

## Issue No. 7/2013:

### MAHLE oil filter insert OX339/2D: oil pressure problems after replacing filter

After replacing filter reference OX339/2D, it is possible that the oil pressure indicator lights up despite an oil pressure check not showing any significant problems. Often the oil filter is then suspected as the cause of the problem. Due to an increase in enquiries from garages and distributors about this phenomenon, the specialists at MAHLE have carried out various tests and identified the source of the fault.

#### RETURN VALVE—STILL ENTIRELY LEAKPROOF?

The majority of oil filter housings used in original equipment and in the aftermarket have an integrated, spring-loaded oil return valve. Unscrewing the filter insert releases the valve allowing the oil in the housing to flow into the oil sump. This ensures that the complete volume of oil can be drained during the oil change.

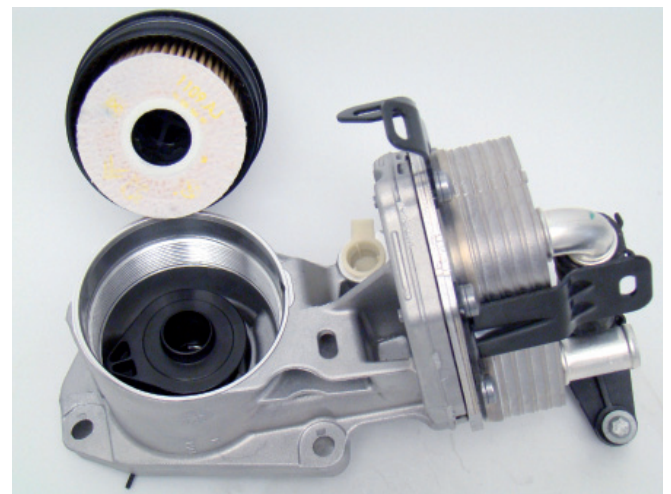
The purpose of the valve is to open the oil return channel when the filter is removed, and to close this channel when the filter is fitted. However, experience shows that the sealing ring in the valve can become brittle—with the result that the valve jams and is unable to properly seal the oil pressure channel or the oil return channel, thereby preventing the build-up of adequate oil pressure.

The risk: because oil pressure is usually measured on the section between the oil pump and the oil filter housing, where no significant deviation can be identified due to the design, the fault is usually not noticed at this measuring point.

**NEVER REPLACE THE FILTER WITHOUT CHECKING THE VALVE!**

In order to prevent serious engine damage caused by insufficient oil pressure, MAHLE recommends to check the valve's freedom of movement before each oil filter change—the simplest way is to do so by hand, by directly actuating the valve or by briefly pressing the oil filter insert to be fitted into the housing.

If the valve jams, or does not move freely to the upper stop, the oil filter housing should be replaced. The housing should also be replaced when the oil pressure indicator lights up after an oil change and there is no other plausible reason for it to be activated. Unfortunately, it is not possible to simply replace the valve because it is a press fit in the housing.



*Oil filter housing with integrated oil return valve*

## Issue No.: 6/2012 – Installation note for MAHLE oil filter insert OX 339/2 D Eco

This oil filter insert is fitted as standard in various diesel engines of the PSA Group with a bandwidth of 1.1 L to 3.2 L displacement and power outputs ranging from 44 kW/60 HP to 160 kW/218 HP. Apart from the main applications in various models from Citroën and Peugeot, equivalent diesel engines are also used by Fiat, Ford, Jaguar, Lancia, Land Rover, Mini, Mitsubishi, and Volvo.



Figure 1: Cover and oil filter insert



Figure 2: Scope of delivery for OX 339/2 D

When replacing the oil filter insert as part of regular maintenance, unscrew the cover and pull the used filter insert out of the housing together with the cover. Then remove the insert from the cover, replace the cover sealing ring with the one supplied, position the new insert in the cover and screw it back into the housing.

### CRUCIAL: THE RIGHT GROOVE FOR THE SEALING RING

The cover sealing ring must be fitted in the upper groove (Figure 3). If the ring is placed in the lower groove by mistake, which is actually the start of the cover thread, you will not be able to screw the cover on completely.

This may lead to leaks and loss of oil, because the incorrectly positioned sealing ring will be damaged when the cover is screwed back into place and/or the cover cannot be tightened fully.

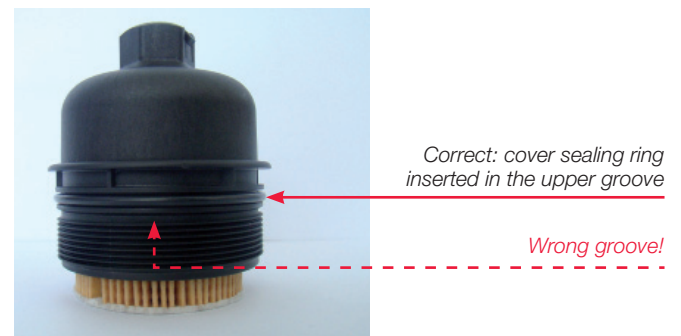


Figure 3: Fully assembled

### INTERCHANGEABLE WITH SYSTEMS FROM OTHER MANUFACTURERS

Due to the multitude of applications, MAHLE is not the only series supplier of this oil filter module. The housing/cover combinations from other manufacturers frequently show visible differences to the MAHLE system, e.g. the cover thread may differ. In addition, the cover sealing rings sometimes have different cross section diameters.

However, these characteristics influence neither fitting accuracy nor function. The MAHLE oil filter insert OX 339/2 D Eco can thus be easily fitted in systems that are equipped with products from other manufacturers.