



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH30M 139969-1253**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0289822</b>	LH	---
Sample Date		Client Info		<b>15 May 2024</b>	19 Oct 2023	---
Machine Age	hrs	Client Info		<b>930</b>	480	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>66	<b>6</b>	11	---
Chromium	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185(m)	>8	<b>1</b>	3	---
Lead	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	6	---
Copper	ppm	ASTM D5185(m)	>74	<b>43</b>	213	---
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

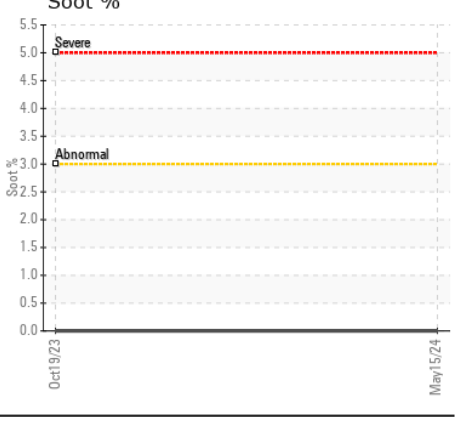
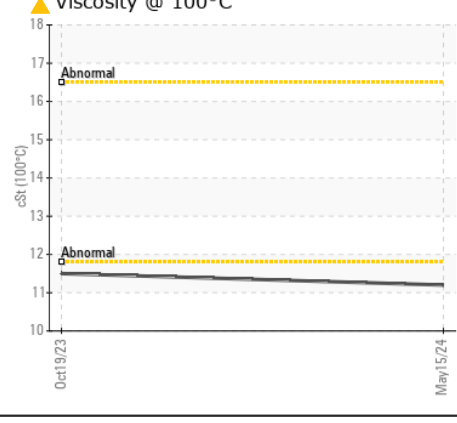
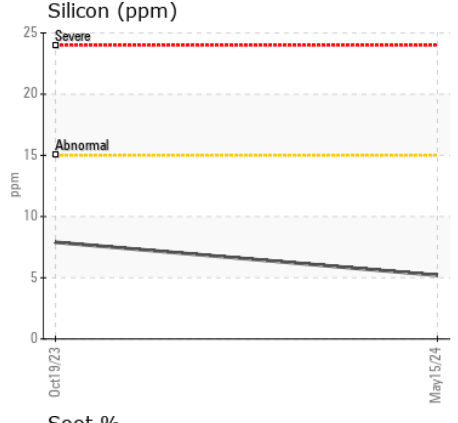
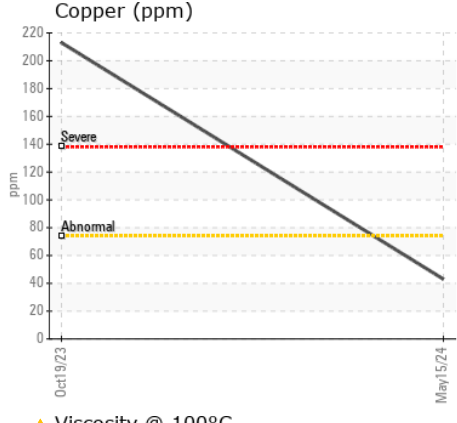
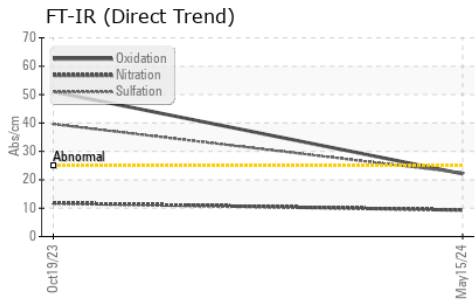
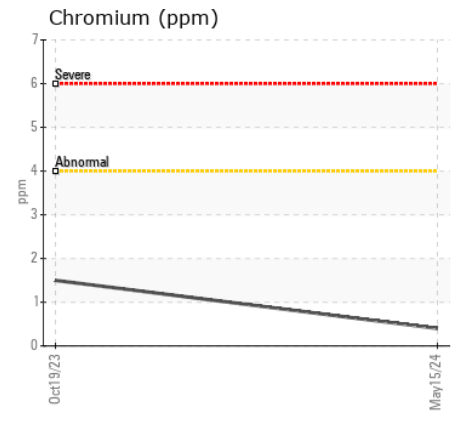
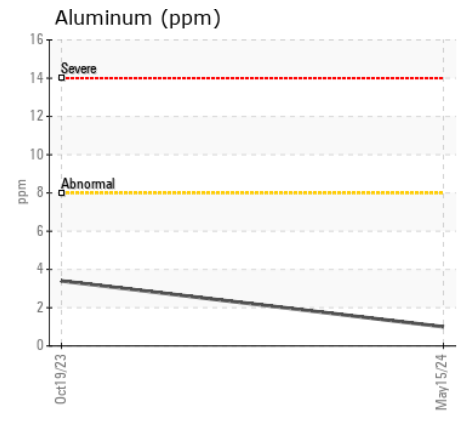
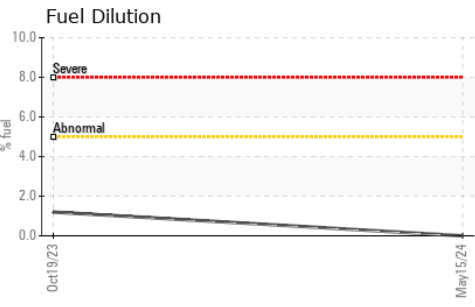
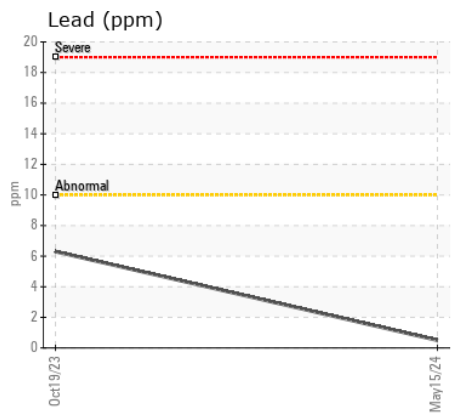
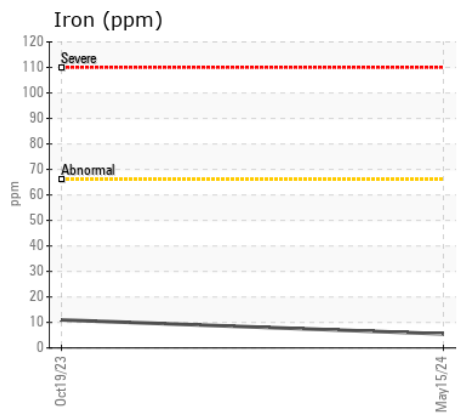
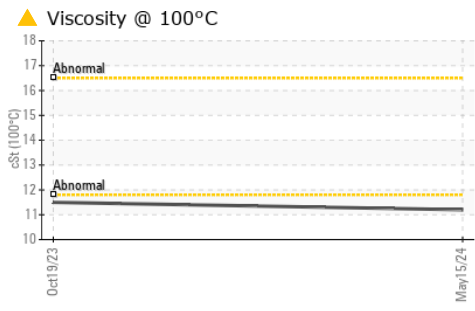
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>5</b>	8	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	---
Fuel	%	ASTM D7593*	>5	<b>0.0</b>	1.2	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	0.0	---
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.3</b>	11.8	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.4</b>	39.6	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---

### FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	<b>4</b>	2	---
Boron	ppm	ASTM D5185(m)		<b>45</b>	95	---
Barium	ppm	ASTM D5185(m)		<b>4</b>	33	---
Molybdenum	ppm	ASTM D5185(m)		<b>54</b>	46	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185(m)		<b>1055</b>	889	---
Calcium	ppm	ASTM D5185(m)		<b>875</b>	1372	---
Phosphorus	ppm	ASTM D5185(m)		<b>975</b>	666	---
Zinc	ppm	ASTM D5185(m)		<b>1157</b>	833	---
Sulfur	ppm	ASTM D5185(m)		<b>2641</b>	1910	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>22.1</b>	51.0	---
Visc @ 100°C	cSt	ASTM D7279(m)		<b>▲ 11.2</b>	▲ 11.5	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0289822 **Received** : 21 May 2024  
**Lab Number** : 02636607 **Tested** : 22 May 2024  
**Unique Number** : 5785769 **Diagnosed** : 22 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, Visual )

**METAUX 139 INC.**  
 86 RTE MARIE-VICTORIN  
 PIERREVILLE, QC  
 CA J0G 1J0  
 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: