



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR PR776 24302**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (90 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0265128</b>	LH0265124	LH0265097
Sample Date		Client Info		<b>06 Apr 2024</b>	18 Jan 2024	24 Aug 2023
Machine Age	hrs	Client Info		<b>9464</b>	6158	4288
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>	N/A	Changed
Filter Changed		Client Info		<b>Changed</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>3</b>	5	5
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	0
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>1</b>	2	<1
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	0
Copper	ppm	ASTM D5185(m)	>125	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

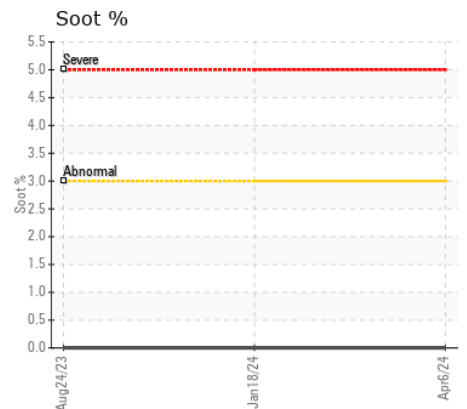
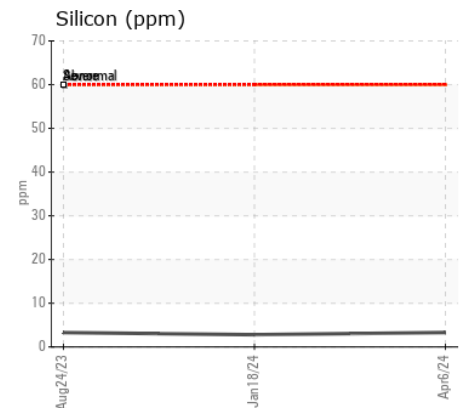
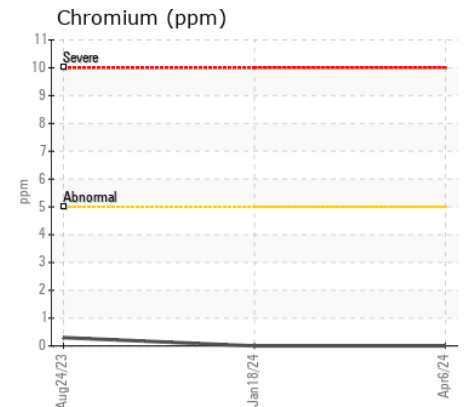
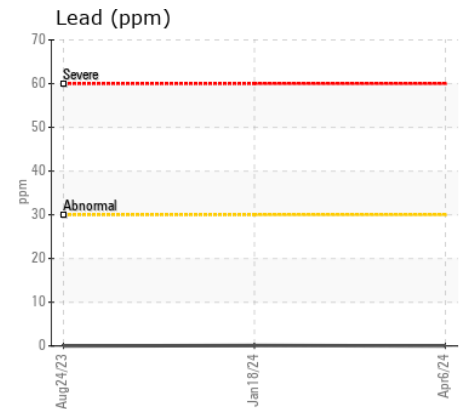
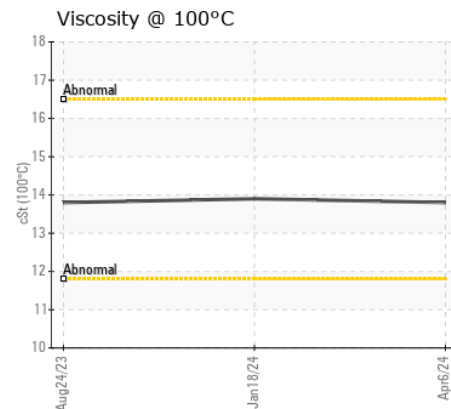
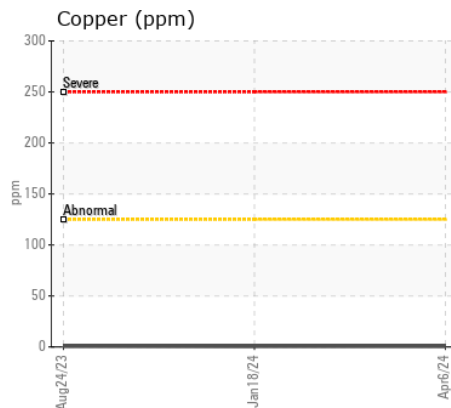
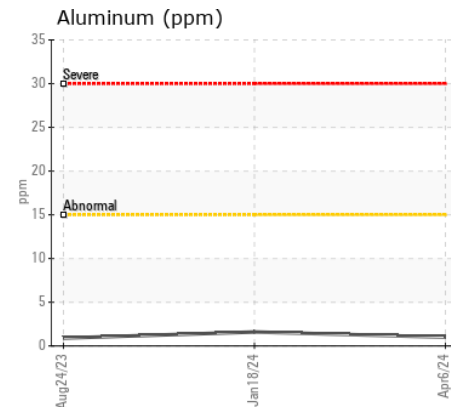
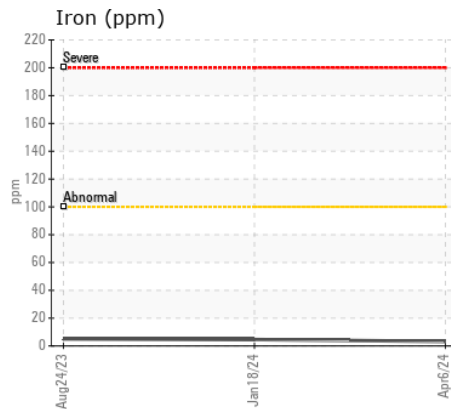
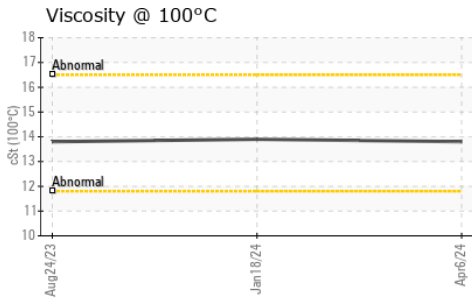
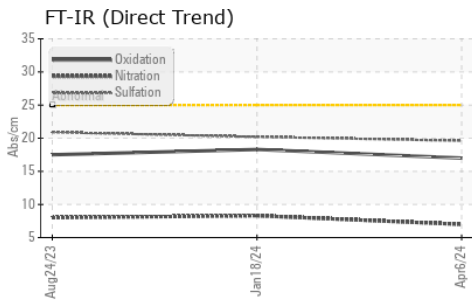
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>3</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>2</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	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.0</b>	8.3	8.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.6</b>	20.2	20.9
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>4</b>	4	7
Boron	ppm	ASTM D5185(m)		<b>34</b>	37	35
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>52</b>	57	54
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>999</b>	1101	1098
Calcium	ppm	ASTM D5185(m)		<b>822</b>	835	797
Phosphorus	ppm	ASTM D5185(m)		<b>926</b>	1026	1032
Zinc	ppm	ASTM D5185(m)		<b>1129</b>	1182	1164
Sulfur	ppm	ASTM D5185(m)		<b>2635</b>	2947	2751
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.0</b>	18.3	17.5
Visc @ 100°C	cSt	ASTM D7279(m)		<b>13.8</b>	13.9	13.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0265128 **Received** : 17 Jun 2024  
**Lab Number** : 02642253 **Tested** : 18 Jun 2024  
**Unique Number** : 5799792 **Diagnosed** : 18 Jun 2024 - Kevin Marson  
**Test Package** : MOB 1

**ARGONAUT GOLD**  
 DUBREUILVILLE MINE  
 DUBREUILVILLE, ON  
 CA  
 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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