



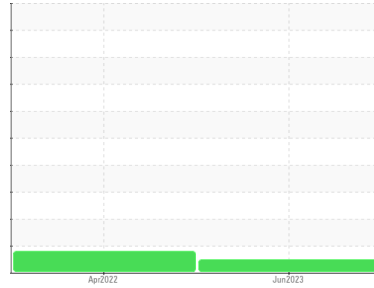
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
PRIDDY [200005313]
 Machine Id
48WEA88850 (S/N EWP-03112)
 Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN CLP ISO 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	NX010170	NX05593173	---
Sample Date	Client Info	12 Jun 2023	08 Apr 2022	---
Machine Age	hrs	Client Info	0	2128
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	---
Sample Status		NORMAL	ABNORMAL	---

WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184	>80	14	14	
Iron	ppm	ASTM D5185m	>150	14	7
Chromium	ppm	ASTM D5185m	>5	<1	<1
Nickel	ppm	ASTM D5185m	>10	1	<1
Titanium	ppm	ASTM D5185m	>10	0	0
Silver	ppm	ASTM D5185m		0	<1
Aluminum	ppm	ASTM D5185m	>10	0	<1
Lead	ppm	ASTM D5185m	>20	1	2
Copper	ppm	ASTM D5185m	>50	0	<1
Tin	ppm	ASTM D5185m	>10	0	<1
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		8	8
Barium	ppm	ASTM D5185m		0	0
Molybdenum	ppm	ASTM D5185m		0	<1
Manganese	ppm	ASTM D5185m		<1	<1
Magnesium	ppm	ASTM D5185m		0	0
Calcium	ppm	ASTM D5185m		23	22
Phosphorus	ppm	ASTM D5185m		223	210
Zinc	ppm	ASTM D5185m		0	<1
Sulfur	ppm	ASTM D5185m		6469	5078

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	2	7
Sodium	ppm	ASTM D5185m	>20	2	2
Potassium	ppm	ASTM D5185m	>20	4	<1
Water	%	ASTM D6304	>0.05	0.006	0.017
ppm Water	ppm	ASTM D6304	>500	65.2	171.7

FLUID CLEANLINESS

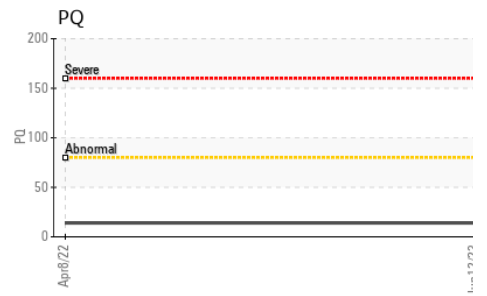
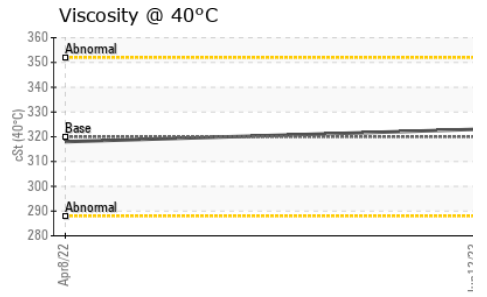
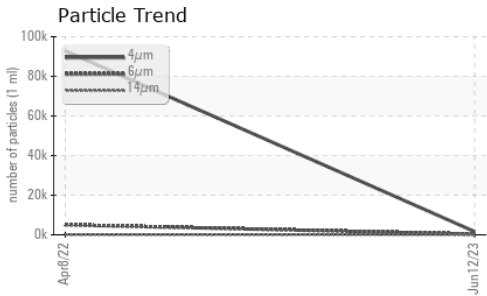
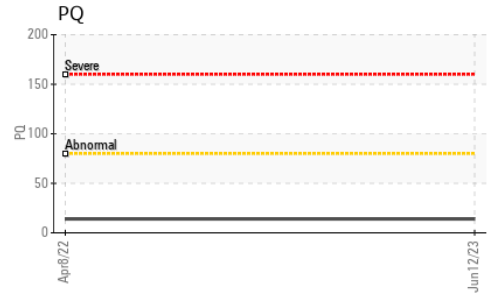
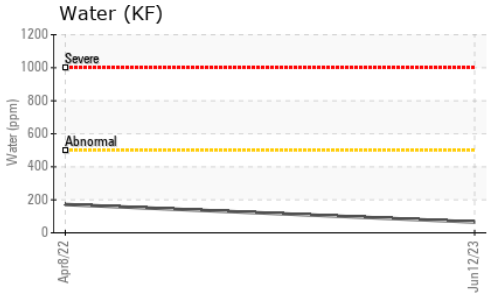
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		1644	92881
Particles >6µm	ASTM D7647	>2500	312	▲ 5037
Particles >14µm	ASTM D7647	>320	30	19
Particles >21µm	ASTM D7647	>80	7	6
Particles >38µm	ASTM D7647	>20	1	1
Particles >71µm	ASTM D7647	>4	0	0
Oil Cleanliness	ISO 4406 (c)	>--/18/15	18/15/12	▲ 24/20/11

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		0.38	0.42



OIL ANALYSIS REPORT



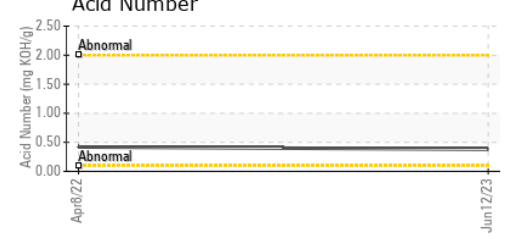
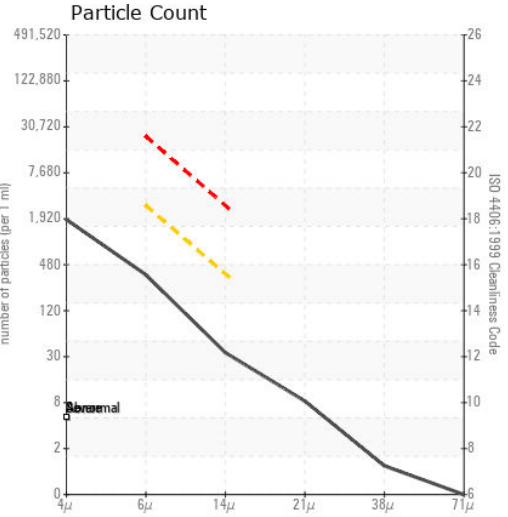
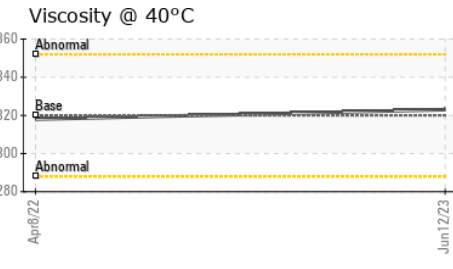
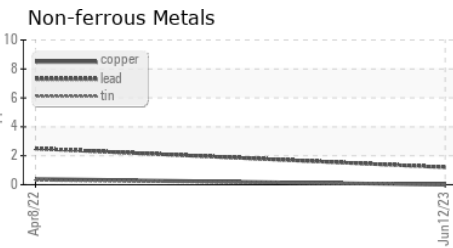
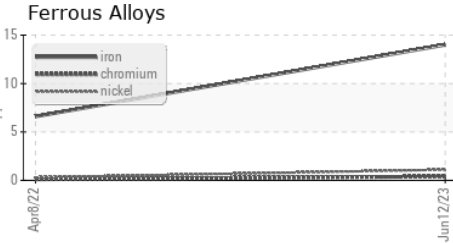
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 320	323	318	---

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. : NX010170 **Received** : 22 Jun 2023
Lab Number : 05881449 **Tested** : 26 Jun 2023
Unique Number : 10526552 **Diagnosed** : 26 Jun 2023 - Don Baldrige

NORDEX USA - Chicago
 300 SOUTH WACKER DRIVE, SUITE 1500
 CHICAGO, IL
 US 60606
 Contact: DEVIN LINEHAN
 DLinehan@nordex-online.com
 T: (312)386-4124
 F: (312)386-7102

Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)
 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)