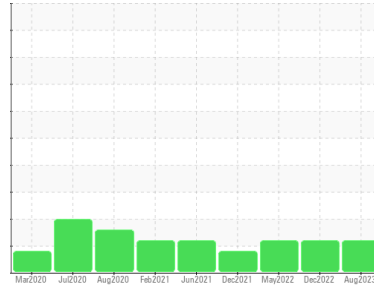




# PROBLEM SUMMARY

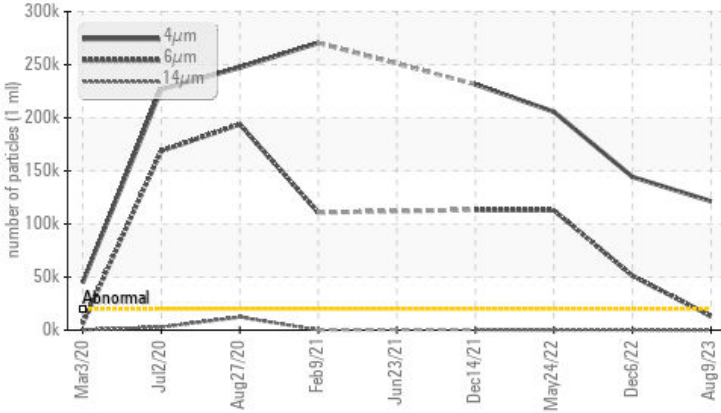
Area  
**Utility**  
 Machine Id  
**Amarillo Gear Co FHH85AH04 Cooling Tower, Cell / Fan**  
 Component  
**Gearbox**  
 Fluid  
**JAX FGG-AW ISO 220 (3 GAL)**

Sample Rating Trend



## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>20000	▲ <b>121395</b>	▲ 144320	▲ 205664
Particles >6µm	ASTM D7647	>5000	▲ <b>13158</b>	▲ 51248	▲ 112881
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>24/21/13</b>	▲ 24/23/15	▲ 25/24/15

Customer Id: NOVFRANC  
 Sample No.: WC0835748  
 Lab Number: 05922232  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

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

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 06 Dec 2022 Diag: Jonathan Hester

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 24 May 2022 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 14 Dec 2021 Diag: Angela Borella

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

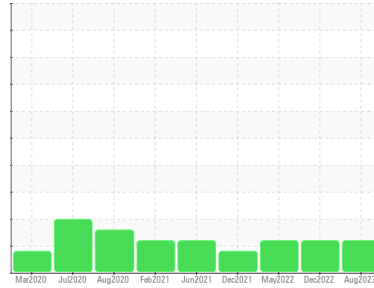
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**Utility**

Machine Id  
**Amarillo Gear Co FHH85AH04 Cooling Tower, Cell / Fan**

Component

**Gearbox**

Fluid

**JAX FGG-AW ISO 220 (3 GAL)**

## DIAGNOSIS

### Recommendation

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

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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>WC0835748</b>	WC0663740	WC0688785
Sample Date	Client Info	<b>09 Aug 2023</b>	06 Dec 2022	24 May 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	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	
Iron	ppm	ASTM D5185m >200	<b>22</b>	37	64
Chromium	ppm	ASTM D5185m >15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	1	2
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m >25	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m >5	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	<1	1
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>0</b>	1	0
Calcium	ppm	ASTM D5185m	<b>2</b>	4	10
Phosphorus	ppm	ASTM D5185m	<b>548</b>	532	581
Zinc	ppm	ASTM D5185m	<b>0</b>	6	4
Sulfur	ppm	ASTM D5185m	<b>609</b>	391	531

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	<b>4</b>	5	5
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	1
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	3
Water	%	ASTM D6304 >0.2	<b>0.001</b>	0.007	0.00
ppm Water	ppm	ASTM D6304 >2000	<b>10.6</b>	76.3	0.00

