



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH50M 086015-1203**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA SUPREME 5W30 (28 LTR)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0278357</b>	LH0238573	LH0234500
Sample Date		Client Info		<b>28 Nov 2023</b>	19 Sep 2022	27 Jun 2022
Machine Age	hrs	Client Info		<b>20736</b>	18175	17693
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>N/A</b>	N/A	Changed
Sample Status				<b>MARGINAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>14</b>	17	27
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>4</b>	5	5
Lead	ppm	ASTM D5185(m)	>30	<b>2</b>	2	2
Copper	ppm	ASTM D5185(m)	>125	<b>3</b>	6	20
Tin	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

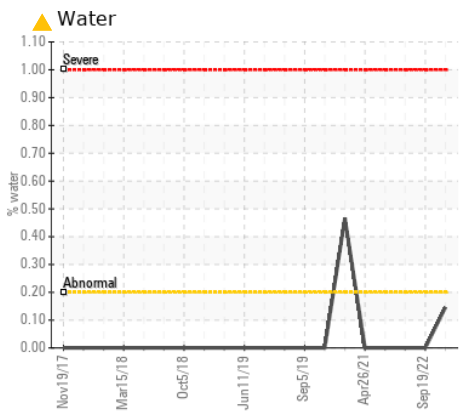
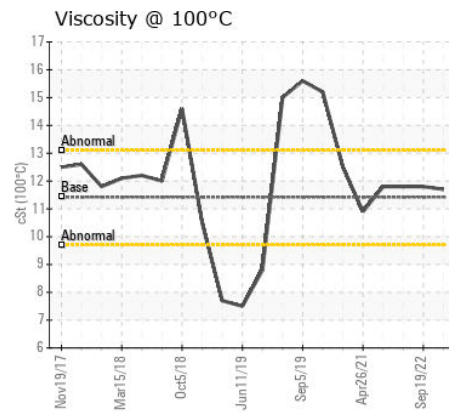
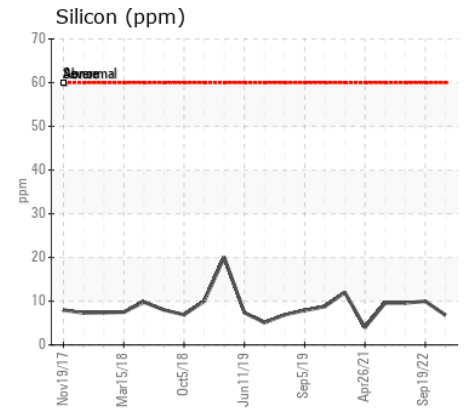
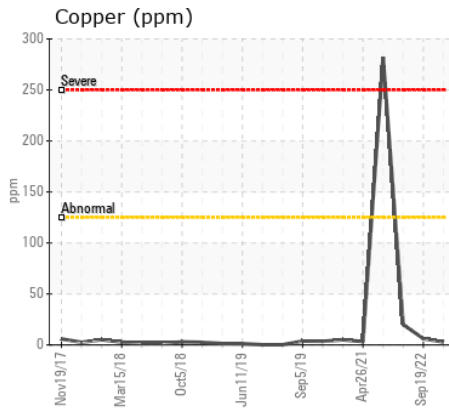
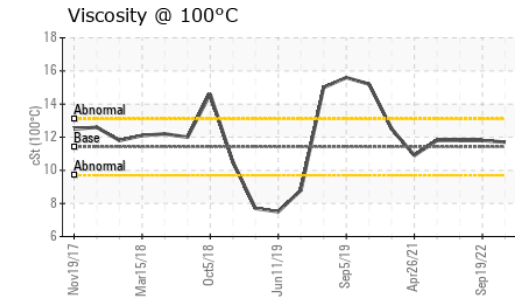
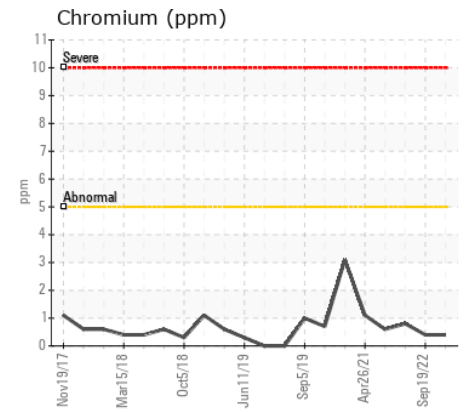
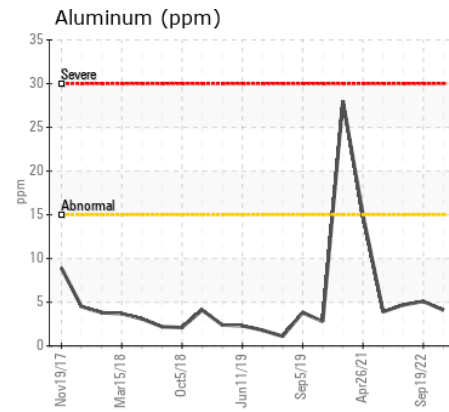
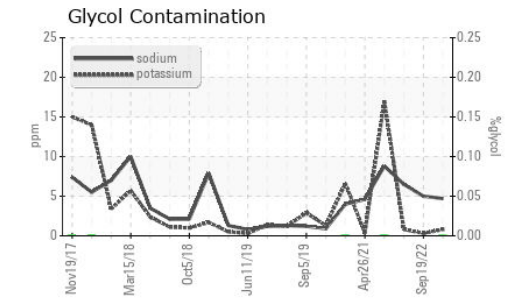
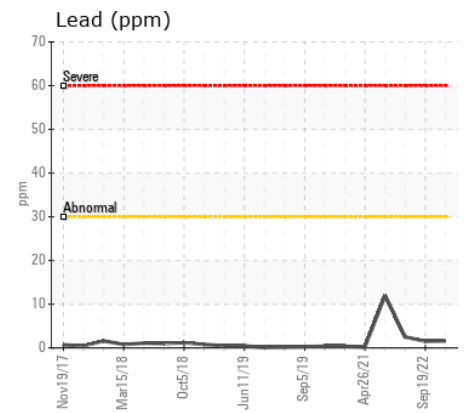
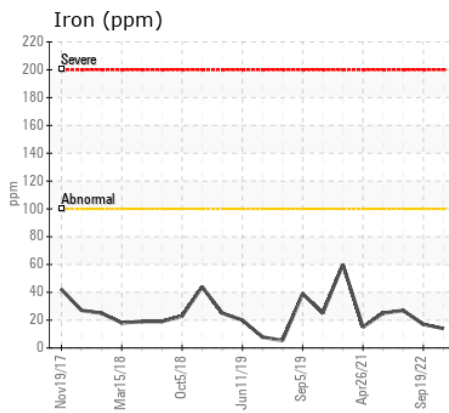
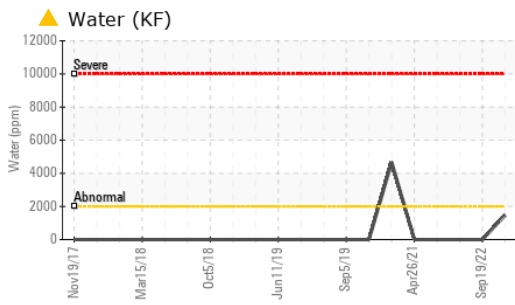
There is a trace of moisture present in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185(m)	>60	<b>7</b>	10	10
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304*	>0.2	<b>▲ 0.146</b>	---	---
ppm Water	ppm	ASTM D6304*	>2000	<b>▲ 1465</b>	---	---
Glycol	%	ASTM D7922*		<b>0.0</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.8</b>	0.5	0.7
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.6</b>	11.6	13.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.2</b>	22.4	26.5
Emulsified Water	scalar	Visual*	>0.2	<b>▲ .2%</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>5</b>	5	6
Boron	ppm	ASTM D5185(m)	186	<b>15</b>	17	10
Barium	ppm	ASTM D5185(m)	<1	<b>0</b>	<1	2
Molybdenum	ppm	ASTM D5185(m)	79	<b>53</b>	59	61
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	578	<b>1020</b>	1152	1142
Calcium	ppm	ASTM D5185(m)	1002	<b>748</b>	848	890
Phosphorus	ppm	ASTM D5185(m)	745	<b>918</b>	1118	965
Zinc	ppm	ASTM D5185(m)	837	<b>1098</b>	1241	1269
Sulfur	ppm	ASTM D5185(m)	2502	<b>2591</b>	2862	2853
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.9</b>	20.1	23.4
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	<b>11.7</b>	11.8	11.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0278357 **Received** : 10 Jan 2024  
**Lab Number** : 02607793 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 5708879 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KF )

**Dartmouth Metals & Bottle Ltd.**  
 14 Dawn Drive  
 Dartmouth, NS  
 CA B3B 1H9  
 Contact: Service

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: