



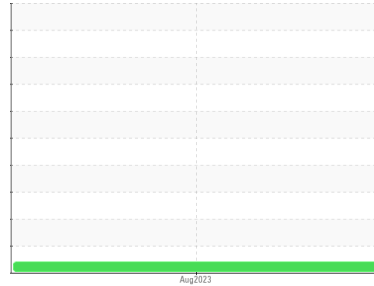
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
WL0424
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was specified as PETRO CANADA DURON SHP 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

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

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0077021	---	---
Sample Date	Client Info		09 Aug 2023	---	---
Machine Age	kms	Client Info	5470	---	---
Oil Age	kms	Client Info	0	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	37	---	---
Chromium	ppm	ASTM D5185(m) >20	2	---	---
Nickel	ppm	ASTM D5185(m) >2	<1	---	---
Titanium	ppm	ASTM D5185(m) >2	<1	---	---
Silver	ppm	ASTM D5185(m) >2	0	---	---
Aluminum	ppm	ASTM D5185(m) >25	27	---	---
Lead	ppm	ASTM D5185(m) >40	4	---	---
Copper	ppm	ASTM D5185(m) >330	170	---	---
Tin	ppm	ASTM D5185(m) >15	0	---	---
Antimony	ppm	ASTM D5185(m)	0	---	---
Vanadium	ppm	ASTM D5185(m)	0	---	---
Beryllium	ppm	ASTM D5185(m)	0	---	---
Cadmium	ppm	ASTM D5185(m)	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	17	---	---
Barium	ppm	ASTM D5185(m) 0	0	---	---
Molybdenum	ppm	ASTM D5185(m) 60	57	---	---
Manganese	ppm	ASTM D5185(m) 0	<1	---	---
Magnesium	ppm	ASTM D5185(m) 1010	546	---	---
Calcium	ppm	ASTM D5185(m) 1070	1576	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	854	---	---
Zinc	ppm	ASTM D5185(m) 1270	1014	---	---
Sulfur	ppm	ASTM D5185(m) 2060	2304	---	---
Lithium	ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	7	---	---
Sodium	ppm	ASTM D5185(m)	41	---	---
Potassium	ppm	ASTM D5185(m) >20	7	---	---
Fuel	%	ASTM D7593* >5	1.6	---	---
Glycol	%	ASTM D7922*	0.0	---	---

INFRA-RED

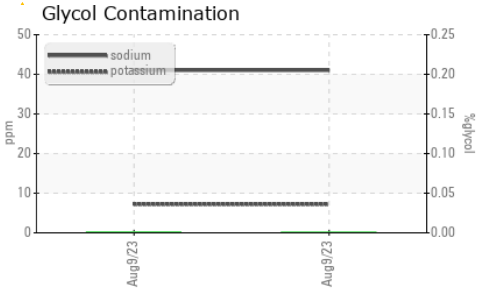
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.4	---	---
Nitration	Abs/cm	ASTM D7624* >20	11.3	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	24.5	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	22.3	---	---



