



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**

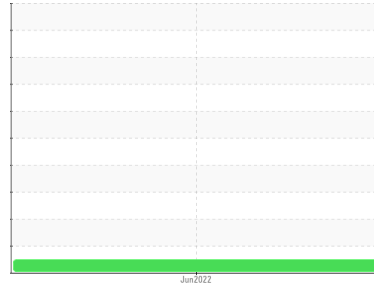


Area  
**EOLUS SAFE HARBOUR PORT**

Machine Id  
**11425272**

Component  
**Wind Turbine Gearbox**

Fluid  
**FUCHS RENOLIN CLP ISO 320 (--- LTR)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

### 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>NX011459</b>	---	---
Sample Date	Client Info		<b>25 Jun 2022</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>Not Chngd</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>80	<b>20</b>	---	---
Iron	ppm	ASTM D5185m	>150	<b>1</b>	---
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	---
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	---
Titanium	ppm	ASTM D5185m		<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>0</b>	---
Tin	ppm	ASTM D5185m		<b>0</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>2</b>	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	---
Manganese	ppm	ASTM D5185m		<b>0</b>	---
Magnesium	ppm	ASTM D5185m		<b>0</b>	---
Calcium	ppm	ASTM D5185m		<b>17</b>	---
Phosphorus	ppm	ASTM D5185m		<b>192</b>	---
Zinc	ppm	ASTM D5185m		<b>3</b>	---
Sulfur	ppm	ASTM D5185m		<b>4586</b>	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>7</b>	---
Sodium	ppm	ASTM D5185m	>20	<b>0</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---
Water	%	ASTM D6304	>0.05	<b>0.007</b>	---
ppm Water	ppm	ASTM D6304	>500	<b>73.9</b>	---

## FLUID CLEANLINESS

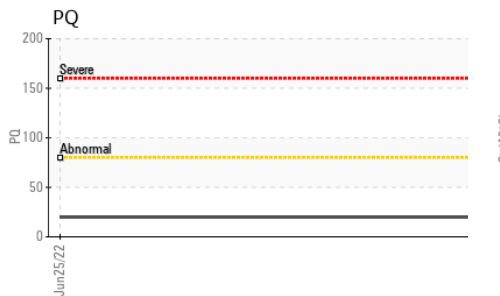
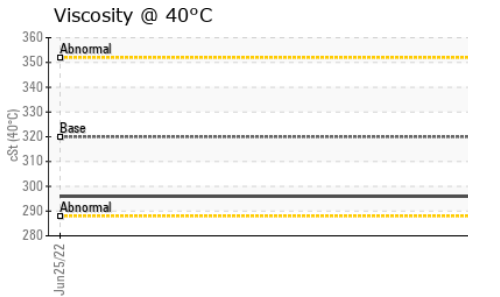
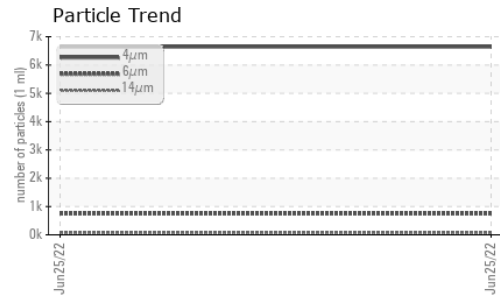
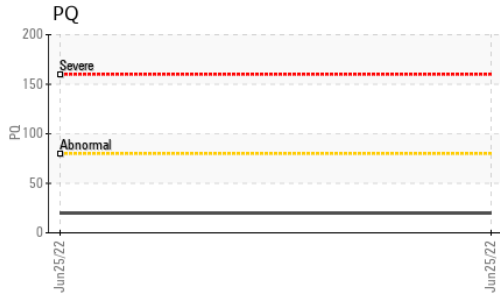
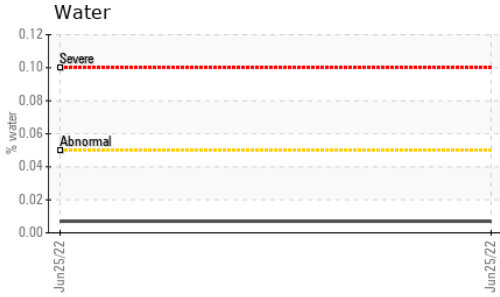
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>6643</b>	---	---
Particles >6µm	ASTM D7647	>2500	<b>747</b>	---	---
Particles >14µm	ASTM D7647	>320	<b>74</b>	---	---
Particles >21µm	ASTM D7647	>80	<b>19</b>	---	---
Particles >38µm	ASTM D7647	>20	<b>7</b>	---	---
Particles >71µm	ASTM D7647	>4	<b>4</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/18/15	<b>20/17/13</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.44</b>	---



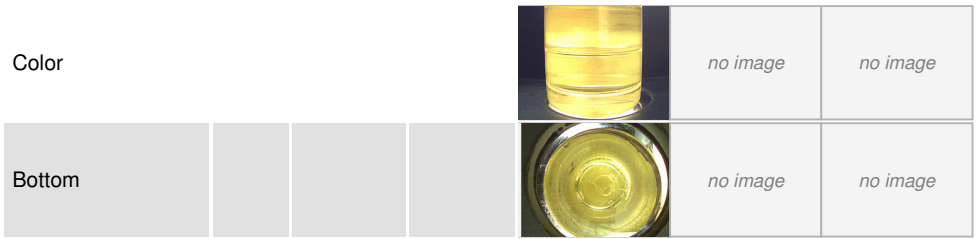
# OIL ANALYSIS REPORT



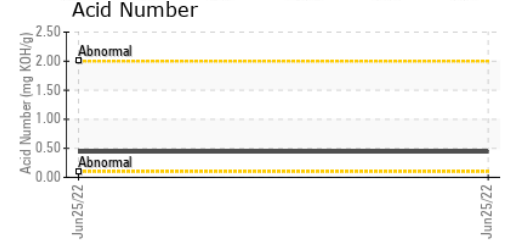
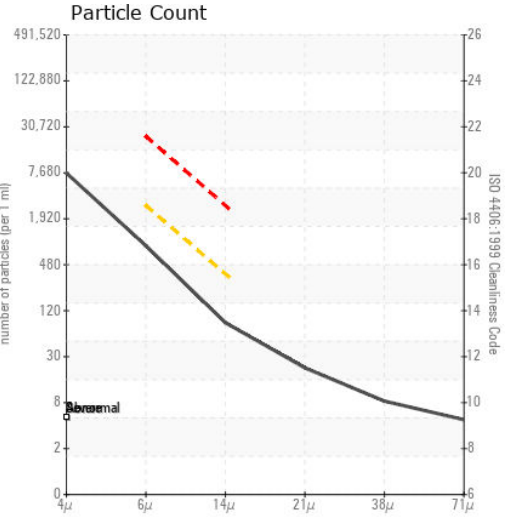
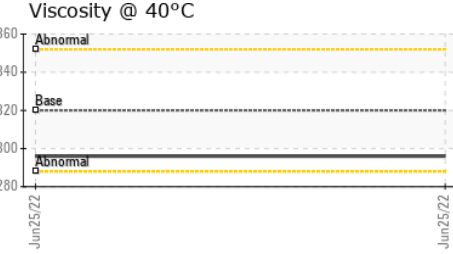
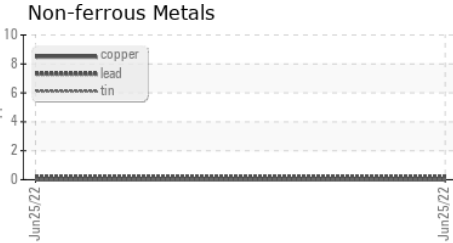
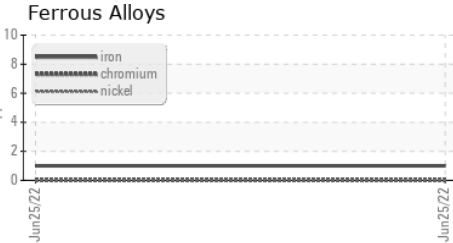
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	296	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX011459 **Received** : 30 Jun 2022  
**Lab Number** : 05581360 **Diagnosed** : 03 Jul 2022  
**Unique Number** : 10035786 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

**NORDEX USA - Chicago**  
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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)