

# **HEAVY FACTS**

Genuine Volvo Parts

# **Brake Linings**

Volvo trucks use a pneumatic system for braking. The engine powers a compressor that generates compressed air. When the driver applies the brake pedal air is sent to the brake actuators that generate force, which is turned into brake torque through the brakes. Air is sent the same way to the trailer and activates the brakes.

The brake linings friction material is riveted to the brake shoe. They are manufactured with a heat resistant material. The brake linings are designed for vibration-free, safe braking, long service life and low noise levels. The shoes have no fixed attachment to the torque plate, which allows the shoes to be self-centering as they wear down. The cam mechanism is built into a grease lubricated cam housing, which also houses the brake's automatic adjusting mechanism.

#### The main components of the drum brakes are

- Cylinder, push rod, brake lever, brake cam, tappets, brake shoe and lining that are pressed against the brake drum
- The brake linings are riveted to the brake shoe

# **Technical description**

#### Friction material

Volvo Genuine Brake Linings consist of approximately 25 different substances to meet the specifications of high demanding brake performance.

- Abrasives that generate friction and remove dirt & corrosion
- A lubricant that preserves both linings and brake drums
- Reinforced fibres that increase service life
- Grooved and chambered edges that provide screech-free braking
- All substances included are selected with consideration for the environment

#### Calibration

Volvo Special Tools are used to calibrate the primary and secondary brake shoes. This is vital for securing the performance, safety and service life of the drum brakes. Incorrect settings are major cause for side pulling and vibrations.



# FEATURES AND BENEFITS

- Lining friction material to Volvo specification. Developed by understanding the vehicle type, weight and operation, resulting in right lining for the right vehicle, thereby providing maximum braking efficiency, optimal service life and reduced running costs
- Specifications meeting all Volvo brake testing criteria to ensure that all brake components work together. This gives longer life for both drum and lining. Evenly distributed friction gives efficient braking performance of all speeds, making it safe and durable at all speeds
- Substances in friction material selected to minimise impact on environment
- Linings designed with grooved and chamfered edges to minimise noise and vibrations, thus providing a smooth and comfortable operation

## **Extensive testing**

The brake linings are one of the most important safety parts in a vehicle. During the development stage, Volvo performs specific and demanding tests to ensure consistent and safe brake performance. Volvo uses three testing periods for extremely meticulous creation of a new brake lining.

Dynamometer in lab environment followed by several tests on a test track and finally field trials with several types of applications.

#### The difference

The braking system is the most important safety system on your truck and the critical components are brake drums and linings. During the design stage, drum and linings are designed to have an optimised performance together. Before being introduced in the market, an extensive brake dynamometer test, fatigue test, vibration test, dirt and mud test, hot and cold environment test, intensive testing on complete vehicle and customer field test are carried out to ensure suitability.

The lifetime with genuine brake parts working together is typically 50% higher compared to other parts and in many cases even higher.

#### The Volvo performance

Volvo Brake Drums and Linings have been developed together and adapted for each truck model, to provide the ultimate braking safety and long life performance.

#### Good temperature properties

Volvo's Brake Linings have good properties at high temperatures. The risk of fading is considerably reduced.

#### Correct friction combination between lining and drum

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

#### Volvo and the environment

All Genuine Volvo Brake linings are free of asbestos and lead.

## Service

To guarantee high quality of repair and longer lifetime of the component, it is recommended to have the following skills, competence, tools and equipment.

- Access and ability to use recommended special tools to ensure high quality repair
- Ability to use Volvo Trucks service information in order to apply the correct and safe repair procedures
- Use of Volvo Trucks service information on all required parts needed for repair to plan and perform the repair efficiently

To secure the best possible service, uptime and efficiency, fit the genuine Volvo parts at a Volvo workshop by certified technicians.

#### **Recommended additional parts**

When changing the brake pads it is recommended to always change linings on the entire axle. Our brake linings are offered as wheel kits. The kits contain all required parts for brake lining replacement, including rivets.

It is recommended to also check the condition of the brake drums when changing the brake linings.



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