

**Engine all (CAR)****Overview**

This document contains information on:

- **Location**
- **Task**
- **Structure**
- **Function**

**Location**

The engine oil pump valve is located on the oil pump in the oil pan or on the left side of the engine on the crankcase.

**Task**

The engine oil pump valve electrohydraulically regulates the switch-over of the engine oil pump between its hydraulically regulated maximum delivery pressures. In this way supply with engine oil in the engine oil circuit is optimized to the respective demand. The demand-based supply lowers the power loss of the engine oil pump and, as a result, the power loss of the engine.

**Structure**

The engine oil pump valve is an electromagnetic valve with three hydraulic connections and two operating positions (open and closed).

**Function**

The engine oil pump valve is actuated by the combustion engine control unit on the basis of needs- and temperature-dependent characteristics maps.

The engine oil pump valve limits the flow volume of engine oil that the engine oil pump delivers and compacts.

Switching takes place between the two compression stages at 2 and 4 bar. In order to achieve the greatest possible fuel savings the pressure switchover is extended by in addition to the base function by the following functions:

**Piston heating function:**

For a cold start one starts with a low oil pressure.

The piston/engine become warm quicker.

**Oil heating function:**

Following operation of the piston heating function, the engine is run for a certain time with a high oil pressure.

The spray oil cooling of the piston crown activated in this way causes rapid warming of the engine oil.

Therefore oil has a low viscosity quicker and the friction power in the engine drops.

**Peak/hold function:**

The engine oil pump valve is actuated with the aid of a peak/hold function under current control in order to reduce the power consumption of the switchover valve.

	<b>Additional components</b>		
	Oil pump valve, detailed information	Engine 608 Engine 260, 264 Engine 282	GF18.10-P-2501A GF18.10-P-2501B GF18.10-P-2501C