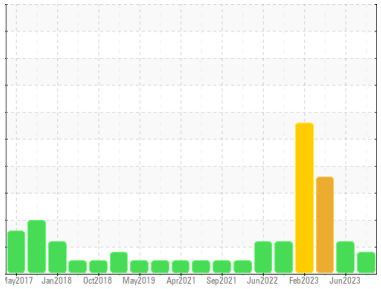
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
4793
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

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		**GFL0085924**	GFL0078001	GFL0077963
Sample Date		Client Info		**05 Jul 2023**	12 Jun 2023	06 Apr 2023
Machine Age	hrs	Client Info		**18345**	18184	17693
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**MARGINAL**	ABNORMAL	SEVERE

CONTAMINATION	method	limit/base	current	history1	history2
Glycol	WC Method		**NEG**	NEG	0.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>110	**11**	22	27
Chromium	ppm	ASTM D5185(m)	>4	**<1**	1	1
Nickel	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	**2**	2	4
Lead	ppm	ASTM D5185(m)	>45	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>85	**<1**	1	1
Tin	ppm	ASTM D5185(m)	>4	**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)	2	**1**	1	1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	50	**56**	55	60
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	**936**	869	870
Calcium	ppm	ASTM D5185(m)	1050	**968**	940	1002
Phosphorus	ppm	ASTM D5185(m)	995	**1028**	928	956
Zinc	ppm	ASTM D5185(m)	1180	**1147**	1066	1066
Sulfur	ppm	ASTM D5185(m)	2600	**2442**	2236	2337
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

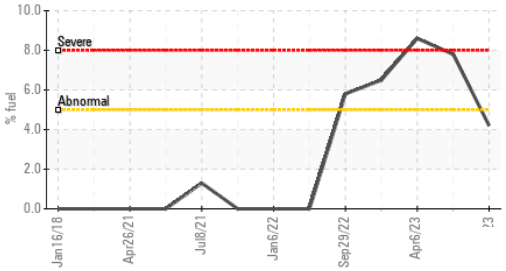
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	**6**	5	6
Sodium	ppm	ASTM D5185(m)		**25**	56	▲ 182
Potassium	ppm	ASTM D5185(m)	>20	**1**	2	4
Fuel	%	ASTM D7593*	>5	▲ **4.2**	▲ 7.8	⬢ 8.6

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.2**	0.5	0.4
Nitration	Abs/cm	ASTM D7624*	>20	**8.1**	11.0	11.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.5**	25.0	21.9

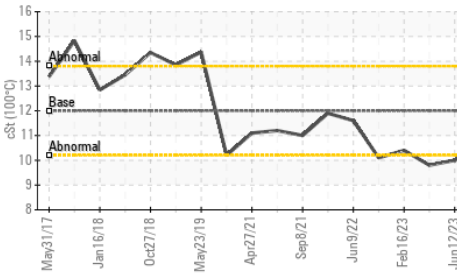
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.7**	27.1	20.3

OIL ANALYSIS REPORT

Fuel Dilution



Viscosity @ 100°C

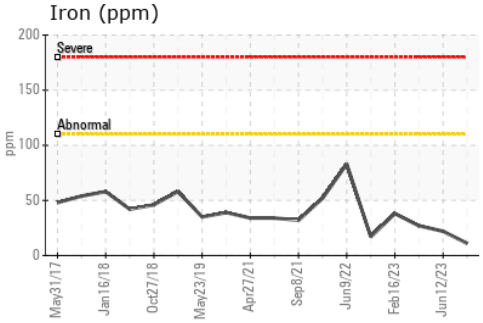


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

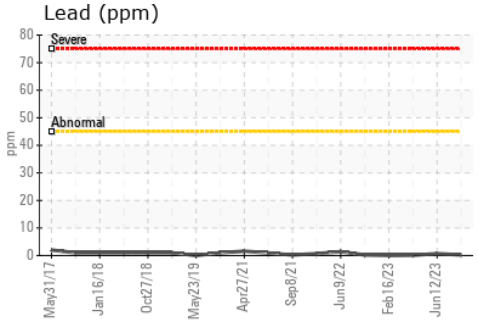
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**10.6**	▲ 10.0	▲ 9.8

GRAPHS

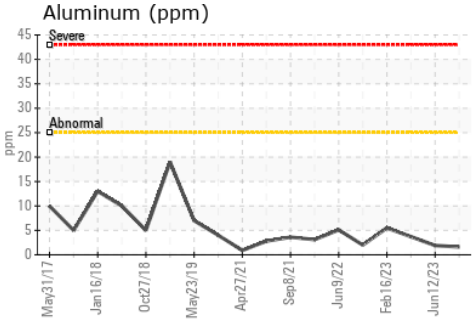
Iron (ppm)



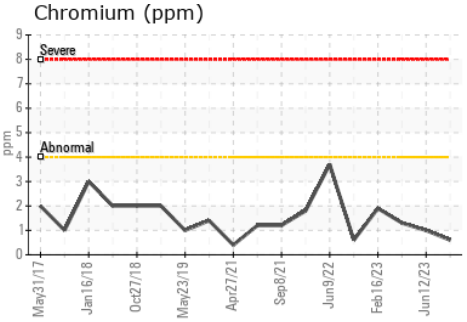
Lead (ppm)



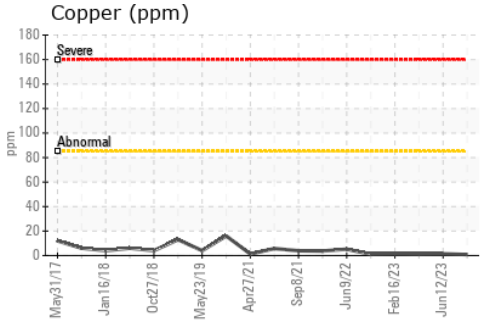
Aluminum (ppm)



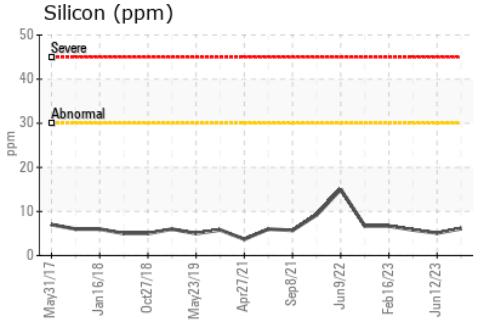
Chromium (ppm)



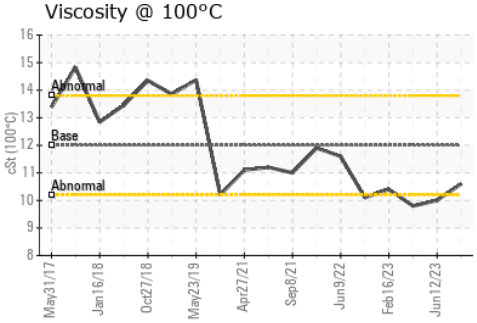
Copper (ppm)



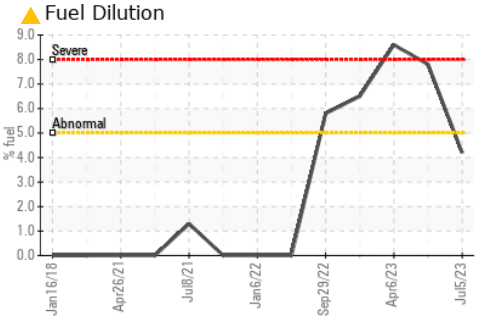
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**
Sample No. : GFL0085924 **Received** : 13 Jul 2023 8409 -15th Street NW
Lab Number : 02569629 **Diagnosed** : 14 Jul 2023 Edmonton, AB
Unique Number : 5606675 **Diagnostician** : Wes Davis CA T6P 0B8
Test Package : MOB 1 (Additional Tests: PercentFuel) Contact: Tim Greig

To discuss this sample report, contact Customer Service at 1-800-268-2131. tgreig@gflenv.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
Validity of results and interpretation are based on the sample and information as supplied. F: