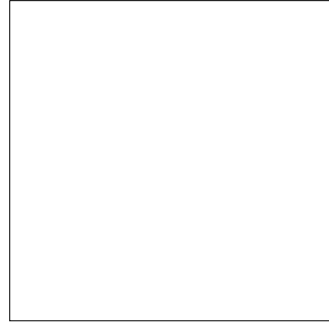


20. QUICK TROUBLE SHOOTER - NO SERVICE

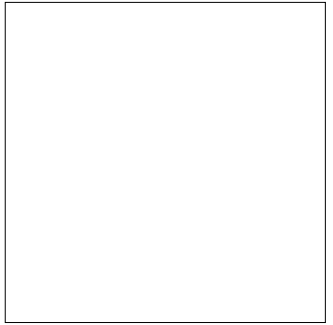
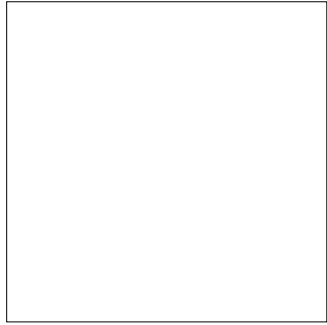
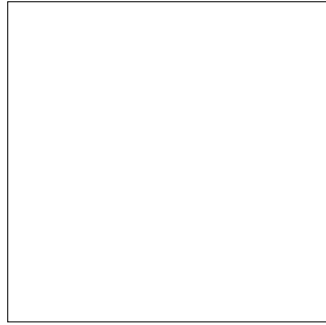
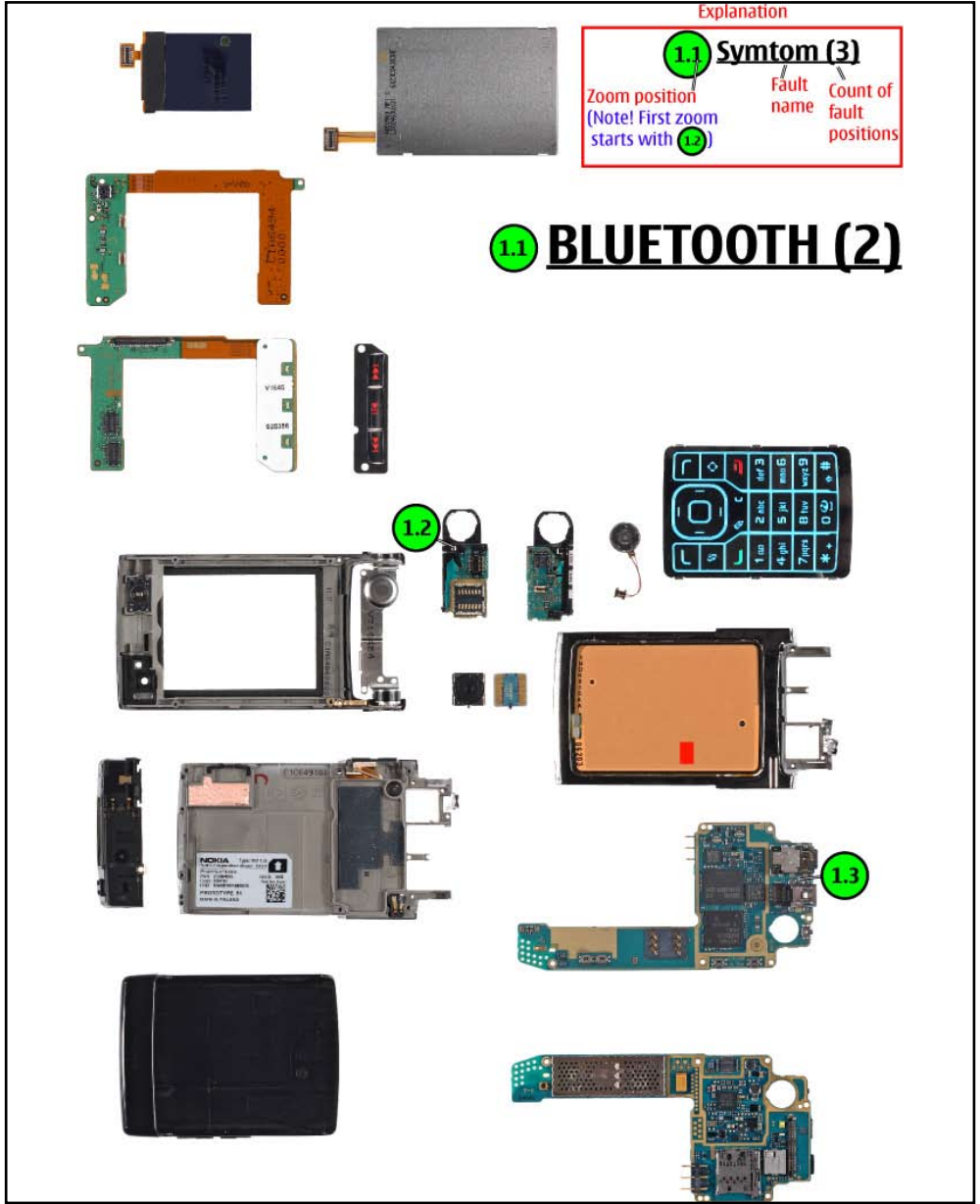
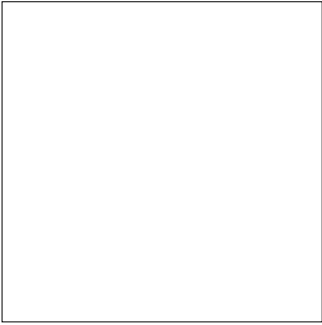
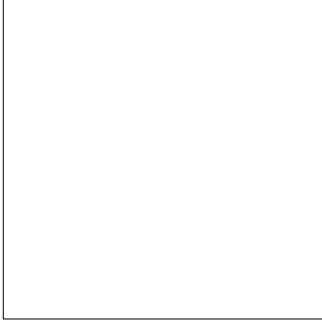
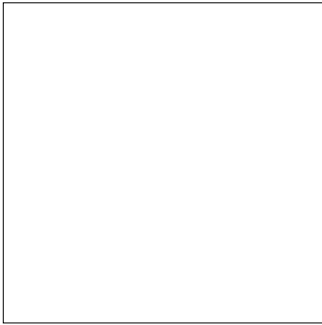
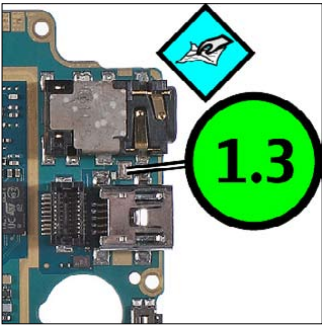
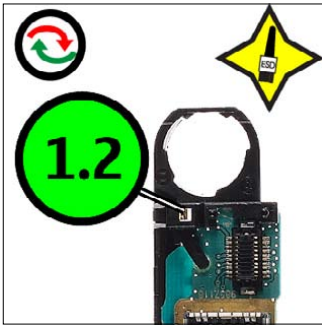


Explanation		
1.1	Symptom (3)	
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

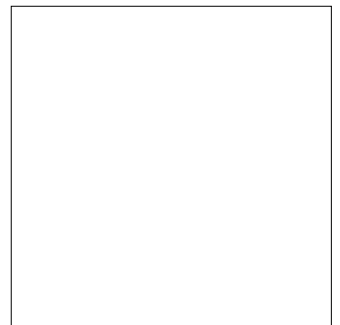
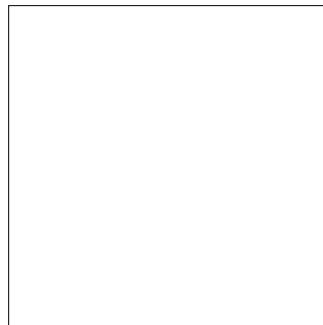
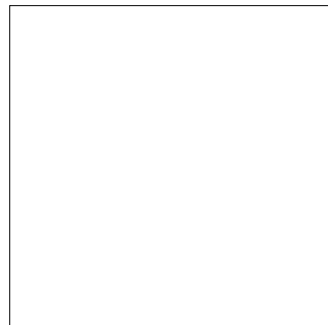
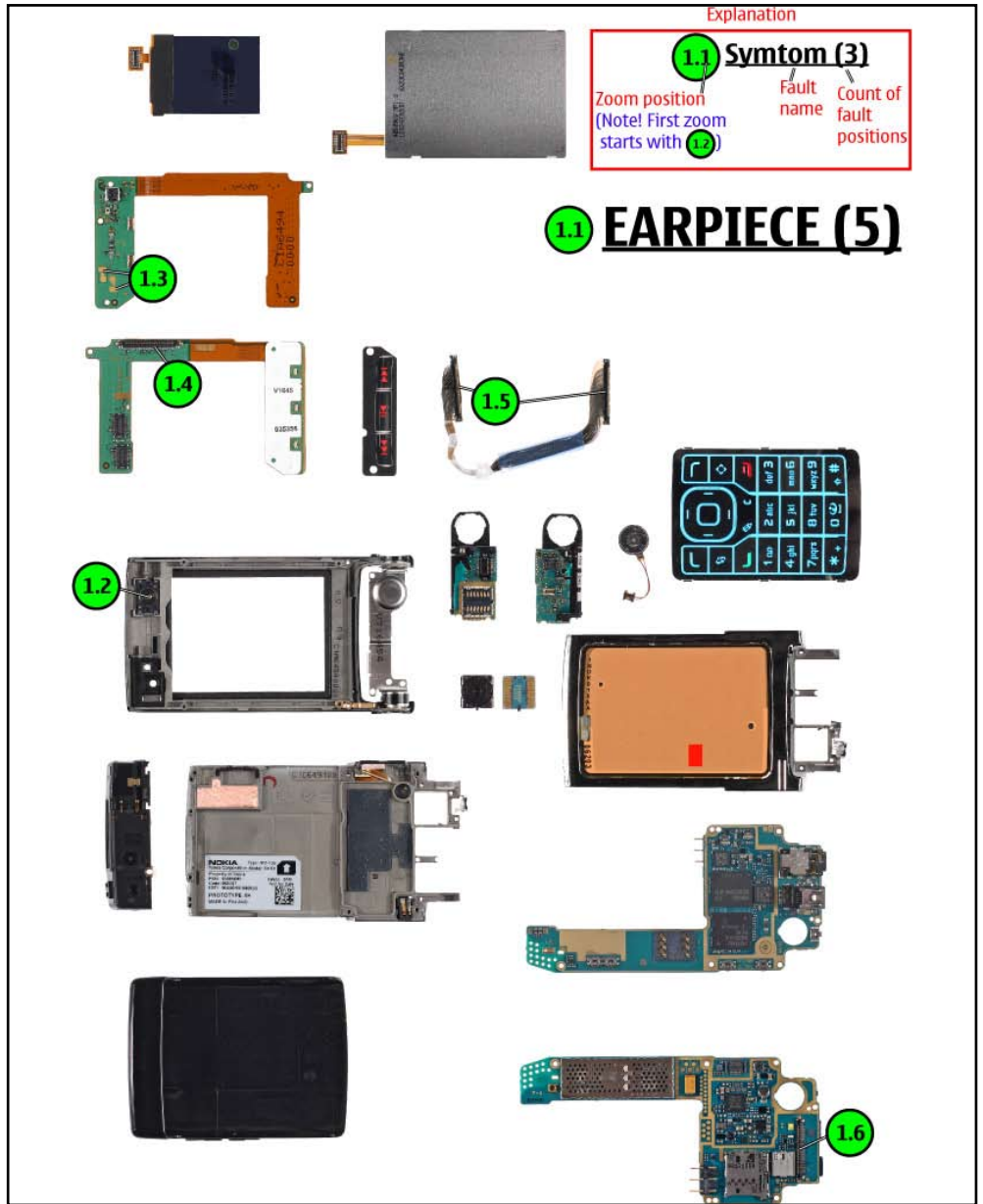
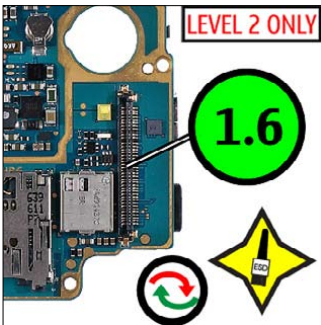
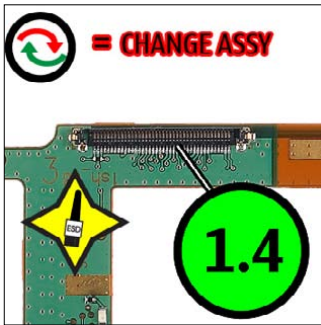
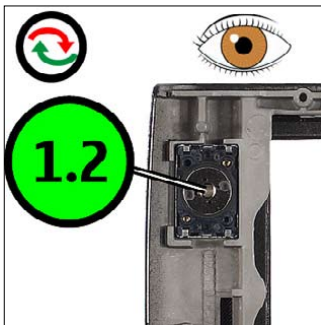
1.1 NO SERVICE (2)



