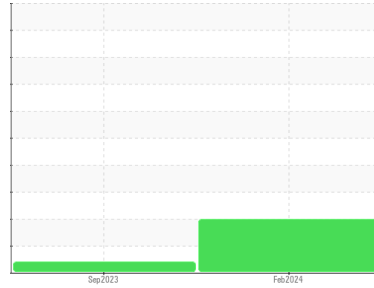




OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area
GFL234
 Machine Id
923003

Component
Diesel Engine
 Fluid

PETRO CANADA 10W30 (--- GAL)

DIAGNOSIS

▲ Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

There is a trace of moisture present in the oil. Test for glycol is negative.

▲ Fluid Condition

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0110641	GFL0064788	---
Sample Date	Client Info			05 Feb 2024	20 Sep 2023	---
Machine Age	hrs	Client Info		5201	4538	---
Oil Age	hrs	Client Info		600	600	---
Oil Changed	Client Info			Changed	Changed	---
Sample Status				ABNORMAL	ABNORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	<1.0	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	12	15	---
Chromium	ppm	ASTM D5185(m)	>20	0	<1	---
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	3	4	---
Lead	ppm	ASTM D5185(m)	>40	0	<1	---
Copper	ppm	ASTM D5185(m)	>330	1	5	---
Tin	ppm	ASTM D5185(m)	>15	0	0	---
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	---

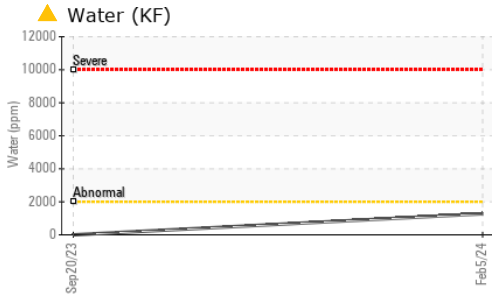
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		72	45	---
Barium	ppm	ASTM D5185(m)		0	0	---
Molybdenum	ppm	ASTM D5185(m)		15	81	---
Manganese	ppm	ASTM D5185(m)		0	<1	---
Magnesium	ppm	ASTM D5185(m)		43	83	---
Calcium	ppm	ASTM D5185(m)		2223	2105	---
Phosphorus	ppm	ASTM D5185(m)		985	1087	---
Zinc	ppm	ASTM D5185(m)		1153	1173	---
Sulfur	ppm	ASTM D5185(m)		3110	3316	---
Lithium	ppm	ASTM D5185(m)		<1	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	5	---
Sodium	ppm	ASTM D5185(m)		2	4	---
Potassium	ppm	ASTM D5185(m)	>20	7	6	---
Water	%	ASTM D6304*	>0.2	▲ 0.127	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 1273	---	---
Glycol	%	ASTM D7922*		0.0	NEG	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.5	0.4	---
Nitration	Abs/cm	ASTM D7624*	>20	10.2	9.6	---
Sulfation	Abs.1mm	ASTM D7415*	>30	24.0	19.5	---



OIL ANALYSIS REPORT



FLUID DEGRADATION

Method	Limit/Base	Current	History 1	History 2
Oxidation	Abs./1mm ASTM D7414*	18.1	14.5	---

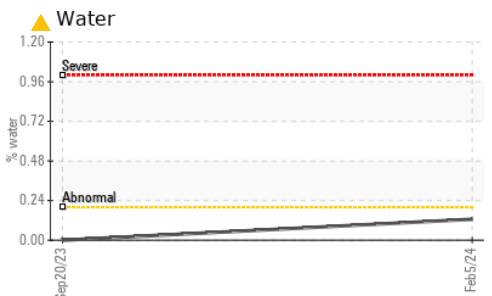
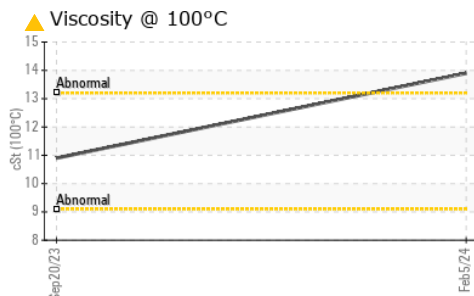
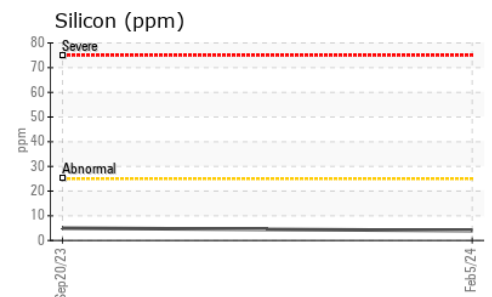
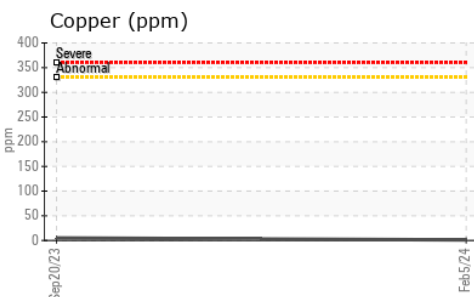
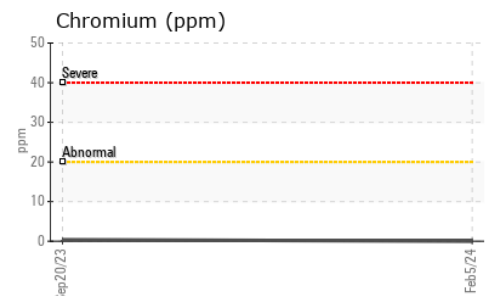
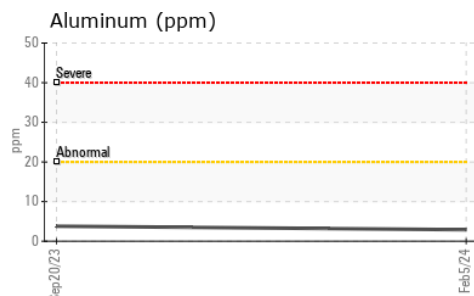
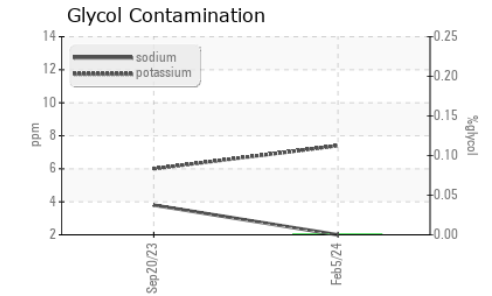
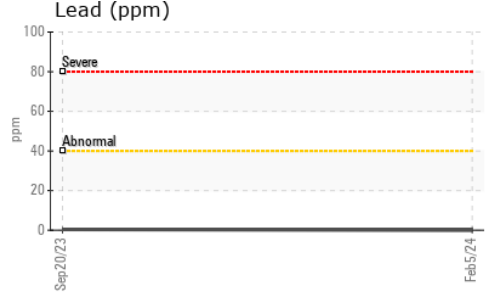
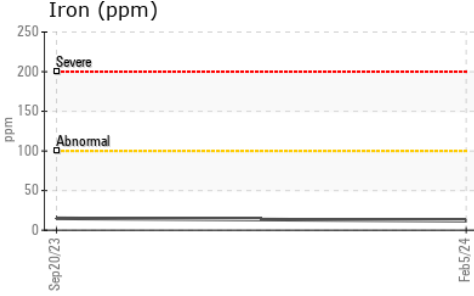
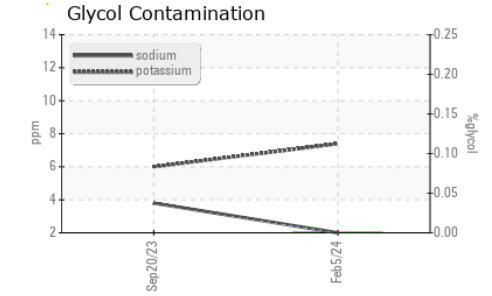
VISUAL

Method	Limit/Base	Current	History 1	History 2
Emulsified Water	scalar Visual*	▲ .2%	NEG	---
Free Water	scalar Visual*	NEG	NEG	---

FLUID PROPERTIES

Method	Limit/Base	Current	History 1	History 2
Visc @ 100°C	cSt ASTM D7279(m)	▲ 13.9	▲ 10.9	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110641
Lab Number : 02614009
Unique Number : 5723104
Test Package : MOB 1 (Additional Tests: Glycol, KF)

GFL Environmental - 213 - Kitchener
 16 Centennial Road, Kitchener Yard
 Kitchener, ON
 CA N2B 3G1
 Contact: Keith Zehr
 kzehr@gflenv.com
 T: (226)751-4416
 F: x:

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.