



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
120556-1216 LIEBHERR LH50M 120556-1216
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DJJ0022477	DJJ0022519	DJJ0022508
Sample Date		Client Info		24 May 2024	27 Mar 2024	08 Mar 2024
Machine Age	hrs	Client Info		9944	9635	9578
Oil Age	hrs	Client Info		0	57	250
Filter Age	hrs	Client Info		0	0	250
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	2	3
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>15	3	2	1
Lead	ppm	ASTM D5185m	>30	<1	<1	0
Copper	ppm	ASTM D5185m	>125	1	1	2
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

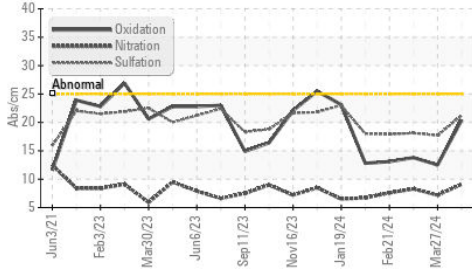
Silicon	ppm	ASTM D5185m	>60	8	9	8
Potassium	ppm	ASTM D5185m	>20	3	8	35
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	7.2	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	17.7	18.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

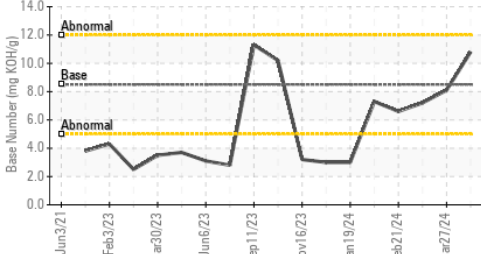
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	0	1	3
Boron	ppm	ASTM D5185m	250	139	104	124
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	47	7	71
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	884	670	650
Calcium	ppm	ASTM D5185m	3000	1376	1286	1168
Phosphorus	ppm	ASTM D5185m	1150	798	702	668
Zinc	ppm	ASTM D5185m	1350	911	795	722
Sulfur	ppm	ASTM D5185m	4250	2586	2902	2803
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.4	12.5	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.8	8.1	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	12.1	12.4	12.1

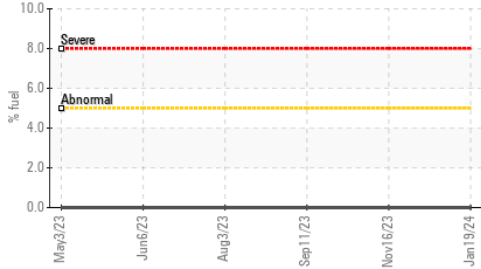
FT-IR (Direct Trend)



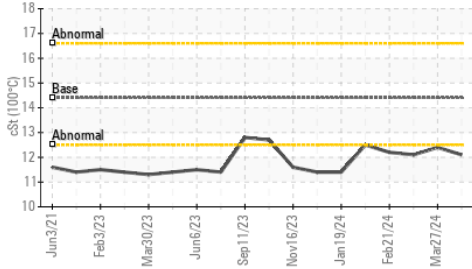
Base Number



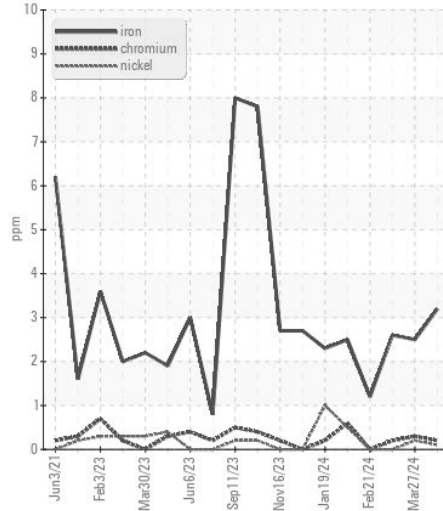
Fuel Dilution



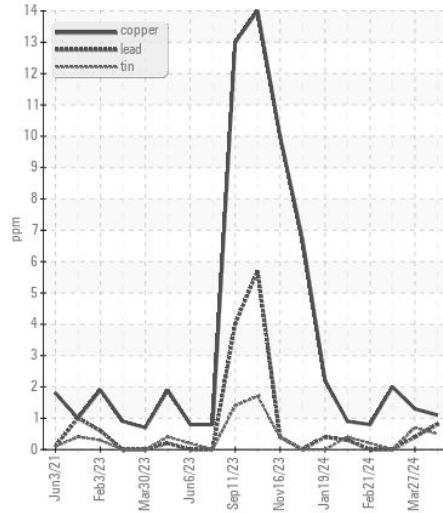
Viscosity @ 100°C



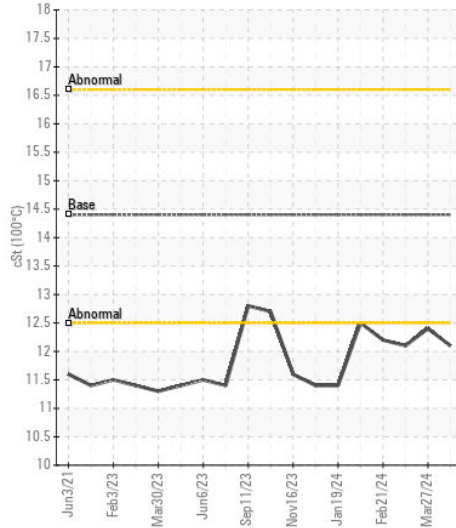
Ferrous Alloys



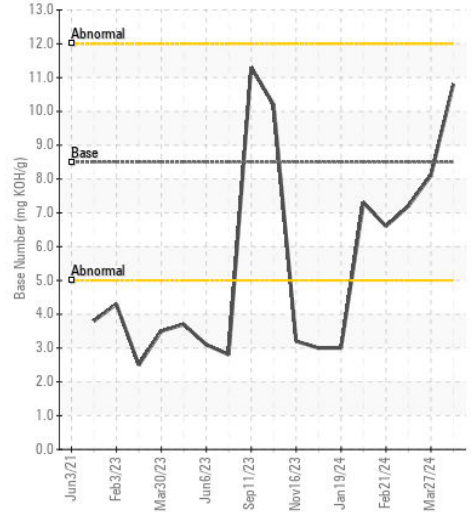
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0022477 **Received** : 20 Jun 2024
Lab Number : 06215457 **Tested** : 21 Jun 2024
Unique Number : 11088321 **Diagnosed** : 21 Jun 2024 - Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, 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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