

Service Repair Documentation Level 3 (2.5 light) – S75



Release	Date	Department	Notes to change
R 1.0	04.10.2005	BenQMobile S CC 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 (former level 2,5light). 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 S75 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 S75 related Customer Care Information

S75 Partnumber on IMEI label: S30880-S7700-#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 mobile authorised Service Partners which are released to repair BenQ mobile phones up to level 3 (2.5 light).

1.3 Terms and Abbreviations

2 List of available level 3 (2.5light) parts

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

Product	ID	Order Number	Description CM
S75	V2631	L36197-F5008-F492	IRDA 115.2 KBIT
S75	V4902	L50640-L2108-D670	FLASH-LED HIGH BRIGHTN. WHITE
S75	X1400	L36334-Z97-C213	CONNECTOR BATTERY 3-POL
S75	X1504	L36334-Z93-C303	IO-JACK SLIM 12-POL
S75	X1604	L36334-Z97-C337	CONNECTOR SIM CARD READER K1
S75	X2200	L50634-Z97-C380	CONNECTOR DISPLAY 20POL
S75	X2705	L50634-Z97-C363	CONNECTOR BOARD TO BOARD 14-POL. X75
S75	X3500	L50634-Z97-C379	CONNECTOR CAMERA-SOCKET
S75	X3800	L36334-Z93-C297	CONNECTOR ANTENNA 6mm
S75	X4800	L50634-Z97-C348	CONNECTOR RS-MMC-READER X75
S75	Z1601	L50620-U6029-D670	FILTER EMI (Fi-Type7) PB Free

3 Hardware requirements

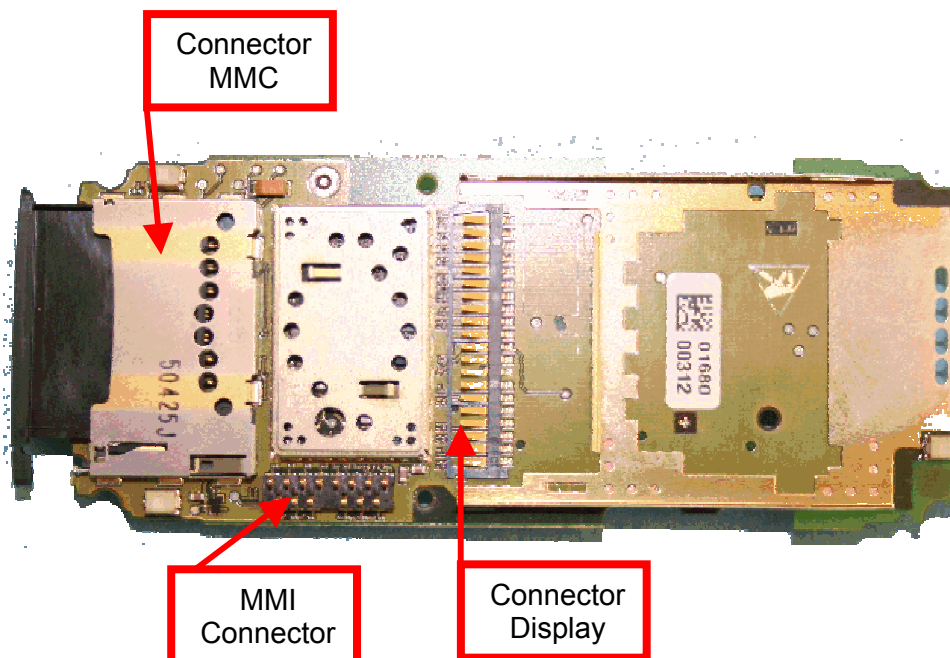
(according to L3-4 (L2.5L-L2.5) General soldering information V1.3 - check C-market for updates)

Jigs, Tools and working materials for all described repairs:

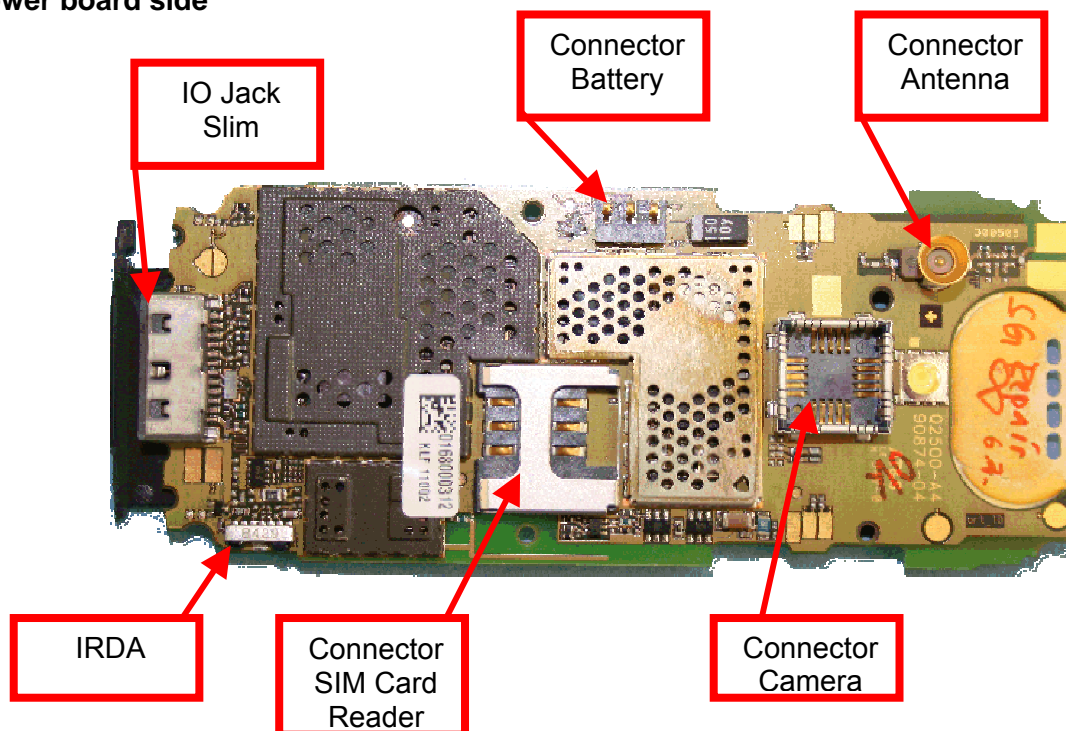
- hot air blower
- soldering gun
- tweezers
- flux
- solder
- S75 dome sheet jig

4 S75 Board layout

Upper board side

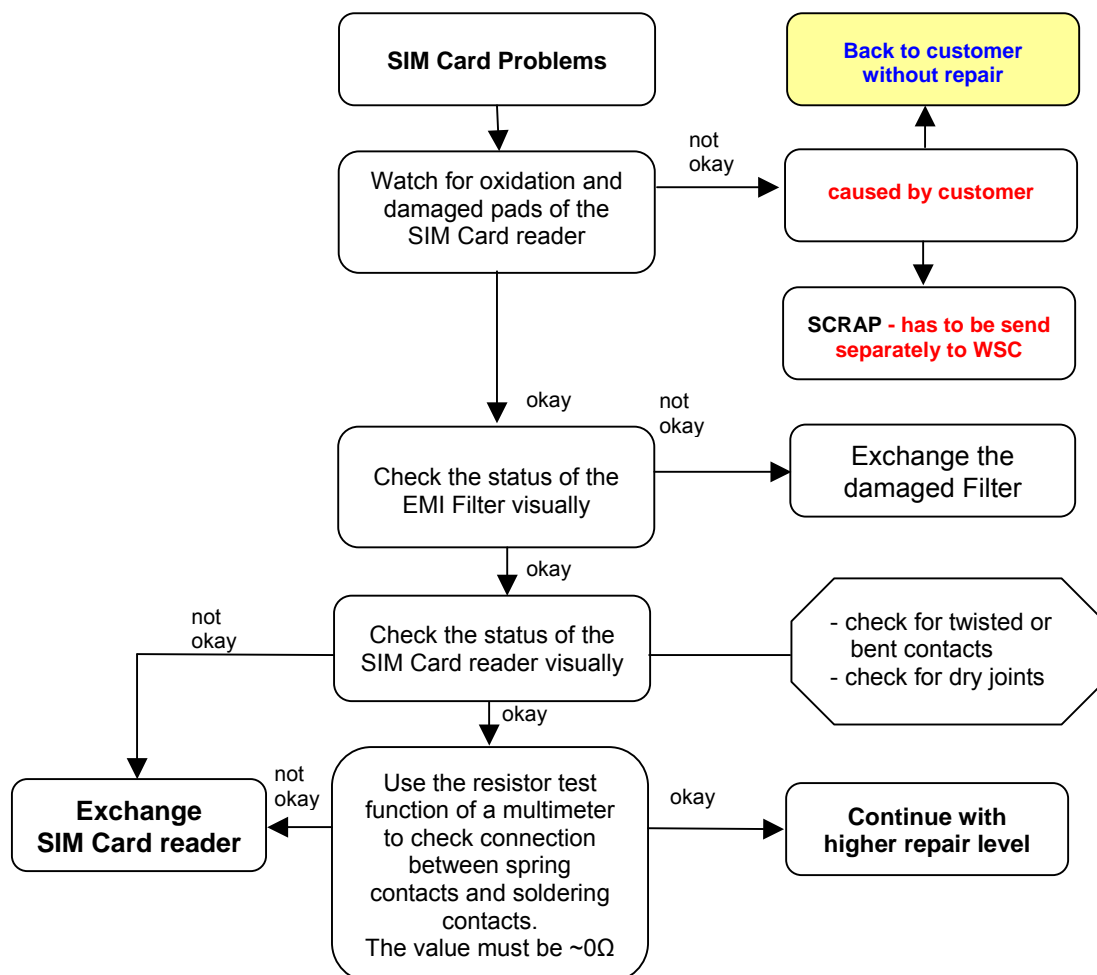


Lower board side



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: L50634-Z97-C406

E-commerce order name: CONNECTOR SIM CARD READER R65 (B)

Soldering temperature: ~ 360°C TIP Temp.

EMI Filter

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

E-commerce order number: L50620-U6029-D670

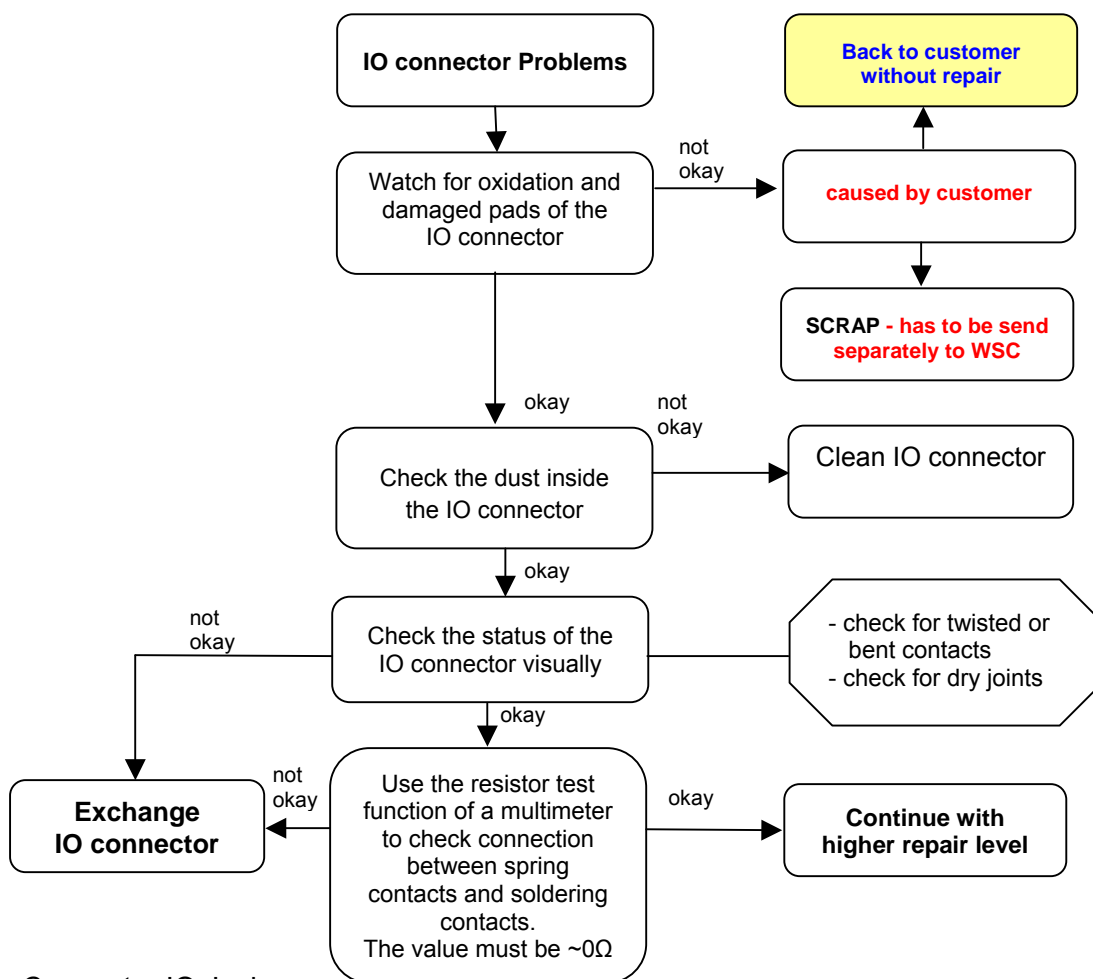
E-commerce order name: FILTER EMI (Fi-Type7) PB Free

Soldering temperature: ~ 360°C TIP Temp

IRIS Diagnose Code: 43300 Interface/SIM Card reader/Mechanical Damage

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

Important additional soldering hints

The MMC Reader is located on the opposite of the SLIM-Lumberg connector. Therefore the risk to damage the plastic material of this MMC-Reader is potentially high if excessive heat is used while removal or soldering of the SLIM-Lumberg connector.

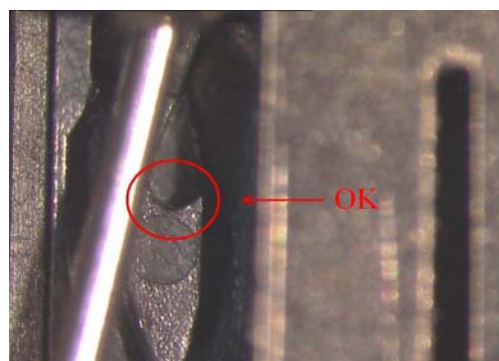
Please follow these instructions:

- a) Remove the SLIM-Lumberg connector with a soldering iron and Desolder Wick
- b) Clean the Pads afterwards
- c) Solder the new connector by using soldering iron under consideration of the max. allowed temperature range.

Samples of critical area:



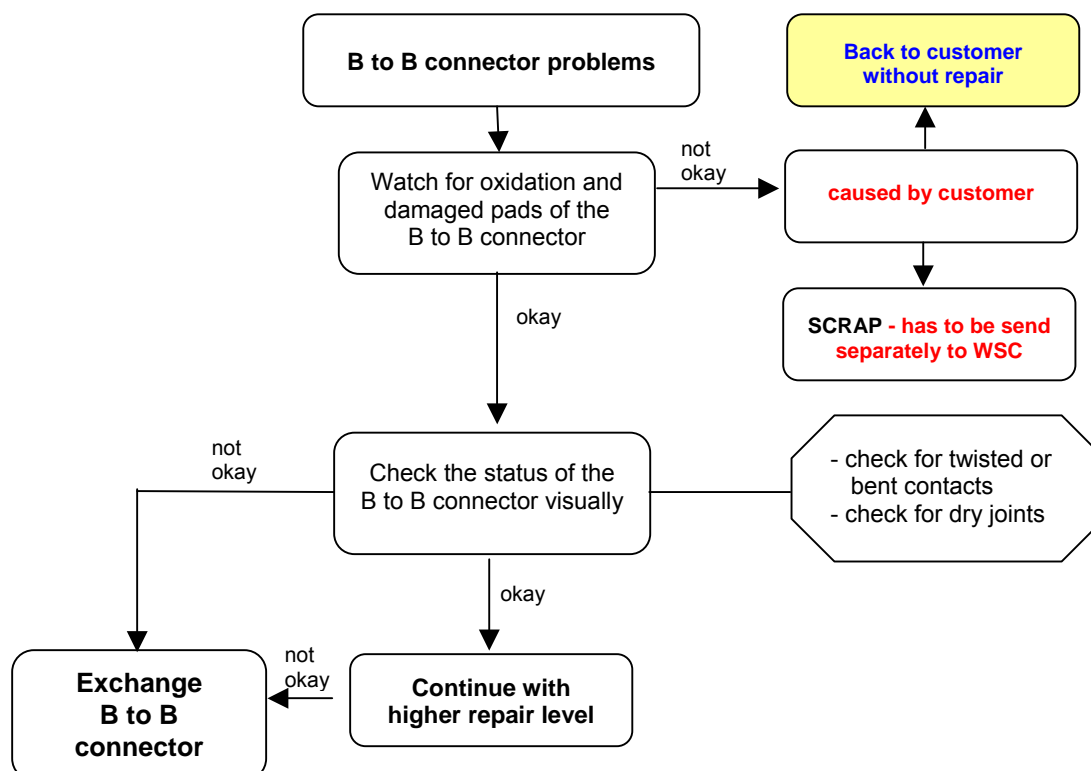
Lock mechanism damaged



Lock mechanism OK

7 B to B connector (upper slider part) Problems

Fault Symptoms	
Customer:	GRT:
Upper slider keyboard malfunction	Keyboard malfunction
Upper slider keypad illumination does not work	Current measured failed



Connector Board to Board

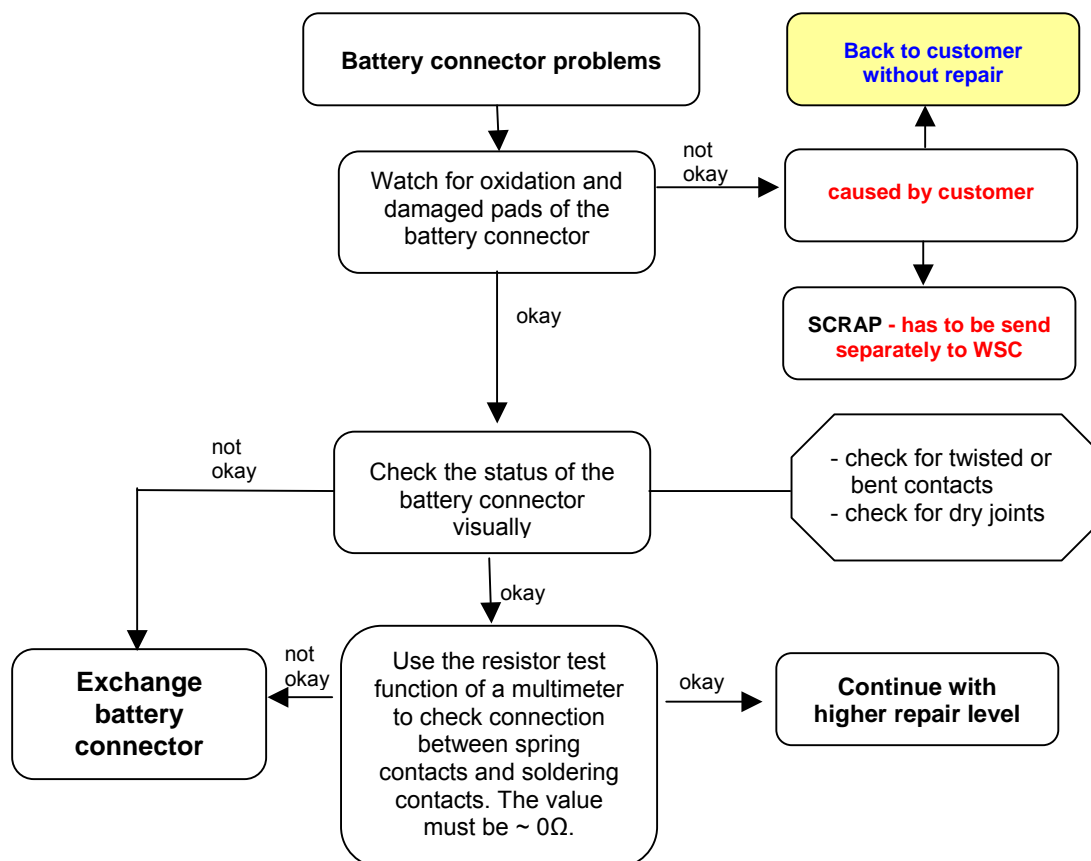
Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50634-Z97-C340
 E-commerce order name: BOARD TO BOARD 30-POL
 Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose Code: 32100 Keys / Main / No Function
 32200 Keys / Main / Reduced Functionality
 36000 Keys / Illumination

8 Battery Connector Problems

Fault Symptoms	
Customer: Mobile does not switch on	GRT: No connection to GRT



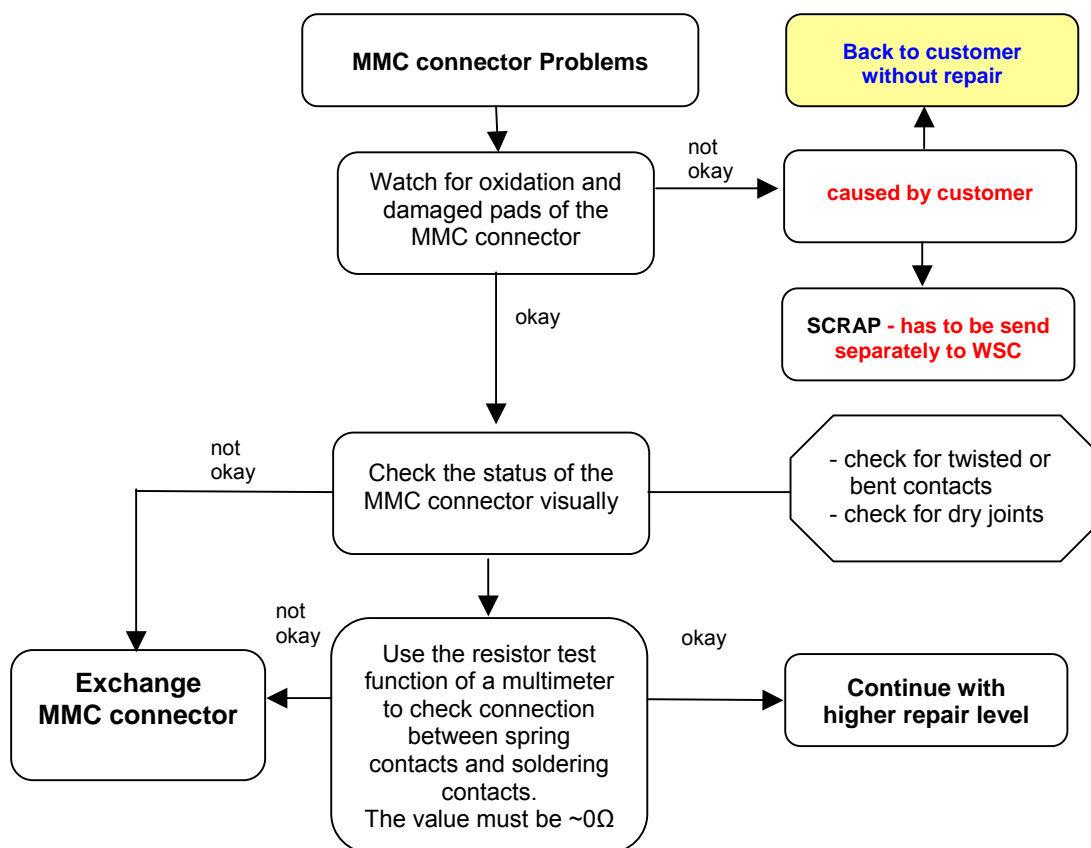
Connector BATTERY

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

9 MMC Connector Problems

Fault Symptoms	
Customer: MMC malfunction	GRT: Tbd.



Connector MMC

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

E-commerce order number: L50634-Z97-C415

E-commerce order name: CONNECTOR RS MMC X75; CONNECTOR RS MMC X75

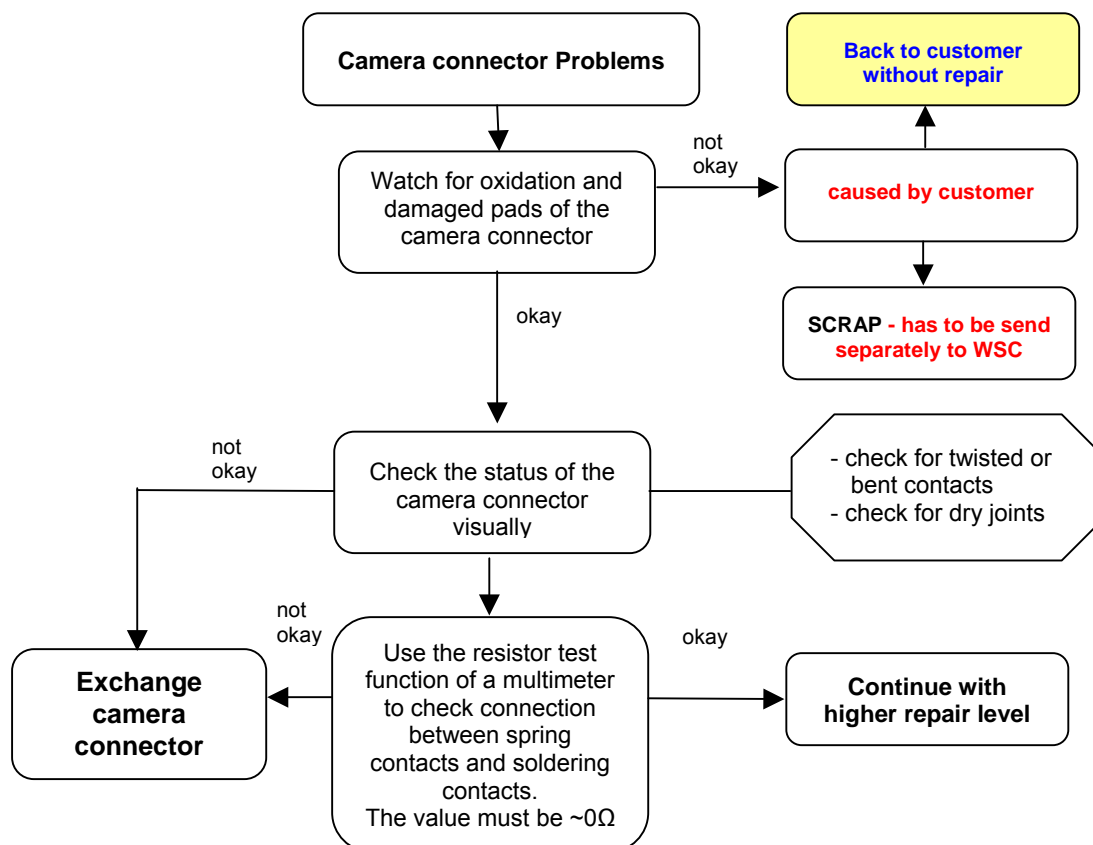
Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose Code: 4E000 Interfaces/ Memory Card Rerader

Attention: Avoid excessive heat in order not to damage the plastic material of the connector (see problem SLIM-Lumberg connector)

10 Camera Connector Problems

Fault Symptoms	
Customer: Camera malfunction	GRT: Tbd.



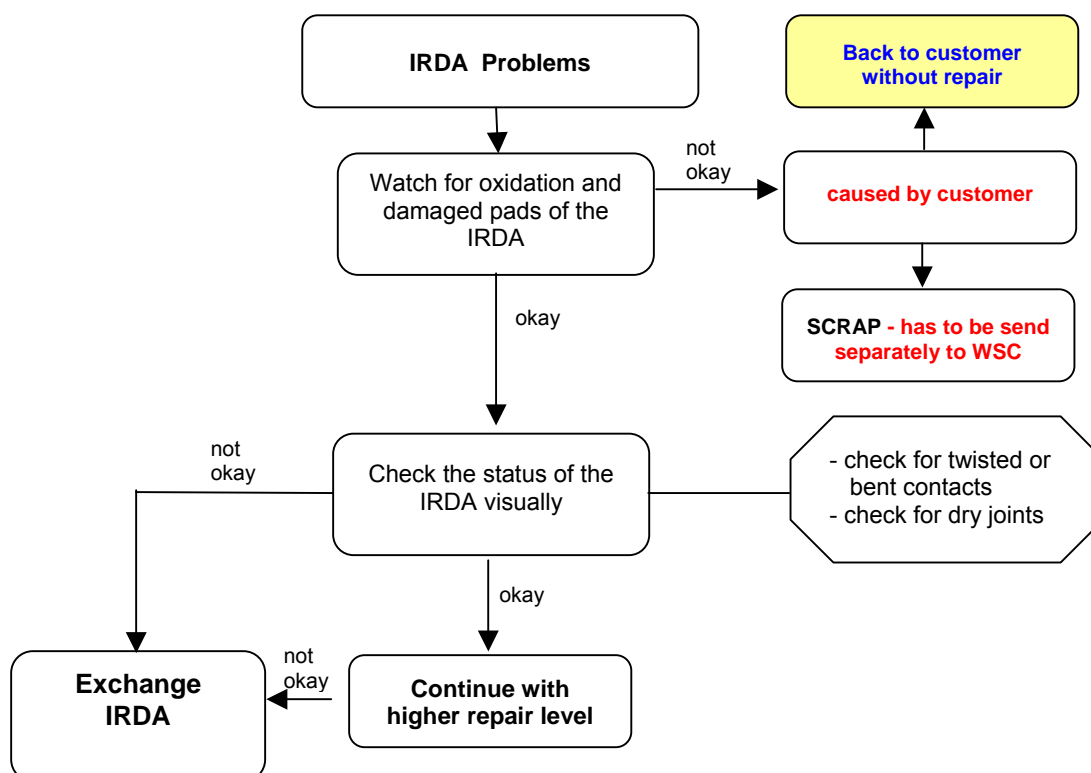
Connector CAMERA

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

E-commerce order number: L50634-Z97-C379
E-commerce order name: CONNECTOR CAMERA-SOCKET
Soldering temperature: ~ 360°C TIP Temp.
IRIS Diagnose Code: BA000 Accessories / Camera

11 IRDA Problems

Fault Symptoms	
Customer: No infrared connection possible	GRT: Tbd.



IRDA

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

E-commerce order number: L36197-F5008-F492

E-commerce order name: IRDA 115.2 KBIT

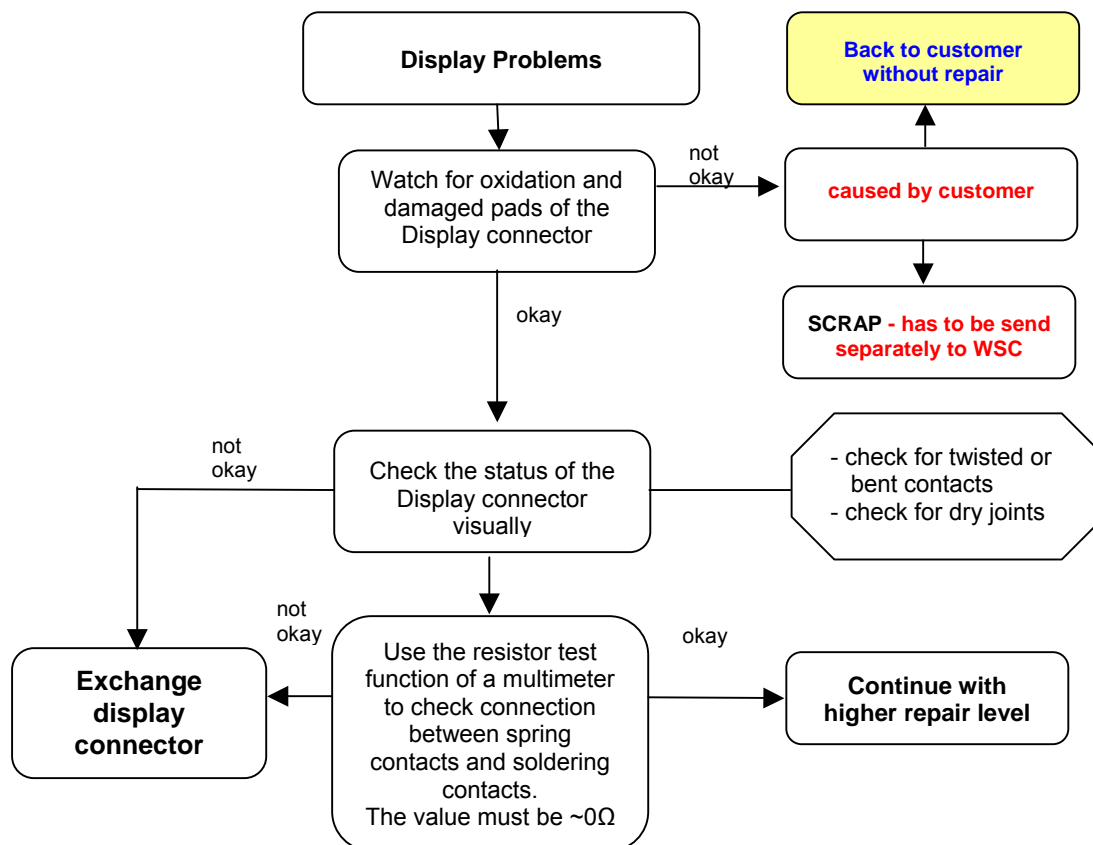
Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose Code: 41100 Interfaces / IRDA / No Function

