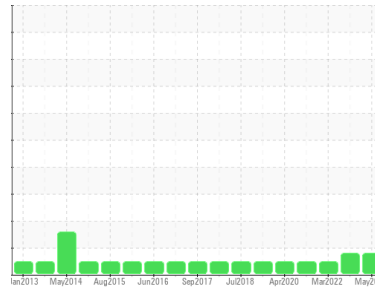




# GREASE ANALYSIS

Sample Rating Trend



WEAR



Machine Id  
**TURBINA 06 (S/N 101166)**

Component  
**Wind Turbine Gearbox**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

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

### Contamination

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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0881114</b>	WC0831546	WC05582430
Sample Date	Client Info		<b>07 May 2024</b>	11 Aug 2023	29 Mar 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	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>50	<b>14</b>	10	16	
Iron	ppm	ASTM D5185m	>30	<b>▲ 98</b>	▲ 66	31
Chromium	ppm	ASTM D5185m	>3	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185m	>15	<b>1</b>	1	<1
Copper	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

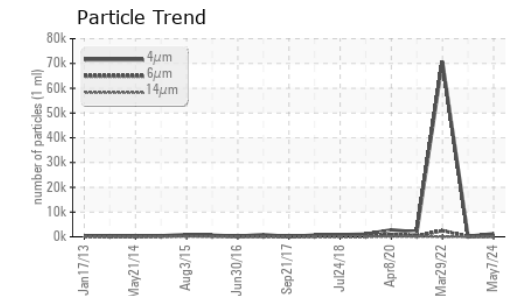
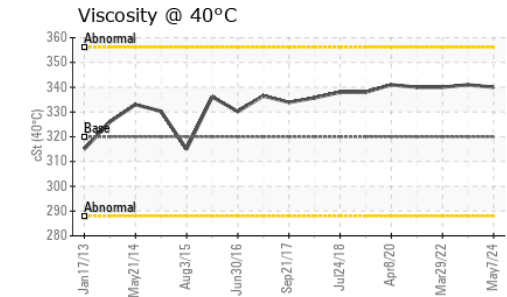
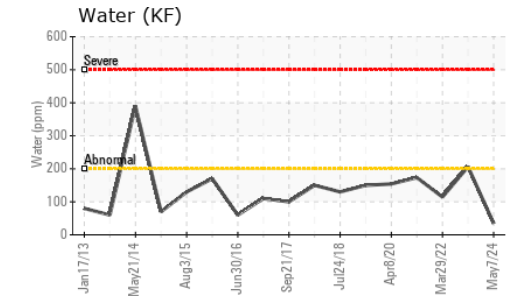
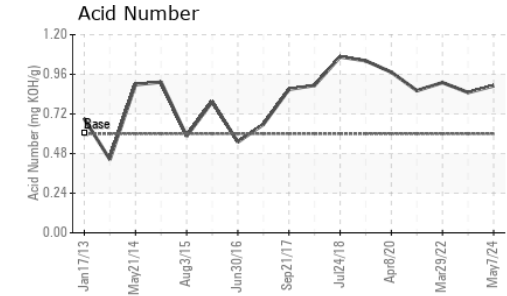
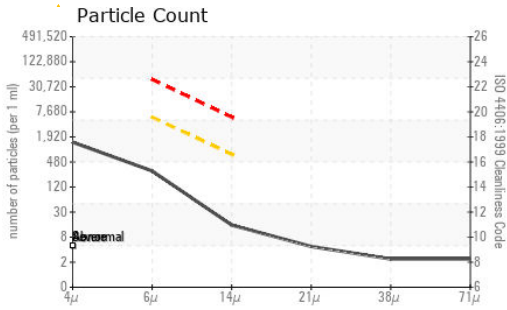
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Phosphorus	ppm	ASTM D5185m		<b>319</b>	210	139
Zinc	ppm	ASTM D5185m		<b>321</b>	234	147
Antimony	ppm	ASTM D5185m		<b>---</b>	---	---

