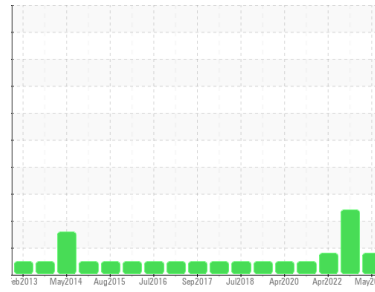




# GREASE ANALYSIS

Sample Rating Trend



WEAR



Machine Id  
**TURBINA 19 (S/N 101289)**

Component  
**Wind Turbine Gearbox**

Fluid  
**FUCHS RENOLIN UNISYN CLP 320 (340 LTR)**

## DIAGNOSIS

### ▲ Recommendation

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

### ▲ Wear

The iron level is abnormal. All other component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

### 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>WC0881124</b>	WCI2352753	WCI2352760
Sample Date	Client Info		<b>14 May 2024</b>	23 Aug 2023	02 Apr 2022
Machine Age	yrs	Client Info	<b>12</b>	11	72
Oil Age	yrs	Client Info	<b>9</b>	7	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184	>50	<b>16</b>	17	21
Iron	ppm	ASTM D5185m	>30	<b>▲ 63</b>	▲ 58
Chromium	ppm	ASTM D5185m	>3	<1	<1
Nickel	ppm	ASTM D5185m	>3	<1	0
Cadmium	ppm	ASTM D5185m		<1	0
Titanium	ppm	ASTM D5185m	>10	<1	0
Vanadium	ppm	ASTM D5185m		0	0
Lead	ppm	ASTM D5185m	>15	<1	<1
Copper	ppm	ASTM D5185m	>10	<1	<1
Tin	ppm	ASTM D5185m	>10	<1	0
Silver	ppm	ASTM D5185m		0	0

## ADDITIVES

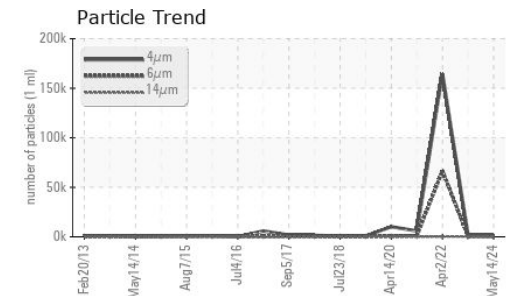
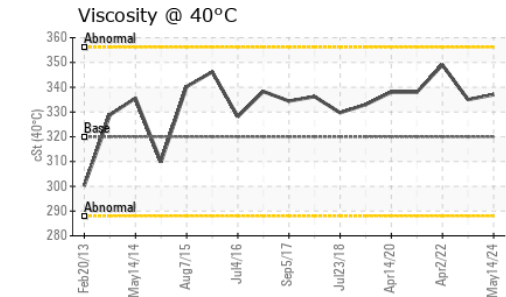
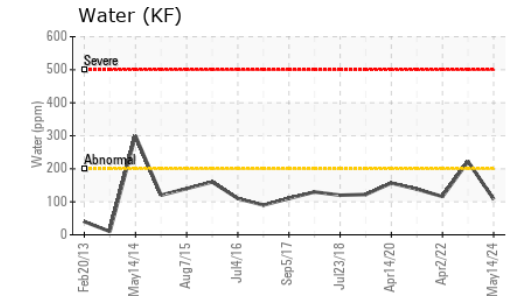
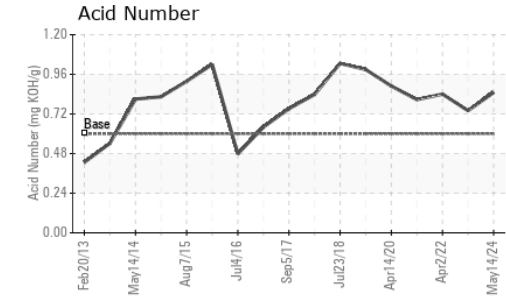
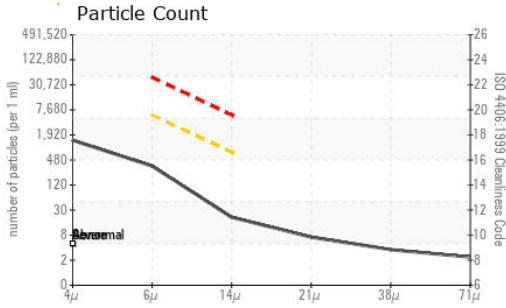
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0
Magnesium	ppm	ASTM D5185m		<1	0
Manganese	ppm	ASTM D5185m		<1	<1
Molybdenum	ppm	ASTM D5185m		<1	0
Phosphorus	ppm	ASTM D5185m		<b>235</b>	216
Zinc	ppm	ASTM D5185m		<b>212</b>	193
Antimony	ppm	ASTM D5185m		---	---

