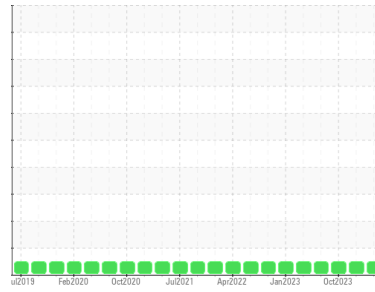




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Fermentation

Machine Id

Lightnin FHG51DB01 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 component. The amount and size of particulates present in the system is acceptable.

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	WC0916398	WC0853642	WC0819248
Sample Date	Client Info	09 May 2024	23 Jan 2024	17 Oct 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		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>200	<1	1	1
Chromium ppm ASTM D5185m	>15	0	<1	0
Nickel ppm ASTM D5185m	>15	0	0	0
Titanium ppm ASTM D5185m		0	0	0
Silver ppm ASTM D5185m		<1	0	0
Aluminum ppm ASTM D5185m	>25	0	2	0
Lead ppm ASTM D5185m	>100	0	0	0
Copper ppm ASTM D5185m	>200	<1	0	0
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	0	0
Molybdenum ppm ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m		0	<1	0
Calcium ppm ASTM D5185m		0	2	2
Phosphorus ppm ASTM D5185m		572	612	606
Zinc ppm ASTM D5185m		8	0	0
Sulfur ppm ASTM D5185m		873	771	816

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>50	<1	0	<1
Sodium ppm ASTM D5185m		<1	0	0
Potassium ppm ASTM D5185m	>20	0	<1	0
Water % ASTM D6304	>0.2	0.003	0.005	0.003
ppm Water ppm ASTM D6304	>2000	36	57	35.2

FLUID CLEANLINESS

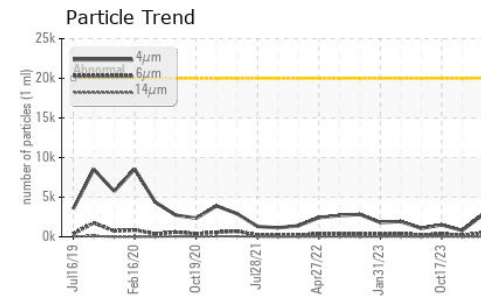
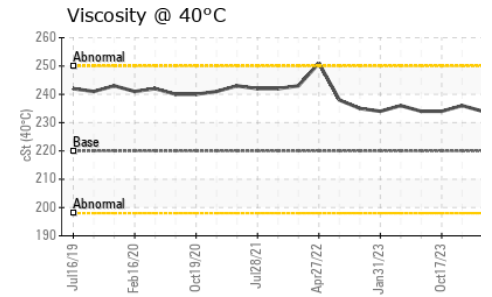
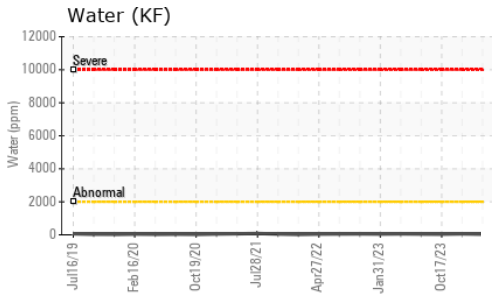
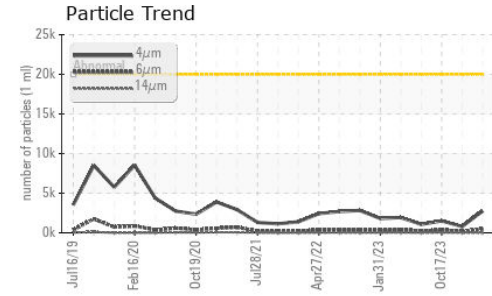
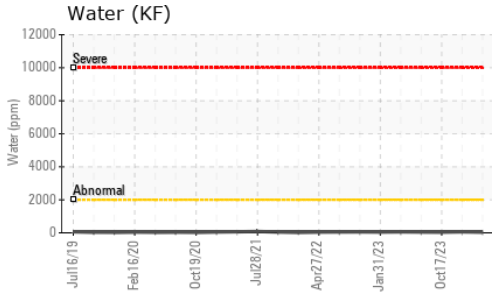
method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>20000	2756	793	1514
Particles >6µm ASTM D7647	>5000	472	164	369
Particles >14µm ASTM D7647	>640	18	14	30
Particles >21µm ASTM D7647	>160	2	5	8
Particles >38µm ASTM D7647	>40	0	1	1
Particles >71µm ASTM D7647	>10	0	1	0
Oil Cleanliness ISO 4406 (c)	>21/19/16	19/16/11	17/15/11	18/16/12

