



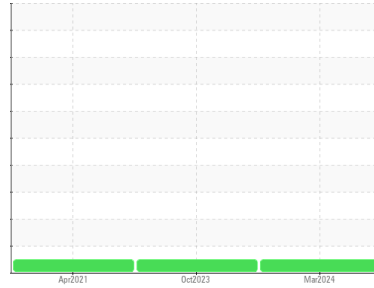
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
GFL234
 Machine Id
728017
 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 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		GFL0110642	GFL0064786	GFL0021391
Sample Date	Client Info		19 Mar 2024	06 Oct 2023	22 Apr 2021
Machine Age	hrs	Client Info	11984	11102	6854
Oil Age	hrs	Client Info	600	600	200
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	4	4	8
Chromium	ppm	ASTM D5185(m)	>20	0	0	<1
Nickel	ppm	ASTM D5185(m)	>15	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	3	2	2
Lead	ppm	ASTM D5185(m)	>40	0	<1	1
Copper	ppm	ASTM D5185(m)	>330	2	1	3
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		13	40	3
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		66	85	58
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		735	92	970
Calcium	ppm	ASTM D5185(m)		1378	2038	1048
Phosphorus	ppm	ASTM D5185(m)		993	971	998
Zinc	ppm	ASTM D5185(m)		1158	1147	1230
Sulfur	ppm	ASTM D5185(m)		2680	3020	2614
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

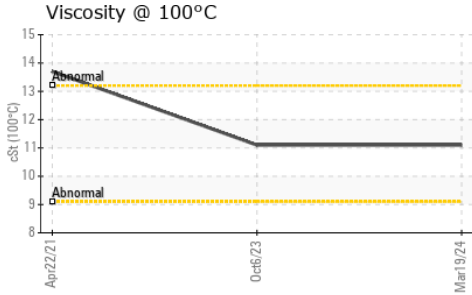
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	1	3	4
Sodium	ppm	ASTM D5185(m)		8	6	2
Potassium	ppm	ASTM D5185(m)	>20	8	<1	3

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	7.1	8.4	7.4
Sulfation	Abs./1mm	ASTM D7415*	>30	18.1	18.4	19.5



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	14.2	13.6	15.2

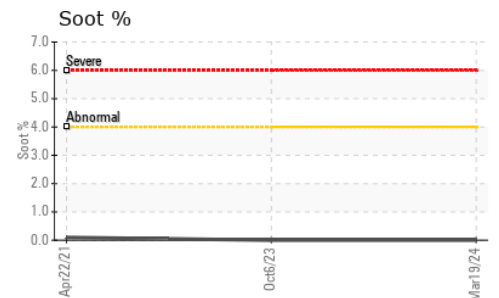
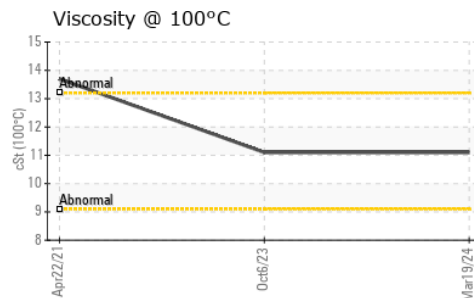
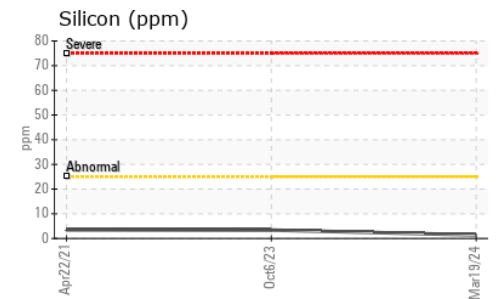
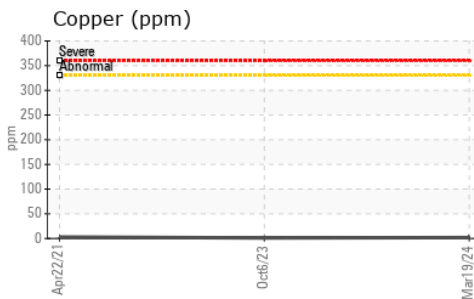
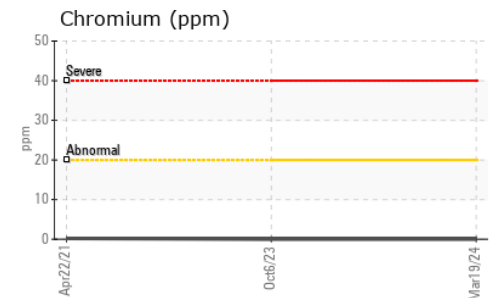
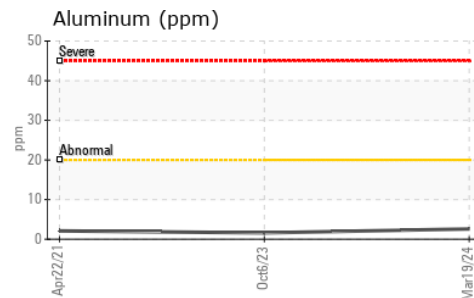
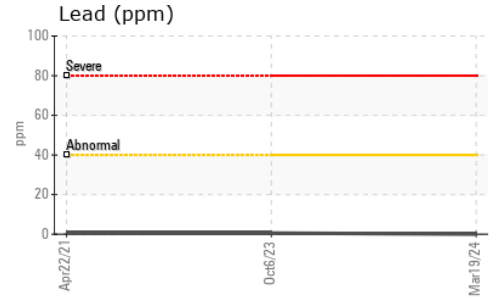
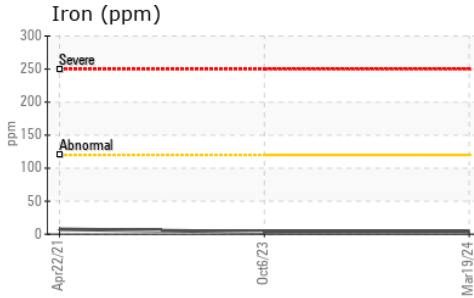
VISUAL

method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	11.1	11.1	13.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110642
Lab Number : 02623655
Unique Number : 5748774
Test Package : MOB 1

GFL Environmental - 213 - Kitchener
 16 Centennial Road, Kitchener Yard
 Kitchener, ON
 CA N2B 3G1
 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.