Service Repair Documentation
Level 3 – AX72

Release	Date	Department	Notes to change
R 1.0	28.11.2005	BenQ MD CC S CES	New document

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1 Introduction

1.1 Purpose

This Service Repair Documentation is intended to support Service partners to carry out repairs on BenQ repair level 3. The described failures shall only be repaired in BenQ authorized local workshops.

The level 3 (former Level 2.5light) partners are obliged to repair level 3 classified boards, up to their repair level, under consideration of this repair instruction.

All repairs have to be carried out in an ESD protected environment and with ESD protected equipment/tools. For all activities the international ESD regulations have to be considered.

Assembling/disassembling has to be done according to the latest AX72 Level 1-2 repair documentation. It has to be ensured that every repaired mobile Phone is checked according to the latest released General Test Instruction document (both documents are available in the Technical Support section of the C-market).

Check at least weekly C-market for updates and consider all AX72 related Customer Care Information

AX72 Partnumber on IMEI label: S30880-S2860-#xxx

, while # may be any letter (A-Z) and xxx may be any number from 100, 101, 102....

Scrap Handling: All Scrap information given in this manual are related to the SCRAP-Rules and instructions.

Attention: Consider the new "LEAD-FREE" soldering rules (available in the communication market), avoid excessive heat.

1.2 Scope

This document is the reference document for all BenQ authorised Service Partners which are released to repair BenQ mobile phones up to level 3.

1.3 Terms and Abbreviations

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2 List of available level 3 parts

(according to Component Matrix V1.09 - check C-market for updates)

Product	ID	Order Number	Description CM
AX72	C1605	L36853-C6224-M6	CAPACITOR 2220N (Cap-Type3)
AX72	R1614	L50652-C472-J2	RESISTOR 4K7 (Res-Type11)
AX72	V286	L36840-L2056-D670	LED AMBER
AX72	V287	L36840-L2056-D670	LED AMBER
AX72	V288	L36840-L2056-D670	LED AMBER
AX72	V289	L36840-L2056-D670	LED AMBER
AX72	V290	L36840-L2056-D670	LED AMBER
AX72	V291	L36840-L2056-D670	LED AMBER
AX72	X1400	L36334-Z97-C213	CONNECTOR BATTERY 3-POL
AX72	X1603	L36334-Z97-C337	CONNECTOR SIM CARD READER K1
AX72	X211	L36334-Z93-C303	IO-JACK SLIM 12-POL
AX72	X2202	L36334-Z97-C205	CONNECTOR DISPLAY 10POL
AX72	Z1601	L50620-U6029-D670	FILTER EMI (Fi-Type6) PB Free

3 Hardware requirements

(according to L2.5L-L2.5 General soldering information V1.3 - check C-market for updates)

Jigs, Tools and working materials for all described repairs:

- hot air blower
- soldering gun
- tweezers
- flux
- solder

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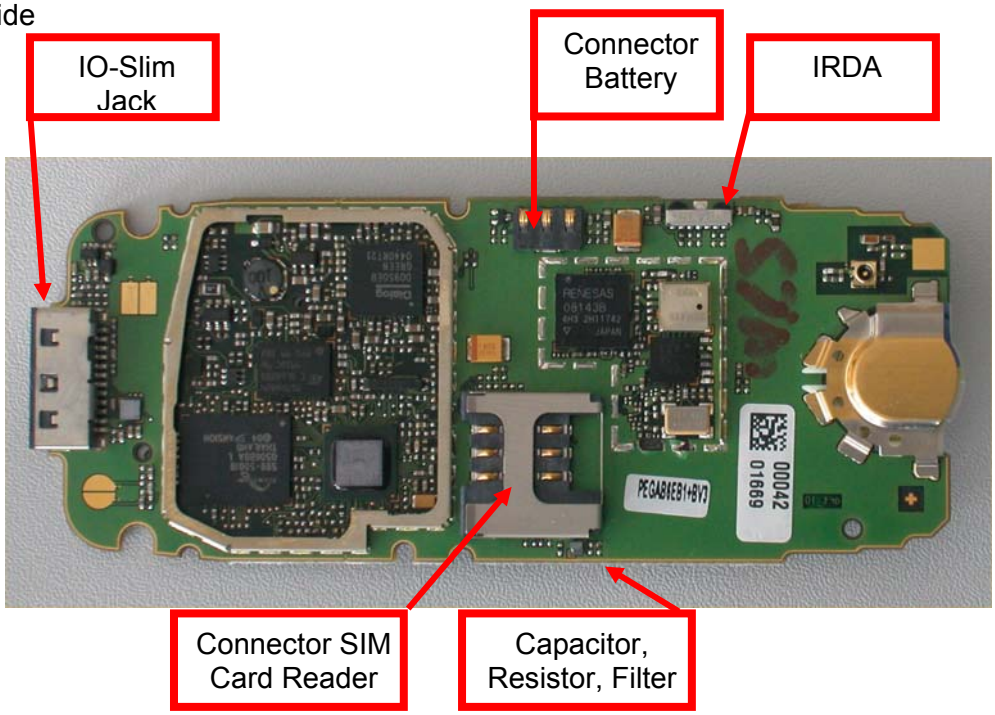
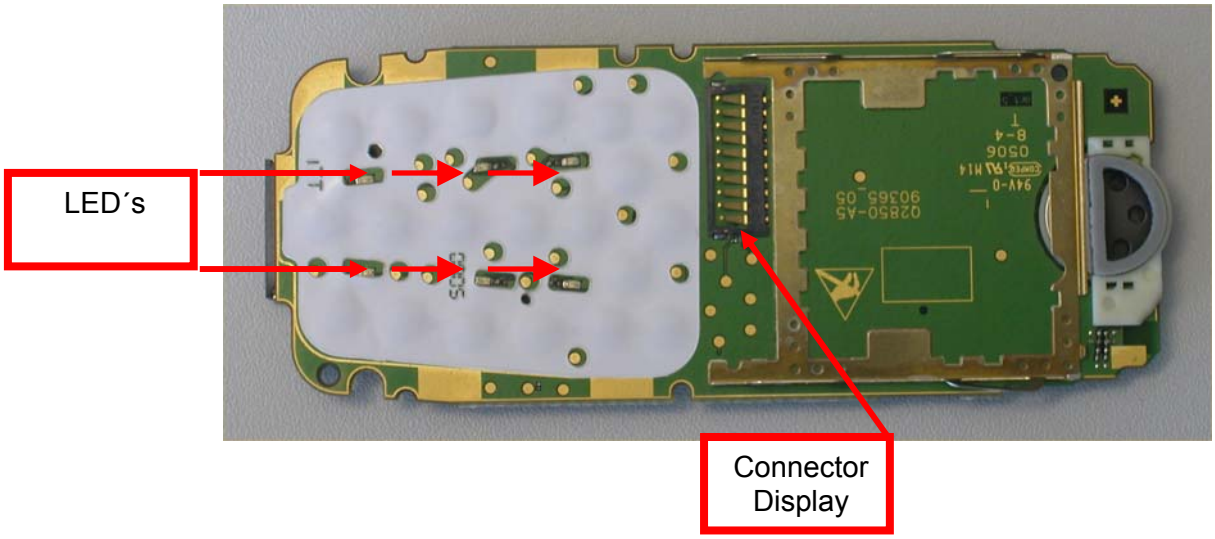
4 AX72 Board layout

Upper board side



Lower board side



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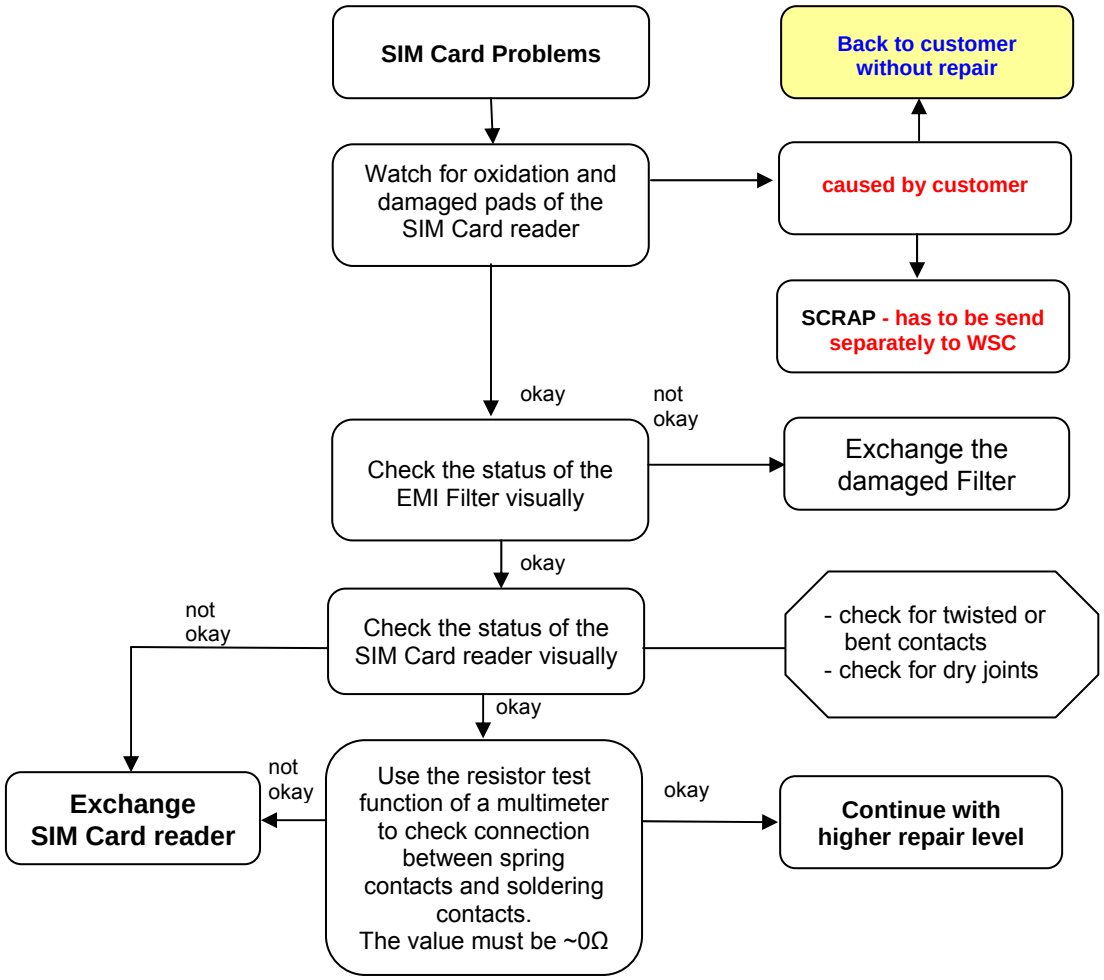
5 SIM Card Problems

Fault Symptoms	
Customer: Handset does not accept SIM card	GRT: SIM Card Problems



Connector SIM Card Reader

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L36334-Z97-C337
E-commerce order name:	CONNECTOR SIM CARD READER K1
Soldering temperature:	~ 360°C Tip Temp.
IRIS Diagnose Code:	43300 Interface/SIM Cardreader/Mechanical Damage

