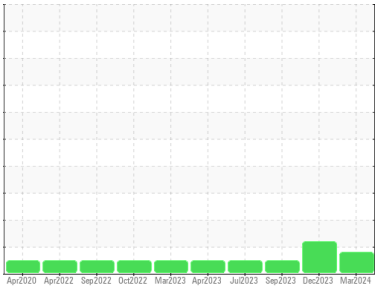
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
[1240714]
Machine Id
829004
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- 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		**GFL0093967**	GFL0093947	GFL0093932
Sample Date		Client Info		**12 Mar 2024**	20 Dec 2023	24 Sep 2023
Machine Age	hrs	Client Info		**9813**	9333	8792
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**MARGINAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	**11**	10	14
Chromium	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	**3**	3	4
Lead	ppm	ASTM D5185(m)	>30	**0**	0	<1
Copper	ppm	ASTM D5185(m)	>150	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>5	**0**	0	0
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	**6**	7	6
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**57**	57	58
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	1010	**905**	901	909
Calcium	ppm	ASTM D5185(m)	1070	**1079**	1110	1033
Phosphorus	ppm	ASTM D5185(m)	1150	**922**	980	941
Zinc	ppm	ASTM D5185(m)	1270	**1124**	1128	1140
Sulfur	ppm	ASTM D5185(m)	2060	**2326**	2645	2405
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**2**	3	4
Sodium	ppm	ASTM D5185(m)		**6**	5	7
Potassium	ppm	ASTM D5185(m)	>20	**2**	4	8
Fuel	%	ASTM D7593*	>5	▲ **2.5**	▲ 2.8	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.2**	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**9.1**	8.5	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.1**	19.0	19.7

OIL ANALYSIS REPORT

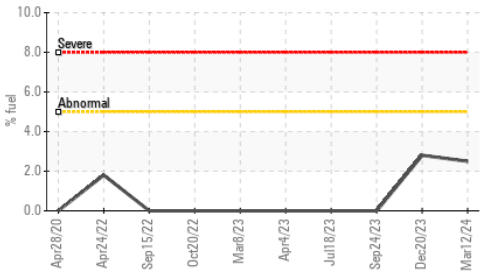
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.6**	15.3	16.3

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

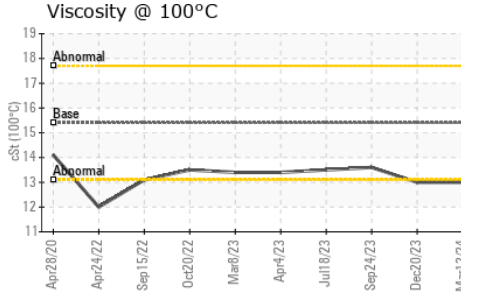
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**13.0**	▲ 13.0	13.6

GRAPHS

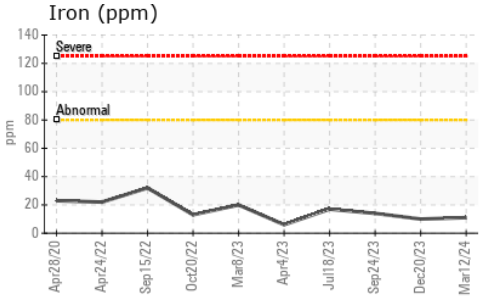
Fuel Dilution



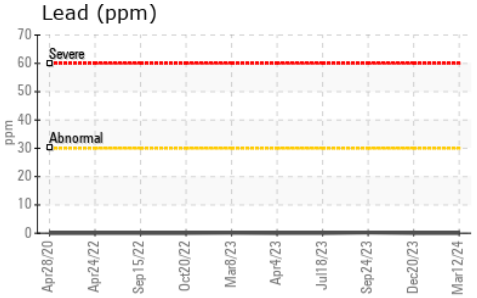
Viscosity @ 100°C



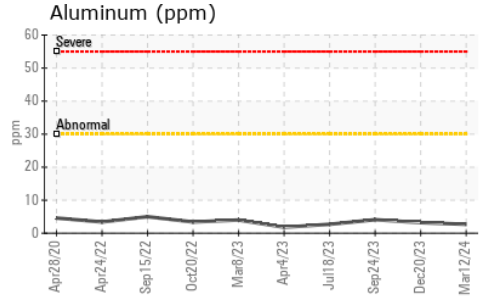
Iron (ppm)



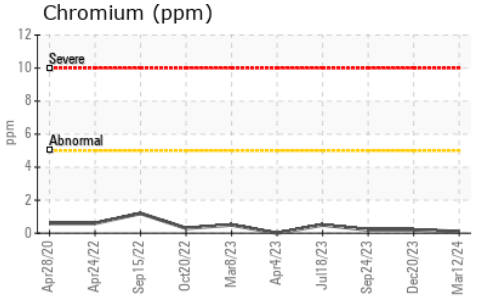
Lead (ppm)



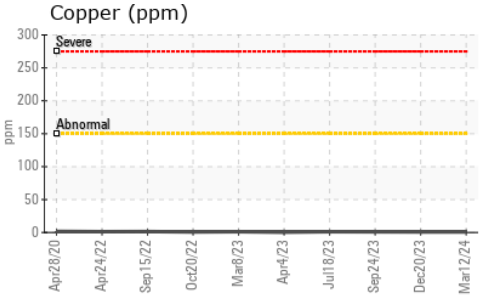
Aluminum (ppm)



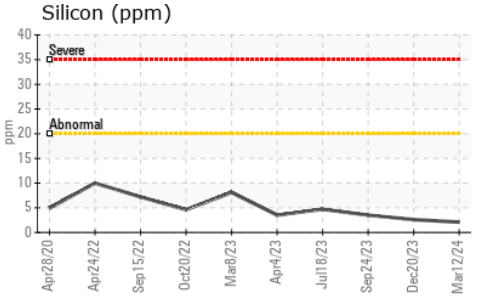
Chromium (ppm)



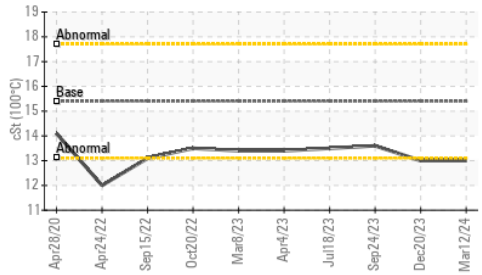
Copper (ppm)



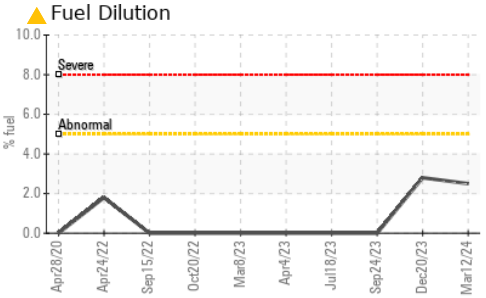
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0093967
Lab Number : 02624131
Unique Number : 5749250
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

Received : 25 Mar 2024
Tested : 26 Mar 2024
Diagnosed : 26 Mar 2024 - 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 - 777 - Belleville-Municipal waste
197 Putman Industrial Road
Belleville, ON
CA K8N 4Z6
Contact: Andrea Michael
amichael@gflenv.com
T: (613)962-7144
F: (613)962-1994

Report Id: GFL777 [WCAMIS] 02624131 (Generated: 03/26/2024 10:25:01) Rev: 1

Submitted By: Shane Cater