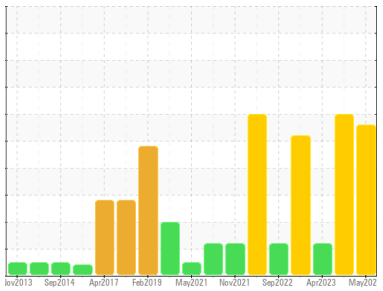
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
8973
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (20 LTR)

DIAGNOSIS

Recommendation
We advise that you check the fuel injection system. 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. 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
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0124653**	GFL0116358	GFL0077473
Sample Date		Client Info		**30 May 2024**	14 Mar 2024	11 Apr 2023
Machine Age	kms	Client Info		**191633**	191158	176315
Oil Age	kms	Client Info		**0**	24946	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	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	**32**	35	68
Chromium	ppm	ASTM D5185(m)	>20	**1**	2	2
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	5	4
Lead	ppm	ASTM D5185(m)	>40	**12**	5	1
Copper	ppm	ASTM D5185(m)	>330	**2**	3	2
Tin	ppm	ASTM D5185(m)	>15	**0**	<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)	0	**2**	2	2
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**51**	50	61
Manganese	ppm	ASTM D5185(m)	0	**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	**796**	728	978
Calcium	ppm	ASTM D5185(m)	1070	**853**	819	1122
Phosphorus	ppm	ASTM D5185(m)	1150	**820**	795	1073
Zinc	ppm	ASTM D5185(m)	1270	**990**	928	1213
Sulfur	ppm	ASTM D5185(m)	2060	**2129**	2218	2413
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**7**	5	5
Sodium	ppm	ASTM D5185(m)		**875**	913	58
Potassium	ppm	ASTM D5185(m)	>20	**3**	4	<1
Fuel	%	ASTM D7593*	>3.0	**7.1**	10.9	<1.0
Glycol	%	ASTM D7922*		**0.022**	0.011	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**3.1**	3.6	6.9
Nitration	Abs/cm	ASTM D7624*	>20	**14.9**	15.6	28.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	**26.4**	27.0	66.0

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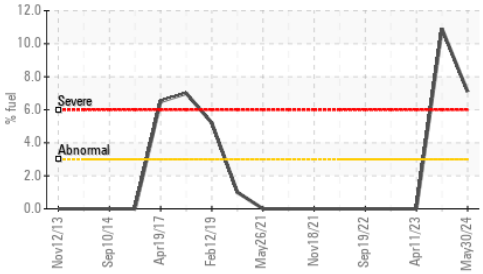
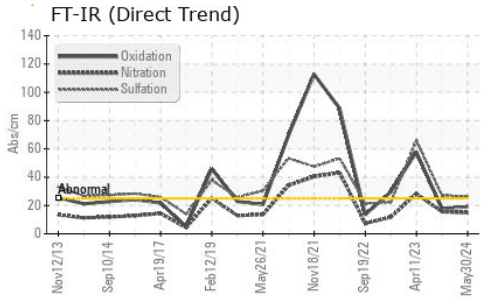
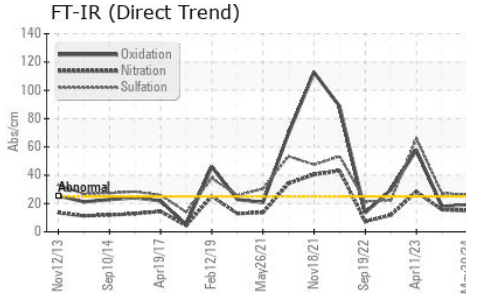
Fuel Dilution



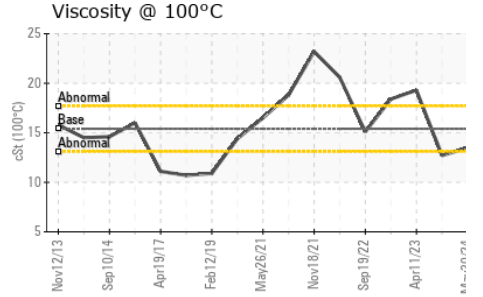
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Viscosity @ 100°C



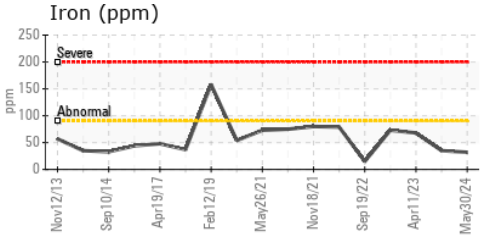
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.1**	17.8	57.8

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

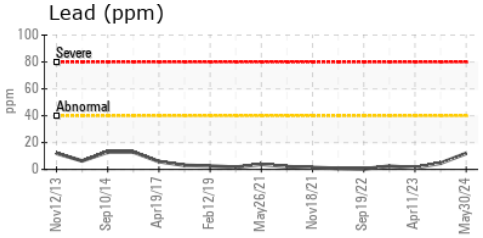
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.5**	▲ 12.7	▲ 19.3

GRAPHS

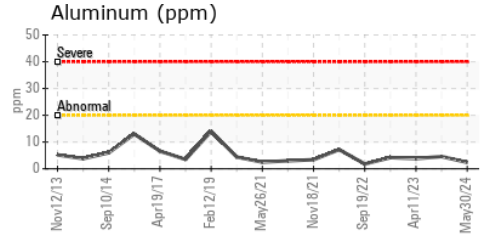
Iron (ppm)



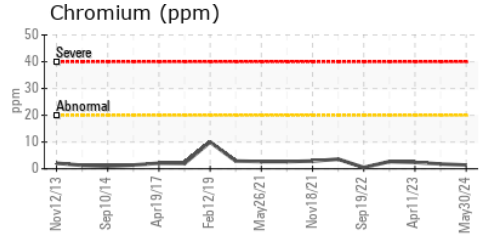
Lead (ppm)



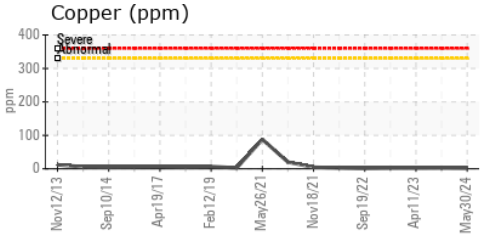
Aluminum (ppm)



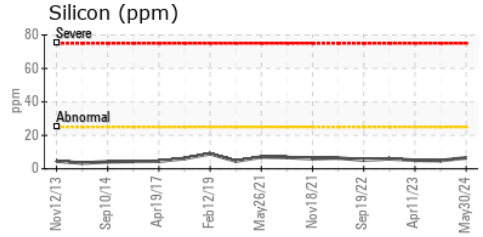
Chromium (ppm)



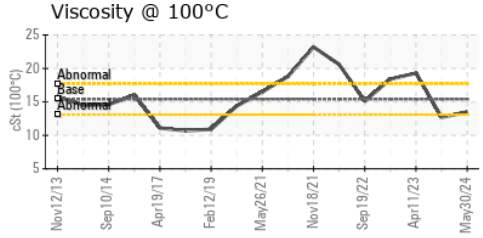
Copper (ppm)



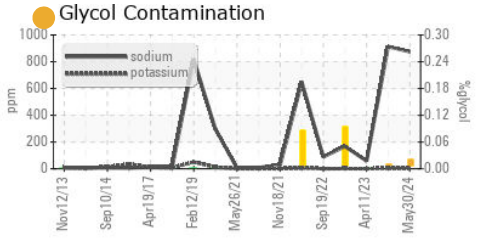
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0124653
Lab Number : 02639315
Unique Number : 5788477
Test Package : MOB 1 (Additional Tests: Glycol, PercentFuel, Visual)

Received : 03 Jun 2024
Tested : 04 Jun 2024
Diagnosed : 04 Jun 2024 - Wes Davis

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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