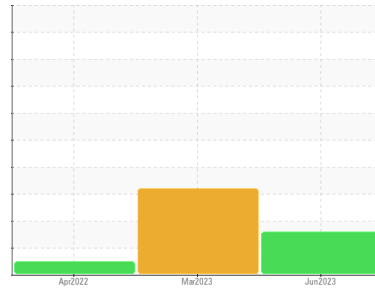




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
PRIDDY [200005313]
 Machine Id
12WEA88867 - C2

Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN UNISYN CKC ISO 320 (--- LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present 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	NX010229	NX011780	NX05593167
Sample Date	Client Info	09 Jun 2023	08 Mar 2023	11 Apr 2022
Machine Age	hrs	Client Info	12937	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184	>50	15	15	21	
Iron	ppm	ASTM D5185m	>30	15	12	5
Chromium	ppm	ASTM D5185m	>3	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	1	<1	<1
Titanium	ppm	ASTM D5185m	>10	0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>30	0	0	<1
Lead	ppm	ASTM D5185m	>15	2	0	2
Copper	ppm	ASTM D5185m	>10	0	<1	<1
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	25	7	9	9
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		0	2	0
Calcium	ppm	ASTM D5185m	17	24	22	20
Phosphorus	ppm	ASTM D5185m	200	225	206	225
Zinc	ppm	ASTM D5185m		0	6	0
Sulfur	ppm	ASTM D5185m	5000	6565	5918	5435

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+15	3	▲ 17	7
Sodium	ppm	ASTM D5185m		3	2	1
Potassium	ppm	ASTM D5185m	>20	3	<1	<1
Water	%	ASTM D6304	>0.02	0.005	0.005	0.014
ppm Water	ppm	ASTM D6304	>200	59.2	52.9	140.5

FLUID CLEANLINESS

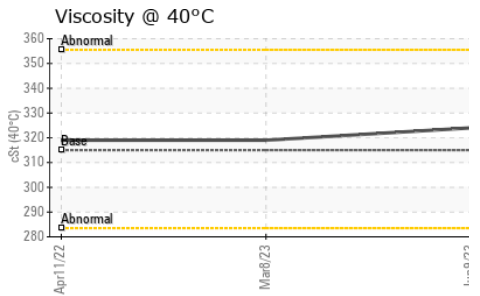
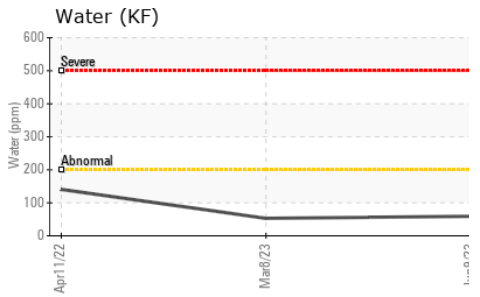
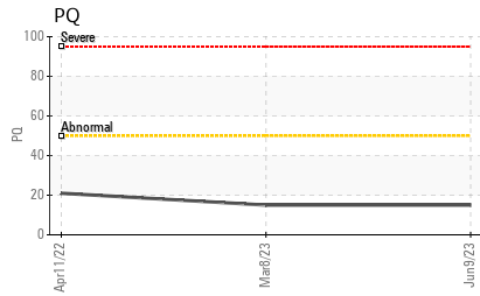
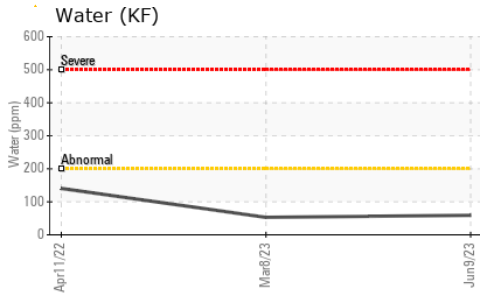
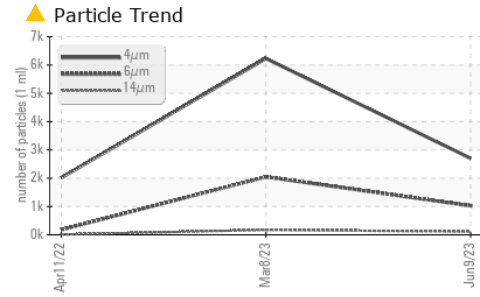
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647		2702	6229	2013
Particles >6µm	ASTM D7647	>320	▲ 1026	▲ 2050	180
Particles >14µm	ASTM D7647	>40	▲ 111	▲ 172	9
Particles >21µm	ASTM D7647	>10	▲ 28	▲ 31	2
Particles >38µm	ASTM D7647	>3	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/15/12	▲ 19/17/14	▲ 20/18/15	18/15/10

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045	0.9	0.31	0.28	0.43



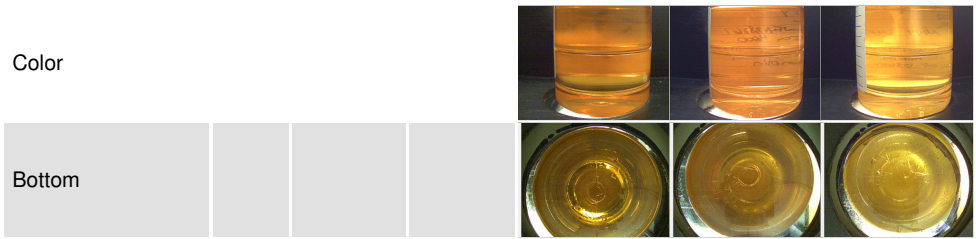
OIL ANALYSIS REPORT



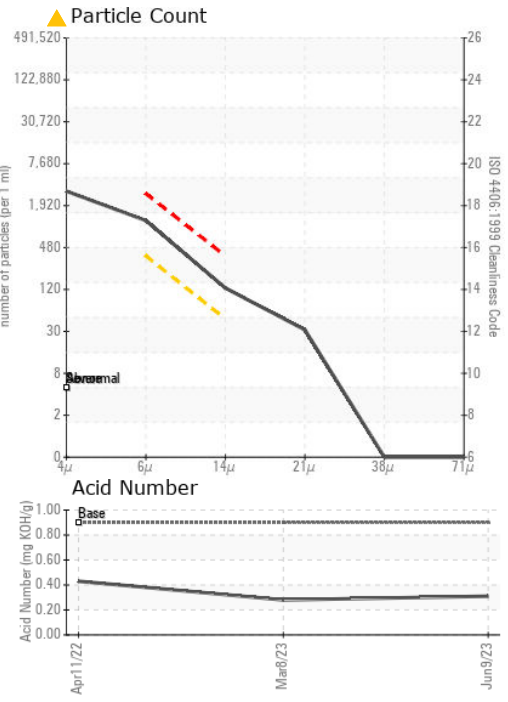
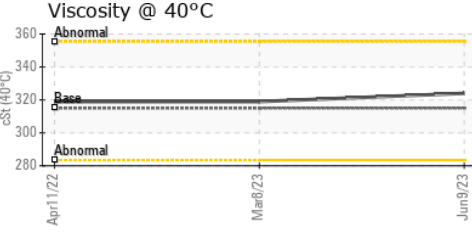
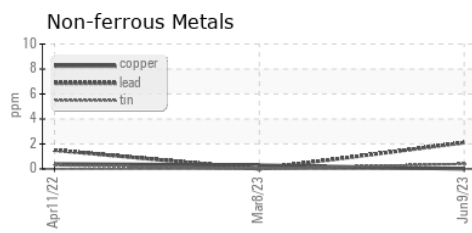
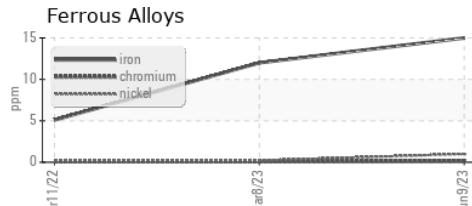
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	315	324	319

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX010229
Lab Number : 05881446
Unique Number : 10526549
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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