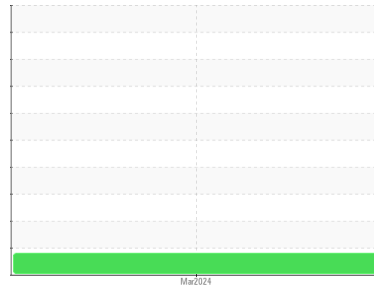




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**CAMERON [200004662]**  
 Machine Id  
**D-36 (S/N 22217)**  
 Component  
**Wind Turbine Gearbox**  
 Fluid  
**GEAR OIL (PAO) ISO 320 (--- LTR)**

## DIAGNOSIS

### ▲ Recommendation

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

### ▲ Wear

The iron level is abnormal. All other component wear rates are normal.

### Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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>NX015433</b>	---	---
Sample Date	Client Info		<b>27 Mar 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</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	>50	<b>16</b>	---	---
Iron	ppm	ASTM D5185m	>30	<b>▲ 45</b>	---
Chromium	ppm	ASTM D5185m	>3	<b>0</b>	---
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	---
Titanium	ppm	ASTM D5185m	>10	<b>0</b>	---
Silver	ppm	ASTM D5185m		<b>0</b>	---
Aluminum	ppm	ASTM D5185m	>30	<b>0</b>	---
Lead	ppm	ASTM D5185m	>15	<b>3</b>	---
Copper	ppm	ASTM D5185m	>10	<b>&lt;1</b>	---
Tin	ppm	ASTM D5185m	>10	<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	25	<b>2</b>	---
Barium	ppm	ASTM D5185m	12	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m	5	<b>0</b>	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---
Magnesium	ppm	ASTM D5185m	25	<b>0</b>	---
Calcium	ppm	ASTM D5185m	25	<b>2</b>	---
Phosphorus	ppm	ASTM D5185m	375	<b>216</b>	---
Zinc	ppm	ASTM D5185m	25	<b>32</b>	---
Sulfur	ppm	ASTM D5185m	4900	<b>5736</b>	---

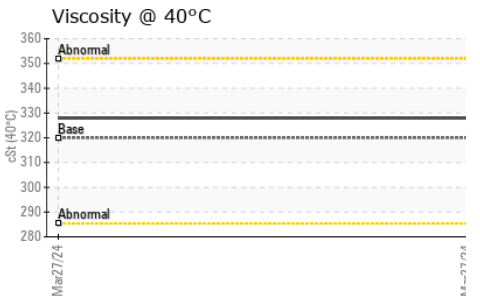
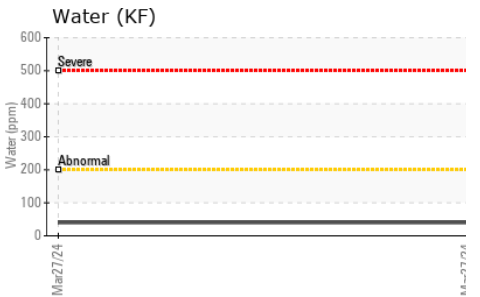
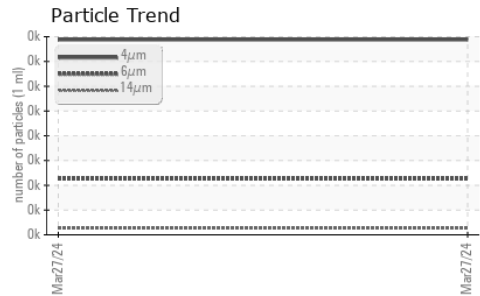
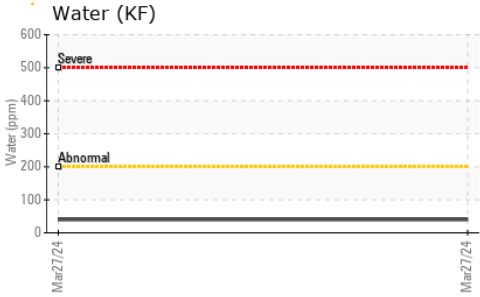
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+15	<b>&lt;1</b>	---
Sodium	ppm	ASTM D5185m		<b>18</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	---
Water	%	ASTM D6304	>0.02	<b>0.003</b>	---
ppm Water	ppm	ASTM D6304	>200	<b>40</b>	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>394</b>	---	---
Particles >6µm	ASTM D7647	>320	<b>113</b>	---	---
Particles >14µm	ASTM D7647	>40	<b>13</b>	---	---
Particles >21µm	ASTM D7647	>10	<b>5</b>	---	---
Particles >38µm	ASTM D7647	>3	<b>0</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	<b>16/14/11</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.10	<b>0.67</b>	---



# OIL ANALYSIS REPORT



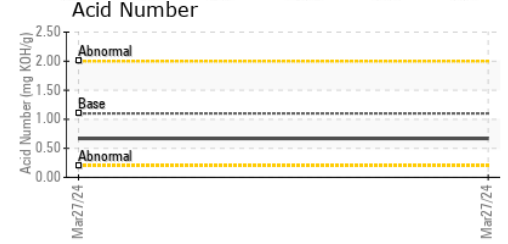
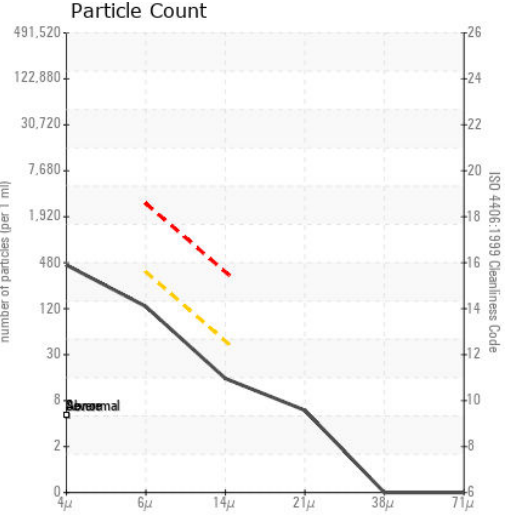
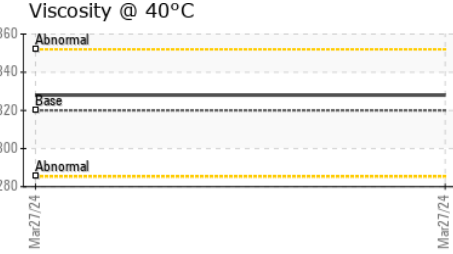
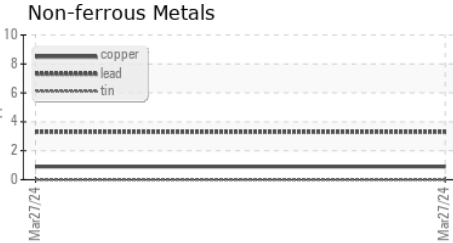
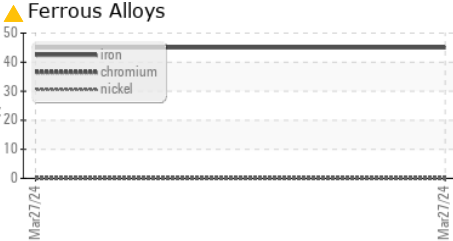
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.02	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	<b>328</b>	---

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.** : NX015433      **Received** : 18 Apr 2024  
**Lab Number** : **06153129**      **Tested** : 19 Apr 2024  
**Unique Number** : 10983207      **Diagnosed** : 22 Apr 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)