



PROBLEM SUMMARY

Sample Rating Trend

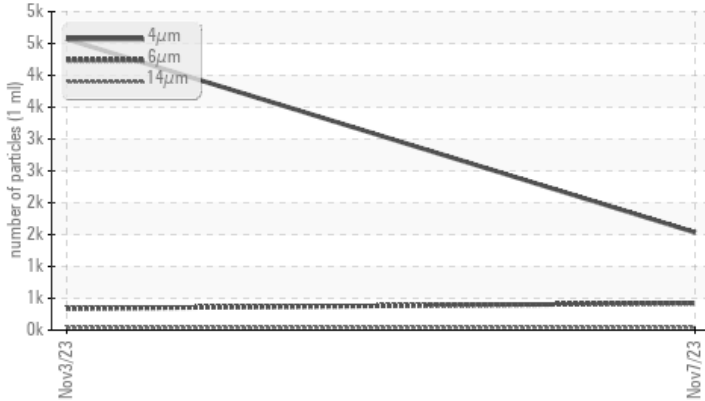
ISO

Area
EL SAUZ [200007686]
 Machine Id
L08WEA90360 (S/N W-123194)
 Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN UNISYN CLP 320 (--- LTR)



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ATTENTION	---
Particles >6µm	ASTM D7647	>320	▲ 423	▲ 340	---
Particles >14µm	ASTM D7647	>40	▲ 43	▲ 41	---
Particles >21µm	ASTM D7647	>10	▲ 12	▲ 12	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	▲ 18/16/13	▲ 19/16/13	---

Customer Id: NORDEX
 Sample No.: NX014597
 Lab Number: 06029368
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

03 Nov 2023 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report





OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
EL SAUZ [200007686]
 Machine Id
L08WEA90360 (S/N W-123194)
 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 moderate 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		NX014597	NX014586	---
Sample Date	Client Info		07 Nov 2023	03 Nov 2023	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			ATTENTION	ATTENTION	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>40	17	13	---
Iron	ppm	ASTM D5185m	>55	33	17
Chromium	ppm	ASTM D5185m	>2	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0
Titanium	ppm	ASTM D5185m	>10	<1	0
Silver	ppm	ASTM D5185m		0	0
Aluminum	ppm	ASTM D5185m	>15	2	0
Lead	ppm	ASTM D5185m	>3	1	0
Copper	ppm	ASTM D5185m	>7	<1	0
Tin	ppm	ASTM D5185m	>3	<1	0
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3	3
Barium	ppm	ASTM D5185m		0	0
Molybdenum	ppm	ASTM D5185m		<1	0
Manganese	ppm	ASTM D5185m		<1	<1
Magnesium	ppm	ASTM D5185m		<1	0
Calcium	ppm	ASTM D5185m		28	18
Phosphorus	ppm	ASTM D5185m		290	203
Zinc	ppm	ASTM D5185m		0	0
Sulfur	ppm	ASTM D5185m		7202	4874

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	9	7
Sodium	ppm	ASTM D5185m		6	2
Potassium	ppm	ASTM D5185m	>20	2	0
Water	%	ASTM D6304	>0.02	0.007	0.004
ppm Water	ppm	ASTM D6304	>200	73	44

FLUID CLEANLINESS

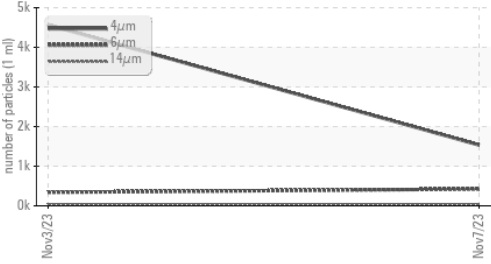
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		1534	4569	---
Particles >6µm	ASTM D7647	>320	▲ 423	▲ 340	---
Particles >14µm	ASTM D7647	>40	▲ 43	▲ 41	---
Particles >21µm	ASTM D7647	>10	▲ 12	▲ 12	---
Particles >38µm	ASTM D7647	>3	0	2	---
Particles >71µm	ASTM D7647	>3	0	1	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	▲ 18/16/13	▲ 19/16/13	---

FLUID DEGRADATION

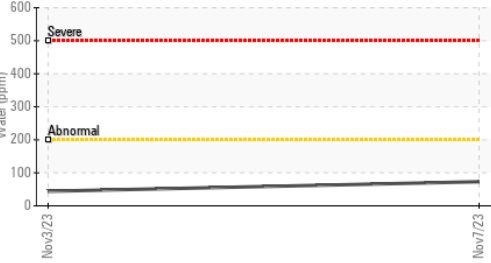
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	0.34	0.32

