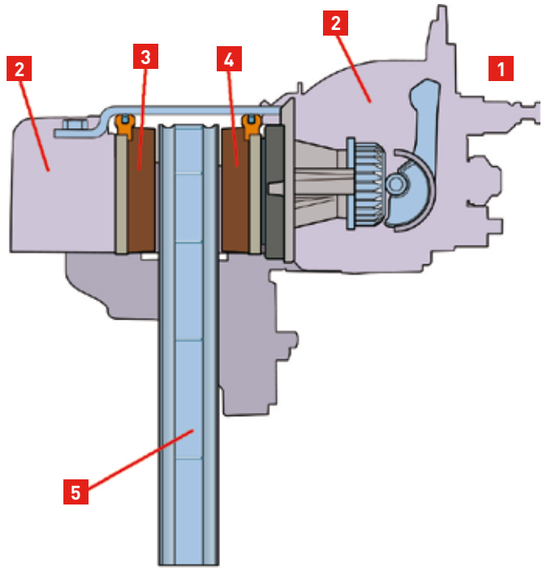
THE BRAKING SYSTEM MAIN COMPONENTS



THE BRAKING SYSTEM MAIN CONSISTS OF THE FOLLOWING COMPONENTS:

1 Pneumatically controlled brake cylinder.

2 So-called "floating brake caliper".

3 An outer and an 4 inner brake pad.

Wheel hub (not visible on the drawing).

5 Brake disc which is attached to the wheel hub via a spline.

The brake caliper is a so-called "floating caliper" with a compressed air controlled brake cylinder which applies the brakes via a lever in the caliper.
In order to always have the correct clearance between brake pad and brake disc the caliper has an automatic adjustment of the clearance.

The brake caliper can be equipped with two wear sensors, one mechanical and one electrical:

- The mechanical sensor shows the wear on the outer brake pad by means of a calibrated dipstick.
- The electrical sensor sends a signal, which is proportional to the pad thickness, to the control unit.

PRACTICAL ADVICE

MAXIMISE THE SALE

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

- Hub bearings: inner and outer
- Hub bearing seals: inner and outer
- Oil/grease.
- Brake cylinder seals.
- Brake pads.
- Ask the number of brake disc changed – ratio of brake pad change versus brake disc change.

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.

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ALL ABOUT BRAKE DISCS

RENAULT TRUCKS DELIVER

PRODUCT COMMERCIAL KNOWLEDGE

FACT

TThe braking system is the most important safety system on your truck and the most critical components are brake discs and pads.
Not all brake discs perform in the same way under heat and pressure and not all brake pads have the same friction material for heat dissipation and wear. The design and quality of the brake disc is critical in many ways. It must withstand enormous forces in the form of extreme differences in friction and temperature throughout its life cycle.

THE DIAMOND DISTINCTION

1 | The Renault Trucks measurement and tolerance
Renault Trucks brake discs and pads have been developed together and adapted for each particular model, so providing you with the ultimate in stopping safety and long life performance.

2 | The Renault Trucks patent spline mounting
Renault Trucks's **patented brake disc** uses a **spline mounting** which allows it to expand radially and symmetrically, so distributing load and heat uniformly. This significantly **reduces the risk of cracking, encourages more even wear and extends the service life of both disc and pads.**

3 | Exact measure/tolerance
The discs measurements are exact – enabling the pads excellent contact with the disc. This gives more efficient braking and reduced pad wear.

4 | High surface finish
The surface finish is a decisive factor in brake pad wear.
If the finish is not correct, premature pad wear will result and durability compromised.

5 | Pore-free material
The material is non-porous – reducing the risk of disc's cracking from heat pockets.

6 | Correct material hardness
The hardness of the material used for the disc is key so that it resists properly to braking constraints. The material hardness of Renault Trucks discs ensures long life services.

7 | Designed as one
The design gives a stable shape during driving in conditions with high temperatures. To ensure maximum brake performance and the best overall economy the disc and the pad are developed together and are specific for each Renault Trucks model.

Renault Trucks brake discs and pads offer <u>reduced transmission of heat</u> from the brake disc to the wheel ensuring <u>maximum braking efficiency</u> and providing for a <u>longer service life.</u>

FEATURES	BENEFITS
Spline mounted disc.	Handles heat dissipation better. Retains shape, minimum distortion and less heat passed to hub bearings.
Manufactured from pore-free material.	For a better resistance in extreme conditions.
Several disc sizes.	Uses common hub. Reduced parts stock.
Patent design.	Renault Trucks forefront of braking design.
Investment in technology.	The Renault Trucks brake system developed over many years at considerable investment.

TWO PARTS MAY LOOK ALIKE, BUT...

There will always be non-genuine suppliers wanting to sell braking system components to Renault Trucks operators. The quality of these non-genuine makes naturally varies as much as their prices.
However, even if a well-known non-genuine Renault Trucks make is chosen – it is by no means certain that the braking components are tailored to the specification of a Renault Trucks vehicle braking system, in the same way as a GENUINE Renault Trucks part.

PATENT DESIGN – MOUNTING SPLINES

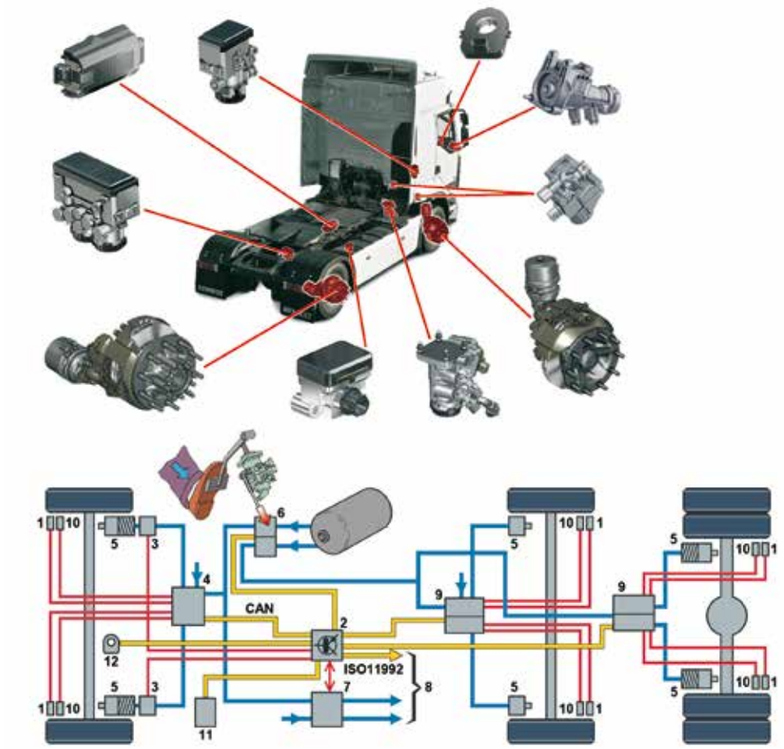
- A mounting with splines allows the brake disc to always expand radially – completely symmetrically.
- The braking load is evenly distributed, which radically reduces the risk of cracks in the brake disc caused by thermal imbalances.
- Ensures even wear and an increased service life – both for the disc and pad – thanks to symmetrical heat dissipation and minimal vibrations.
- Transmits less heat to the wheel hub and bearings – even load and transmission of energy from the lining on both sides of the disc.

PATENT MATERIAL

- Patented type of iron with high carbon content and alloys such as vanadium and molybdenum – contributes to the brake disc's extremely good durability.

THE BRAKING SYSTEM HOW IT WORKS

On today's Renault Trucks, a **pneumatic system** is used. The engine powers a compressor that generates compressed air. When the driver presses the brake pedal, air is forced through the footbrake valve to the wheel brakes. This system also makes the connection to trailers very easy.



THIS SYSTEM MAKES THE CONNECTION TO TRAILERS VERY EASY

BRAKE PAD

The brake pad for the brake disc consists of a plate and an asbestosfree pad. The main function of the pads is to transfer the force from the brake mechanism to a friction force between pad and disc.
The pads are designed with a focus on low noise level, absence of vibration and long service life.

BRAKE DISC

The solid brake disc is made from a **highly durable material, which reduces the risk of crack formation and vibration.** The brake disc is fitted to the hub via splines – which allows the brake disc to expand radially, extending lifespan and reduces the risk of crack formation.
This design also reduces the risk of the wheel bearings, overheating.