

Cylinder head gasket

A cylinder head gasket is a complex high-tech component primarily designed to keep the various media such as water and oil apart in the engine, as well as providing an external seal.

Function

The cylinder head gasket is an important engine component which has to be able to cope with the increased demands of modern engines. The high combustion pressures of supercharged diesel engines represent a particular challenge for the cylinder head gasket.

MODERN HIGH-PERFORMANCE SEALING SYSTEMS ARE EXTREMELY RELIABLE

Engine designers and suppliers have spent a great deal of time and effort developing products which can be relied upon to ensure safe operation even under critical conditions. Modern cylinder head gasket systems can withstand high pressures, high temperatures and aggressive media throughout the entire lifetime of a car.

In addition to keeping the various media apart in the engine, such as gases, water and oil, and providing an external seal, cylinder head gaskets also act as a force transmission element. For example, the cylinder head gasket between the engine and cylinder block has a considerable influence on force distribution within the clamping system as a whole.

CYLINDER HEAD GASKET DAMAGE

Damage to the cylinder head gasket is normally not noticed until leakage occurs. Failure of the cylinder head gasket is however not the cause of the leak. Usually, damage in the area of the cylinder head gasket produces an excessive strain on the gasket.

Protection of the environment

The cylinder head gasket ensures efficient, safe and economical engine operation. Thanks to advanced technologies and sophisticated products, the cylinder head gasket stops hazardous substances such as fuel or lubricating oil escaping into the environment.

Value retention

To prevent [engine](#) damage and ensure the longest possible service life, it is important to guard against cylinder head gasket failure.

The appropriate action should be taken immediately if any abnormal engine operation is noticed.

For example:

- Poor cold starting
- Loss of power
- Coolant temperature in red zone
- Oil in coolant
- Water and oil need topping up at short intervals

In such problems occur, the engine should be switched off immediately and an expert consulted to establish the cause.

If caught at an early stage, it is often possible to avoid major engine damage and high repair costs.

Regular servicing and inspection of the vehicle and engine at a workshop can also help to retain a car's value over the long term.

Safety

A fully functional cylinder head gasket is an important aspect of vehicle safety. For example, it prevents the escape of hot gases into the engine or passenger compartment.



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