OIL ANALYSIS REPORT

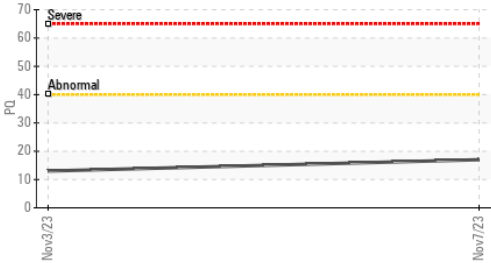
▲ Particle Trend



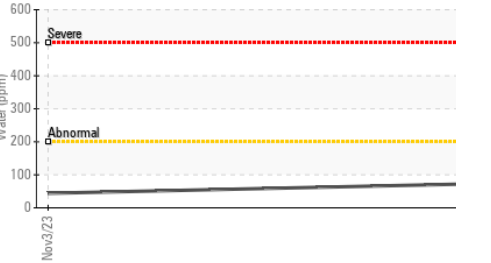
Water (KF)



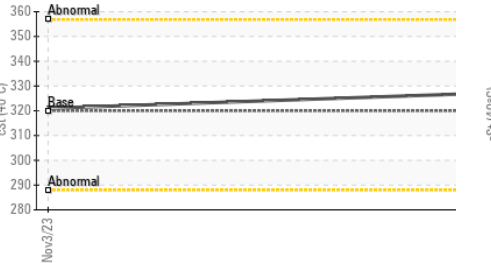
PQ



Water (KF)



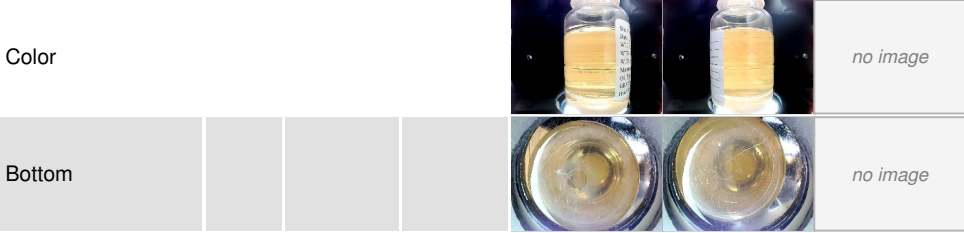
Viscosity @ 40°C



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	>0.02	NEG	---
Free Water	scalar	*Visual		NEG	---

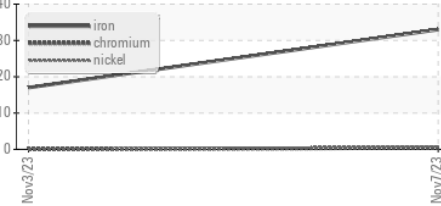
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 320	327	321	---

SAMPLE IMAGES

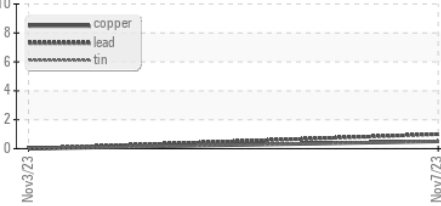


GRAPHS

Ferrous Alloys



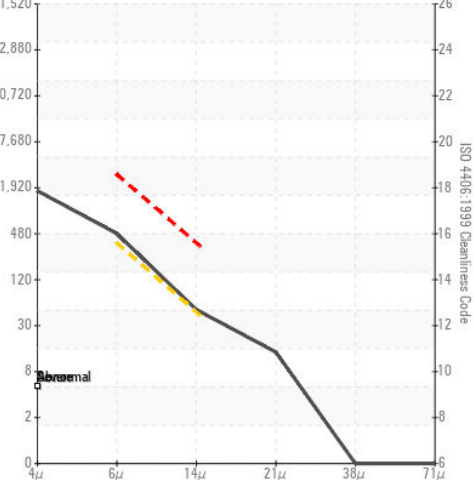
Non-ferrous Metals



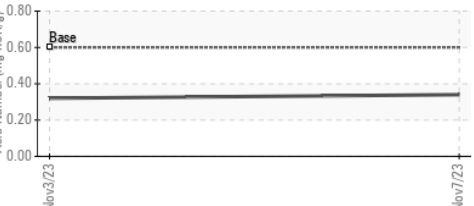
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX014597 **Received** : 08 Dec 2023
Lab Number : 06029368 **Diagnosed** : 12 Dec 2023
Unique Number : 10779159 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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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)