## THICKENER/SOAP

	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m		<b>1</b>	0
Barium	ppm	ASTM D5185m		<b>1</b>	2
Calcium	ppm	ASTM D5185m		<b>10</b>	8
Sodium	ppm	ASTM D5185m		<b>4</b>	0
Sulfur	ppm	ASTM D5185m		<b>3995</b>	4230

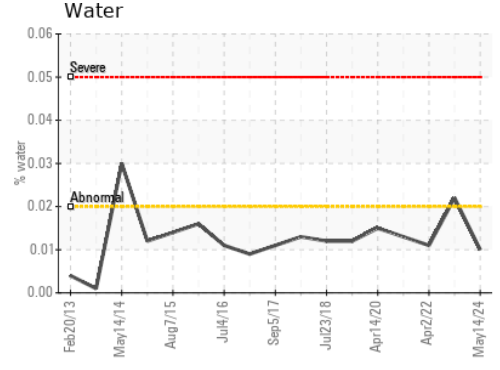
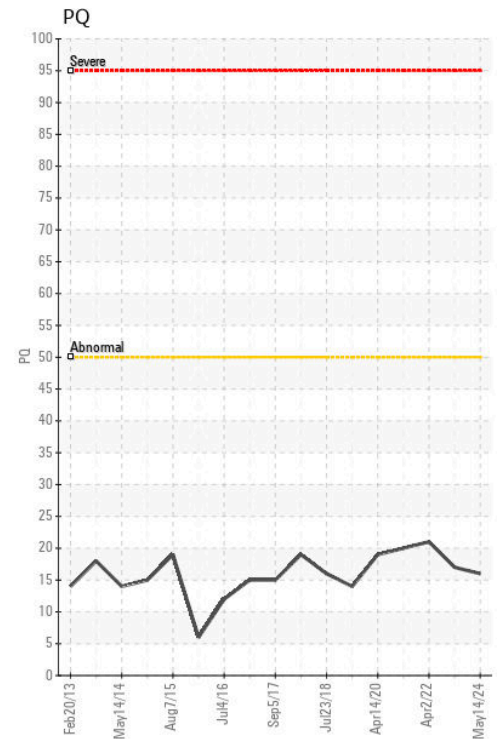
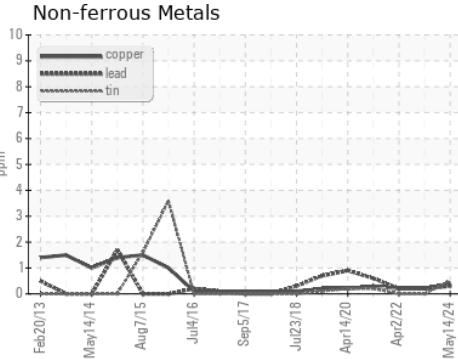
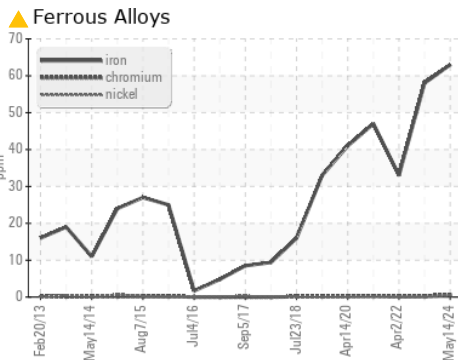
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+15	<b>1</b>	1
Potassium	ppm	ASTM D5185m		<1	<1
Water	%	ASTM D6304	>0.02	<b>0.010</b>	▲ 0.022
ppm Water	ppm	ASTM D6304	>200	<b>108</b>	▲ 222.0



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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0881124 **Received** : 29 May 2024  
**Lab Number** : 06194678 **Tested** : 31 May 2024  
**Unique Number** : 11056801 **Diagnosed** : 31 May 2024 - Jonathan Hester  
**Test Package** : GRS 1 ( Additional Tests: Consistency, FilterPatch, GreaseColor, ICP, KF, KV40, PQ, PrtCount, SORFAC )  
 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)