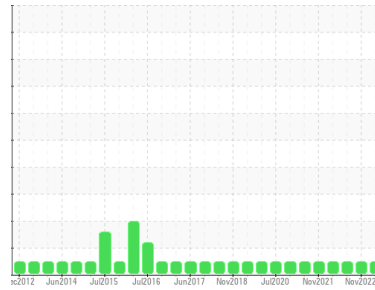




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**HIGHLAND [600380500]**  
 Machine Id  
**22WEA80830**  
 Component  
**Wind Turbine Gearbox**  
 Fluid  
**MOBIL XMP 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>NX05928198</b>	NX05710368	NX05700293
Sample Date	Client Info			<b>11 Jul 2023</b>	30 Nov 2022	11 Oct 2022
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>80	<b>18</b>	7	11
Iron	ppm	ASTM D5185m	>150	<b>78</b>	65	67
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>3</b>	1	4
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	<1	29
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	1	0
Calcium	ppm	ASTM D5185m		<b>&lt;1</b>	3	43
Phosphorus	ppm	ASTM D5185m	315	<b>365</b>	378	392
Zinc	ppm	ASTM D5185m		<b>40</b>	37	31
Sulfur	ppm	ASTM D5185m		<b>14436</b>	12910	15091

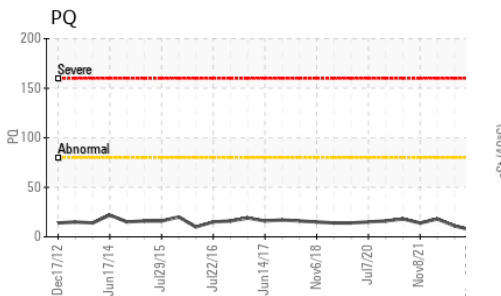
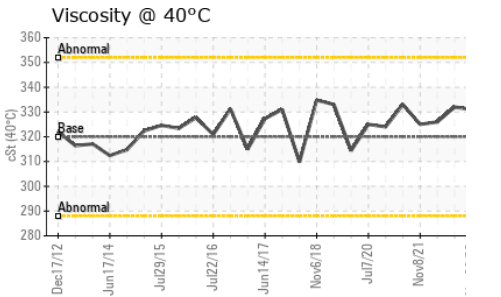
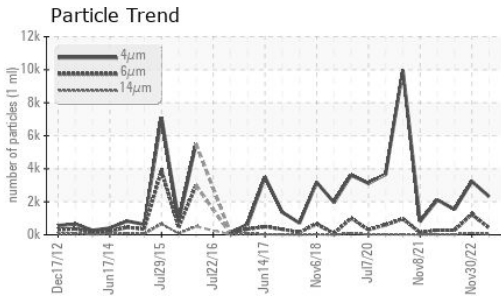
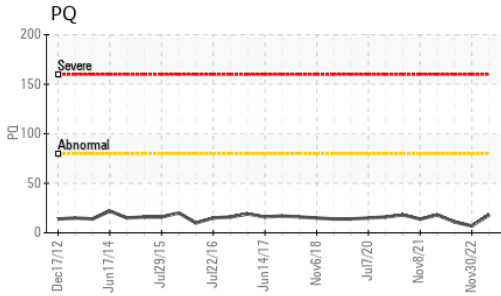
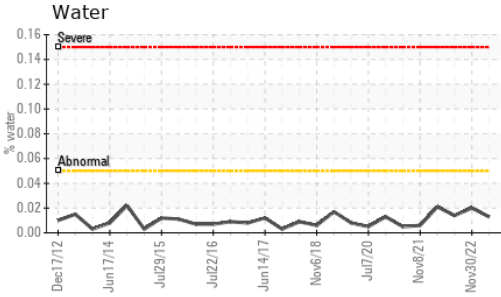
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Water	%	ASTM D6304	>0.05	<b>0.013</b>	0.020	0.014
ppm Water	ppm	ASTM D6304	>500	<b>134.5</b>	205.0	147.9

