



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(371127)
Machine Id
137622-1216
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		LH0288384	LH0281297	LH0265676
Sample Date		Client Info		07 Jun 2024	07 Mar 2024	03 Aug 2023
Machine Age	hrs	Client Info		4549	4054	2910
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

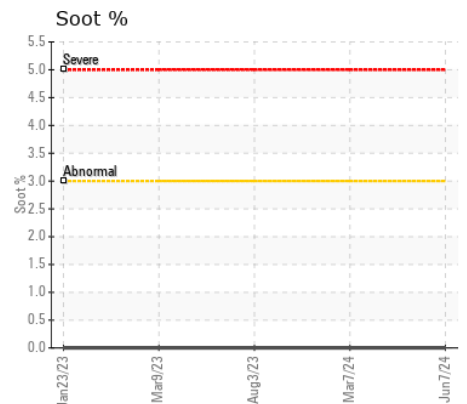
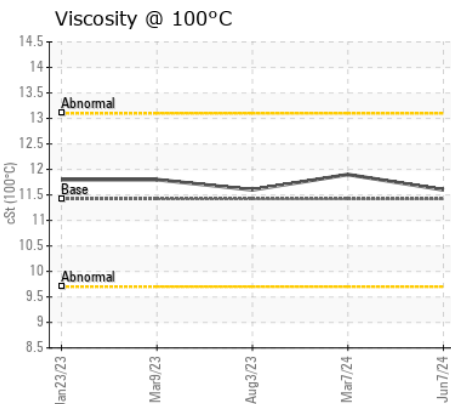
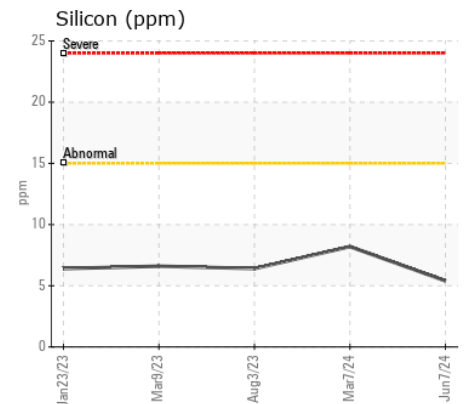
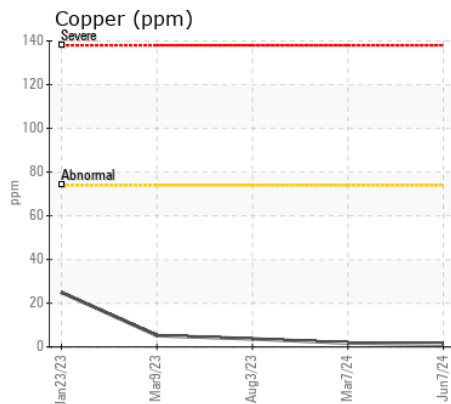
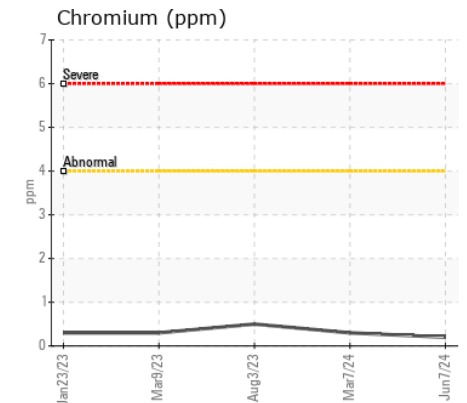
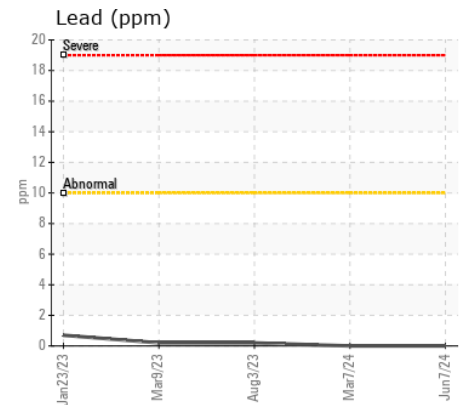
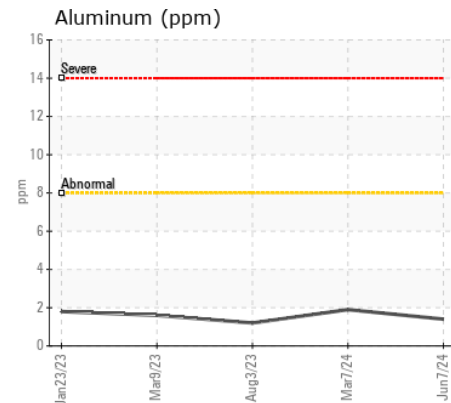
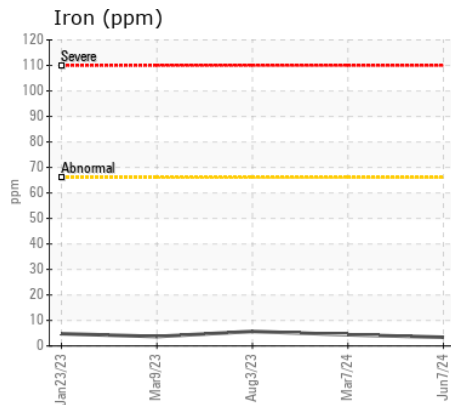
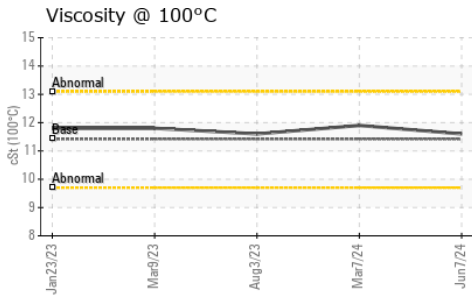
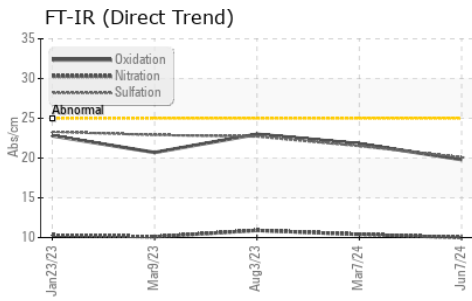
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	5	8	6
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	10.0	10.4	10.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.1	21.5	22.7
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		4	4	5
Boron	ppm	ASTM D5185(m)	186	34	32	21
Barium	ppm	ASTM D5185(m)	<1	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	79	57	57	62
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	578	1127	1093	1134
Calcium	ppm	ASTM D5185(m)	1002	848	833	820
Phosphorus	ppm	ASTM D5185(m)	745	1000	1030	1061
Zinc	ppm	ASTM D5185(m)	837	1235	1182	1215
Sulfur	ppm	ASTM D5185(m)	2502	2792	2910	2732
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.8	21.8	23.0
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	11.6	11.9	11.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288384 **Received** : 28 Jun 2024
Lab Number : 02644543 **Tested** : 28 Jun 2024
Unique Number : 5802082 **Diagnosed** : 28 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

American Iron and Metal
 100 INDUSTRIAL ROAD
 NORTH BAY, ON
 CA P1B 8K3
 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: