



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30M 139284-1253**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T4 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0241868</b>	LH0239949	LH0241859
Sample Date		Client Info		<b>31 Oct 2023</b>	04 Sep 2023	06 Jul 2023
Machine Age	hrs	Client Info		<b>2739</b>	2265	1668
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	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>66	<b>3</b>	4	4
Chromium	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>8	<b>2</b>	1	1
Lead	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>74	<b>2</b>	2	6
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

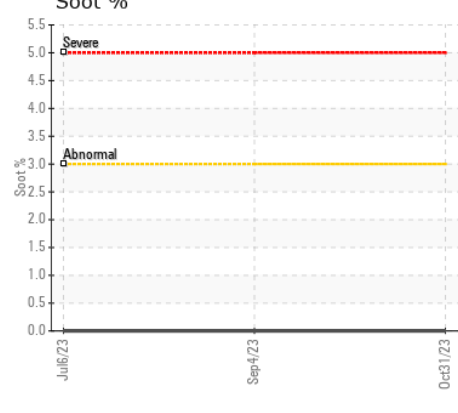
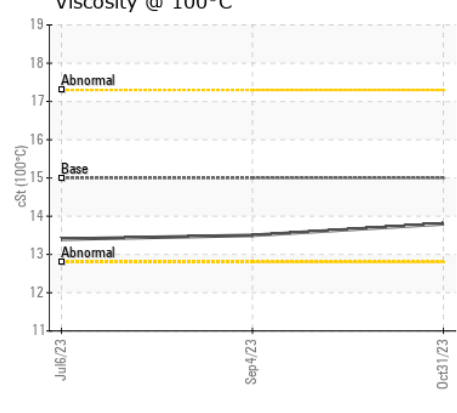
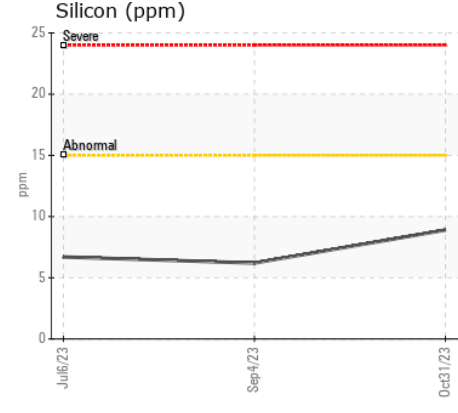
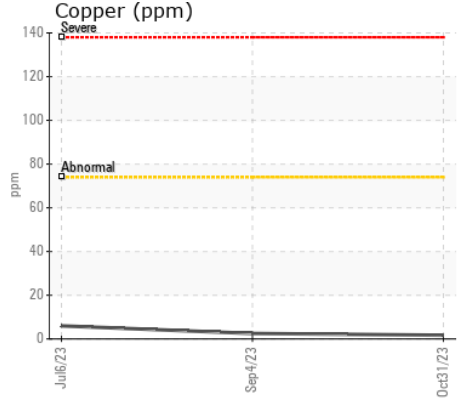
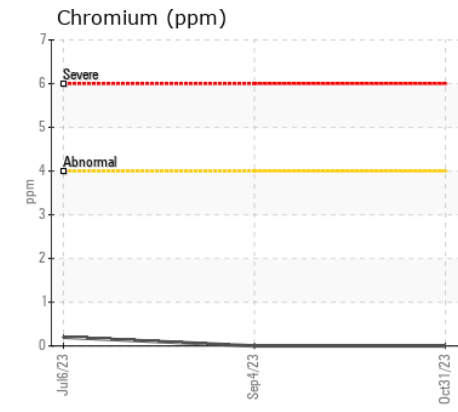
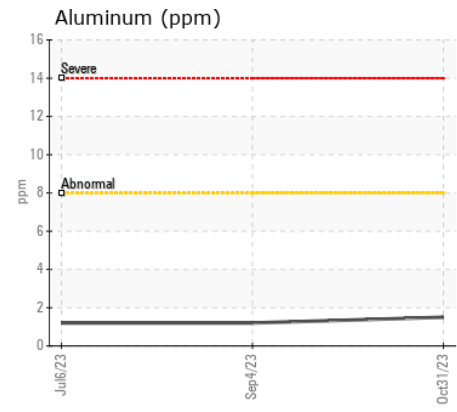
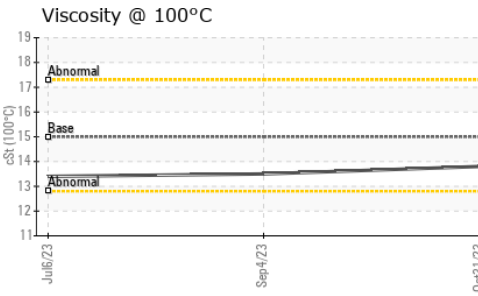
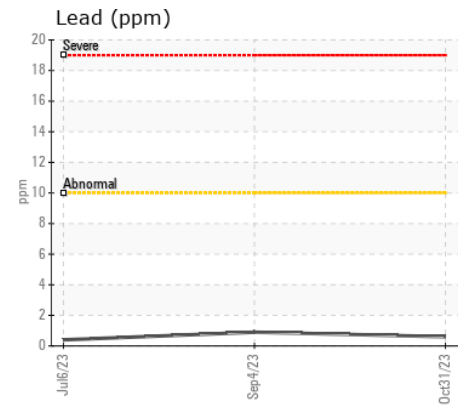
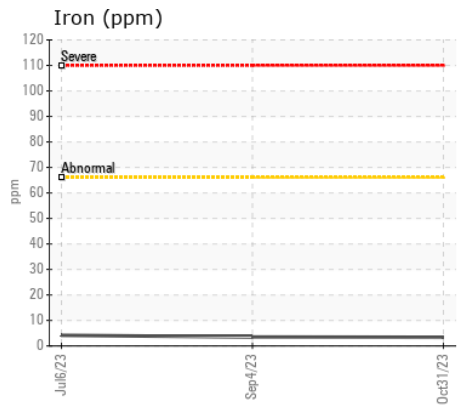
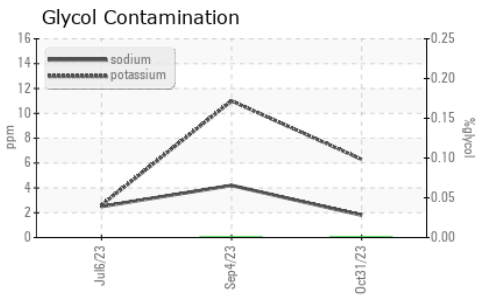
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>9</b>	6	7
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	11	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.0</b>	8.8	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.9</b>	22.3	22.7
Silt	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
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)		<b>2</b>	4	2
Boron	ppm	ASTM D5185(m)		<b>105</b>	95	94
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	5
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>18</b>	25	106
Calcium	ppm	ASTM D5185(m)		<b>2246</b>	2222	1973
Phosphorus	ppm	ASTM D5185(m)		<b>975</b>	957	944
Zinc	ppm	ASTM D5185(m)		<b>1151</b>	1156	1100
Sulfur	ppm	ASTM D5185(m)		<b>3053</b>	2919	2639
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.0</b>	18.6	19.1
Visc @ 100°C	cSt	ASTM D7279(m)	15	<b>13.8</b>	13.5	13.4



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0241868 **Received** : 16 Jan 2024  
**Lab Number** : 02608969 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 5710055 **Diagnostician** : Kevin Marson  
**Test Package** : MOBCE ( Additional Tests: Glycol, Visual )

**HUBERT & FILS**  
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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.