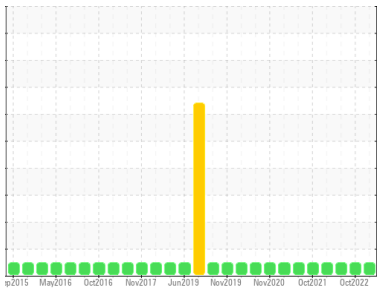
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
4444
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (40 LTR)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0087419**	GFL0062821	GFL0056875
Sample Date		Client Info		**07 Jul 2023**	19 Oct 2022	26 Jul 2022
Machine Age	kms	Client Info		**581907**	555969	0
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	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)	>120	**19**	6	11
Chromium	ppm	ASTM D5185(m)	>20	**<1**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	1	1
Lead	ppm	ASTM D5185(m)	>40	**2**	2	2
Copper	ppm	ASTM D5185(m)	>330	**1**	<1	1
Tin	ppm	ASTM D5185(m)	>15	**<1**	<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	**4**	3	4
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**58**	58	57
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**940**	939	925
Calcium	ppm	ASTM D5185(m)	1070	**1030**	1053	1056
Phosphorus	ppm	ASTM D5185(m)	1150	**1057**	1058	955
Zinc	ppm	ASTM D5185(m)	1270	**1186**	1159	1165
Sulfur	ppm	ASTM D5185(m)	2060	**2286**	2548	2476
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**3**	3	4
Sodium	ppm	ASTM D5185(m)		**4**	4	4
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Fuel	%	ASTM D7593*	>3.0	**2.3**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.3**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**10.7**	8.8	9.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.7**	20.0	20.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.7**	17.0	17.7

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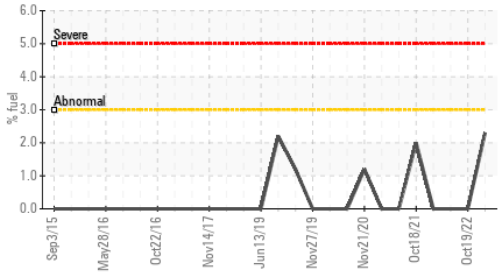
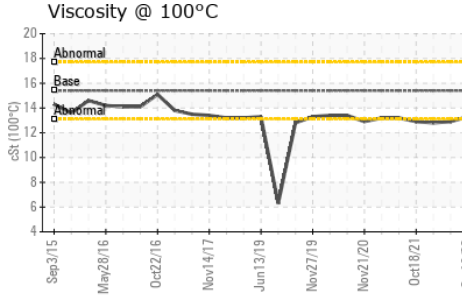
Fuel Dilution



Viscosity @ 100°C

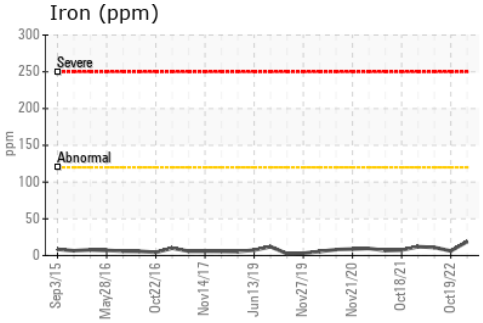


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

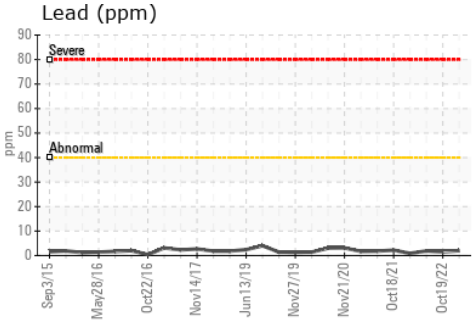
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**12.9**	13.3	12.9

GRAPHS

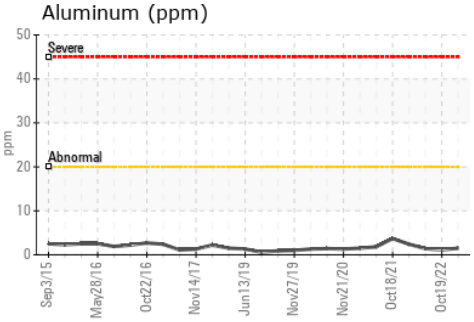
Iron (ppm)



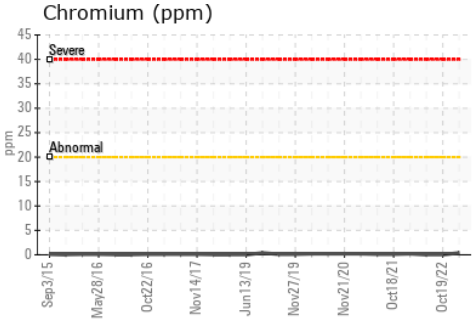
Lead (ppm)



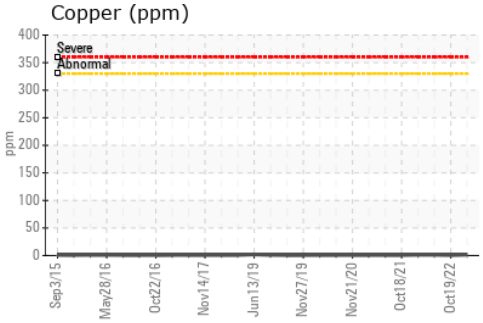
Aluminum (ppm)



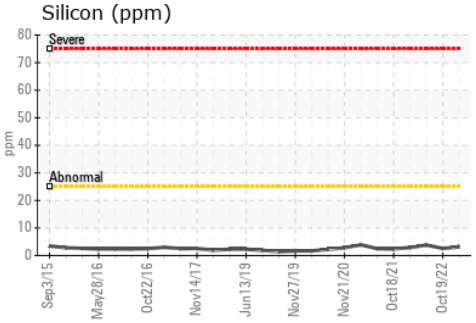
Chromium (ppm)



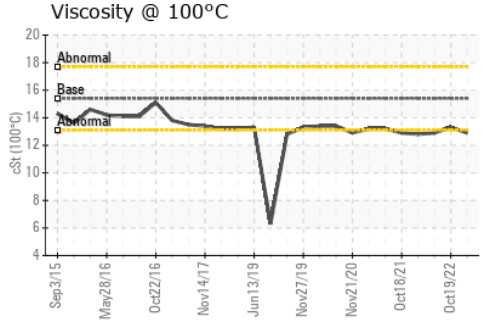
Copper (ppm)



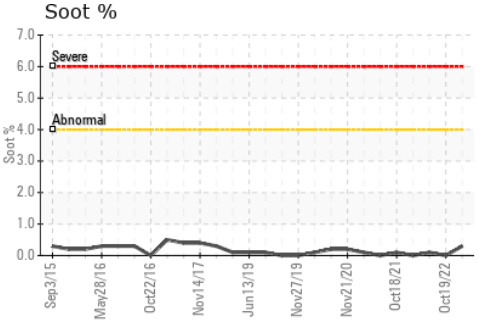
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 252 - GTA Hauling**
Sample No. : GFL0087419 **Received** : 03 Aug 2023
Lab Number : 02573995 **Diagnosed** : 04 Aug 2023
Unique Number : 5619046 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

3668 Weston Road
North York, ON
CA M9L 1W2
Contact: Tom Hatzioannidis
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T: (416)406-2040
F:

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.