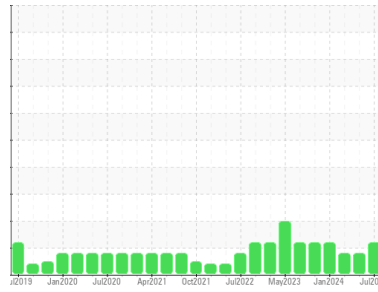




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

Fermentation

Machine Id

Lightnin FHG51AB01 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 silt (particulates < 14 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		WC0901922	WC0888633	WC0916395
Sample Date	Client Info		12 Jul 2024	31 May 2024	01 May 2024
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	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	13	13	21
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	0	0	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	0	0	0
Tin	ppm	ASTM D5185m >25	0	0	0
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	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	0	1	2
Phosphorus	ppm	ASTM D5185m	577	567	539
Zinc	ppm	ASTM D5185m	0	6	4
Sulfur	ppm	ASTM D5185m	887	858	820

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	2	0	1
Sodium	ppm	ASTM D5185m	<1	2	1
Potassium	ppm	ASTM D5185m >20	0	0	0
Water	%	ASTM D6304 >0.2	0.008	0.004	0.011
ppm Water	ppm	ASTM D6304 >2000	80	49	114

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 152378	▲ 135760	● 38955
Particles >6µm	ASTM D7647	>5000	▲ 92878	4413	2088
Particles >14µm	ASTM D7647	>640	466	163	65
Particles >21µm	ASTM D7647	>160	59	28	10
Particles >38µm	ASTM D7647	>40	3	0	1
Particles >71µm	ASTM D7647	>10	0	0	1
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/24/16	▲ 24/19/15	● 22/18/13

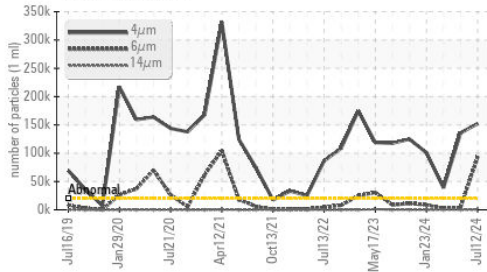
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.72	0.74	0.769

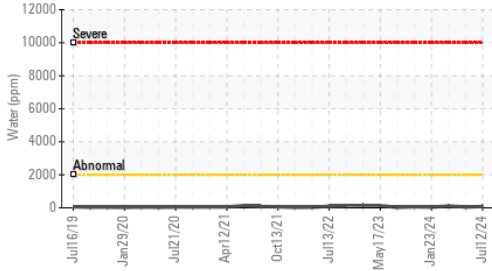


OIL ANALYSIS REPORT

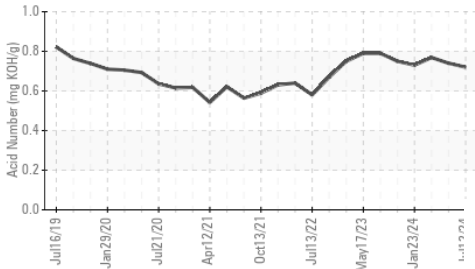
Particle Trend



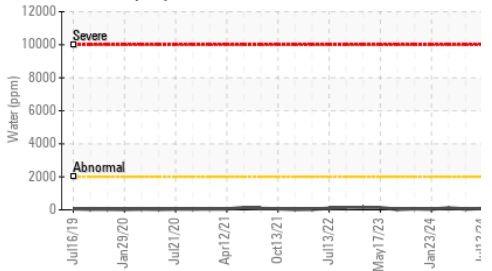
Water (KF)



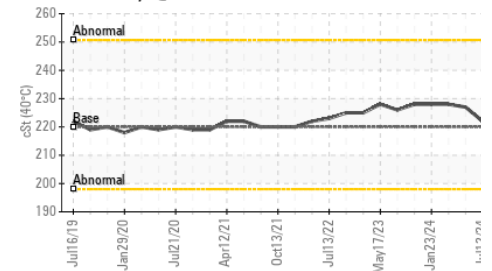
Acid Number



Water (KF)



Viscosity @ 40°C

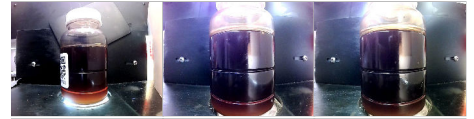


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

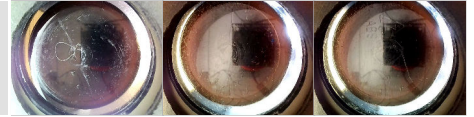
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	222	227

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

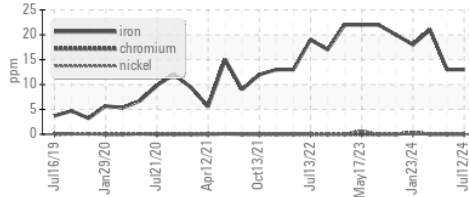


Bottom

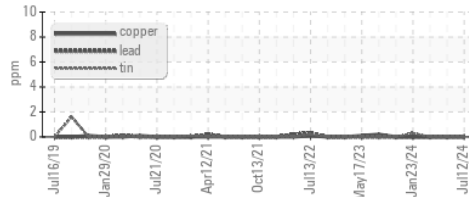


GRAPHS

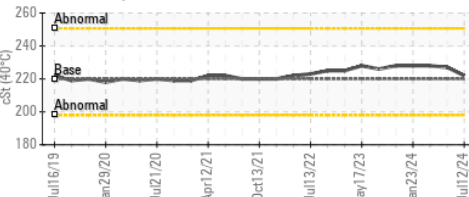
Ferrous Alloys



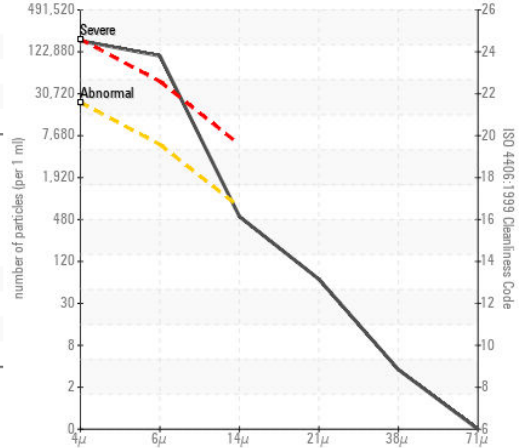
Non-ferrous Metals



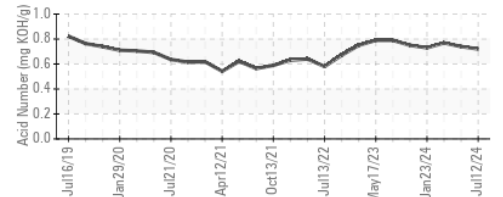
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0901922

Lab Number : 06237795

Unique Number : 11126629

Test Package : IND 2 (Additional Tests: KF, PrtCount)

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)

Received : 16 Jul 2024

Tested : 17 Jul 2024

Diagnosed : 18 Jul 2024 - Don Baldrige

NOVOZYMES

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US 27525

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