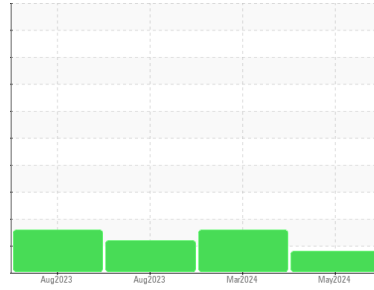




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

EL SAUZ [200007686]

Machine Id

E06-52WEA90038 (S/N W-122891)

Component

Wind Turbine Gearbox

Fluid

FUCHS RENOLIN UNISYN CLP 320 (--- LTR)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) 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	NX015110	NX015085	NX014620
Sample Date	Client Info	29 May 2024	13 Mar 2024	22 Aug 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184	>40	12	15	13	
Iron	ppm	ASTM D5185m	>55	36	29	25
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>10	0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	0	0
Lead	ppm	ASTM D5185m	>3	<1	<1	<1
Copper	ppm	ASTM D5185m	>7	<1	0	<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		3	<1	<1
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		0	0	<1
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		1	0	<1
Calcium	ppm	ASTM D5185m		14	6	17
Phosphorus	ppm	ASTM D5185m		244	209	220
Zinc	ppm	ASTM D5185m		18	<1	9
Sulfur	ppm	ASTM D5185m		6166	5964	5223

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>35	6	5	5
Sodium	ppm	ASTM D5185m		3	0	0
Potassium	ppm	ASTM D5185m	>20	4	0	1
Water	%	ASTM D6304	>0.02	0.001	0.004	0.003
ppm Water	ppm	ASTM D6304	>200	15	43	39.2

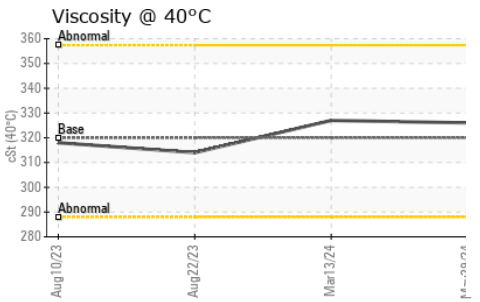
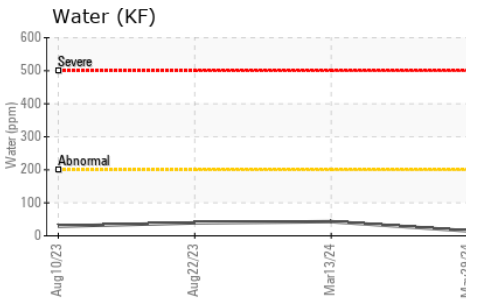
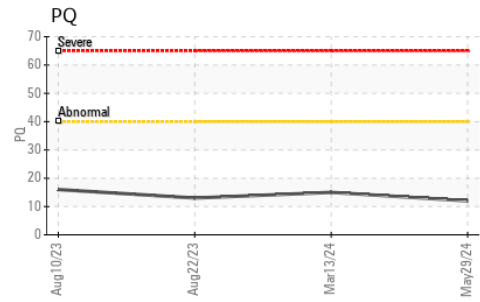
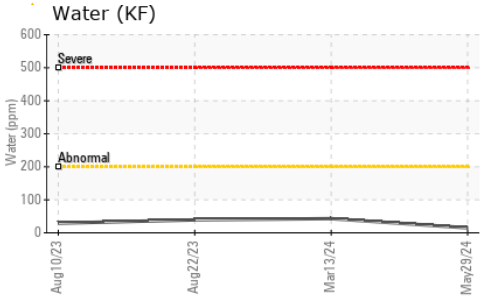
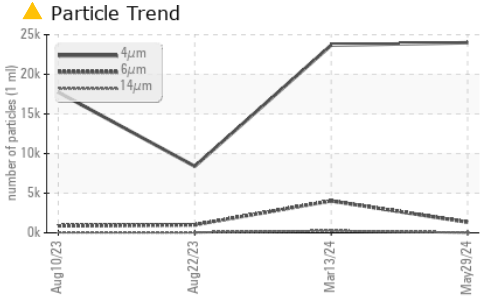
FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647		23994	23679	8397
Particles >6µm	ASTM D7647	>320	▲ 1342	▲ 4027	▲ 1007
Particles >14µm	ASTM D7647	>40	25	▲ 252	▲ 49
Particles >21µm	ASTM D7647	>10	3	▲ 51	8
Particles >38µm	ASTM D7647	>3	0	1	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/15/12	▲ 22/18/12	▲ 22/19/15	▲ 20/17/13

