



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



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

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0022460</b>	DJJ0022511	DJJ0019884
Sample Date		Client Info		<b>12 Apr 2024</b>	29 Dec 2023	02 Nov 2023
Machine Age	hrs	Client Info		<b>11651</b>	11348	11072
Oil Age	hrs	Client Info		<b>250</b>	250	500
Filter Age	hrs	Client Info		<b>0</b>	250	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>6</b>	5	4
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>11</b>	5	8
Lead	ppm	ASTM D5185m	>30	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>125	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

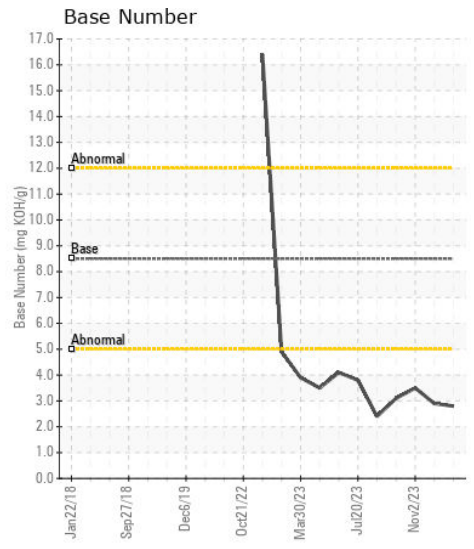
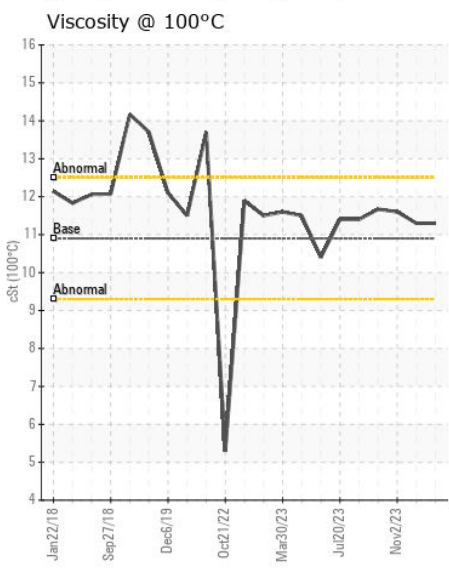
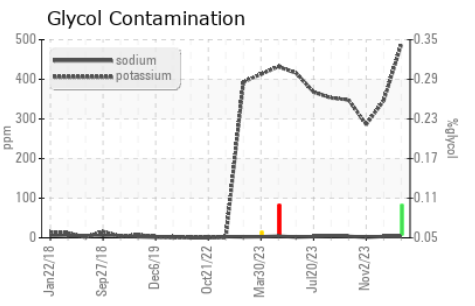
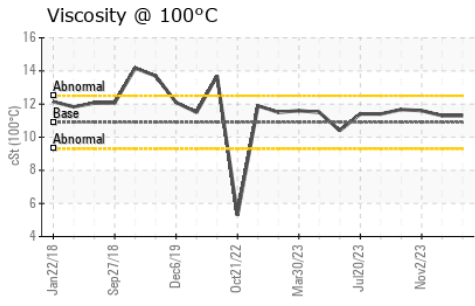
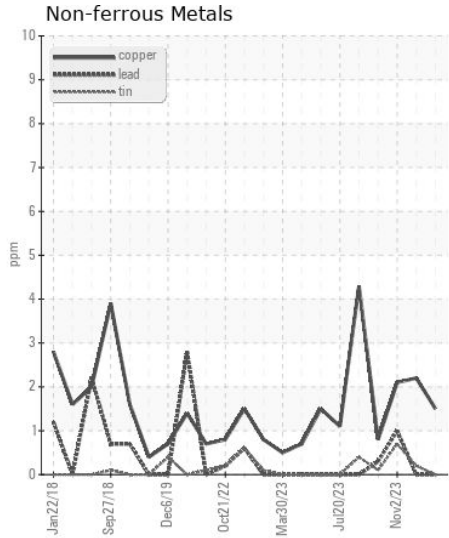
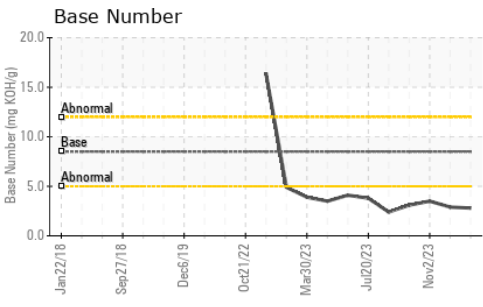
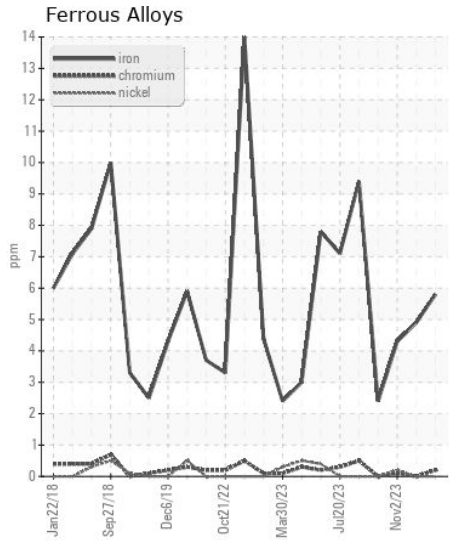
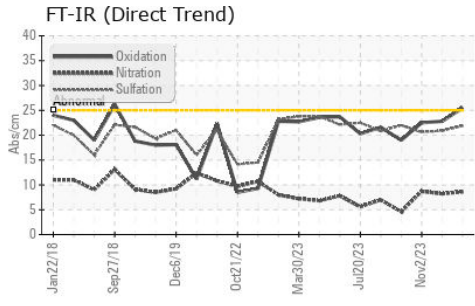
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	<b>16</b>	15	14
Potassium	ppm	ASTM D5185m	>20	<b>488</b>	347	286
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>0.10</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.2	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	20.9	20.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>3</b>	3	2
Boron	ppm	ASTM D5185m	250	<b>672</b>	609	572
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	1
Molybdenum	ppm	ASTM D5185m	100	<b>1149</b>	981	864
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>98</b>	95	91
Calcium	ppm	ASTM D5185m	3000	<b>504</b>	493	913
Phosphorus	ppm	ASTM D5185m	1150	<b>10</b>	53	163
Zinc	ppm	ASTM D5185m	1350	<b>14</b>	50	177
Sulfur	ppm	ASTM D5185m	4250	<b>2053</b>	2181	2333
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.5</b>	22.8	22.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>2.8</b>	2.9	3.5
Visc @ 100°C	cSt	ASTM D445	10.9	<b>11.3</b>	11.3	11.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0022460 **Received** : 17 Apr 2024  
**Lab Number** : 06151781 **Tested** : 19 Apr 2024  
**Unique Number** : 10981859 **Diagnosed** : 19 Apr 2024 - Don Baldrige  
**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)