



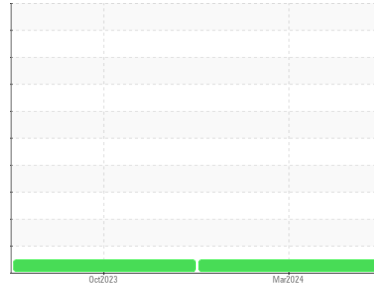
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
413111
Component
Diesel Engine
Fluid
PETRO CANADA 10W30 (38 LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0110650	GFL0064778	---
Sample Date	Client Info		21 Mar 2024	03 Oct 2023	---
Machine Age	hrs	Client Info	1539	600	---
Oil Age	hrs	Client Info	600	600	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	---
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	21	41	---
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>5	4	3	---
Titanium	ppm	ASTM D5185(m)	>2	0	0	---
Silver	ppm	ASTM D5185(m)	>2	0	1	---
Aluminum	ppm	ASTM D5185(m)	>20	4	7	---
Lead	ppm	ASTM D5185(m)	>40	5	12	---
Copper	ppm	ASTM D5185(m)	>330	219	433	---
Tin	ppm	ASTM D5185(m)	>15	<1	4	---
Antimony	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Beryllium	ppm	ASTM D5185(m)		0	0	---
Cadmium	ppm	ASTM D5185(m)		0	0	---

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		8	204	---
Barium	ppm	ASTM D5185(m)		0	<1	---
Molybdenum	ppm	ASTM D5185(m)		68	129	---
Manganese	ppm	ASTM D5185(m)		0	5	---
Magnesium	ppm	ASTM D5185(m)		754	676	---
Calcium	ppm	ASTM D5185(m)		1326	1510	---
Phosphorus	ppm	ASTM D5185(m)		993	670	---
Zinc	ppm	ASTM D5185(m)		1191	795	---
Sulfur	ppm	ASTM D5185(m)		2432	1899	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS

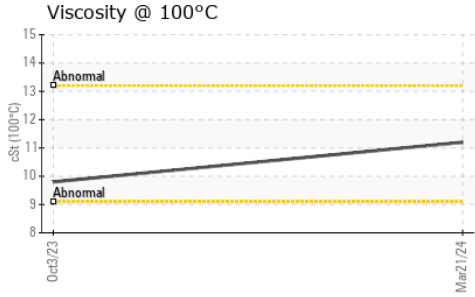
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	3	37	---
Sodium	ppm	ASTM D5185(m)		2	4	---
Potassium	ppm	ASTM D5185(m)	>20	12	15	---

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.4	0.4	---
Nitration	Abs/cm	ASTM D7624*	>20	9.6	10.8	---
Sulfation	Abs./1mm	ASTM D7415*	>30	20.6	25.6	---



OIL ANALYSIS REPORT

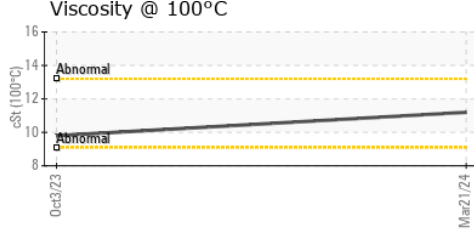
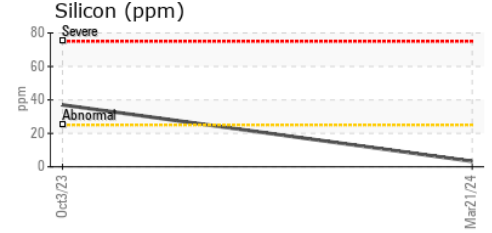
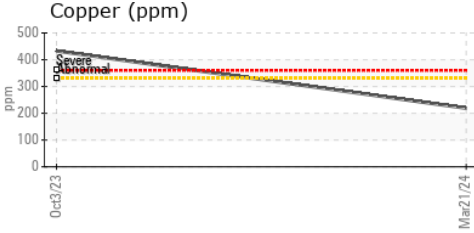
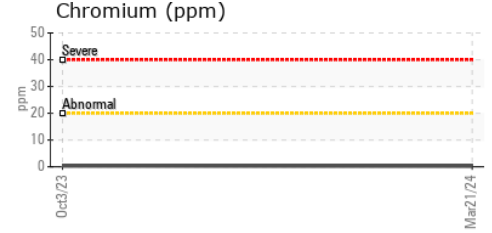
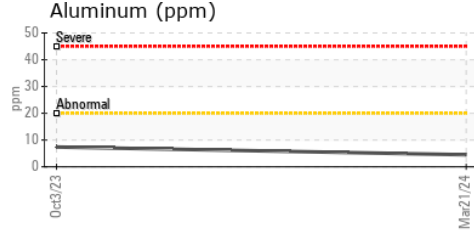
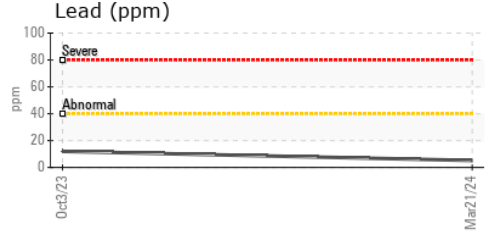
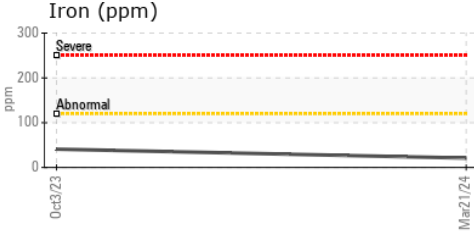


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	16.2	24.3	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---
Free Water	scalar	Visual*		NEG	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)		11.2	9.8	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110650 **Received** : 26 Mar 2024
Lab Number : 02624554 **Tested** : 26 Mar 2024
Unique Number : 5749673 **Diagnosed** : 26 Mar 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 213 - Kitchener
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 Contact: Keith Zehr
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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.