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	0.37	0.33	0.35

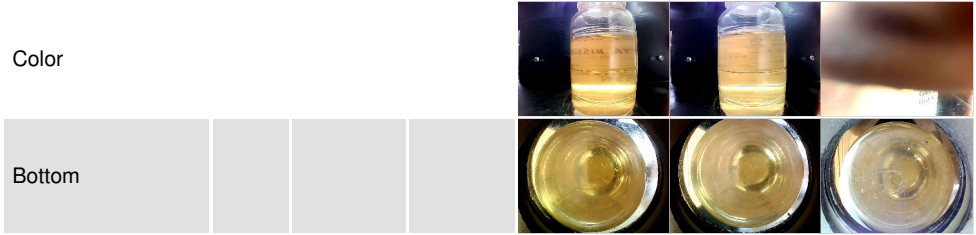
OIL ANALYSIS REPORT



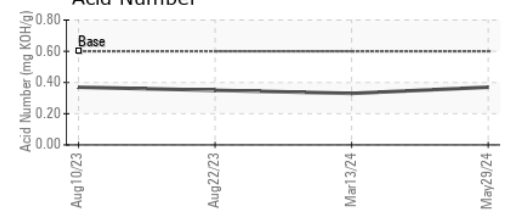
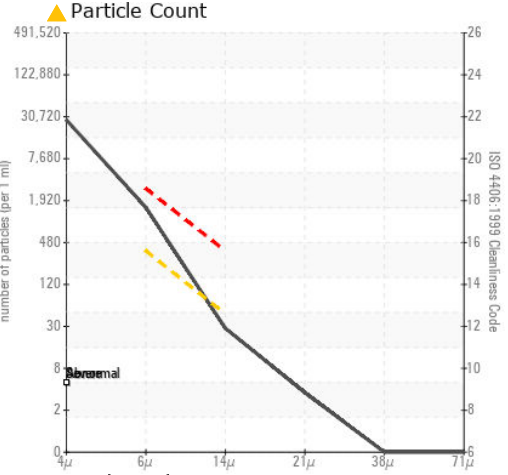
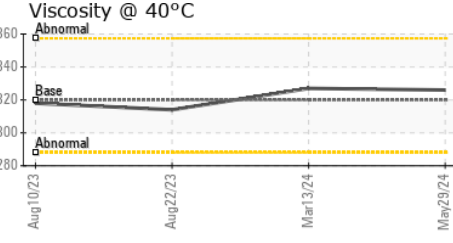
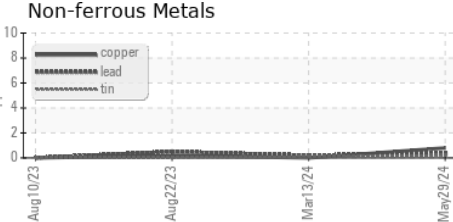
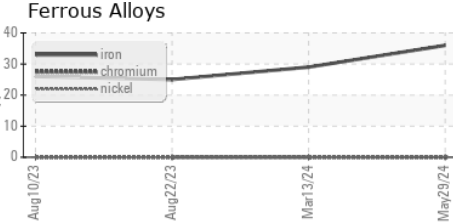
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX015110 **Received** : 18 Jun 2024
Lab Number : 06213999 **Tested** : 20 Jun 2024
Unique Number : 11086863 **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)