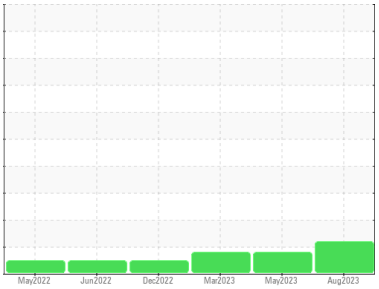
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
228003
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring.

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0090846**	GFL0082574	GFL0063912
Sample Date		Client Info		**17 Aug 2023**	19 May 2023	23 Mar 2023
Machine Age	kms	Client Info		**197795**	184179	6914
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**ABNORMAL**	MARGINAL	ABNORMAL

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)	>100	**25**	25	▲ 102
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	2
Nickel	ppm	ASTM D5185(m)	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**5**	7	18
Lead	ppm	ASTM D5185(m)	>40	**0**	0	<1
Copper	ppm	ASTM D5185(m)	>330	**<1**	<1	4
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)	250	**27**	70	5
Barium	ppm	ASTM D5185(m)	10	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**42**	58	65
Manganese	ppm	ASTM D5185(m)		**<1**	<1	1
Magnesium	ppm	ASTM D5185(m)	450	**497**	432	983
Calcium	ppm	ASTM D5185(m)	3000	**1664**	1785	1189
Phosphorus	ppm	ASTM D5185(m)	1150	**807**	1110	1092
Zinc	ppm	ASTM D5185(m)	1350	**896**	1192	1254
Sulfur	ppm	ASTM D5185(m)	4250	**2111**	2834	2377
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

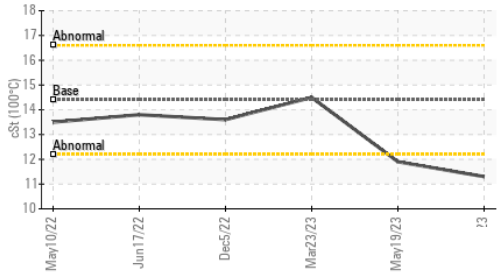
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	4	10
Sodium	ppm	ASTM D5185(m)	>158	**2**	1	2
Potassium	ppm	ASTM D5185(m)	>20	**4**	4	13
Fuel	%	ASTM D7593*	>5	▲ **2**	▲ 2.4	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.8**	0.9	0.8
Nitration	Abs/cm	ASTM D7624*	>20	**10.0**	8.9	6.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.9**	21.7	19.2

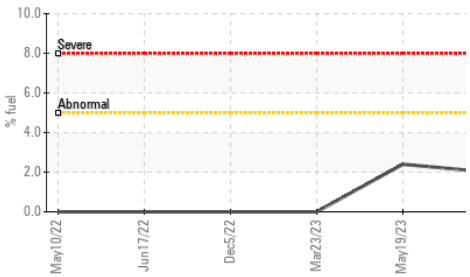
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**21.9**	17.3	9.0

OIL ANALYSIS REPORT

Viscosity @ 100°C



Fuel Dilution

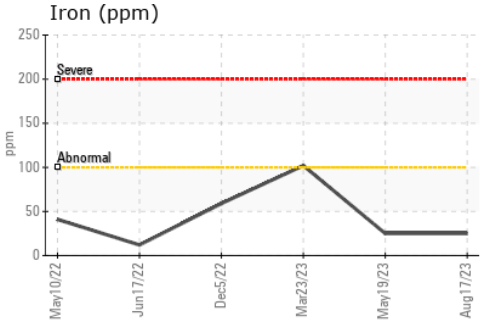


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

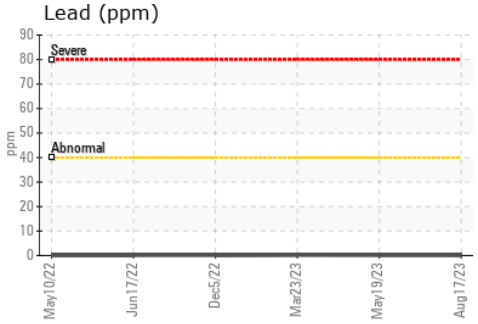
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.3**	11.9	14.5

GRAPHS

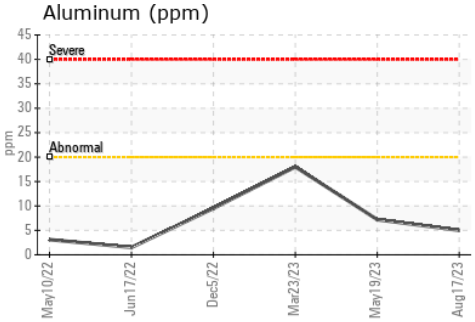
Iron (ppm)



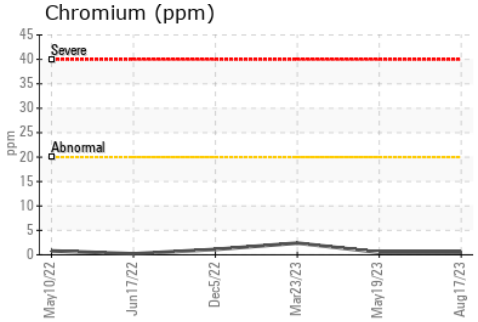
Lead (ppm)



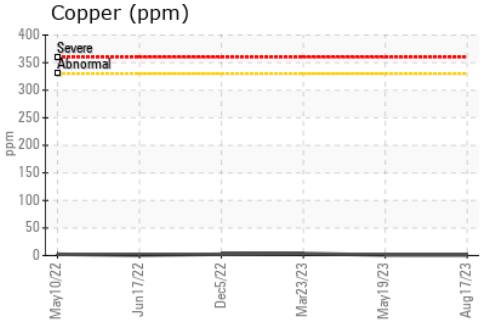
Aluminum (ppm)



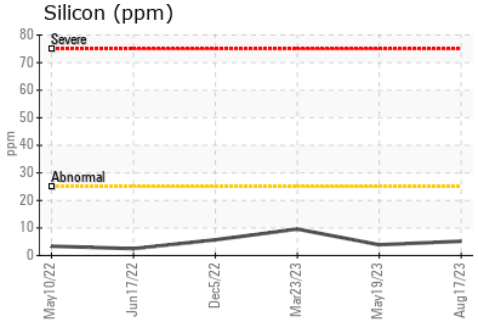
Chromium (ppm)



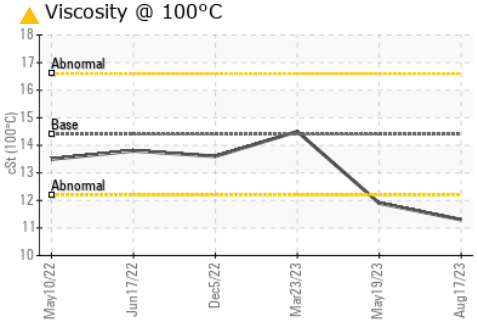
Copper (ppm)



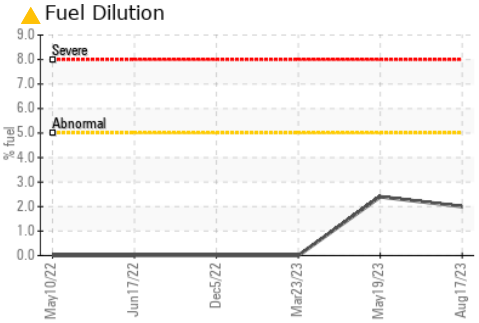
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090846
Lab Number : 02576645
Unique Number : 5629705
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

Received : 18 Aug 2023
Diagnosed : 21 Aug 2023
Diagnostician : Wes Davis

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 - 246 - Windsor
2700 Deziel Dr
Windsor, ON
CA N8W 5H8
Contact: Dave Varga
dvarga@gflenv.com
T: (519)944-8009
F: