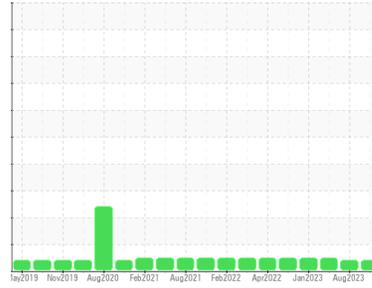




PROBLEM SUMMARY

Area
Fermentation
 Machine Id
Lightnin FHG51EB01 Main Fermentor, Agitator
 Component
Gearbox
 Fluid
JAX FGG-AW ISO 220 (28 GAL)

Sample Rating Trend

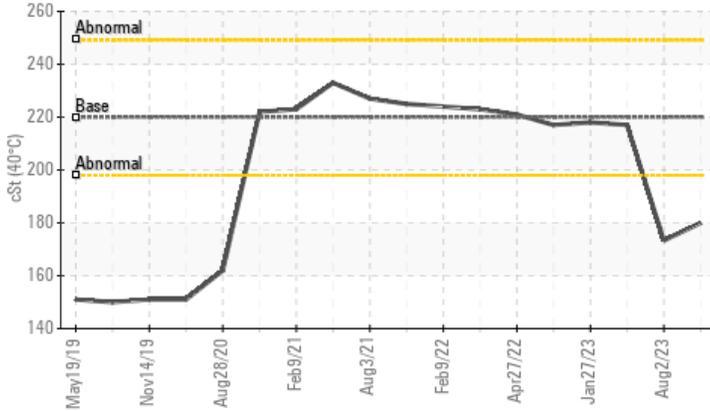


VISCOSITY



COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	ATTENTION	NORMAL
Visc @ 40°C	cSt	ASTM D445	220	▲ 180	▲ 173.3	217

Customer Id: NOVFRANC
 Sample No.: WC0835751
 Lab Number: 05922230
 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

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

02 Aug 2023 Diag: Don Baldrige

VISCOSITY



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

view report



15 Mar 2023 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



27 Jan 2023 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

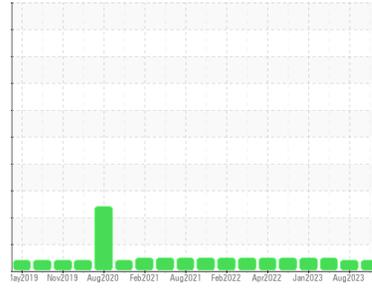
view report





OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area
Fermentation
 Machine Id
Lightnin FHG51EB01 Main Fermentor, Agitator
 Component
Gearbox
 Fluid
JAX FGG-AW ISO 220 (28 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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 oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0835751	WC0835740	WC0774929
Sample Date	Client Info		09 Aug 2023	02 Aug 2023	15 Mar 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ATTENTION	ATTENTION	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<1	0	0
Chromium	ppm	ASTM D5185m >15	0	0	0
Nickel	ppm	ASTM D5185m >15	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	1	0	<1
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	<1	<1	<1
Tin	ppm	ASTM D5185m >25	0	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	<1	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	0	2	0
Calcium	ppm	ASTM D5185m	0	2	3
Phosphorus	ppm	ASTM D5185m	600	596	589
Zinc	ppm	ASTM D5185m	0	0	4
Sulfur	ppm	ASTM D5185m	734	746	717

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	5	3	6
Sodium	ppm	ASTM D5185m	<1	1	0
Potassium	ppm	ASTM D5185m >20	0	<1	0
Water	%	ASTM D6304 >0.2	0.001	0.004	0.007
ppm Water	ppm	ASTM D6304 >2000	11.6	49.3	73.7

FLUID CLEANLINESS

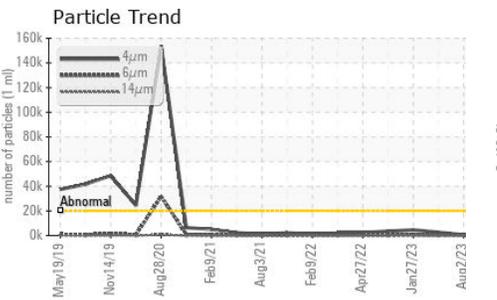
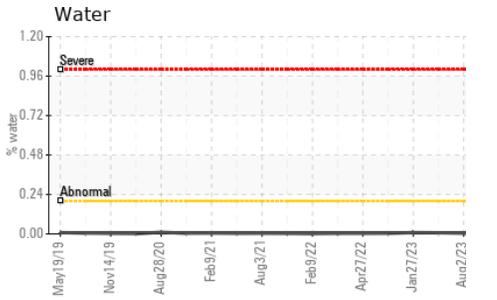
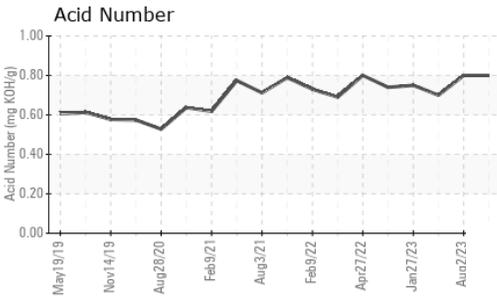
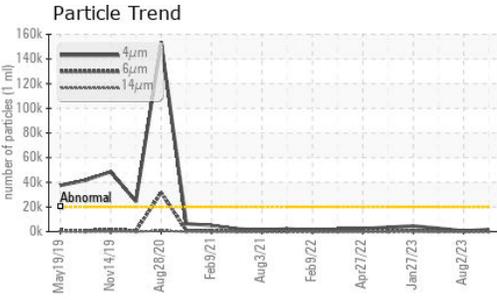
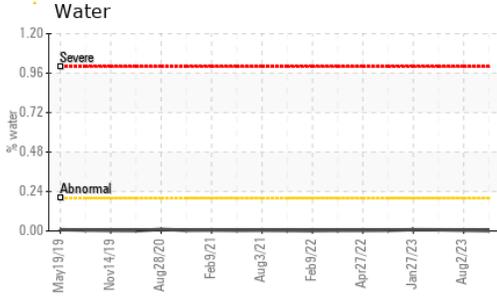
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	1626	617	2659
Particles >6µm	ASTM D7647	>5000	322	126	444
Particles >14µm	ASTM D7647	>640	30	9	26
Particles >21µm	ASTM D7647	>160	8	2	5
Particles >38µm	ASTM D7647	>40	1	0	1
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	18/16/12	16/14/10	19/16/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.80	0.80	0.70



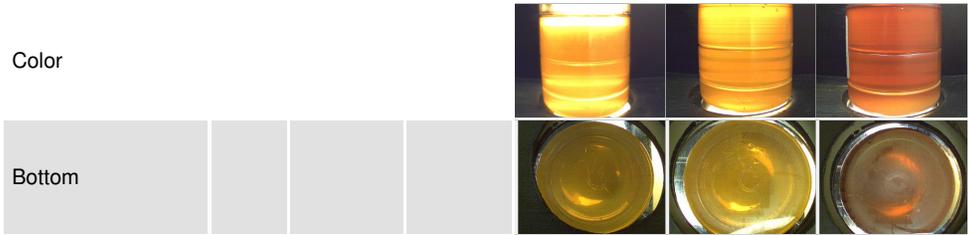
OIL ANALYSIS REPORT



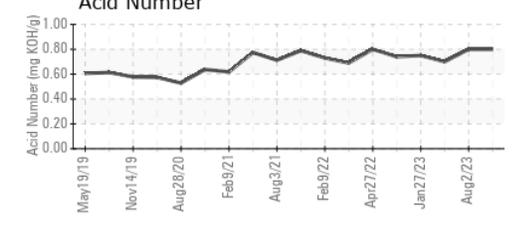
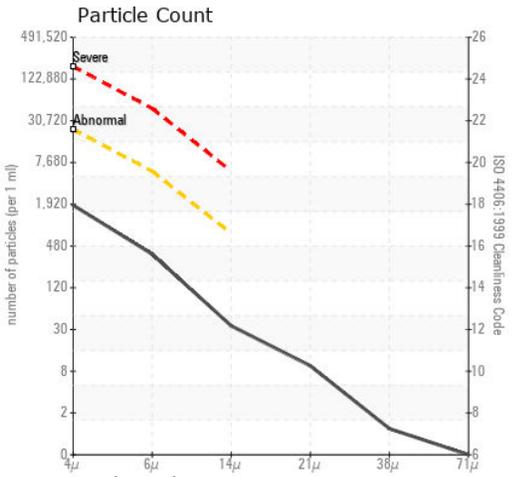
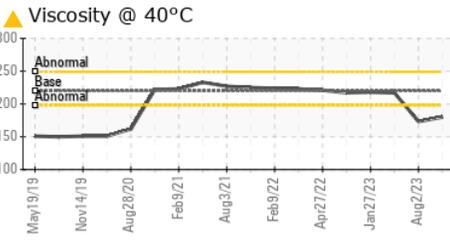
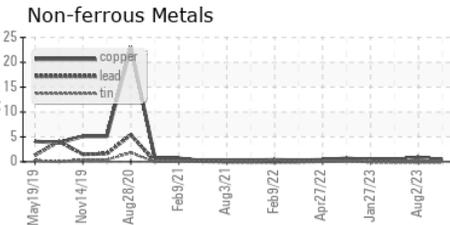
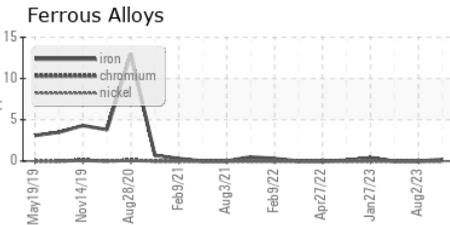
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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 ▲ 180	▲ 173.3	217

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0835751 **Received** : 11 Aug 2023
Lab Number : 05922230 **Diagnosed** : 14 Aug 2023
Unique Number : 10602177 **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

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)