



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30 119194-1253**  
Component  
**Diesel Engine**  
Fluid  
**LIEBHERR MOTOROIL 5W-30 LOW ASH (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0243134</b>	LH0243133	LH0243135
Sample Date		Client Info		<b>22 Feb 2024</b>	11 Jan 2024	09 Jun 2023
Machine Age	hrs	Client Info		<b>6782</b>	7279	6258
Oil Age	hrs	Client Info		<b>524</b>	1021	1039
Filter Age	hrs	Client Info		<b>524</b>	1021	1039
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	SEVERE	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>66	<b>2</b>	4	6
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	3	<1
Copper	ppm	ASTM D5185m	>74	<b>2</b>	▲ 97	4
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	● 9	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

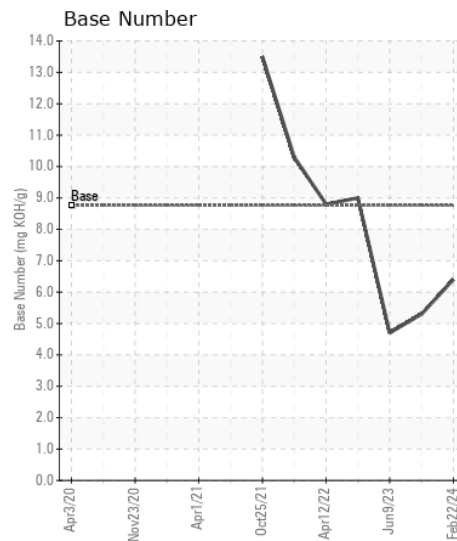
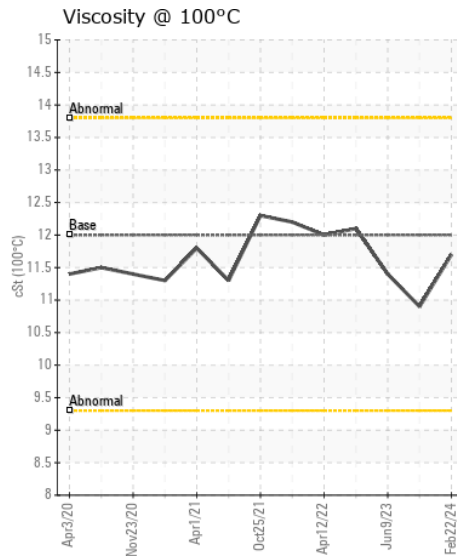
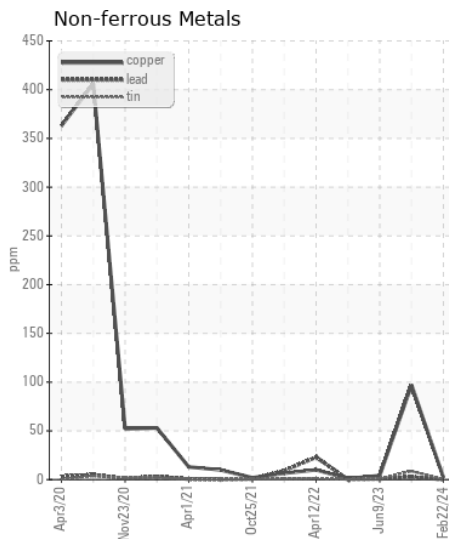
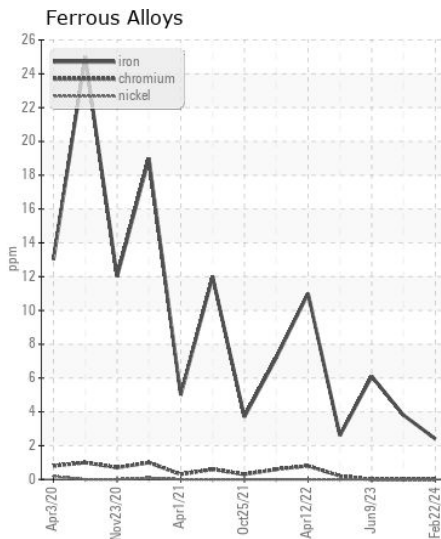
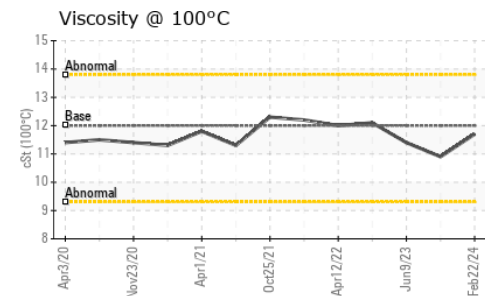
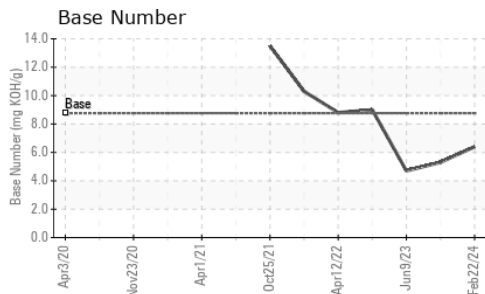
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>6</b>	7	8
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	10.5	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	22.6	23.8
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 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		<b>3</b>	4	4
Boron	ppm	ASTM D5185m	2	<b>51</b>	▲ 31	▲ 35
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	<1	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	12	<b>616</b>	624	628
Calcium	ppm	ASTM D5185m	2224	<b>1187</b>	▲ 1197	▲ 1209
Phosphorus	ppm	ASTM D5185m	635	<b>643</b>	633	649
Zinc	ppm	ASTM D5185m	718	<b>643</b>	649	669
Sulfur	ppm	ASTM D5185m	1694	<b>2449</b>	2380	2482
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.0</b>	19.2	21.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.76	<b>6.4</b>	5.3	4.7
Visc @ 100°C	cSt	ASTM D445	12.0	<b>11.7</b>	10.9	11.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0243134 **Received** : 23 Feb 2024  
**Lab Number** : 06098237 **Tested** : 26 Feb 2024  
**Unique Number** : 10896467 **Diagnosed** : 26 Feb 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)