## THICKENER/SOAP

	method	limit/base	current	history1	history2	
Aluminum	ppm	ASTM D5185m		<b>1</b>	0	<1
Barium	ppm	ASTM D5185m		<b>1</b>	2	0
Calcium	ppm	ASTM D5185m		<b>18</b>	12	6
Sodium	ppm	ASTM D5185m		<b>7</b>	1	2
Sulfur	ppm	ASTM D5185m		<b>5330</b>	4070	2992

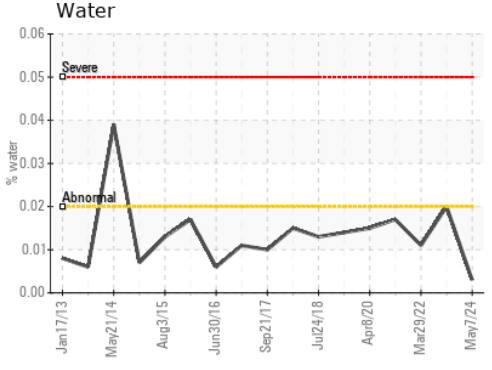
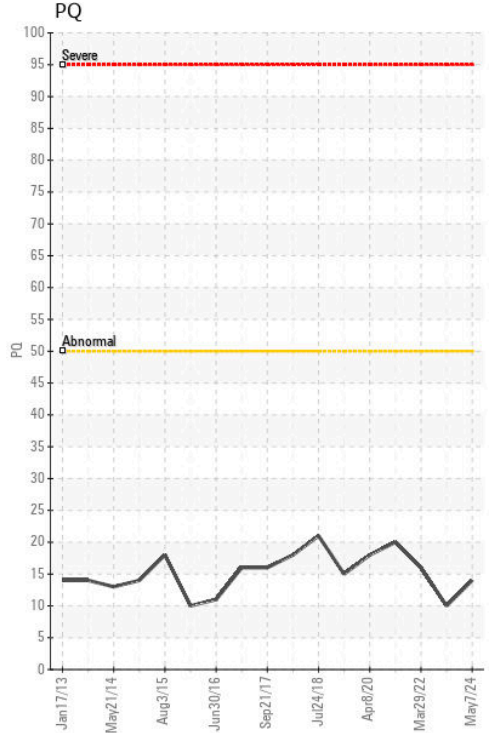
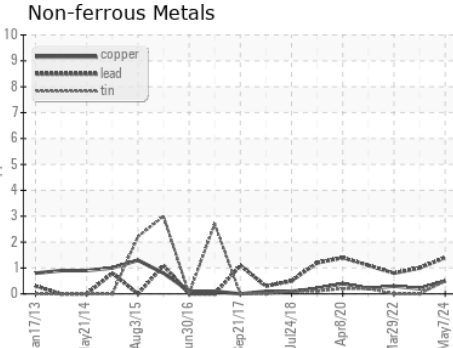
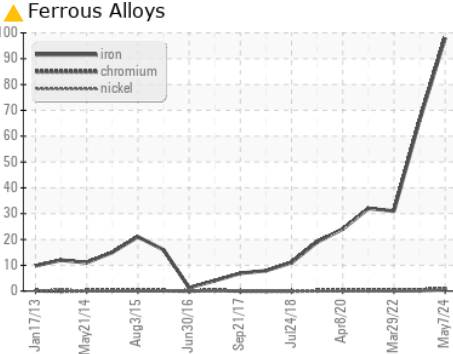
## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>+15	<b>3</b>	2	1
Potassium	ppm	ASTM D5185m		<b>2</b>	<1	0
Water	%	ASTM D6304	>0.02	<b>0.003</b>	0.020	0.011
ppm Water	ppm	ASTM D6304	>200	<b>35</b>	206.2	114.3



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.** : WC0881114  
**Lab Number** : 06194670  
**Unique Number** : 11056793  
**Test Package** : GRS 1 ( Additional Tests: Consistency, FilterPatch, GreaseColor, ICP, KF, KV40, PQ, PrtCount, SORFAC)

**EOL DE NICARAGUA S.A.**  
 DEL SEMAFORO DEL CLUB TERRAZA, 1 CUADRA AL SUR  
 MANAGUA, ZZ  
 NI  
 SOFREN Rafael Bermudez

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)