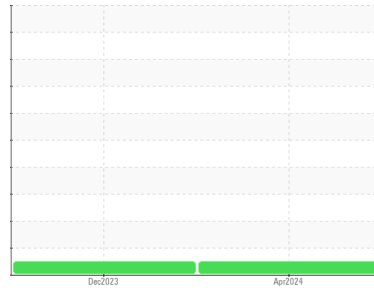




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
BEKEVAR [46004111]
 Machine Id
D622324 (S/N CM0072)
 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

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			NX014233	NX014243	---
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		13	12	---
Iron	ppm	ASTM D5185m	>200	<1	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		0	0	---
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		474	436	---
Zinc	ppm	ASTM D5185m		0	3	---
Sulfur	ppm	ASTM D5185m		3861	3357	---

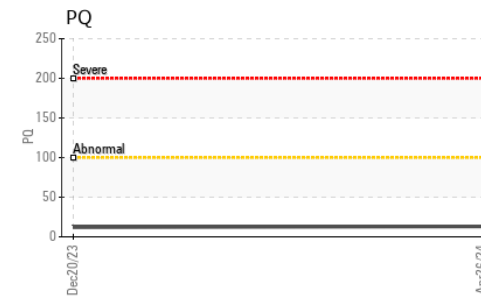
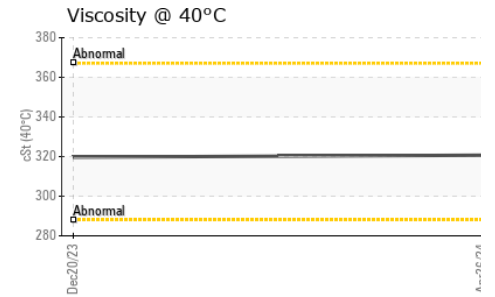
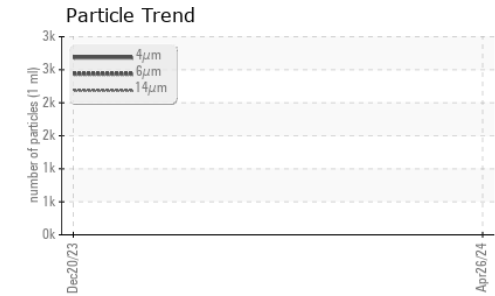
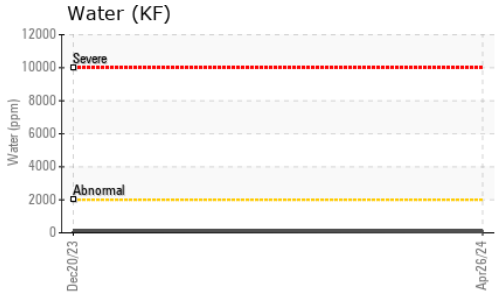
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		<1	<1	---
Sodium	ppm	ASTM D5185m		<1	0	---
Potassium	ppm	ASTM D5185m	>20	0	<1	---
Water	%	ASTM D6304	>0.2	0.007	0.013	---
ppm Water	ppm	ASTM D6304	>2000	74	131	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		2683	---	---
Particles >6µm		ASTM D7647	>1300	799	---	---
Particles >14µm		ASTM D7647	>160	49	---	---
Particles >21µm		ASTM D7647	>40	11	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>17/14	17/13	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.93	0.94	---



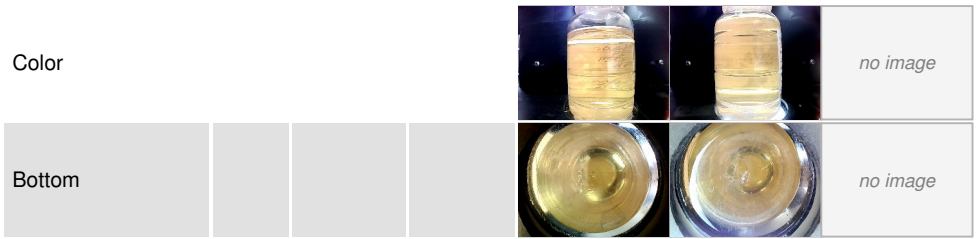
OIL ANALYSIS REPORT



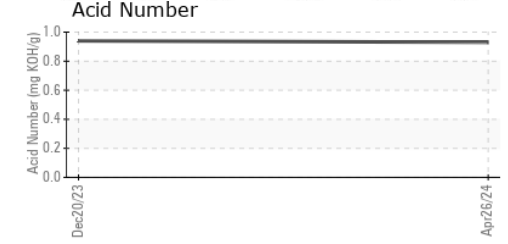
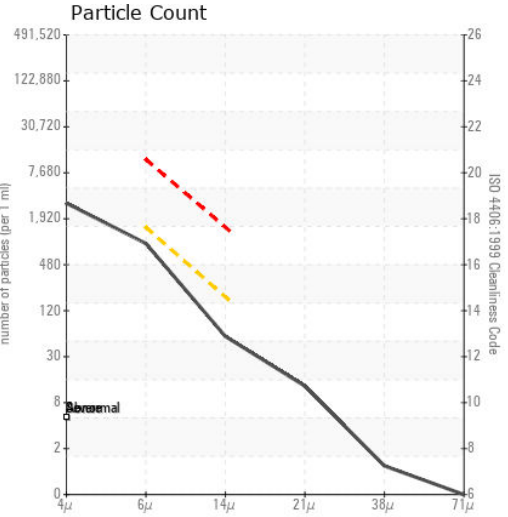
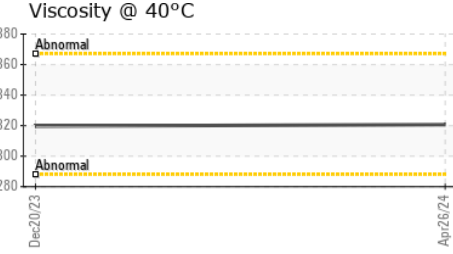
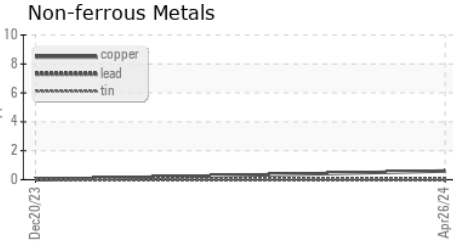
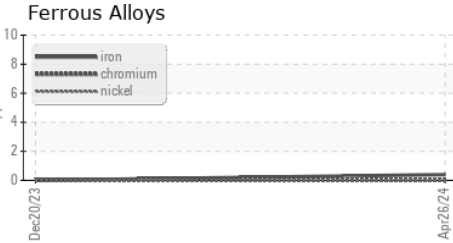
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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	320.7	319.7	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX014233 **Received** : 16 May 2024
Lab Number : **06181859** **Tested** : 20 May 2024
Unique Number : 11033185 **Diagnosed** : 20 May 2024 - Angela Borella
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) F: (312)386-7102