

Mechanical Working Instructions

Applicable for T28

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1 Disassembly

1.1 Process tools

- Front-disassembly-tools.
- Torque screwdriver, torx no.6 pre-set to 33 Ncm.

1.2 Instructions

NOTE! Keep all contact-surfaces/display clean of skin oil. Use gloves!

1. Remove the battery.
2. Hold the phone upside down. Open the flip until it points 90° outwards and press your thumb on the hinge (fig1.1).
3. Remove the flip by placing your thumb on the outside and your fingers on the inside and press it off the hinge (fig1.2).
4. Carefully pull out the other hinge.

NOTE! Be careful, the connector-pins will easily stick into the mic. cable.

5. Remove the antenna by slightly moving it side by side at the same time as pulling it out from the phone (fig1.3).

NOTE! Don't break, the antenna holder/connector may be damaged.

6. Hold the phone with the frame towards you. Place one of the front-disassembly tools in the small slot between the front and the frame, in the middle of one side (fig1.4).

NOTE! Be carefully, don't slide with the tools, the frame or the front will easily be scratched.

7. Without breaking, bend the tool upwards while pressing/forcing it all the way under the front cover until the green handle comes into contact with the frame and leave it there (fig1.5).

NOTE! You are not allowed to break with the tool or slide with it, only push it under the front

8. Repeat previous step with another tool on the opposite side (fig1.6).

NOTE! The green handles on the tools must come into contact with the frame, otherwise the front cover will not come loose in next step!

9. On the top, place the last tool in the small slot between front and frame. Bend it towards you (fig1.7).

10. Carefully pull off the front cover by lifting and turning it around the system connector (fig1.8).

NOTE! Carefully so you don't damage the snap holder in the front or stretch the mic-cable.

11. Disconnect the mic-cable from the board (fig1.9).
12. Remove the four display assembly screws (fig1.10).

13. Remove the display assembly by lifting it upwards.
14. Remove the three board screws and place the board on an ESD-protected surface (fig1.11).



Fig 1.1



Fig 1.2



Fig 1.3



Fig 1.4

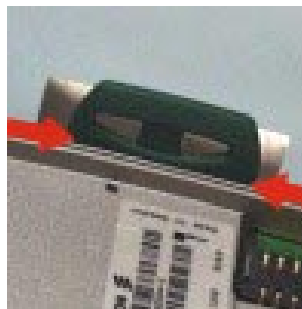


Fig 1.5

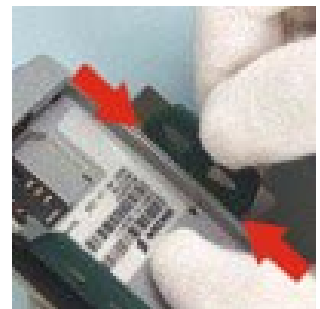


Fig 1.6

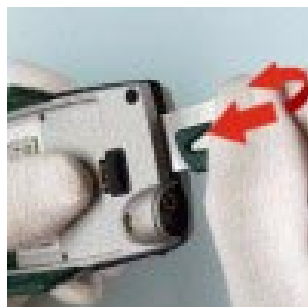


Fig 1.7

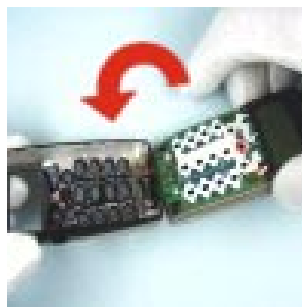


Fig 1.8

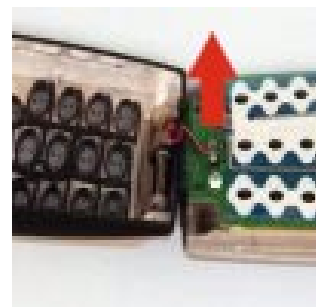


Fig 1.9



Fig 1.10



Fig 1.11

2 Reassembly

2.1 Process tools

- Torque screwdriver, torx no.6 pre-set to 33 Ncm.
- Tweezers.

2.2 Instructions

NOTE! Keep all contact-surfaces/display clean of skin oil. Use gloves!

1. Control every contact-surfaces on the board is clean and not damaged.
2. Place the board on the frame and control that the vibrator connector board is correctly mounted with the cables pointed downward (fig3.1).
3. Mount a short screw over the vibrator connector and tighten with the torque screwdriver (fig3.2).
4. Mount one long screw on the left side (washer) of the system-connector and one short screw of the other side. Tighten them with the torque screwdriver (fig3.3).
5. Control there is no dust/dirt on the EI-lamp or on the backside of the display.
6. Place the display assembly on the board.

NOTE! Always exchange the elastomeric-connector.

7. Mount two long screws beside the loudspeaker and tighten them with the torque screwdriver (fig3.4).
8. Mount two short screws in the lower corners of the carrier and tighten them with the torque screwdriver (fig3.5).
9. Make a visual control there are no fissures in the front cover and its snapholders.
10. Rotate the mic-cable contact inside the front until the cables are pointing downwards and hold still with your thumb. Fit in the connector-pins and guiding pin in the front with the flip wide open. Press your thumb on the hinge (fig3.6).
11. Place your left thumb on the inside of the flip and your fingers on the outside and press it on in the wide-open position (fig3.7).

NOTE! You can use a screwdriver to push in the plunger.

12. Close the flip and check the contact between the mic-cable and the flip is properly inserted all the way in and with the cables pointed upward (fig3.8).
13. Mount the mic-cable (still mounted in the front cover) on the board with the cables pointed downwards (red cable to the right) (fig3.9).

NOTE! Carefully so you don't stretch the mic-cable.

14. Control there is no dust/dirt on the display or on the inside of the window.
15. Mount the phone by first pushing the frame into the top of the front (fig3.10).

NOTE! Make sure that the volume button is in its lower position.

16. Control that the mic-cable is into the cavity between the hinge and the spring.

17. Press the phone together and control there is no gap between front and frame.
18. Push the volume button up and down to secure it's snapped onto the volume-switch (fig3.11).
19. Mount the antenna and the battery



Fig 3.1

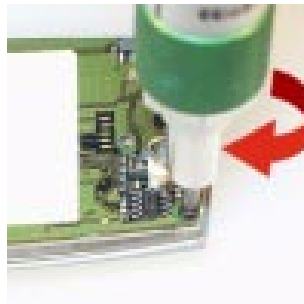


Fig 3.2

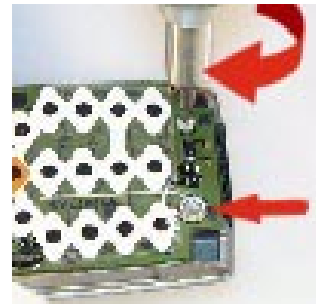


Fig 3.3

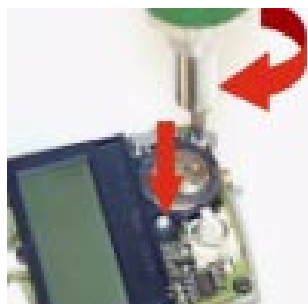


Fig 3.4

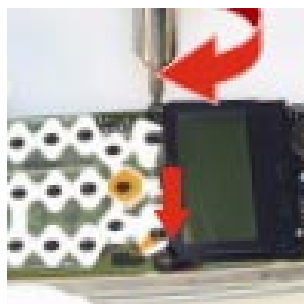


Fig 3.5



Fig 3.6



Fig 3.7

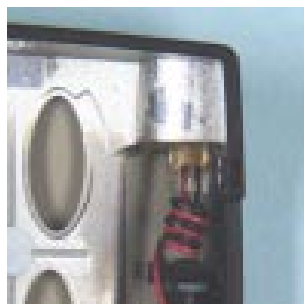


Fig 3.8

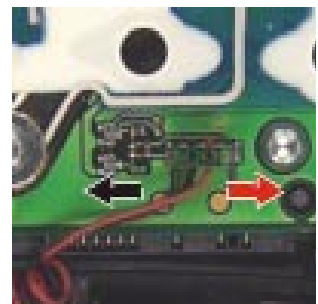


Fig 3.9



Fig 3.10



Fig 3.11

3 Replacement of Mechanical Parts

3.1 Flip

3.1.1 Process tools

- Cutting pliers.

3.1.2 Instructions

- Dismount the flip as described in *1 Disassembly* ([page 2](#)), step 1-11.

NOTE! If the flip will not be reused, simply cut off the right hinge with a cutting pliers.

1. Take a new flip.

- Mount the flip as described in *2 Reassembly* ([page 4](#)), step 9-19.

3.2 Volume button

3.2.1 Instructions

- No *Disassembly* or *Reassembly*.
1. Remove the volume button by pressing in your nail between the button and the front and pull carefully outwards (fig2.1).
NOTE! Be careful, not to damage the front and control that no snapholders comes loose and stays inside the phone.
 2. Take a new volume button.
 3. Mount the volume button in the lower edge in the front cover with the lower snap-holders first (fig2.2).
NOTE! The triangle arrow inside the button will point upward.
 4. Push the volume button up and down to secure it's snapped onto the volume switch (fig2.3).



Fig 2.1



Fig 2.2



Fig 2.3

3.3 Front cover

3.3.1 Process tools

- Tweezers.

3.3.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1-11.
 1. Remove the mic-cable from the front cover by turning it -30° and pulling it out (fig2.1).
 2. Remove the keyboard from the front cover.
 3. Take a new front cover and mount the keyboard.
 4. Mount the mic-cable with a tweezers into the bayonet in the front cover with the cables pointed upwards.
 5. Remove the protections gasket inside the window.
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 9-19.

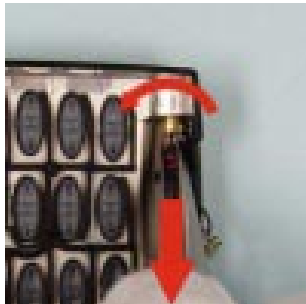


Fig 2.1

3.4 Mic-cable

3.4.1 Process tools

- Tweezers

3.4.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1-11.
- 1. Remove the mic-cable from the front cover by turning it -30° and pulling it out (fig2.1).
- 2. Mount a new mic-cable with a tweezers into the bayonet in the front cover with the cables pointed upwards.
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 9-19.

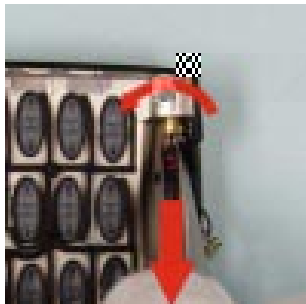


Fig 2.1

3.5 Buzzer gasket

3.5.1 Process tools

- Tweezers.

3.5.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-11.
 1. Remove the gasket from the front cover with a tweezers (fig2.1).
 2. Take a new buzzer gasket.
 3. Remove the protection tape and mount the gasket inside the front cover.

NOTE! Check that the adhesive part on the gasket does not cover the sound channel.
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 9 and 13-19.



Fig 2.1

3.6 Keyboard

3.6.1 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-10.
 1. Replace the old keyboard with a new keyboard.
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 9 and 13-19.

3.7 Display assembly

3.7.1 Process tools

- Tweezers.

3.7.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-13.

WARNING! Different kind of LCD's and they are not compatible. Compare the article number on the old LCD (under the elastomeric holder or in the lower part) with the article number on the new display assembly cartoon (within parenthesis).

1. Press the loudspeaker through the hole in the old carrier.

NOTE! Do not touch the display or contact surface with your fingers, use gloves!

2. Remove the elastomeric-connector holder from the old carrier by lifting it upwards.
3. Take a new display assembly and control it's within same brand as the old one.
4. Take a new elastomeric connector and mount it in the holder inside the carrier. Press the elastomeric connector into the hole with your finger (fig2.1).

NOTE! Do not touch the elastomeric connector with your hands, use gloves!

5. Mount a new gasket carefully onto the carrier.
6. Mount the loudspeaker in the cavity and press a few seconds without pressing on the LCD or the gasket (fig2.2).

- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 5-9 and 13-19



Fig 2.1



Fig 2.2

3.8 Loudspeaker

3.8.1 Process tools

- Tweezers.

3.8.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-13.
1. Press the loudspeaker through the hole in the carrier (fig2.1).
NOTE! Do not touch the display or contact surface with your fingers, use gloves!
 2. Remove the old loudspeaker gasket carefully.
 3. Mount a new gasket carefully onto the carrier (fig2.2).
 4. Mount a new loudspeaker in the cavity and press a few seconds without pressing on the LCD or on the gasket (fig2.3).
- NOTE! Always exchange the elastomeric-connector.**
5. Mount a new loudspeaker support beside the hole onto the loudspeaker.

Mount the phone as described in *2 Reassembly* ([page 4](#)), step 5-9 and 13-19.



Fig 2.1

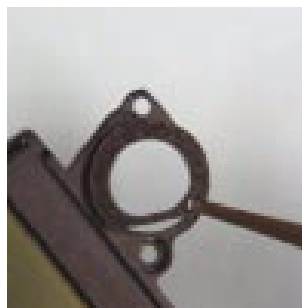


Fig 2.2



Fig 2.3

3.9 Elastomeric connector

3.9.1 Process tools

- Tweezers.

3.9.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-13.

NOTE! Do not touch the display or contact surface with your fingers, use gloves!

1. Remove the old elastomeric-connector.
2. Take a new elastomeric-connector with a tweezers and place it in the holder. Press the connector into the hole with your finger (fig2.1).

- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 5-9 and 13-19.



2.1

3.10 Vibrator assembly

WARNING! You are not allowed to remove the board from the frame on phones produced 99W41 and earlier, because of the strong over fill glue, which hold the circuit tight to the frame when removing the board. Send the phones to higher level.

3.10.1 Process tools

- Tweezers.

3.10.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-14.
 - 1. Remove the vibrator-assembly with a tweezers by lifting it in the flywheel. If necessary, remove residue from the adhesive gasket. (fig2.1)
NOTE! Be careful, do not damage the EMI-gasket on the frame.
 - 2. Take a new vibrator-assembly and apply the adhesive gasket.
 - 3. Mount the vibrator-assembly with the flat side up into the specific cavity in the frame.
 - 4. Place the board on the frame and control that the vibrator connector board is correctly mounted with the cables pointed downward (fig2.2).
 - 5. Mount a short screw over the vibrator connector and tighten it slowly with the torx screwdriver (fig2.3).
 - 6. Break off the vibrator connector board.
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 4-9 and 13-19

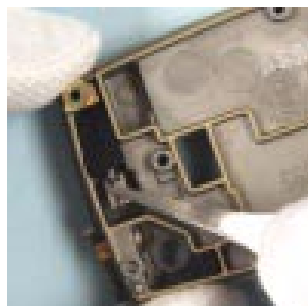


Fig 2.1



Fig 2.2

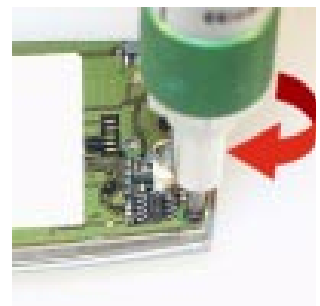


Fig 2.3

3.11 Antenna

3.11.1 Instructions

- No Disassembly or Reassembly.
1. Remove the antenna by slightly moving it side by side at the same time as pulling it out from the phone (fig2.1).
 2. Take a new antenna. Place it in the antenna house and push until a click is heard



Fig 2.1

3.12 Plug

WARNING! You are not allowed to remove the board from the frame on phones produced 99W41 and earlier, because of the strong over fill glue, which hold the circuit tight to the frame when removing the board. Send the phones to higher level.

3.12.1 Process tools

- Tweezers.

3.12.2 Instructions

- Dismount the phone as described in *1 Disassembly* ([page 2](#)), step 1 and 5-14.
 1. Remove the plug (fig2.1)

NOTE! Be careful, do not damage the EMI-gasket on the frame.
 2. Take a new plug.
 3. Mount the plug into the specific cavity in the frame (fig2.2).
- Mount the phone as described in *2 Reassembly* ([page 4](#)), step 3-9 and 13-19



Fig 2.1

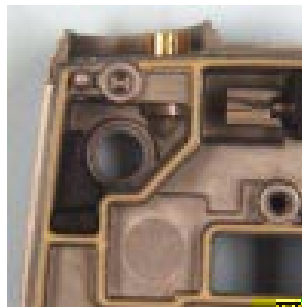


Fig 2.2

4 Warranty seal

4.1 Process tools

- Tweezers.

4.2 Instructions

1. Remove the antenna.
2. Mount the warranty seal in the antenna house according to fig 3.1 and fig 3.2.

NOTE! It is important that the warranty seal is not to stretch or to slack mounted.

3. Mount the antenna.



Fig 3.1

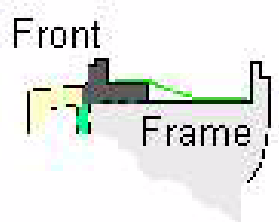


Fig 3.2

5 Revision History

Rev.	Date	Changes / Comments
A	1999-07-14	First release.
B	1999-08-04	Chapter 1.2, 2.2, 3.4.2 and 3.7.2 are updated.
C	1999-09-20	Chapter 1.2, 2.2, and 3.8.2 are updated.
D	1999-11-01	Convert from FrameMaker to Word and updated chapter 3.10, 3.12.