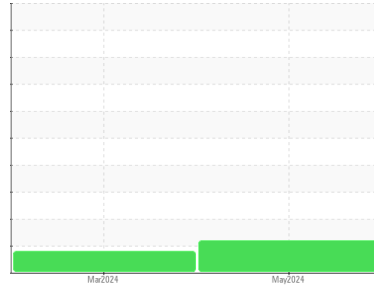




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

**EL SAUZ [200007686]**

Machine Id

**K04-56WEA90060 (S/N W-123021)**

Component

**Wind Turbine Gearbox**

Fluid

**FUCHS RENOLIN UNISYN CLP 320 (--- LTR)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates 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>NX015057</b>	NX015084	---	
Sample Date	Client Info	<b>08 May 2024</b>	13 Mar 2024	---	
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed	Client Info	<b>N/A</b>	N/A	---	
Sample Status		<b>ABNORMAL</b>	ATTENTION	---	

## WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184	>40	<b>13</b>	16	---	
Iron	ppm	ASTM D5185m	>55	<b>41</b>	36	---
Chromium	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	---
Lead	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>7	<b>&lt;1</b>	0	---
Tin	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m		<b>3</b>	<1	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Calcium	ppm	ASTM D5185m		<b>15</b>	9	---
Phosphorus	ppm	ASTM D5185m		<b>241</b>	211	---
Zinc	ppm	ASTM D5185m		<b>11</b>	0	---
Sulfur	ppm	ASTM D5185m		<b>6153</b>	5954	---

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>35	<b>6</b>	5	---
Sodium	ppm	ASTM D5185m		<b>3</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	0	---
Water	%	ASTM D6304	>0.02	<b>0.007</b>	0.003	---
ppm Water	ppm	ASTM D6304	>200	<b>74</b>	31	---

## FLUID CLEANLINESS

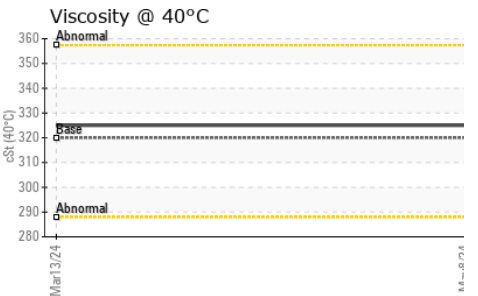
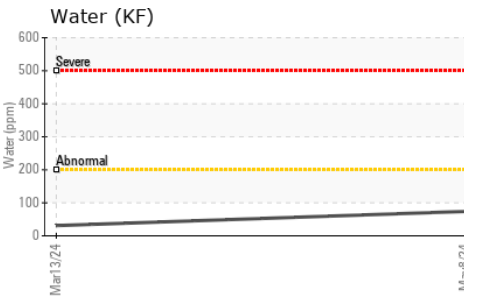
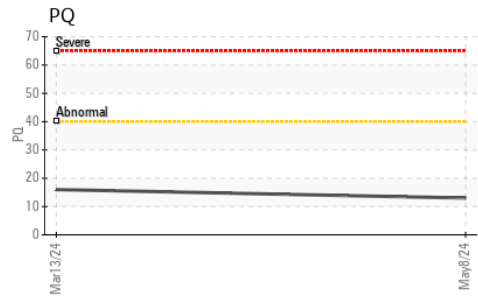
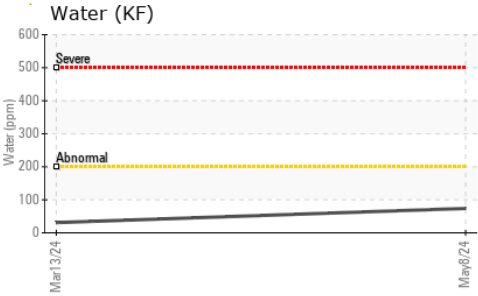
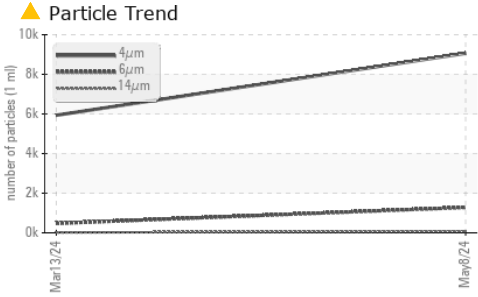
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647		<b>9064</b>	5935	---
Particles >6µm	ASTM D7647	>320	<b>1281</b>	477	---
Particles >14µm	ASTM D7647	>40	<b>72</b>	16	---
Particles >21µm	ASTM D7647	>10	<b>9</b>	5	---
Particles >38µm	ASTM D7647	>3	<b>0</b>	1	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	<b>20/17/13</b>	20/16/11	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	<b>0.36</b>	0.32	---



