



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
527073 FREIGHTLINER COLUMBIA 120

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0102205	---	---
Sample Date		Client Info		14 Nov 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		600	---	---
Filter Age	hrs	Client Info		600	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	29	---	---
Chromium	ppm	ASTM D5185m	>5	3	---	---
Nickel	ppm	ASTM D5185m	>2	0	---	---
Titanium	ppm	ASTM D5185m		1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>30	3	---	---
Lead	ppm	ASTM D5185m	>30	4	---	---
Copper	ppm	ASTM D5185m	>150	6	---	---
Tin	ppm	ASTM D5185m	>5	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

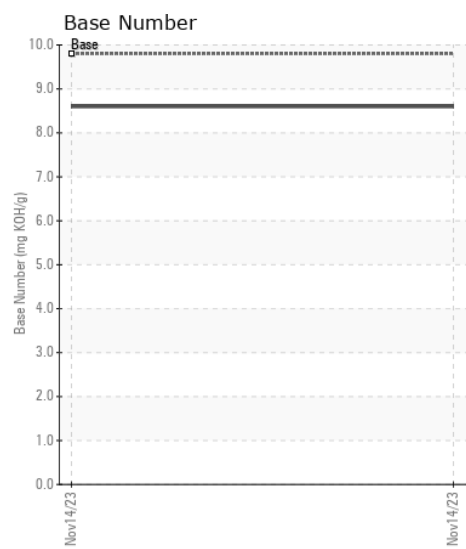
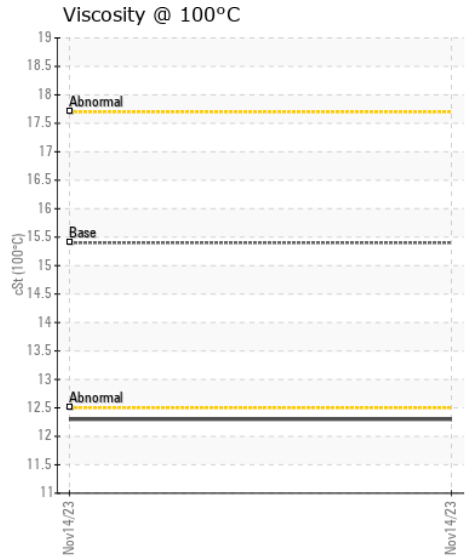
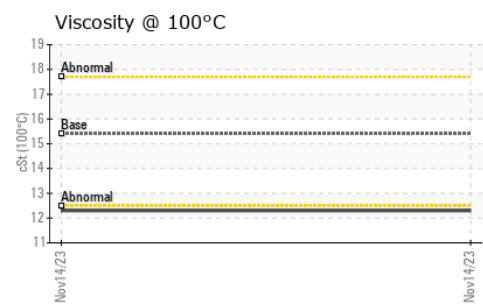
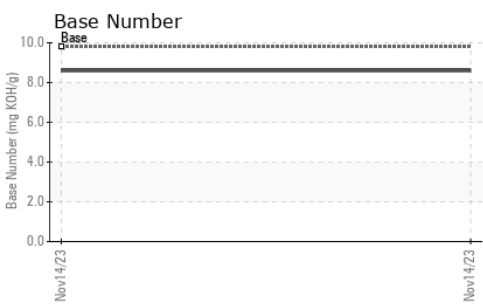
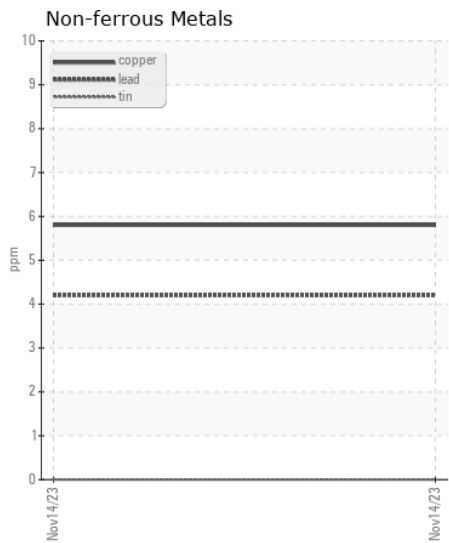
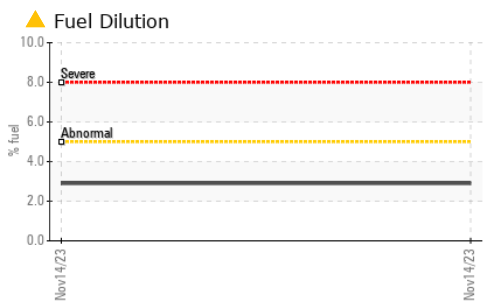
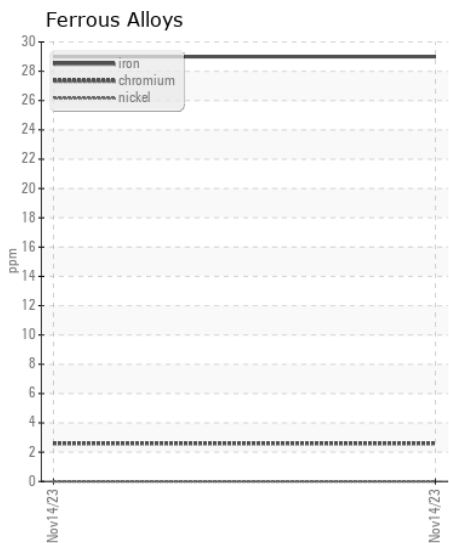
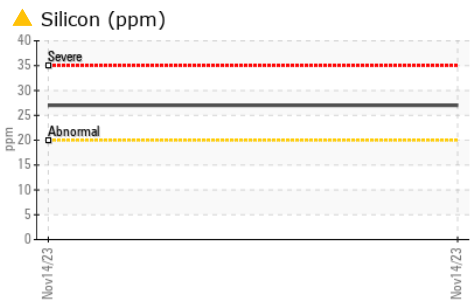
Elemental level of silicon (Si) above normal indicating ingress of seal material. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>20	▲ 27	---	---
Potassium	ppm	ASTM D5185m	>20	6	---	---
Fuel	%	ASTM D3524	>5	▲ 2.9	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	---	---
Boron	ppm	ASTM D5185m	0	10	---	---
Barium	ppm	ASTM D5185m	0	<1	---	---
Molybdenum	ppm	ASTM D5185m	60	80	---	---
Manganese	ppm	ASTM D5185m	0	0	---	---
Magnesium	ppm	ASTM D5185m	1010	1185	---	---
Calcium	ppm	ASTM D5185m	1070	1428	---	---
Phosphorus	ppm	ASTM D5185m	1150	1293	---	---
Zinc	ppm	ASTM D5185m	1270	1637	---	---
Sulfur	ppm	ASTM D5185m	2060	4843	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.6	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	12.3	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102205 **Received** : 17 Nov 2023
Lab Number : 06011262 **Tested** : 21 Nov 2023
Unique Number : 10750406 **Diagnosed** : 21 Nov 2023 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 642- Grand Rapids Hauling
 5826 Alden Nash Ave SE
 Lowell, MI
 US 49331
 Contact: Josh Arnett
 joshuaarnett@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:
F: