



## Typical water pump claims and causes

# MEYLE water pumps – pioneering advancements instead of technological dead end!



The water pump quality depends upon the use of high grade components. These ensure competent repair in the workshops and satisfied customers.

But even the best selection of materials cannot prevent premature water pump damage caused by ignoring fitting instructions.

In an ongoing dialogue with repair professionals our experienced specialists identify the external factors primarily responsible for early water pump failure. The following section describes typical damage patterns and their causes.



## The new generation!

## Put an end to leaks: with MEYLE-HD water pumps to beat frustration in the workshop!

As of now there are 6 new MEYLE water pumps in HD quality for numerous VW vehicle applications available. By combining uniquely tough components, MEYLE-HD water pumps offer quality standards far higher than what can normally be found on the free market for components:

- > Made in Germany
- > Extremely hard-wearing mechanical seal in OE quality with SiC/SiC seal faces (silicon carbide) and high resistance to abrasive materials
- > Housing seal resistant to high temperatures
- > Water pump bearings in OEM quality
- > High-tech grease offers long service life
- > 4 year warranty on all MEYLE- HD parts



[www.meyle.com](http://www.meyle.com)

Simply lasts longer.

## Water pump leakage



### The problem:

A leaking radial seal results in water pump leakage. The radial seal reacts sensitive to particles and will not seal properly.

These can penetrate the sealing gap of the mechanical seal and destroy the sliding surfaces.

Caution: Small amounts of fluid egressing from the bleed hole shortly after installation are harmless, as the sealing elements do not settle until after the run-in period.

### Possible effects:

- > coolant loss
- > risk of engine over-heat
- > possible damage of the shaft bearing

### MEYLE's *advice*:

Thoroughly flush the cooling system prior to installing the new water pump to remove contaminants.

Follow the flush procedures recommended by the vehicle manufacturer and use the specified fluids.

## Defective bearing



### The problem:

Excessive strain frequently caused by incorrect belt tension results in bearing damage. The effect: Bearing failure.

### Possible effects:

- > noise from the pump
- > water pump failure
- > in worst case engine damage

### MEYLE's *advice*:

When tensioning the belt, observe the vehicle manufacturer's specifications and use the recommended special tooling. We recommend that all belt drive components be replaced. Unusual noise coming from the belt drive must be checked immediately.

## Damage to the housing



### The problem:

Incorrect alignment when installing the water pump and over-tightened screws lead to strain which can cause fissures in the housing. These structural damages lead to leaks and eventually failure.

### Possible effects:

- > water pump leakage
- > engine damage

### MEYLE's *advice*:

To ensure strain-free installation clean the seal face thoroughly, hand tighten the screws. Follow the installation procedures recommended by the vehicle manufacturer and apply the specified torques.

## Corrosion and cavitation in the cooling system



### The problem:

Insufficient and/or incorrect coolant additives cause corrosion and cavitation in the cooling system with negative effects on the water pump components and risk of radial seal contamination.

### Possible effects:

- > leakage
- > cavitation damage
- > damage to other cooling system components

### MEYLE's *advice*:

Check the coolant condition on a regular basis and observe the replacement intervals specified by the vehicle manufacturer at all times. Note: Never blend different types of coolant.

## Coolant and antifreeze



### The problem:

Improper use of coolant. The coolant used is not specified for the given engine or the mixing ratio is incorrect. At worst, there is no coolant at all or the water is contaminated. Mixing incompatible coolants results in even greater damage.

### Possible effects:

- > thermal damage
- > frost damage
- > chemical reactions
- > deposits
- > corrosion and cavitation damage

### MEYLE's *advice*:

Use the MEYLE coolant and observe the mixing ratio specifications. To maintain optimal coolant performance use water of drinking quality, preferably distilled water.

### Important:

Coolants must be treated as heavy metal waste and disposed of accordingly!

## Sealants



### The problem:

Cooling system contaminated owing to incorrect use of silicon sealant.

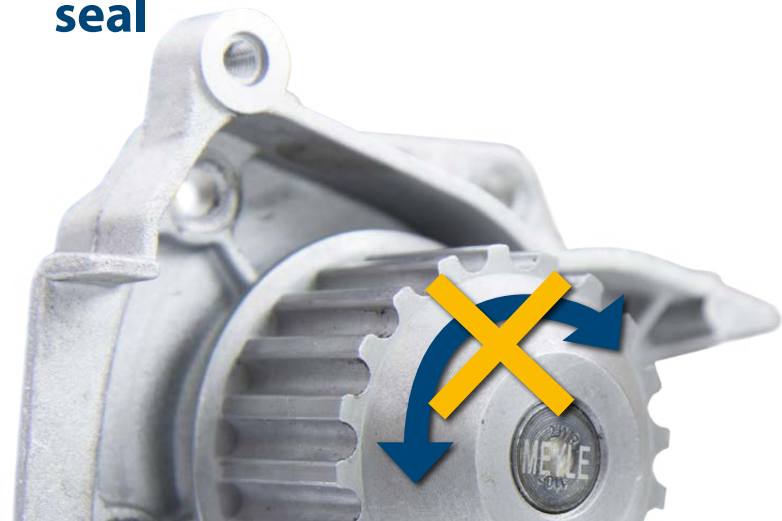
### Possible effects:

- > radial seal damage
- > clogging of the coolant system

### MEYLE's *advice*:

Only use the sealant provided with the MEYLE product or recommended by the vehicle manufacturer. Use silicon sealant sparingly and protect the cooling system from sealant ingress.

# Pre-damage of the radial seal



## The problem:

Excessive rotation of the belt pulley without cooling fluid may result in initial damage to the mechanical seal.

## Possible effects:

- > mechanical face seal pre-damage

## MEYLE's *advice*:

Do not allow the water pump to run dry longer than necessary.



**4-year warranty on MEYLE-HD parts.**

## Engineered to perform. Designed to last.

Our development engineers design every single MEYLE-HD part. Technically superior to their OE equivalents, MEYLE-HD parts offer exceptional service life. They have been specially designed for easy assembly to professional standards.

### MEYLE-HD parts – Better than the original:

- > required mounting parts included
- > no need for special mounting tools
- > superior quality and performance due to in-house development and manufacture





Your source for MEYLE parts:

777 200 0306



### Caution:



- These instructions are for information purposes only and are no substitute for the specifications of the vehicle manufacturers.
- Repairs may only be performed by properly trained staff.