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045		0.67	0.65	0.64



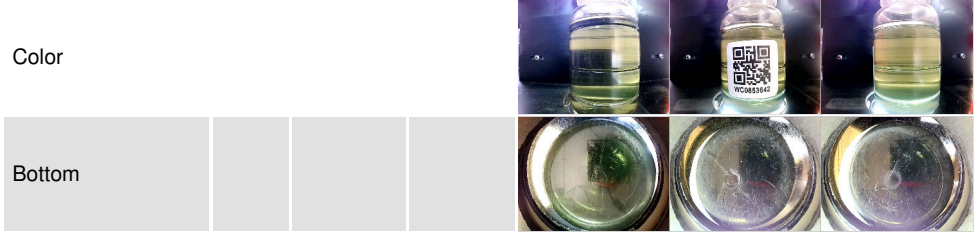
OIL ANALYSIS REPORT



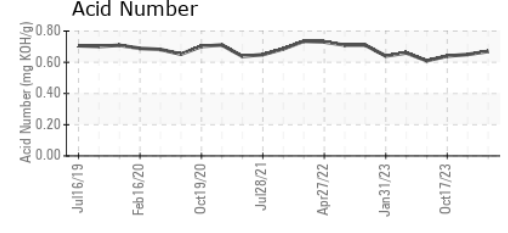
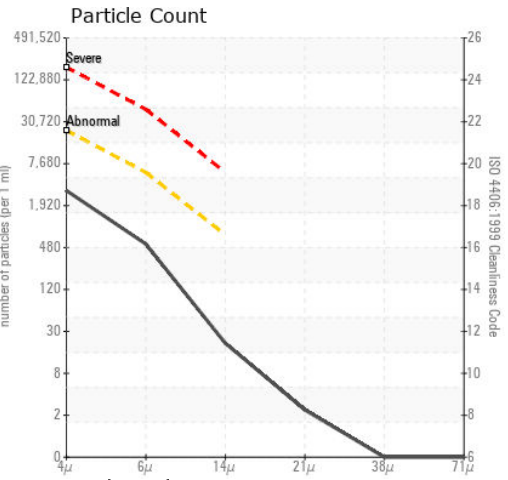
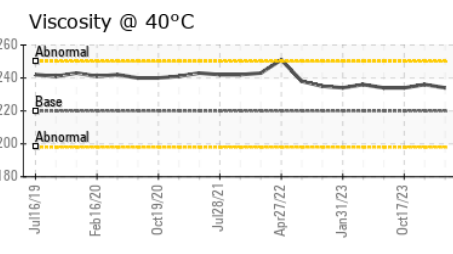
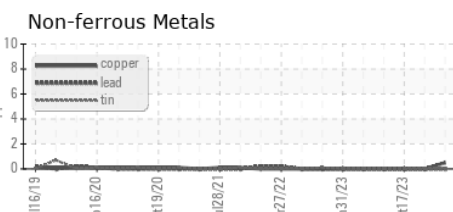
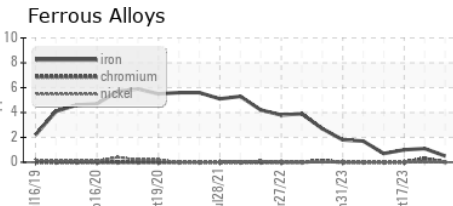
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	234	236	234

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916398 **Received** : 16 May 2024
Lab Number : 06181320 **Tested** : 17 May 2024
Unique Number : 11032646 **Diagnosed** : 20 May 2024 - Angela Borella
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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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)