

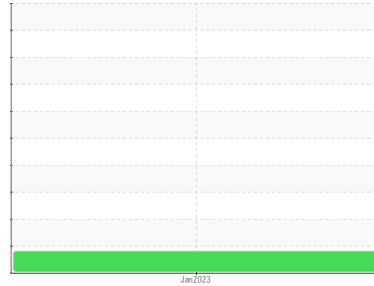


# PROBLEM SUMMARY

Sample Rating Trend

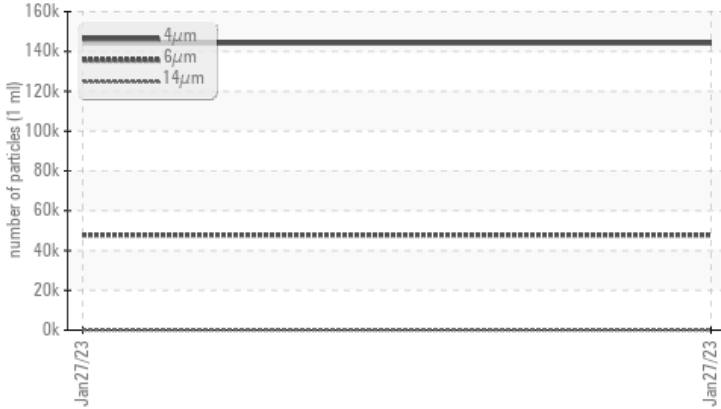
ISO

Area  
**BLACKJACK CREEK [200007683]**  
 Machine Id  
**18WEA88412 - D-03 (S/N W-122244)**  
 Component  
**Wind Turbine Gearbox**  
 Fluid  
**FUCHS RENOLIN CLP ISO 320 (--- LTR)**



## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time.  
 Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	---	---
Particles >6µm	ASTM D7647	>2500	▲ <b>47782</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/18/15	▲ <b>24/23/14</b>	---	---

Customer Id: NORDEX  
 Sample No.: NX011567  
 Lab Number: 05762032  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

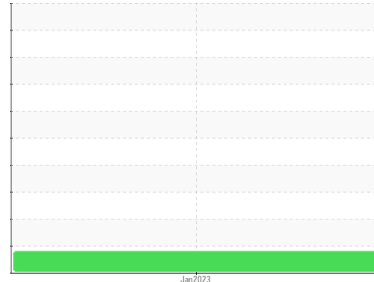


# OIL ANALYSIS REPORT

Sample Rating Trend

ISO

Area  
**BLACKJACK CREEK [200007683]**  
 Machine Id  
**18WEA88412 - D-03 (S/N W-122244)**  
 Component  
**Wind Turbine Gearbox**  
 Fluid  
**FUCHS RENOLIN CLP ISO 320 (--- LTR)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>NX011567</b>	---	---
Sample Date	Client Info	<b>27 Jan 2023</b>	---	---
Machine Age	hrs Client Info	<b>1547</b>	---	---
Oil Age	hrs Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184 >80	<b>15</b>	---	---
Iron	ppm ASTM D5185m >150	<b>27</b>	---	---
Chromium	ppm ASTM D5185m >5	<b>0</b>	---	---
Nickel	ppm ASTM D5185m >10	<b>0</b>	---	---
Titanium	ppm ASTM D5185m >10	<b>0</b>	---	---
Silver	ppm ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >10	<b>0</b>	---	---
Lead	ppm ASTM D5185m >20	<b>&lt;1</b>	---	---
Copper	ppm ASTM D5185m >50	<b>&lt;1</b>	---	---
Tin	ppm ASTM D5185m >3	<b>&lt;1</b>	---	---
Vanadium	ppm ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>4</b>	---	---
Barium	ppm ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m	<b>0</b>	---	---
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm ASTM D5185m	<b>0</b>	---	---
Calcium	ppm ASTM D5185m	<b>19</b>	---	---
Phosphorus	ppm ASTM D5185m	<b>203</b>	---	---
Zinc	ppm ASTM D5185m	<b>0</b>	---	---
Sulfur	ppm ASTM D5185m	<b>5278</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	<b>8</b>	---	---
Sodium	ppm ASTM D5185m >20	<b>2</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>0</b>	---	---
Water	% ASTM D6304 >0.05	<b>0.016</b>	---	---
ppm Water	ppm ASTM D6304 >500	<b>167.5</b>	---	---

## FLUID CLEANLINESS

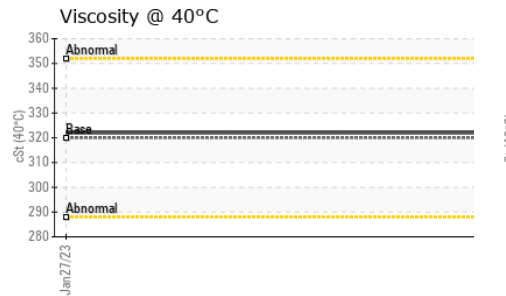
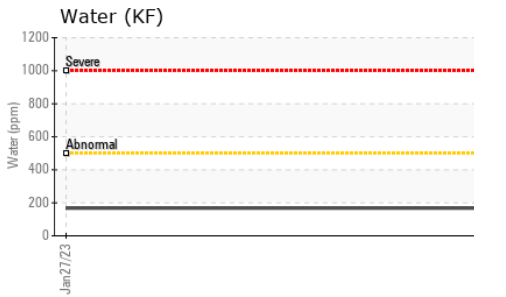
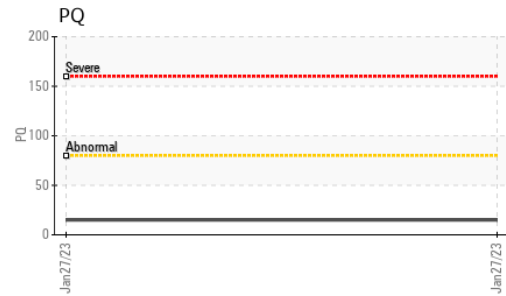
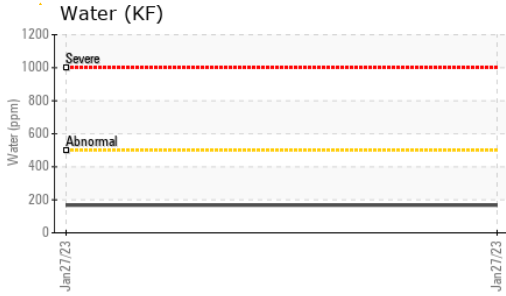
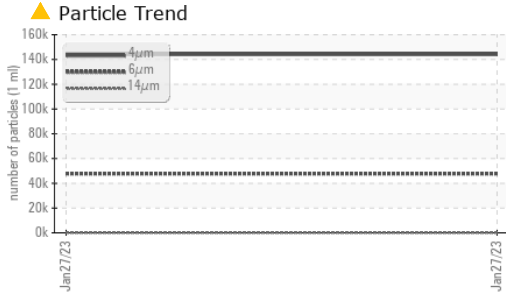
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	<b>144151</b>	---	---
Particles >6µm	ASTM D7647 >2500	<b>▲ 47782</b>	---	---
Particles >14µm	ASTM D7647 >320	<b>147</b>	---	---
Particles >21µm	ASTM D7647 >80	<b>5</b>	---	---
Particles >38µm	ASTM D7647 >20	<b>1</b>	---	---
Particles >71µm	ASTM D7647 >4	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c) >--/18/15	<b>▲ 24/23/14</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D8045	<b>0.37</b>	---	---



# OIL ANALYSIS REPORT



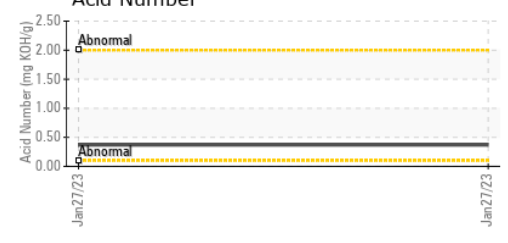
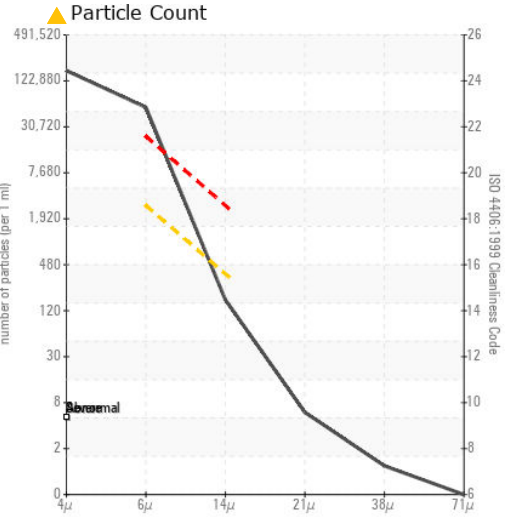
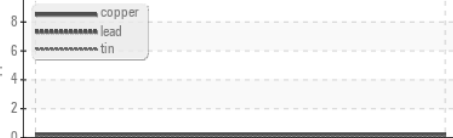
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	322	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color		no image	no image
Bottom		no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX011567 **Received** : 08 Feb 2023  
**Lab Number** : 05762032 **Diagnosed** : 09 Feb 2023  
**Unique Number** : 10331640 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

**NORDEX USA - Chicago**  
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 US 60606  
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 F: (312)386-7102

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)