



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**111164-1217**  
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>LH0269652</b>	LH0260356	LH0246738
Sample Date		Client Info		<b>12 Dec 2023</b>	13 Jun 2023	11 Jan 2023
Machine Age	hrs	Client Info		<b>6995</b>	4735	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>	Changed	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	5
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>2</b>	2	3
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>125	<b>2</b>	3	2
Tin	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

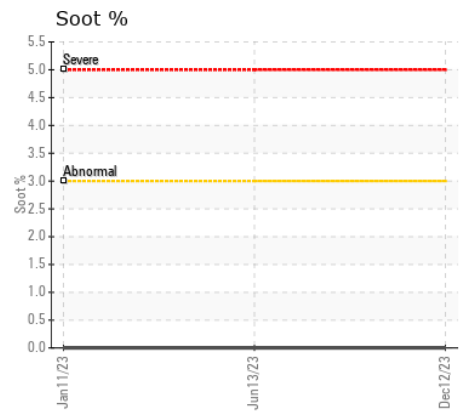
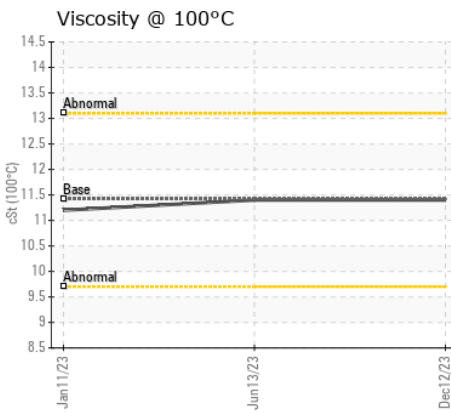
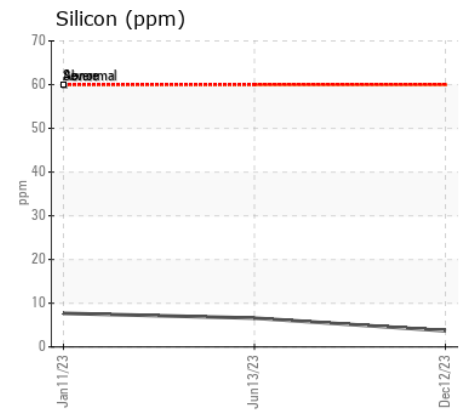
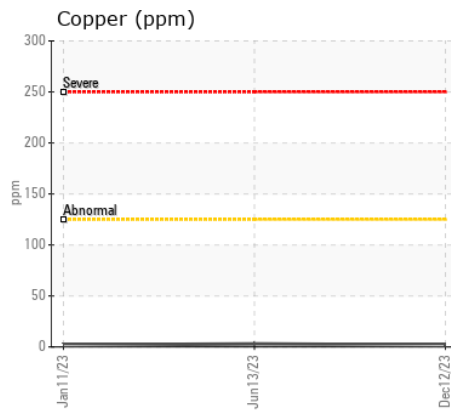
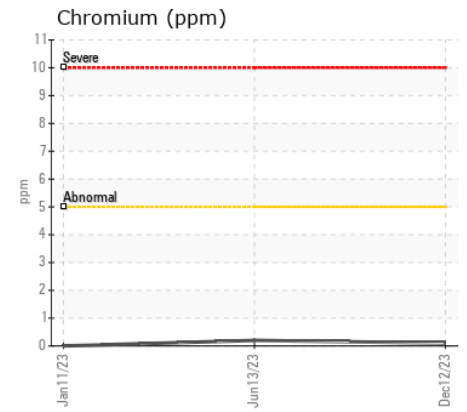
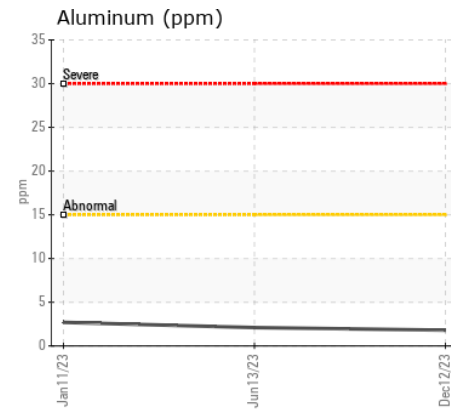
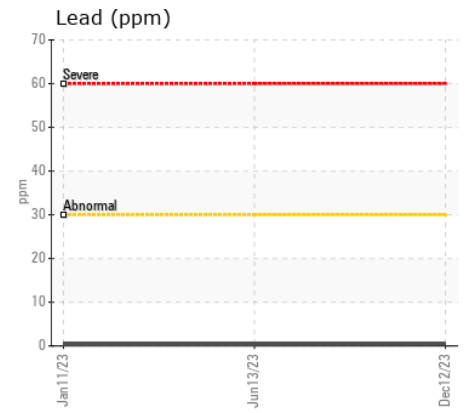
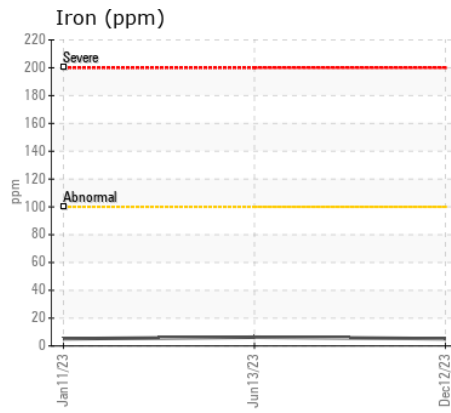
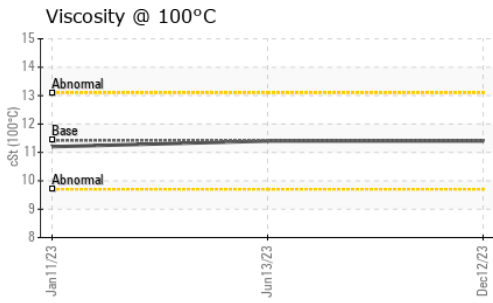
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>4</b>	7	8
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	1	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>10.9</b>	11.6	12.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.6</b>	23.1	23.4
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>4</b>	4	6
Boron	ppm	ASTM D5185(m)	186	<b>23</b>	20	16
Barium	ppm	ASTM D5185(m)	<1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	79	<b>56</b>	58	59
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	578	<b>1055</b>	1118	1091
Calcium	ppm	ASTM D5185(m)	1002	<b>763</b>	814	853
Phosphorus	ppm	ASTM D5185(m)	745	<b>940</b>	1044	1024
Zinc	ppm	ASTM D5185(m)	837	<b>1126</b>	1178	1179
Sulfur	ppm	ASTM D5185(m)	2502	<b>2692</b>	2799	2860
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>21.0</b>	22.9	22.1
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	<b>11.4</b>	11.4	11.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0269652 **Received** : 10 Jan 2024  
**Lab Number** : 02607795 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 5708881 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**American Iron and Metal**  
 60 SIMMONDS DRIVE  
 DARTMOUTH, NS  
 CA B3B 1P6  
 Contact: Pierre Paille

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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