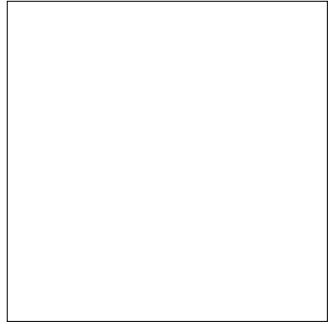
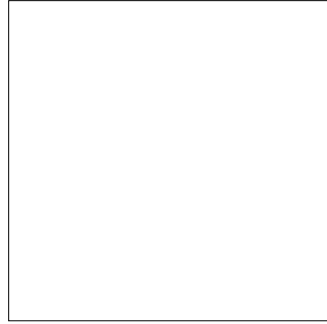
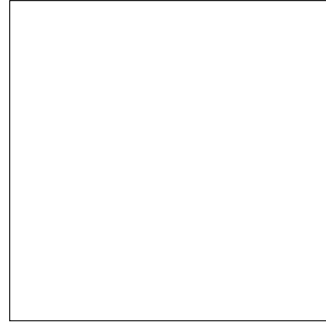
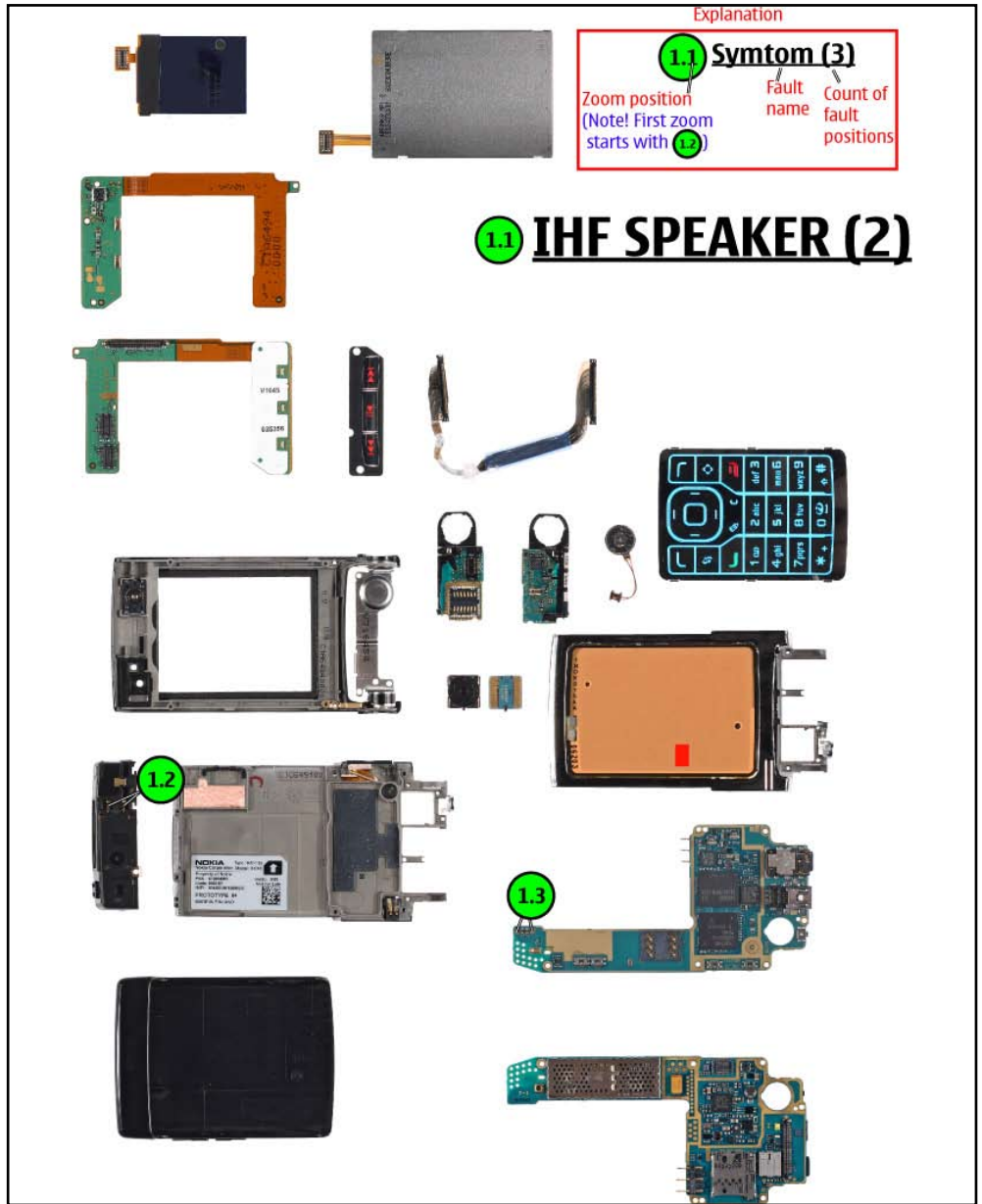
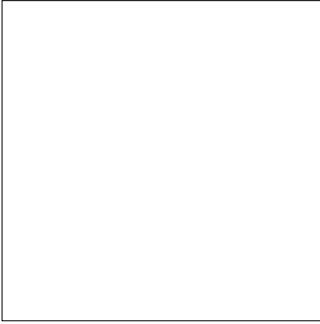
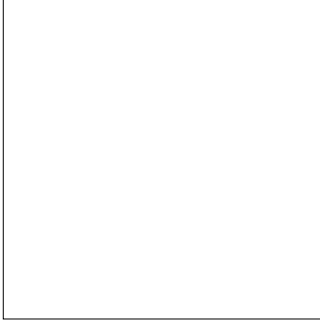
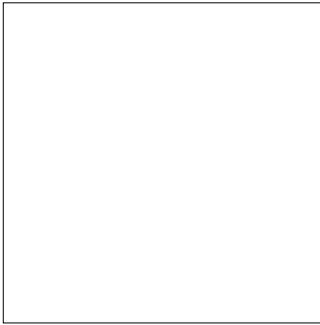
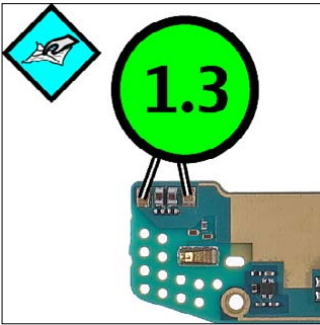
21. QUICK TROUBLE SHOOTER - BLUETOOTH



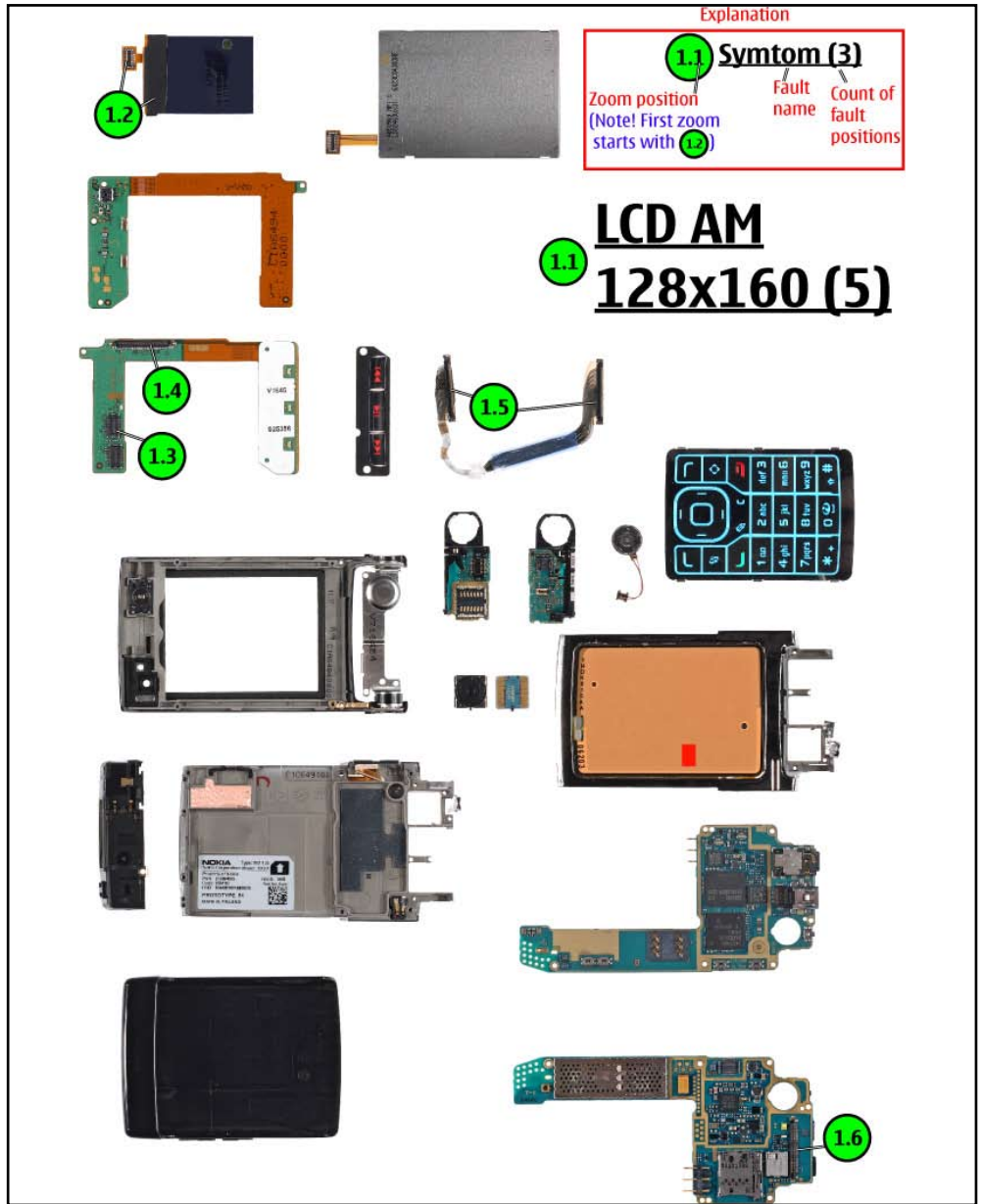
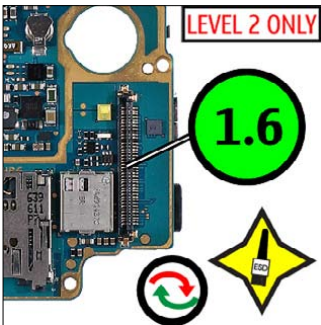
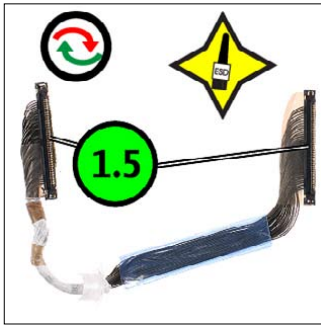
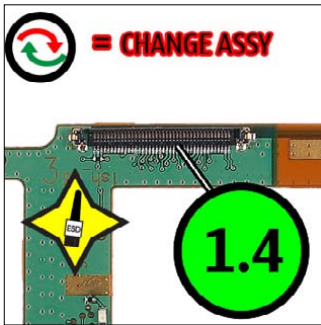
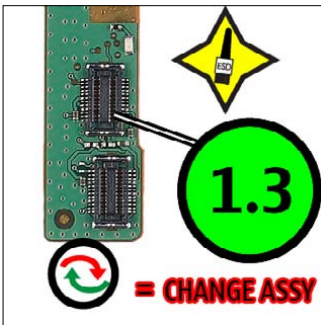
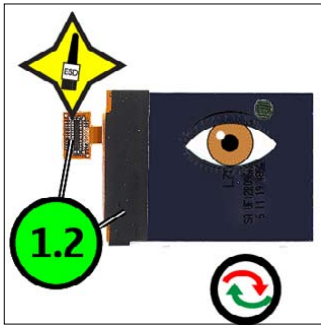
22. QUICK TROUBLE SHOOTER - EARPIECE



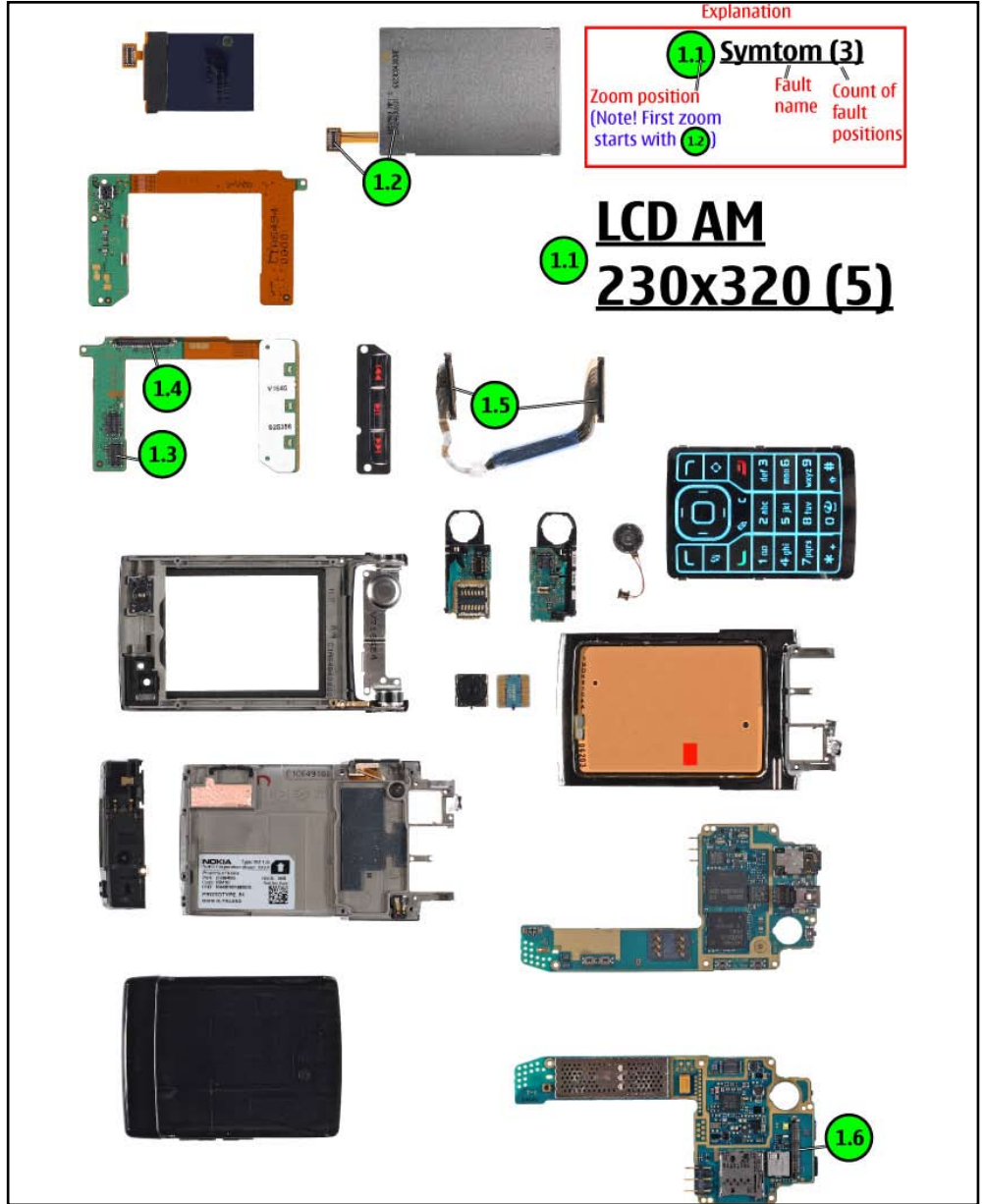
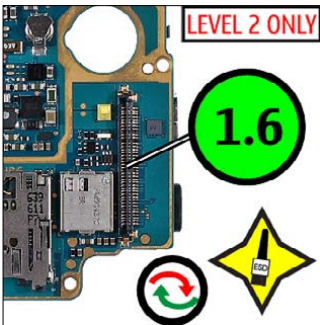
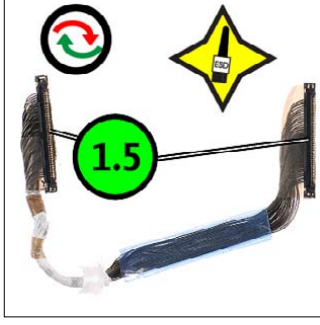
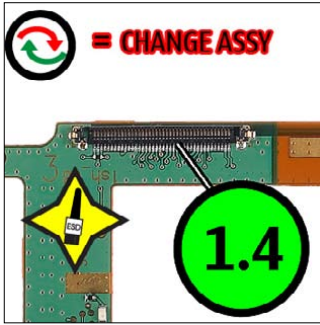
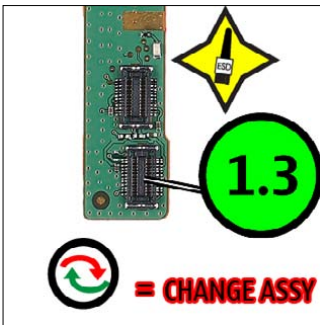
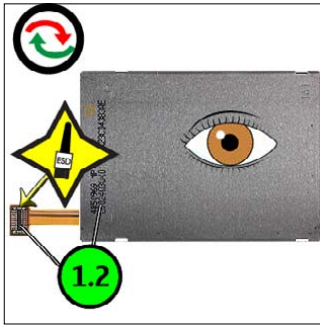
23. QUICK TROUBLE SHOOTER - IHF SPEAKER



24. QUICK TROUBLE SHOOTER - LCD AM 128X160



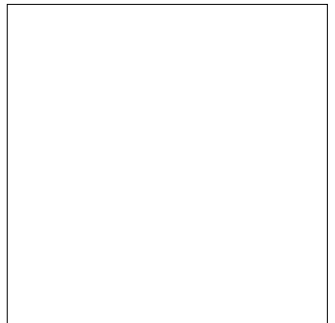
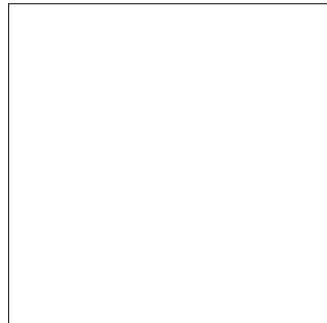
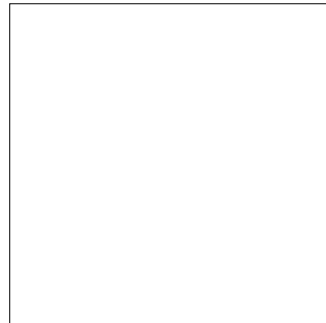
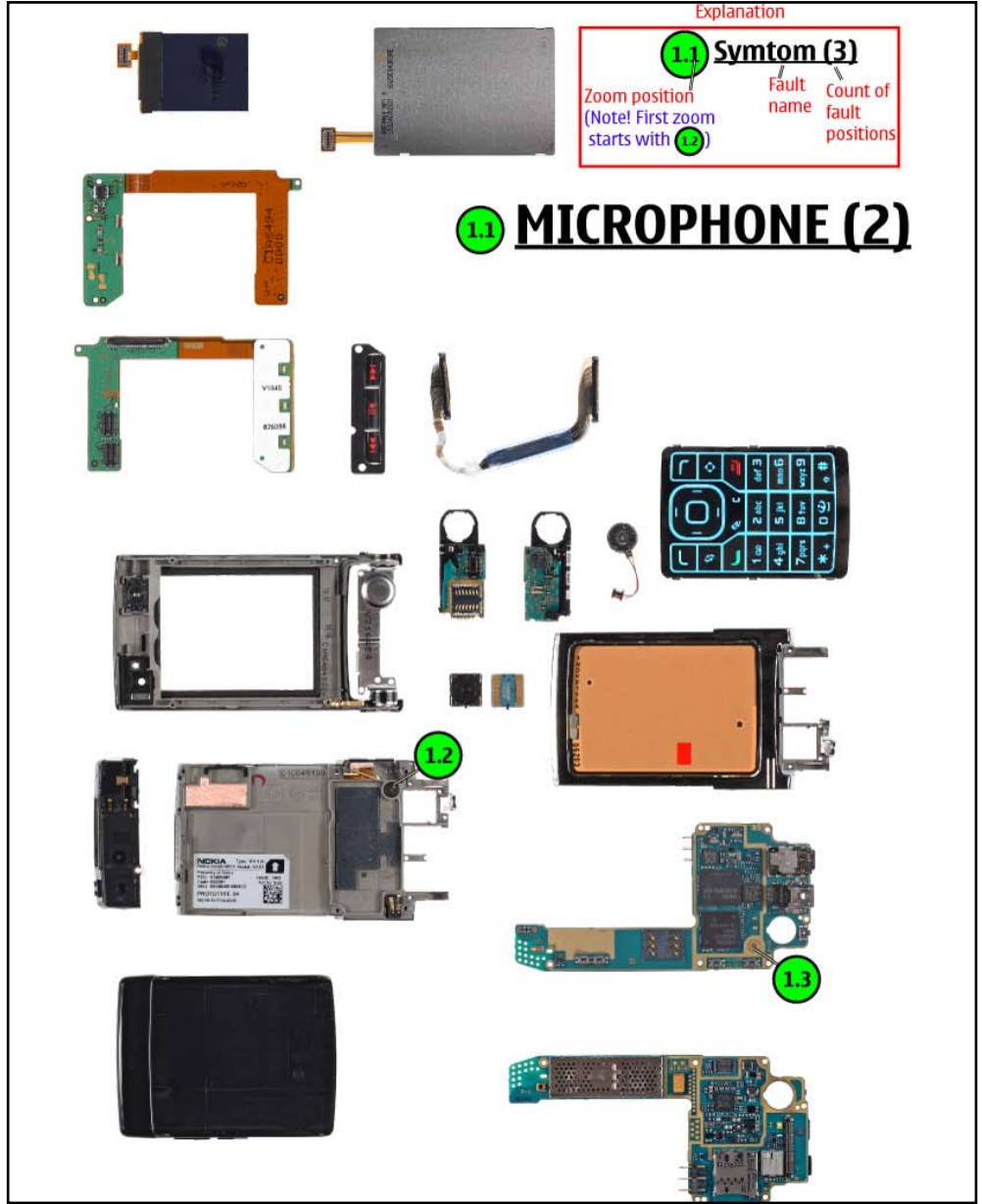
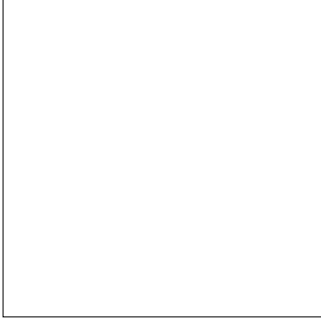
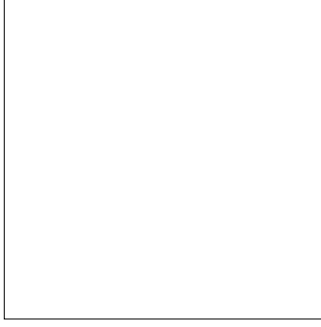
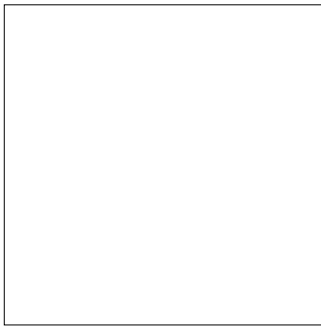
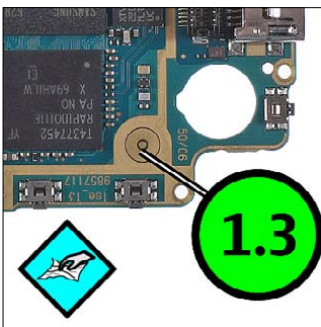
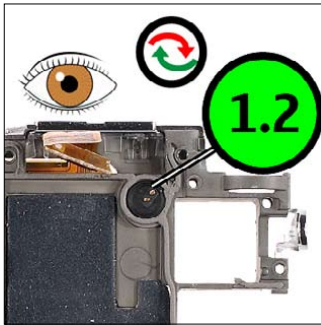
25. QUICK TROUBLE SHOOTER - LCD AM 230X320



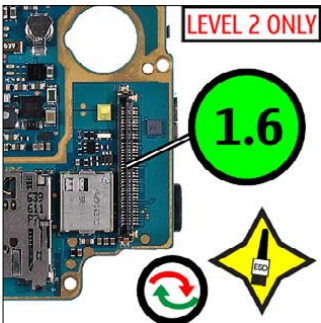
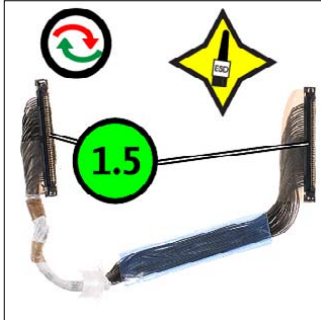
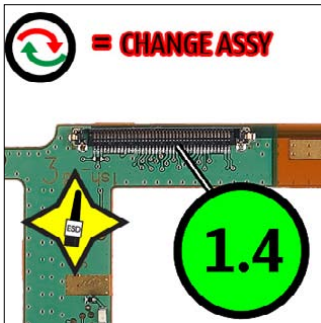
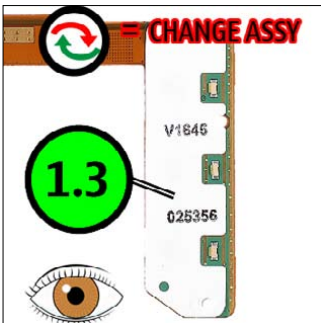
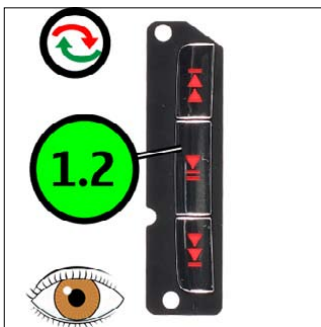
Explanation		
1.1	Symtom (3)	
Zoom position (Note! First zoom starts with 1.2)	Fault name	Count of fault positions

1.1 LCD AM 230x320 (5)

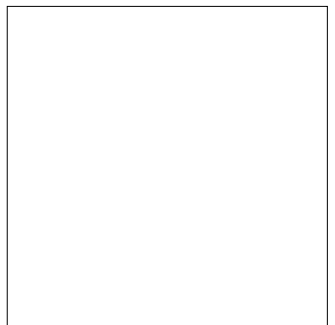
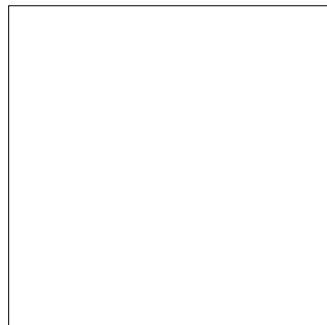
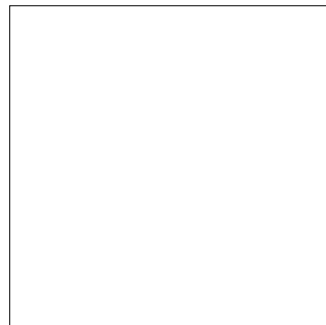
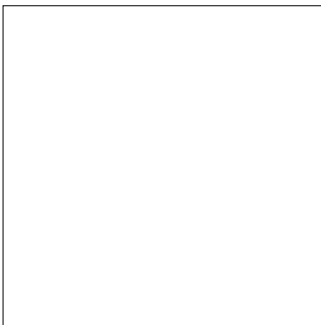
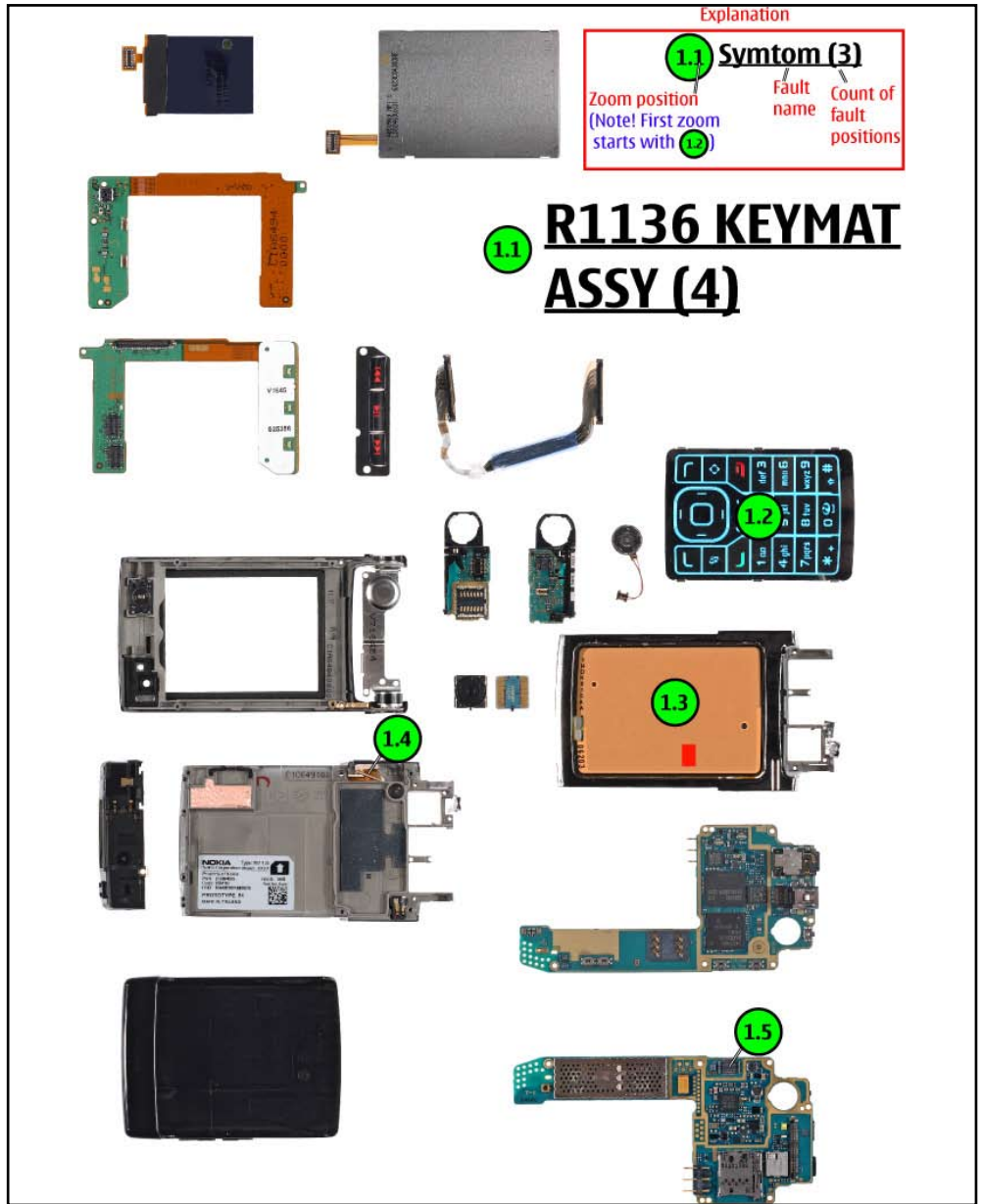
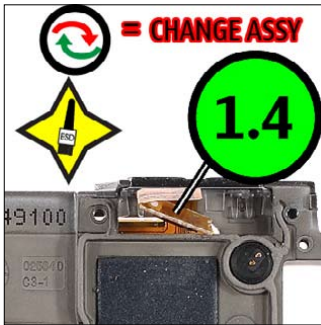
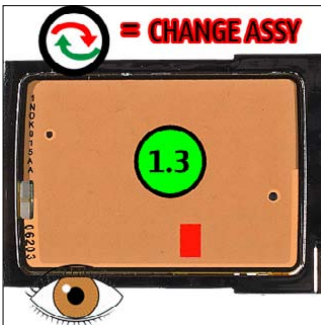
26. QUICK TROUBLE SHOOTER - MICROPHONE



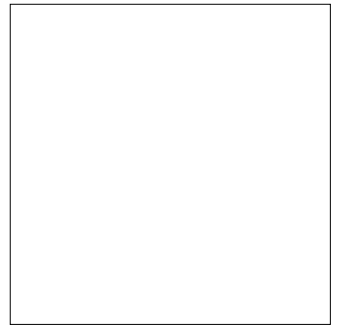
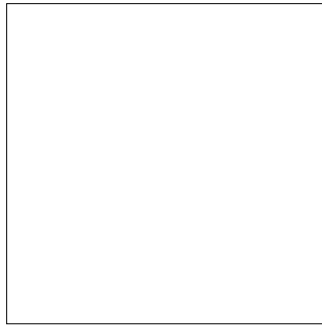
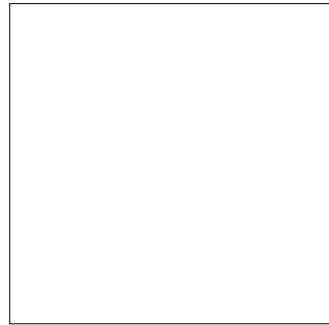
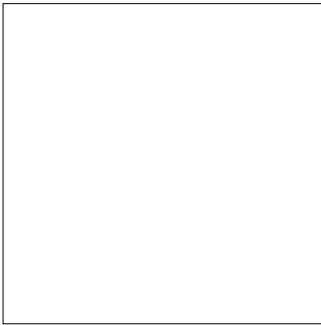
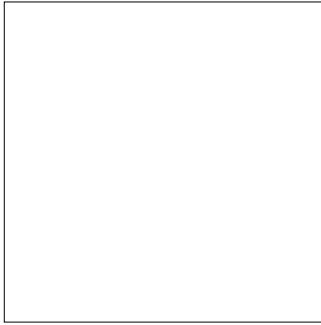
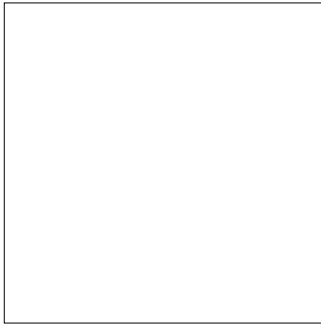
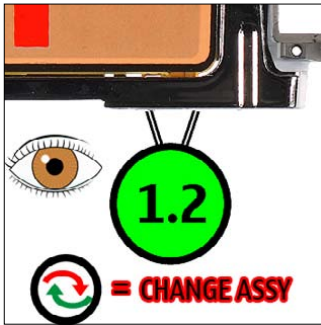
27. QUICK TROUBLE SHOOTER - MEDIA KEYMAT



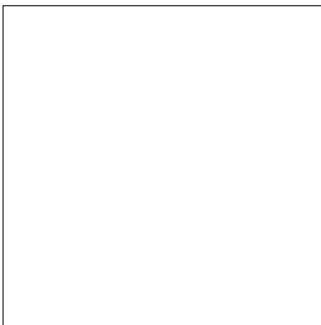
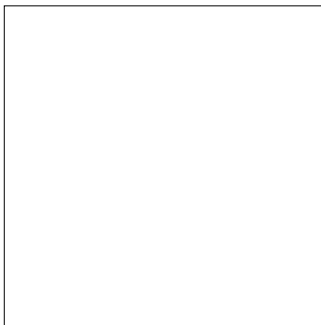
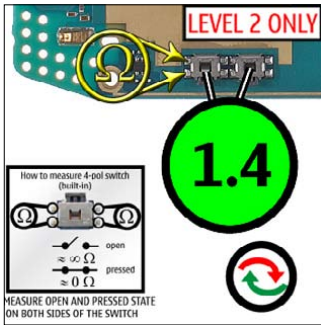
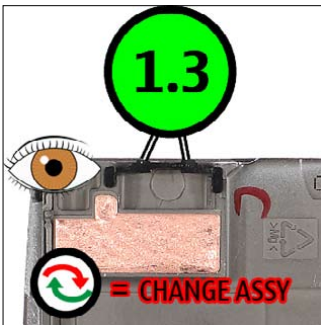
28. QUICK TROUBLE SHOOTER - R1136 KEYMAT ASSY



29. QUICK TROUBLE SHOOTER - VOLUME KEYS



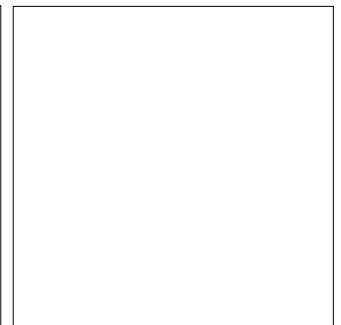
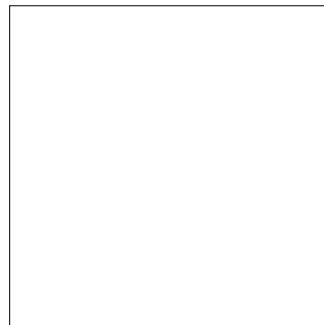
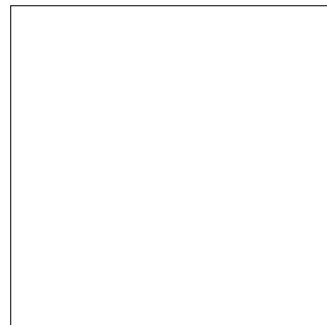
30. QUICK TROUBLE SHOOTER - CAMERA/MODE KEYS



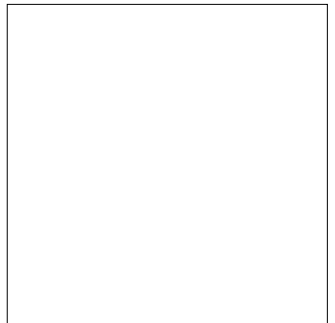
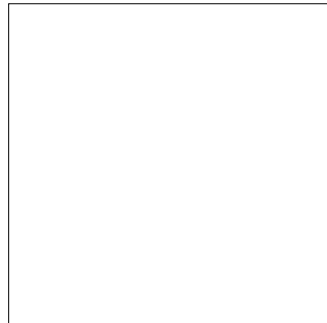
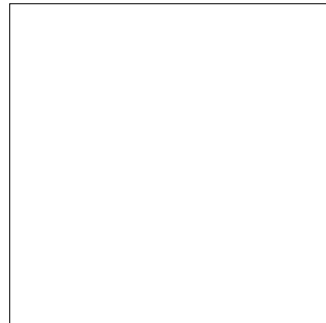
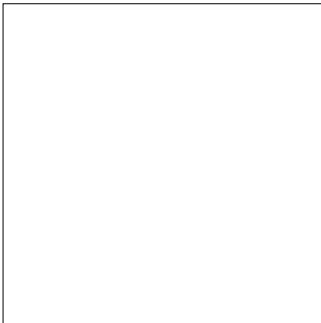
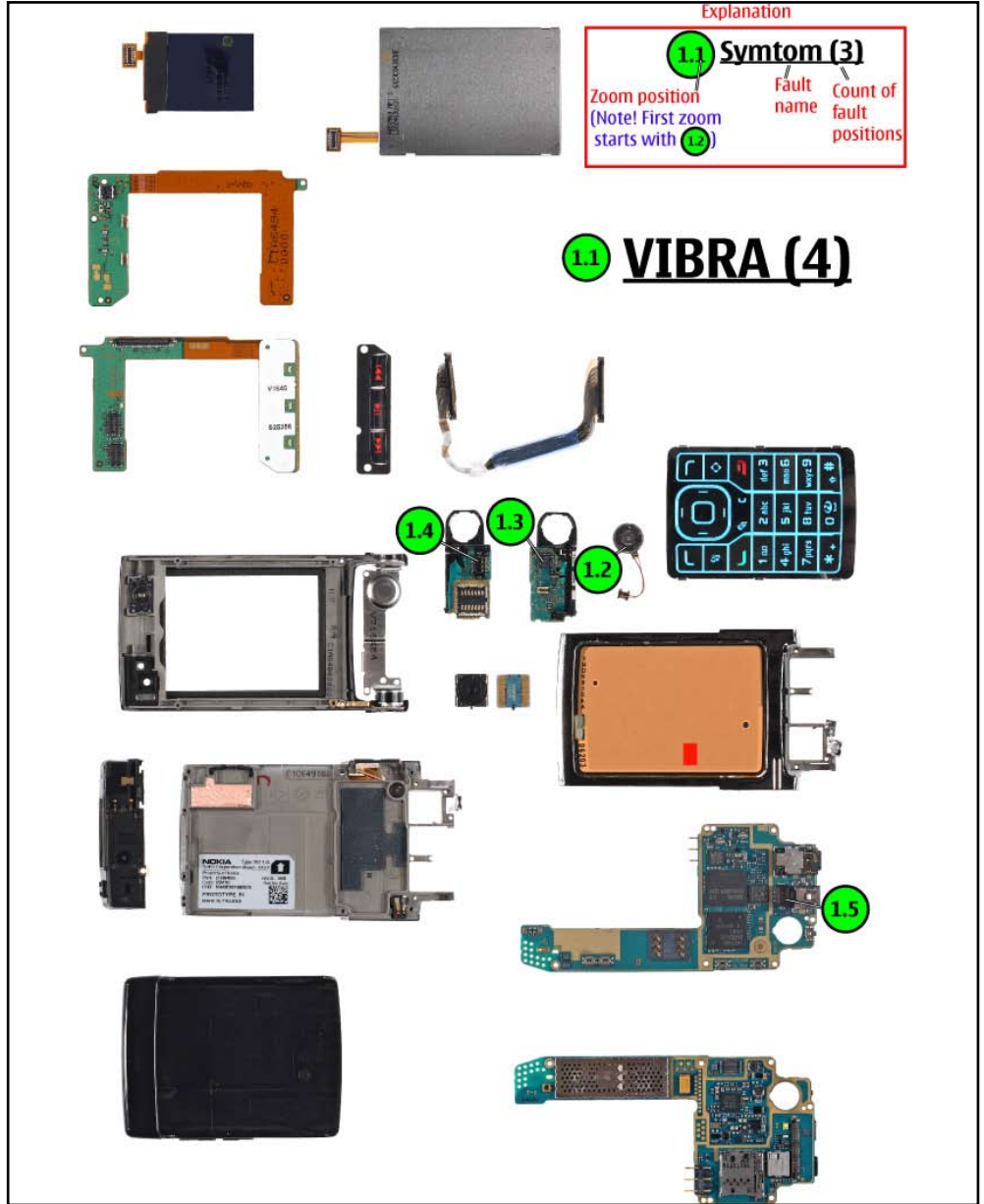
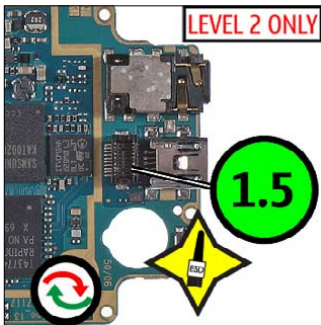
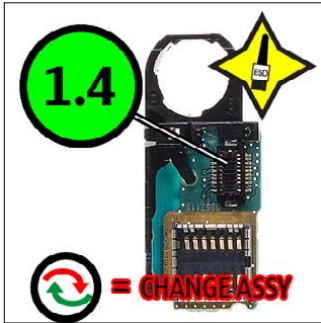
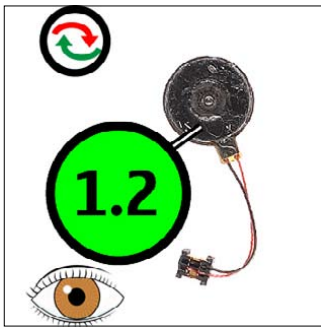
Explanation

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

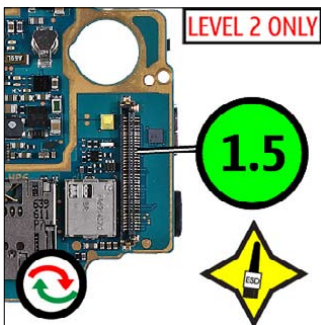
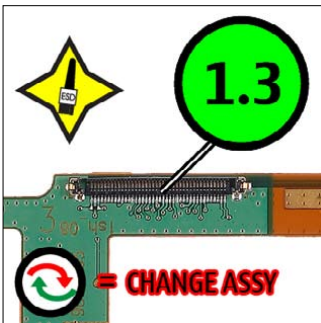
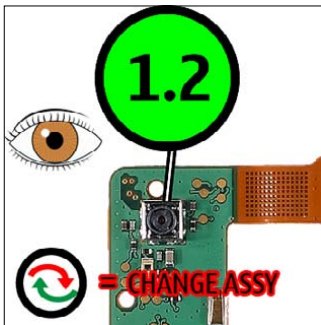
1.1 CAMERA/MODE KEYS (3)



31. QUICK TROUBLE SHOOTER - VIBRA

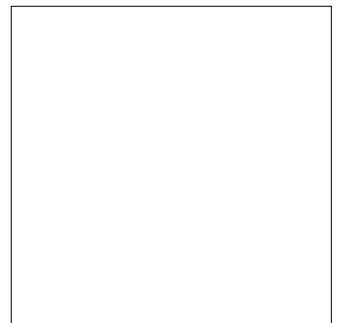
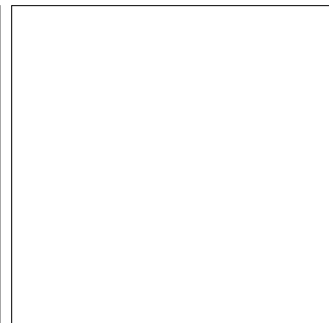
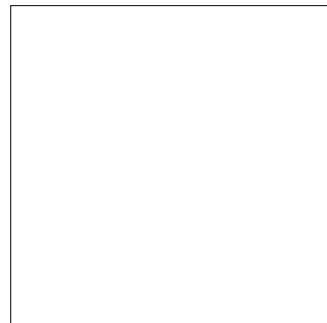
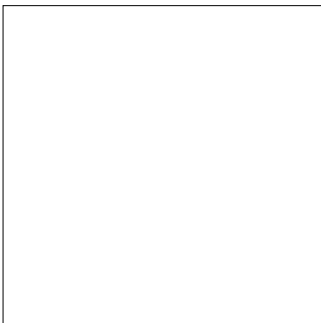


32. QUICK TROUBLE SHOOTER - CIF CAMERA



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

1.1 CIF CAMERA (4)



33. QUICK TROUBLE SHOOTER - CAMERA

