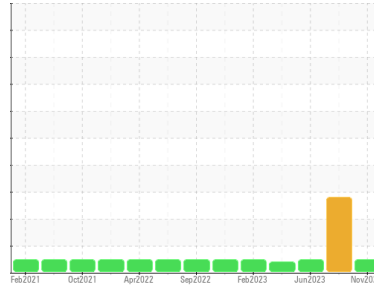




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
928002
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0102882	GFL0090854	GFL0082570
Sample Date	Client Info		23 Nov 2023	15 Sep 2023	22 Jun 2023
Machine Age	hrs	Client Info	0	0	216495
Oil Age	hrs	Client Info	16281	8983	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	SEVERE	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)	>120	4	9	5
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	1	2	1
Lead	ppm	ASTM D5185(m)	>40	<1	<1	0
Copper	ppm	ASTM D5185(m)	>330	<1	1	<1
Tin	ppm	ASTM D5185(m)	>15	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	97	34	7
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	12	8	55
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	67	106	892
Calcium	ppm	ASTM D5185(m)	1070	2137	1761	1091
Phosphorus	ppm	ASTM D5185(m)	1150	975	851	999
Zinc	ppm	ASTM D5185(m)	1270	1154	987	1117
Sulfur	ppm	ASTM D5185(m)	2060	2843	2179	2505
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

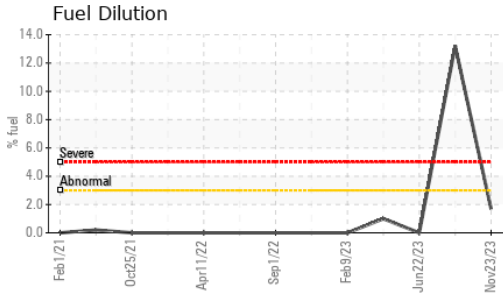
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	3	3	2
Sodium	ppm	ASTM D5185(m)		3	8	2
Potassium	ppm	ASTM D5185(m)	>20	4	4	2
Fuel	%	ASTM D7593*	>3.0	1.7	13.2	<1.0

INFRA-RED

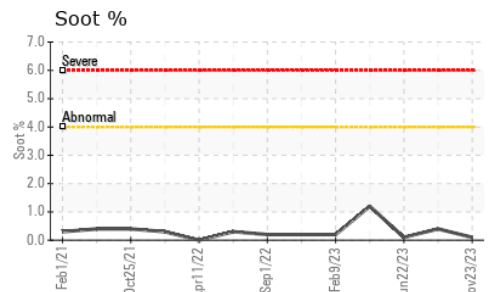
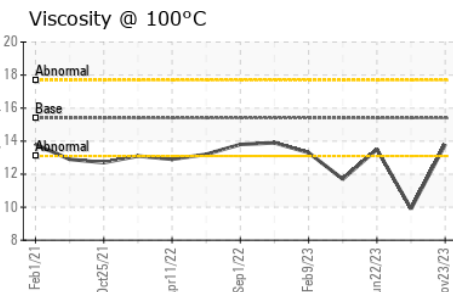
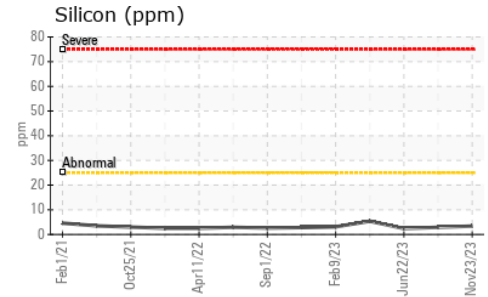
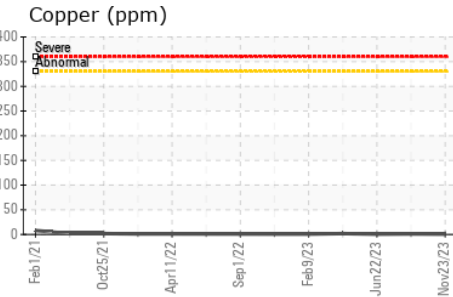
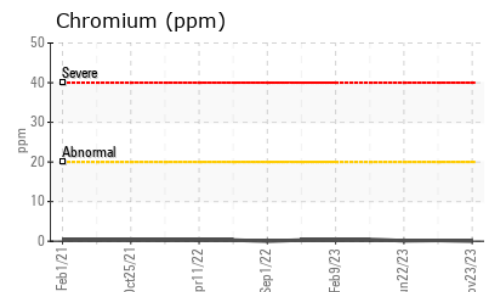
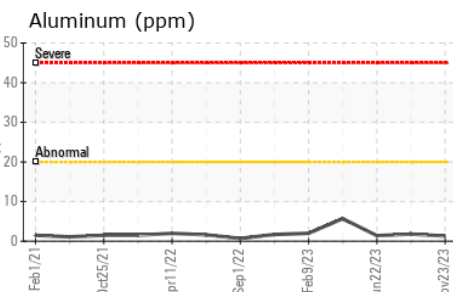
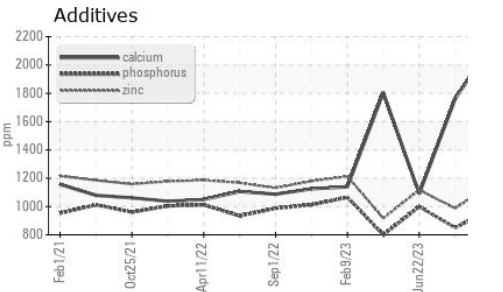
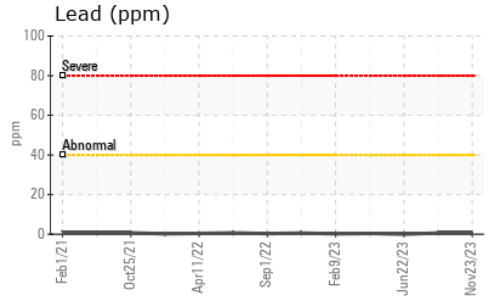
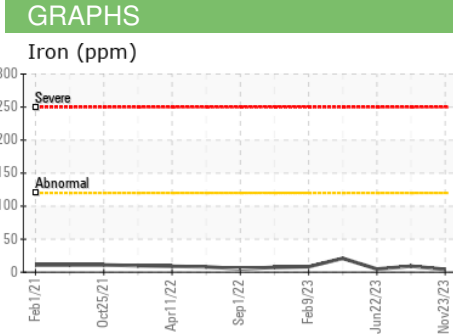
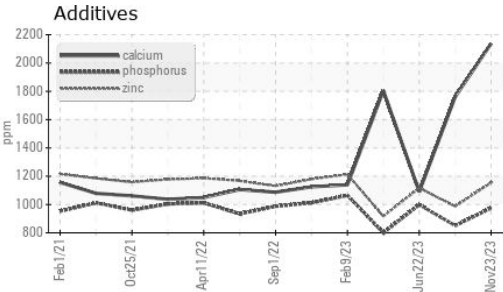
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.1	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.1	8.5	5.9
Sulfation	Abs./1mm	ASTM D7415*	>30	23.4	22.2	18.6



OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	19.6	16.4	14.2
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	13.8	9.9	13.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**
Sample No. : GFL0102882 **Received** : 24 Nov 2023
Lab Number : **02598722** **Diagnosed** : 27 Nov 2023
Unique Number : 5683802 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PercentFuel)

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