

# Trouble Shooting Guide, Mechanical

Applicable for J100a, J100c and J100i

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# 1 General

This document outlines the mechanical repairs that should be made in an attempt to fix the common failures that are seen in the field. To gain a complete understanding of how to test and repair a specific failure, this document should be used in conjunction with the Test Instructions, Mechanical and the Working Instructions, Mechanical.

## 1.1 Service functions in the software

There are two different service menus.

**#82#**; Here you will find information about software and hardware versions.

**#890#**; Here you will find the test menu.

The test menu will look like this:

**Keypad**

**Vibrator**

**LCM** ; Display test

**Buzzer** ; Ring signal test

**Voice loop back** ; Microphone and speaker test

**NOTE: Different names may occur depending on language setting and customization.**

## 1.2 Misuse and other no warranty issues






Misuse is not covered by warranty. This chapter will explain what's not covered by warranty. Phones that have been exposed to misuse will not be covered by warranty.

This means: if it is possible to repair the phone, the customer will have to pay for the repair. SEMC will not allow any of these phones to be claimed into WCMS. Some local perspectives may interfere with this. Please reference to local directives.


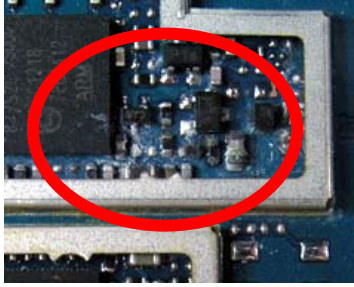
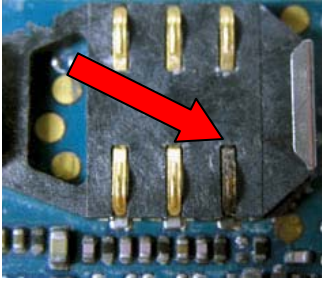
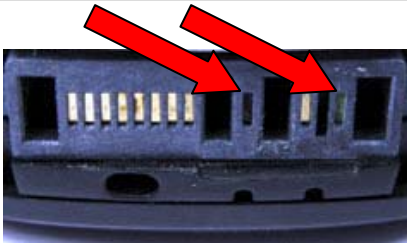
### 1.2.1 Action

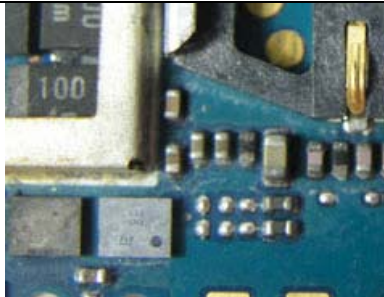
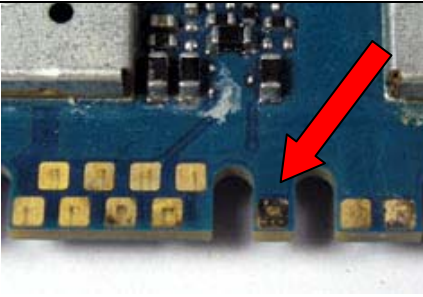
Make a general visual inspection for misuse.

Below are some **examples** of what is not covered by warranty.

				
Front window broken due to misuse.	LCD cracked due to drop.	Clear scratches	Mark after drop	Corrosion components on the PCB.

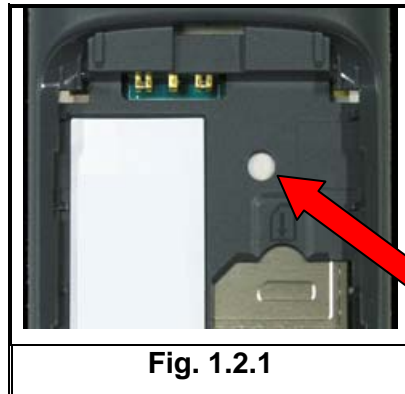
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<p>Corrosion components on the PCB.</p>	<p>Corrosion components on the PCB.</p>	<p>SIM reader damaged by liquid.</p>	<p>System connector damaged by liquid</p>

