



PROBLEM SUMMARY

Sample Rating Trend

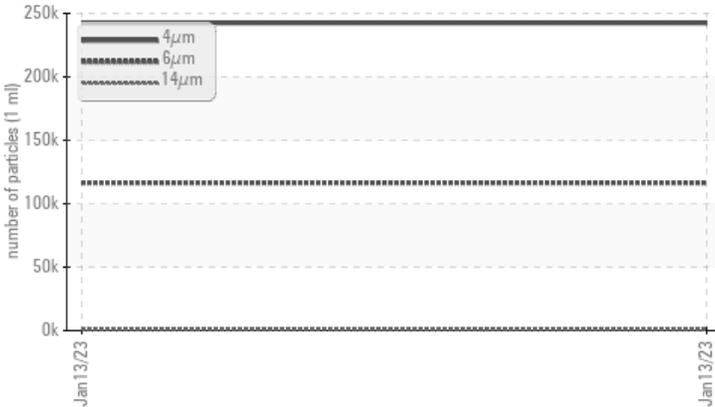
ISO



Area
BLACKJACK CREEK [200007683]
 Machine Id
19WEA88404 - D-04 (S/N W-122274)
 Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN CLP ISO 320 (--- LTR)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	---	---
Particles >6µm	ASTM D7647	>2500	▲ 116409	---	---	---
Particles >14µm	ASTM D7647	>320	▲ 824	---	---	---
Oil Cleanliness	ISO 4406 (c)	>--/18/15	▲ 25/24/17	---	---	---

Customer Id: NORDEX
 Sample No.: NX011547
 Lab Number: 05757203
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
BLACKJACK CREEK [200007683]
 Machine Id
19WEA88404 - D-04 (S/N W-122274)
 Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN CLP ISO 320 (--- LTR)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. 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	NX011547	---	---
Sample Date	Client Info	13 Jan 2023	---	---
Machine Age	hrs Client Info	2097	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		ABNORMAL	---	---

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184 >80	19	---	---
Iron	ppm ASTM D5185m >150	38	---	---
Chromium	ppm ASTM D5185m >5	<1	---	---
Nickel	ppm ASTM D5185m >10	0	---	---
Titanium	ppm ASTM D5185m >10	0	---	---
Silver	ppm ASTM D5185m	0	---	---
Aluminum	ppm ASTM D5185m >10	0	---	---
Lead	ppm ASTM D5185m >20	0	---	---
Copper	ppm ASTM D5185m >50	<1	---	---
Tin	ppm ASTM D5185m >3	<1	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	5	---	---
Barium	ppm ASTM D5185m	0	---	---
Molybdenum	ppm ASTM D5185m	0	---	---
Manganese	ppm ASTM D5185m	<1	---	---
Magnesium	ppm ASTM D5185m	0	---	---
Calcium	ppm ASTM D5185m	18	---	---
Phosphorus	ppm ASTM D5185m	209	---	---
Zinc	ppm ASTM D5185m	0	---	---
Sulfur	ppm ASTM D5185m	5262	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >50	7	---	---
Sodium	ppm ASTM D5185m >20	2	---	---
Potassium	ppm ASTM D5185m >20	0	---	---
Water	% ASTM D6304 >0.05	0.009	---	---
ppm Water	ppm ASTM D6304 >500	99.6	---	---

FLUID CLEANLINESS

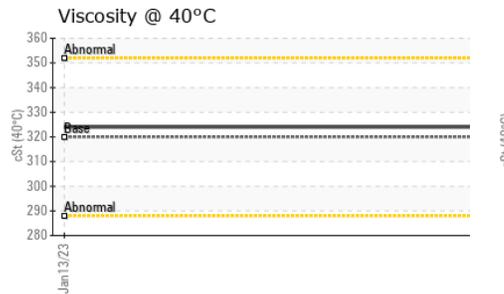
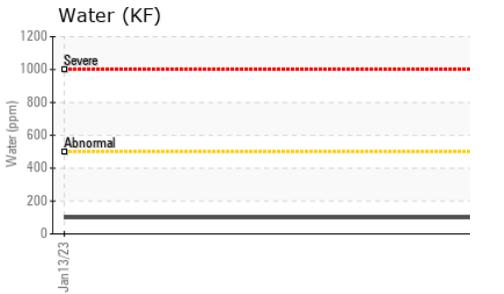
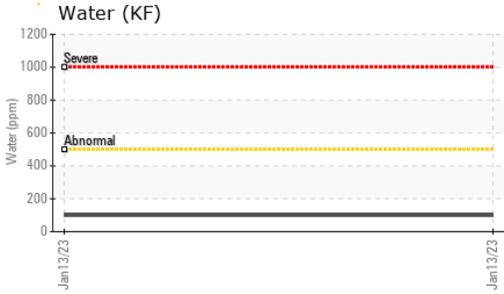
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	242417	---	---
Particles >6µm	ASTM D7647 >2500	▲ 116409	---	---
Particles >14µm	ASTM D7647 >320	▲ 824	---	---
Particles >21µm	ASTM D7647 >80	34	---	---
Particles >38µm	ASTM D7647 >20	2	---	---
Particles >71µm	ASTM D7647 >4	0	---	---
Oil Cleanliness	ISO 4406 (c) >--/18/15	▲ 25/24/17	---	---

FLUID DEGRADATION

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



OIL ANALYSIS REPORT



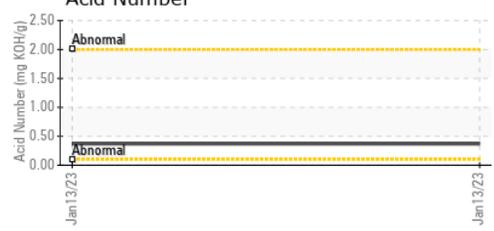
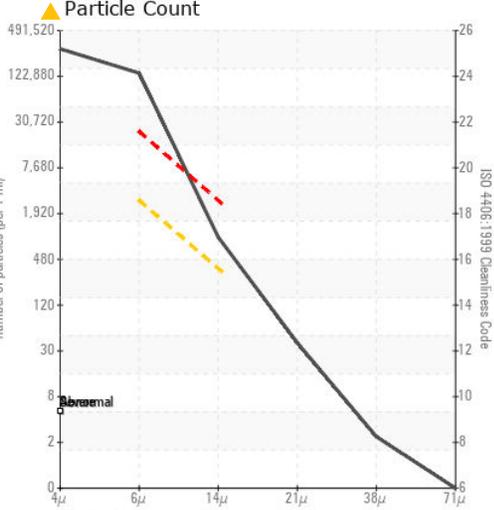
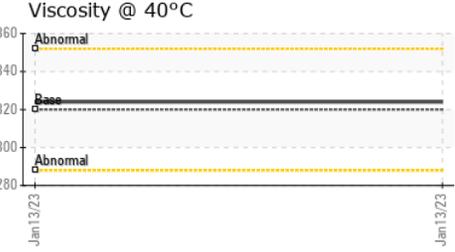
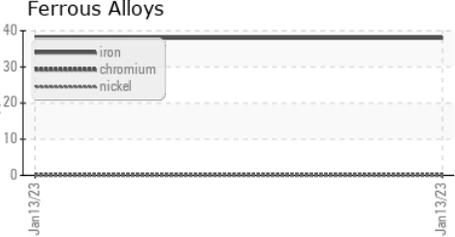
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
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	324	---	---

SAMPLE IMAGES

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX011547 **Received** : 02 Feb 2023
Lab Number : 05757203 **Diagnosed** : 03 Feb 2023
Unique Number : 10321810 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PQ, PrtCount)

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Certificate L2367
 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)