# 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	>0.02	NEG	---
Free Water	scalar	*Visual		NEG	---

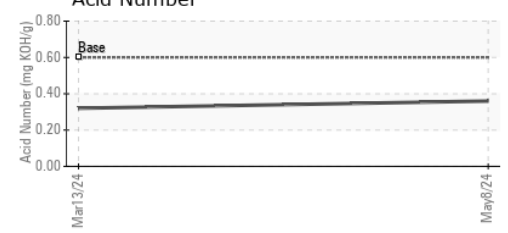
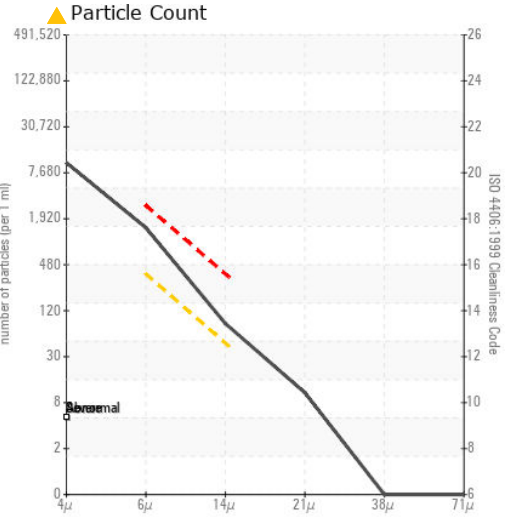
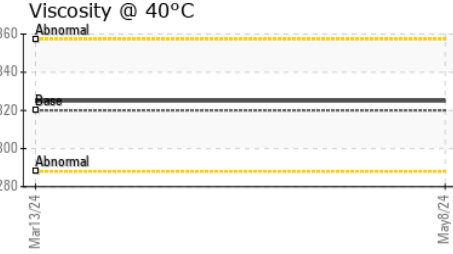
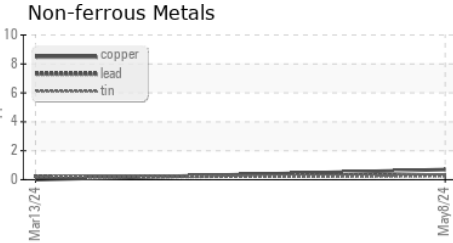
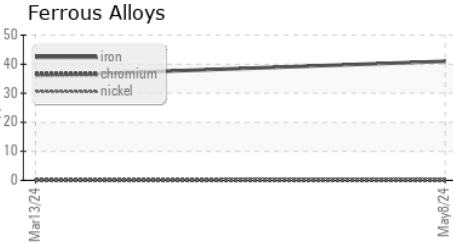
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	<b>325</b>	325

SAMPLE IMAGES	method	limit/base	current	history1	history2
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**Color**

**Bottom**

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX015057      **Received** : 18 Jun 2024  
**Lab Number** : 06214013      **Tested** : 20 Jun 2024  
**Unique Number** : 11086877      **Diagnosed** : 20 Jun 2024 - Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

**NORDEX USA - Chicago**  
 300 SOUTH WACKER DRIVE, SUITE 1500  
 CHICAGO, IL 60606  
 Contact: DEVIN LINEHAN  
 DLinehan@nordex-online.com

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)