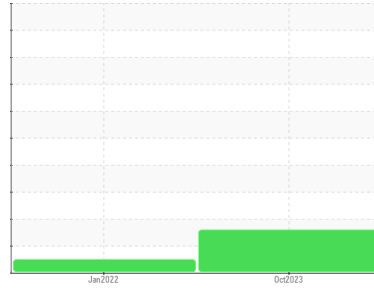




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
MARYNEAL [200006807]
 Machine Id
87028 SITE 29

Component
Wind Turbine Gearbox
 Fluid
FUCHS RENOLIN UNISYN CLP 320 (650 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		NX06054856	NX009232	---
Sample Date	Client Info		02 Oct 2023	31 Jan 2022	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			ABNORMAL	NORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>40	12	18	---
Iron	ppm	ASTM D5185m	>55	12	9
Chromium	ppm	ASTM D5185m	>2	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0
Titanium	ppm	ASTM D5185m	>10	0	0
Silver	ppm	ASTM D5185m		0	<1
Aluminum	ppm	ASTM D5185m	>15	0	1
Lead	ppm	ASTM D5185m	>3	<1	2
Copper	ppm	ASTM D5185m	>7	<1	<1
Tin	ppm	ASTM D5185m	>3	0	<1
Antimony	ppm	ASTM D5185m	>3	---	0
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3	8
Barium	ppm	ASTM D5185m		0	0
Molybdenum	ppm	ASTM D5185m		0	0
Manganese	ppm	ASTM D5185m		0	<1
Magnesium	ppm	ASTM D5185m		0	0
Calcium	ppm	ASTM D5185m		12	19
Phosphorus	ppm	ASTM D5185m		182	201
Zinc	ppm	ASTM D5185m		0	0
Sulfur	ppm	ASTM D5185m		4647	3971

CONTAMINANTS

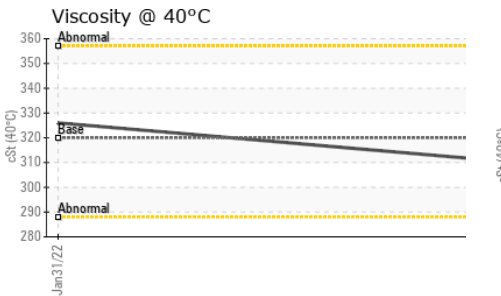
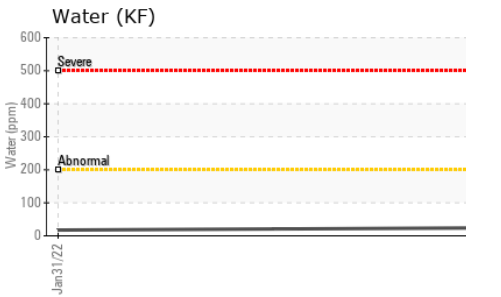
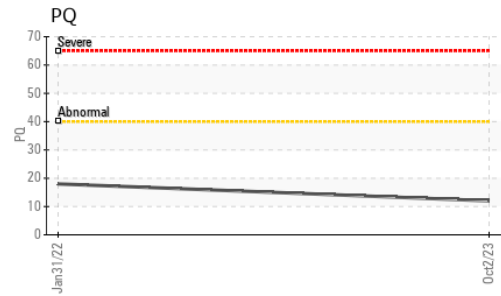
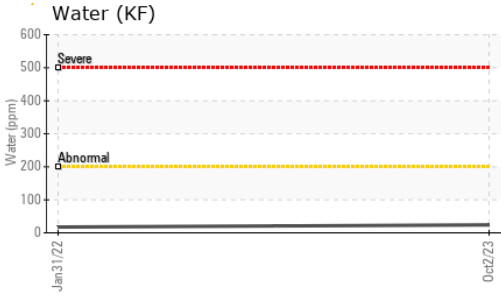
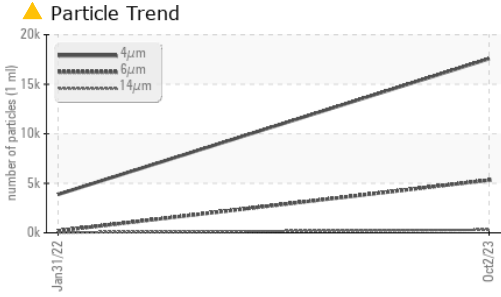
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>35	10	31
Sodium	ppm	ASTM D5185m		6	0
Potassium	ppm	ASTM D5185m	>20	0	<1
Water	%	ASTM D6304	>0.02	0.002	0.002
ppm Water	ppm	ASTM D6304	>200	24	17.5

