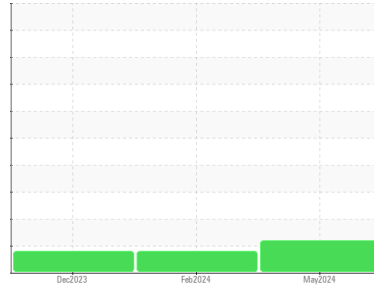




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

EL SAUZ [200007686]

Machine Id

N06-08WEA90076 (S/N W-123152)

Component

Wind Turbine Gearbox

Fluid

FUCHS RENOLIN UNISYN CLP 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		NX015059	NX014623	NX014654
Sample Date	Client Info		10 May 2024	16 Feb 2024	12 Dec 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>40	15	16	21	
Iron	ppm	ASTM D5185m	>55	26	24	25
Chromium	ppm	ASTM D5185m	>2	0	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>10	0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	2	0
Lead	ppm	ASTM D5185m	>3	<1	<1	0
Copper	ppm	ASTM D5185m	>7	<1	<1	<1
Tin	ppm	ASTM D5185m	>3	<1	<1	0
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		4	2	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		<1	<1	0
Calcium	ppm	ASTM D5185m		17	21	63
Phosphorus	ppm	ASTM D5185m		247	201	214
Zinc	ppm	ASTM D5185m		2	2	10
Sulfur	ppm	ASTM D5185m		6185	4842	4942

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>35	7	7	6
Sodium	ppm	ASTM D5185m		3	1	1
Potassium	ppm	ASTM D5185m	>20	3	2	0
Water	%	ASTM D6304	>0.02	0.007	0.016	0.007
ppm Water	ppm	ASTM D6304	>200	77	164	73

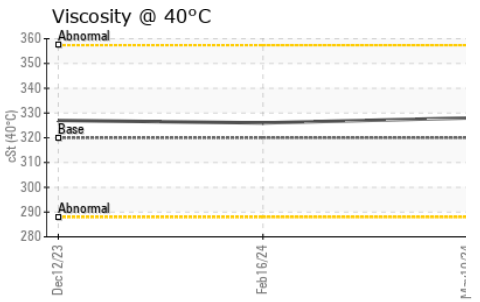
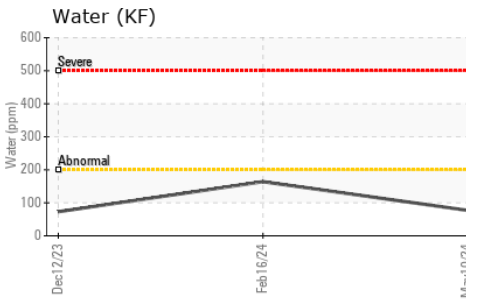
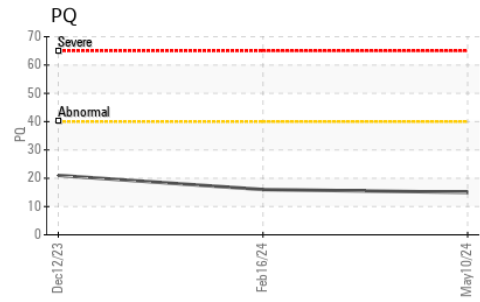
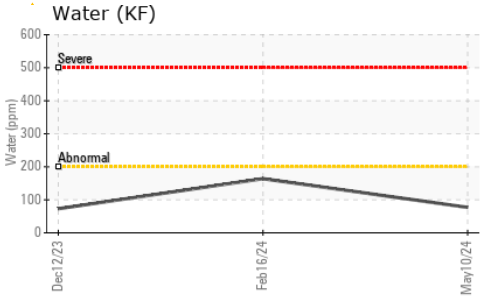
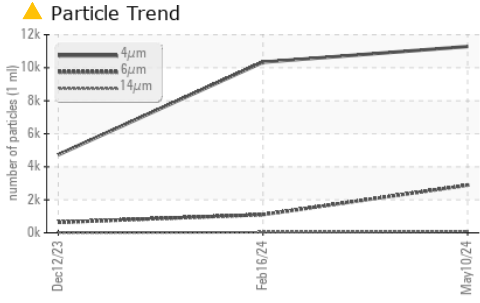
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		11286	10335	4731
Particles >6µm	ASTM D7647	>320	2884	1099	636
Particles >14µm	ASTM D7647	>40	83	36	12
Particles >21µm	ASTM D7647	>10	7	11	2
Particles >38µm	ASTM D7647	>3	1	2	0
Particles >71µm	ASTM D7647	>3	1	1	0
Oil Cleanliness	ISO 4406 (c)	>--/15/12	21/19/14	21/17/12	19/16/11

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	0.39	0.38	0.35

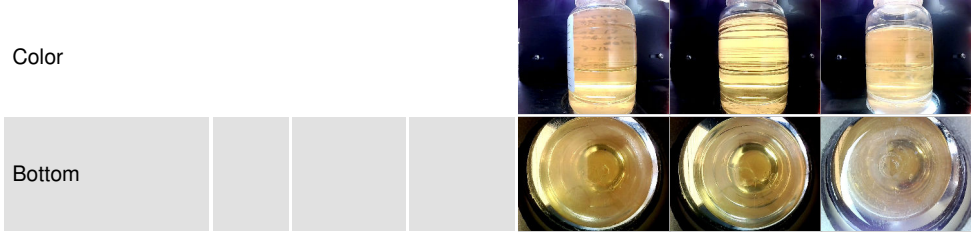
OIL ANALYSIS REPORT



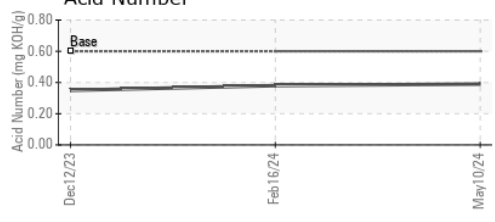
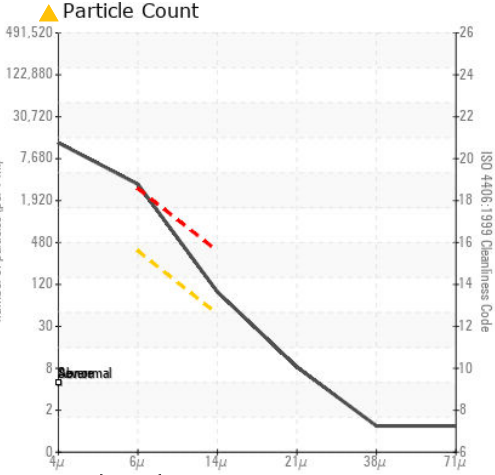
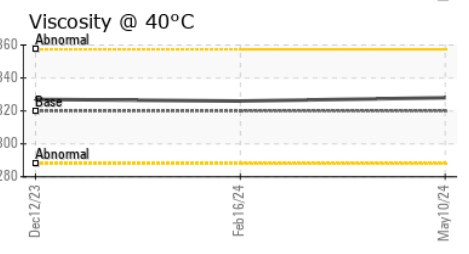
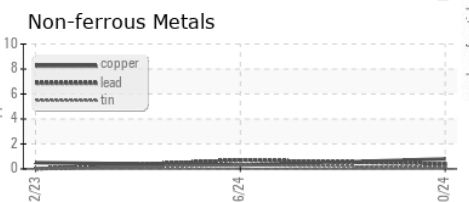
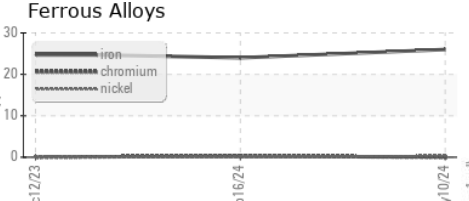
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 320	328	326	327

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX015059 **Received** : 18 Jun 2024
Lab Number : **06214010** **Tested** : 20 Jun 2024
Unique Number : 11086874 **Diagnosed** : 20 Jun 2024 - Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

NORDEX USA - Chicago
 300 SOUTH WACKER DRIVE, SUITE 1500
 CHICAGO, IL 60606
 Contact: DEVIN LINEHAN
 DLinehan@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)