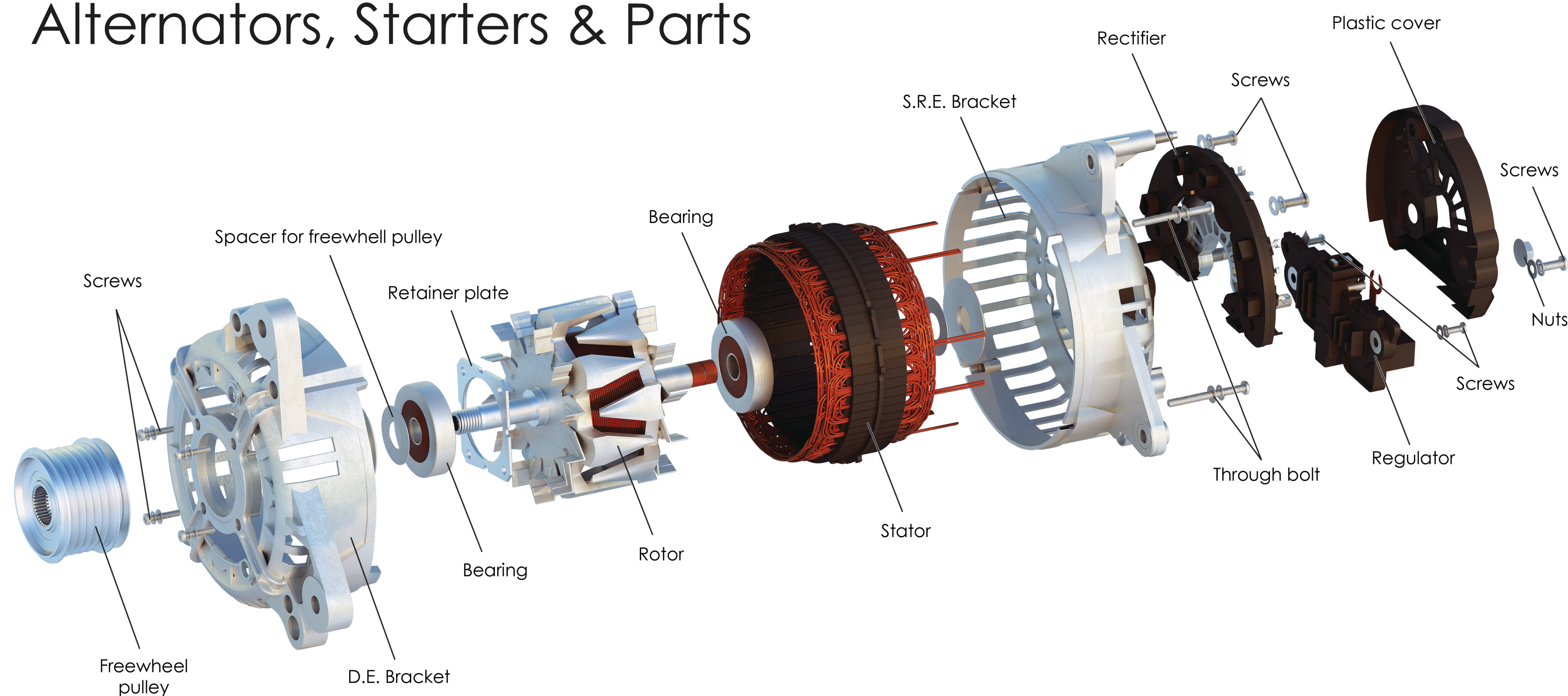




Alternators, Starters & Parts

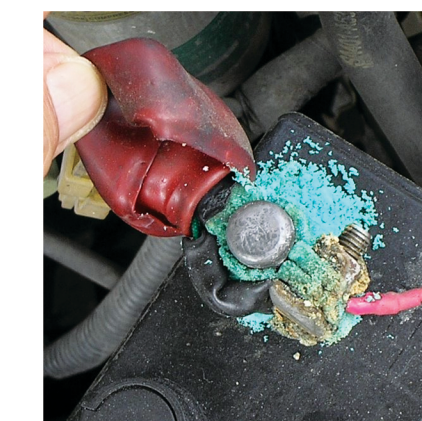


DESIGN AND DIAGNOSTICS OF AN ALTERNATOR



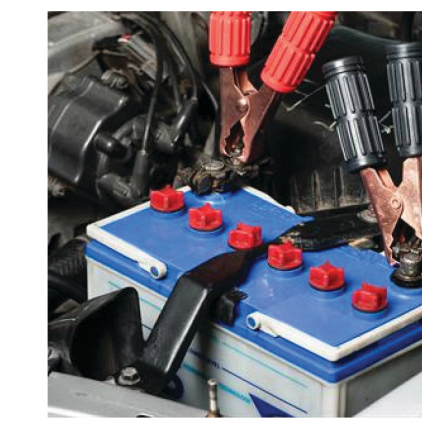
SYMPTOMS

Control light doesn't appear after the ignition is switched on



SYMPTOMS

The battery doesn't charge



SYMPTOMS

The battery is continuously overcharged



SYMPTOMS

Interrupted battery charging



SYMPTOMS

Excessive noise

CAUSES

- defective light or bulb
- loose cables
- damaged or defective regulator

CAUSES

- Faulty battery or damaged cables and/or fixings
- damaged alternator

CAUSES

- faulty battery
- damaged or defective regulator

CAUSES

- loose V-belt
- faulty clamps
- damaged rectifier bridge
- damaged windings
- damaged regulator

CAUSES

- loose /worn out V-belt
- worn out bearings

REPAIR

- the light and/or bulb should be replaced
- the mount has to be repaired
- the alternator has to be refurbished/replaced

REPAIR

- The battery and cables have to be checked and replaced if necessary
- the voltage has to be checked
- the alternator has to be refurbished/replaced

REPAIR

- the battery has to be replaced
- the alternator has to be refurbished/replaced

REPAIR

- the V-belt tension has to be adjusted, or the V- belt has to be replaced
- the clamps have to be checked
- the alternator has to be refurbished /replaced

REPAIR

- the V-belt tension has to be adjusted, or the V- belt has to be replaced
- The alternator has to be refurbished /replaced



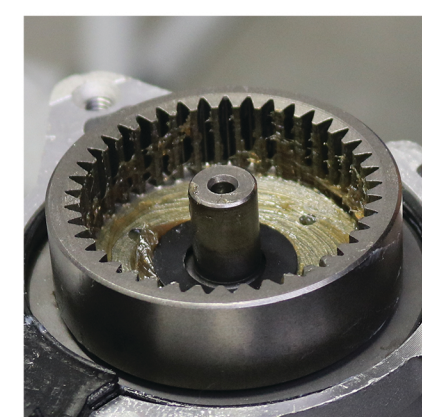
SYMPTOMS

The starter does not rotate the crankshaft



SYMPTOMS

