

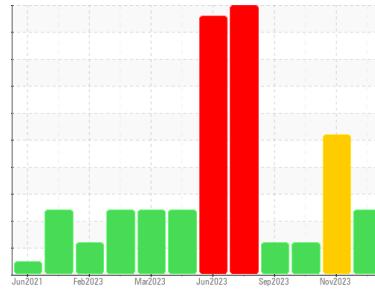


OIL ANALYSIS REPORT



Machine Id
120556-1216 LIEBHERR LH50M 120556-1216
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

Sample Rating Trend



GLYCOL



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain high.

Fluid Condition

The BN level is low.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	DJJ0022501	DJJ0022510	DJJ0022526
Sample Date	Client Info	03 Jan 2024	16 Nov 2023	11 Oct 2023
Machine Age	hrs	9096	8743	8542
Oil Age	hrs	250	225	250
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	ABNORMAL	ATTENTION

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	3	3	8
Chromium	ppm ASTM D5185m >5	0	<1	<1
Nickel	ppm ASTM D5185m >5	0	0	<1
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m >3	0	0	1
Aluminum	ppm ASTM D5185m >15	6	7	6
Lead	ppm ASTM D5185m >30	0	<1	6
Copper	ppm ASTM D5185m >125	7	10	14
Tin	ppm ASTM D5185m >5	0	<1	2
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	713	628	390
Barium	ppm ASTM D5185m 10	0	11	95
Molybdenum	ppm ASTM D5185m 100	1107	911	346
Manganese	ppm ASTM D5185m	0	<1	2
Magnesium	ppm ASTM D5185m 450	86	136	186
Calcium	ppm ASTM D5185m 3000	462	628	2474
Phosphorus	ppm ASTM D5185m 1150	10	105	707
Zinc	ppm ASTM D5185m 1350	10	122	796
Sulfur	ppm ASTM D5185m 4250	1904	2283	3040

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >60	17	14	17
Sodium	ppm ASTM D5185m	4	5	10
Potassium	ppm ASTM D5185m >20	▲ 471	▲ 309	▲ 120
Glycol	% *ASTM D2982	NEG	▲ 0.06	NEG

INFRA-RED

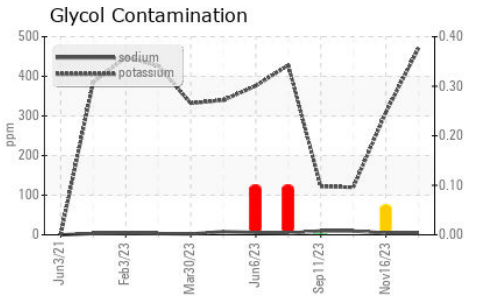
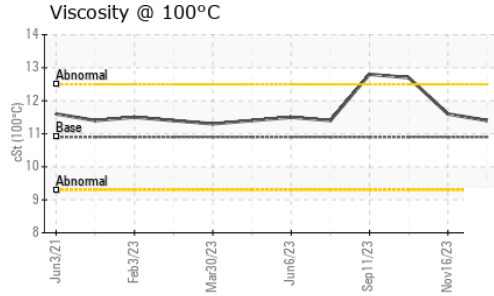
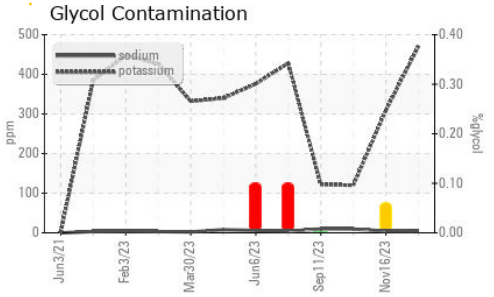
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	8.5	7.2	9.0
Sulfation	Abs/.1mm *ASTM D7415 >30	21.8	21.6	18.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	25.5	22.1	16.4
Base Number (BN)	mg KOH/g ASTM D2896 8.5	▲ 3.0	▲ 3.2	10.2



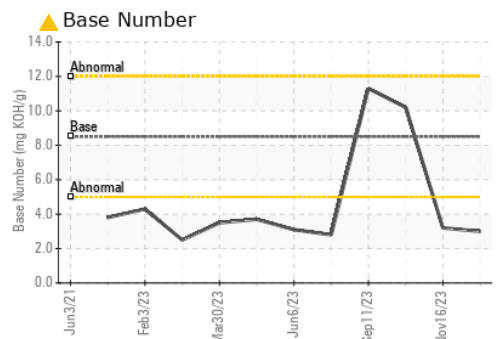
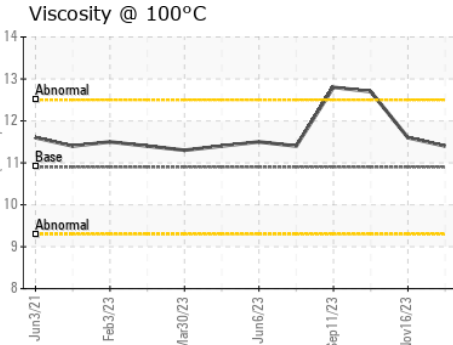
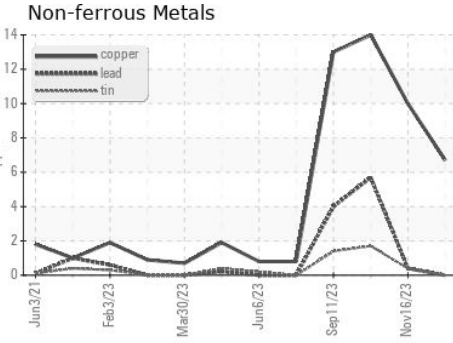
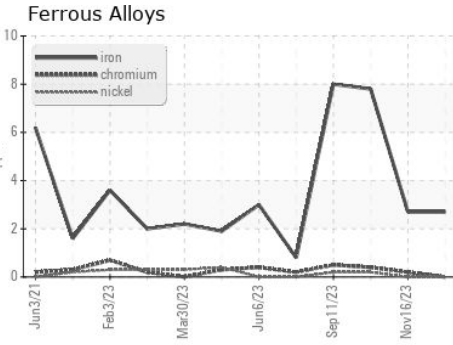
OIL ANALYSIS REPORT



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	▲ MODER	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	11.4	11.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0022501 **Recieved** : 16 Jan 2024
Lab Number : 06060666 **Diagnosed** : 17 Jan 2024
Unique Number : 10832048 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

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

Certificate L2367
 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)