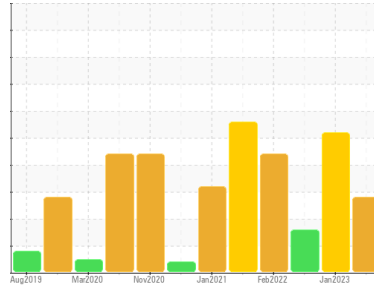




PROBLEM SUMMARY

Area
Fermentation
 Machine Id
Lightnin FHG21BB01 Dosing Tank, Agitator
 Component
Gearbox
 Fluid
JAX MAGNA-PLATE 460 FG (14 GAL)

Sample Rating Trend

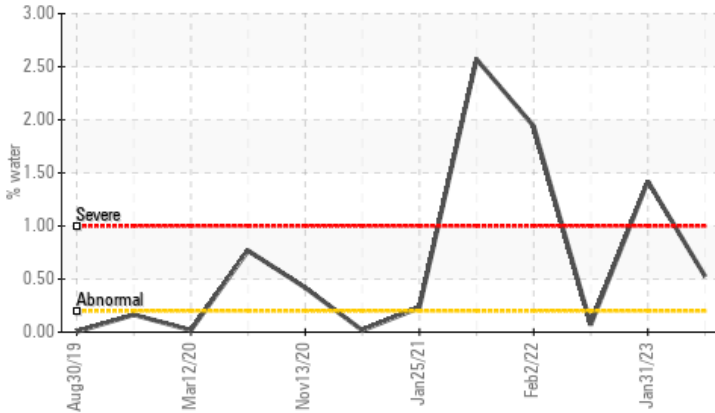


WATER



COMPONENT CONDITION SUMMARY

▲ Water



RECOMMENDATION

We advise that you check for the source of water entry. 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.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	SEVERE	ABNORMAL
Water	%	ASTM D6304	>0.2	▲ 0.526	● 1.42	0.070
ppm Water	ppm	ASTM D6304	>2000	▲ 5260	● 14200	700.3
Debris	scalar	*Visual	NONE	▲ MODER	▲ LIGHT	LIGHT
Appearance	scalar	*Visual	NORML	▲ HAZY	▲ MILKY	▲ HAZY

Customer Id: NOVFRANC
 Sample No.: WC0793880
 Lab Number: 05873188
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

31 Jan 2023 Diag: Doug Bogart

WATER



We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Else, we recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count. All component wear rates are normal. Appearance is milky. Light concentration of visible dirt/debris present in the oil. There is a high concentration of water present in the oil. The AN level is acceptable for this fluid.

view report



28 Jul 2022 Diag: Doug Bogart

CONTAMINANT



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 < 6 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



02 Feb 2022 Diag: Angela Borella

WATER



We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count. All component wear rates are normal. Appearance is milky. Moderate concentration of visible dirt/debris present in the oil. There is a high concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid.

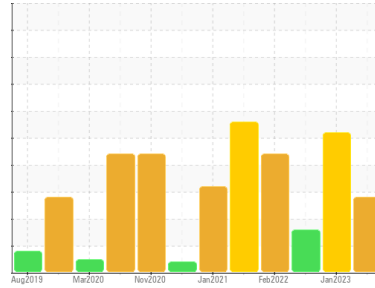
view report





OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area
Fermentation
 Machine Id
Lightnin FHG21BB01 Dosing Tank, Agitator
 Component
Gearbox
 Fluid
JAX MAGNA-PLATE 460 FG (14 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. 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

There is a moderate concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0793880	WC0745866	WC0718046
Sample Date	Client Info	13 Jun 2023	31 Jan 2023	28 Jul 2022
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ABNORMAL	SEVERE	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >200	11	58	27
Chromium	ppm	ASTM D5185m >15	0	<1	<1
Nickel	ppm	ASTM D5185m >15	0	0	1
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	2
Aluminum	ppm	ASTM D5185m >25	0	0	2
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	<1	0	0
Tin	ppm	ASTM D5185m >25	<1	0	1
Antimony	ppm	ASTM D5185m >5	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	4	0	2
Barium	ppm	ASTM D5185m	0	<1	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	<1	0	<1
Calcium	ppm	ASTM D5185m	34	▲ 5	8
Phosphorus	ppm	ASTM D5185m	867	541	612
Zinc	ppm	ASTM D5185m	13	0	0
Sulfur	ppm	ASTM D5185m	1112	▲ 594	987

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >50	10	<1	<1
Sodium	ppm	ASTM D5185m	0	0	<1
Potassium	ppm	ASTM D5185m >20	<1	0	0
Water	%	ASTM D6304 >0.2	▲ 0.526	■ 1.42	0.070
ppm Water	ppm	ASTM D6304 >2000	▲ 5260	■ 14200	700.3

FLUID CLEANLINESS

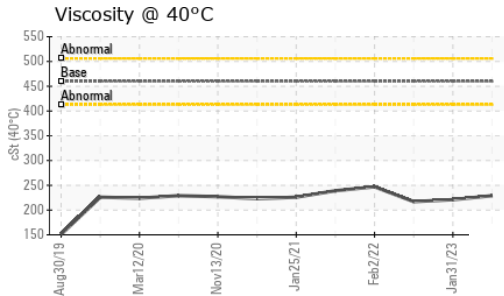
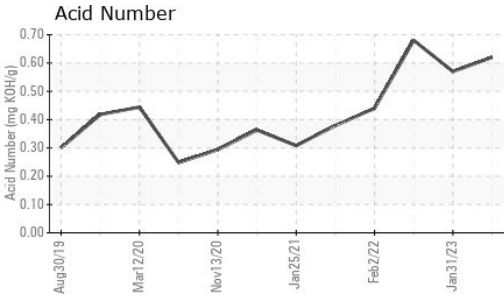
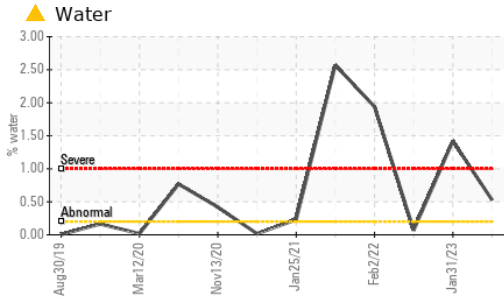
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	---	---	▲ 51798
Particles >6µm	ASTM D7647 >5000	---	---	4938
Particles >14µm	ASTM D7647 >640	---	---	161
Particles >21µm	ASTM D7647 >160	---	---	34
Particles >38µm	ASTM D7647 >40	---	---	0
Particles >71µm	ASTM D7647 >10	---	---	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	---	---	▲ 23/19/15

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.62	0.57	0.68



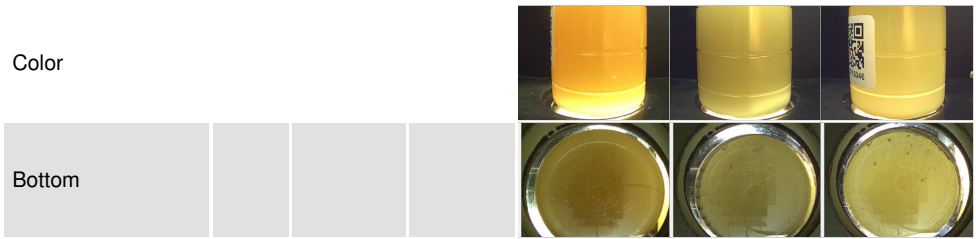
OIL ANALYSIS REPORT



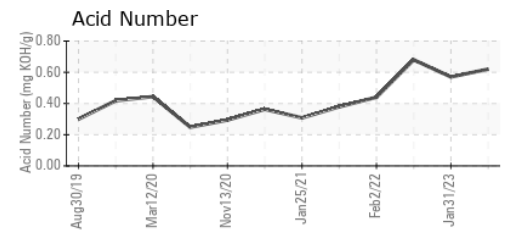
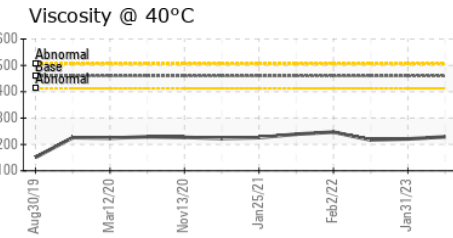
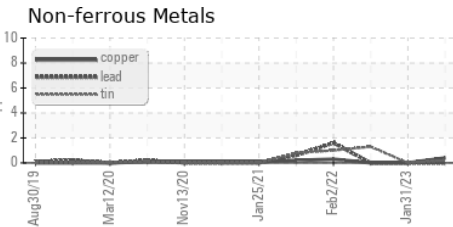
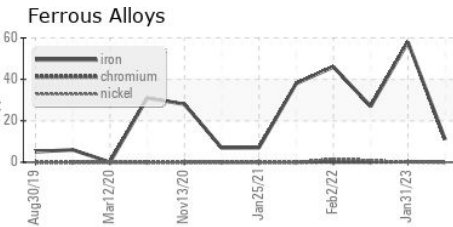
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	▲ MODER	▲ LIGHT	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 460	229	221	217

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0793880 **Received** : 14 Jun 2023
Lab Number : 05873188 **Diagnosed** : 15 Jun 2023
Unique Number : 10512972 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PrtCount)

NOVOZYMES
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 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)