# **Trouble Shooting Guide, Mechanical**

Applicable for W880i, W888c

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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 unit, this document should be used in conjunction with the Test Instructions, Mechanical and the Working Instructions, Mechanical.

- NOTE! A unit should always be inspected for liquid damage and flashed with latest software before using the Mechanical Trouble Shooting Guide. Refer to the Mechanical Test Instructions for details regarding upgrading software.
- NOTE! If all of the repair actions listed in this document for addressing a problem have been performed and a unit still is not working, handle the unit according to your local Sony Ericsson Representative



#### Service functions in the software

The service menu will be accessed with the following key combination. Use the joystick.

The service menu options are:

Service info

Service tests

**Text labels** 

Under the "**Service tests**" option, the phone's software has a built in service functionality that allows you to test some of the phones functions. It looks like this:

Main display

LED/illumination

Keyboard

Speaker

**Earphone** 

Microphone

Vibrator

Camera

**Video Call Camera** 

**Memory Stick** 

Real time clock

**Total call time** 

Security

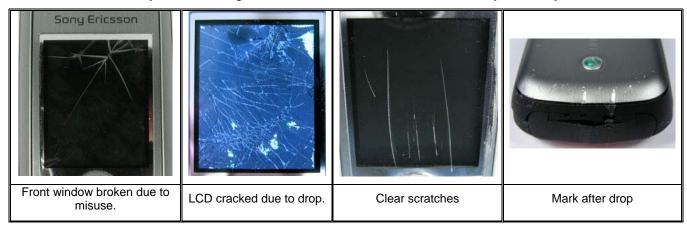
NOTE: Different names may occur depending on language setting and customization.

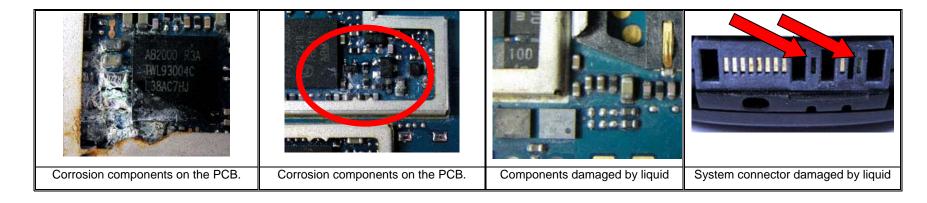
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#### Misuse and other no warranty issues

A phone that is damaged due to misuse <u>is not covered</u> by warranty. This section shows many of the signs of misuse that are seen in the field. Please refer to local directives on how a phone that appears to be damaged due to misuse should be handled.

Below are some **examples** of damage due to misuse that are not covered by warranty.

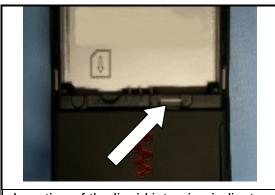




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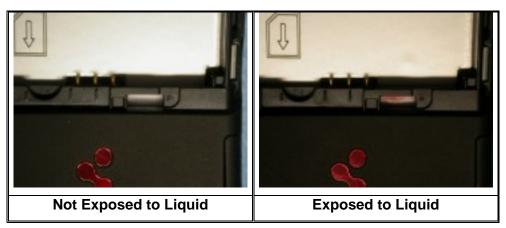
#### 1.1.1 Liquid Damage Inspection

Before any tests are performed, an inspection of the liquid intrusion indicator should be made. If the liquid intrusion indicator is red this is an indication of possible liquid exposure. If the liquid intrusion indicator suggests liquid exposure please consult your local SEMC representative for handling instructions.



Location of the liquid intrusion indicator

The following pictures show the different between an indicator that has been in contact with liquid and one that has not.



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#### 2 Power Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Unit will not Power On or	Check whether the phone vibrates when you press the power key	If activation of the vibrator is detected, refer to the "Display Problems" section	
switch off spontaneous	Inspect battery connector	If dirty or oxidized – Clean the connector's contact pins	
		If adhesive is detected on the contact pins – use an eraser to rub off the adhesive	
		If damaged – Send to a repair location allowed to perform electrical repairs on this product	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Attach a Sheet(Battery) into the battery cavity, according to the chapter 3.2.3 in the Working Instructions Mechanical.	
		Clean the battery contacts surface with alcohol (isopropyl)	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	Inspect the area between the power key portion of the keypad and the dome foil assembly	<ul> <li>If the keypad is damaged, replace it</li> <li>Replace the dome foil assembly</li> </ul>	
	Inspect the area between components L3103 and N2000 for burned components or PCB	• Scrap	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

# 3 Network/Signal Problems

Problem Area	Items to Inspect		Repair Action	<b>Inspection Reference</b>
No Signal or Poor Signal	Before proceeding →	•	Ensure the correct SIM (GSM) or USIM (UMTS) is installed. See Test Instruction for details.	
	Inspect antenna-to-board spring connectors	•	If dirty or oxidized – Clean the antenna-to-board spring connectors	
		•	If damaged – Send to a repair location allowed to perform electrical repairs on this product	
	If the issue has not been resolved →	•	Replace the antenna	
	If the issue is still not resolved→	•	Send to a repair location allowed to perform electrical repairs on this product	

## 4 Audio Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Receiver:	Before proceeding →	Perform a setting reset	
No sound or poor quality sound	Inspect the receiver's external ports	If clogged – Clean the ports and receiver's dust cloth	Son Fricsson
	Inspect the receiver's dust cloth	If dirty – Clean     If damaged – Replace the camera flex assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	Inspect the two connections where the camera flex assembly connects to the circuit board	<ul> <li>If either connection is improperly connected – Reestablish proper connection</li> <li>If one or both of the connections is dirty or oxidized – Clean both halves of the connection(s)</li> <li>If any portion on the camera assembly flex film is damaged – replace the camera flex assembly</li> <li>If either of the camera flex assembly connections on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	3.06 930 1
	If the issue has not been resolved →	Replace the camera assembly, if it has not been replaced	
	If the issue is still not resolved →	Send to a repair location allowed to perform electrical repairs on this product	



Problem Area Items to Inspect	Repair Action	Inspection Reference
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Rear Speaker:	Before proceeding →	Perform a setting reset	
No sound or poor quality sound	Inspect whether the rear speaker's external port is clogged	If clogged – Clean the port and rear speaker cloth	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
	Inspect the rear speaker cloth	<ul> <li>If dirty – Clean</li> <li>If damaged – Replace the camera flex assembly</li> </ul>	
	Inspect the two camera flex assembly connections to the circuit board	<ul> <li>If either connection is improperly connected – Reestablish proper connection</li> <li>If one or both of the connections is dirty or oxidized – Clean both halves of the connection(s)</li> <li>If any portion on the camera assembly flex film is damaged – replace the camera flex assembly</li> <li>If either of the camera flex assembly connections on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	SEGA SPU
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

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Problem Area Items to Inspect	Repair Action	Inspection Reference
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Microphone:	Before proceeding →	Perform a setting reset	
	Inspect the microphone's external port	If clogged – Remove the co-brand label and clean the microphone's port hole	
	Inspect the microphone	<ul> <li>If dirty – Clean the microphone</li> <li>If damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

## **5 Key Problems**

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keypad: A key on the keypad is not	Inspect the area between the keypad and the dome foil assembly where the key is not functioning	If the keypad is damaged, replace it	
functioning or is	If the issue is not resolved→	Replace the dome foil assembly	
intermittent	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	
Entire keypad or a portion of the keypad is not	Inspect the dome foil assembly to circuit board connection	If the connector is improperly connected – Reestablish proper connection	
functioning or is intermittent		If the connection is dirty – Clean both halves of that connection	
		If dome foil assembly's half of the connection is damaged – replace the dome foil assembly	1
		If the half of the connection on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product	
	If the issue is not resolved→	Replace the dome foil assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	
Volume key:	Inspect the volume key	If dirty or damaged, replace the volume key	Raina Ridennan
	Inspect the volume switch on the camera flex assembly	If damaged, replace the camera flex assembly	
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Camera key	Inspect the area between the camera key and the dome foil assembly	<ul> <li>If the camera key is damaged, replace it</li> <li>If the camera key portion of the dome foil assembly is damaged, replace the dome foil assembly</li> </ul>	
	If the issue is not resolved→	Replace the dome foil assembly, if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	
Music Key	Inspect the Music key	If dirty or damaged, replace the Music key	
	Inspect the Music key's dome foil on the camera flex assembly	If damaged, replace the camera flex assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

# **6 Display Problems**

Problem Area	Items to Inspect	Repair Action	Inspection Reference
If display is not functioning	Check whether the phone vibrates when you press the power key	If activation of the vibrator is <b>not detected</b> , refer to the "Power     Problems" section	
	Inspect the display flex film's connection to the circuit board	If improperly connected – establish proper connection	
		If dirty or oxidized – Clean both halves of the connection	
		If the display's portion of the connection is damaged – replace the display assembly	
		If the portion of the connection on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product	
	If the issue has not been resolved →	Replace the display assembly if it has not been replaced	2500 490
	If the issue is still not resolved →	Send to a repair location allowed to perform electrical repairs on this product	
Display is not Illuminating properly	Refer to the "Illumination Problems" se	ection of this document	17

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#### 7 Illumination Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keypad Illumination: The entire keypad will not illuminate	Before proceeding →	Perform a setting reset	
	Inspect both halves of the dome foil assembly to circuit board connection	<ul> <li>If dirty or oxidized – Clean both halves of the connection</li> <li>If the portion of the connection on</li> </ul>	
		the dome foil assembly is damaged  - Replace the dome foil assembly	
		If the portion of the connection on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product	
	If the issue has not been resolved →	Replace the dome foil assembly, if it has not been replaced	
	If the issue has not been resolved →	Send to a repair location allowed to perform electrical repairs on this product	
Keypad Illumination: A portion of the keypad does not illuminate	Perform the following action →	Replace the dome foil assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	If the issue has not been resolved →	Send to a repair location allowed to perform electrical repairs on this product	
Display	Before proceeding →	Perform a setting reset	
Illumination:	Inspect the display flex film's connection to the circuit board	If improperly connected – establish proper connection	
		If dirty or oxidized – Clean both halves of the connection	
		If the display's portion of the connection is damaged – replace the display assembly	
		If the portion of the connection on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product	
	If the issue has not been resolved →	Replace the display assembly if it has not been replaced	100 mm m
	If the issue is still not resolved →	Send to a repair location allowed to perform electrical repairs on this product	

## 8 Alert Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Vibrator:	Before proceeding →	Perform a setting reset	
	If the issue is not resolved →	Send to a repair location allowed to perform electrical repairs on this product	
Rear speaker:	Before proceeding →	Perform a setting reset	
No sound or poor quality sound	Inspect whether the rear speaker's external port is clogged	If clogged – Clean the port and rear speaker cloth	Sony Ericason
	Inspect the rear speaker cloth	If dirty – Clean     If damaged – Replace the camera flex assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	Inspect the two camera flex assembly connections to the circuit board	<ul> <li>If either connection is improperly connected – Reestablish proper connection</li> <li>If one or both of the connections is dirty or oxidized – Clean both halves of the connection(s)</li> <li>If any portion on the camera assembly flex film is damaged – replace the camera flex assembly</li> <li>If either of the camera flex assembly connections on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

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# 9 Charging/Capacity Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Phone is not charging properly	Inspect the battery connector	<ul> <li>If dirty or oxidized – Clean the connector's contact pins</li> <li>If adhesive is detected on the contact pins – use an eraser to rub off the adhesive</li> <li>If damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	Lidsing Jones 1910 1910 1910 1910 1910 1910 1910 191
	Inspect the system connector	<ul> <li>If dirty or oxidized – Clean the connector's contacts</li> <li>If damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	
	If the issue has not been resolved →	Send to a repair location allowed to perform electrical repairs on this product	

#### 10 SIM Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
SIM undetected	Inspect camera flex assembly to SIM flex connection	<ul> <li>If the connector is improperly connected – Reestablish proper connection</li> <li>If the connection is dirty – Clean both halves of that connection</li> <li>If SIM flex half of the connection is damaged – replace the SIM Flex</li> <li>If Camera flex half of the connection is damaged – replace the Camera Flex Assembly</li> </ul>	
	If the issue has not been resolved →	Replace the SIM Flex, if it has not been replaced	
	If the issue is still not resolved →	Send to a repair location allowed to perform electrical repairs on this product	
Unit indicates the incorrect SIM is inserted	Before proceeding →	Ensure the correct SIM (GSM) or USIM (UMTS) is installed. See Test Instruction for details.	
	Check whether the phone is locked to a particular carrier and whether the correct carrier's SIM is being used	Use Correct Carrier SIM or test SIM	

# 11 Data Transfer Problems using a Data Cable

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Problem transferring data using a direct connection	Inspect the system connector	If dirty or oxidized – Clean the connector's contacts	CON CONTRACTOR OF THE PARTY OF
	If the issue has not been resolved →	Send to a repair location allowed to perform electrical repairs on this product	

#### 12 Hands-Free Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Hands-free not working	Inspect the system connector	If dirty or oxidized – Clean the connector's contacts	
	If the issue has not been resolved →	Send to a repair location allowed to perform electrical repairs on this product	

## 13 Rear Camera Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Lines or marks in picture	Visually inspect the rear camera window	<ul> <li>If dirty – Clean the rear camera window</li> <li>If scratched or damaged – Replace the rear camera window</li> </ul>	South Edition
	If the issue has not been resolved →	Replace the camera flex assembly	
	If the issue is still not resolved →	Send to a repair location allowed to perform electrical repairs on this product	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
Will not capture an image	To determine whether or not the problem is with the camera key, try capturing an image by pressing the navigation key	If pressing the navigation key does take a picture – Perform the steps listed in the camera key portion of the "Key Problems" section	
		If pressing the navigation key does not take a picture— Perform the remaining inspect/repair procedures in this section.	
	Inspect the two camera flex assembly connections to the circuit board	If either connection is improperly connected – Reestablish proper connection	
		If one or both of the connections is dirty or oxidized – Clean both halves of the connection(s)	
		If any portion on the camera assembly flex film is damaged – replace the camera flex assembly	
		If either of the camera flex assembly connections on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product	PHI NO.
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

## 14 Video Call Camera Problems (W880 Only)

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Lines or marks in picture	Visually inspect the front camera's window	<ul> <li>If dirty – Clean the front camera's window</li> <li>If scratched or damaged – Replace the front cover</li> </ul>	Ing Ericsson
	If the issue has not been resolved →	Replace camera flex assembly	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	
Do not see image when in video call mode	Inspect the two camera flex assembly connections to the circuit board	<ul> <li>If either connection is improperly connected – Reestablish proper connection</li> <li>If one or both of the connections is dirty or oxidized – Clean both halves of the connection(s)</li> <li>If any portion on the camera assembly flex film is damaged – replace the camera flex assembly</li> <li>If either of the camera flex assembly connections on the circuit board is damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	
	If the issue has not been resolved →	Replace camera flex assembly if it has not already been replaced	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

#### 15 Bluetooth Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Will not connect with a functional Bluetooth device	Inspect Bluetooth antenna-to-board spring connectors	<ul> <li>If dirty or oxidized – Clean the Bluetooth antenna-to-board spring connectors</li> <li>If damaged – Send to a repair location allowed to perform electrical repairs on this product</li> </ul>	
	If the issue has not been resolved →	Replace the antenna	
	If the issue is still not resolved→	Send to a repair location allowed to perform electrical repairs on this product	

# **16 Revision History**

Rev.	Date	Changes / Comments
1	Feb. 8, 2007	Initial Release
2	2007-04-12	W888 added
3	2007-10-01	Power Problems updated
4	2007-10-11	Burnd components or PCB added
5	2008-01-23	Chapter 2 Power Problems updated