41300 Interfaces / IRDA / Mechanical Damage

11 Display Problems

Fault Symptoms	
Customer: Display problems	GRT: Current measured failed



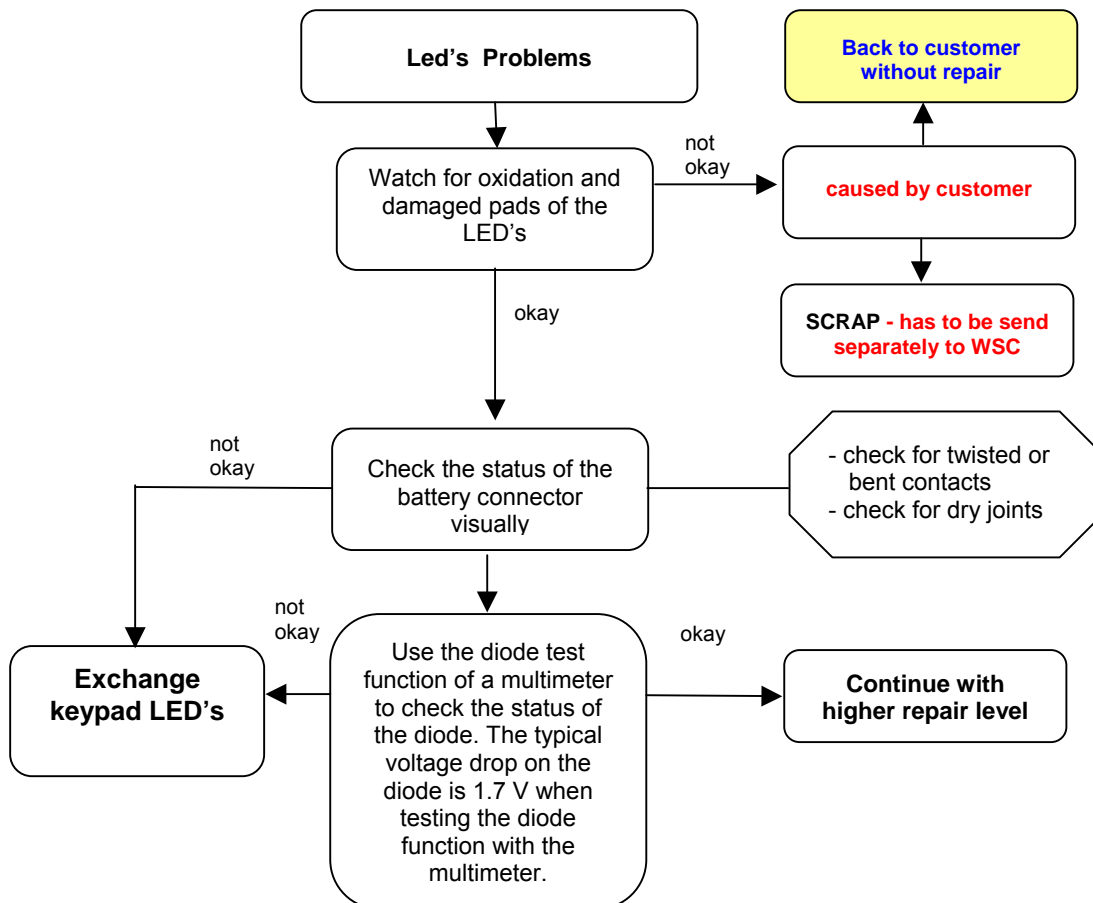
Connector DISPLAY

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

E-commerce order number: L50634-Z97-C380
 E-commerce order name: CONNECTOR DISPLAY 20POL
 Soldering temperature: ~ 360°C TIP Temp.
 IRIS Diagnose Code: 21000 Display / Performance
 22000 Display / Background Illumination

12 Main keypad illumination Problems

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



LED WHITE TOP

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

Attention: Remove Metal Dome Sheet before!!!

E-commerce order number: L36840-L2099-D670

E-commerce order name: LED WHITE TOP

Soldering temperature: ~ 360°C TIP Temp.

IRIS Diagnose Code: 36000 Keys/Illumination