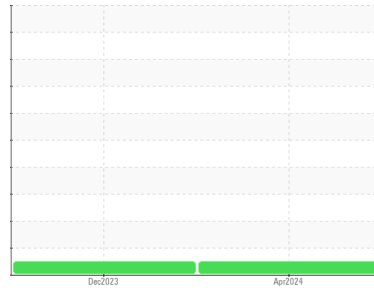




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
BEKEVAR [46004111]
 Machine Id
D622345 (S/N CM0078)
 Component
Wind Turbine Gearbox
 Fluid
SHELL OMALA S5 WIND 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 oil. The amount and size of particulates present in the system are 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			NX014230	NX014242	---
Sample Date	Client Info			26 Apr 2024	20 Dec 2023	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Oil Changed	Client Info			Not Changed	Not Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		16	18	---
Iron	ppm	ASTM D5185m	>200	2	0	---
Chromium	ppm	ASTM D5185m	>10	0	0	---
Nickel	ppm	ASTM D5185m	>10	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m		2	<1	---
Lead	ppm	ASTM D5185m		0	0	---
Copper	ppm	ASTM D5185m		<1	0	---
Tin	ppm	ASTM D5185m		0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
Cadmium	ppm	ASTM D5185m		0	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m		0	0	---
Calcium	ppm	ASTM D5185m		0	0	---
Phosphorus	ppm	ASTM D5185m		486	432	---
Zinc	ppm	ASTM D5185m		0	4	---
Sulfur	ppm	ASTM D5185m		3889	3325	---

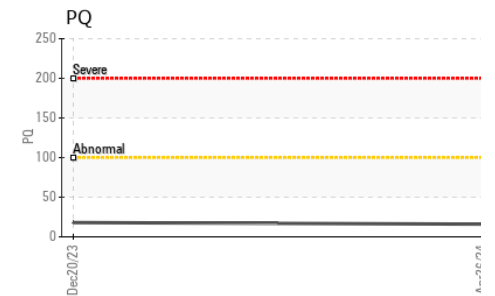
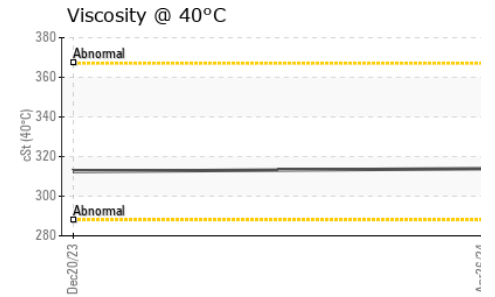
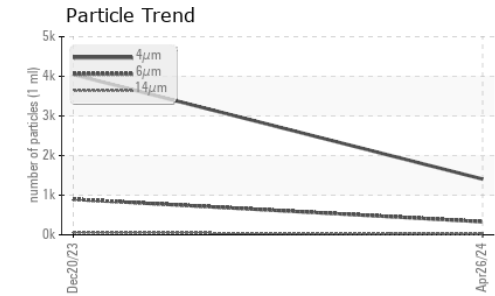
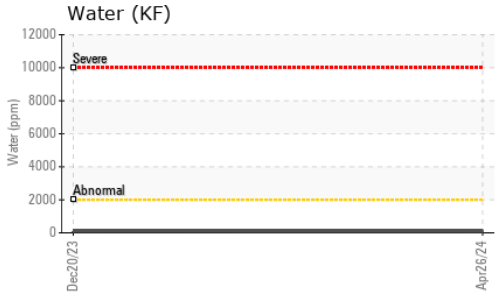
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		1	<1	---
Sodium	ppm	ASTM D5185m		1	0	---
Potassium	ppm	ASTM D5185m	>20	<1	1	---
Water	%	ASTM D6304	>0.2	0.009	0.010	---
ppm Water	ppm	ASTM D6304	>2000	97	102	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		1406	4044	---
Particles >6µm		ASTM D7647	>1300	331	897	---
Particles >14µm		ASTM D7647	>160	19	57	---
Particles >21µm		ASTM D7647	>40	4	10	---
Particles >38µm		ASTM D7647	>10	1	1	---
Particles >71µm		ASTM D7647	>3	1	0	---
Oil Cleanliness		ISO 4406 (c)	>17/14	16/11	17/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.96	0.95	---



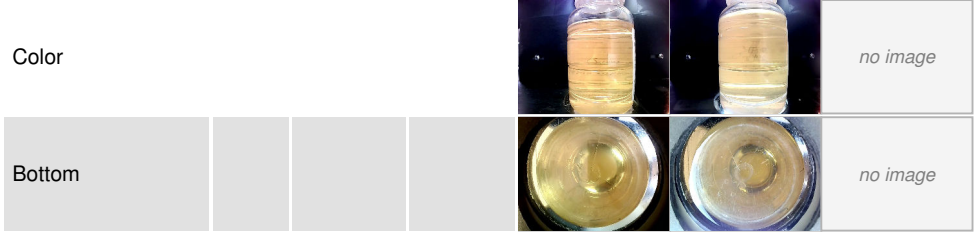
OIL ANALYSIS REPORT



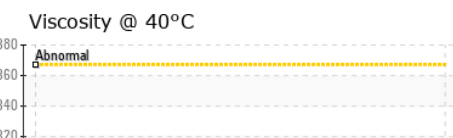
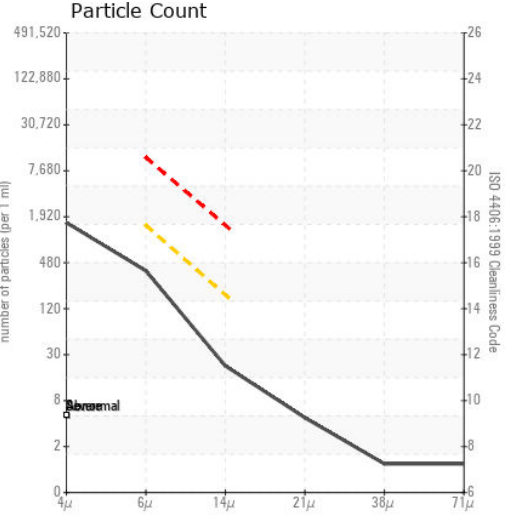
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	313.9	312.5	---

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. : NX014230
Lab Number : 06181867
Unique Number : 11033193
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

NORDEX USA - Chicago
 300 SOUTH WACKER DRIVE, SUITE 1500
 CHICAGO, IL
 US 60606
 Contact: KEVIN REGAN
 KRegan@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)

T: (312)386-7102