


ISO 9001
BUREAU VERITAS
Certification



UKAS
Quality Management
003

We recommend Renault Trucks Oils

99, Route de Lyon - 69806 Saint-Priest Cedex - France
Tel. +33 (0) 4 69 09 60 00

**RENAULT
TRUCKS
DELIVER**

ALL ABOUT BELT TENSIONERS

**RENAULT
TRUCKS
DELIVER**

PRODUCT
TECHNICAL AND COMMERCIAL KNOWLEDGE

PRODUCT
TECHNICAL AND COMMERCIAL KNOWLEDGE



renault-trucks.com

Renault Trucks SAS with a capital of 50 000 000 € - 954 506 077 RCS Lyon - Crédit photos : © Renault Trucks - 04/2017 - © C&Bproject



renault-trucks.com



FACT

The main functions of the belt tensioners are to maintain the proper tension, to dampen system vibrations and to guide the drive belt. There are two belt tensioners on Renault Trucks Heavy Duty engines. One is installed for the fan drive and coolant pump, and the other is installed for the drive of the alternator and air conditioning. The function has to be adapted to every vehicle operating condition.

TENSIONERS CONSIST OF FOLLOWING ELEMENTS

- Tensioner pulley which guides the belt.
- Tensioner spring that generates torque.
- Damping pad / Friction linings, creates damping through friction.
- Tensioner pivot which allow rotation of tensioner pulley around it.
- Aluminium tensioner case for lower weight.

FEATURES	BENEFITS
Rotary tensioner.	<ul style="list-style-type: none">■ Smaller than linear tensioners.■ Improved maintenance.
Locking pin in assembly position.	<ul style="list-style-type: none">■ Easier to mount the belt.■ Serviceability/maintainability.
Dual row/Twin bearing assemblies.	<ul style="list-style-type: none">■ Better belt guiding, less noise.
Improved friction element design.	<ul style="list-style-type: none">■ Longer lifetime.■ Durability.
Aluminum case.	<ul style="list-style-type: none">■ Lower weight.■ Lower fuel consumption.
Optimized service plan.	<ul style="list-style-type: none">■ Reliability.



PROPER TENSION TO DAMPEN SYSTEM VIBRATIONS



THE PROMISE OF A GENUINE RENAULT TRUCKS PART

Renault Trucks tensioners are designed with accuracy to perform precisely according to our product range requirements. The power, the speed, the usage, and the dynamics behaviour of various assemblies are scrutinized to come up with fine tuned spring and friction device properties.

Renault Trucks tensioners have very accurate design of friction elements, which are wearing out at each cycle, in order to protect the tensioner and the belt drive from vibrations. These friction elements are to be accurately machined to maintain a proper friction level, as well as a predictive deterioration. If the friction element is not well designed, the tensioner lifetime will be reduced, and failures become unexpected.

BELT TENSIONERS - HOW IT WORKS

Belt tensioners are installed to maintain sufficient tension in the drive so that the belt has sufficient friction to transmit power. Due to different output levels to transmit, the fan and alternator tensioner can have different torque, even if they look identical. The tensioners rotate around a centre point which is called the tensioner pivot, in opposite to linear tensioners that can be found in competitor engines. Rotary tensioners are smaller and are easier to install.

Renault Trucks tensioner springs range from 28 Nm to 48 Nm, and ensure enough tensioner to provide up to 70 kW (95 hp) of power to the fan (as an example this is as much power as a smaller car engine can provide).

EURO V TENSIONER

- Euro V tensioner is a rotary tensioner, with a flat spiral spring. The tensioner is rotating around a steel pivot bushing which is coated by polytetrafluoroethylene (PTFE). The damping is provided by a friction pad, which is pressed by an axial spring towards the aluminium case. The tensioner pulley contains a twin bearing assembly, which provides proper belt guiding over long distances, according to service interval.

EURO VI TENSIONER

- Euro VI tensioner is a rotary tensioner, with round wire spring. It provides a more linear torque depending on the angular position. It has a PTFE pivot bushing around an aluminium tube. The damping is provided by a PTFE fractioning lining, which is pressed by the main spring at each rotation towards the outer aluminium case. The tensioner pulley contains a dual row bearing assembly, which provides proper belt alignment and a good grease reservoir over long distances, according to service interval.

EXTENSIVE TESTING

Renault Trucks perform extensive testing of belt tensioners. All engine operating conditions are recorded in an engine test cell, and tested up to 4,000 h. Then the belt tensioners are tested when installed in different field test trucks all over the world, used under different conditions like dusty mining environments, in city distribution or on long haul.

SERVICE

The belt tensioners are to be changed according to the Renault Trucks Service Program: **see service information group 175 in "Impact". Service and repair operations can be found in "Impact", group 26.**

RECOMMENDED ADDITIONAL PARTS

The idler pulley should be changed at the same time as the tensioner. Drive belts are also to be changed when tensioners and idlers.

PRACTICAL ADVICE

Avoid to forget something, order "all in one" belt tensioner kits!

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.