

► The lab report – the entire information at a glance

The optimum oil operating life depends on many factors. The single engine manufacturers define exact limit values for the different parameters. These provide information on the condition of oil and engine

and are monitored by regular oil analyses. If only one of these limit values is exceeded, the warranty of your plant is put at risk!

The ABC of characteristic values:

Alkalinity stability

The combustion of gas results in acid combustion products which need to be absorbed and neutralised by the engine oil. An acidification of the engine oil leads to corrosive wear. The parameters given below are important criteria for indicating the oil acidification.

TBN	Total Base Number, alkaline reserve, neutralises acids which develop during combustion
TAN	Total Acid Number, extent of overall acidification of the oil
ipH-value	indicator of aggressive acids in the oil: the lower the ipH-value, the higher the risk of corrosion

The valid rule of thumb says: The TBN must always be higher than the TAN. For exact limit values please follow the respective manufacturer specifications!

Oil condition

It needs to be monitored carefully in order to avoid downtimes and additional maintenance effort.

Oxidation	main feature of oil ageing
Nitration	oil loading with nitrogen compounds, accelerates oil ageing
Viscosity increase	oil thickening, impairs flowability and lubricating film thickness

Ageing processes cause sludge deposition and varnish formation at the components. These impair power and performance of the engine, shorten operating lives and lead to grinding and wear. Moreover, oil ageing results in the formation of acid reaction products causing corrosion.

Wear elements

They provide information on the wear condition of the engine. By the help of these parameters wear can be detected at an early stage. Depending on the respective element (Fe, Pb, Al, Cu, Zi, Cr) or the combination of several elements, it is possible to draw conclusions on affected components.

Contaminants

Natrium, glycol or **water** in the engine oil usually indicate a contamination with antifreeze agent. If there is a rise of these values, the leak tightness of the cooling unit should be checked! Cooler protecting agent in the engine oil reduces both lubricating and cooling capacity. Therefore an oil change should be carried out.

Silicon can enter the system as gaseous compound and in the form of dust. It causes deposits on engine components under high thermal loads. Power loss, abrasive wear and engine damages can occur.

Trend analysis

Lists results of up to six previous analyses – this way the condition of both oil and engine can be monitored optimally.

Diagnosis and recommendation

Indicate if the oil operating life can be extended or possibly needs to be reduced. If there are conspicuous values, these are marked and you find an individual explanation on page 2 of the lab report.

Oil drain interval

Definition of number of operating hours which can be added or possibly need to be cut; the interval depends on gas quality, operating conditions, oil volume, and oil quality. It is determined by the help of our matrix taking into consideration general OEM specifications and our experience.

If the results allow an extension of the oil drain interval, you find the date for your next oil analysis in the report. You should follow this recommendation by any means in order to ensure the optimum monitoring of the oil and of your plant!

The sample form – how to complete it correctly

In order to allow the optimum evaluation of the results for your plant, we need your complete and correct data! Please complete the sample form carefully! In our instruction we have marked the respective hints in turquoise.

PROBENBEGLEITSCHEIN Sample Information Form (SIF) GAS



Sample

Gasmotorenset (türkis), Gas Engine Kit (mint green)

Probe
Analysenumfang
Test scope

Grund für die Analyse Reason for analysis

- Routinetest / Routine
- Trend, vorherige Labornt.: **Please select**
- Ermittlung Wechselzeitfrist / Change interval
- Sonstiger Grund / Other reason

Probenentnahme Sample taken

Please select
TT dd MM mm JJ yy

Einsatzzeit Operating time

Please select
Enter operating hours
Wechsel Change

Kühlmittelbezeichnung Coolant brand name

Please select

- Kühlmittelkonzentrat Coolant concentrate
- Heizwasser Heating water

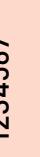
ADDINOL Gasmotorenöl ADDINOL gas engine oil

- ADDINOL Gas Engine Oil MG 40 - Extra Plus
- ADDINOL Gas Engine Oil MG 40 - Extra LA
- Sonstige Other

Please select

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TIP!

Always have your lab.-no. ready
in case of questions

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Probenentnahme Sample taken

Please select
TT dd MM mm JJ yy

Einsatzzeit Operating time

Please select
Enter operating hours
Wechsel Change

Kühlmittelbezeichnung Coolant brand name

Please select

- Kühlmittelgemisch Coolant mixture
- Basis-/Präparationswasser Basic / Preparation water

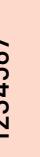
ADDINOL Gasmotorenöl ADDINOL Gas Engine Oil NG 40

- ADDINOL Eco Gas 4000 XD

Please select

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Zusätzliche Angaben (erscheinen auf dem Laborbericht) Additional notes (printed in lab-report)

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