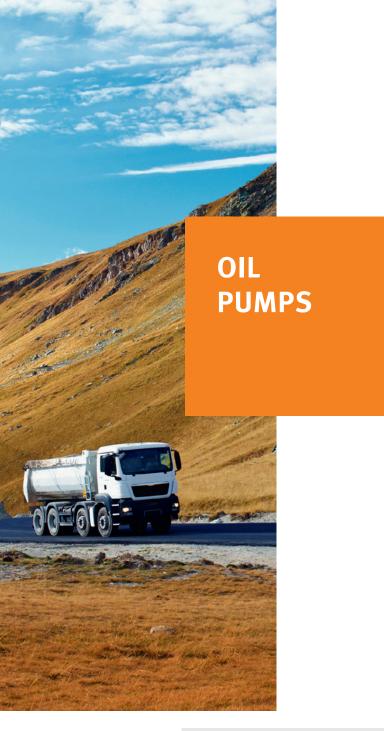


OIL AND WATER PUMPS FROM A SINGLE SOURCE





- The oil pump sucks oil from the oil pan and supplies it to the oil filter and oil cooler, from where it passes along oil ducts to the engine's lubricating points.
- Due to their purpose and the way they function, oil pumps are installed inside the engine.
- When the oil pump is replaced, the engine must either be opened or dismantled, depending on the pump design.
- Oil pumps are generally replaced as complete unit. They are not intended to be reconditioned.
- Oil pumps have high durability. Factors such as:
 - poor oil quality
 - oil dilution
 - dirt
 - engine damage

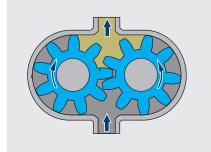
can significantly decrease their durability. It is therefore necessary to change the oil pump prematurely.

GEAR PUMPS

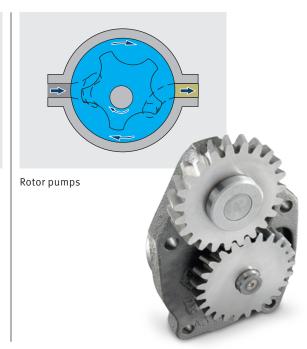
- Gear pumps are mostly in the form of plug-in pumps or pumps with gear or chain drive. These oil pumps are driven indirectly by the crankshaft.
- Compared to chain driven oil pumps the design of gear driven or plug-in oil pumps allow a more easy replacement.

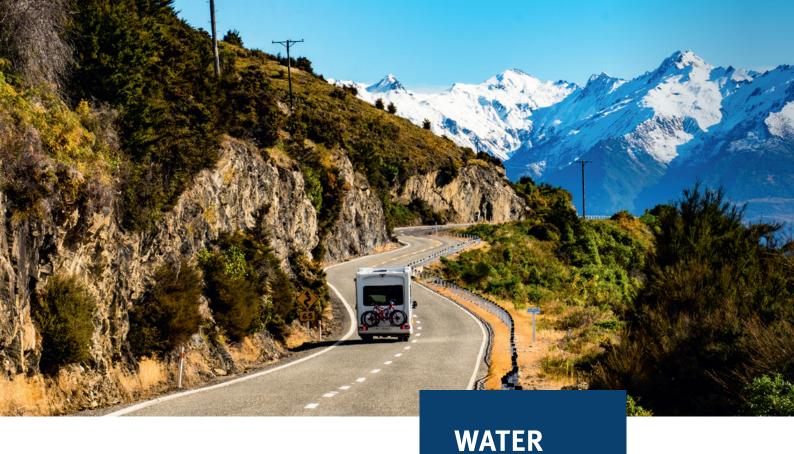
ROTOR PUMPS

 Rotor pumps are able to generate high delivery rates and high pressures.









PUMPS

- Water pumps are responsible for circulating coolant in the engine cooling system.
- Water pumps are typical wear parts, which must sometimes be replaced several times during the service life of an engine. In the event of engine reconditioning, the water pump shouldalways be replaced to safeguard operational safety.
- Water pumps are attached to the outside of the engine block and can be replaced without having to open the engine.
- Depending on their installation location on the engine, water pumps are driven by V-belts, poly-rib belts or gears.
- With water pump malfunction the engine overheats, which can result in serious engine damage.

MECHANICAL WATER PUMPS

The cooling liquid of the water pump absorbs the heat from the engine block and cylinder head and releases it into the ambient air through the cooler. Depending on their design, mechanical water pumps are located either externally on the engine in their own pump housing or are flanged directly on the crankcase and are driven by a V-belt, toothed belt or the enginedirectly.

Motorservice water pumps have the following quality features:

- High-quality sliding ring sealing cartridge
- Maintenance-free, long-life rolling bearings
- Flow-optimised impellers made from plastic, steel, aluminium or brass
- Gaskets and O-rings are included in the scope of supply



HEADQUARTERS:

MS Motorservice International GmbH

Wilhelm-Maybach-Straße 14–18 74196 Neuenstadt, Germany www.ms-motorservice.com