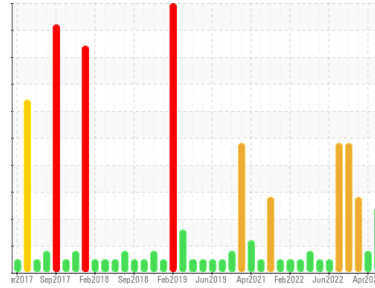




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
8136
Component
Diesel Engine
Fluid
PETRO CANADA 10W30 (--- LTR)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Test for glycol is negative.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0097640	GFL0077951	GFL0059958
Sample Date	Client Info	15 Oct 2023	19 Apr 2023	20 Nov 2022
Machine Age	hrs	16366	15481	14763
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	Changed	N/A
Sample Status		SEVERE	MARGINAL	SEVERE

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >80	45	54	50
Chromium	ppm	ASTM D5185(m) >5	2	2	3
Nickel	ppm	ASTM D5185(m) >2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	0	<1	<1
Silver	ppm	ASTM D5185(m) >3	<1	0	0
Aluminum	ppm	ASTM D5185(m) >30	2	3	2
Lead	ppm	ASTM D5185(m) >30	<1	1	2
Copper	ppm	ASTM D5185(m) >150	2	3	12
Tin	ppm	ASTM D5185(m) >5	<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)	2	2	1
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	58	44
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	772	944	721
Calcium	ppm	ASTM D5185(m)	836	1089	801
Phosphorus	ppm	ASTM D5185(m)	811	1036	807
Zinc	ppm	ASTM D5185(m)	953	1169	885
Sulfur	ppm	ASTM D5185(m)	1984	2411	1799
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	5	5	6
Sodium	ppm	ASTM D5185(m)	40	8	5
Potassium	ppm	ASTM D5185(m) >20	4	<1	2
Fuel	%	ASTM D7593* >5	9.2	4	16.7
Glycol	%	ASTM D7922*	0.0	NEG	NEG

INFRA-RED

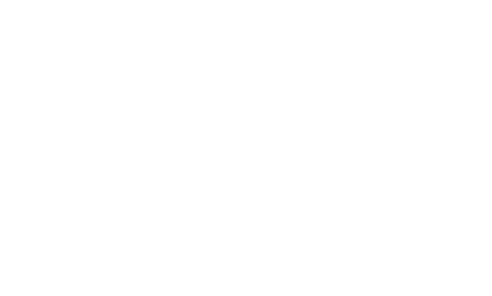
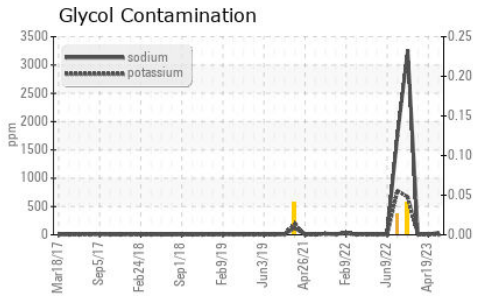
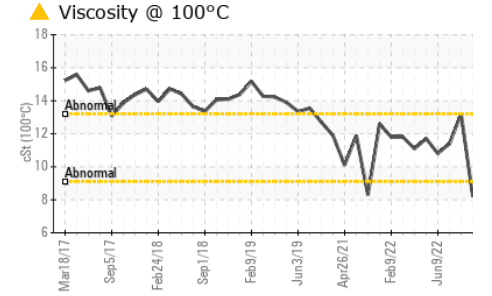
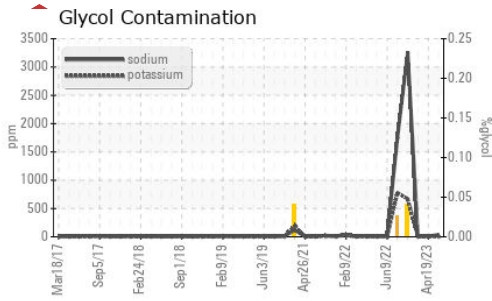
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >3	1.1	1.4	1.1
Nitration	Abs/cm	ASTM D7624* >20	11.9	11.2	11.8
Sulfation	Abs/.1mm	ASTM D7415* >30	28.0	24.0	29.1

