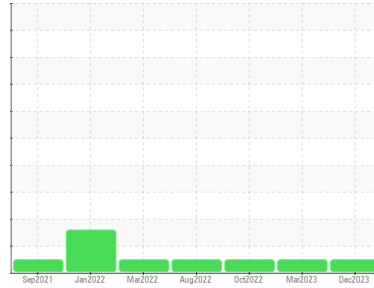




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

1162

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			GFL0090757	GFL0069701	GFL0053248
Sample Date	Client Info			19 Dec 2023	28 Mar 2023	16 Oct 2022
Machine Age	hrs	Client Info		20494	19012	18554
Oil Age	hrs	Client Info		600	600	600
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<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)	>100	36	21	15
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	2	2
Lead	ppm	ASTM D5185(m)	>40	6	1	2
Copper	ppm	ASTM D5185(m)	>330	1	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

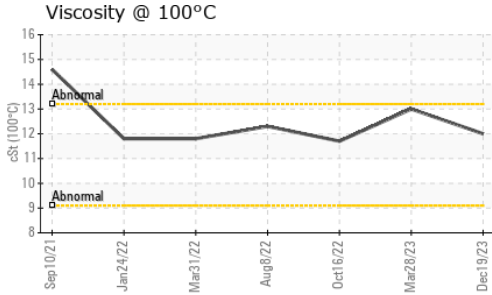
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		1	8	2
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		64	66	62
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		1048	1035	1010
Calcium	ppm	ASTM D5185(m)		1189	1179	1110
Phosphorus	ppm	ASTM D5185(m)		1081	1145	1110
Zinc	ppm	ASTM D5185(m)		1294	1269	1216
Sulfur	ppm	ASTM D5185(m)		2584	2690	2604
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	6	6	6
Sodium	ppm	ASTM D5185(m)		8	4	2
Potassium	ppm	ASTM D5185(m)	>20	5	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.8	0.4	0.2
Nitration	Abs/cm	ASTM D7624*	>20	12.3	11.3	9.2
Sulfation	Abs.1mm	ASTM D7415*	>30	24.7	24.2	21.4



OIL ANALYSIS REPORT



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	21.4	18.1	16.8

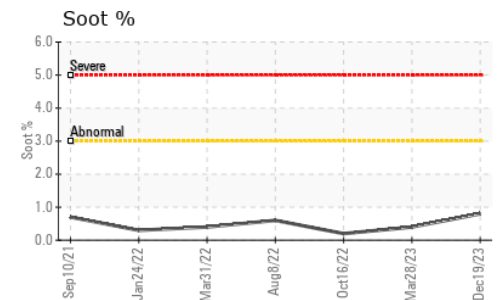
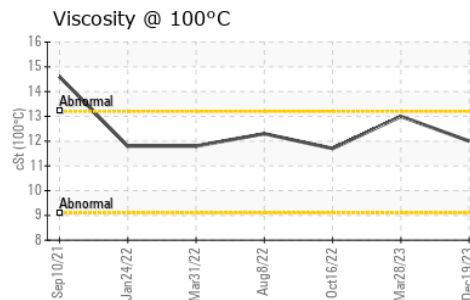
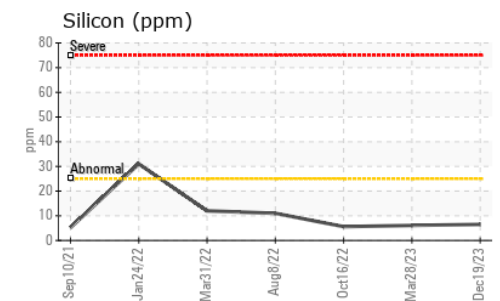
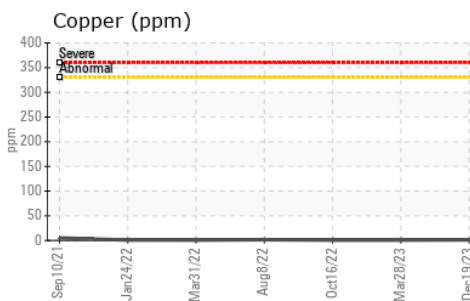
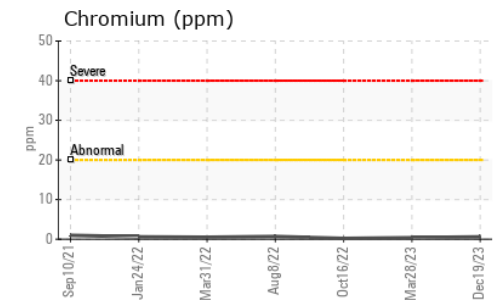
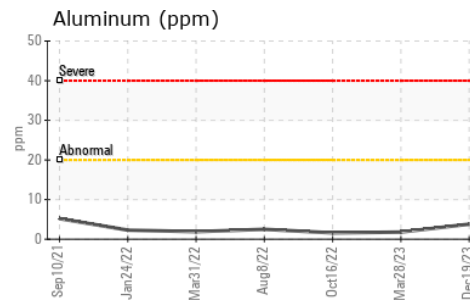
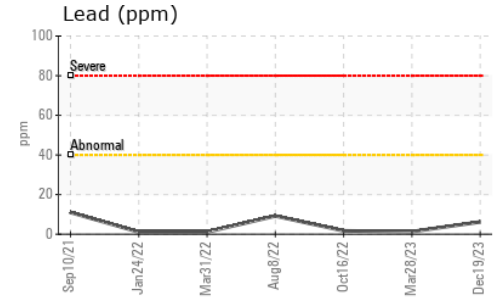
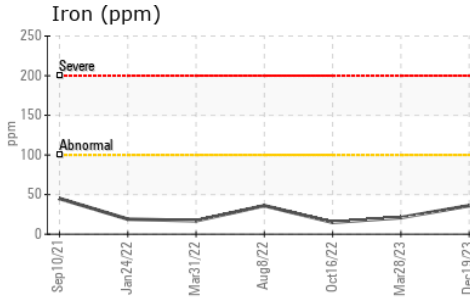
VISUAL

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)	12.0	13.0	11.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 504 - Edmonton
Sample No. : GFL0090757 **Received** : 20 Dec 2023 12015 28 Street NE
Lab Number : 02604328 **Diagnosed** : 20 Dec 2023 Edmonton, AB
Unique Number : 5697413 **Diagnostician** : Wes Davis CA T6S 1E2
Test Package : MOB 1

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.

Contact: Jerrod Adair
 jerrodadair@gflenv.com

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F: