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RENAULT
TRUCKS
DELIVER

ALL ABOUT BRAKE DRUMS

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 - ©C&Bproject



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FACT

On today's Renault Trucks' vehicles, a pneumatic system is used. The engine powers a compressor that generates compressed air.

When the driver applies the brake pedal, air is sent to the brake actuators which generate force which is turned into brake torque through the brakes. In the same way, air is sent to the trailer and activates the brakes.

THE DRUM BRAKE MAIN COMPONENTS ARE THE FOLLOWING

- Cylinder, push rod, brake lever, brake cam, tappets and brake shoe and lining that are pressed against the brake drum.
- The cam mechanism is built into a grease lubricated cam housing, which also houses the brake's automatic adjusting mechanism. The shoes have no fixed attachment to the torque plate. This results in a "floating" attachment, which allows the shoes to be self-centering as they wear down. The brake drum is machined inside and also outside, in order to minimize thickness variation and out-of-roundness.



FEATURES	BENEFITS
Brake drum material delivers maximum braking efficiency/ optimal service life.	■ Provides safe braking at optimum operating cost.
Renault Trucks' specification to vehicle type, weight and operation resulting in optimal performance.	■ Provides safe braking at optimum operating cost.
Specification meeting all Renault Trucks brake testing criteria – to ensure that the brake drums work perfectly together with the other brake components of the vehicle.	■ Provides safe braking at optimum operating cost.
Material with excellent heat transfer.	■ Safe braking even in extreme temperatures.
Patented material in durable alloy with excellent heat transfer capability that also minimizes the risks of cracking.	■ Safe braking and long service life.

BRAKE DRUMS - HOW IT WORKS

Renault Trucks' brake drums are manufactured in a highly durable, heat-resistant alloy with good heat transfer ability that enables the drums to absorb a great deal of brake energy with a high intensity. The chosen material is unique for the brake drum and increases service life and minimises the risk of cracking. Also, the drum secures maintained geometry at severe braking. The design enables the entire surface of the brake drum to be in contact with the brake linings, regardless of the drum's temperature.

- The design does also take into consideration, the amount of brake energy absorption needed for the truck application.
- The selection is dependent of the truck application and type of operation.
- The brake drum is mounted onto the hub clamped by the wheel nuts and fixation screws.

The brake drums are 410 mm in friction surface diameter and with different widths depending on application. It is allowed to wear off maximum 3 mm, and the drum can be re-machined if surface is corroded or uneven. Oversized brake linings are available.

EXTENSIVE TESTING

The brake drum is one of the most important safety parts in a vehicle. During the development stage, Renault Trucks performs very specific and demanding tests to ensure long service life and consistent safe brake performance.

Renault Trucks uses three testing periods in the extremely meticulous creation of a new brake drum: dynamometer in lab environment followed by several tests on a test track and finally field trials with trucks in several types of applications.

SERVICE

To guarantee the highest quality of the repair, and the longest lifetime of the component, it is recommended to have the following skills, competence, tools and equipment:

- Access and ability to use Renault Trucks' recommended special tools to ensure the quality of the repair and shortest repair time.
- Ability to use Renault Trucks' service information to order to be able to apply the correct and safe repair procedures.
- Use of Renault Trucks' service information on all required parts needed for the repair to plan and perform the repair without waiting for needed parts.

Only by having Genuine Renault Trucks Parts fitted in a Renault Trucks workshop by a certified and fully trained Renault Trucks technician, the best possible levels of service, uptime and efficiency can be secured.

THE PROMISE OF A GENUINE RENAULT TRUCKS PART

The braking system is the most important safety system on your truck and the critical components are brake drums and linings.

Renault Trucks certifies the brakes as a system on all trucks towards the technical total weight. If it's 42 tons, the weight is split on a 6x4 with 10 tons on the front axle and 16 tons on each rear axle. They should be able to perform in all kinds of conditions such as desert heat, Siberia snow, dusty and muddy environments.

Already at design stage drum and linings are designed to have an optimized performance together. Before being launched to the market, extensive brake dynamometer test, fatigue test, vibration test, dirt and mud test, hot and cold environment test, intensive testing on complete vehicle testing at proving ground and customer field test, to prove its suitability.

It takes 3–5 years before a new system is developed and approved. The lifetime with genuine brake parts, working together is typically 50% higher compared with other parts while in many cases much more.

Genuine Renault Trucks brake drums are designed with a focus on safety, low noise level, absence of vibration and a long service life.

1 | THE RENAULT TRUCKS PERFORMANCE

Renault Trucks' brake drums and linings have been developed together and are adapted for each particular model, to provide you with the ultimate in stopping safety and long life performance.

2 | GOOD TEMPERATURE PROPERTIES

Renault Trucks' brake drums have good properties at high temperatures. In combination with the Renault Trucks brake linings the risk of fading is considerably reduced.

3 | CORRECT FRICTION COMBINATION BETWEEN LINING AND DRUM

The correct and tested combination of brake lining and brake drum provide a better total life cycle for both the lining and the drum and gives the customer higher uptime and lower cost.

4 | RENAULT TRUCKS AND THE ENVIRONMENT

By the weight optimization and long service life, Renault Trucks Genuine brake drums contribute to less waste and less environmental impact.

PRACTICAL ADVICE

MAXIMISE THE SALE

It is recommended to change brake drums by pair. It would be interesting to check the frequency of replacement of the linings versus brake drums.

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.