

➤ 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, Zr, Cr) or the combination of several elements, it is possible to draw conclusions on affected components.

Contaminants

Sodium, 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.

PROBENBEGLEITSCHHEIN

Sample Information Form (SIF)

GAS



Probe Sample

Analyseumfang
Test scope
Gasmotorenset (türkis)
Gas Engine Kit (mint green)

Grund für die Analyse Reason for analysis

- Routinekontrolle Routine
- Trend, vorherige Labornr. Previous lab no.
- Ermittlung Wechselfrist Find change interval
- Sonstiger Grund Other reason

Please select

Ersteinsetz First use
Schaden Damage
H₂S-Gehalt H₂S-content: **xxx** ppm

Probenentnahme Sample taken
TT dd MMmm JJ yy

Letzter Wechsel Last change
TT dd MMmm JJ yy

Einsatzzeit Operating time
TT dd MMmm JJ yy

Enter operating hours
warsenst Change
 Ja/yes Nein/no vor/Before Nach/After

Probenentnahme Sample taken
TT dd MMmm JJ yy

Ersteinsetz First use
Schaden Damage
H₂S-Gehalt H₂S-content: **xxx** ppm

Letzter Wechsel Last change
TT dd MMmm JJ yy

Einsatzzeit Operating time
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warsenst Change
 Ja/yes Nein/no vor/Before Nach/After

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Probenentnahme Sample taken
TT dd MMmm JJ yy

Ersteinsetz First use
Schaden Damage
H₂S-Gehalt H₂S-content: **xxx** ppm



Maschine Machine

Bezeichnung Aggregate
Bitte unbedingt ausfüllen! Unit ID Please complete
Please always enter the same name for the exact identification of the sample

z.B. Motorbezeichnung, Standort, Inventar-Nr. (max. 20 Zeichen)
e.g. engine name, location, inventory-no. (max. 20 characters)

Komponente / Probe aus Component / Sample from

- Biogasmotor Biogas engine
- Klärgasmotor Sewage gas engine
- Deponiegasmotor Landfill gas engine
- Erdgasmotor Natural gas engine
- Klärgasmotor Sewage gas engine
- Andern-Gasart Other gas type
- Kältemittel Coolant

Zündstrahl-Gasmotor Pilot injection gas engine
Zünddütyp Injection oil type

- Heizöl Heating oil
- Biodiesel Biodiesel
- Sonstige Other
- Rapsöl Rape seed oil
- Sojaböhl Soybean oil
- Palmöl Palm oil

Motorhersteller Engine manufacturer

Motorotyp Engine type

Seriennummer Serial number

Ölmenge im System Oil quantity
Liter/Litre

Bemerkung Remark

Ihr Probenbeleg Keep for your reference

Bezeichnung Aggregate
Unit ID
Please always enter the same name for the exact identification of the sample

Komponente / Probe aus Component / Sample from
 Biogasmotor Biogas engine
 Klärgasmotor Sewage gas engine
 Erdgasmotor Natural gas engine
 Deponiegasmotor Landfill gas engine
 Sonstige Other

Labor-Nr. Laboratory-no.
1234567



Kunde Customer

Firma Company
Company XYZ

Name Name
John Q. Public

Abteilung Department
e.g. Technics

Straße, Postfach Street, P.O. Box
Yourstreet 1

Land, PLZ, Ort Country, ZIP, City
Yourcountry, Yourzip, Yourtown

Telefon, Durchwahl Phone Number, Direct
01234/ 54689

Handy Mobile Phone

Website

E-Mail
additional e-mail address if required: yourname@email.com
gasmotorenoelanalyse@addinol.de

Laborbericht geht an Lab-report is sent to
Deutsch **English**

Sprache des Laborberichts Language of the lab-report

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

ADDINOL contact or distribution partner

Please completely fill in all marked fields for each plant.

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Please stick bar code onto sample bottle



Bitte diesen Barcode auf das Probengefäß kleben!
Please stick this barcode label on the sample bottle!

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