



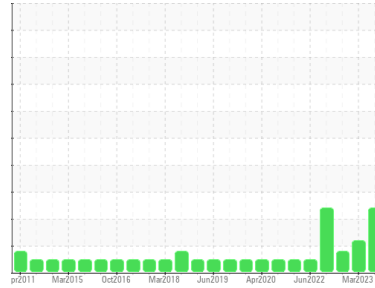
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id
4421
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 LTR)



DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. 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

There is a high amount of fuel 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		GFL0097759	GFL0064331	GFL0061024
Sample Date	Client Info		02 Nov 2023	15 Mar 2023	08 Dec 2022
Machine Age	hrs	Client Info	39398	38423	37967
Oil Age	hrs	Client Info	600	600	100
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			SEVERE	ABNORMAL	MARGINAL

CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >120	27	8	4
Chromium	ppm	ASTM D5185(m) >20	<1	0	0
Nickel	ppm	ASTM D5185(m) >5	<1	0	0
Titanium	ppm	ASTM D5185(m) >2	0	<1	<1
Silver	ppm	ASTM D5185(m) >2	<1	0	0
Aluminum	ppm	ASTM D5185(m) >20	2	1	2
Lead	ppm	ASTM D5185(m) >40	4	<1	<1
Copper	ppm	ASTM D5185(m) >330	7	3	2
Tin	ppm	ASTM D5185(m) >15	<1	0	<1
Antimony	ppm	ASTM D5185(m)	0	<1	<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	9	3
Barium	ppm	ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	57	54	56
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	931	870	937
Calcium	ppm	ASTM D5185(m) 1070	1012	1135	1055
Phosphorus	ppm	ASTM D5185(m) 1150	923	1008	1060
Zinc	ppm	ASTM D5185(m) 1270	1131	1078	1136
Sulfur	ppm	ASTM D5185(m) 2060	2279	2500	2637
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	1	1
Potassium	ppm	ASTM D5185(m) >20	1	<1	<1
Fuel	%	ASTM D7593* >3.0	5.7	2.9	2.4

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	2.4	0.7	0.2
Nitration	Abs/cm	ASTM D7624* >20	10.5	6.8	5.2
Sulfation	Abs/.1mm	ASTM D7415* >30	23.7	22.3	19.3

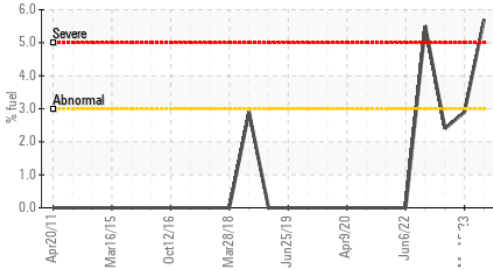
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	16.5	14.5	13.4

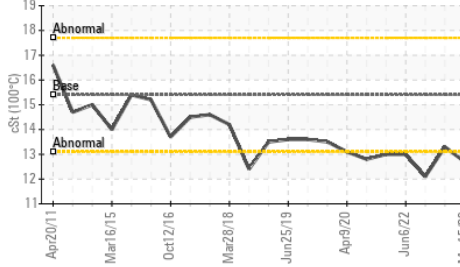


OIL ANALYSIS REPORT

Fuel Dilution



Viscosity @ 100°C



VISUAL

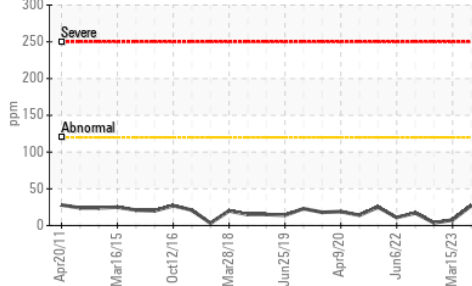
	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES

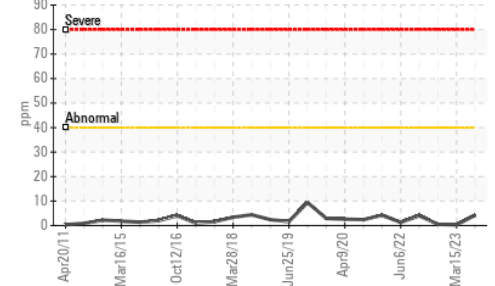
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.4	▲ 12.7

GRAPHS

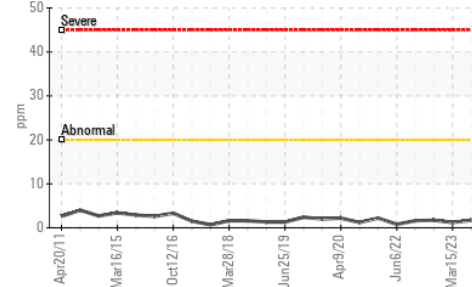
Iron (ppm)



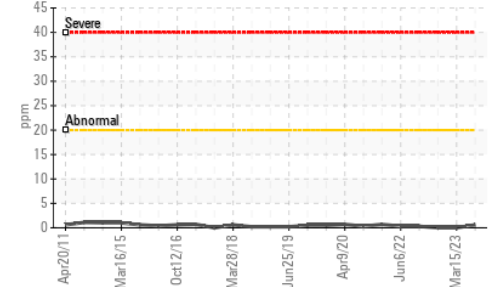
Lead (ppm)



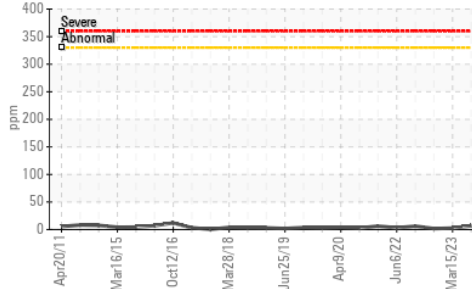
Aluminum (ppm)



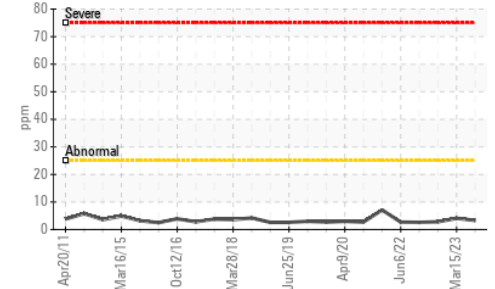
Chromium (ppm)



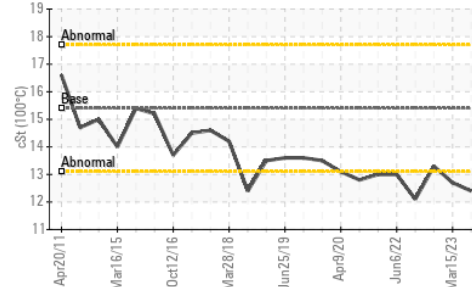
Copper (ppm)



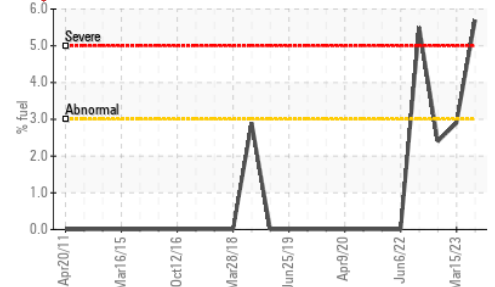
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 209 - Hamilton**
Sample No. : GFL0097759 **Received** : 07 Nov 2023
Lab Number : 02594545 **Diagnosed** : 08 Nov 2023
Unique Number : 5671624 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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