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		17578	3876	---
Particles >6µm	ASTM D7647	>320	▲ 5324	199	---
Particles >14µm	ASTM D7647	>40	▲ 304	33	---
Particles >21µm	ASTM D7647	>10	▲ 57	11	---
Particles >38µm	ASTM D7647	>3	1	0	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	▲ 21/20/15	19/15/12	---




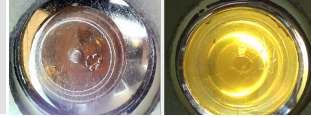
OIL ANALYSIS REPORT



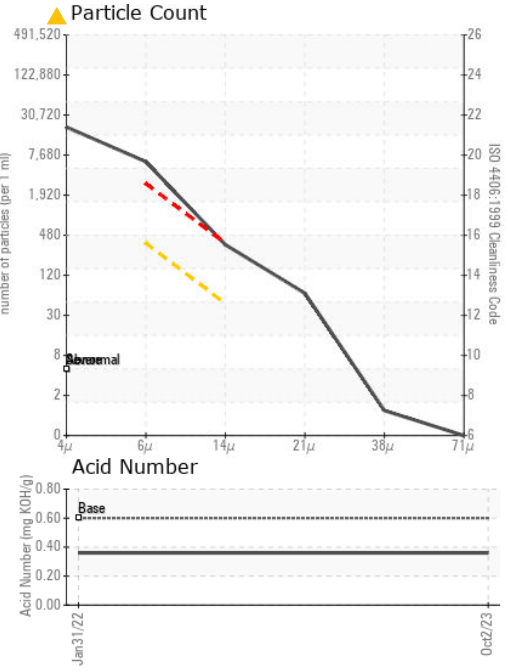
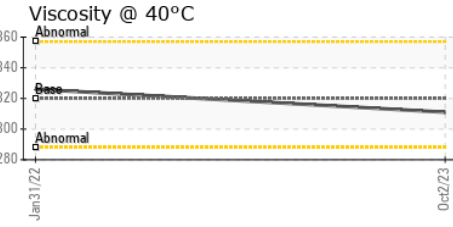
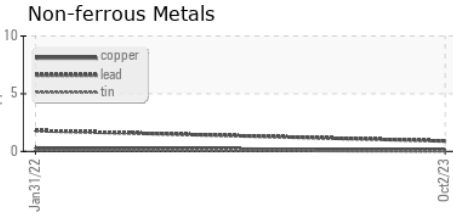
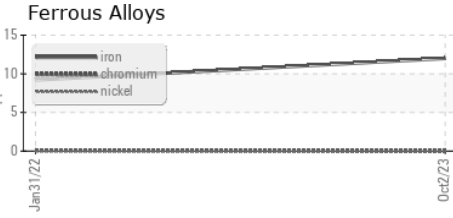
FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	0.36	0.36	---

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	LIGHT	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	311	326	---

SAMPLE IMAGES	method	limit/base	current	history1	history2	
Color						
Bottom						

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NX06054856 **Received** : 08 Jan 2024
Lab Number : 06054856 **Diagnosed** : 10 Jan 2024
Unique Number : 10820805 **Diagnostician** : Don Baldrige
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)