MOTORSERVICE
RHEINMETALL AUTOMOTIVE

SERVICE INFORMATION

Malfunction in the engine lubricating system
Loss of oil pressure caused by fracture on oil filter cap

Situation

A damaged oil filter cap results in a decrease or loss of engine oil pressure. Problems or damages resulting from this are:

- Engine noise
- Engine overheating
- Piston seizure (45° seizure)
- Overheated piston pin bearing (piston pin with annealing colours)
- Crankshaft and plain bearing damage
- Turbocharger failure
- Total write-off

Cause of damage

Due to a fracture of the plastic tube at the oil filter cap (Fig. 2), the pressure oil coming from the oil pump drains off into the oil pan unchecked. There is a loss of engine oil pressure resulting in the engine problems and damage described above.

⚠️ **Attention:**
A lack of oil pressure cannot be detected by the driver for engines without oil pressure sensors.

Fig. 1: Plastic tube at the oil filter cap (MB OM611, OM646, M271)
Detail: Drainage valve seal – keeper with sealing ring

Fig. 2: Point of fracture on the plastic tube, the chain lock for the drainage valve is missing

Background

A drainage valve can be found at the base of many oil filter housings, which facilitates oil filter replacement.
The illustrated version (Fig. 1) shows a keeper at the end of the plastic tube. This keeper closes the drainage borehole with the oil filter cap screwed in. The drainage borehole is opened when the oil filter cap is unscrewed. This causes the oil collected in the oil filter housing to drain into the oil pan.

⚠️ **Attention:**
When changing the engine oil, ensure safe handling of the oil filter unit. The plastic tube on the oil filter cap is sensitive to application of a force and can break. The point of fracture (Fig. 2) can occur in different places. When removing the oil filter cartridge, the broken off plastic tube often gets stuck in the oil filter cartridge and is disposed of as well, without noticing.
Furthermore, the elastomer sealing rings on the oil filter cap must always be replaced as well.

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