



Trouble shooting guide, SP/Mechanical

Applicable for P900, P908

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1 Explanations

1.1 Service functions in the software

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

↑*↓↓↓*↓↓*

They are as follows:

1. **Information**
2. **Service tests**
3. **Service functions (Format internal disk)**

The service test menu looks like this:

1. **Display**
2. **Touch screen**
3. **Illumination**
4. **Keys**
5. **Vibrator**
6. **Speakers**
7. **Memory stick**

1.2 Liquid damage

1.2.1 Sticker

In the phone there is placed a sticker that can give you a hint to see if the phone is damage by liquid or not. This sticker is located near the battery connector (*Fig. 1.1*) and it is possible to see it without disassemble the phone.

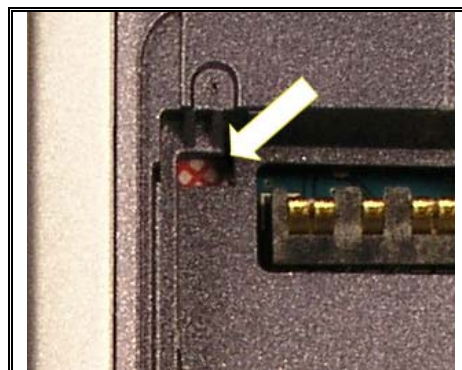
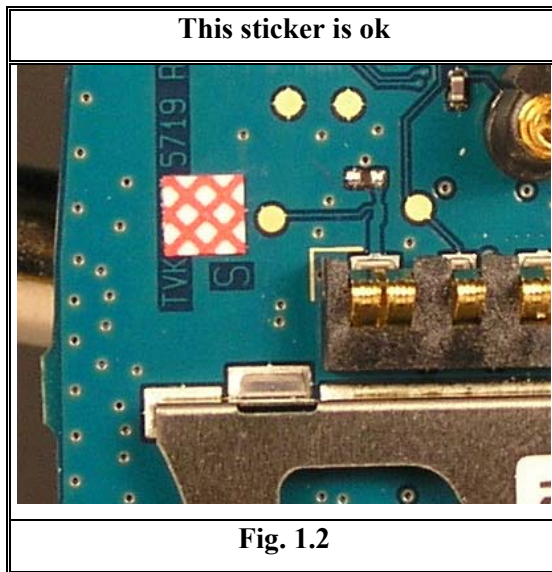


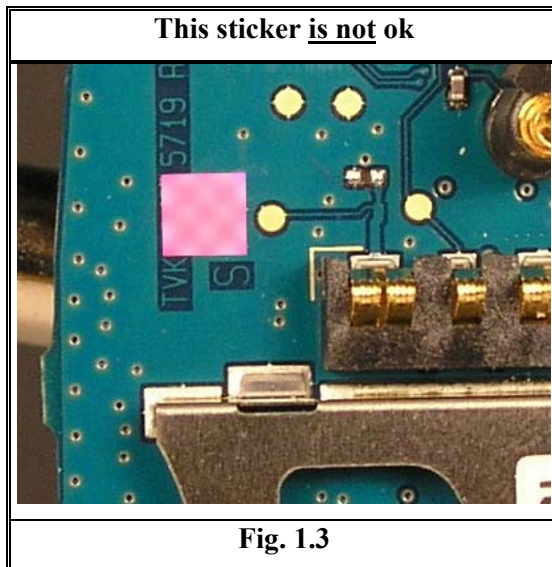
Fig. 1.1



On the pictures below you will see the different between a sticker that has been in contact with liquid (*Fig. 1.3*) and with on that hasn't (*Fig. 1.2*).



This sticker has not been in contact with liquid.



This sticker has been in contact with liquid. As you can see the red pattern has turn into a pink pattern. In this case you should check the phone for liquid damage (*See point 1.2.2*).

1.2.2 Action

Make a general visual inspection for corrosion or oxidation from liquid damage. No further action should be taken for a liquid damaged phone. Handle the unit according to local company or GSP directives.

2 Appearance Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Check the cabinet upper sub assembly (*Fig. 2.1*), the flip assembly (*Fig. 2.2*) and the bezel (*Fig. 2.1*) for damage, scratches and that the parts fit correct. Replace the faulty components if necessary.
- Check the cabinet lower sub assembly (*Fig. 2.3*), the battery lid (*Fig. 2.3*) and the panel camera assembly (*Fig. 2.3*) for damage, scratches and that the parts fit correct. Replace the faulty components if necessary.
- Check the cap (MS) (*Fig. 2.4*), the cap (JACK) (*Fig. 2.5*), the cap (RF) (*Fig. 2.3*), the cap left screw (*Fig. 2.3*) and the cap right screw (*Fig. 2.3*) for damage, scratches and that the parts fit correct. Replace the faulty components if necessary.

If the failure still occurs, handle the unit according to the local company or the GSP directives.



3 Alert Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

3.1 Rear speaker

- Turn on the phone. Go to the service test menu; choose “Speakers”. The rear speaker will start to play.
- Check if the rear speaker (*Fig. 3.1*) is mechanical damaged, dirty or oxidized. Replace it if necessary.
- Check if the cushion rear speaker (*Fig. 3.2*) is mechanical damaged. Replace it if necessary.
- Check if the holder rear speaker (*Fig. 3.3*) is mechanical damaged. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



Fig. 3.1



Fig. 3.2

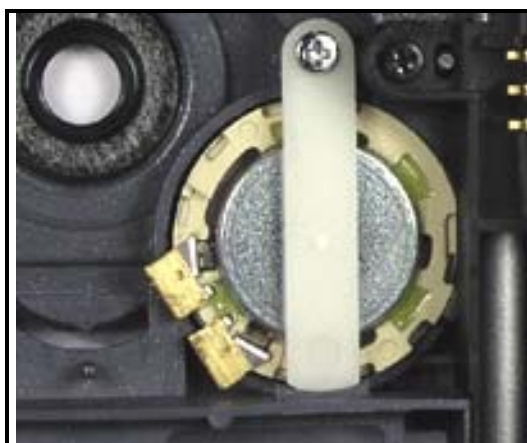


Fig. 3.3

3.2 Vibrator

- Turn on the phone. Go to the service test menu; choose “Vibrator”. Press OK to check the vibrator works properly.
- Check if the vibrator (*Fig. 3.4*) is mechanical damaged, dirty or oxidized. Replace it if necessary.
- Check if the vibrator pads (*Fig. 3.5*) are dirty or oxidized. Clean them if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



Fig. 3.4

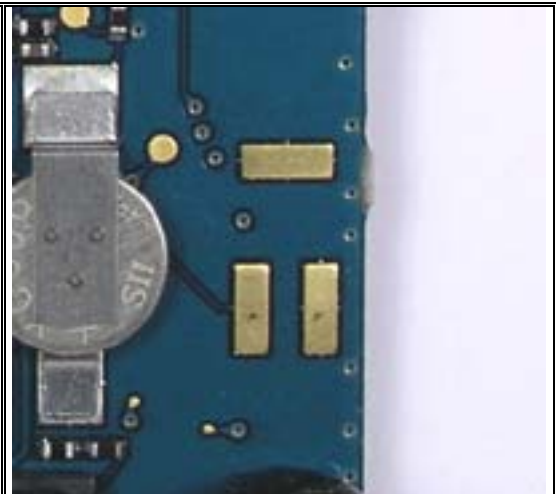


Fig. 3.5

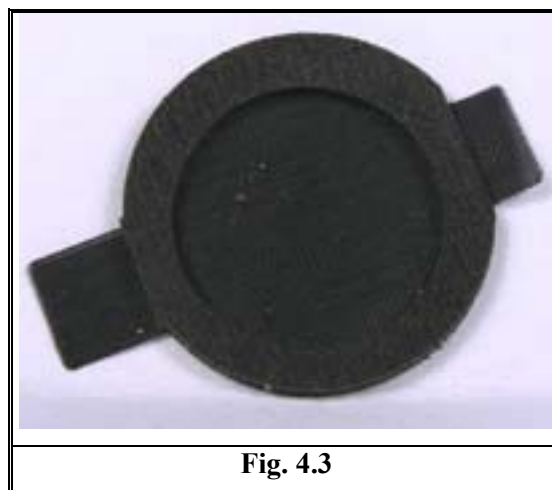
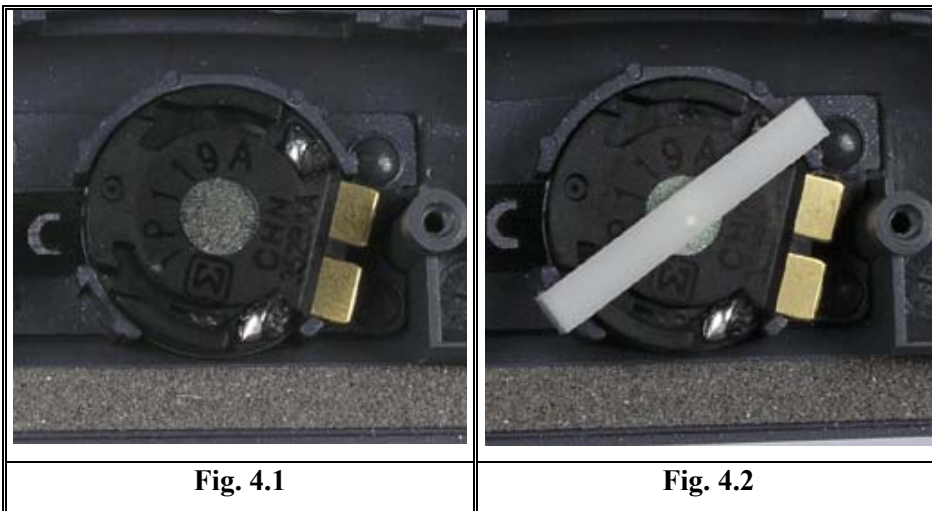
4 Audio Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

4.1 Earphone (front speaker)

- Turn on the phone. Go to the service test menu; choose “Speakers”. The rear speaker will start to play. Press ok or “1” to test the front speaker.
- Check if the front speaker (*Fig. 4.1*) is mechanical damaged, dirty or oxidized. Replace it if necessary.
- Check if the holder front speaker (*Fig. 4.2*) is mechanical damaged. Replace it if necessary.
- Check if the cushion front speaker (*Fig. 4.3*) is mechanical damaged. Replace it if necessary.

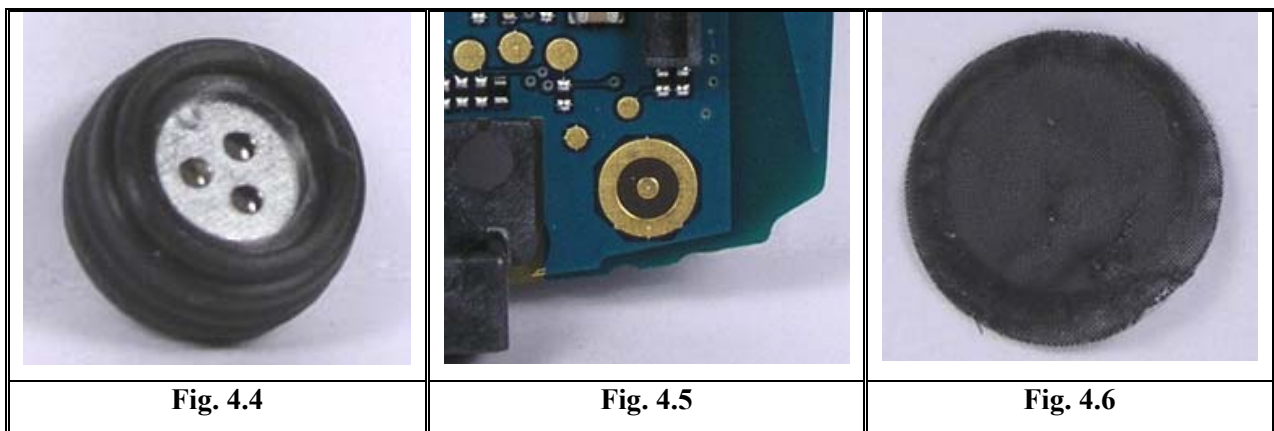
If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



4.2 Microphone

- Insert a working SIM card to the P900/P908 and turn it on; place a call to the phone.
- Test the microphone.
- Check if the microphone (*Fig. 4.4*) is mechanical damaged, dirty or oxidized. Replace it if necessary.
- Check if the microphone pads (*Fig. 4.5*) are not dirty or oxidized. Clean them if necessary.
- Check if the microphone net (*Fig. 4.6*) is mechanical damaged or dirty. Replace it if necessary.

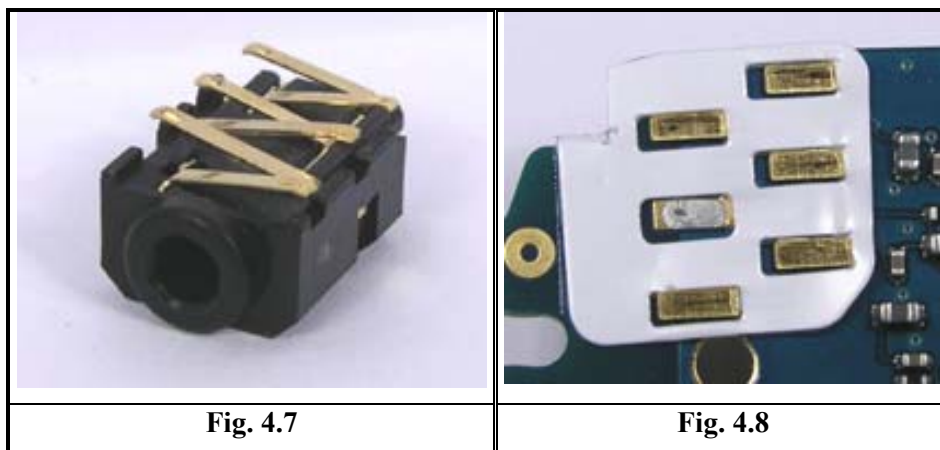
If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



4.3 Headset

- Insert a working headset to the phone jack.
- Insert a working SIM card to the P900/P908 and turn it on; place a call to the phone.
- Check if there is sound from the microphone and the earphone. Replace the phone jack (*Fig. 4.7*) if necessary.
- Check if the pads (*Fig. 4.8*) are dirty or oxidized. Clean them if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.





5 Charging/Capacity Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

5.1 Charging

- With a working battery connect a working charger to the phone, if the battery voltage is too low the phone will charge the battery without turning on the phone (this will usual not take more than 10 minutes) and when the battery voltage is high enough the phone will be able to turn on and show charging in the LCD.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

5.2 Capacity

- The standby time will be reduced if, the light is turned on all the time, the bluetooth is turned on, or if the infrared is turned on.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

6 Data Communication Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- If no communication, is accomplished via bluetooth or infrared. Try to master reset the phone.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

7 Key/Flip problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

7.1 Side Keys

- Turn on the phone. Go to the service test menu; choose “Keys”. Press any key to verify the keys function.
- Check if the camera key (*Fig. 7.1*) and the Internet key (*Fig. 7.1*) and the on/off key (*Fig. 7.2*) are working properly and that the mechanical response feels normal. Replace the side switch (*Fig. 7.3*), the holder stylus (*Fig. 7.4*) or the cabinet lower sub assembly (*Fig. 7.5*) if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

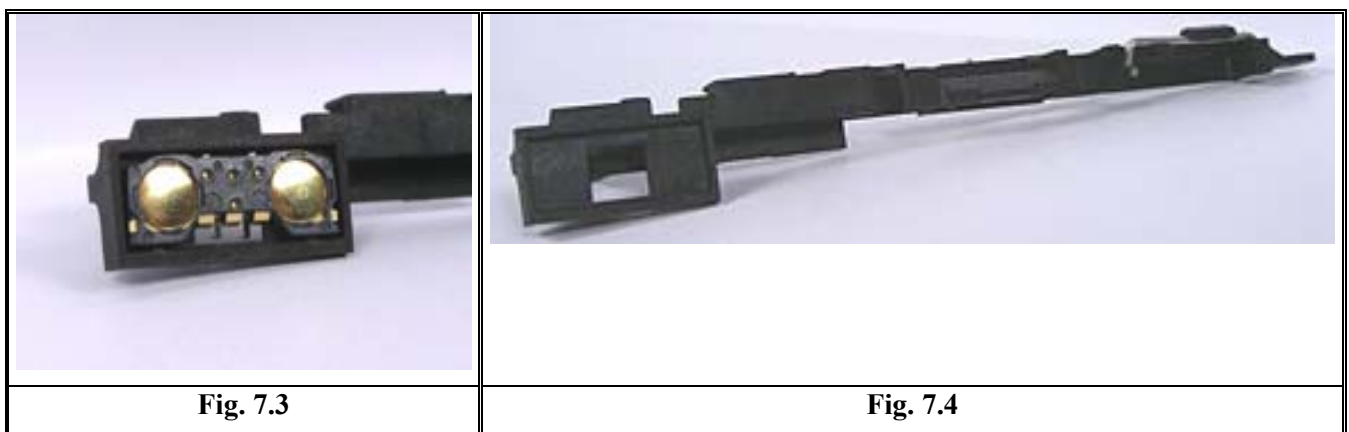
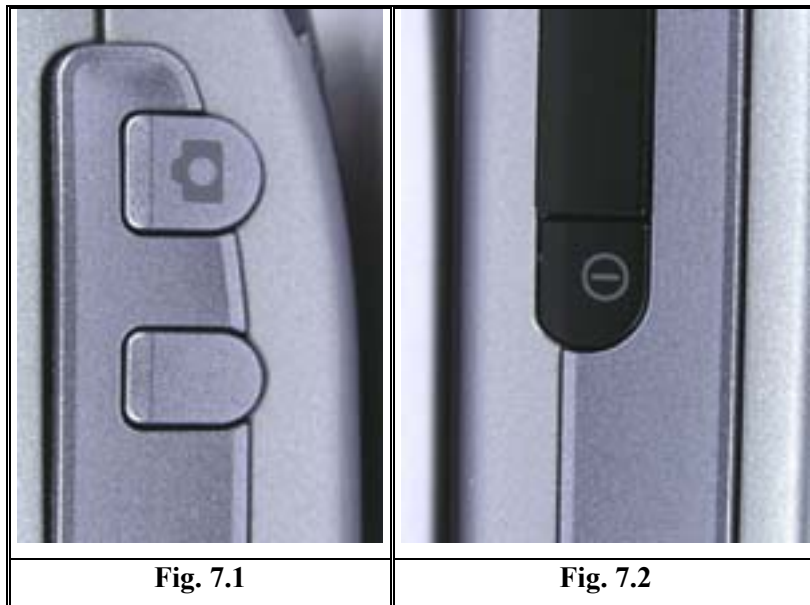




Fig. 7.5

7.2 Keyboard

- Turn on the phone. Go to the service test menu; choose “Keys”. Press any key to verify the keys function.
- Check if the flip assembly (Fig. 7.6) is working properly; press all the buttons. A sound should be heard. Check if the mechanical response feels normal and that all the keys have been showed in the LCD. Replace the flip assembly (Fig. 7.6) if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

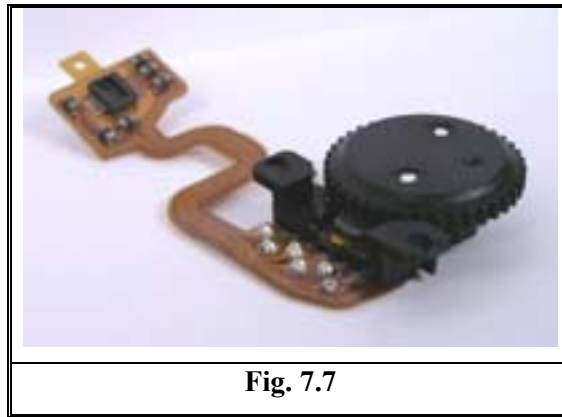


Fig. 7.6

7.3 Jog dial

- Turn on the phone. Go to the service test menu; choose “Keys”. Press any key to verify the keys function.
- Check if the jog dial (Fig. 7.7) is working properly, check all five directions. Replace the jog encoder assembly if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



7.4 Stylus

- Check if the stylus is fitting correct in the stylus holder (*Fig. 7.8*) and if it will fall out of the holder with out resistance. Replace the stylus holder (*Fig. 7.8*) or the stylus spring (*Fig. 7.9*) if necessary.



Fig 7.8



Fig 7.9

8 LCD/Illumination Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

8.1 LCD

- Turn on the phone. Go to the service test menu; choose “Display”.
- Check if the LCD is working properly and if there are missing lines or discolours. Replace it if necessary.

Note: Check the LCD and IC driver cushion (*Fig. 8.1*) before mounting the cabinet upper sup assembly. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

8.2 Touch screen

- Turn on the phone. Go to the service test menu; choose “Touch screen”.
- Check if the touch screen is working properly. Check if the area in the LCD does correspond to the area pressed in the LCD. If necessary go to Application/Control panel/Display/Screen/Calibrate screen and calibrate the touch screen according to the phones instructions. If the fault still occurs replace the LCD.

Note: Check the LCD and IC driver cushion (*Fig. 8.1*) before mounting the cabinet upper sup assembly. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

8.3 Illumination

- Turn on the phone. Go to the service test menu; choose “Illumination”.
- Check if the illumination is even all over the LCD. Replace the LCD if necessary.
- Check if the illumination is even in all the keys. Replace the flip assembly (*Fig. 8.2*) if necessary.

Note: Check the LCD and IC driver cushion (*Fig. 8.1*) before mounting the cabinet upper sup assembly. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



Fig 8.1



Fig 8.2

9 On/Off Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2

9.1 Battery or battery connector

- Turn on the phone with the customer's battery. If it fails, connect a charger to the phone, if the battery voltage is too low the phone will charge the battery without turning on the phone (this will usual not take more than 10 minutes) and when the battery voltage is high enough the phone will be able to turn on and show charging in the LCD. If it still fails to turn on;
- Check if the battery (*Fig. 9.1*) is working properly. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



Fig 9.1

9.2 On/Off key

- Turn on the phone with a working battery. If it fails;
- Check if the On/Off key (*Fig. 9.2*) is mechanical damaged. Replace the cabinet lower sub assembly (*Fig 9.3*) if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



Fig. 9.2

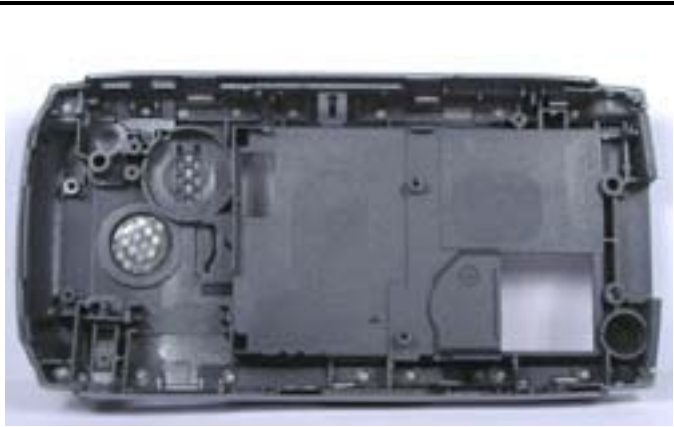
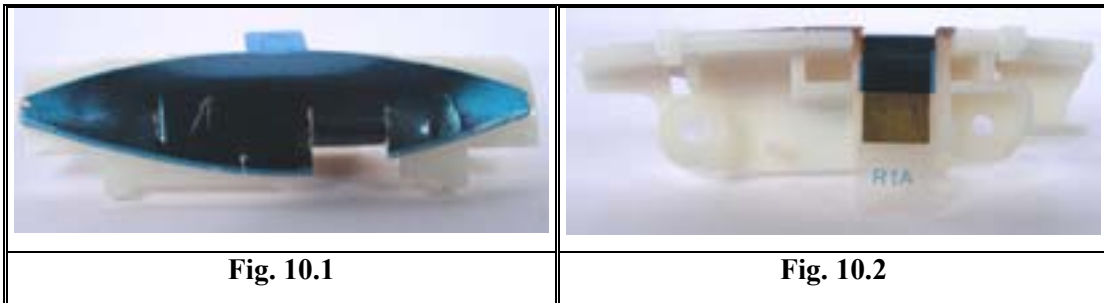


Fig. 9.3

10 Network Problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Insert a working SIM card to the P900/P908 and turn it on.
- Check if the signal strength is ok; compare it with a working phone or test the phone with a Go/No go test.
- Check if the antenna unit (*Fig. 10.1 & Fig. 10.2*) is mechanical damaged, dirty or oxidized. Replace it if necessary.
- Check if the CP support (*Fig. 10.2*) is mechanical damaged. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.



11 SIM problems

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Insert a working SIM card to the P900/P908 and turn it on.
- If the display shows “Insert card”, there is a SIM problem, if it shows “Insert correct card”, the phone might be SIM locked in this case try to use a test SIM card.
- Check if the SIM-reader J370 (*Fig. 11.1*) is not mechanical damaged, dirty or oxidized. Clean it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.

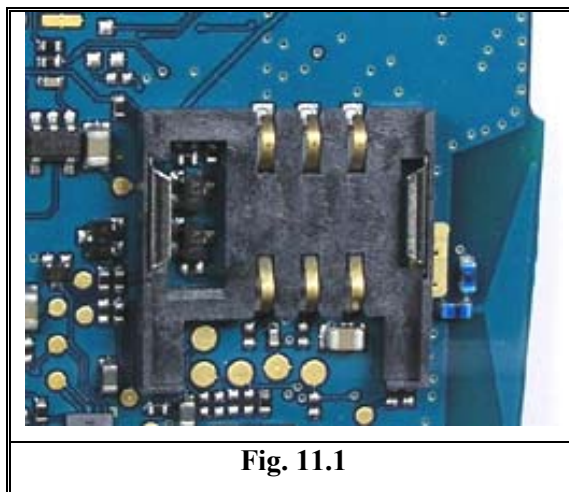


Fig. 11.1

12 Other Problems

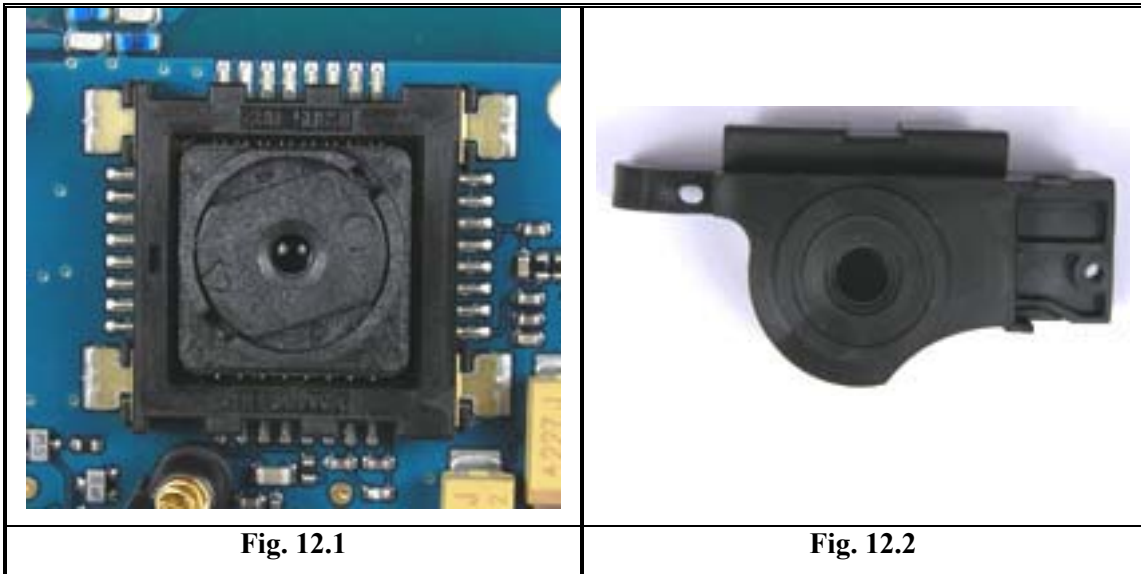
12.1 Camera

- Make a general visual inspection for corrosion or oxidation from liquid damage according to point 1.2
- Insert a working SIM card to the P900/P908 and turn it on.
- Check if the camera (*Fig. 12.1*) works properly; verify the viewfinder functionality in the LCD. Replace the camera if necessary.

Note: Do not touch the camera lens, when replacing the camera.

- Check if the grommet (*Fig. 12.2*) is mechanical damage. Replace it if necessary.

If the fault still occurs, try to update the phone to the latest available software version. If this doesn't solve the problem, handle the unit according to the local company or the GSP directives.





13 Software Problems

- If there are problems with the response of the keypad commands, or spelling errors in the menu, if they are not related to mechanical damage, make a master reset and flash the phone with the latest software from EMMA II.
- Checking the software revision can be done in the Service info, see chapter *Service functions in the software*.
Choose: Service info / SW information.
The Software revision and date will be shown in the display.

Note: Do a SW upgrade before sending the unit to a higher level. Do **not** scrap a phone that hasn't been upgraded.

If the failure still occurs, handle the unit according to the local company or the GSP directives.

14 Revision History

Rev.	Date	Changes / Comments
A	2003-10-03	First release