



Trouble Shooting Guide Repair Instruction Electrical/4/000 21-2/FEA 209 544/136, Electrical

Applicable for K530i

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1 General

The purpose of this document is to indicate the electrical level repair actions associated with the different failure symptoms.

For symptoms that have multiple repair actions, the repair actions are listed in order of their probability of creating a successful repair. The first action has the highest probability, and subsequent actions have lower probabilities. The intention is for the repair technician to implement the first repair action and then retest the phone. If the phone continues to fail the same test, then the technician should continue to the second repair action. If the phone continues to fail the same test after all of the repair actions are exhausted, then the phone will be considered not repairable at this level.

This document should be used only after the actions from the Mechanical Trouble Shooting Guide have been exhausted for the specific symptom.

Voltage, current, and resistance information is provided for some symptoms to enable faster repairs. Perform current measurements using a dummy battery and power supply with digital current display. The phone should be fully assembled. Perform voltage and resistance measurements with a multimeter. Purchasing this equipment and performing these measurements is optional but recommended.

2 Repair Actions for Manual Test Failures

Failure	Failure Symptom	Repair Action
2.1 Audio	<ul style="list-style-type: none"> No microphone or low gain <i>For to verify Buzzing Noise from Call problem the phone must be test in live call as the buzzing sound cannot be detected from service Menu test cases!</i> 	Replace B4101 Replace V4106 Replace N4202 Replace N2000
	No or poor audio in loudspeaker	Replace V4101
	<ul style="list-style-type: none"> Receiver "Ear speaker" <i>For to verify Buzzing Noise from Call problem the phone must be test in live call as the buzzing sound cannot be detected from service Menu test cases!</i> 	Replace N4100
	Audio problem with accessories	Replace N4202 Replace N4100 Replace N2000
2.2 Bluetooth		Replace N1400
2.3 Charging	Can't charge	Replace V2202, V2203 Replace V2204 Replace N2000
2.4 Camera	Problems with the Mega pixel camera	Replace X2505 if damaged
	Problem with the video call camera	Replace X2510 if damaged



2.4 Display	Display and keys work, but they are dark. Measure V3102 with the Positive (red) probe on the anode = 0.16 to 0.19	Replace X2590 if damaged Replace Z3100, Z3101 & Z3102 Replace V3101 If VDC is outside of range, then replace V3102 Replace N2000
2.5 Key	Keyboard problem	Replace X2591 if damaged Replace V2506, V2509 & V2510
	Volume keys	Replace S2512 if damaged Replace S2513 if damaged Replace V2506, V2509 & V2510
	Keypad Illumination; Display and keys work, but they are dark. Measure V3102 with the Positive (red) probe on the anode = 0.16 to 0.19	Replace X2591 if damaged If VDC is outside of range, then replace V3102 Replace V3101 Replace N2000 Replace N1500
2.6 Memory stick		Replace X2301 if damaged
2.7 On/Off	Can't power on	Replace S2500 If damaged Replace X2200 If damaged Replace V2504 Replace N2000
	Current draw when powered off	Replace A1200 – Approved Centers Only Replace A1300 – Approved Centers Only
	Turns off by itself	Replace X2200 If damaged
	Hangs at gray display. Constant vibration. Will not power off.	Replace B2100
	Draws current when pushing power key, returns to zero	Replace N2200
2.8 RTC	The clock has to be set after the battery has been detached.	Replace C2217, B2100
2.9 SIM		Replace X2302 if damaged
2.10 USB		Replace N2300 Replace D2304
2.11 Other Symptoms		Replace X2200 if damaged Replace V2504 Replace N2000



3 Repair Actions for Go/No Go Test Failures

Failure	Repair Action
Fails any part of Go/No Go testing	Run the calibration routine.
Fails Go/No Go test, but passes calibration	Replace the antenna. Replace antenna connector Rerun the phone through Go/No Go testing.
Fails Go/No Go test after passing calibration	Change X1000 and re-test.

4 Repair Actions for Calibration Failures

Failure	Repair Action
Fails any part of the GSM calibration routine	Replace A1300 – Approved Centers Only Replace N2400 Replace N2000
Fails any part of the UMTS calibration routine	Replace A1200 – Approved Centers Only Replace D2001 Replace A1300 – Approved Centers Only Replace N2402



5 Revision History

Rev.	Date	Changes / Comments
A	2007-07-10	First release
2.1	2007-12-18	Audio Update