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	32.0	21.0	33.5



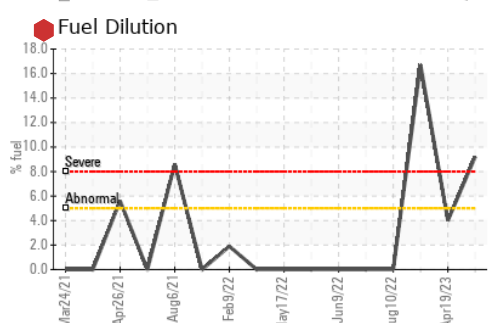
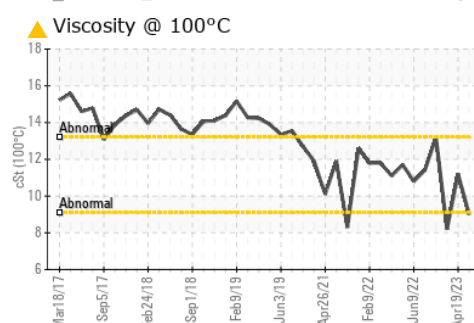
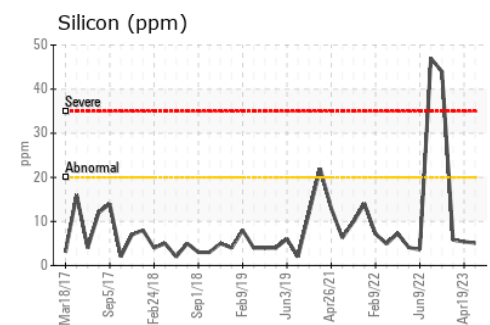
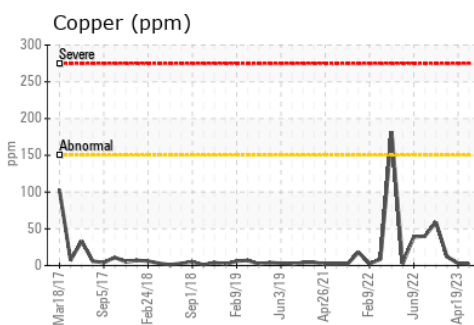
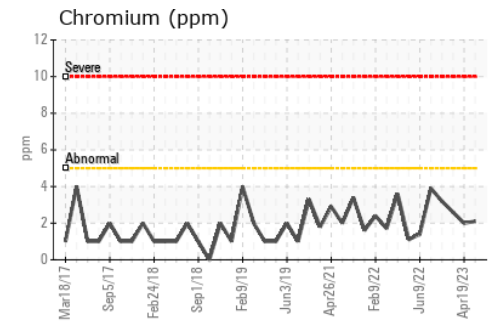
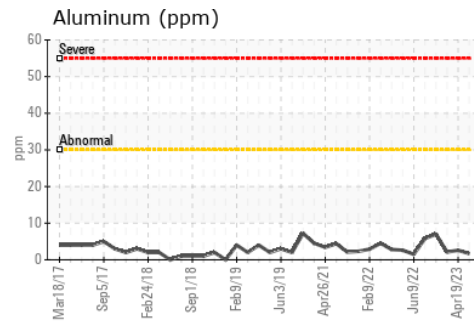
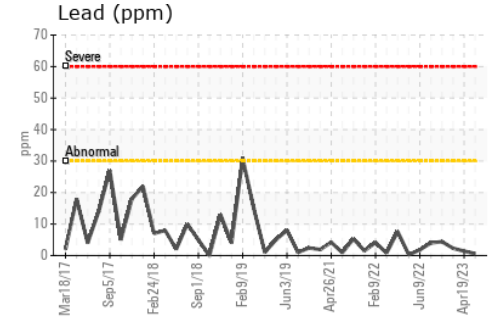
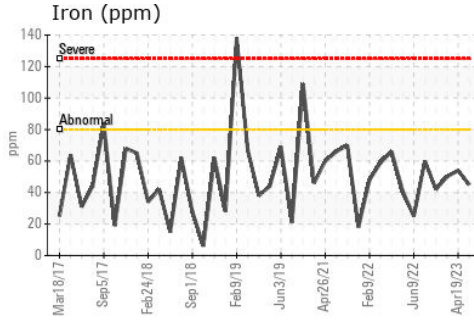
OIL ANALYSIS REPORT



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)	▲ 9	11.2	◆ 8.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW
Sample No. : GFL0097640 **Received** : 16 Oct 2023
Lab Number : 02589215 **Diagnosed** : 24 Oct 2023
Unique Number : 5658281 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: FuelDilution, GLYCOL, PercentFuel)

8409 -15th Street NW
 Edmonton, AB
 CA T6P 0B8
 Contact: Tim Greig
 tgreig@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.

T:
F: