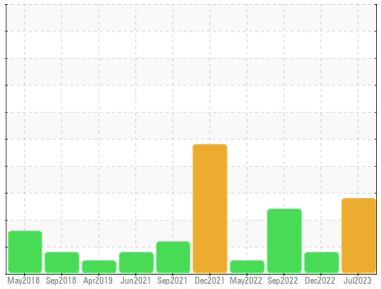
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
8138
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

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.

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	history 1	history 2
Sample Number		Client Info		**GFL0085910**	GFL0064075	GFL0057751
Sample Date		Client Info		**03 Jul 2023**	05 Dec 2022	01 Sep 2022
Machine Age	hrs	Client Info		**16256**	15327	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	Changed
Sample Status				**SEVERE**	MARGINAL	SEVERE

CONTAMINATION		method	limit/base	current	history 1	history 2
Glycol		WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m)	>80	**32**	18	61
Chromium	ppm	ASTM D5185(m)	>5	**2**	<1	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**	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	**1**	1	2
Lead	ppm	ASTM D5185(m)	>30	**8**	1	8
Copper	ppm	ASTM D5185(m)	>150	**1**	2	60
Tin	ppm	ASTM D5185(m)	>5	**<1**	<1	3
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	history 1	history 2
Boron	ppm	ASTM D5185(m)	2	**2**	3	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	2
Molybdenum	ppm	ASTM D5185(m)	50	**46**	56	45
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	1
Magnesium	ppm	ASTM D5185(m)	950	**743**	891	715
Calcium	ppm	ASTM D5185(m)	1050	**790**	1021	839
Phosphorus	ppm	ASTM D5185(m)	995	**816**	1002	802
Zinc	ppm	ASTM D5185(m)	1180	**896**	1102	892
Sulfur	ppm	ASTM D5185(m)	2600	**1921**	2461	1778
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>20	**4**	4	8
Sodium	ppm	ASTM D5185(m)		**6**	8	24
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	6
Fuel	%	ASTM D7593*	>5	**15.2**	▲ 3.9	11.3

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844*	>3	**0.8**	0.4	1.1
Nitration	Abs/cm	ASTM D7624*	>20	**10.4**	7.7	12.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.6**	21.9	28.3

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**29.1**	18.4	32.1

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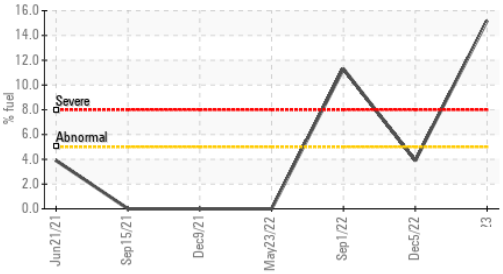
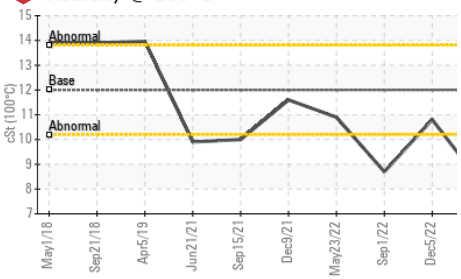
Fuel Dilution



Viscosity @ 100°C

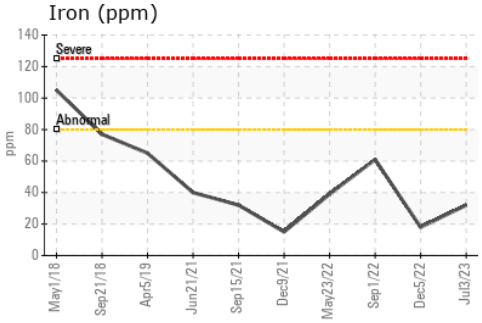


VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

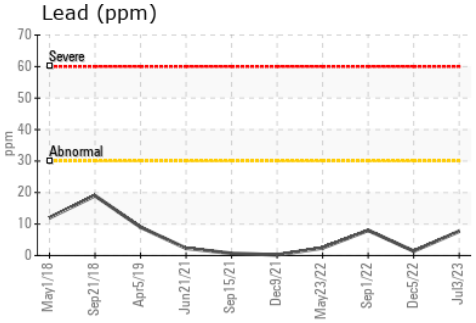
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**8.3**	10.8	▲ 8.7

GRAPHS

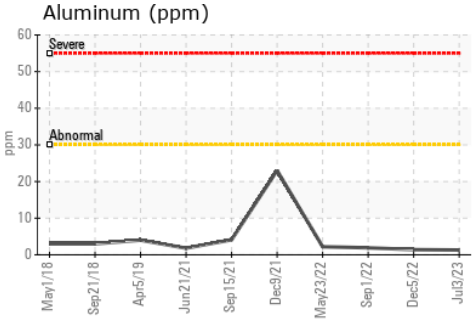
Iron (ppm)



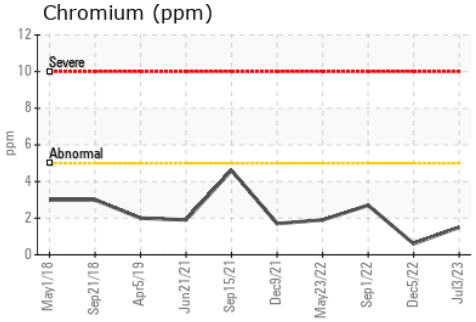
Lead (ppm)



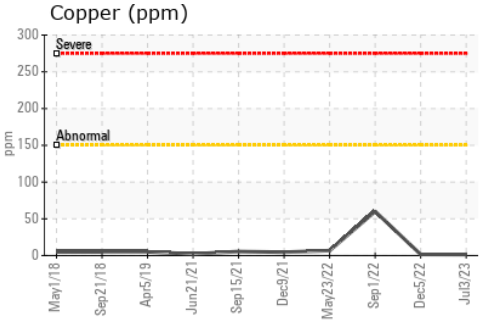
Aluminum (ppm)



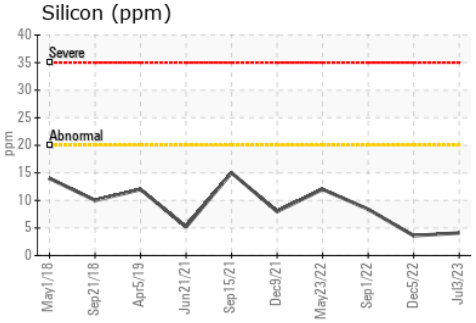
Chromium (ppm)



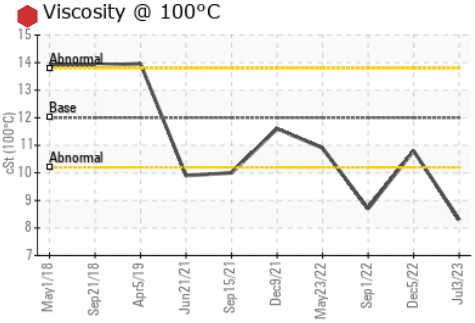
Copper (ppm)



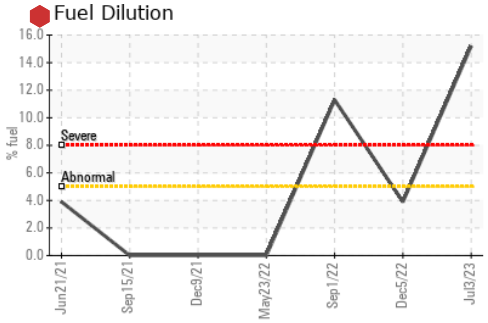
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0085910 **Received** : 04 Jul 2023
Lab Number : 02567700 **Diagnosed** : 05 Jul 2023
Unique Number : 5604746 **Diagnostician** : Kevin Marson
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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