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We recommend Renault Trucks Oils

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**RENAULT
TRUCKS
DELIVER**

ALL ABOUT COOLING FAN

PRODUCT
TECHNICAL AND COMMERCIAL KNOWLEDGE



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



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FACT

Modern powerful engines place very high demands on the cooling system. The purpose of the engine cooling fan is to drive air flow through the cooling package and is a vital part of the cooling system. It also contributes to keep the air temperature in the engine compartment at a desired level.

Fans for heavy duty trucks in Europe are controlled by a very sophisticated electronic system which provides optimized cooling of the engine as well as sub systems for climate control and retarder braking.

Each fan is thoroughly selected to obtain the best performance for the entire cooling system in each truck model.

FEATURES	BENEFITS
Adjustable airflow.	<ul style="list-style-type: none"> Optimized cooling of the engine and sub systems.
Cooling fan optimized for Renault Trucks' cooling system.	<ul style="list-style-type: none"> Fuel efficiency. Uptime and minimized risks of consequential damage to engine components. Durability. Low operating costs.
Low idle speed when fan is not needed.	<ul style="list-style-type: none"> Fuel efficiency. Low noise level.
Robust testing of each fan installation.	<ul style="list-style-type: none"> Low operating costs. Reliability.
Diagnostic function.	<ul style="list-style-type: none"> Offers preventive maintenance and fault tracing. Uptime.
Fail safe mode.	<ul style="list-style-type: none"> Ensures engine protection.
Cooling fan available as Renault Trucks eXchange Part.	<ul style="list-style-type: none"> Lower maintenance cost. Environmental care.



OPTIMIZED COOLING, POWER EFFICIENCY, RELIABILITY AND LONG LIFE SERVICE

THE PROMISE OF A GENUINE RENAULT TRUCKS PART

The design of the fan is optimised for each application.

Each fan assembly (fan clutch + fan blade) undertakes several tests according to Renault Trucks' technical specifications before it is fully validated and can be approved for different applications.

This can only be done by the original manufacturer and Renault Trucks by using special test programs and test methods. The fan itself is always thoroughly tested and validated by the supplier before test and validation starts by Renault Trucks.

Tests conducted by Renault Trucks are done with the fan installed in the truck. Tests are carried out using both special test rigs and rigorous road tests under various operating conditions in different parts of the world. The way each fan is installed will very much affect its performance and quality.

Today's fan assemblies are the result of years of experience and tight collaboration between approved suppliers and engineers within Renault Trucks.

A fan which has not been approved by Renault Trucks will not only jeopardize cooling and driveability but also the function of various sub systems of the truck.

COOLING FAN - HOW IT WORKS

- The cooling fan consists of an electronically controlled viscous fan clutch with variable speed and closed loop control. Closed loop means continuous control of the actual fan speed by a fan speed feedback signal to the engine management system.
- The fan is driven by a belt transmission from the crank shaft. The principle of a viscous fan clutch is to vary the actual fan speed by high viscosity silicone oil which transfers torque from its drive shaft to the housing on which the plastic fan is mounted on. The amount of oil in the so called working chamber is managed by an electromechanical system that both opens and closes a valve mechanism inside the fan clutch.
- The fan clutch is designed with a fail safe mode which makes the fan fully engaged in case of electrical malfunction to allow limp home mode.
- The fan blades and its fan clutch are developed and tuned as one unit to secure optimal function, durability and strength.
- High air flow efficiency is achieved by an engine mounted fan ring with tight tip clearance, proper shape and position.

EXTENSIVE TESTING

Typical component tests:

- Fan airflow performance test.
- Noise emission test.
- Burst test of fan blade.
- Shaker test of fan assembly.
- Cold start behaviour.
- Strain and load measurements on fan assembly installed on engine/in vehicle.
- Salt spray test (corrosion resistance).
- Dust box test (dirt resistance).
- EMC-test (Electro Magnetic Compatibility test).
- Cooling performance – both in combined climate/wind tunnel/ dyno-rig and road test in hot climate.
- Fan clutch behaviour – both in combined climate/wind tunnel/ dyno-rig and road test (also in hot and cold climate)
- Vehicle durability test (field test).

RENAULT TRUCKS EXCHANGE PARTS



Cooling fans are available as Renault Trucks eXchange Parts.

SERVICE

For a status test of the engine cooling fan there is a diagnostic test operation no. 26325-3. This is to be performed by Renault Trucks Techtool. Other service and repair operations can be found in service information group 26 in "Impact".

PRACTICAL ADVICE

MAXIMISE THE SALE

It is recommended to check belt and pulley when the fan is mounted on a pulley. Think about the all-in-one belt-tensioner kit. You can also refill with coolant.

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.