

# Short repair instructions for an alternator

Lima-Shop.de offers free of charge instructions for repairing alternators. The contents may not be copied or published without written approval.

## Structure of an alternator:



Cutaway view of the alternator (photo: Bosch)

For completing the repair, you require the following spare parts:

Picture	Spare Part	Link
	1x Regulator	<a href="http://www.lima-shop.de/en/index.php/cat/c69_Charging-Regulators.html">http://www.lima-shop.de/en/index.php/cat/c69_Charging-Regulators.html</a>
	1x Bearing in the front	<a href="http://www.lima-shop.de/en/index.php/cat/c70_Alternator-Ball-Bearings.html">http://www.lima-shop.de/en/index.php/cat/c70_Alternator-Ball-Bearings.html</a>
	1x Bearing backward	<a href="http://www.lima-shop.de/en/index.php/cat/c70_Alternator-Ball-Bearings.html">http://www.lima-shop.de/en/index.php/cat/c70_Alternator-Ball-Bearings.html</a>
	1x Slip ring	<a href="http://www.lima-shop.de/en/index.php/cat/c71_Alternator-Slip-Rings.html">http://www.lima-shop.de/en/index.php/cat/c71_Alternator-Slip-Rings.html</a>
<b>Optional Parts:</b>		
	1x Tolerance ring	<a href="http://www.lima-shop.de/en/index.php/cat/c169_More-alternator-parts.html">http://www.lima-shop.de/en/index.php/cat/c169_More-alternator-parts.html</a>
	3x Diode positiv 3x Diode negativ	<a href="http://www.lima-shop.de/en/index.php/cat/c106_Alternator-Diodes.html">http://www.lima-shop.de/en/index.php/cat/c106_Alternator-Diodes.html</a>
	1x Brush Kit	<a href="http://www.lima-shop.de/en/index.php/cat/c173_Alternator-Brush-Kits.html">http://www.lima-shop.de/en/index.php/cat/c173_Alternator-Brush-Kits.html</a>
	1x Clutch Pulley	<a href="http://www.lima-shop.de/en/index.php/cat/c171_Alternator-Clutch-Pulley.html">http://www.lima-shop.de/en/index.php/cat/c171_Alternator-Clutch-Pulley.html</a>

For completing the repair, you require, among other things, the following tools:



- Small ratchet
- 8 mm socket
- 10 mm socket
- Phillips head screwdriver
- Impact screwdriver with 24 mm socket
- Flathead screwdriver
- Bearing puller
- 6 mm diameter, 8 mm diameter punch

### Disassembly:

1. Disassemble and remove the rear housing cap
2. Remove the regulator (putting all small parts in a separate bag)
3. Disassemble the belt pulley using the impact screwdriver and 24 mm socket
4. **!!! Important:** Mark the housing on the underside with a marker pen to find the correct position later again
5. Loosen 4x screws on the housing, usually 8 mm socket
6. Remove the rear part of the housing and putting it aside
7. Carefully remove the bearing cap
8. Place the front part incl. rotor on the housing
9. Spray 4x Phillips countersunk-head screw with WD40
10. Loosen 4x screws with Phillips bit socket and handle by knocking
11. Loosen the screw by attaching the small ratchet and unscrew it
12. Press the bearing with puller out of the housing front
13. Pull 2x bearing with puller from the rotor, turn over a wing with flat-nose pliers, if necessary
14. Carefully expose the slip ring with a mill
15. Separate the slip ring from the copper wires and remove it
16. Carefully press on the new slip ring and solder on the contacts

### Reassembling the alternator:

17. Lightly oil the bearing seats and mount the bearing with 17 mm socket
18. Clean or sandblast the front part
19. Clean the bearing seat with sandpaper, if necessary
20. Push the bearing onto the housing, use oil on the bearing seat
21. Mount 4x countersunk screw
22. Insert bearing ring into the rear housing part and push the housing together
23. Screw in 4x screws to the housing
24. Mount the belt pulley again
25. Insert and screw the regulator
26. Mount the housing cap