



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR L580 071613-1760**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA SUPREME 5W30 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0284819</b>	LH0277096	LH0260010
Sample Date		Client Info		<b>12 Feb 2024</b>	14 Oct 2023	27 Jun 2023
Machine Age	hrs	Client Info		<b>1640</b>	1054	519
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>5</b>	6	8
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	0
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)	>15	<b>1</b>	1	2
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185(m)	>125	<b>2</b>	4	13
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

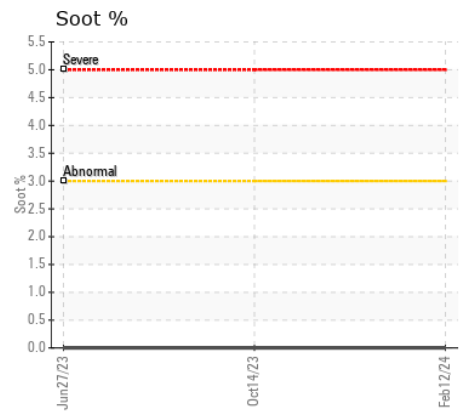
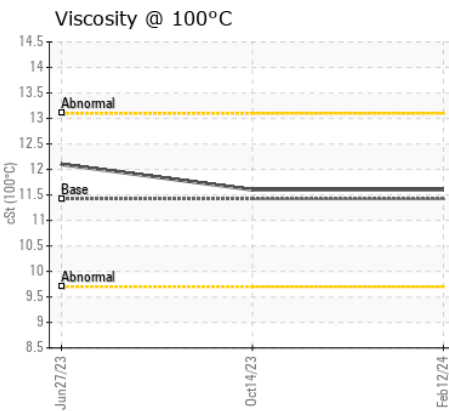
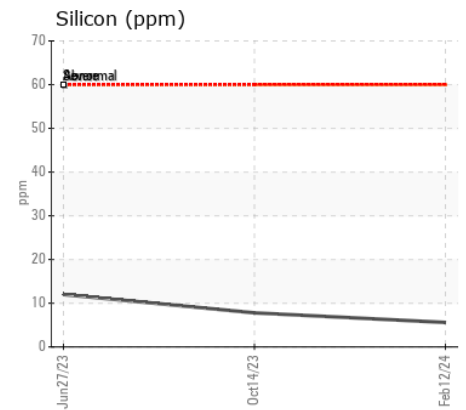
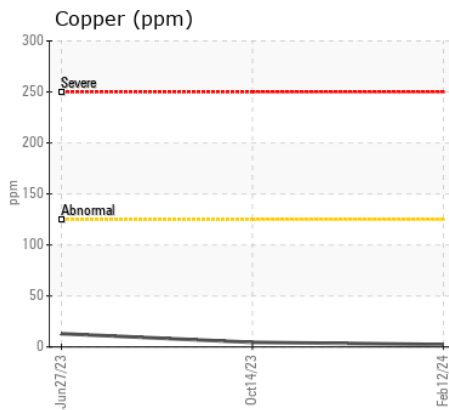
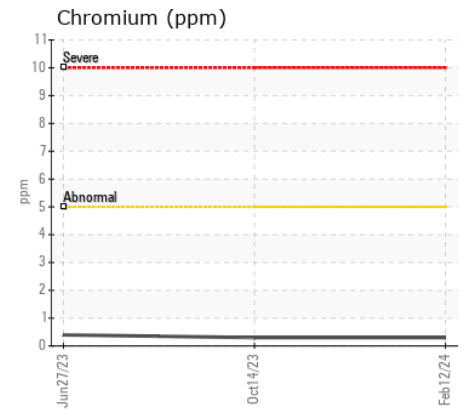
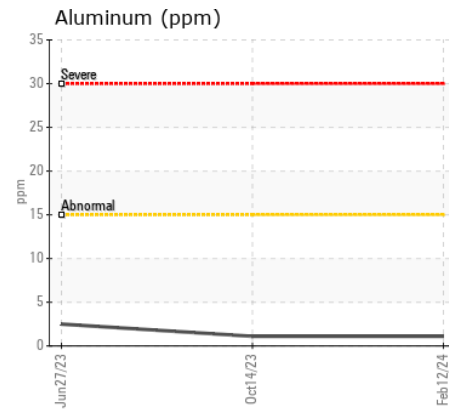
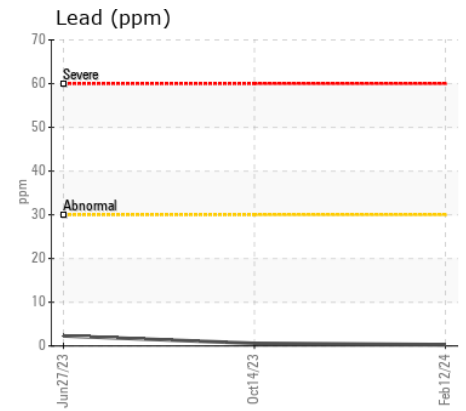
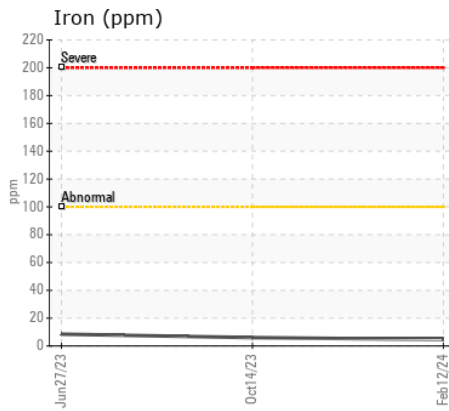
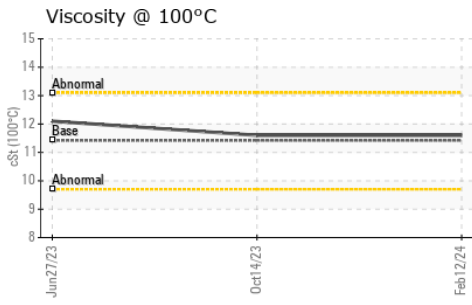
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>6</b>	8	12
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	1.1
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>8.9</b>	9.1	10.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.2</b>	22.8	39.4
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>5</b>	4	2
Boron	ppm	ASTM D5185(m)	186	<b>35</b>	38	105
Barium	ppm	ASTM D5185(m)	<1	<b>&lt;1</b>	3	19
Molybdenum	ppm	ASTM D5185(m)	79	<b>57</b>	58	45
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	3
Magnesium	ppm	ASTM D5185(m)	578	<b>1083</b>	1098	926
Calcium	ppm	ASTM D5185(m)	1002	<b>826</b>	892	1348
Phosphorus	ppm	ASTM D5185(m)	745	<b>1002</b>	970	794
Zinc	ppm	ASTM D5185(m)	837	<b>1159</b>	1152	865
Sulfur	ppm	ASTM D5185(m)	2502	<b>2909</b>	2672	1967
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.2</b>	23.0	50.5
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	<b>11.6</b>	11.6	12.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0284819  
**Lab Number** : 02617394  
**Unique Number** : 5734504  
**Test Package** : MOB 1  
**Received** : 22 Feb 2024  
**Tested** : 22 Feb 2024  
**Diagnosed** : 22 Feb 2024 - Wes Davis

**BIRCH HILL CONSTRUCTION**  
 11 MCELROY ST.  
 MONCTON, NB  
 CA E1C 9T2  
 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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