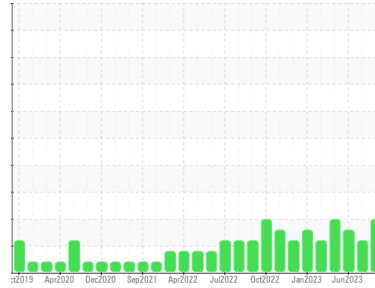




# PROBLEM SUMMARY

## Sample Rating Trend



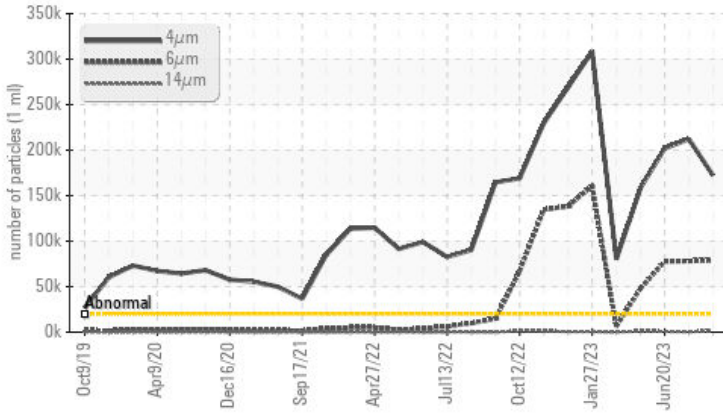
ISO



Area  
**Fermentation**  
 Machine Id  
**Lightnin FHG51CB01 Main Fermentor, Agitator**  
 Component  
**Gearbox**  
 Fluid  
**JAX FGG-AW ISO 220 (46 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>20000	▲ <b>172368</b>	▲ 212256	▲ 201832
Particles >6µm	ASTM D7647	>5000	▲ <b>79216</b>	▲ 78115	▲ 77857
Particles >14µm	ASTM D7647	>640	▲ <b>1714</b>	337	▲ 768
Particles >21µm	ASTM D7647	>160	▲ <b>235</b>	39	96
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ <b>25/23/18</b>	▲ 25/23/16	▲ 25/23/17

Customer Id: NOVFRANC  
 Sample No.: WC0842997  
 Lab Number: 05963579  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

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

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.

## HISTORICAL DIAGNOSIS

### 02 Aug 2023 Diag: Don Baldrige

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 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



### 20 Jun 2023 Diag: Angela Borella

ISO



We recommend you service the filters on this component. 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



### 15 Mar 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component. 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.

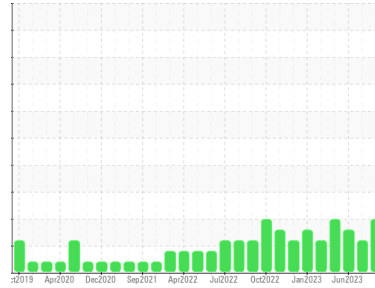
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**Fermentation**  
 Machine Id  
**Lightnin FHG51CB01 Main Fermentor, Agitator**  
 Component  
**Gearbox**  
 Fluid  
**JAX FGG-AW ISO 220 (46 GAL)**

## 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>WC0842997</b>	WC0835739	WC0782842
Sample Date	Client Info		<b>19 Sep 2023</b>	02 Aug 2023	20 Jun 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	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>96</b>	110	99
Chromium	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185m >100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >200	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m >25	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</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	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m	<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m	<b>0</b>	1	0
Calcium	ppm	ASTM D5185m	<b>15</b>	2	0
Phosphorus	ppm	ASTM D5185m	<b>638</b>	470	458
Zinc	ppm	ASTM D5185m	<b>0</b>	0	0
Sulfur	ppm	ASTM D5185m	<b>819</b>	1636	1536

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>&lt;1</b>	1	<1
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	1	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Water	%	ASTM D6304 >0.2	<b>0.004</b>	0.002	0.004
ppm Water	ppm	ASTM D6304 >2000	<b>47.3</b>	17.0	45.5

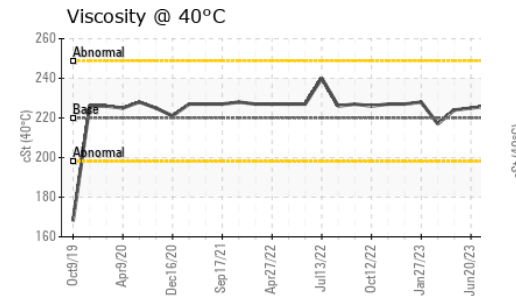
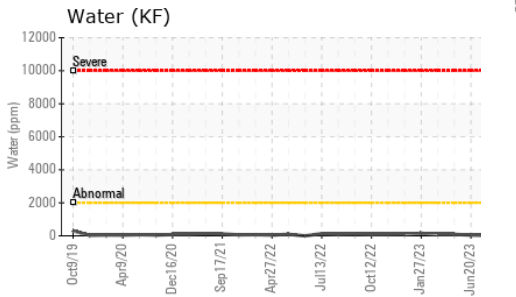
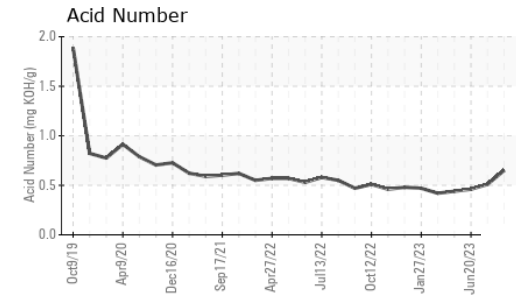
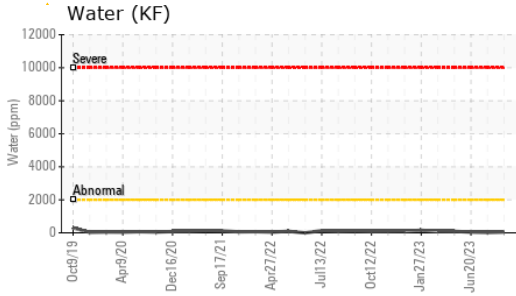
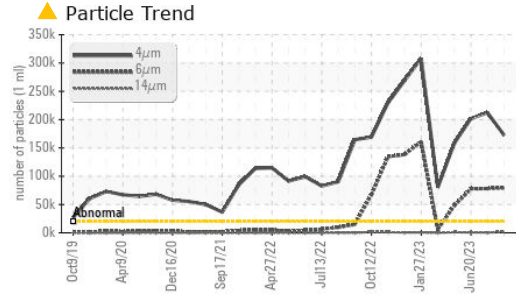
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	<b>▲ 172368</b>	▲ 212256	▲ 201832
Particles >6µm	ASTM D7647	>5000	<b>▲ 79216</b>	▲ 78115	▲ 77857
Particles >14µm	ASTM D7647	>640	<b>▲ 1714</b>	337	▲ 768
Particles >21µm	ASTM D7647	>160	<b>▲ 235</b>	39	96
Particles >38µm	ASTM D7647	>40	<b>4</b>	0	1
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	<b>▲ 25/23/18</b>	▲ 25/23/16	▲ 25/23/17

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.65</b>	0.51	0.46

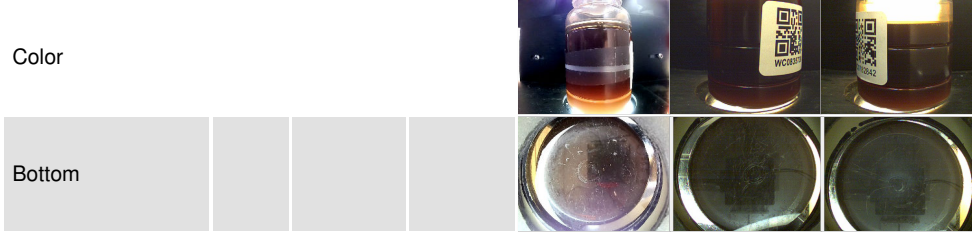
# OIL ANALYSIS REPORT



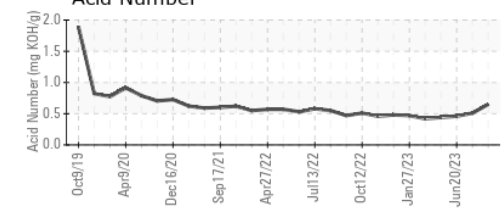
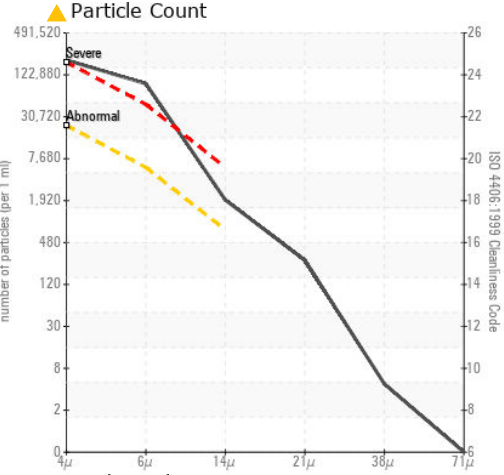
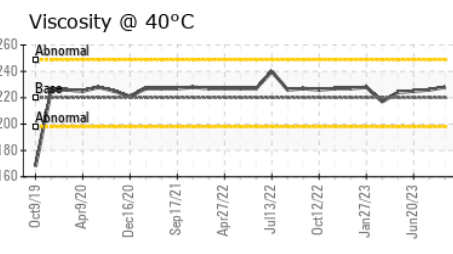
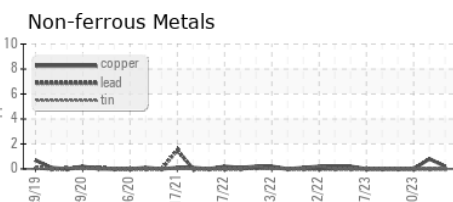
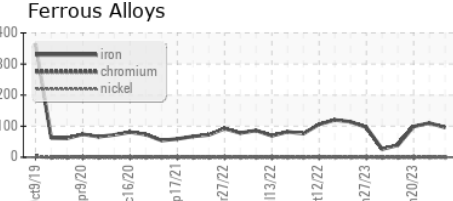
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	228	226

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0842997 **Received** : 28 Sep 2023  
**Lab Number** : 05963579 **Diagnosed** : 29 Sep 2023  
**Unique Number** : 10670130 **Diagnostician** : Don Baldrige  
**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

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)