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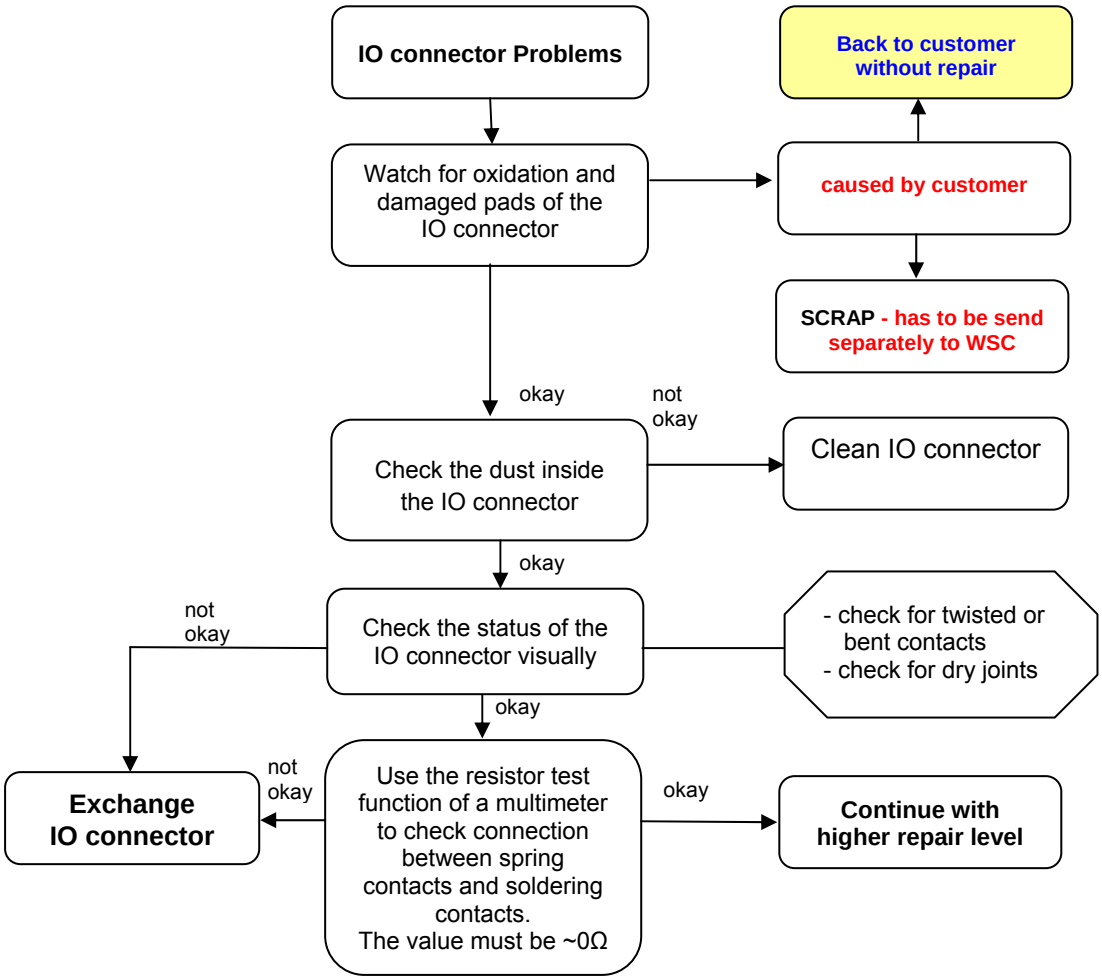
6 IO Connector Problems

Fault Symptoms	
Customer: Charging Problems Problems with external loudspeaker or microphone when using a car kit Problems with accessories connected at the IO connector	GRT: No connection to GRT



Connector IO Jack

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L36334-Z93-C303
E-commerce order name:	IO-JACK SLIM 12-POL
Soldering temperature:	~ 360°C Tip Temp.
IRIS Diagnose Code:	46100 Interface/Charging Connector/Mechanical Damage 47300 Interface/Data Interface/Mechanical Damage 4B100 Interface/Headset Connector/Mechanical Damage