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>2314</b>	3238	1544
Particles >6µm		ASTM D7647	>2500	<b>421</b>	1241	282
Particles >14µm		ASTM D7647	>320	<b>33</b>	102	20
Particles >21µm		ASTM D7647	>80	<b>9</b>	23	7
Particles >38µm		ASTM D7647	>20	<b>0</b>	2	0
Particles >71µm		ASTM D7647	>4	<b>0</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>--/18/15	<b>18/16/12</b>	19/17/14	18/15/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.28</b>	1.22	1.25



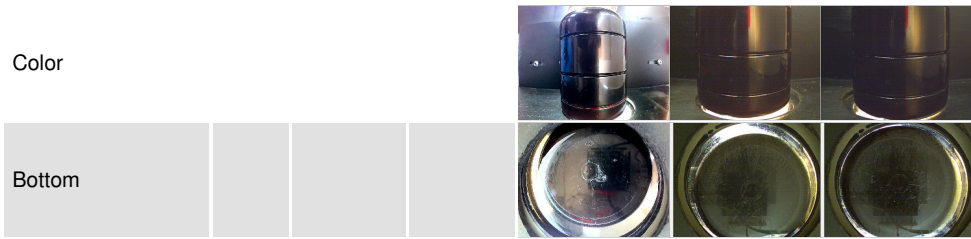
# OIL ANALYSIS REPORT



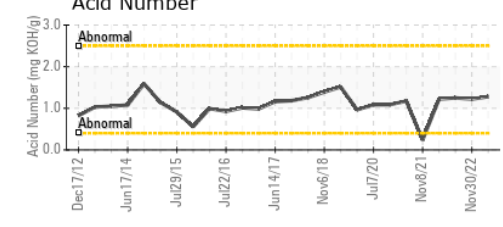
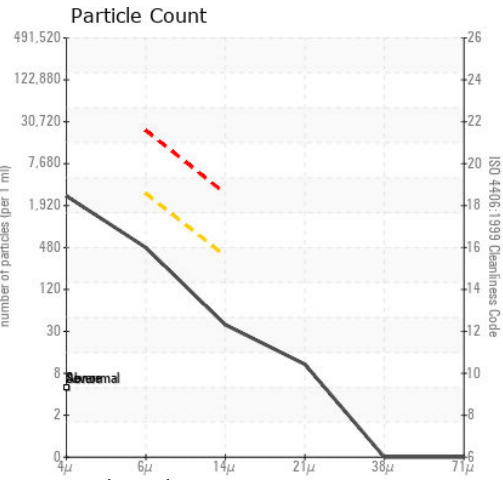
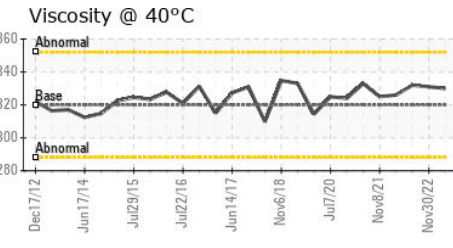
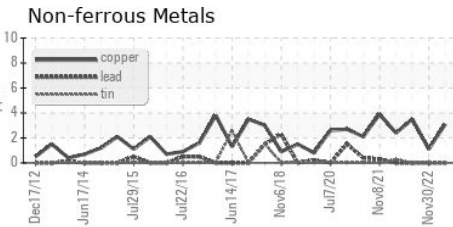
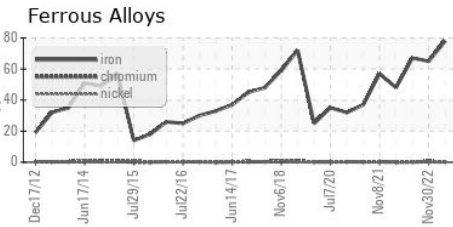
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	330	331

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



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : NX05928198  
**Lab Number** : 05928198  
**Unique Number** : 10608145  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount )

**NORDEX USA - HIGHLAND & HIGHLAND NORTH**  
 300 SOUTH WACKER DRIVE, SUITE 1500  
 CHICAGO, IL  
 US 60606

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)

Contact: Robert Warner  
 rwarner@everpower.com

T: x:  
 F: x: