

KlüberMonitor Grease Condition Analysis

Laboratory analysis for used grease condition analysis



Benefits for your application

- **Reliability**
 - The Grease Condition Analysis describes the current condition of a grease
 - Product expertise at Klüber Lubrication, professional interpretation of results
- **Highly effective**
 - Regular analyses reduce failure risk of expensive components or systems
 - Useful life of components is maximised
- **Convenience of use**
 - Kit for sampling and dispatch; standardised, compact and comprehensible report including recommendations
- **Structured system**
 - Test results promptly after receipt

Description

Grease condition analyses made in Klüber Lubrication laboratories provide information on several aspects of a grease's current condition, including general grease condition (homogeneous / inhomogeneous), consistency, contamination, behaviour of the additives, wear, reliable relubrication, mixing with foreign matter and oxidation. The result of the analysis is summarised in a standardised, compact report describing the condition of the grease.

The analytical evaluation is shown with one of the following pictograms:



- Green tick: The grease condition is within the permissible limits and it is fit for further use.
- Yellow question mark: The quality of the grease is within tolerable limits but shows deviations from the ideal condition. Machine inspection or general monitoring is strongly recommended. A recommendation for further action, e.g. a repeated analysis, is also made.
- Red "X": The grease is no longer fit for use. A grease change should be performed.

Application

Grease condition analysis can be performed for selected Klüber greases based on mineral oil, ester oil, polyalphaolefin or polyglycol. Approx. 5 g of grease is required for an analysis. Analyses of other greases and other criteria can be performed on request.

Application notes

The result of the grease condition analysis depends largely on correct sampling. Klüber Lubrication provides sample bottles with lids and labels as well as a detailed description containing all information needed for correct sampling.

The sampling kit (999054) was developed by Klüber Lubrication for packing to high-quality standards. It is made of materials that are compatible with the lubricants to be analysed and protects the sample against contamination. For a succession of analyses, please always use the same sampling point in the system. The report issued with the analysis contains a recommendation how to proceed with regard to the grease tested.

Please note:

The specific conditions under which a machine or grease system operates are not necessarily known to Klüber Lubrication München. A single result is only a snapshot and recommendations can only be based on a trend over a series of samples.

KlüberMonitor Grease Condition Analysis

Laboratory analysis for used grease condition analysis

Analysis report, example:

General information:		Equipment details:								
Company	Equipment ID	XXX								
	Model	XXX								
Contact	Manufacturer	-								
	Application	Rear bearing								
Address	Remarks	Sample after 12 000 operating hours								
	Grease details:									
Telephone	Product name	Sample grease								
	Age of grease [operating hours]	XXX								
Fax:	Average operating temperature [°C]	XX								
Email:	Sample date	DD.MM.YYYY								
	Place of sampling:	XXX								
Diagnosis										
Additives are slightly changed. The sample shows typical signs of use. XXX										
Physical and chemical properties										
Aspect	Texture	Shear viscosity at 25 °C and 300 1/s (mPas)								
Brown/pasty	homogeneous	1600								
Infrared spectroscopy (please observe also interpretation comment under "Diagnosis")										
Identity	Additive decomposition	Oxidation	Alien greases	Cloudiness (soot, abrasion particles, deposits)						
obvious	slight	none	none	none						
Analysis of principal additive elements (ppm)										
Ba	Ca	Mg	Cl	Sb	P	Mo	Zn	S	Na	Si
< 10	12	<10	< 20	<10	1020	3129	61	8202	67	10
Analysis of principal abrasion elements (ppm)										
Al	Cr	Cu	Fe	Pb	Sn	Ni	Ti	Ag	Mn	V
< 10	< 10	< 10	88	<10	<10	<10	<10	<10	<10	<10
Legend										
10 ppm: 0.001 %;										
100 ppm: 0.01 %;										
1 000 ppm: 0.1 %;										
10 000 ppm: 1 %;										
Sample reference no.		Date: DD.MM.YYYY								
Lab request no.: LR 2011-00005555		Signature: Joe Sample								





KlüberMonitor Grease Condition Analysis

Laboratory analysis for used grease condition analysis

Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

**Klüber Lubrication München SE & Co. KG /
Geisenhausenerstraße 7 / 81379 München / Germany /
phone +49 89 7876-0 / fax +49 89 7876-333.**

The data in this document is based on our general experience and knowledge at the time of publication and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

Publisher and Copyright: Klüber Lubrication München SE & Co. KG. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication München SE & Co. KG and if source is indicated and voucher copy is forwarded.