## (i) Tech Tips

# Engine oil Q & A Part 1

There are a lot of misconceptions when it comes to motor oil. Engines have evolved, and so have motor oils. Using the incorrect motor oil can result in excessive wear, or damage to other components such as variable valve lifters and DPFs. Here, Liqui Moly answers some common questions about motor oil.

### Should motor oil be checked when the engine is cold or warm?

The fill level of the motor oil is always measured when it is warm. This ensures that the motor is in the temperature range in which it usually is, optimally

### After how many miles should oil have to be added?

There is no general answer to how often a motor oil has to be refilled. Oil consumption can vary greatly even with motors identical in construction. Excessive oil consumption should be investigated to determine it's cause.

#### Can you mix motor oil in an engine?

Generally speaking, all kinds of modern motor oil can be mixed. There are no motor oils which cannot be mixed. But the question is: what is the mixed oil like? When you mix two oils of the same specification but from different brands, this is no big difference to the engine. When you mix two different types of

Valve damage

can result from

using the wrong

specification oil

oil, the properties and performance of the mixed oil is a mix of the two original oils.

## What happens if you add too much oil to an engine?

The engine oil level must always be correct, as both too little and too much oil can lead to serious damage of the motor. If you add

too much oil, this can lead to the creation of many air bubbles. These air bubbles are then sucked by the oil pump and moved through the engine to the lubrication points. As air does not lubricate, greater wear is generated, which can lead to motor damage. A further problem of overfilling is increased oil pressure. This can lead to seals, which are supposed to keep the oil in the motor, being torn from their actual position or damaged and therefore the motor becoming leaky.

### How can I tell that an oil change is really needed?

You can't. You cannot assess the condition of a motor oil by looking at it or by touching it. This requires as analysis in the laboratory. So you are well advised to follow the instructions of the car manufacturer when to change the oil.

A blocked and damaged DPF can result from using the wrong specification oil

#### Which motor oil should I use?

What's important in the selection of the right motor oil is the specification or approval given by the vehicle manufacturer, which can be found in the operating manual of the vehicle. If this is printed on the label of an oil, then this oil can be used for the respective motor. If you are not sure about this, the LIQUI MOLY online oil guide at www.liqui-moly.com can help.

## Can it damage the engine if I fill it with the wrong motor oil?

A definite yes! Modern motors are highly complex mechanical assemblies. Due to the high requirements expected of them, they require a lubricant aligned to the materials and properties.

If it does not receive this, the increased friction may lead to motor damage.

### Are petrol motor oil and diesel motor oil

The times in which there were special motor oils for diesel motors are long gone. Modern motor oils fulfil both the requirements of petrol and diesel motors. What's important in the selection of the right motor oil is much more the specification or approval given by the vehicle manufacturer. If this is printed on the bottle label, then the oil can be used for the respective motor. Regardless of whether it's diesel or petrol.

## Can a car manufacturer require a certain manufacturer of lubricants and other liquids for its vehicles?

No. Car manufacturers usually define the technical specification of the motor oil, not the brand. When they "recommend" a certain brand, this is solely marketing without any technical consequences. You may always use the corresponding LIQUI MOLY oil.

# The car manufacturer recommends an oil brand on the oil cap and in the manual. What happens if I use oil from another brand during the warranty period?

Nothing, if the other oil meets the required specification. You do not violate the warranty regulations if you use the from the first oil change.

## Why does some oil immediately turn black after being changed?

As there are soot deposits in the oil circuit, ,particularly in diesel motors, but also in petrol motors, the oil is often coloured black after the first few revolutions of the motor. However, this is no reason to panic, as the oil is doing what it should: It is cleaning! While doing so, it is absorbing the soot

deposits in the motor and then transporting it to the oil filter.