



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id  
**LIEBHERR LH22M 110435-1250**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (20 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0288119</b>	LH0280954	LH0284000
Sample Date		Client Info		<b>30 May 2024</b>	20 Mar 2024	31 Jan 2024
Machine Age	hrs	Client Info		<b>13142</b>	12555	12137
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	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>15</b>	15	20
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	2	4
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	0	1
Copper	ppm	ASTM D5185(m)	>125	<b>2</b>	7	20
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

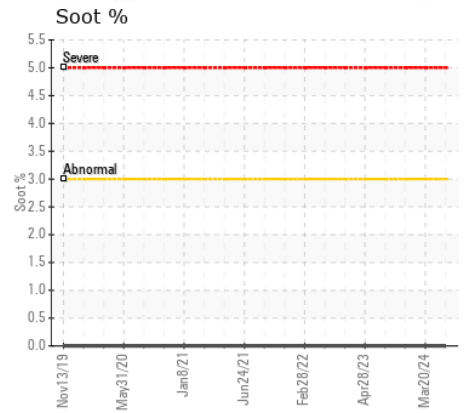
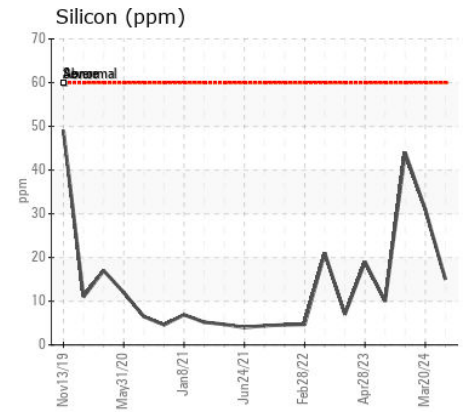
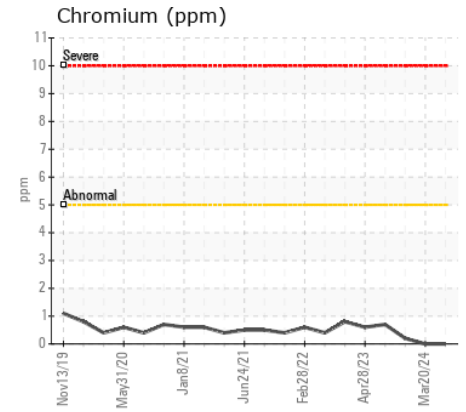
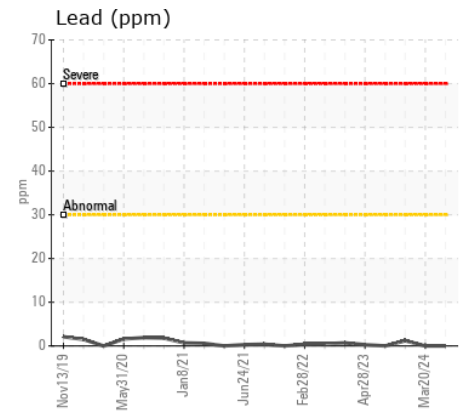
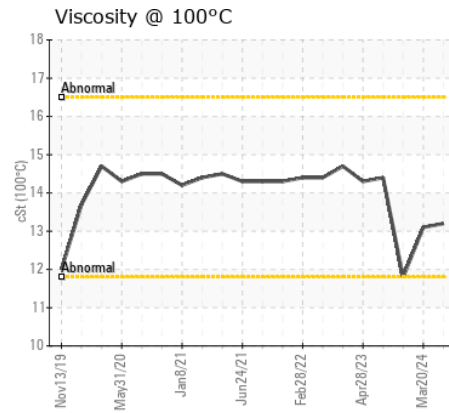
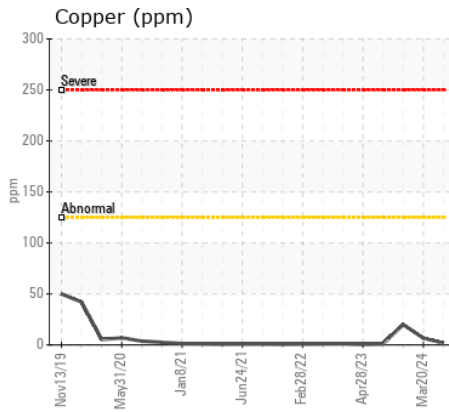
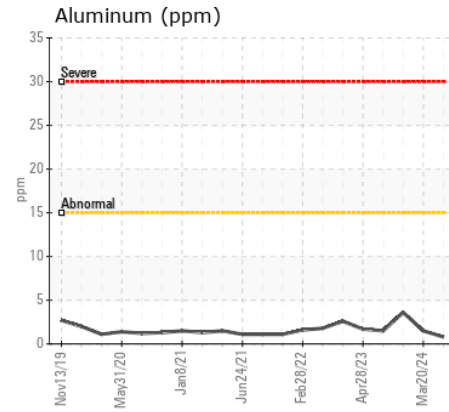
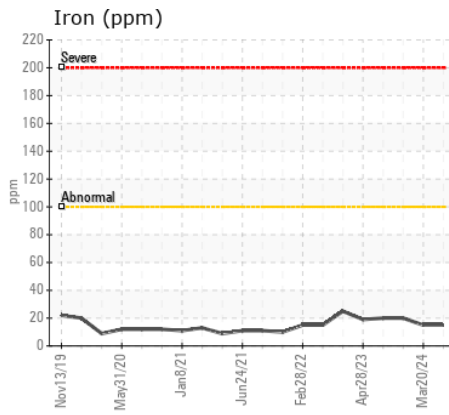
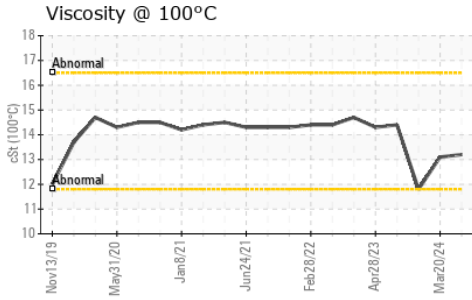
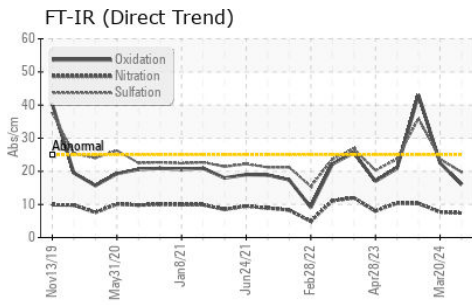
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>15</b>	31	44
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	2
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</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.4</b>	7.7	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.7</b>	23.7	36.0
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)	>20	<b>&lt;1</b>	2	3
Boron	ppm	ASTM D5185(m)		<b>2</b>	17	83
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	3
Molybdenum	ppm	ASTM D5185(m)		<b>61</b>	53	38
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	4
Magnesium	ppm	ASTM D5185(m)		<b>1016</b>	911	749
Calcium	ppm	ASTM D5185(m)		<b>1137</b>	1292	1834
Phosphorus	ppm	ASTM D5185(m)		<b>1037</b>	943	809
Zinc	ppm	ASTM D5185(m)		<b>1250</b>	1155	945
Sulfur	ppm	ASTM D5185(m)		<b>2533</b>	2384	2273
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.0</b>	22.5	43.0
Visc @ 100°C	cSt	ASTM D7279(m)		<b>13.2</b>	13.1	11.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0288119  
**Lab Number** : 02641335  
**Unique Number** : 5798874  
**Test Package** : MOB 1

**Received** : 12 Jun 2024  
**Tested** : 12 Jun 2024  
**Diagnosed** : 12 Jun 2024 - Wes Davis

**ECOWASTE INDUSTRIES**  
 4 SPRUCE ST  
 NEW WESTMINSTER, BC  
 CA V3L 5G6  
 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.

T:  
 F: