



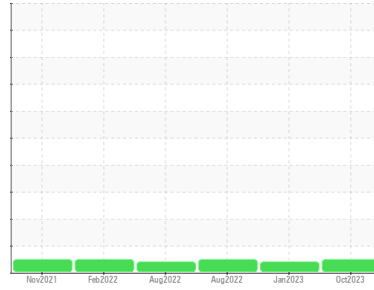
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
411017
 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	GFL0064787	GFL0064765	GFL0053837
Sample Date	Client Info	16 Oct 2023	16 Jan 2023	17 Aug 2022
Machine Age	hrs	6030	4439	102929
Oil Age	hrs	600	600	0
Oil Changed	Client Info	Changed	Changed	N/A
Sample Status		NORMAL	ABNORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	1	<1.0
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >120	8	19	14
Chromium	ppm ASTM D5185(m) >20	0	<1	<1
Nickel	ppm ASTM D5185(m) >15	<1	2	<1
Titanium	ppm ASTM D5185(m) >2	0	<1	<1
Silver	ppm ASTM D5185(m) >3	<1	0	0
Aluminum	ppm ASTM D5185(m) >20	2	3	3
Lead	ppm ASTM D5185(m) >40	<1	2	<1
Copper	ppm ASTM D5185(m) >330	1	4	7
Tin	ppm ASTM D5185(m) >15	<1	1	<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)	23	14	5
Barium	ppm ASTM D5185(m)	<1	0	0
Molybdenum	ppm ASTM D5185(m)	85	82	61
Manganese	ppm ASTM D5185(m)	0	<1	<1
Magnesium	ppm ASTM D5185(m)	101	95	980
Calcium	ppm ASTM D5185(m)	2047	2117	1127
Phosphorus	ppm ASTM D5185(m)	957	1014	1080
Zinc	ppm ASTM D5185(m)	1162	1146	1245
Sulfur	ppm ASTM D5185(m)	2892	2909	2704
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

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

INFRA-RED

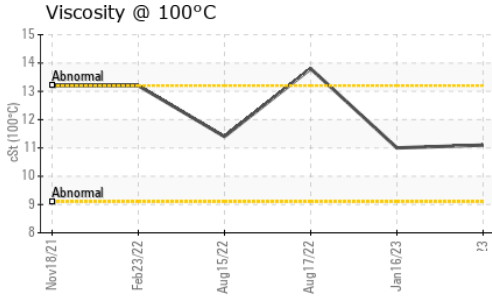
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >4	0.2	0.3	0.2
Nitration	Abs/cm ASTM D7624* >20	9.7	11.0	7.8
Sulfation	Abs/.1mm ASTM D7415* >30	19.7	24.0	19.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	14.3	16.2	14.4



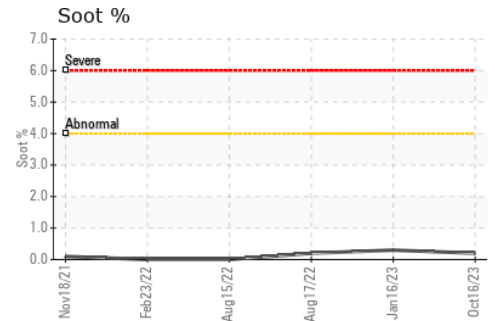
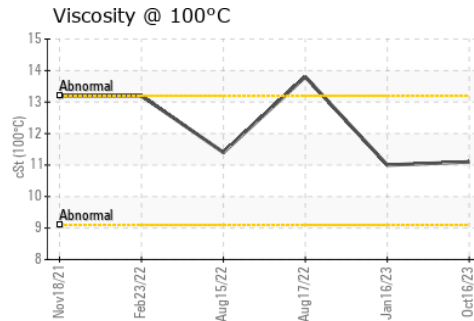
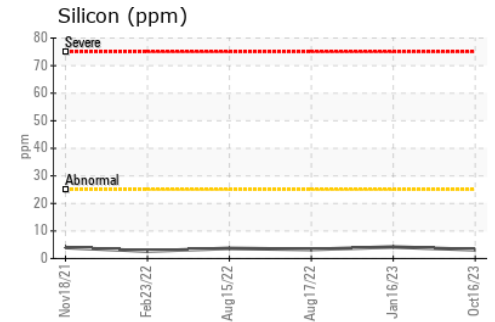
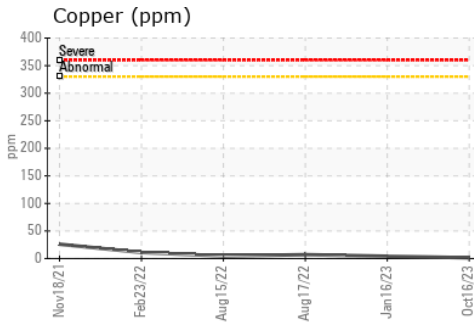
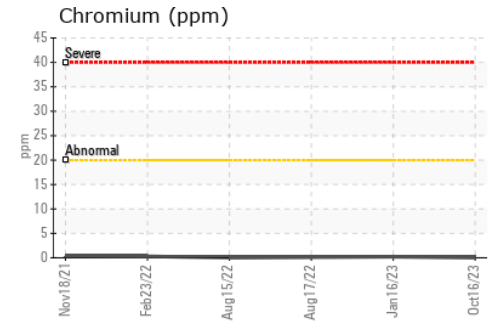
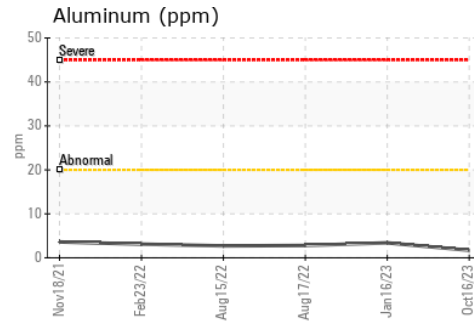
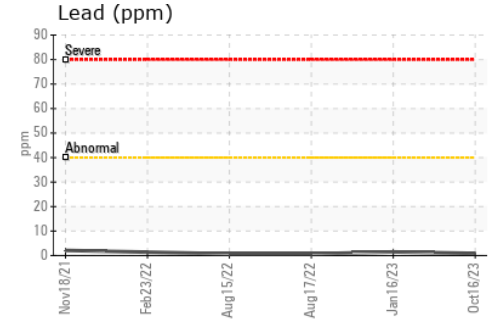
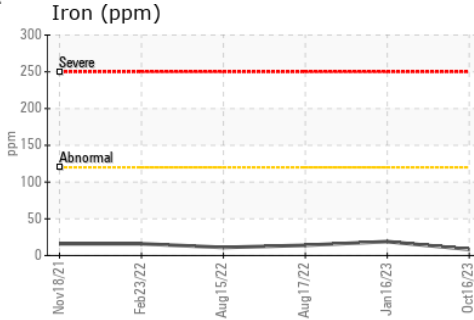
OIL ANALYSIS REPORT



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	▲ 11.0	13.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 213 - Kitchener**
Sample No. : GFL0064787 **Received** : 17 Oct 2023 **16 Centennial Road, Kitchener Yard**
Lab Number : 02589533 **Diagnosed** : 17 Oct 2023 **Kitchener, ON**
Unique Number : 5658599 **Diagnostician** : Wes Davis **CA N2B 3G1**
Test Package : MOB 1 **Contact: Keith Zehr**
kzehr@gflenv.com

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.

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