



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH60M 1217-146314

Component
Diesel Engine

Fluid
LIEBHERR MOTOROIL 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286178	---	---
Sample Date		Client Info		24 Jan 2024	---	---
Machine Age	hrs	Client Info		2000	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	---	---
Chromium	ppm	ASTM D5185m	>5	1	---	---
Nickel	ppm	ASTM D5185m	>5	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>15	4	---	---
Lead	ppm	ASTM D5185m	>30	<1	---	---
Copper	ppm	ASTM D5185m	>125	7	---	---
Tin	ppm	ASTM D5185m	>5	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

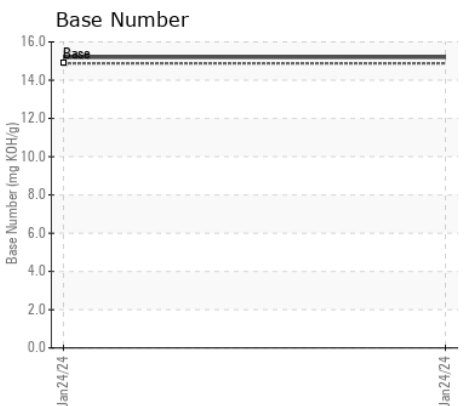
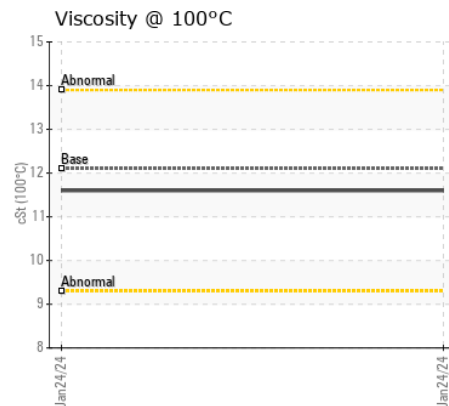
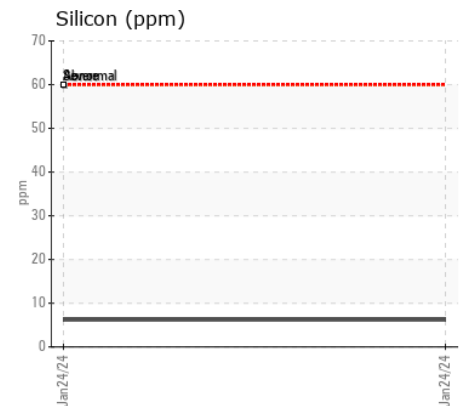
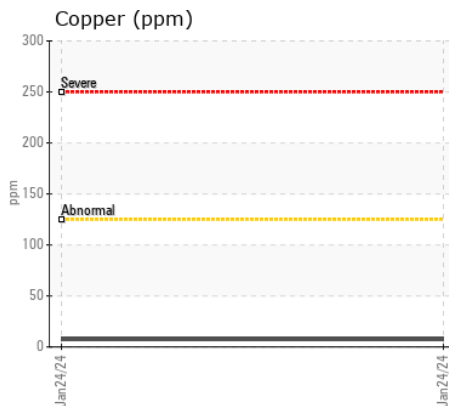
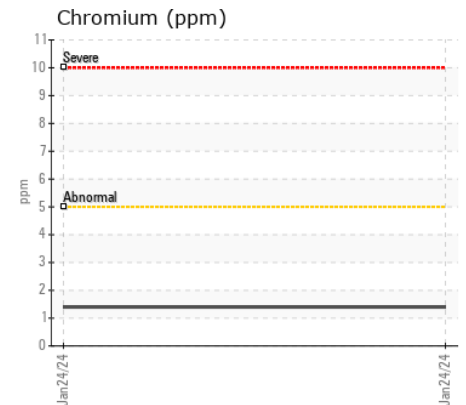
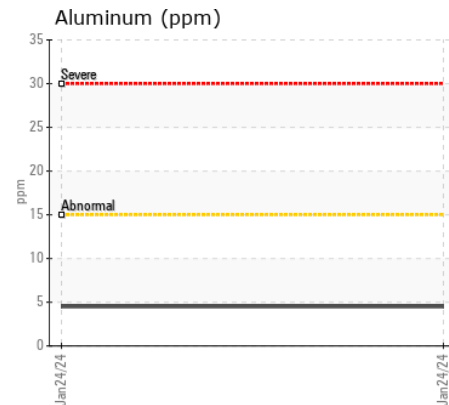
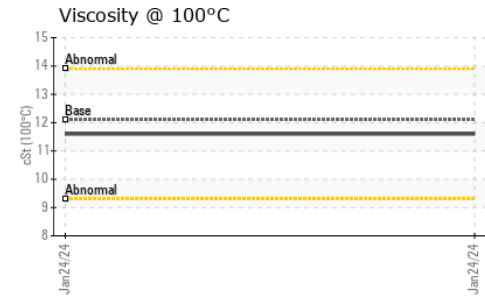
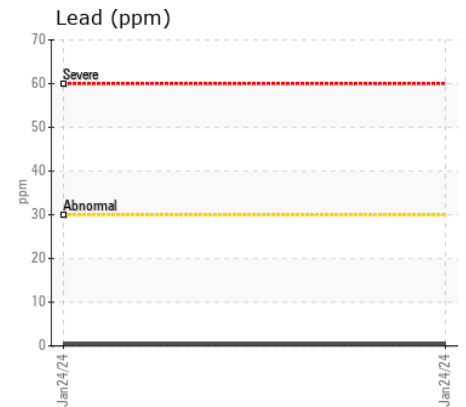
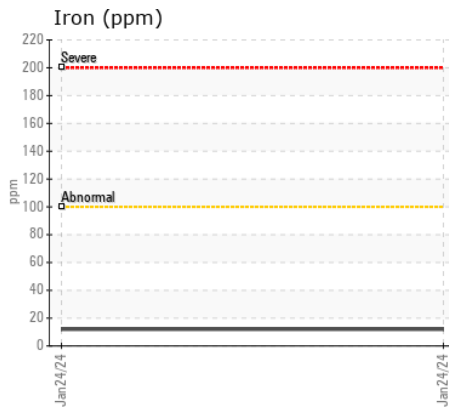
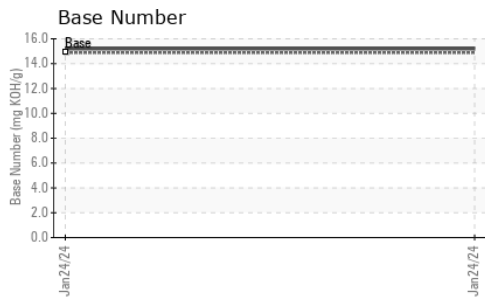
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	6	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	14.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.9	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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		2	---	---
Boron	ppm	ASTM D5185m	236	279	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	0	2	---	---
Manganese	ppm	ASTM D5185m	<1	<1	---	---
Magnesium	ppm	ASTM D5185m	25	40	---	---
Calcium	ppm	ASTM D5185m	4298	4682	---	---
Phosphorus	ppm	ASTM D5185m	1020	1193	---	---
Zinc	ppm	ASTM D5185m	1164	1318	---	---
Sulfur	ppm	ASTM D5185m	2460	3560	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	14.88	15.2	---	---
Visc @ 100°C	cSt	ASTM D445	12.1	11.6	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0286178
Lab Number : 06121409
Unique Number : 10930242
Test Package : MOBCE (Additional Tests: TBN)

C AND B EQUIPMENT, LLC
 4831 US-42
 GHENT, KY
 US 41045
 Contact: Service Manager

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: