



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR L550 050779-1214**  
Component  
**Diesel Engine**  
Fluid  
**LIEBHERR MOTOROIL 5W-30 LOW ASH (7 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0243138</b>	LH0243139	LH0207890
Sample Date		Client Info		<b>11 Apr 2023</b>	13 Dec 2022	08 Apr 2022
Machine Age	hrs	Client Info		<b>1453</b>	939	476
Oil Age	hrs	Client Info		<b>514</b>	939	476
Filter Age	hrs	Client Info		<b>514</b>	939	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>5</b>	5	11
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	3	2
Lead	ppm	ASTM D5185m	>30	<b>&lt;1</b>	<1	5
Copper	ppm	ASTM D5185m	>125	<b>61</b>	136	185
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	2
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

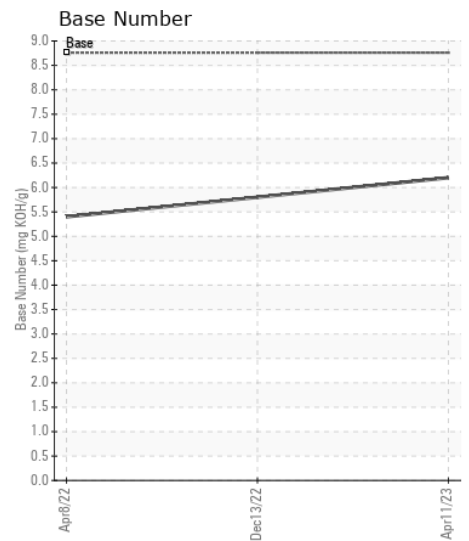
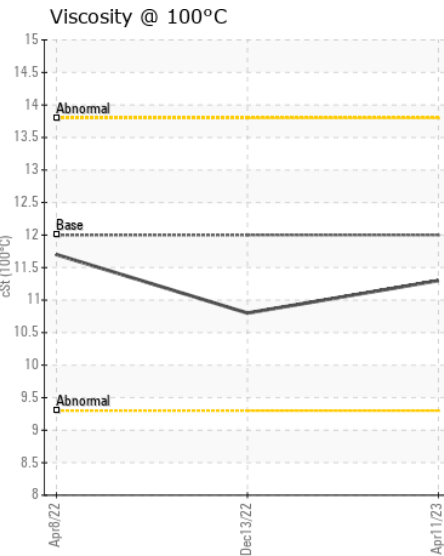
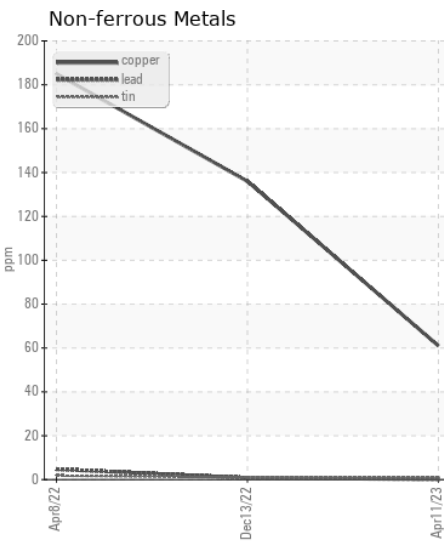
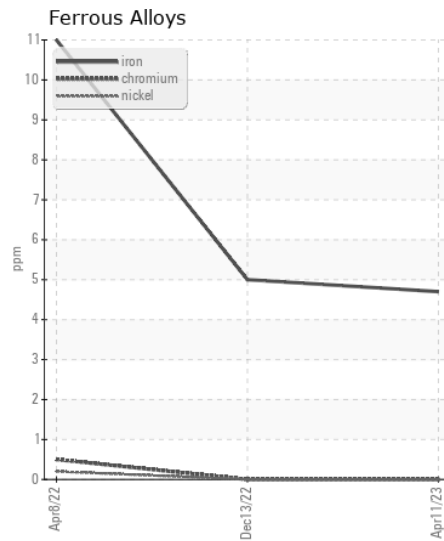
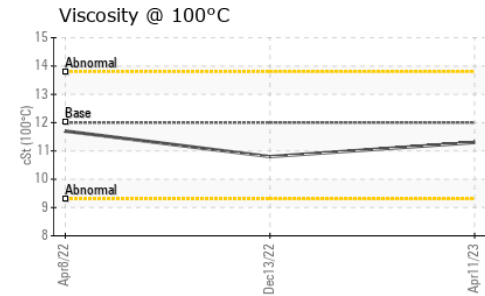
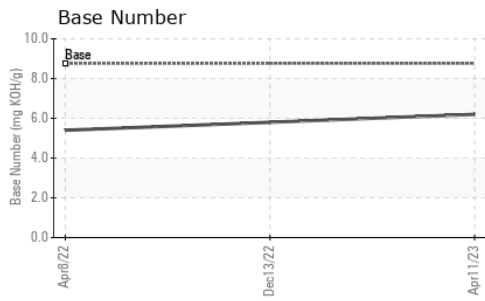
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	<b>7</b>	8	11
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	22	8
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>9.0</b>	8.2	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	20.9	37.4
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>	3	3
Boron	ppm	ASTM D5185m	2	<b>64</b>	76	114
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	5	31
Molybdenum	ppm	ASTM D5185m	<1	<b>1</b>	14	42
Manganese	ppm	ASTM D5185m	<1	<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m	12	<b>630</b>	590	876
Calcium	ppm	ASTM D5185m	2224	<b>1216</b>	1173	1386
Phosphorus	ppm	ASTM D5185m	635	<b>664</b>	655	714
Zinc	ppm	ASTM D5185m	718	<b>684</b>	662	862
Sulfur	ppm	ASTM D5185m	1694	<b>2465</b>	2427	2245
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	16.0	44.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.76	<b>6.2</b>	5.8	5.4
Visc @ 100°C	cSt	ASTM D445	12.0	<b>11.3</b>	10.8	11.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0243138 **Received** : 23 Feb 2024  
**Lab Number** : 06098236 **Tested** : 26 Feb 2024  
**Unique Number** : 10896466 **Diagnosed** : 26 Feb 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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