	
<p>Components around system connector damaged by liquid</p>	<p>System connector pad(s) damaged by liquid</p>

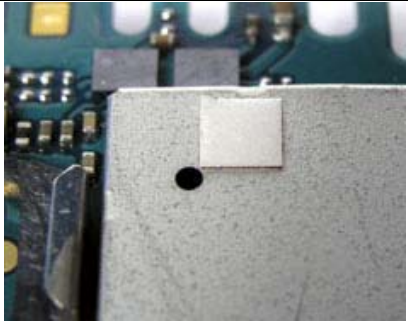
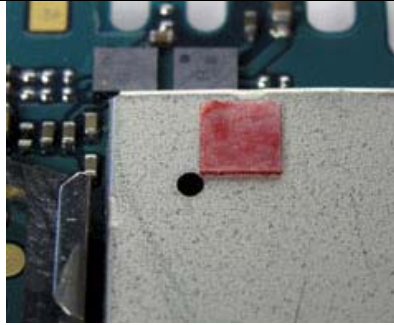
## 1.2.2 Liquid damage sticker

In the phone there is placed a sticker that can give you a hint to see if the phone is damage by liquid or not. This sticker is located near the SIM reader (Fig. 1.2.1) and it is possible to see it without disassemble the phone.



**Fig. 1.2.1**


On the pictures below you will see the different between a sticker that has been in contact with liquid (Fig. 1.2.3) and with one that hasn't (Fig. 1.2.2).

This sticker is ok	This sticker <u>is not</u> ok	
		<p>The white sticker that has been in contact with liquid turns into a red or pink sticker. In this case you should check the phone for liquid damage (See point 1.1.1).</p> <p>Note: There must be clear marks after liquid on the PCB before rejecting the phone for repair.</p>
<b>Fig. 1.2.2</b>	<b>Fig. 1.2.3</b>	

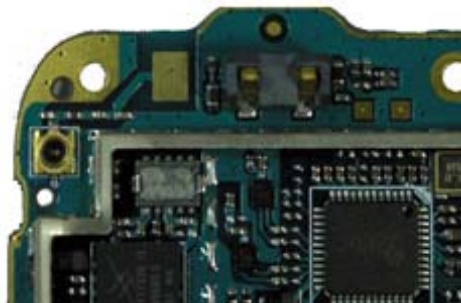

### **1.2.3 Action**

Make a general visual inspection for misuse, corrosion or oxidation from liquid damage. No further action should be taken for a liquid damaged phone. Handle the unit according to local directives.



## 2 Appearance Problems

Problem Area	Items to Check	Repair Action	Reference Image
Appearance	Visually inspect the cosmetic quality of all user viewable surfaces	<ul style="list-style-type: none"> <li>• If dirty – Clean parts as necessary.</li> <li>• If unacceptably scratched or damaged – Replace damage parts as necessary.</li> </ul> <p><b>NOTE: Misuse is not covered by warranty. Refer to <a href="#">chapter 1.2</a></b></p>	
	Visually inspect keypad	<ul style="list-style-type: none"> <li>• If dirty – Clean keypad.</li> <li>• If unacceptably scratched or damaged – Replace keypad.</li> </ul> <p><b>NOTE: Misuse is not covered by warranty. Refer to <a href="#">chapter 1.2</a></b></p>	
	Visually inspect for improper gap between seams	<ul style="list-style-type: none"> <li>• Reassemble or replace damaged parts as necessary.</li> </ul>	



### 3 Network/Signal Problems

Problem Area	Items to Check	Repair Action	Reference Image
No Signal or Poor signal.	Visually inspect antenna contact pads	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean the pads and replace the antenna assembly.</li> </ul>	
	Visually inspect antenna	<ul style="list-style-type: none"> <li>If dirty or oxidized – Replace it.</li> <li>If damaged – Replace it.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	



## 4 On/Off Problems

Problem Area	Items to Check	Repair Action	Reference Image
Power On problems	Check whether the phone vibrates 10 to 15 seconds after pressing the power key and whether the keypad illuminates	<ul style="list-style-type: none"> <li>If activation of the vibrator or keypad are detected, refer to the “Display Problems” <a href="#">chapter 7</a></li> </ul>	
	Visually inspect contact pads on battery	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean pads.</li> <li>If damaged – Replace the battery.</li> </ul>	
	Visually inspect the power key	<ul style="list-style-type: none"> <li>If damaged – Replace the Dome Foil.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	



## 5 Audio Problems

Problem Area	Items to Check	Repair Action	Reference Image
Microphone:	Visually inspect the microphone's external port	<ul style="list-style-type: none"> <li>If clogged - Clean or replace Rear cover.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Replace microphone</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	



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Problem Area	Items to Check	Repair Action	Reference Image
Earphone: No sound or poor quality sound	Visually inspect earphone's external port	<ul style="list-style-type: none"> <li>If clogged – Clean or replace front cover.</li> </ul>	
	Visually inspect speaker's dust cloth	<ul style="list-style-type: none"> <li>If dirty or damaged – Replace front cover.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Replace earphone.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	

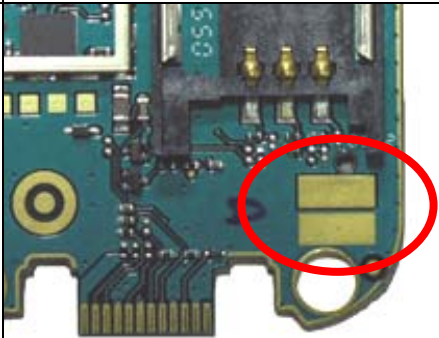

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Problem Area	Items to Check	Repair Action	Reference Image
Loudspeaker: No sound or poor quality sound	Visually inspect the loudspeaker's dust cloth	<ul style="list-style-type: none"> <li>If dirty or damaged – replace Rear cover</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Replace loudspeaker.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	


## 6 Key Problems

Problem Area	Items to Check	Repair Action	Reference Image
Keypad: A key on the keypad is not functioning or it is intermittent	Visually inspect for dirt between keypad and dome foil, and for damage to the keypad or the dome foil.	<ul style="list-style-type: none"> <li>If dirty – Clean both parts.</li> <li>If damaged - Replace keypad and/or dome foil if necessary.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Replace the dome foil, if it has not already been replaced.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	


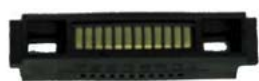
## 7 Alert Problems

Problem Area	Items to Check	Repair Action	Reference Image
Vibrator:	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a flash upgrade and a setting reset.</li> </ul>	
	Visually inspect the vibrator pads on the PCB	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean them.</li> </ul>	
	Visually inspect the vibrator	<ul style="list-style-type: none"> <li>If dirty or oxidized – Replace it.</li> <li>If damaged – Replace it.</li> </ul>	

## 8 SIM Problems

Problem Area	Items to Check	Repair Action	Reference Image
SIM undetected <b>(Insert SIM)</b>	Inspect SIM holder	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean.</li> <li>If damaged – Send to an electrical repair location.</li> </ul>	
Unit indicates that an incorrect SIM is inserted <b>(Insert correct SIM)</b>	Check if the phone is locked to a particular carrier and whether the correct carrier's SIM is being used	<ul style="list-style-type: none"> <li>Use Correct Carrier SIM or test SIM.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	

## 9 Charging/Capacity Problems

Problem Area	Items to Check	Repair Action	Reference Image
Battery will not charge	Visually inspect the contact pads of the battery	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean.</li> <li>If damaged – Replace battery.</li> </ul>	
	Visually inspect the system connector	<ul style="list-style-type: none"> <li>If dirty, oxidized or damaged – Replace.</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>Handle the unit according to local directives.</li> </ul>	

## 10 Revision History

Rev.	Date	Changes / Comments
A	2006-04-10	First release