

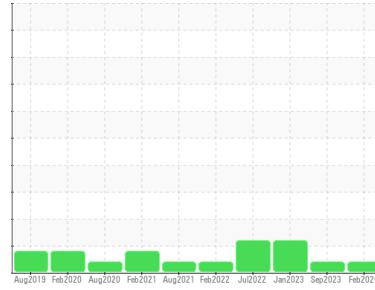


# OIL ANALYSIS REPORT

Sample Rating Trend

VIS DEBRIS

Area  
**Fermentation**  
 Machine Id  
**Lightnin FFG20CB01 Dosing Tank, Agitator**  
 Component  
**Gearbox**  
 Fluid  
**JAX FGG-AW ISO 220 (4 GAL)**



## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

### Wear

All component wear rates are normal.

### Contamination

Moderate concentration of visible dirt/debris present in the oil.

### 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>WC0883700</b>	WC0842998	WC0765170
Sample Date	Client Info		<b>14 Feb 2024</b>	26 Sep 2023	27 Jan 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>&lt;1</b>	5	19
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	4	11
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>0</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>&lt;1</b>	<1	11
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	1
Calcium	ppm	ASTM D5185m		<b>145</b>	195	467
Phosphorus	ppm	ASTM D5185m		<b>592</b>	534	543
Zinc	ppm	ASTM D5185m		<b>0</b>	0	36
Sulfur	ppm	ASTM D5185m		<b>579</b>	946	1012

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>50	<b>2</b>	1	1
Sodium	ppm	ASTM D5185m		<b>1</b>	<1	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Water	%	ASTM D6304	>0.2	<b>0.002</b>	0.010	0.013
ppm Water	ppm	ASTM D6304	>2000	<b>17</b>	102.3	139.9

## FLUID CLEANLINESS

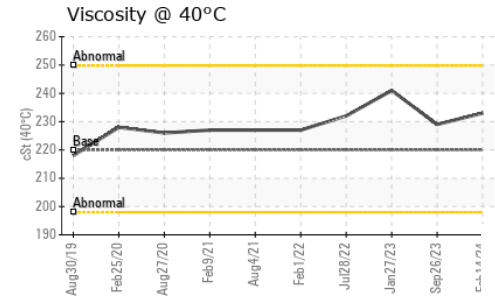
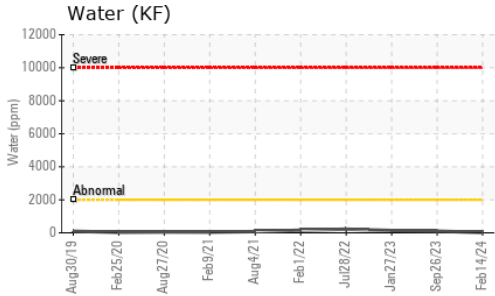
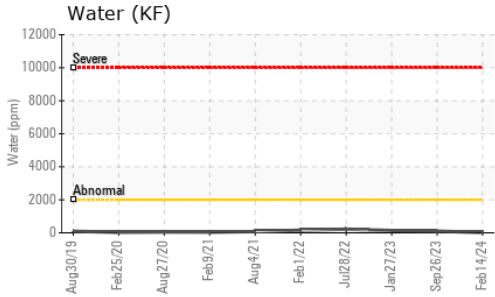
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	---	---	▲ 131779
Particles >6µm	ASTM D7647	>5000	---	---	● 7605
Particles >14µm	ASTM D7647	>640	---	---	99
Particles >21µm	ASTM D7647	>160	---	---	13
Particles >38µm	ASTM D7647	>40	---	---	1
Particles >71µm	ASTM D7647	>10	---	---	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	---	---	▲ 24/20/14

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.60</b>	0.37	0.36



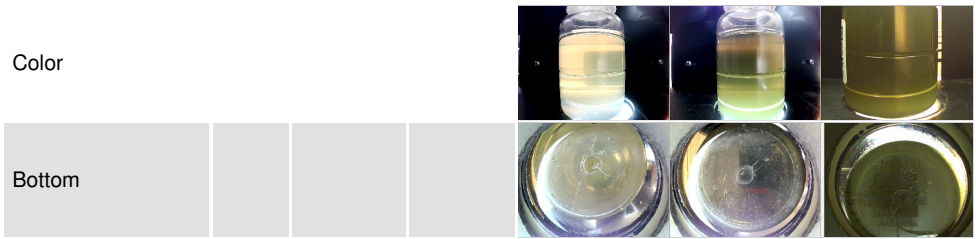
# OIL ANALYSIS REPORT



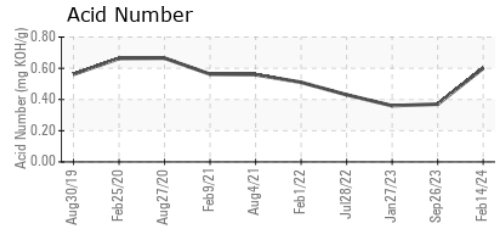
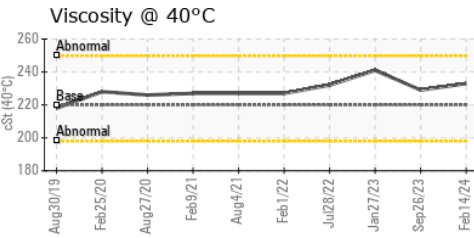
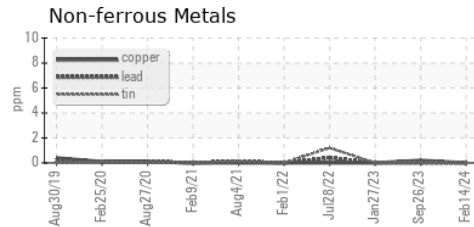
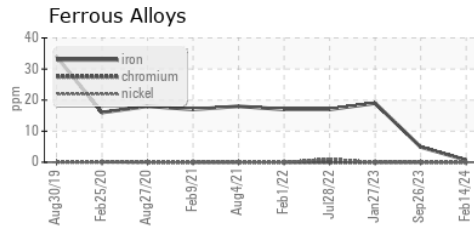
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	▲ MODER	▲ MODER	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	233	229

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



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0883700  
**Lab Number** : 06100121  
**Unique Number** : 10898351  
**Test Package** : IND 2 ( Additional Tests: KF, PriCount )

**Received** : 26 Feb 2024  
**Tested** : 28 Feb 2024  
**Diagnosed** : 28 Feb 2024 - Don Baldrige

**NOVOZYMES**  
 P.O. BOX 576, 77 PERRY CHAPEL CHURCH ROAD  
 FRANKLINTON, NC  
 US 27525

Contact: BRUCE THOMAS  
 brct@novozymes.com

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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