



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
145463-1218
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0287869	LH0260011	---
Sample Date		Client Info		08 Apr 2024	18 May 2023	---
Machine Age	hrs	Client Info		1500	470	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	7	7	---
Chromium	ppm	ASTM D5185(m)	>5	0	<1	---
Nickel	ppm	ASTM D5185(m)	>5	0	0	---
Titanium	ppm	ASTM D5185(m)		<1	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>15	4	3	---
Lead	ppm	ASTM D5185(m)	>30	<1	5	---
Copper	ppm	ASTM D5185(m)	>125	22	120	---
Tin	ppm	ASTM D5185(m)	>5	0	1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

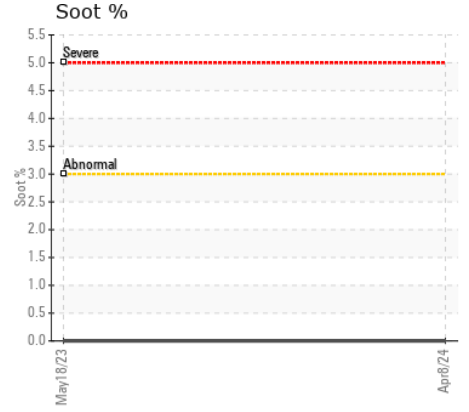
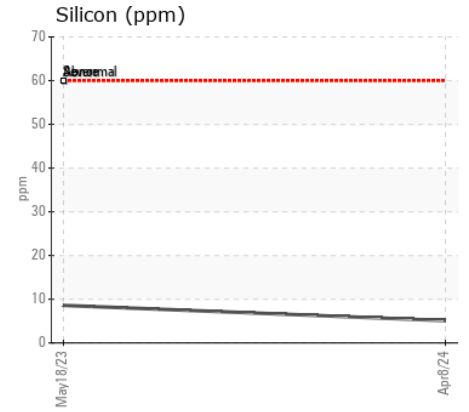
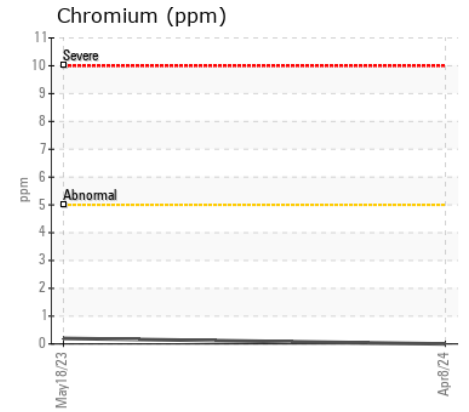
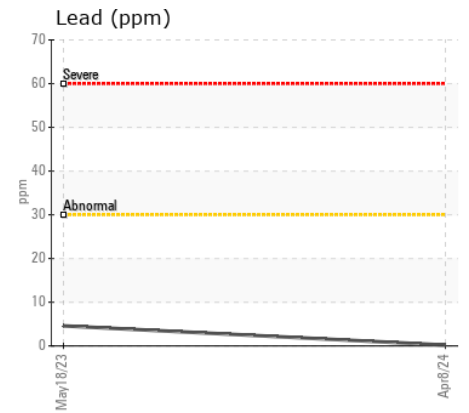
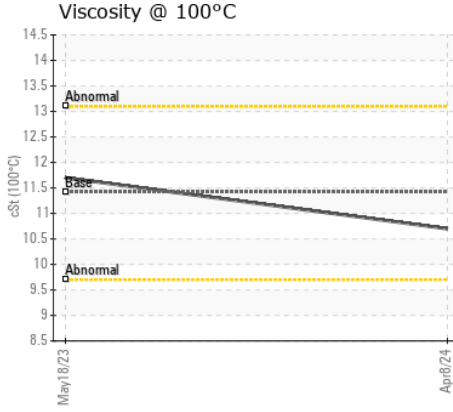
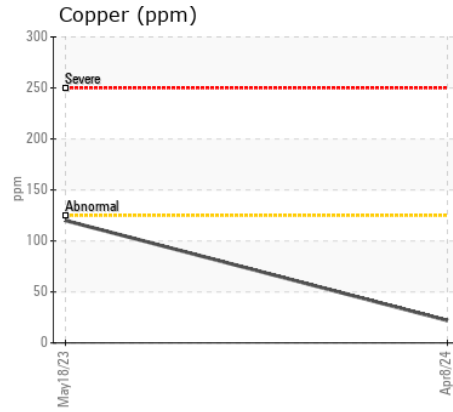
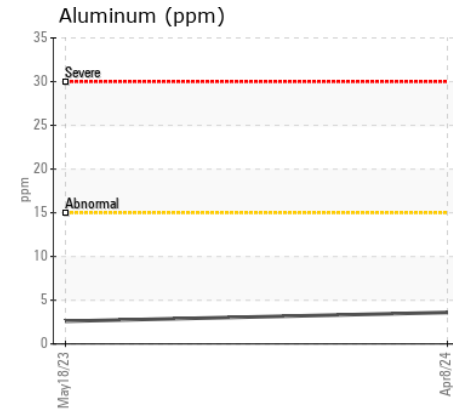
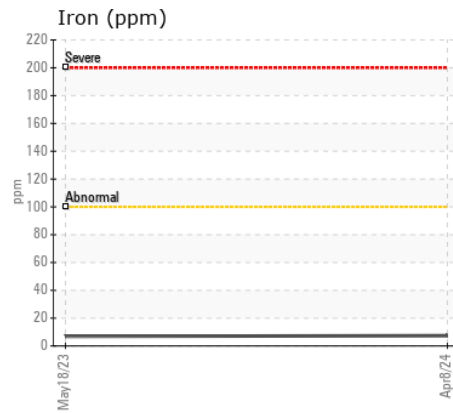
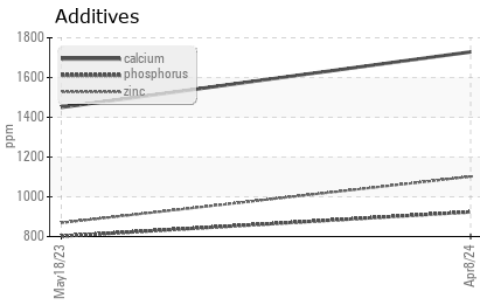
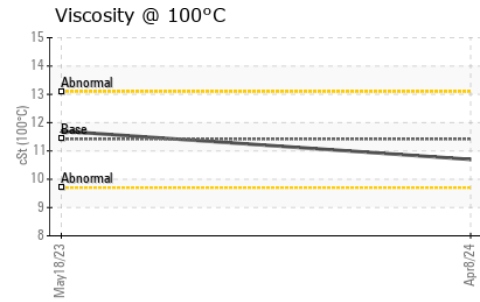
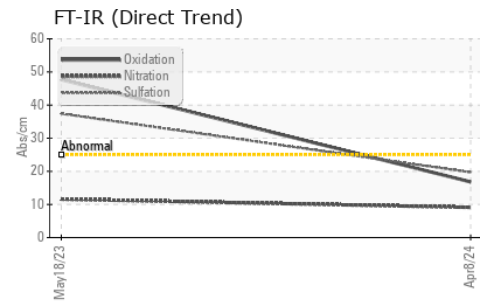
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	9	---
Potassium	ppm	ASTM D5185(m)	>20	14	2	---
Fuel		WC Method	>5	<1.0	1.5	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	9.1	11.6	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.7	37.4	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	---
Boron	ppm	ASTM D5185(m)	186	26	90	---
Barium	ppm	ASTM D5185(m)	<1	<1	19	---
Molybdenum	ppm	ASTM D5185(m)	79	71	49	---
Manganese	ppm	ASTM D5185(m)	0	0	<1	---
Magnesium	ppm	ASTM D5185(m)	578	418	845	---
Calcium	ppm	ASTM D5185(m)	1002	1729	1450	---
Phosphorus	ppm	ASTM D5185(m)	745	924	802	---
Zinc	ppm	ASTM D5185(m)	837	1102	869	---
Sulfur	ppm	ASTM D5185(m)	2502	2674	2078	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.8	47.7	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	10.7	11.7	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0287869
Lab Number : 02628391
Unique Number : 5761523
Test Package : MOB 1
Received : 12 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 12 Apr 2024 - Wes Davis

American Iron and Metal
 145 GATEWAY ST.
 SAINT JOHN, NB
 CA E2M 5S8
 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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F: