

Trouble Shooting Guide, Mechanical

Applicable for Z530i, Z530c, W300i, and W300c

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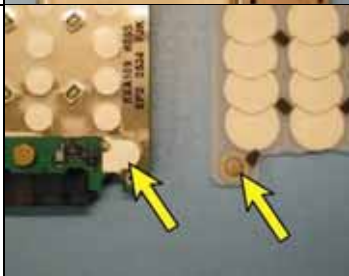
1 General

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.

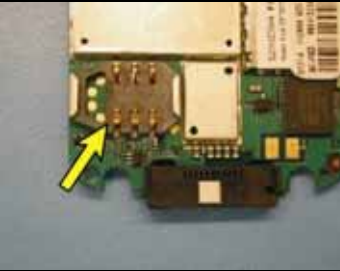
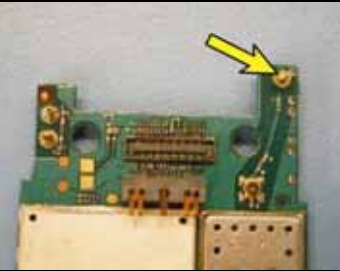

NOTE! A unit should always be inspected for liquid damage and flashed with latest software before using the Mechanical Trouble Shooting Guide. Refer to the Mechanical Test Instructions for details regarding inspecting for liquid damage and upgrading software.

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 company directives.




2 Power Problems



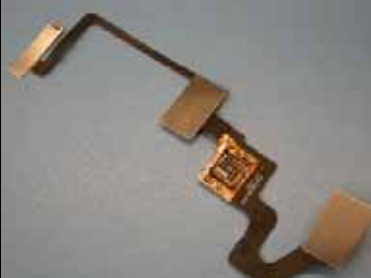
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Unit will not Power On	Check whether the phone vibrates 10 to 15 seconds after pressing the power key and whether the keypad illuminates	If activation of the vibrator and keypad are detected, refer to the “Display Problems” section	
	Inspect battery connector	<ul style="list-style-type: none"> • If dirty or oxidized – Clean • If damaged – Send to an electrical repair location 	
	Inspect the power key portion of the keypad for debris or damage Inspect the power contact portion of the dome array	<ul style="list-style-type: none"> • If dirty – Clean • If damaged – Replace the keypad • If dirty – Clean • If damaged – Replace the dome array 	
	If the issue has not been resolved→	• Replace the keypad and the dome array, if they have not been replaced	
	If the issue is still not resolved→	• Escalate to an electrical repair level	





3 Network/Signal Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
No Signal or Poor Signal	Inspect SIM holder	<ul style="list-style-type: none"> If dirty or oxidized – Clean If damaged – Send to an electrical repair location 	
	Inspect antenna-to-board connector	<ul style="list-style-type: none"> If dirty or oxidized – Clean the antenna-to-board connector and replace the antenna assembly If damaged – Send to an electrical repair location 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace the antenna assembly if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

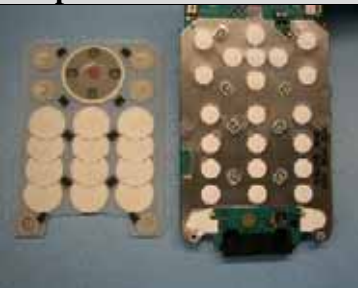

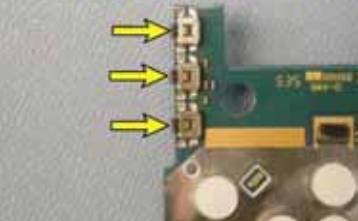
4 Audio Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Microphone:	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the microphone's external port	<ul style="list-style-type: none"> If clogged – Replace the flip bumper and the microphone mesh. Also clean the microphone 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Receiver: No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the receiver's external ports	<ul style="list-style-type: none"> If clogged – Replace the upper inner cover and the receiver 	
	Inspect the contact springs of the receiver	<ul style="list-style-type: none"> If dirty or damaged – Replace the receiver 	




Problem Area	Items to Inspect	Repair Action	Inspection Reference
Receiver: No sound or poor quality sound (Cont.)	Inspect the receiver's contact pads on the main flex film	<ul style="list-style-type: none"> • If dirty - Clean • If damaged – Replace the main flex film 	 <p>Receiver Contact Pads</p>
	If the issue has not been resolved →	<ul style="list-style-type: none"> • Replace receiver, if it has not been replaced 	 <p>Receiver</p>
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Replace the main flex film, if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	



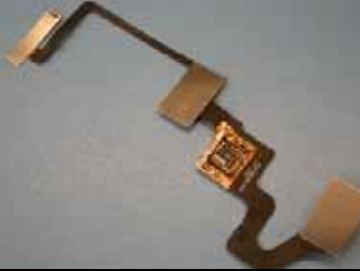
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Rear Speaker: No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	 <p>Rear Speaker Ports</p>
	Inspect whether the rear speaker's external port is clogged	<ul style="list-style-type: none"> If clogged – replace the rear speaker cover and clean and/or replace the rear speaker cloth 	
	Inspect the rear speaker cloth	<ul style="list-style-type: none"> If dirty or damaged - Replace the rear speaker cloth 	 <p>Rear Speaker Cloth</p>
	Inspect the rear speaker connection springs on the circuit board	<ul style="list-style-type: none"> If dirty or oxidized – Clean both springs and replace the rear speaker box If damaged – Send to an electrical repair location 	 <p>Rear Speaker Connection Springs</p>
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace rear speaker box 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	



5 Key Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keypad: A key on the keypad is not functioning or is intermittent	Inspect for debris between and/or damage to the keypad and the dome array.	<ul style="list-style-type: none">• If dirty – Clean both parts• If damaged - Replace keypad and/or dome array as necessary	
	If the issue has not been resolved →	<ul style="list-style-type: none">• Replace the dome array, if it has not already been replaced	
	If the issue is still not resolved→	<ul style="list-style-type: none">• Escalate to an electrical repair level	
Navigation Key:	Refer to “ Keypad ” section under “ Key Problems ”		
Volume key: (Z530 only)	Inspect the volume key switch that appears not to be functioning	<ul style="list-style-type: none">• Clean the switch	Volume Key Switches 
	If the issue has not been resolved→	<ul style="list-style-type: none">• Escalate to an electrical repair level	
Music key: (W300 only)	Inspect the music key switch that appears not to be functioning	<ul style="list-style-type: none">• Clean the switch	Music Key Switches 
	If the issue has not been resolved→	<ul style="list-style-type: none">• Escalate to an electrical repair level	

6 Display Problems



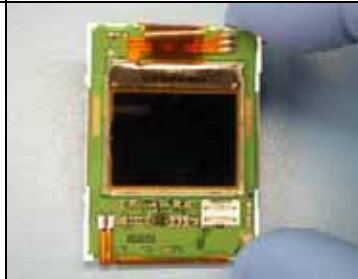

Problem Area	Items to Inspect	Repair Action	Inspection Reference
If neither the inner or out display is functioning	Check whether the phone vibrates 10 to 15 seconds after pressing the power key and whether the keypad illuminates	<ul style="list-style-type: none"> If activation of the vibrator and keypad are not detected, refer to the “Power Problems” section 	
	Inspect whether the main flex film is properly connected to the circuit board	<ul style="list-style-type: none"> If improperly connected - Reestablish proper connection 	
	Inspect each half of the main flex film to circuit board connection	<ul style="list-style-type: none"> If dirty or oxidized – Clean both halves of the connection If the portion of the connector on the main flex film is damaged - Replace the main flex film If the portion of the connector on the circuit board is damaged – Send to an electrical repair location 	
	Inspect whether the main flex film is properly connected to the display assembly	<ul style="list-style-type: none"> If improperly connected - Reestablish proper connection 	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
If neither the inner or out display is functioning (Cont.)	Inspect each half of the display to main flex film connection	<ul style="list-style-type: none"> • If dirty or oxidized – Clean both halves of the connection • If the portion of the connector on the display assembly is damaged - Replace display assembly • If the portion of the connector on the main flex film is damaged - Replace the main flex film 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> • Replace the display assembly if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Replace the main flex film if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	



Problem Area	Items to Inspect	Repair Action	Inspection Reference
If one of the two displays is not functioning	Perform the following action →	<ul style="list-style-type: none"> Replace the display assembly 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Replace the main flex film 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	





7 Illumination Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keypad Illumination: The entire keypad will not illuminate	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Perform the following action →	<ul style="list-style-type: none"> Send to an electrical repair location 	
Keypad Illumination: A portion of the keypad does not illuminate	Perform the following action →	<ul style="list-style-type: none"> Send to an electrical repair location 	
Navigation Key Illumination:	Refer to the “ Keypad ” sections under “ Illumination Problems ”		
Display Illumination:	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect whether the main flex film is properly connected to the circuit board	<ul style="list-style-type: none"> If improperly connected - Reestablish proper connection 	
	Inspect each half of the main flex film to circuit board connection	<ul style="list-style-type: none"> If dirty or oxidized – Clean both halves of the connection If the portion of the connector on the main flex film is damaged - Replace the main flex film If the portion of the connector on the circuit board is damaged – Send to an electrical repair location 	

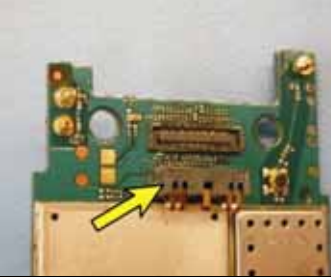

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Display Illumination (Cont.)	Inspect whether the main flex film is properly connected to the display assembly	<ul style="list-style-type: none"> If improperly connected - Reestablish proper connection 	
	Inspect each half of the display to main flex film connection	<ul style="list-style-type: none"> If dirty or oxidized –clean both halves of the connection If the portion of the connector on the display assembly is damaged - Replace the display assembly If the portion of the connector on the main flex film is damaged - Replace the main flex film 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace the display assembly 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Replace the main flex film 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

8 Alert Problems


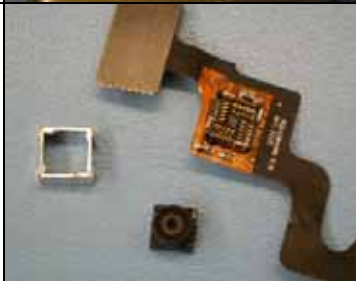
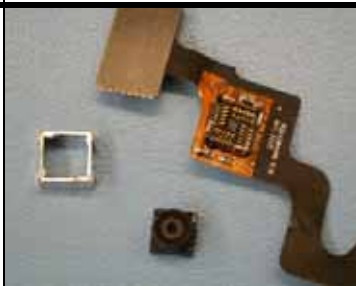
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Vibrator:	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the vibrator contact pads on the circuit board	<ul style="list-style-type: none"> If dirty – Clean 	 <p>Vibrator Contact Pads</p>
	Perform the following action →	<ul style="list-style-type: none"> Replace the vibrator 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Rear speaker: No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	 <p>Rear Speaker Ports</p>
	Inspect whether the rear speaker's external port is clogged	<ul style="list-style-type: none"> If clogged – replace the rear speaker cover and clean and/or replace the rear speaker cloth 	
	Inspect the rear speaker cloth	<ul style="list-style-type: none"> If dirty or damaged - Replace the rear speaker cloth 	 <p>Rear Speaker Cloth</p>
	Inspect the rear speaker connection springs on the circuit board	<ul style="list-style-type: none"> If dirty – Clean both springs and replace the rear speaker box If damaged – Send to an electrical repair location 	 <p>Rear Speaker Connection Springs</p>
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace the rear speaker box if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	


9 Charging/Capacity Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Phone is not charging properly	Inspect the battery connector	<ul style="list-style-type: none"> • If dirty or oxidized – Clean • If damaged – Send to an electrical repair location 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> • Replace the system connector 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	

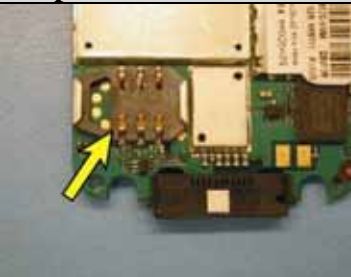
10 Camera Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Lines or marks in picture	Perform the following action →	<ul style="list-style-type: none"> Clean the camera lens 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace the camera module and the main flex film 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Will not capture an image	Perform the following action →	<ul style="list-style-type: none"> Replace camera module and the main flex film 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	


11 IR Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Will not connect with a functional IR device	Inspect the IR window	<ul style="list-style-type: none"> If dirty – Clean If scratched or damaged – Replace IR window 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	


12 SIM Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
SIM undetected	Inspect SIM holder	<ul style="list-style-type: none"> If dirty or oxidized – Clean If damaged – Send to an electrical repair location 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Unit indicates the incorrect SIM is inserted	Check whether the phone is locked to a particular carrier and whether the correct carrier's SIM is being used	<ul style="list-style-type: none"> Use Correct Carrier SIM or test SIM 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

13 Data Communication Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Problem transferring data using a direct connection	Perform the following action →	<ul style="list-style-type: none"> Replace the system connector 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

14 Hands-Free Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Hands-free not working	Perform the following action →	<ul style="list-style-type: none"> Replace the system connector 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

15 Revision History

Rev.	Date	Changes / Comments
A	2006-Mar. 16	Initial Release
B	2006-Mar. 30	Due to system problem. No changes made to content
C	2006-April 26	Added W300i and W300c to the “Applicable for” section Adjusted the volume/music key sections to accommodate Z530 and W300
D	2006-June 19	Fixed minor typos in document