The starter rotates the crankshaft too slowly.



SYMPTOMS

The starter rotates but it doesn't turn the crankshaft.



SYMPTOMS

The starter does not stop rotating



SYMPTOMS

Excessive noise coming from the starter

CAUSES

- the battery is nearly discharged
- damaged, burnt fuse
- electromagnetic contact switch malfunction
- starter motor malfunction
- mechanical problem of the engine

CAUSES

- the battery is nearly discharged
- the cables may be loose and/or corroded
- poor connection in electromagnetic contact switch
- starter motor malfunction (worn out brushes)

CAUSES

- damaged /worn out starter pinion or flywheel ring
- damaged starter bendix

CAUSES

- damaged/worn out starter pinion or flywheel ring
- damaged electromagnetic switch
- damaged ignition switch

CAUSES

- worn out sleeve
- pinion ends wear/wheel gear flange wear

REPAIR

- the battery charge level has to be checked
- the fuse has to be replaced
- the electromagnetic relay has to be replaced
- the starter has to be refurbished/replaced
- the engine has to be checked

REPAIR

- the battery charge level has to be checked
- the cables have to be checked/replaced
- the electromagnetic relay has to be replaced
- the starter has to be refurbished/replaced

REPAIR

- the condition of the pinion has to be checked
- the starter has to be refurbished/replaced

REPAIR

- the condition of the pinion has to be checked
- the starter has to be refurbished/replaced
- the condition of the ignition switch has to be examined

REPAIR

- the condition of the starter has to be checked
- the starter has to be replaced/refurbished