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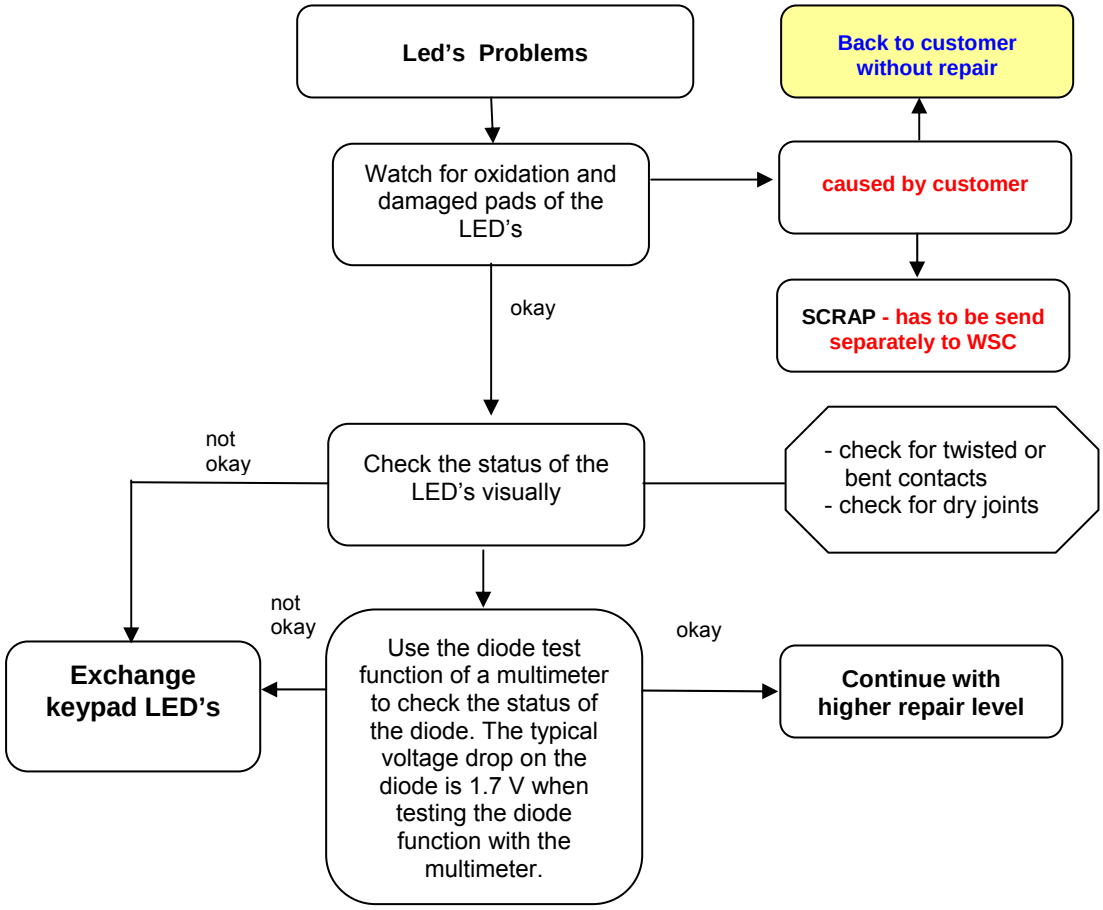
7 LED_Keypad illumination Problems

Fault Symptoms	
Customer: Main keypad illumination does not work	GRT: Current measured failed



LED_ KEYPAD
Remove metal dome sheet before replace LED's Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards. The metal dome jip must be used to place the metal dome sheet.

E-commerce order number: L36840-L2056-D670
E-commerce order name: LED AMBER
Soldering temperature: ~ 360°C Tip Temp.
IRIS Diagnose Code: 22000 Display / Background Illumination

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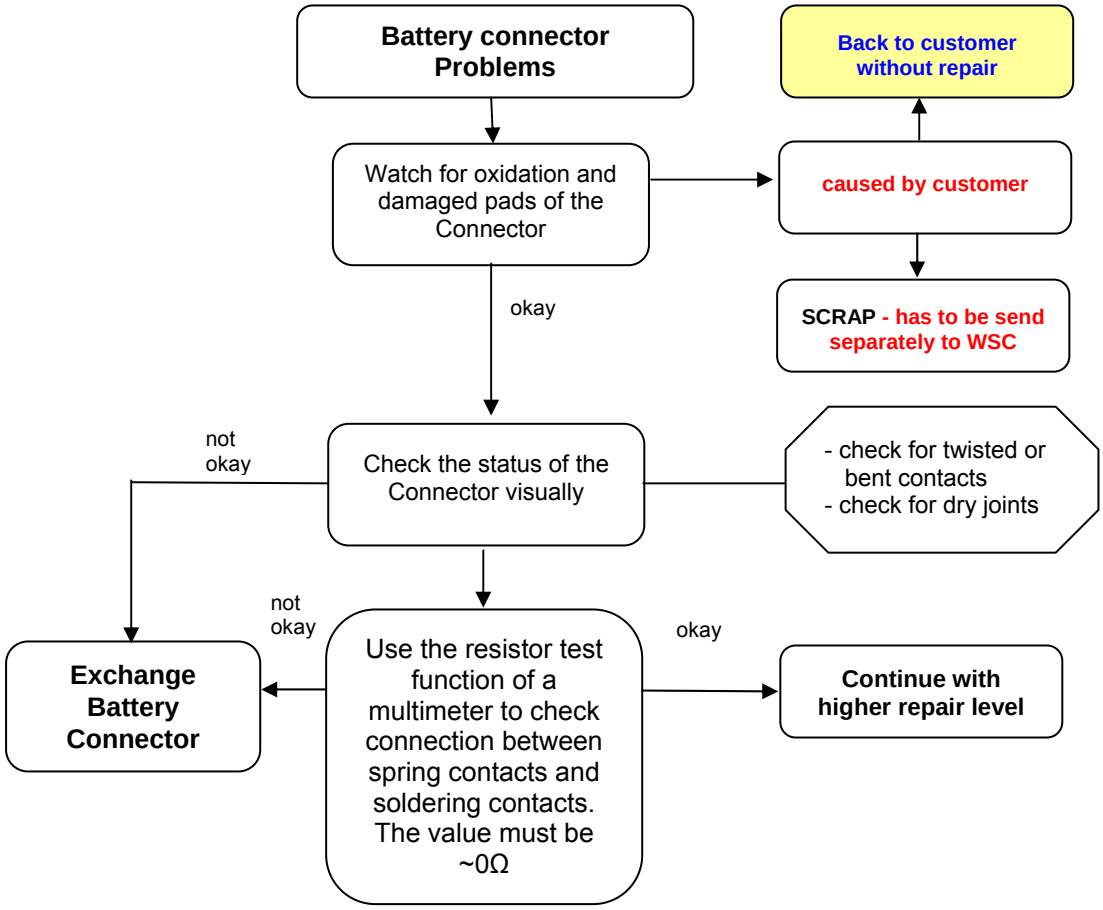
8 Battery Connector Problems

Fault Symptoms	
Customer: Mobile does not switch on	GRT: Current measured failed



Connector BATTERY

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L36334-Z97-C213
E-commerce order name:	CONNECTOR BATTERY 3-POL
Soldering temperature:	~ 360°C Tip Temp.
IRIS Diagnose Code:	13000 Battery/Mechanical Damage

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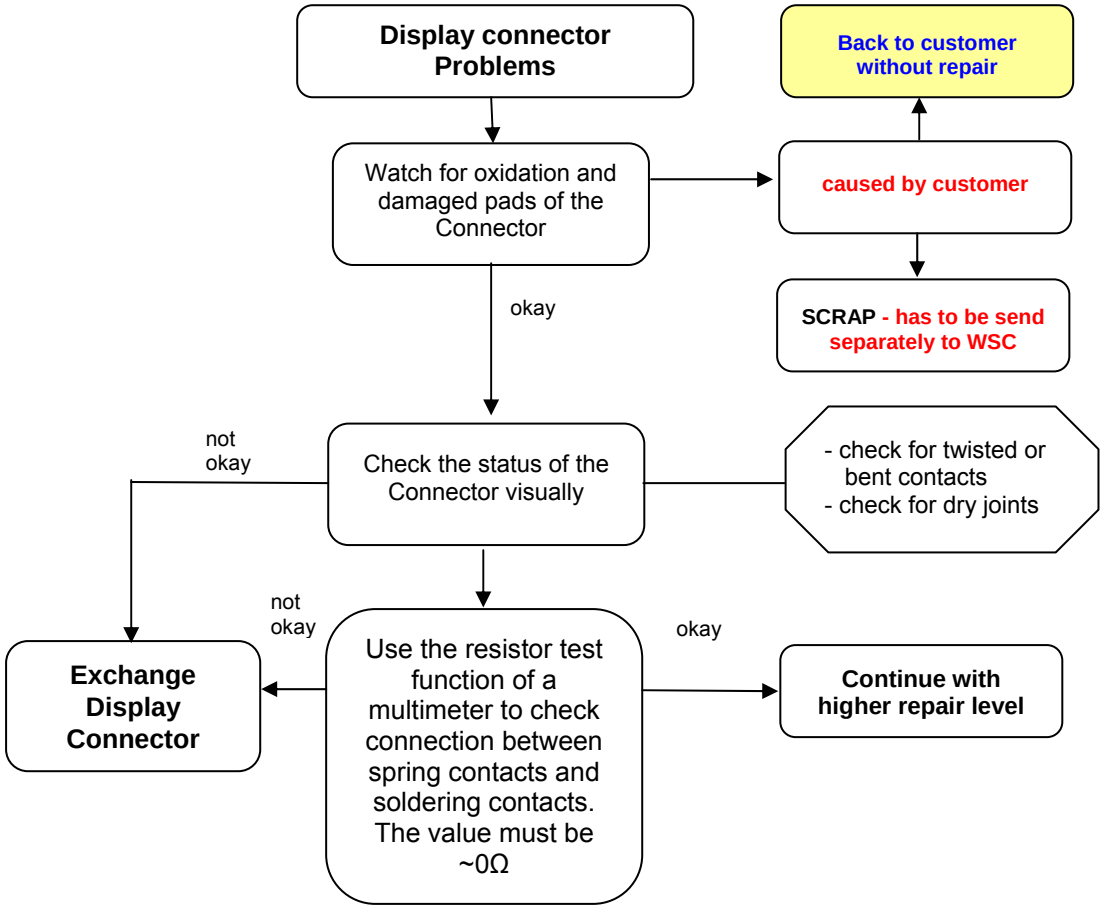
9 Display Problems