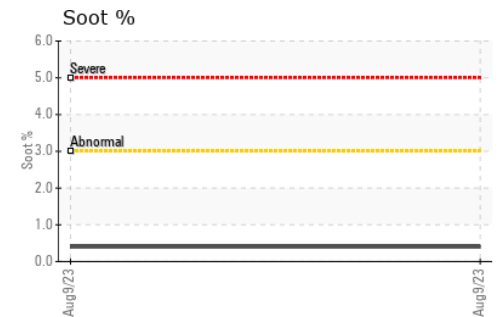
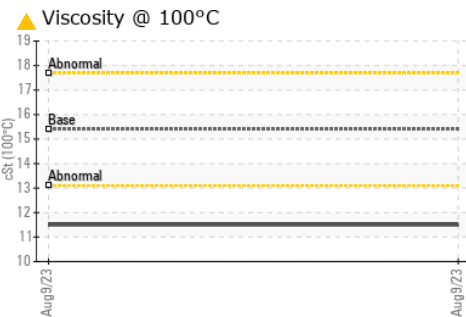
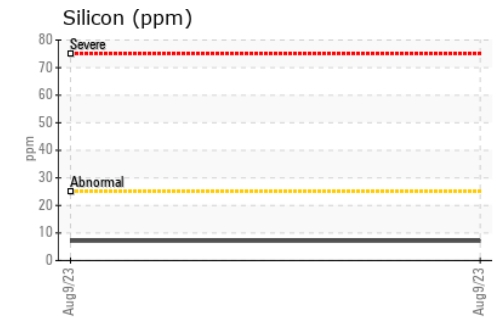
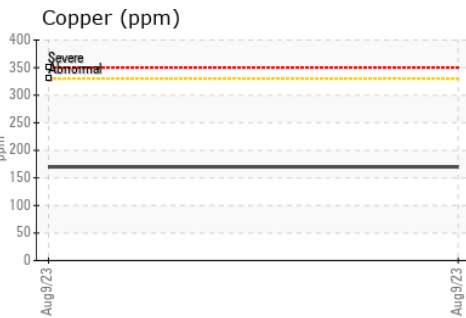
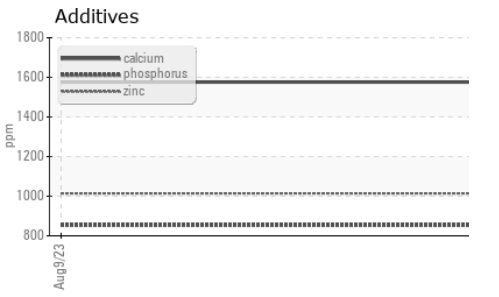
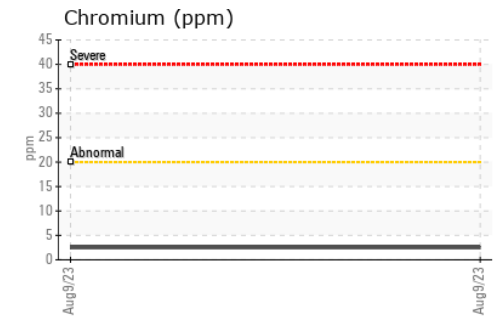
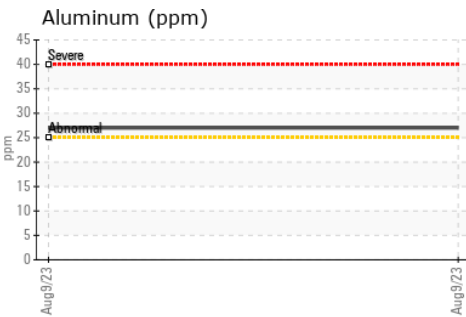
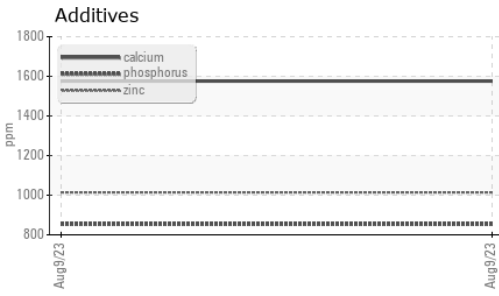
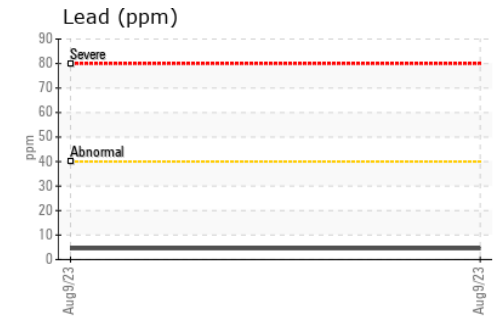
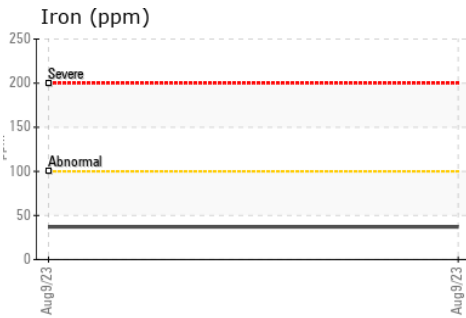
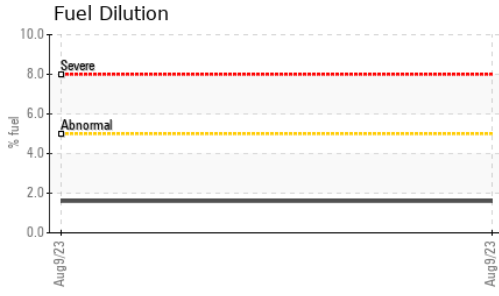
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.5	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling
Sample No. : GFL0077021 **Received** : 14 Aug 2023
Lab Number : 02575652 **Diagnosed** : 15 Aug 2023
Unique Number : 5620703 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel)

38950 Queens Way,
 Squamish, BC
 CA V8B 0K8
 Contact: Jonas Araujo
 jaraujo@gflenv.com

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.

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F: