



# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**AZURE SKY [200007684]**

Machine Id  
**T-23**

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	<b>NX06054833</b>	---	---
Sample Date	Client Info	<b>07 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---
Oil Age	hrs	Client Info	<b>0</b>	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184	>50	<b>12</b>	---
Iron	ppm	ASTM D5185m	>30	<b>6</b>
Chromium	ppm	ASTM D5185m	>3	<b>0</b>
Nickel	ppm	ASTM D5185m	>3	<b>0</b>
Titanium	ppm	ASTM D5185m	>10	<b>0</b>
Silver	ppm	ASTM D5185m		<b>0</b>
Aluminum	ppm	ASTM D5185m	>30	<b>0</b>
Lead	ppm	ASTM D5185m	>15	<b>2</b>
Copper	ppm	ASTM D5185m	>10	<b>&lt;1</b>
Tin	ppm	ASTM D5185m	>10	<b>0</b>
Vanadium	ppm	ASTM D5185m		<b>0</b>
Cadmium	ppm	ASTM D5185m		<b>0</b>

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>7</b>
Barium	ppm	ASTM D5185m		<b>0</b>
Molybdenum	ppm	ASTM D5185m		<b>0</b>
Manganese	ppm	ASTM D5185m		<b>0</b>
Magnesium	ppm	ASTM D5185m		<b>0</b>
Calcium	ppm	ASTM D5185m		<b>17</b>
Phosphorus	ppm	ASTM D5185m		<b>202</b>
Zinc	ppm	ASTM D5185m		<b>0</b>
Sulfur	ppm	ASTM D5185m		<b>4682</b>

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+15	<b>2</b>
Sodium	ppm	ASTM D5185m		<b>4</b>
Potassium	ppm	ASTM D5185m	>20	<b>0</b>
Water	%	ASTM D6304	>0.02	<b>0.003</b>
ppm Water	ppm	ASTM D6304	>200	<b>27</b>

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>7575</b>	---
Particles >6µm	ASTM D7647	>320	<b>▲ 1789</b>	---
Particles >14µm	ASTM D7647	>40	<b>▲ 120</b>	---
Particles >21µm	ASTM D7647	>10	<b>▲ 18</b>	---
Particles >38µm	ASTM D7647	>3	<b>0</b>	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---
Oil Cleanliness	ISO 4406 (c)	>--/15/12	<b>▲ 20/18/14</b>	---

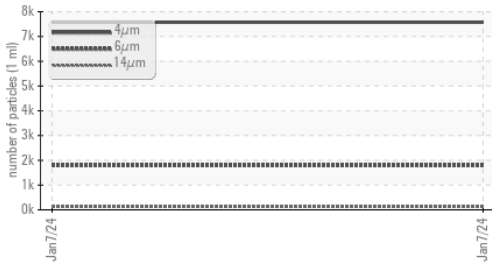
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.6	<b>0.33</b>

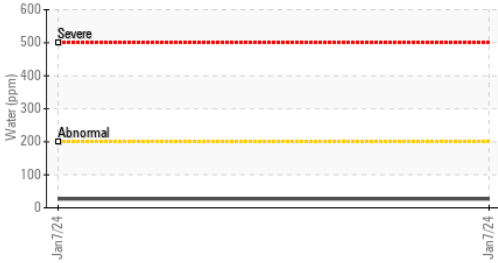


# OIL ANALYSIS REPORT

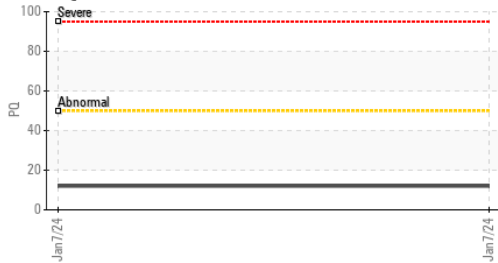
## Particle Trend



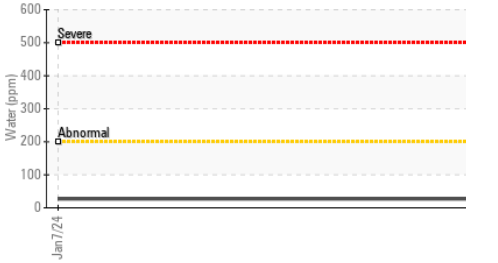
## Water (KF)



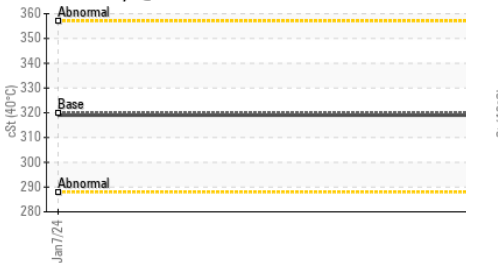
## PQ



## 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	---

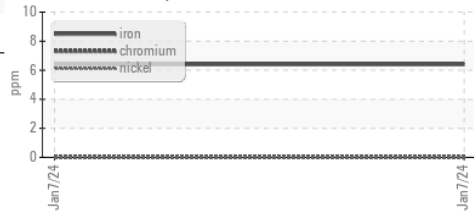
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	319	---

## SAMPLE IMAGES

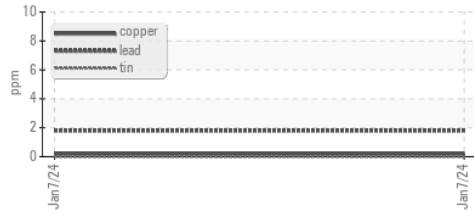
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

## GRAPHS

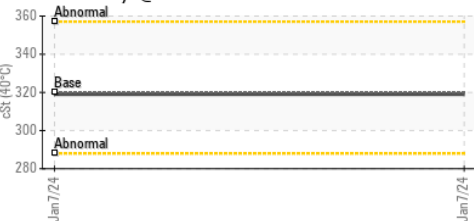
### Ferrous Alloys



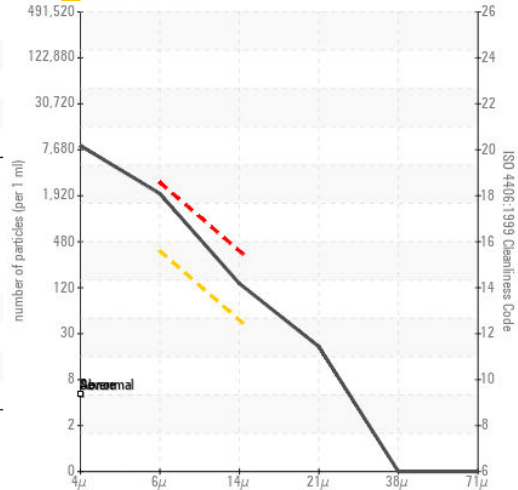
### Non-ferrous Metals



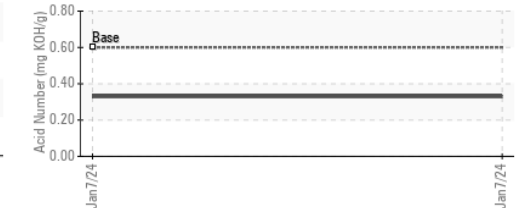
### Viscosity @ 40°C



### Particle Count



### Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : NX06054833 Recieved : 08 Jan 2024  
 Lab Number : 06054833 Diagnosed : 10 Jan 2024  
 Unique Number : 10820782 Diagnostician : Don Baldrige  
 Test Package : IND 2 ( Additional Tests: KF, PQ, PrtCount )

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)

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