

Become your own “on site service-technician”!

The Test

Please remove the protection cover. Place a drop of warm oil from the dip stick on the test paper. Please protect the sheet from moisture and keep it horizontal. The soak time at room temperature takes between 2 and 15 minutes. General rule: the better the oil, the faster it soaks. Very old oil can take more than 45 minutes.

Understanding the test results

Because engine oil is slow acting, the complete absorption time can take several hours. The complete graphic representation of information can take between 3 and 10 hours, depending on the age of the oil. We suggest leaving the test overnight and compare it to the results reference guide from this brochure (available on www.opc.deutz.com).

References

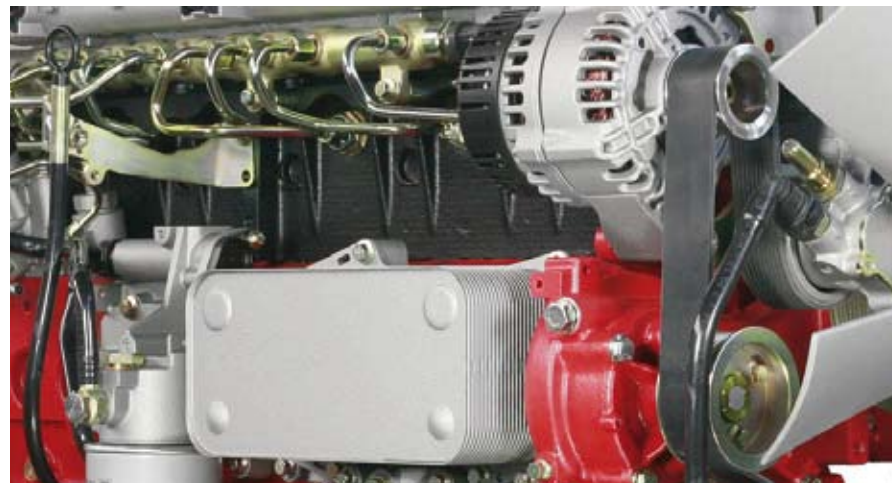
- Hold the test sheet against light which gives you a much clearer view to interpret.
- General rule: the longer the oil drop is left to soak the more accurate becomes the test result.
- This test is applicable with Diesel- and Otto-engines.
- Practical references towards possible defects and their outcome as well as repair proposals please find inside of this brochure.
- Appraise and compare the picture from the inner to the outer circle.
- It is reasonable to repeat this test at regular intervals (e.g. every 300 hrs.).

Test result	good	medium	poor
Soot in oil	☺	check engine calibration	
State of oil	☺	poss. change oil and filters	change oil and filters
Water in oil	☺	check cooling system	
Fuel in oil	☺	check fuel system	

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Analysis DEUTZ Oil-Performance-Check Diesel



The “One drop on-the-spot” analysis for your engine.

It reliably identifies soot, oil status, water & fuel in oil.

Our after-sales service is global with our own service centres and selected dealers in over 150 countries. Trust in the approved DEUTZ quality and know-how, with Genuine DEUTZ spare parts only!



Forming and meaning of circles patterns

The inner circle shows soot and impurities from dust, metal, wear etc. When achieving the lube oil change intervals, the “soot spot” can extend beyond circles 2 and 3.

Reasons: poor combustion, false fuel injection timing, clogged main flow filter, problems with turbocharger, carbonised injectors

Consequences: soot formation on valves and pistons, poorer heat exchange. Thereby added wear and fuel consumption in combination with poorer emission values!

Soot

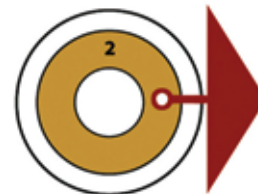


The second circle shows the general condition/oxidation of the oil. If the engine has an excessive soot production there may be no noticeable difference between the 1st and 2nd circle.

Reasons: oil change interval overdue, temporary overheating, wrong oil quality, unusually high sulfur content

Consequences: added wear at e.g. piston rings and other moving engine parts. Lower viscosity of oil leads to a higher fuel consumption and lower engine power output!

Oil condition

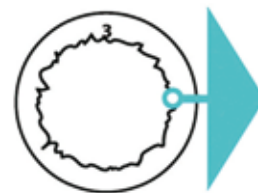


The jagged edge around the 2nd circle is an indication for water. We distinguish two types of water: condensate and coolant (with glycol). Glycol will be indicated by a exterior yellow circle (“corona”) around the jagged edge which becomes more and more clear.

Reasons: defective/porous seals/oil cooler seals/cylinder head gaskets, cracks in the water cooling system or corrosive soldering connections

Consequences: Reduced lubrication by dilution of oil may lead to a heavy engine damage (see below)!

Water

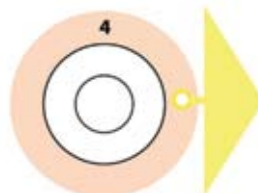


The outmost bright circle shows the presence of fuel in oil. It appears shortly after feeding. The bigger the ring is, the more fuel is in the oil. A small circle is normal and does not represent an exceeding dilution by fuel.

Reasons: bad injection or valve controls, defective injectors/nozzles, defective piston rings

Consequences: Reduced lubrication by dilution of oil, overheating, added wear, poorer emission values and engine power output!

Fuel

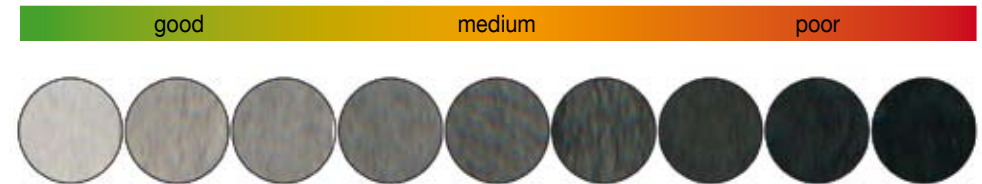


Important note: The DEUTZ Oil-Performance-Check cannot guarantee, whether the engine has technical or functional defects. Any liability and claims towards the supplier and the manufacturer are excluded!

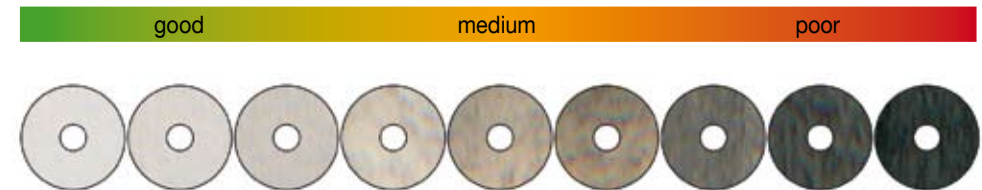
Test results reference guide Diesel



The inner circle shows the grade of oil contamination.



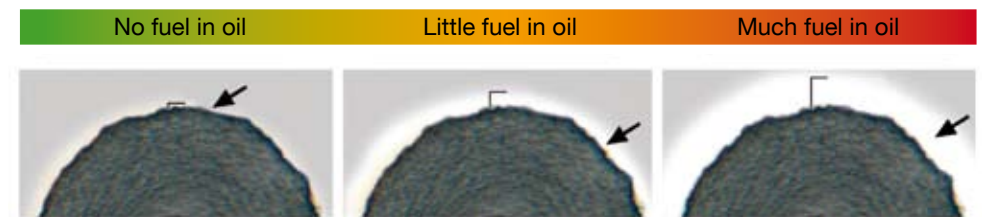
The second circle indicates the general condition of the engine oil.



The jagged ring: condensate and coolant in oil are forming jags around the 2nd circle. Coolant is indicated by an additional yellow circle around.



The fuel circle: hold the test sheet against light. The fuel circle will be better noticeable.



This reference guide can be downloaded as a PDF-file from our homepage www.opc.deutz.com