

LAB REPORT

Unit ID **Gas turbine**
Component **Lubricating oil**
Lab number **1700834**



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OELCHECK GmbH · Kerschelweg 28 · 83098 Brannenburg

Example report
Analysis scope: Turbine Oil Kit 7

Machine type: **Gas turbine**
Manufacturer: **ABC**
Oil brand name: **Mobil DTE 832**
Oil quantity in system: **4300 l**

Diagnosis for the current laboratory values

No wear metals present in the sample. Viscosity and additive levels are in the normal range. The air release property is at the level of fresh oil. The foaming tendency is the same as that of fresh oil. If no oil change has happened yet, it is possible to continue using the oil under similar operating conditions and under continuation of the usual maintenance schedule. I recommend that you send the next sample at the next service interval or at your regular inspection for trend analysis.

Dipl.-Ing. Stefan Mitterer

Sample Rating



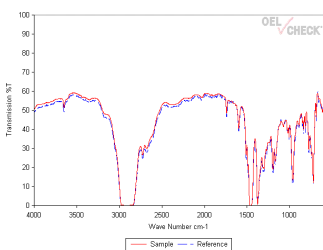
normal

ANALYSIS RESULTS			Current sample	Previous samples	
LAB NUMBER			1700834	1700835	
SAMPLE RATING					
Date tested			31.10.2023	25.11.2022	
Date of sample taken			27.10.2023	14.11.2022	
Date of last oil change			24.07.2023	01.10.2017	
Top-up since change	l		200	2400	
Operating time since change	h		665	32856	
Total operating time	h		38211	32856	
Oil changed			no	no	
WEAR					
Iron	Fe	mg/kg	0	0	
Chrome	Cr	mg/kg	0	0	
Tin	Sn	mg/kg	0	0	
Aluminum	Al	mg/kg	0	0	
Nickel	Ni	mg/kg	0	0	
Copper	Cu	mg/kg	0	0	
Lead	Pb	mg/kg	0	0	
Molybdenum	Mo	mg/kg	0	0	
PQ index	-		< 25	< 25	
CONTAMINATION					
Silicon	Si	mg/kg	0	0	
Potassium	K	mg/kg	0	0	
Sodium	Na	mg/kg	0	0	
Lithium	Li	mg/kg	0	0	
Water K. F.	ppm		85	91	
OIL CONDITION					
Viscosity at 40°C	mm²/s		32.46	32.05	
Viscosity at 100°C	mm²/s		5.80	5.76	
Viscosity index	-		122	122	
Oxidation	A/cm		1	1	
IR index	-		99.25	99.10	
Color	Color index		1.0	4.0	
ADDITIVES					
Calcium	Ca	mg/kg	2	0	
Magnesium	Mg	mg/kg	0	0	
Boron	B	mg/kg	1	0	
Zinc	Zn	mg/kg	1	0	
Phosphorus	P	mg/kg	1099	1155	
Barium	Ba	mg/kg	0	0	
Sulphur	S	mg/kg	56	140	

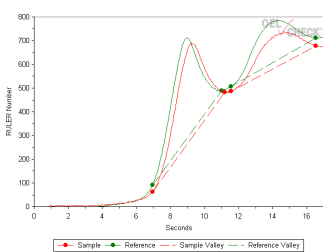
Bottle and cap



Infrared Spectrum



RULER Diagram





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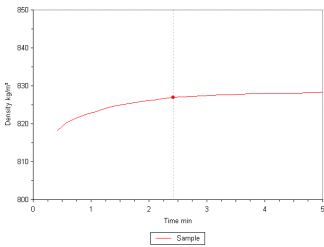
 +49 8034-9047-210

Example report
Analysis scope: Turbine Oil Kit 7

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Manufacturer: **ABC**
Oil brand name: **Mobil DTE 832**
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SAMPLE RATING				
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Date of sample taken		27.10.2023	14.11.2022	
Date of last oil change		24.07.2023	01.10.2017	
Top-up since change	l	200	2400	
Operating time since change	h	665	32856	
Total operating time	h	38211	32856	
Oil changed		no	no	
ADDITIONAL TESTS				
AN / NN	mgKOH/g	< 0.10	0.12	
Air-release properties	min	2.4	2.8	
Foam test seq. I	ml/ml	140/0	220/0	
Cleanliness class	ISO 4406	15/13/10	16/14/10	
>4µm (ISO)	Particles/100ml	30213	61254	
>6µm (ISO)	Particles/100ml	7547	14587	
>14µm (ISO)	Particles/100ml	889	888	
Antioxidant 1 - RULER	%	91.3	58.1	
Antioxidant 2 - RULER	%	84.7	49.8	
Phenolic antioxidant FT-IR	%	94.1	66.0	

Air-release properties



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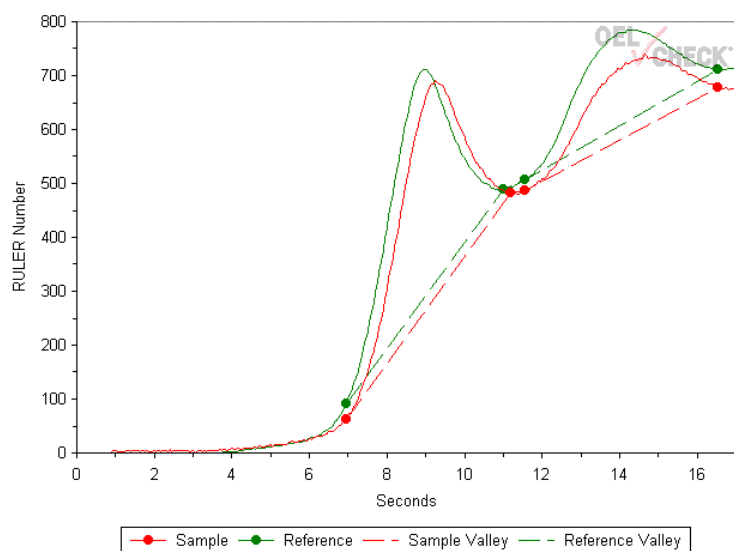
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Example report

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Evaluation of the oxidation inhibitors

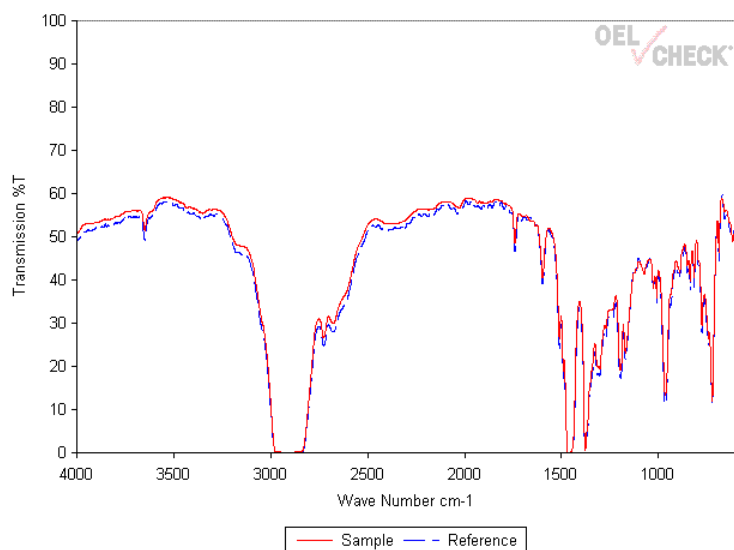
In comparison with the reference sample, there are no significant changes of antioxidant additives (oxidation inhibitors).

Dipl.-Ing. Stefan Mitterer**ANALYSIS RESULTS****LAB NUMBER**

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Date of last oil change		24.07.2023
Top-up since change	l	200
Operating time since change	h	665
Total operating time	h	38211
Oil changed		no

Antioxidant/RULER

Antioxidant 1 - RULER	%	91,3
Antioxidant 2 - RULER	%	84,7

**Antioxidant/FT-IR**

Phenolic antioxidant FT-IR	%	94,1
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