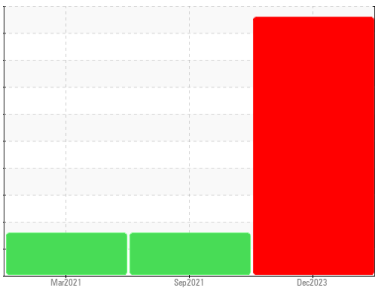
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
500528
Component
Diesel Engine
Fluid
PETRO CANADA 10W40 (--- GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

▲ Contamination
Test for glycol is positive. Light fuel dilution occurring. There is a high concentration of glycol present 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		**GFL0047666**	GFL0024285	GFL0011136
Sample Date		Client Info		**09 Dec 2023**	29 Sep 2021	29 Mar 2021
Machine Age	hrs	Client Info		**0**	6702	3210
Oil Age	hrs	Client Info		**0**	492	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

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)	>90	**75**	18	35
Chromium	ppm	ASTM D5185(m)	>20	**2**	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**3**	4	2
Lead	ppm	ASTM D5185(m)	>40	**2**	1	<1
Copper	ppm	ASTM D5185(m)	>330	**31**	3	1
Tin	ppm	ASTM D5185(m)	>15	**<1**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	<1	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**	270	2
Barium	ppm	ASTM D5185(m)		**0**	<1	<1
Molybdenum	ppm	ASTM D5185(m)		**92**	105	56
Manganese	ppm	ASTM D5185(m)		**<1**	2	<1
Magnesium	ppm	ASTM D5185(m)		**955**	674	946
Calcium	ppm	ASTM D5185(m)		**1016**	1403	1038
Phosphorus	ppm	ASTM D5185(m)		**1025**	731	974
Zinc	ppm	ASTM D5185(m)		**1187**	838	1166
Sulfur	ppm	ASTM D5185(m)		**2631**	2047	2576
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**15**	▲ 29	▲ 29
Sodium	ppm	ASTM D5185(m)	>20	● **114**	6	5
Potassium	ppm	ASTM D5185(m)	>20	▲ **305**	2	1
Fuel	%	ASTM D7593*	>3.0	▲ **1.5**	<1.0	<1.0
Glycol	%	ASTM D7922*		▲ **0.372**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.9**	0.1	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**13.1**	6.4	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.6**	23.5	21.2

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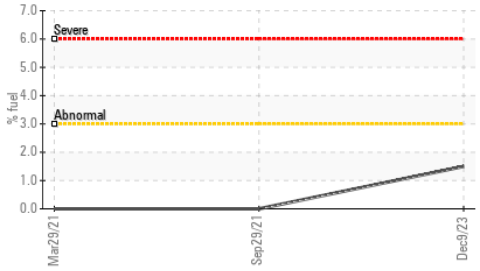
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.3**	15.9	16.9

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

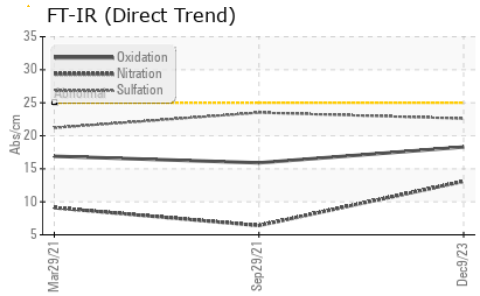
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)		▲ **11.2**	13.0	11.2

GRAPHS

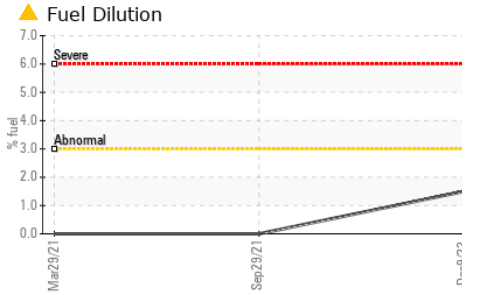
Fuel Dilution



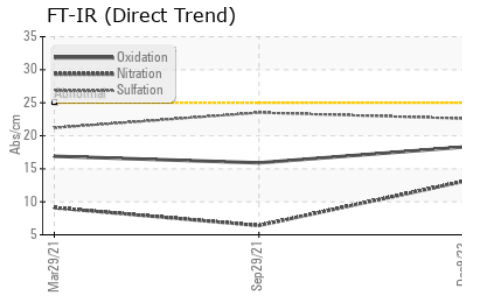
FT-IR (Direct Trend)



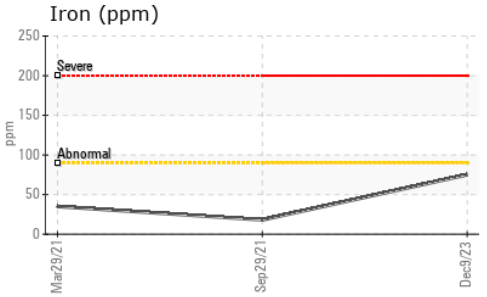
Fuel Dilution



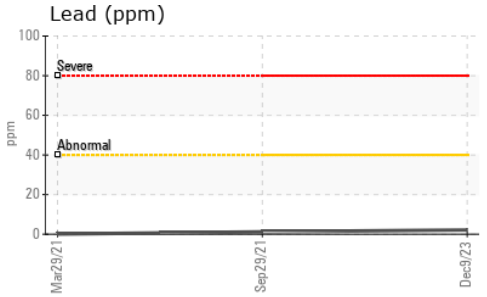
FT-IR (Direct Trend)



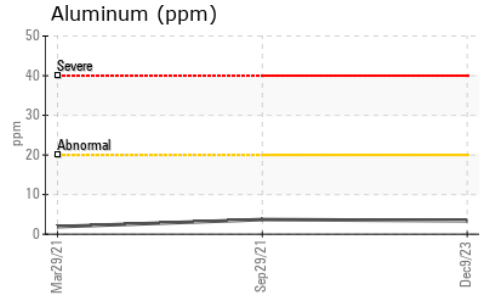
Iron (ppm)



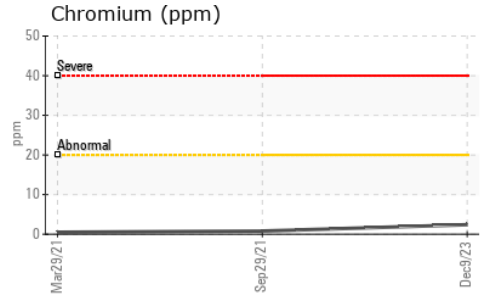
Lead (ppm)



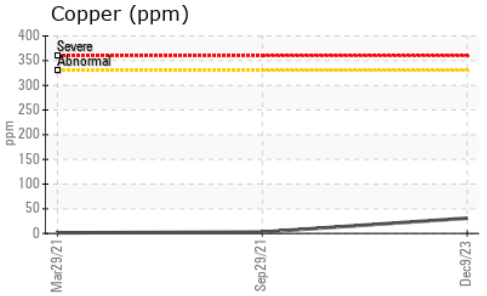
Aluminum (ppm)



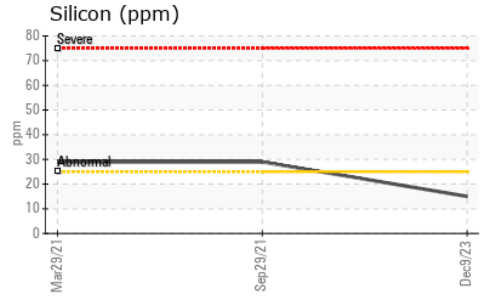
Chromium (ppm)



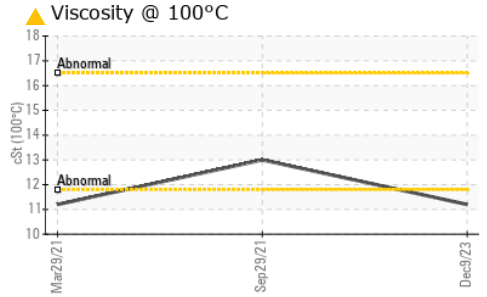
Copper (ppm)



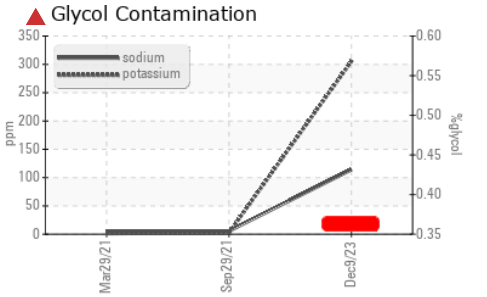
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0047666
Lab Number : 02610219
Unique Number : 5711305
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel)

Received : 22 Jan 2024
Tested : 23 Jan 2024
Diagnosed : 23 Jan 2024 - Kevin Marson

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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