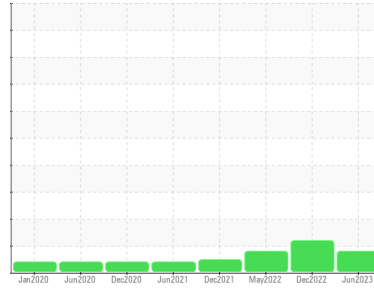




PROBLEM SUMMARY

Sample Rating Trend



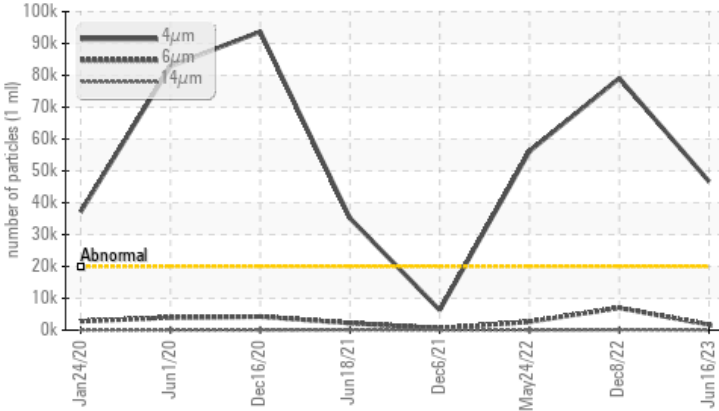
ISO



Area
Fermentation
 Machine Id
Lightnin FFG35SB01 Seed Fermentor, Agitator
 Component
Gearbox
 Fluid
JAX FGG-AW ISO 220 (11 GAL)

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	▲ 46693	▲ 79107	▲ 56178
Oil Cleanliness	ISO 4406 (c) >21/19/16	▲ 23/18/12	▲ 23/20/14	▲ 23/19/12

Customer Id: NOVFRANC
 Sample No.: WC0793890
 Lab Number: 05878076
 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

08 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: Doug Bogart

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 < 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



06 Dec 2021 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





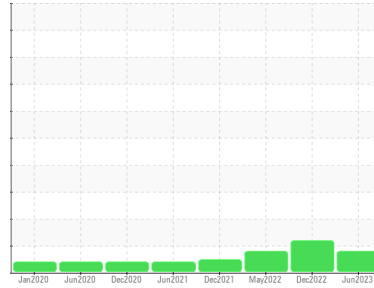
OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
Fermentation
 Machine Id
Lightnin FFG35SB01 Seed Fermentor, Agitator
 Component
Gearbox
 Fluid
JAX FGG-AW ISO 220 (11 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 < 6 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		WC0793890	WC0741051	WC0675411
Sample Date	Client Info		16 Jun 2023	08 Dec 2022	24 May 2022
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			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	8	8	8
Chromium	ppm	ASTM D5185m >15	0	0	0
Nickel	ppm	ASTM D5185m >15	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >25	16	16	16
Lead	ppm	ASTM D5185m >100	<1	0	<1
Copper	ppm	ASTM D5185m >200	1	<1	<1
Tin	ppm	ASTM D5185m >25	0	0	<1
Antimony	ppm	ASTM D5185m >5	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	3	5	4
Barium	ppm	ASTM D5185m	0	4	0
Molybdenum	ppm	ASTM D5185m	<1	<1	<1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	2	3	2
Calcium	ppm	ASTM D5185m	759	777	371
Phosphorus	ppm	ASTM D5185m	510	524	564
Zinc	ppm	ASTM D5185m	41	33	30
Sulfur	ppm	ASTM D5185m	1865	1112	1211

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	3	4	2
Sodium	ppm	ASTM D5185m	1	0	<1
Potassium	ppm	ASTM D5185m >20	0	0	0
Water	%	ASTM D6304 >0.2	0.004	0.008	0.00
ppm Water	ppm	ASTM D6304 >2000	43.7	89.2	0.00

FLUID CLEANLINESS

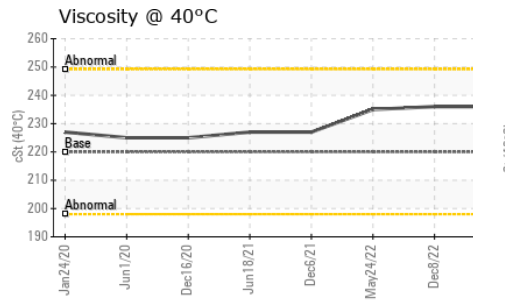
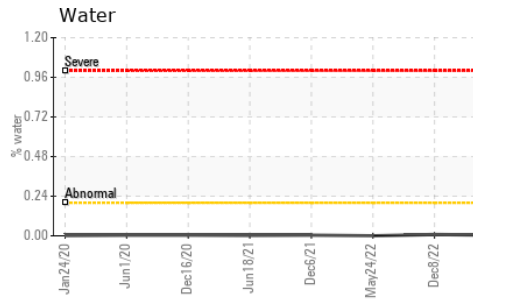
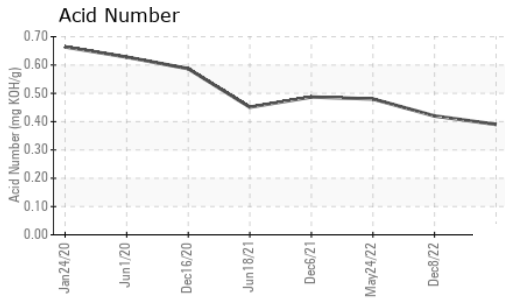
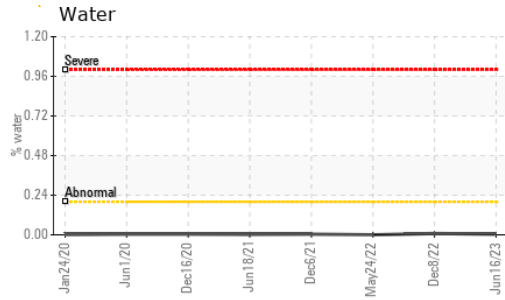
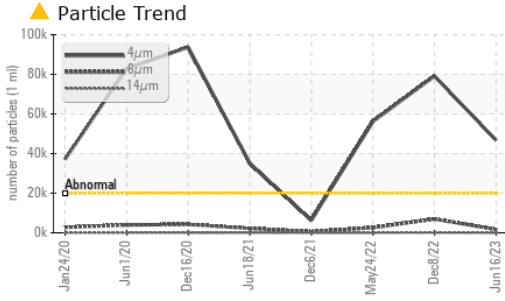
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 46693	▲ 79107	▲ 56178
Particles >6µm	ASTM D7647	>5000	1695	▲ 6974	2630
Particles >14µm	ASTM D7647	>640	30	112	22
Particles >21µm	ASTM D7647	>160	7	18	4
Particles >38µm	ASTM D7647	>40	0	1	0
Particles >71µm	ASTM D7647	>10	0	1	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 23/18/12	▲ 23/20/14	▲ 23/19/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.39	0.42	0.48



OIL ANALYSIS REPORT



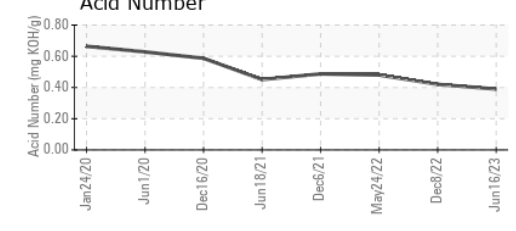
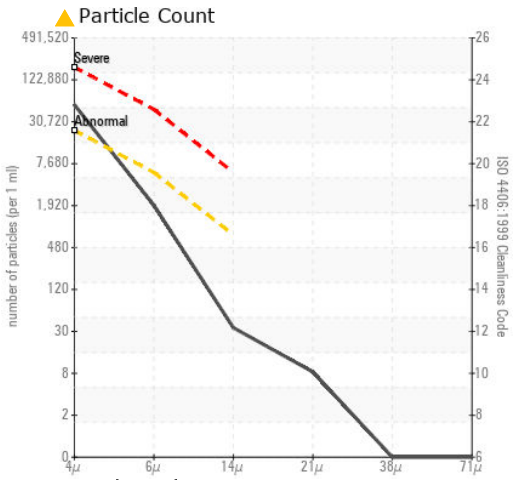
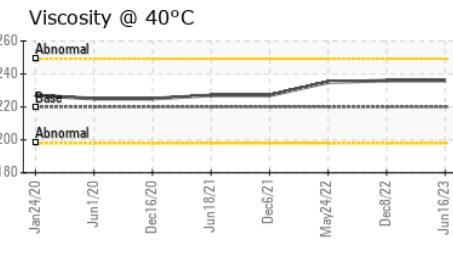
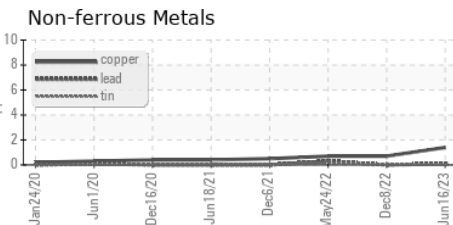
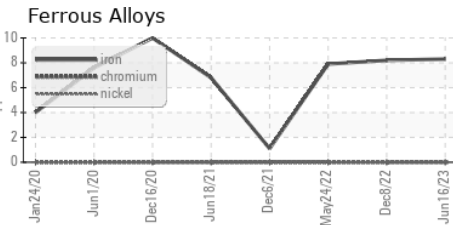
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	236	235

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0793890 **Received** : 20 Jun 2023
Lab Number : 05878076 **Diagnosed** : 21 Jun 2023
Unique Number : 10523179 **Diagnostician** : Doug Bogart
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)