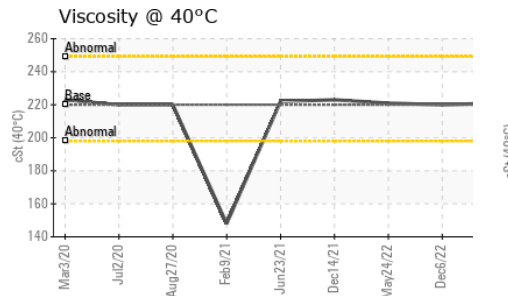
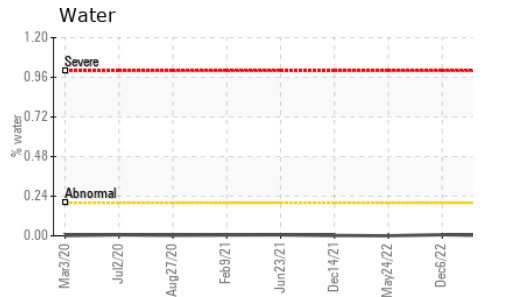
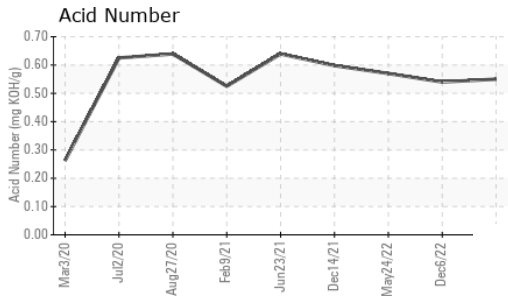
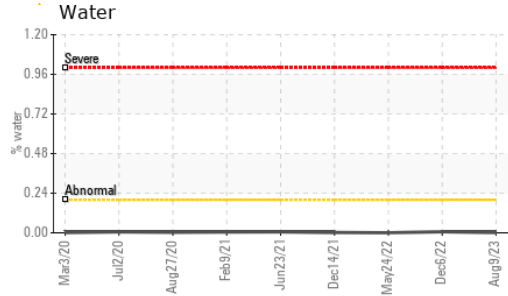
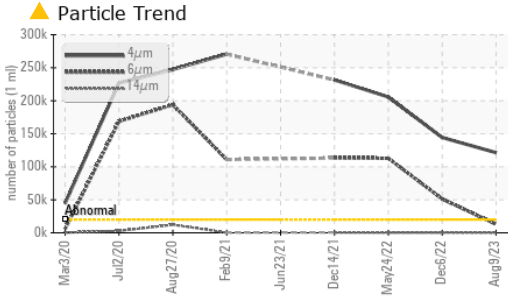
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	<b>▲ 121395</b>	▲ 144320	▲ 205664
Particles >6µm	ASTM D7647 >5000	<b>▲ 13158</b>	▲ 51248	▲ 112881
Particles >14µm	ASTM D7647 >640	<b>79</b>	309	315
Particles >21µm	ASTM D7647 >160	<b>19</b>	51	13
Particles >38µm	ASTM D7647 >40	<b>1</b>	1	0
Particles >71µm	ASTM D7647 >10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	<b>▲ 24/21/13</b>	▲ 24/23/15	▲ 25/24/15

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.55</b>	0.54	0.57

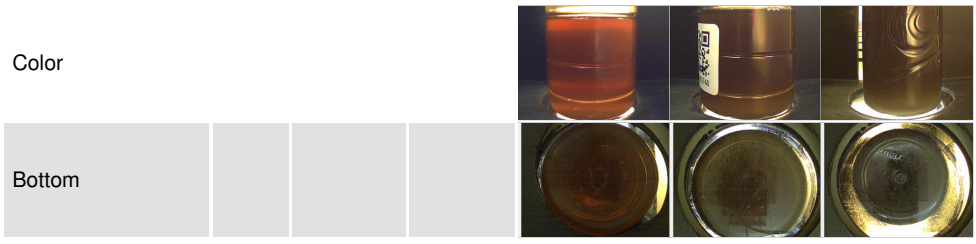
# OIL ANALYSIS REPORT



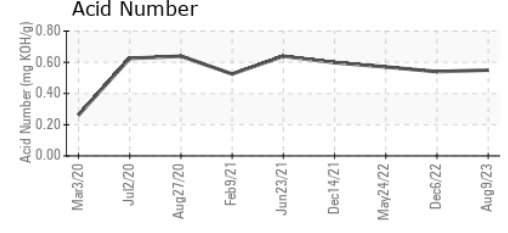
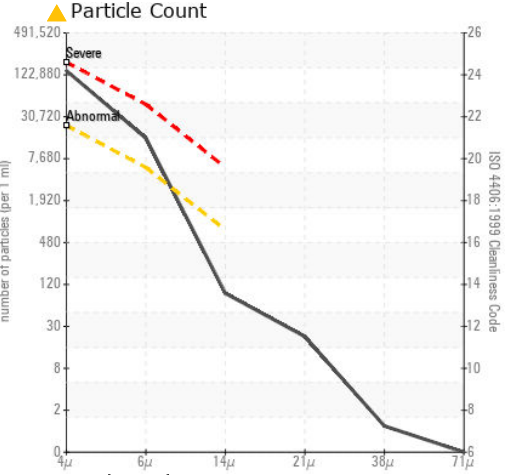
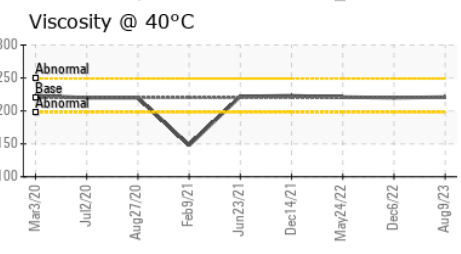
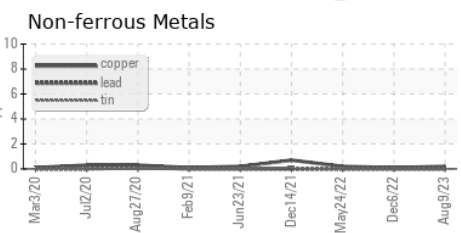
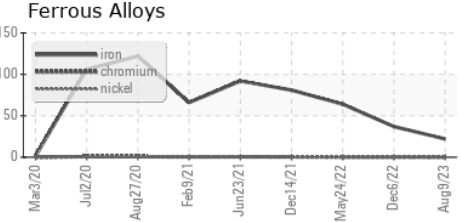
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	221	221

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0835748 **Received** : 11 Aug 2023  
**Lab Number** : 05922232 **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10602179 **Diagnostician** : Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount )

**NOVOZYMES**  
 P.O. BOX 576, 77 PERRY CHAPEL CHURCH ROAD  
 FRANKLINTON, NC  
 US 27525  
 Contact: BRUCE THOMAS  
 brct@novozymes.com  
 T: (919)494-3146  
 F: (919)494-3456

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)