



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**056255-1007**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA 10W40 (29 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0292219</b>	LH0270056	LH0235491
Sample Date		Client Info		<b>26 Jun 2024</b>	14 Jul 2023	27 Jun 2022
Machine Age	hrs	Client Info		<b>17524</b>	16930	0
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>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>66	<b>11</b>	12	9
Chromium	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>8	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>74	<b>4</b>	6	6
Tin	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

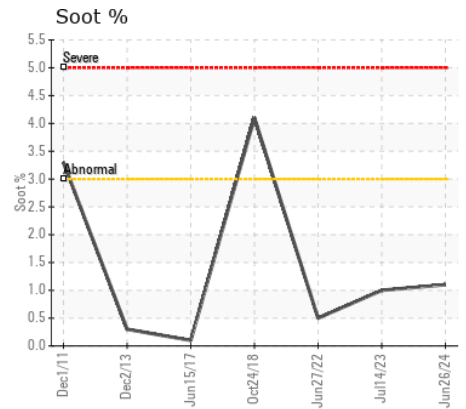
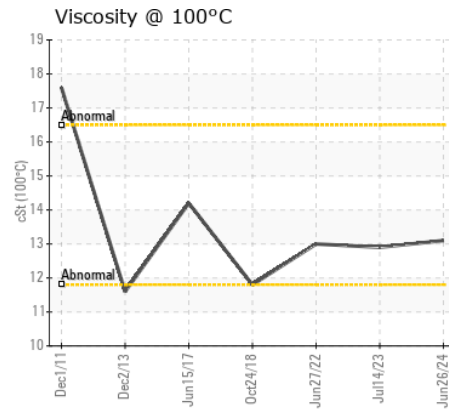
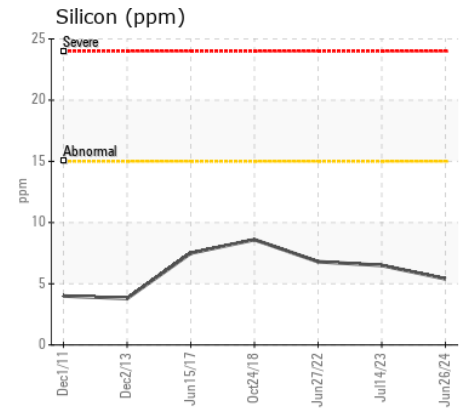
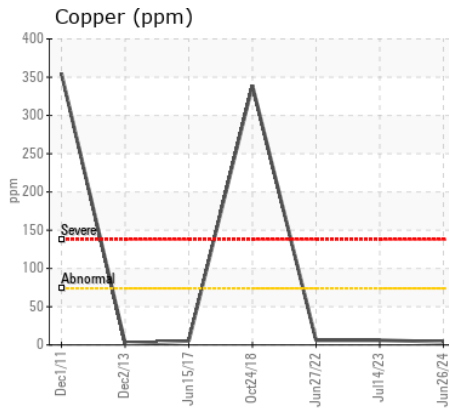
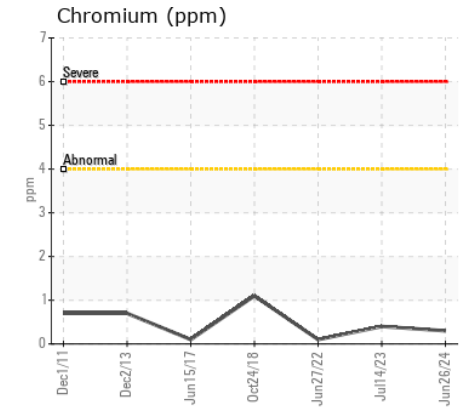
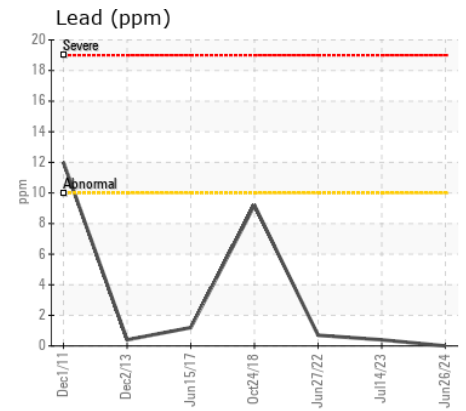
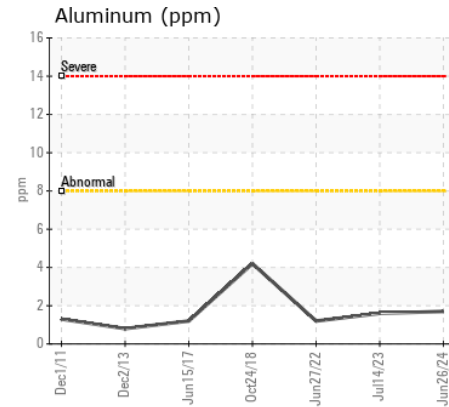
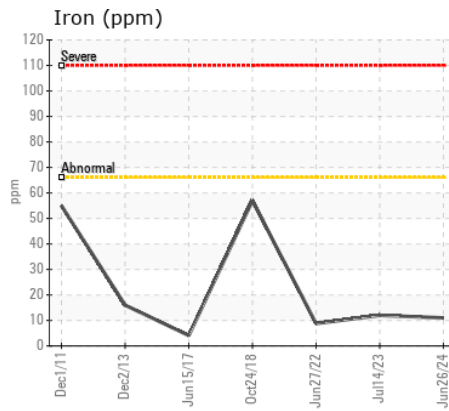
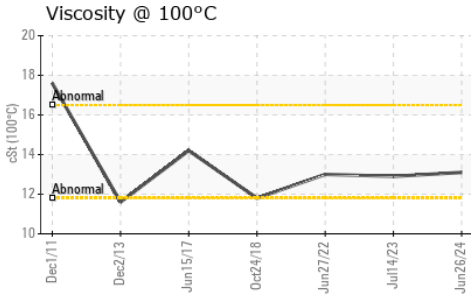
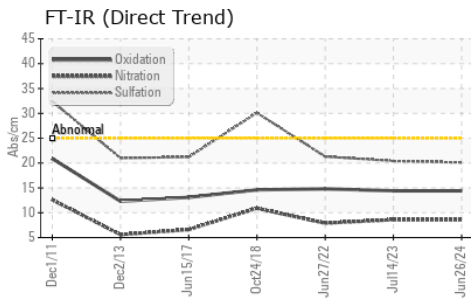
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>5</b>	6	7
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	2	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>1.1</b>	1	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.6</b>	8.6	7.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.1</b>	20.4	21.3
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
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>2</b>	2	2
Boron	ppm	ASTM D5185(m)		<b>13</b>	3	4
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>55</b>	59	58
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)		<b>865</b>	982	974
Calcium	ppm	ASTM D5185(m)		<b>1232</b>	1136	1072
Phosphorus	ppm	ASTM D5185(m)		<b>990</b>	1071	1005
Zinc	ppm	ASTM D5185(m)		<b>1211</b>	1193	1186
Sulfur	ppm	ASTM D5185(m)		<b>2616</b>	2594	2718
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.4</b>	14.4	14.8
Visc @ 100°C	cSt	ASTM D7279(m)		<b>13.1</b>	12.9	13.0



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0292219  
**Lab Number** : 02645142  
**Unique Number** : 5802681  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**Received** : 03 Jul 2024  
**Tested** : 03 Jul 2024  
**Diagnosed** : 03 Jul 2024 - Wes Davis

**American Iron and Metal**  
 9100 BOUL HENRI-BOURASSA EST  
 MONTREAL, QC  
 CA H1E 2S4

Contact: Sebastien Liautaud  
 sliautaud@aimrecyclinggroup.com  
 T: (514)494-2000  
 F: (450)661-5033

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.