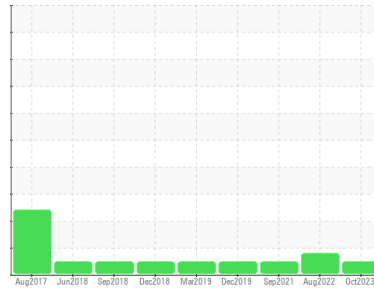




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
9238
 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		GFL0064780	GFL0035523	GFL0035270
Sample Date	Client Info		12 Oct 2023	15 Aug 2022	01 Sep 2021
Machine Age	hrs	Client Info	14460	13405	0
Oil Age	hrs	Client Info	600	600	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	2.3	<1.0
Glycol	WC Method		NEG	0.0	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	17	22	7
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>3	<1	2	0
Aluminum	ppm	ASTM D5185(m)	>20	4	7	2
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	5	2	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Antimony	ppm	ASTM D5185(m)		0	<1	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)		37	19	18
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		85	79	50
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		100	128	688
Calcium	ppm	ASTM D5185(m)		2021	2039	1355
Phosphorus	ppm	ASTM D5185(m)		989	927	844
Zinc	ppm	ASTM D5185(m)		1152	1074	955
Sulfur	ppm	ASTM D5185(m)		3030	2956	2119
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	5	8	4
Sodium	ppm	ASTM D5185(m)		6	10	4
Potassium	ppm	ASTM D5185(m)	>20	3	8	<1

INFRA-RED

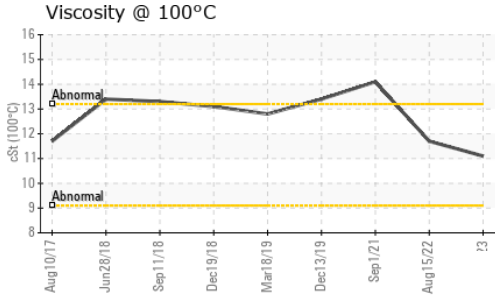
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.7	1.5	0.3
Nitration	Abs/cm	ASTM D7624*	>20	9.3	10.7	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.5	23.5	21.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.6	15.5	20.1



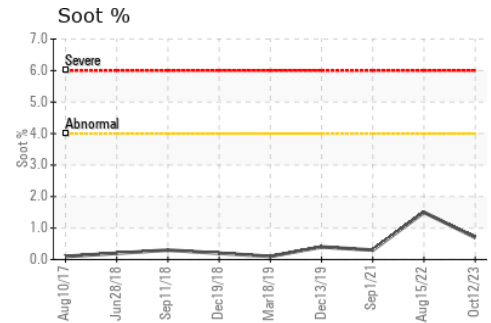
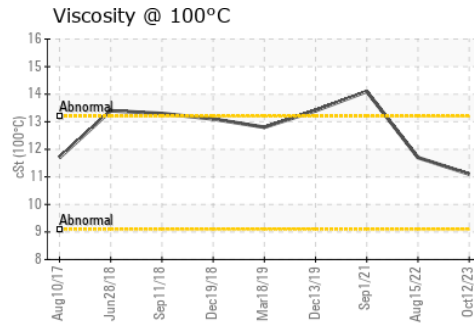
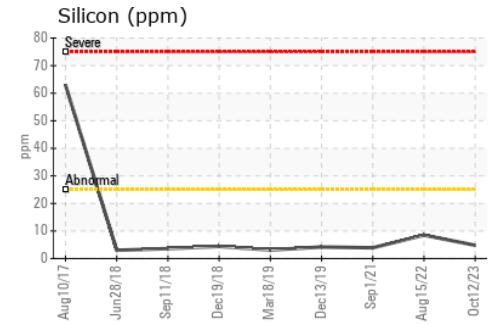
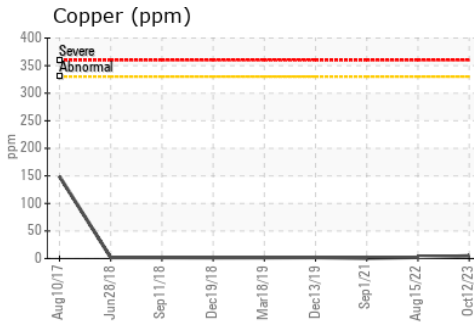
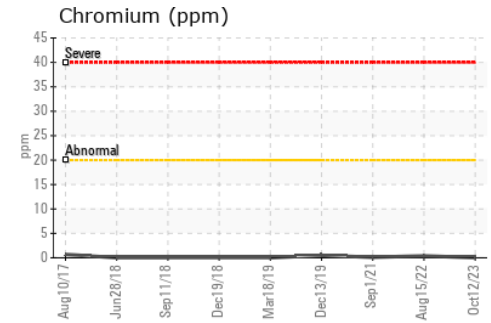
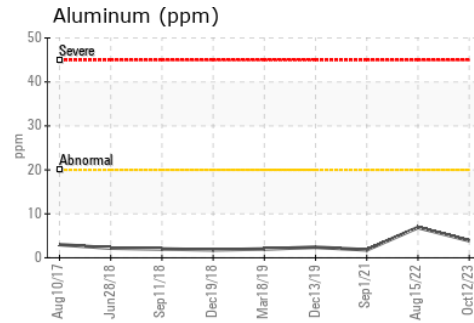
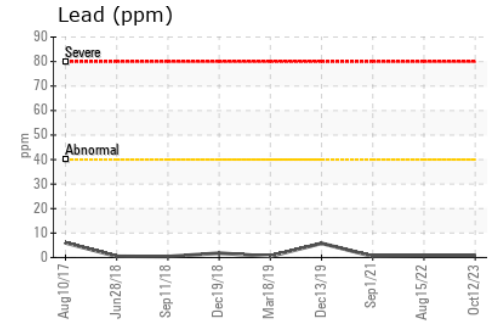
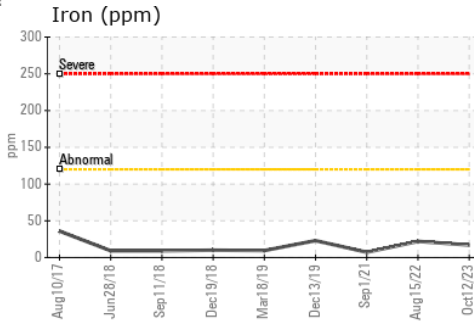
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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)	11.1	▲ 11.7	14.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 213 - Kitchener**
Sample No. : GFL0064780 **Received** : 17 Oct 2023 **16 Centennial Road, Kitchener Yard**
Lab Number : 02589531 **Diagnosed** : 17 Oct 2023 **Kitchener, ON**
Unique Number : 5658597 **Diagnostician** : Wes Davis **CA N2B 3G1**
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: Keith Zehr
 kzehr@gflenv.com
 T: (226)751-4416
 F: x: