

Tips and Technology

For Bosch partners

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Electrics / Electronics



BOSCH

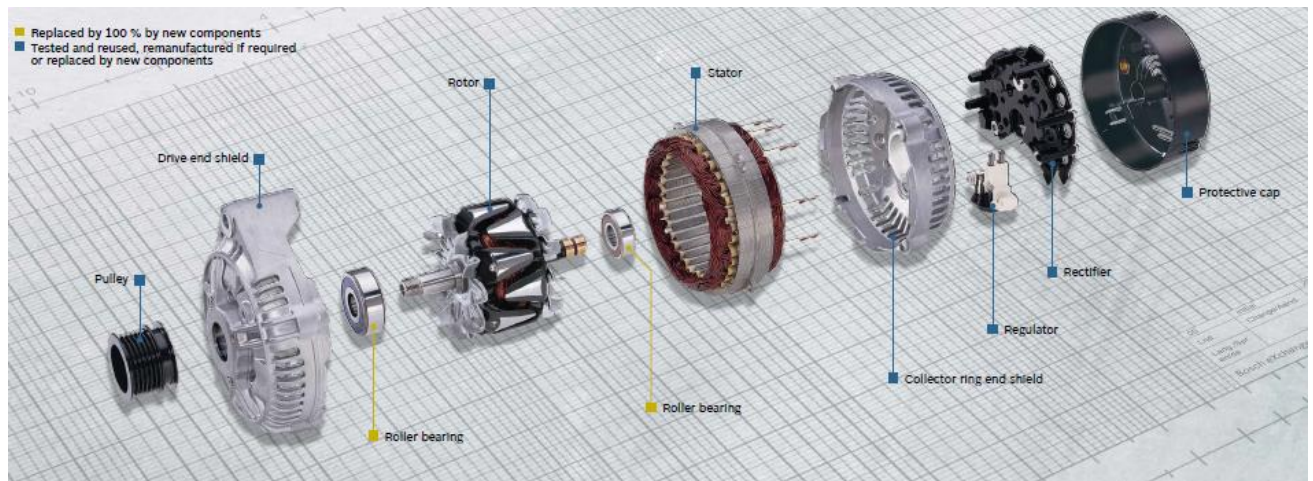
Invented for life

Exchanging Starters and Generators

Replacement parts from the Bosch eXchange are produced with the same high-quality standards as the original equipment. Reconditioning is done in factories that are certified according to the same standards as production facilities for original equipment. Proven, documented methods are used for each step. A strict quality assurance system in accordance with the standards of the automobile industry guides the entire process.

By using original Bosch replacement starters and generators, you can avoid risk. We will be describing the specific risks in this article.

Exchanging generators



Belt pulleys

Reconditioning involves the following

- The belt pulley contact surface and the bore of turned belt pulleys are checked
- Sheet-metal belt pulleys are replaced with a new part
- The surface is galvanized and chromated
- The freewheeling belt pulley is carefully cleaned, checked, lubricated and remounted

This eliminates the following risks:

- Faster wear of the V-belt or flat belt
- Running out of true and detachment of the belt pulley
- Corrosion

Drive end shield

Reconditioning involves the following

- The roller bearing seat is checked

This eliminates the following risks:

- reduced service life
- noise development

Roller bearings

Reconditioning involves the following

- The roller bearing is replaced with a new part

This eliminates the following risks:

- reduced service life
- noise development

Rotors

Reconditioning involves the following

- The sliprings are resurfaced
- The rotors are replaced with a new part if they are too thin
- The rotors are checked for a short to ground

This eliminates the following risks:

- Reduced service life of the carbon brushes
- Reduced function

Stators

Reconditioning involves the following

- The stators are checked for output
- The stators are checked for an interturn fault and a short to ground
- If there is any damage, the stators are reinsulated

This eliminates the following risks:

- short to ground

- failure of the aggregate

Slip ring bearing shield

Reconditioning involves the following

- The roller bearing seat is checked
- The plastic bushings are replaced with new parts
- The splash guard sleeves and rubber parts are replaced with new parts

This eliminates the following risks:

- Reduced service life
- noise development

Electronic field regulator

Reconditioning involves the following

- The functioning of the electronic field regulator is checked
- The carbon brushes are replaced with new parts if they are too thin

This eliminates the following risks:

- reduced function
- reduced service life

Rectifiers

Reconditioning involves the following

- The diodes are checked in the flow direction and blocked direction
- defective rectifiers are replaced with new parts

This eliminates the following risks:

- failure of the aggregate

Protective cap

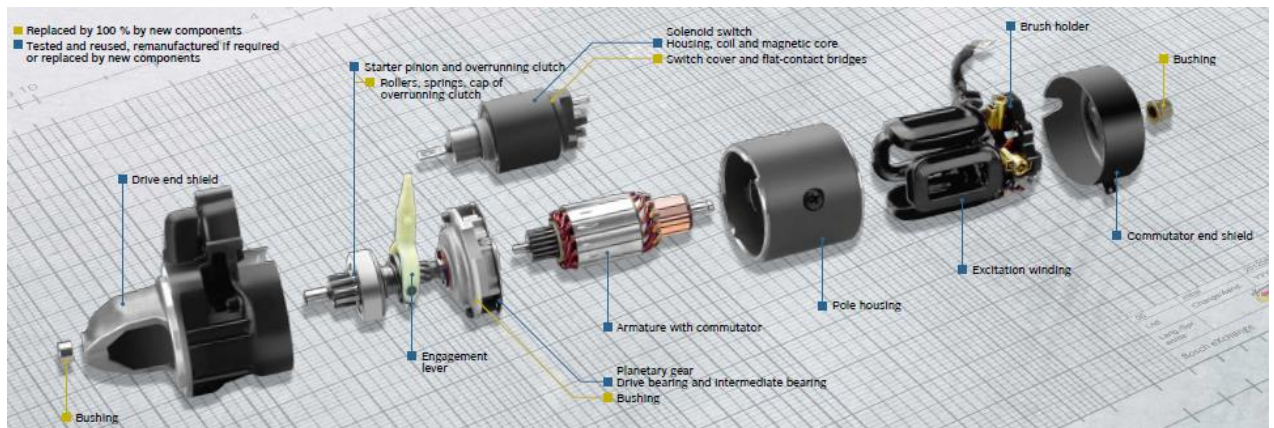
Reconditioning involves the following

- The protective caps are checked for damage
- defective protective caps are replaced with new parts

This eliminates the following risks:

- damage to the rectifier when the protective breaks
- short circuits

Exchanging starters



Drive bearing with bushing

Reconditioning involves the following

- the bushings, roller bearings and radial sealing ring are replaced with new parts
- the bushings are calibrated according to original equipment specifications
- the threaded holes are checked

This eliminates the following risks:

- reduced service life
- noise development
- Problems associated with use and installation

Starter pinions and overrunning clutch

Reconditioning involves the following

- the overrunning clutch is removed and cleaned
- The drive connectors are checked for hairline cracks (eddy current test)
- the bushings, rollers, springs, support rings and plastic parts are replaced with new parts
- grease is used according to original equipment specifications

This eliminates the following risks:

- Problems with demeshing and overrunning, ineffective shifting
- pinion slippage
- damage to the ring gear, pasting
- no transmission of torque
- Reduced service life

Planet gears

Reconditioning involves the following

- The needle bearing is checked for functioning while installed
- the bushings in the intermediate bearing are replaced with new parts

This eliminates the following risks:

- Reduced service life

- sluggish armature
- increased wear of the carbon brushes
- noise development

Fork lever

Reconditioning involves the following

- the fork lever is visually inspected
- if there is strong wear or damage, the fork levers are replaced with new parts

This eliminates the following risks:

- The starter does not smoothly mesh and disengage

Solenoid operated switch

Reconditioning involves the following

- the switch cover and contact pins are replaced with new parts
- the contact bridges are replaced with new parts
- the solenoid operated switch is tested for functioning according to original equipment specifications

This eliminates the following risks:

- greater voltage drop from oxidized or burned contacts
- premature or immediate failure
- short service life

Armature with commutator

Reconditioning involves the following

- The commutators are entirely resurfaced
- The commutators are checked: A new armature is installed if the diameter is below the minimum
- The commutators and armature stacks are checked for true running
- The windings are checked for shorts to ground and coil winding short-circuits

This eliminates the following risks:

- loss of performance
- reduced service life
- noise development
- short to ground
- failure of the aggregate

Pole housing

Reconditioning involves the following

- the pole housing is cleaned
- the damaged magnets and retaining springs are replaced with new parts
- the pole housing is magnetized according to original equipment specifications

This eliminates the following risks:

- Reduced performance
- short to ground or coil winding short-circuit

Excitation winding

Reconditioning involves the following

- The excitation windings are checked for a short to ground
- The winding bands are reimpregnated

This eliminates the following risks:

- short to ground
- failure of the aggregate

Brush holder

Reconditioning involves the following

- the brush holders are checked for remaining life
- if there is strong wear or damage, the brush holders are replaced with new parts
- The carbon brushes are replaced with new parts if they are too thin
- original carbon brushes are used

This eliminates the following risks:

- loss of performance from poor ground transition
- reduced life of the carbon brushes

Commutator bearing

Reconditioning involves the following

- the bushings are replaced with new parts
- the commutator bearings are recalibrated according to original equipment specifications

This eliminates the following risks:

- reduced service life
- premature failure
- short to ground