

For decades, the Elring brand has stood for high-quality spare parts in the workshop. Gaskets, gasket sets, and accessories from Elring have proven their worth for repairing engines, transmissions and other assemblies.

When it comes to repairing engines, Elring provides you with assistance in the form of important information and practical tips. You work competently, save time, have fewer complaints and more satisfied customers.

A Problem *from the Real World*

Hot weather leads to an increase in the number of engine failures – for instance, as the result of a defective cylinder-head gasket. The gasket, however, is seldom the actual cause of the failure. In this TSI, we track down the root cause of the problem and provide tips on how such damage can be easily avoided.

A cylinder-head gasket (metal-elastomer construction) that has failed due to overheating can be identified by the appearance of the elastomer at feed-through openings for water (see fig.). The actual cause for the failure, though, is seldom the gasket. The real culprits that must be identified are often not even taken into consideration, e.g. engine components such as the water pump or thermostat that are functioning only poorly or not at all, or a clogged radiator. Often, the cause is even simpler: too old or improper coolant – this can be avoided from the outset.



*Close-up view
of a failed water feed-
through opening*

Destructive
Heat as the Reason
for Failure of the
Cylinder-Head Gasket

Important:

Check and replace coolant

The importance of the coolant is often underestimated. The coolant is needed not only to cool the engine and act as anti-freeze, but also often to protect component surfaces against corrosion – especially surfaces of aluminum alloys such as those that function as sealing surfaces for the cylinder-head gasket. The inhibitors and glycols contained in the coolant are responsible for this. Over time, however, these degrade as the result of the high temperatures encountered in the coolant circuit of the engine – and the specified protection is no longer assured! As corrosion progresses on the sealing surfaces, the cylinder-head gasket gradually starts to fail (see fig.). Checking and replacing the coolant on a regular basis prevents this.

Comply with operating specifications exactly

When examining cylinder-head gaskets that have been returned because of failure, we always find: the reason for the failure is improper coolant composition or an incorrect ratio of coolant to water. For this reason, it is always important to also pay attention to these “minor details”.

Our tip:

- Always comply with the operating specifications of the engine manufacturer
- To be perfectly safe, use only the coolants approved by the manufacturer

Remember: Check the coolant – especially during the next inspection before winter. This will prevent costs and frustration.



Failed cylinder-head gasket



Das Original

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