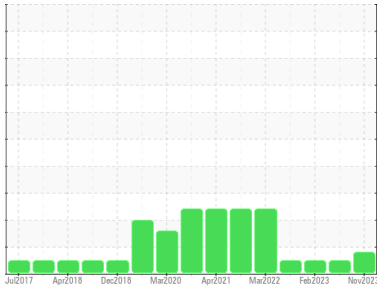
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
8423
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation
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 moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition
The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0085663**	GFL0070445	GFL0059843
Sample Date		Client Info		**13 Nov 2023**	17 May 2023	28 Feb 2023
Machine Age	hrs	Client Info		**3055**	3055	0
Oil Age	hrs	Client Info		**3055**	2508	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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)	>100	**24**	26	28
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**1**	2	2
Lead	ppm	ASTM D5185(m)	>40	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**1**	1	2
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<1
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**	9	49
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**55**	49	14
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**879**	783	216
Calcium	ppm	ASTM D5185(m)	1070	**979**	1221	1991
Phosphorus	ppm	ASTM D5185(m)	1150	**904**	1011	959
Zinc	ppm	ASTM D5185(m)	1270	**1110**	1121	1085
Sulfur	ppm	ASTM D5185(m)	2060	**2221**	2431	2651
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

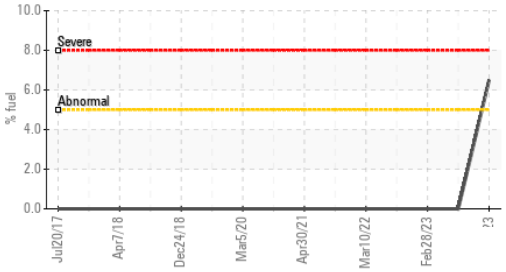
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	6	8
Sodium	ppm	ASTM D5185(m)		**4**	8	5
Potassium	ppm	ASTM D5185(m)	>20	**<1**	2	6
Fuel	%	ASTM D7593*	>5	**6.5**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.5**	0.5	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**12.4**	12.7	7.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.7**	25.2	21.8

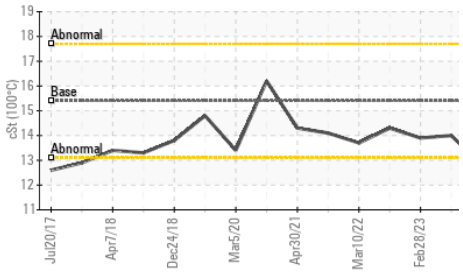
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**25.5**	24.6	16.0

OIL ANALYSIS REPORT

Fuel Dilution



Viscosity @ 100°C

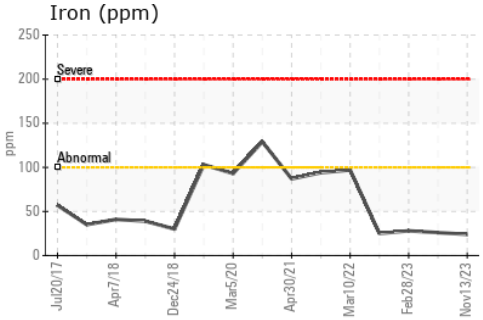


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

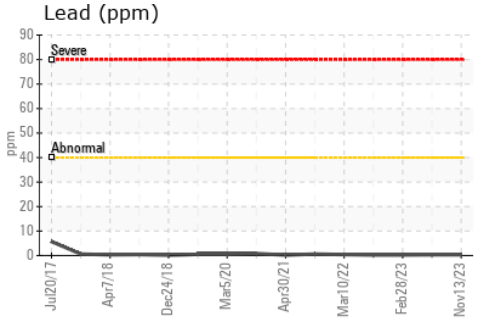
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**12.8**	14.0	13.9

GRAPHS

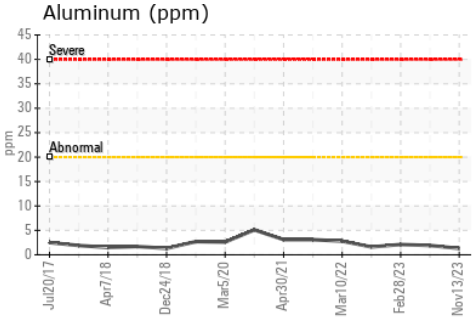
Iron (ppm)



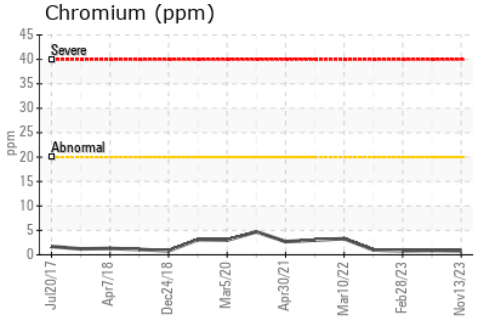
Lead (ppm)



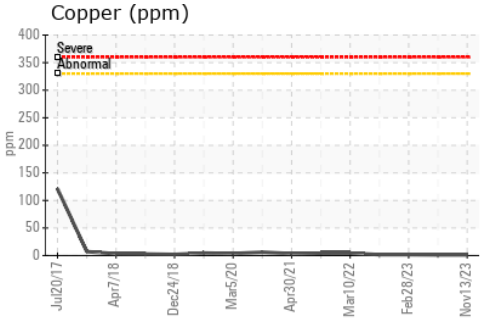
Aluminum (ppm)



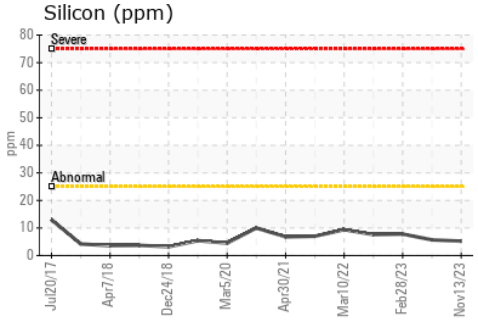
Chromium (ppm)



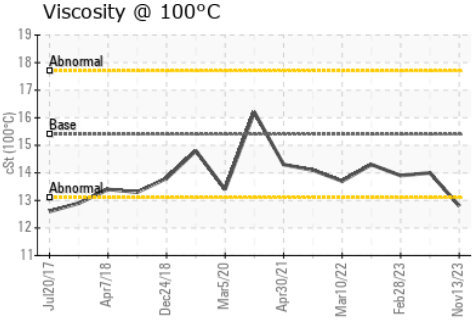
Copper (ppm)



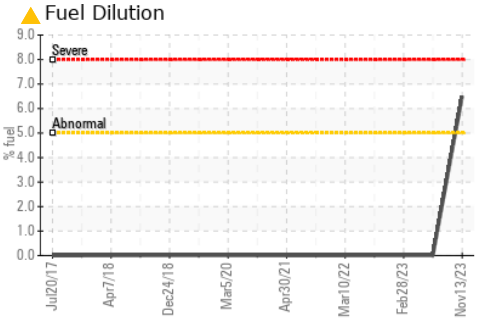
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0085663
Lab Number : 02596731
Unique Number : 5681811
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

Received : 16 Nov 2023
Diagnosed : 17 Nov 2023
Diagnostician : 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.

GFL Environmental - 221 - Windsor
905 Tecumseh Road W
Windsor, ON
CA N8W 4J5
Contact: Rhys Marotte
rmarotte@gflenv.com
T:
F:

Report Id: GFL221 [WCAMIS] 02596731 (Generated: 11/17/2023 10:24:28) Rev: 1

Submitted By: Rhys Marotte