



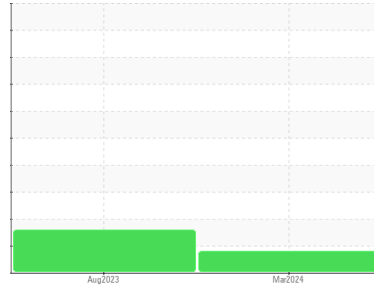
# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**EL SAUZ [200007686]**  
 Machine Id  
**E03WEA90031 (S/N EWP-03411)**  
 Component  
**Wind Turbine Gearbox**  
 Fluid  
**FUCHS RENOLIN UNISYN CLP 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 moderate 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>NX015101</b>	NX014514	---
Sample Date	Client Info		<b>08 Mar 2024</b>	08 Aug 2023	---
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>ATTENTION</b>	ATTENTION	---

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>50	<b>8</b>	20	---
Iron	ppm	ASTM D5185m	>30	<b>4</b>	10
Chromium	ppm	ASTM D5185m	>3	<b>0</b>	0
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0
Titanium	ppm	ASTM D5185m	>10	<b>0</b>	0
Silver	ppm	ASTM D5185m		<b>0</b>	0
Aluminum	ppm	ASTM D5185m	>30	<b>&lt;1</b>	0
Lead	ppm	ASTM D5185m	>15	<b>2</b>	2
Copper	ppm	ASTM D5185m	>10	<b>0</b>	<1
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0
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>1</b>	4
Barium	ppm	ASTM D5185m		<b>0</b>	2
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	<1
Calcium	ppm	ASTM D5185m		<b>11</b>	27
Phosphorus	ppm	ASTM D5185m		<b>180</b>	264
Zinc	ppm	ASTM D5185m		<b>0</b>	2
Sulfur	ppm	ASTM D5185m		<b>5394</b>	6715

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+15	<b>2</b>	5
Sodium	ppm	ASTM D5185m		<b>0</b>	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1
Water	%	ASTM D6304	>0.02	<b>0.005</b>	0.004
ppm Water	ppm	ASTM D6304	>200	<b>56</b>	45.3

## FLUID CLEANLINESS

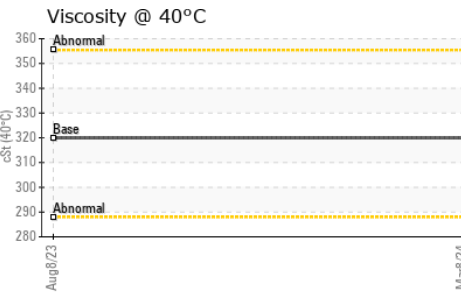
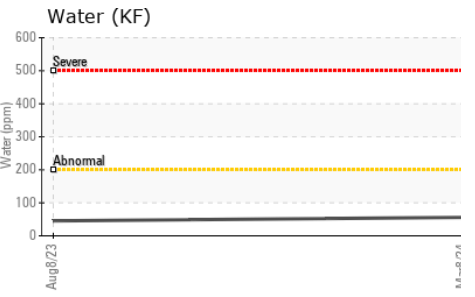
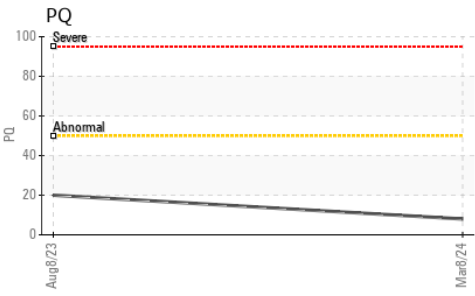
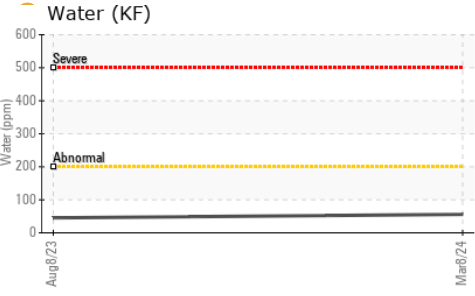
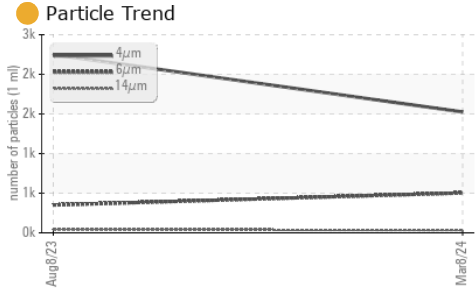
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>1525</b>	2250	---
Particles >6µm	ASTM D7647	>320	<b>503</b>	351	---
Particles >14µm	ASTM D7647	>40	<b>34</b>	40	---
Particles >21µm	ASTM D7647	>10	<b>7</b>	11	---
Particles >38µm	ASTM D7647	>3	<b>1</b>	1	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	<b>18/16/12</b>	18/16/12	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	<b>0.35</b>	0.40



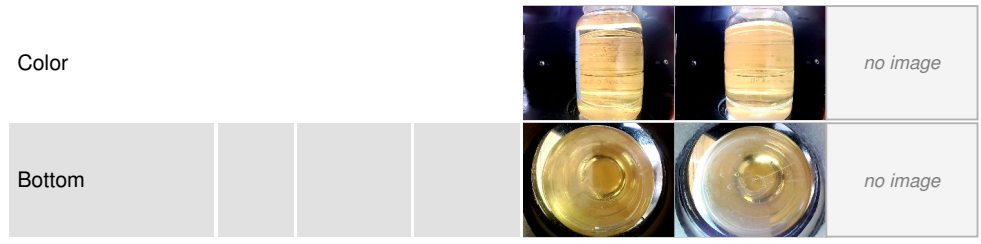
# OIL ANALYSIS REPORT



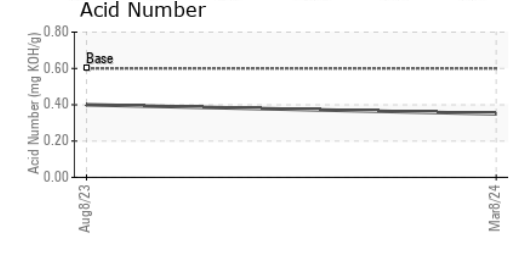
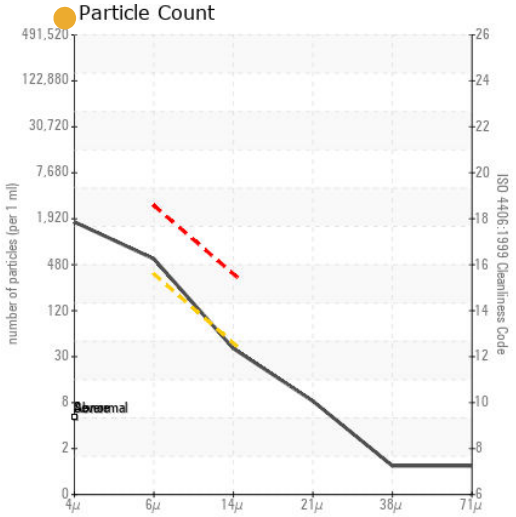
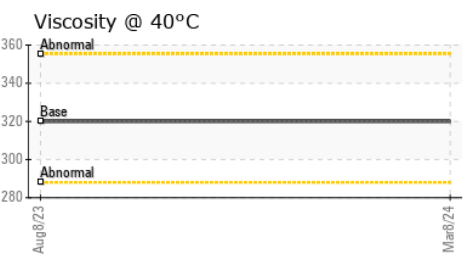
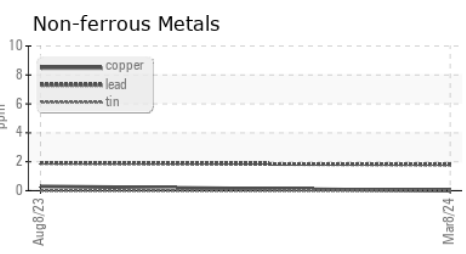
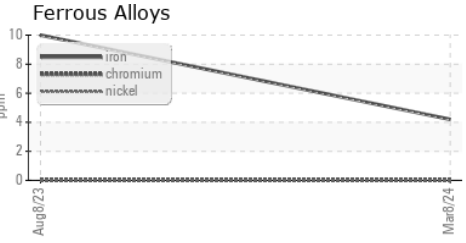
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	320	320	---

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX015101      **Received** : 19 Mar 2024  
**Lab Number** : 06123088      **Tested** : 20 Mar 2024  
**Unique Number** : 10937239      **Diagnosed** : 21 Mar 2024 - Angela Borella  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

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

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)