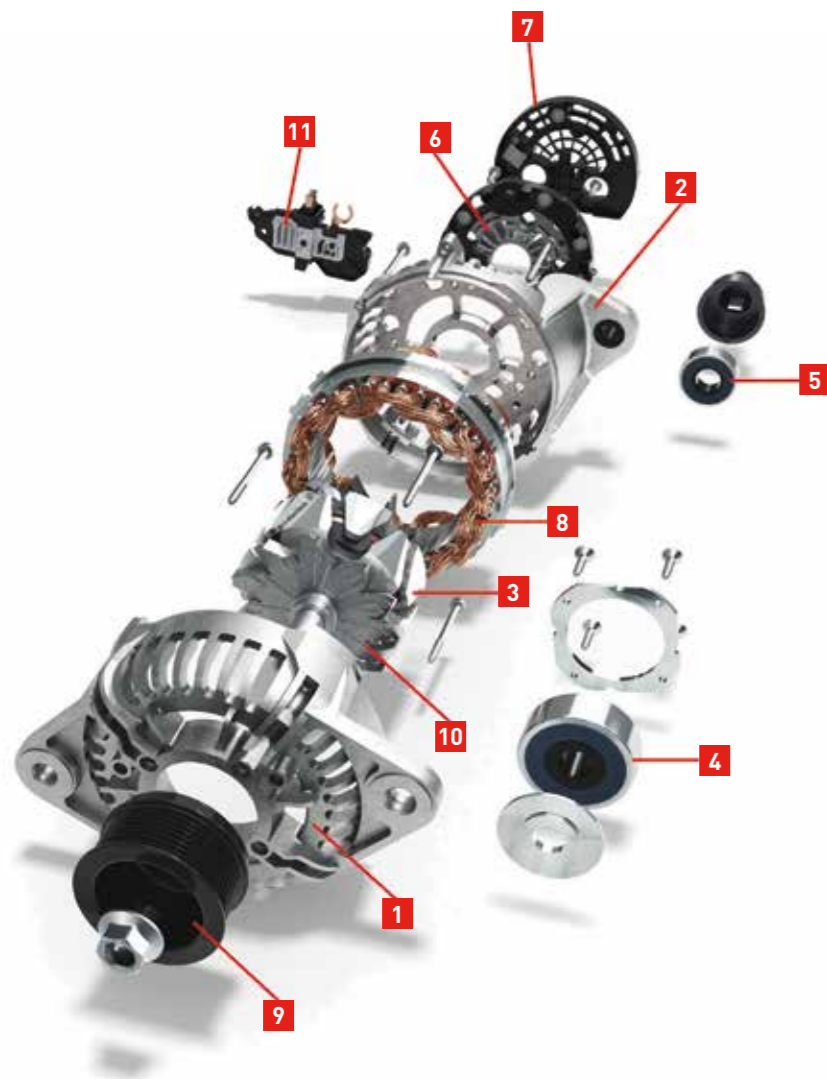


THE ALTERNATOR COMPONENTS



THE ALTERNATOR CONSISTS OF THE FOLLOWING COMPONENTS:

- 1 Rotor**
This creates a magnetic field when the rotor turns.
- 6 Diodes**
Rectifies the alternating current (AC) to direct current (DC), needed for the electrical system.
- 10 Stator Winding**
A stationary component of the alternator. When the rotor rotates a voltage is induced in the stator winding.
- 11 Regulator**
This regulates the voltage – to maintain the output regardless of variations in load and rpm.
- Rings and Brushes** (not shown)
Supplies current to the rotor excitation winding.

ALL ABOUT ALTERNATOR



RENAULT TRUCKS DELIVER

PRODUCT COMMERCIAL KNOWLEDGE

PRACTICAL ADVICE

MAXIMISE THE SALE

Don't just sell the alternator – look for further opportunities to maximise the sale:

- Alternator belts.
- Tensioner.

RENAULT FITTED-PART

- One year warranty.
- Fitted by Renault Trucks trained technicians.

RENAULT TRUCKS 24/7

- Professional roadside assistance 24 hrs a day, 7 days a week, 365 days a year.
- Dedicated to getting customers' trucks back on the road with minimum delay.



renault-trucks.com

Renault Trucks SAS with a capital of 50 000 000 € - 954 506 077 RCS Lyon Crédit photos : © Renault Trucks - 01/2017



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FACT

You can avoid immobilisation due to electrical failures by fitting GENUINE Renault Trucks alternators.

Trucks are now fitted with many electrical systems and drivers also use more and more electricity from the truck. (phone, ipad, gps, electronic cigarette etc).

The alternator is an important part because it helps to power your vehicle when you travel. Therefore, you can avoid truck immobilization if you check your alternator regularly and choose GENUINE Renault Trucks alternator.

THE DIAMOND DISTINCTION

1 | Renault Trucks aluminium diode bridge

Renault Trucks uses the superior Zener diodes and press-fits them in an aluminium bridge for maximum resistance to vibration rather than using the more common soldered diodes, which are less tolerant to vibration.

GENUINE Renault Trucks alternators are developed to ensure optimum interface, reliability and continuous electrical performance.

**LESS DOWNTIME
NO MORE FLAT BATTERY**



RISKS OF FITTING NON GENUINE



As the task of the alternator is to provide power to charge the batteries at a rate which allows it to perform day in and day out – the last thing an operator needs is battery failure. If a non-genuine alternator is used, there is an increased risk of battery failure leading to a vehicle breakdown or non-start – unplanned downtime and costs. Renault Trucks always specifies the highest requirements for all component parts within a Renault Trucks alternator.

FEATURES	BENEFITS
Water sealed regulation electric connections.	Maintains electrical integrity – good electrical contacts.
Zener diodes with a press-fit, mounted in an aluminium bridge.	Maximum vibration endurance – delivering a longer service life.
Toughest specification for lubricating grease and bearings.	Guarantees the best function and longest service life in tough working conditions.
Quality NSK bearings.	Better reliability and life span.
Zink plated bolts.	Resistant against rust.
Stator windings have been coated.	Resistance against corrosion which affects capability.
Supplied with Pulley fitment nut.	Reduced downtime.
Metal parts are either painted or treated.	Resistance against corrosion.

WHY CHOOSE A RENAULT TRUCKS EXCHANGE ALTERNATOR?

- Up to 50 % less than the price of a new part.
- Using 100% of GENUINE Parts.
- The overhaul work is always based on the latest version of the original drawings.
- The highest requirements to withstand the tough environment in which it works.
- The dimensions and tolerances are the same as for a new factory unit. This means that the overhauled alternator fits exactly into the truck, the mechanical function is perfect with a minimum of belt wear and the best cooling capacity from the fan.
- One year international warranty



AN ALTERNATOR IS REQUIRED TO PROVIDE ALL CURRENT FOR THE ELECTRICAL COMPONENTS



ALTERNATOR – HOW IT WORKS

WHY DO WE NEED AN ALTERNATOR?

The batteries have only a limited capacity to provide current and they are drained if they have to supply quantities of power over a certain time. The alternator works with the battery to generate power for the electrical components of a vehicle and recharge the battery too.



ALTERNATOR

- The alternator, which is driven by the engine, converts mechanical energy into electrical energy.
- The electrical energy is used to charge the batteries and provide all the loads in the truck with current.
- The alternating current (AC) in the alternator is generated by a rotating magnetic field (rotor) which induces (produces) current in a stationary winding (stator).
- The induced alternating current is converted to direct current by means of a rectifier for use in the vehicle's electrical system.
- The alternator is sheathed in two housing halves called bearing shields **1 2**. There is a bearing in each bearing shield in which the rotor **3** is fitted. The bearing in the forward bearing shield **1** is called the driver bearing **4**. The other one is called the trailing ring bearing **5** and is fitted in the rear bearing shield **2**. The rectifier diodes **6** are located in the rear bearing shield and the cooling plate **7**. The magnetised current to the rotor is conducted via the carbon brushes (not shown) and trailing rings. The charging current from the stator winding **8** passes through the connection to the consumers and batteries. A pulley **9** and a cooling fan **10** to drive and cool the alternator are fitted to its front end.
- When the engine starts and the rotor begins to rotate, the rotor's magnetic field moves so that it passes through the stator windings. As the various consumers in the vehicle can only run on direct current the alternating current generated in the stator must be rectified. This is done with the aid of the rectifier's diodes. The current then flows from the rectifier to the battery and other consumers of electricity fitted to a truck.

REGULATOR

- The regulator **11** controls the magnetising current supplied to the alternator. In this way, it can keep the charge current constant, irrespective of alternator speed and current consumption of the loads. The task of the regulator in the power supply system is important, since the electrical components in the vehicle are designed for a certain voltage. If they are supplied with current at excessive voltage, they might be destroyed. The regulator is frequently mounted on the alternator itself.

