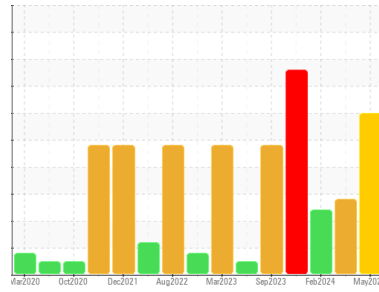




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Area
[1269414]

Machine Id
214000

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

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

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	GFL0110685	GFL0110668	GFL0110656
Sample Date	Client Info	01 May 2024	21 Mar 2024	21 Feb 2024
Machine Age	hrs	16362	16132	15953
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	Changed	Changed
Sample Status		SEVERE	SEVERE	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >75	15	11	9
Chromium	ppm ASTM D5185(m) >5	<1	<1	<1
Nickel	ppm ASTM D5185(m) >4	0	0	0
Titanium	ppm ASTM D5185(m) >2	0	0	0
Silver	ppm ASTM D5185(m) >2	0	0	0
Aluminum	ppm ASTM D5185(m) >15	1	1	1
Lead	ppm ASTM D5185(m) >25	0	0	0
Copper	ppm ASTM D5185(m) >100	<1	<1	<1
Tin	ppm ASTM D5185(m) >4	0	0	0
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) 0	2	2	2
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 60	60	47	46
Manganese	ppm ASTM D5185(m) 0	0	0	0
Magnesium	ppm ASTM D5185(m) 1010	834	685	688
Calcium	ppm ASTM D5185(m) 1070	889	734	739
Phosphorus	ppm ASTM D5185(m) 1150	822	691	726
Zinc	ppm ASTM D5185(m) 1270	1012	848	829
Sulfur	ppm ASTM D5185(m) 2060	2000	1731	1922
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

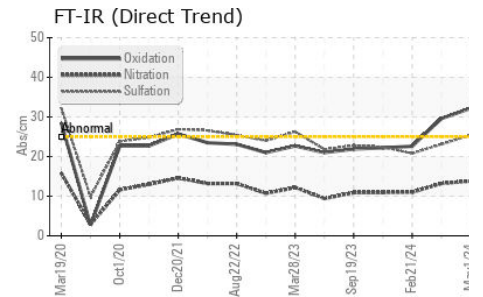
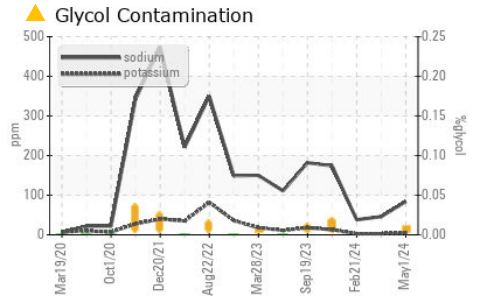
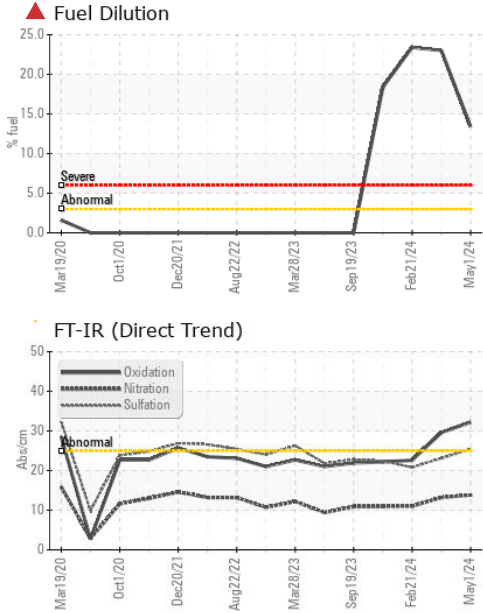
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	2	1	3
Sodium	ppm ASTM D5185(m)	84	46	38
Potassium	ppm ASTM D5185(m) >20	4	3	2
Fuel	% ASTM D7593* >3.0	▲ 13.4	▲ 23	▲ 23.4
Glycol	% ASTM D7922*	▲ 0.011	NEG	NEG

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >6	0.2	0.1	0.1
Nitration	Abs/cm ASTM D7624* >20	13.8	13.2	11.0
Sulfation	Abs.1mm ASTM D7415* >30	25.4	23.1	20.8



OIL ANALYSIS REPORT

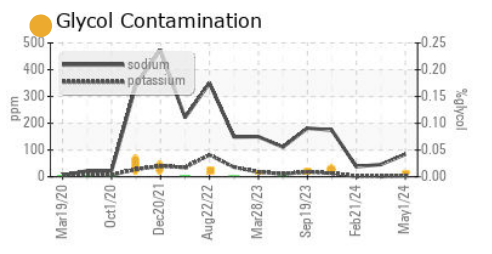
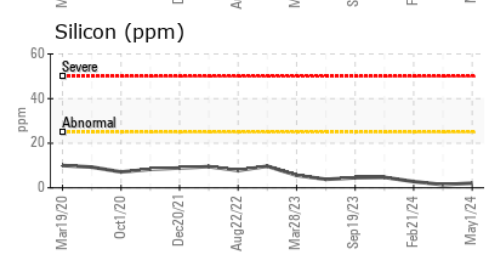
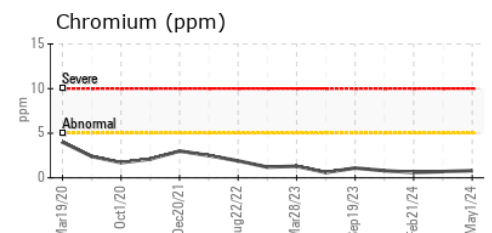
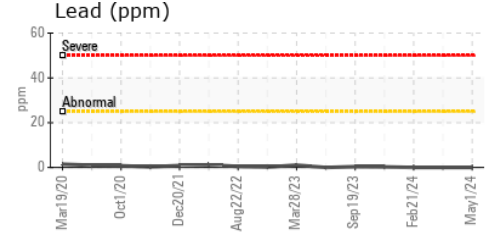
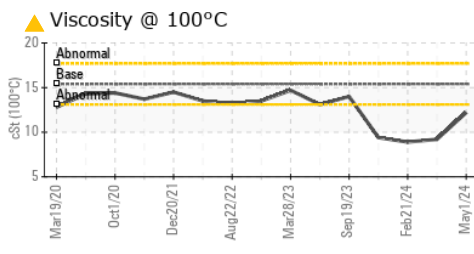
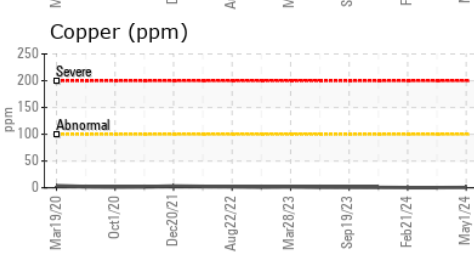
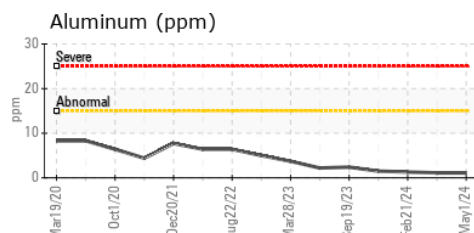
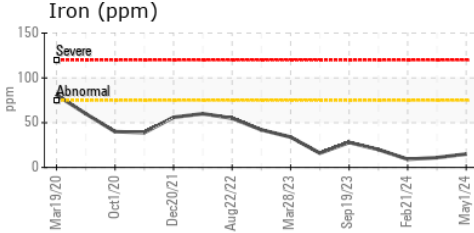


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	32.2	29.6	22.6

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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)	15.4	▲ 12.2	▲ 9.2	▲ 8.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110685
Lab Number : 02632972
Unique Number : 5774125
Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, Visual)

GFL Environmental - 207 - Pickering SW
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 PICKERING, ON
 CA L1W 3P1
 Contact: Ian Patton
 ipatton@gflenv.com
 T: (905)831-6297
 F: (905)426-3577

*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.*