



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH50M 144587-1216**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH</b>	LH	LH0234460
Sample Date		Client Info		<b>17 Jun 2024</b>	12 Dec 2023	21 Jun 2023
Machine Age	hrs	Client Info		<b>3191</b>	2050	1004
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>66	<b>10</b>	9	7
Chromium	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>8	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	2	8
Copper	ppm	ASTM D5185(m)	>74	<b>8</b>	48	269
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

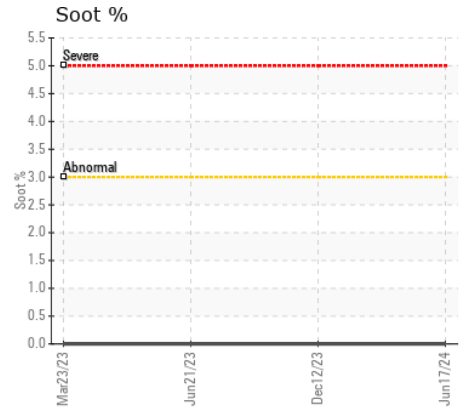
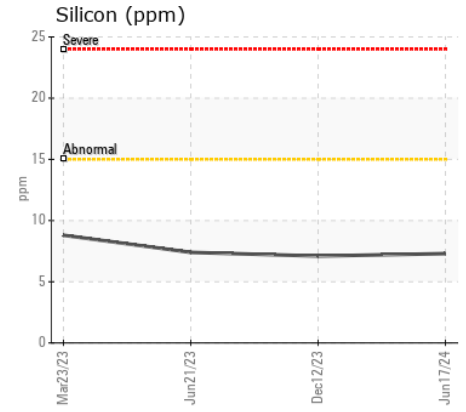
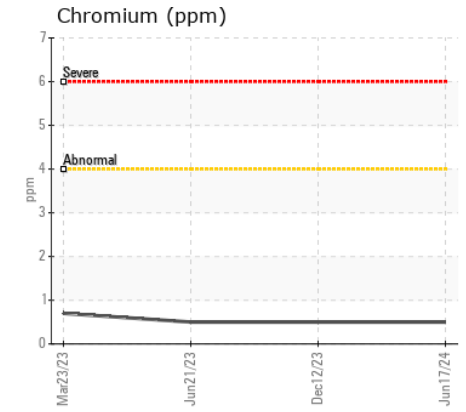
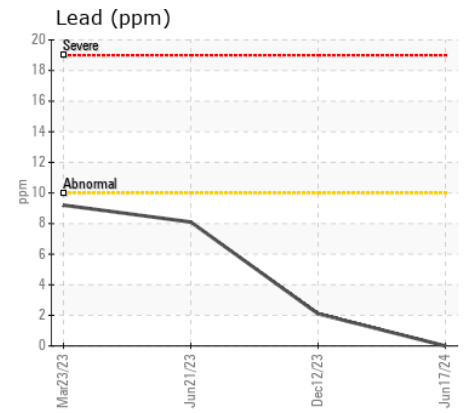
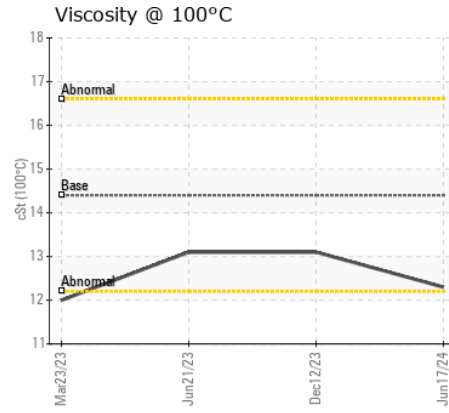
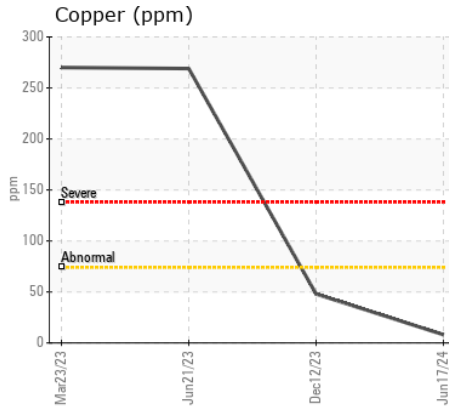
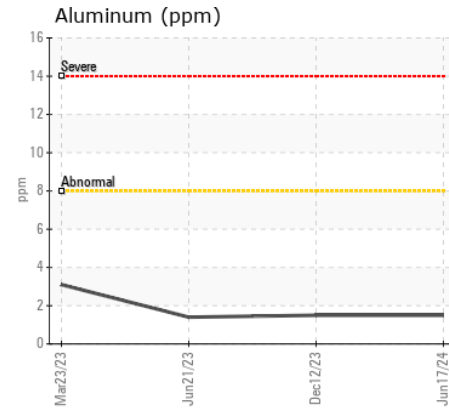
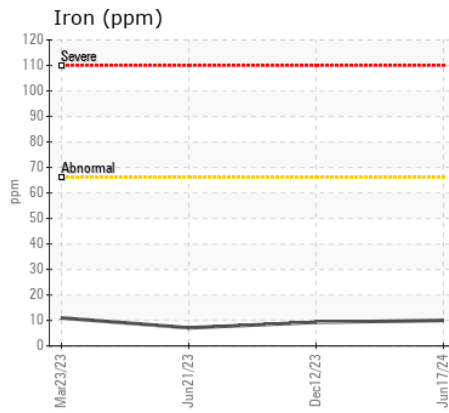
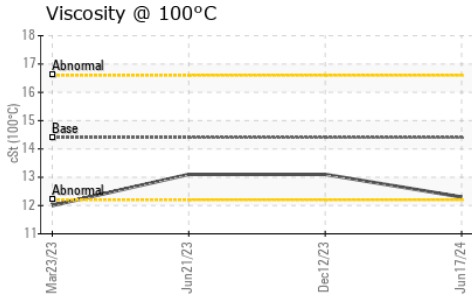
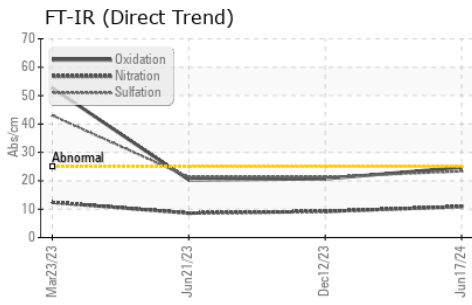
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>7</b>	7	7
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	0	<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	0.0
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.9</b>	9.2	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>23.3</b>	21.3	21.3
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>216	<b>4</b>	2	2
Boron	ppm	ASTM D5185(m)	250	<b>18</b>	1	7
Barium	ppm	ASTM D5185(m)	10	<b>&lt;1</b>	1	3
Molybdenum	ppm	ASTM D5185(m)	100	<b>59</b>	60	56
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>1039</b>	970	971
Calcium	ppm	ASTM D5185(m)	3000	<b>875</b>	1043	1034
Phosphorus	ppm	ASTM D5185(m)	1150	<b>979</b>	926	1013
Zinc	ppm	ASTM D5185(m)	1350	<b>1187</b>	1203	1152
Sulfur	ppm	ASTM D5185(m)	4250	<b>2506</b>	2055	2252
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>24.7</b>	20.7	20.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>12.3</b>	13.1	13.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH  
**Lab Number** : 02642785  
**Unique Number** : 5800324  
**Test Package** : MOB 1  
**Received** : 19 Jun 2024  
**Tested** : 19 Jun 2024  
**Diagnosed** : 19 Jun 2024 - Wes Davis

**Industrial Metals**  
 550 Messier St.  
 Winnipeg, MB  
 CA R2J 0G5  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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F: