

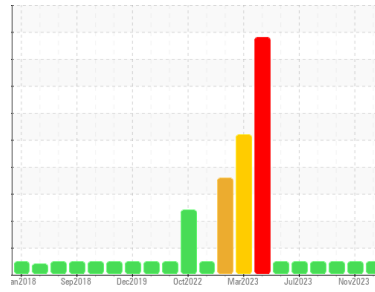


OIL ANALYSIS REPORT



Area
RMR-Trinity
 Machine Id
1216-96585 LIEBHERR LH50M 1216-96585
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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.

Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		DJJ0022511	DJJ0019884	DJJ0019887
Sample Date	Client Info		29 Dec 2023	02 Nov 2023	21 Aug 2023
Machine Age	hrs	Client Info	11348	11072	10694
Oil Age	hrs	Client Info	250	500	7
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	5	4	2
Chromium	ppm	ASTM D5185m >5	0	<1	0
Nickel	ppm	ASTM D5185m >5	0	<1	0
Titanium	ppm	ASTM D5185m	1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >15	5	8	2
Lead	ppm	ASTM D5185m >30	0	1	<1
Copper	ppm	ASTM D5185m >125	2	2	<1
Tin	ppm	ASTM D5185m >5	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	609	572	778
Barium	ppm	ASTM D5185m 10	0	1	0
Molybdenum	ppm	ASTM D5185m 100	981	864	1017
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m 450	95	91	108
Calcium	ppm	ASTM D5185m 3000	493	913	501
Phosphorus	ppm	ASTM D5185m 1150	53	163	48
Zinc	ppm	ASTM D5185m 1350	50	177	23
Sulfur	ppm	ASTM D5185m 4250	2181	2333	3104

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >60	15	14	14
Sodium	ppm	ASTM D5185m	3	2	4
Potassium	ppm	ASTM D5185m >20	347	286	348
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

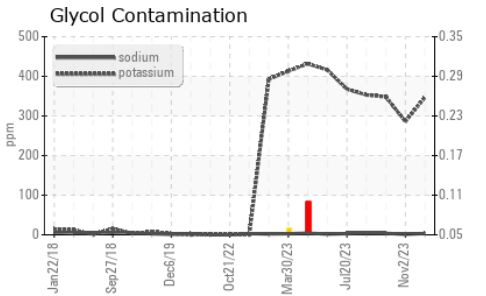
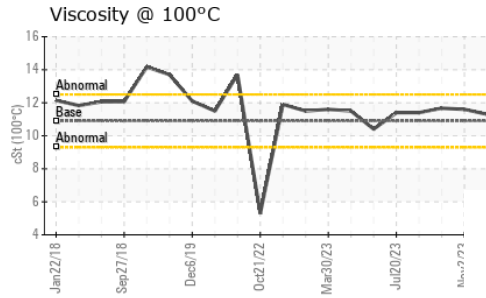
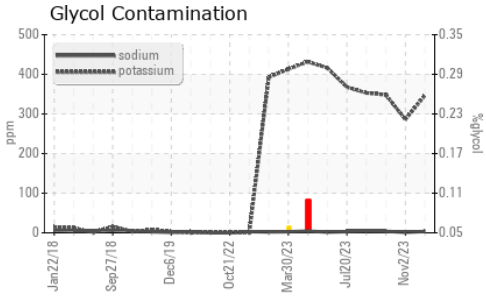
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.2	8.7	4.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.9	20.6	22.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.8	22.5	19.0
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	2.9	3.5	3.1



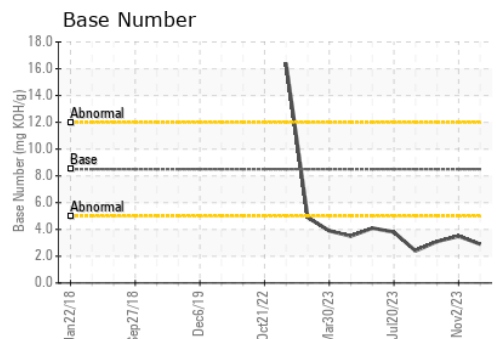
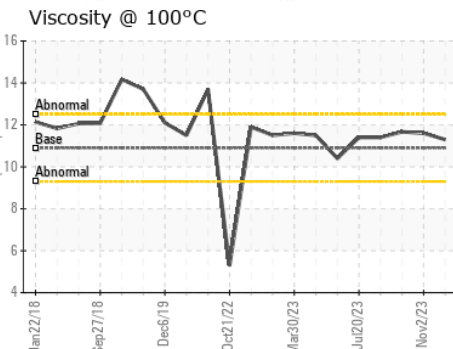
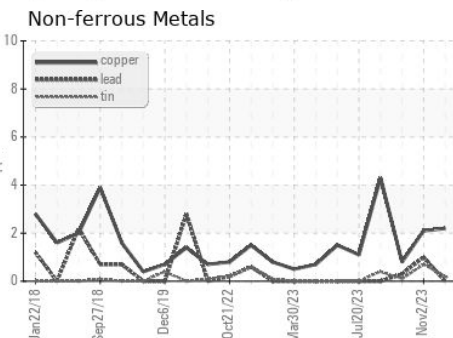
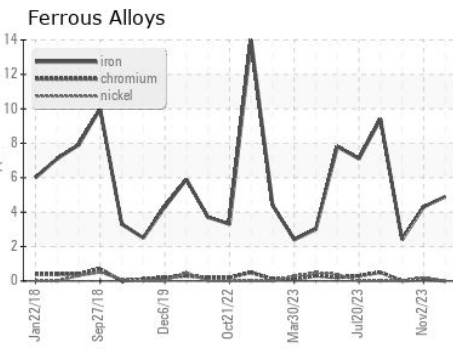
OIL ANALYSIS REPORT



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 @ 100°C	cSt	ASTM D445	10.9	11.3	11.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0022511 **Received** : 16 Jan 2024
Lab Number : 06060665 **Diagnosed** : 17 Jan 2024
Unique Number : 10832047 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, TBN)

RIVER METALS RECYCLING - DECATUR FACILITY
 4301 IVERSON BLVD
 TRINITY, AL
 US 35673
 Contact: LARRY BARBER
 larry.barber@rmrecycling.com

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)

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F: