



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
LIEBHERR
Machine Id
LIEBHERR LH50M 1216-123124
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		DJJ0023779	DJJ0011082	LH0212808
Sample Date		Client Info		05 Mar 2024	30 Jan 2024	28 Nov 2023
Machine Age	hrs	Client Info		6335	6109	5140
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	12	26
Chromium	ppm	ASTM D5185m	>5	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	1	3
Lead	ppm	ASTM D5185m	>30	2	5	26
Copper	ppm	ASTM D5185m	>125	2	3	7
Tin	ppm	ASTM D5185m	>5	0	<1	1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

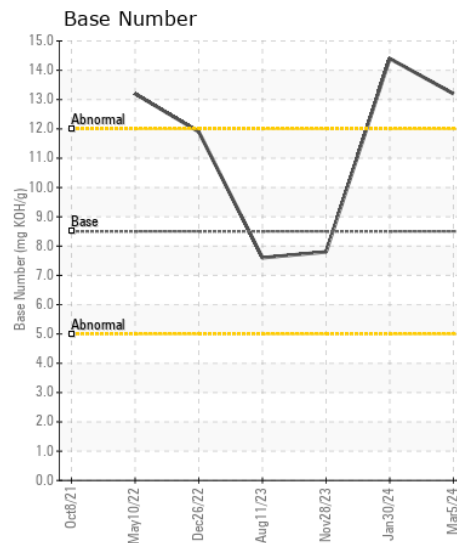
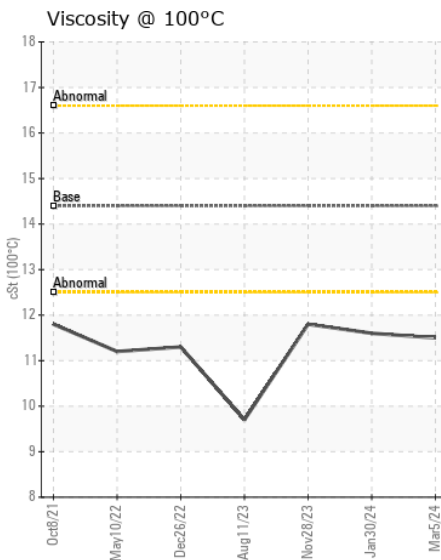
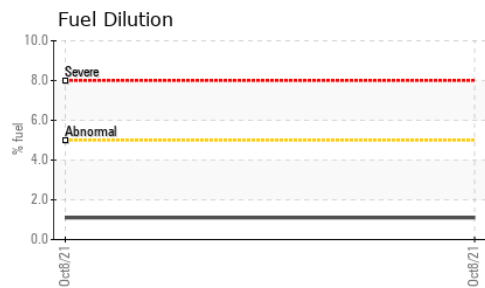
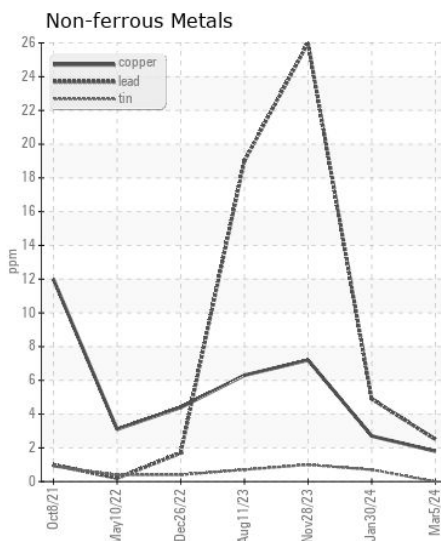
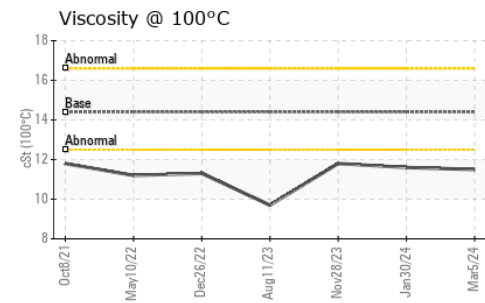
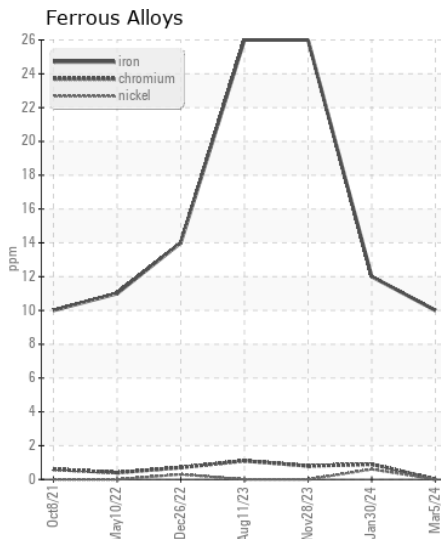
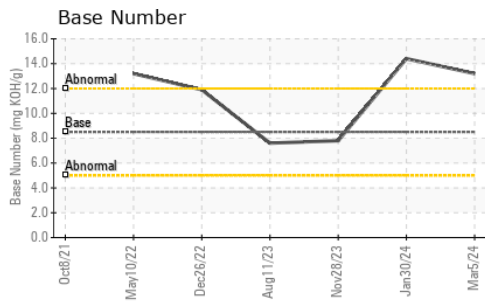
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	8	10	9
Potassium	ppm	ASTM D5185m	>20	0	3	3
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	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	15.3	13.6	23.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	17.0	26.4
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	2	0	4
Boron	ppm	ASTM D5185m	250	221	256	173
Barium	ppm	ASTM D5185m	10	0	0	1
Molybdenum	ppm	ASTM D5185m	100	1	2	2
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	43	21	30
Calcium	ppm	ASTM D5185m	3000	4280	4093	4447
Phosphorus	ppm	ASTM D5185m	1150	1027	933	1067
Zinc	ppm	ASTM D5185m	1350	1155	1266	1202
Sulfur	ppm	ASTM D5185m	4250	3152	2769	2079
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	12.8	28.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	13.2	14.4	7.8
Visc @ 100°C	cSt	ASTM D445	14.4	11.5	11.6	11.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0023779
Lab Number : 06122060
Unique Number : 10936211
Test Package : CONST (Additional Tests: FuelDilution, TBN)

METAL RECYCLING SERVICES - MONROE
 P.O. BOX 812
 MONROE, NC
 US 28111
 Contact: RYAN BOWDEN

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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