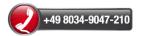
## LAB REPORT

Wind energy system

Component Umrichterkühleinheit

Current sample number 1704334





page 1 of 2

Machine type:

MM92

Coolant:

Antifrogen N44

Example report

Unit ID

Analysis scope: Wind power analysis kit

OELCHECK GmbH  $\cdot$  Kerschelweg 28  $\cdot$  83098 Brannenburg

### Diagnosis for the current laboratory values

The sample is transparent and free of solid contaminants. The typical anti-freeze (glycol) additives and the glycol concentration are visible. Please observe further changes with the next sample. I recommend that you send the next sample at the next service interval or at your regular inspection for trend analysis.

Dipl.-Ing. Andy Böhme (CLS)

## Sample Rating



#### normal

<b>ANALYSIS RESULTS</b>			Current sample		Previous samples
LAB NUMBER			1704334		
SAMPLE RATING			$\checkmark$		
Date tested			16.08.2023		
Date of sample taken			11.08.2023		
Date of last coolant chang	е		-		
Top-up since change			-		
Operating time since chan	ge		-		
Total operating time		h	27865		
Coolant changed			-		
CONDITION					
Color	-		gelb		
Refractive index 20°C	-		1.3813		
Glycol concentration	% [Vol/Vol		46.3		
Density 20°C	kg/m³		1062		
pH value 25°C	-		8.0		
Conductivity 25°C	μS/cm		2136		
Freezing point	°C		-30.3		
WATER QUALITY					
Water hardness	°dH		2.0		
Alkaline earths	mmol/l		0.36		
Calcium	Ca	mg/l	10.8		
Magnesium	Mg	mg/l	2.1		
Sulphate	mg/l	_	18.8		
Chloride	mg/l		11.3		
ADDITIVES					
Sodium	Na	mg/l	2891.5		
Phosphorus	Р	mg/l	< 1.0		
Boron	В	mg/l	< 10.0		
Potassium	K	mg/l	< 10.0		
Silicon	Si	mg/l	1.8		
Molybdenum	Мо	mg/l	102.5		
Effective silicate	mg/l		3.9		
Nitrate	mg/l		744.7		
Nitrite	mg/l		< 5.0		
Phosphate	mg/l		< 5.0		
Adipic acid	mg/l		< 5.0		
Acetat	mg/l		< 5.0	 	
WEAR					
Iron	Fe	mg/l	< 0.1		
Chrome	Cr	mg/l	< 0.1		
Aluminum	Al	mg/l	< 0.2		
Nickel	Ni	mg/l	< 0.1		
Copper	Cu	mg/l	< 0.1		
Lead	Pb	mg/l	< 0.1		
Zinc	Zn	mg/l	< 0.1		
Tin	Sn	mg/l	< 1.0	 	
• • • • • • • • • • • • • • • • • • • •	J.1	9/1		 	



# LAB REPORT

Unit ID Wind energy system

Component Umrichterkühleinheit

Current sample number 1704334





page 2 of 2

Machine type:

MM92

Coolant:

Antifrogen N44

Example report

Analysis scope: Wind power analysis kit

<b>ANALYSIS RESULT</b>	S		Current sample			Previous samples	
LAB NUMBER			1704334				
SAMPLE RATING			$\checkmark$				
Date tested			16.08.2023				
Date of sample taken			11.08.2023				
Date of last coolant change			-				
Top-up since change			-				
Operating time since change			-				
Total operating time		h	27865				
Coolant changed			-				
DEGRADATION PRODUCT							
Glycolate	mg/l		8.1				
Formiate	mg/l		5.7				
Oxalate	mg/l		< 5.0				
CONTAMINATION							
Fluoride	mg/l		< 5.0				
Bromide	mg/l		< 10.0				
Manganese	Mn	mg/l	< 1.0				
Titanium	Ti	mg/l	< 0.1				
Vanadium	V	mg/l	< 0.1				
Silver	Ag	mg/l	< 0.1				
Lithium	Li	mg/l	< 1.0				