

Unit ID **Gas turbine**  
Component **Lubricating oil**  
Current sample number **1700834**

OELCHECK GmbH · Postfach 1116 · 83094 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



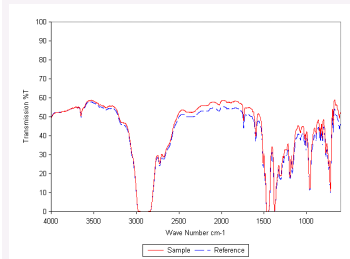
normal

ANALYSIS RESULTS			Current sample	Previous samples	
<b>LAB NUMBER</b>			<b>1700834</b>	1700835	
<b>SAMPLE RATING</b>			✓	✓	
Date tested			<b>31.10.2010</b>	21.11.2009	
Date sample taken			<b>27.10.2010</b>	14.11.2009	
Date of last oil change			<b>24.07.2010</b>	01.10.2004	
Top-up since change			<b>200</b>	2400	
Operating hrs since change			<b>665</b>	32856	
Total operating hrs			<b>38211</b>	32856	
Oil changed			<b>no</b>	no	
<b>WEAR</b>					
Iron	Fe	mg/kg	<b>0</b>	0	
Chrome	Cr	mg/kg	<b>0</b>	0	
Tin	Sn	mg/kg	<b>0</b>	0	
Aluminum	Al	mg/kg	<b>0</b>	0	
Nickel	Ni	mg/kg	<b>0</b>	0	
Copper	Cu	mg/kg	<b>0</b>	0	
Lead	Pb	mg/kg	<b>0</b>	0	
Molybdenum	Mo	mg/kg	<b>0</b>	0	
PQ index	-		<b>OK</b>	OK	
<b>CONTAMINATION</b>					
Silicon	Si	mg/kg	<b>0</b>	0	
Potassium	K	mg/kg	<b>0</b>	0	
Sodium	Na	mg/kg	<b>0</b>	0	
Lithium	Li	mg/kg	<b>0</b>	0	
Water K. F.	ppm		<b>85</b>	91	
<b>OIL CONDITION</b>					
Viscosity at 40°C	mm <sup>2</sup> /s		<b>32.46</b>	32.05	
Viscosity at 100°C	mm <sup>2</sup> /s		<b>5.80</b>	5.76	
Viscosity index	-		<b>122</b>	122	
Oxidation	A/cm		<b>1</b>	1	
Phenolic Inhibitor	%		<b>94</b>	66	
Color	Color index		<b>1.0</b>	4.0	
<b>ADDITIVES</b>					
Calcium	Ca	mg/kg	<b>2</b>	0	
Magnesium	Mg	mg/kg	<b>0</b>	0	
Boron	B	mg/kg	<b>1</b>	0	
Zinc	Zn	mg/kg	<b>1</b>	0	
Phosphorus	P	mg/kg	<b>1099</b>	1155	
Barium	Ba	mg/kg	<b>0</b>	0	
Sulphur	S	mg/kg	<b>56</b>	140	

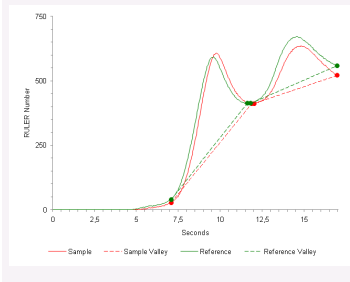
Bottle and Cap



Infrared Spectrum



RULER Diagram



# LAB REPORT



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Unit ID **Gas turbine**  
Component **Lubricating oil**  
Current sample number **1700834**

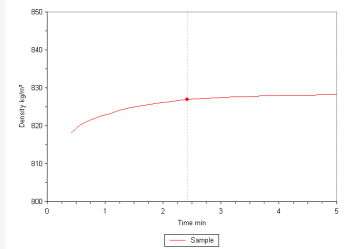
page 2 of 3

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**

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Date sample taken	<b>27.10.2010</b>	14.11.2009		
Date of last oil change	<b>24.07.2010</b>	01.10.2004		
Top-up since change	l <b>200</b>	2400		
Operating hrs since change	h <b>665</b>	32856		
Total operating hrs	h <b>38211</b>	32856		
Oil changed	<b>no</b>	no		
<b>ADDITIONAL TESTS</b>				
Neutralisation number	mgKOH/g <b>0.03</b>	0.12		
Air release	min <b>2.4</b>	2.8		
Foam test seq. I	ml/ml <b>140/0</b>	220/0		
Cleanliness class	ISO 4406 (1999) <b>15/13/10</b>	16/14/10		
>4µm (ISO)	Particles/100ml <b>30213</b>	61254		
>6µm (ISO)	Particles/100ml <b>7547</b>	14587		
>14µm (ISO)	Particles/100ml <b>889</b>	888		
RULER Additive 1	<b>91.3</b>	58.1		
RULER Additive 2	<b>84.7</b>	49.8		

Air release



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page 3 of 3

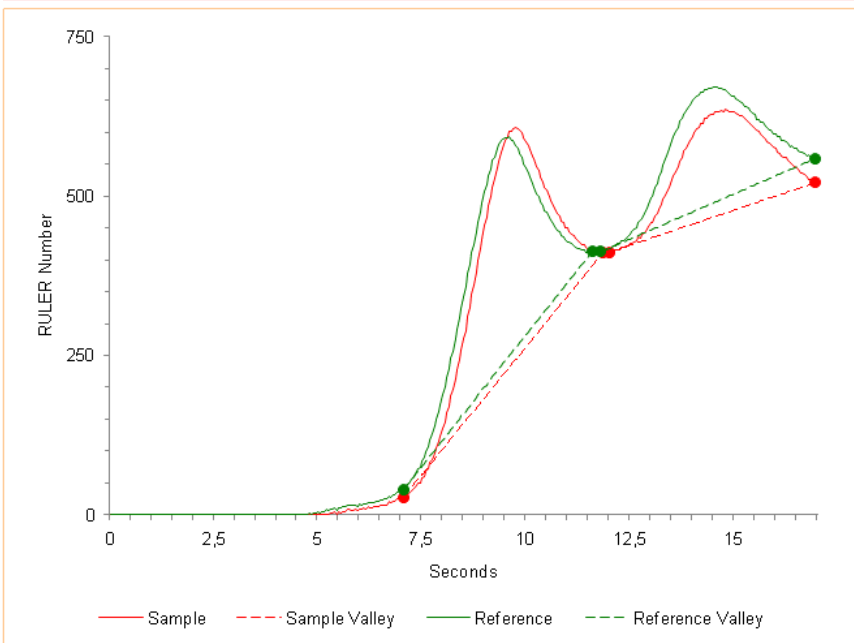
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### Diagnosis of RULER test

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

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Top-up since change	l	200
Operating hrs since change	h	665
Total operating hrs	h	38211
Oil changed		no

### Antioxidant/residual content

RULER Additive 1	91,3
RULER Additive 2	84,7