Fault Symptoms	
Customer: Display problems, like missing lines or columns on the LCD or display contrast problems or illumination problems	GRT: Display problems



Connector DISPLAY

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L36334-Z97-C205
E-commerce order name:	CONNECTOR DISPLAY 10POL
Soldering temperature:	~ 360°C Tip Temp.
IRIS Diagnose Code:	21000 Display / Performance 22000 Display / Background Illumination

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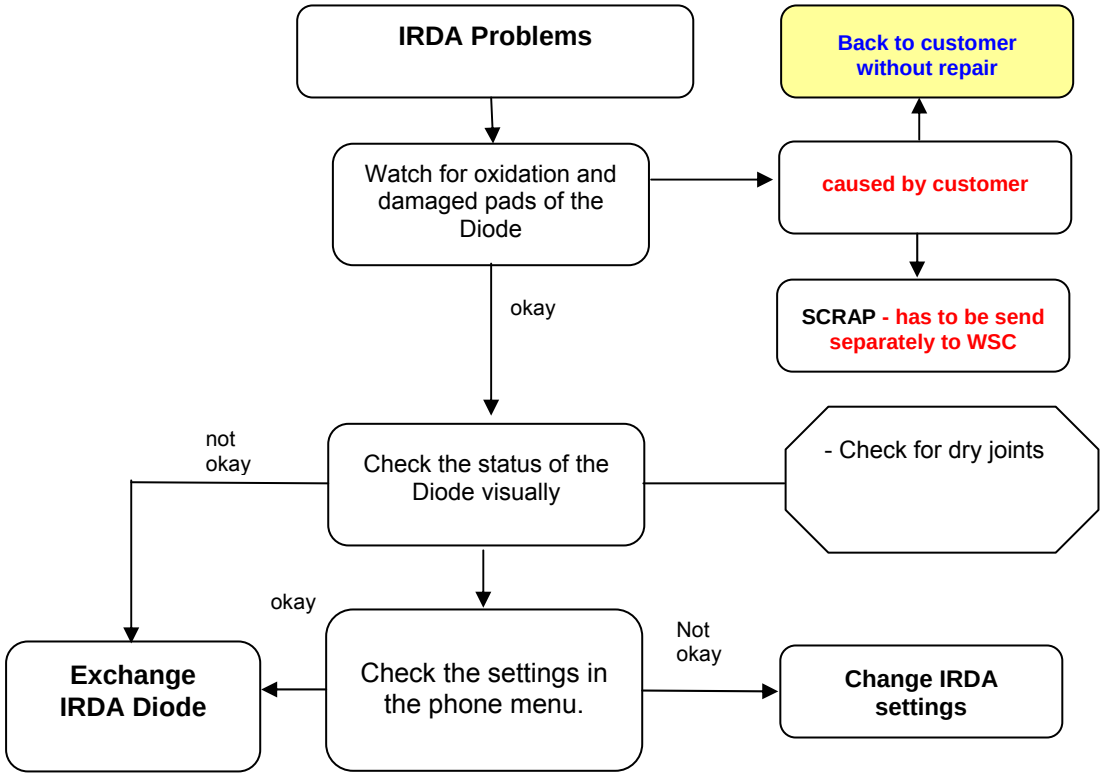
10 IRDA Problems

Fault Symptoms	
Customer: IRDA does not work	GRT: Display problems



Connector DISPLAY

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number:	L36334-Z97-C205
E-commerce order name:	CONNECTOR DISPLAY 10POL
Soldering temperature:	~ 360°C Tip Temp.
IRIS Diagnose Code:	21000 Display / Performance 22000 Display / Background Illumination

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