

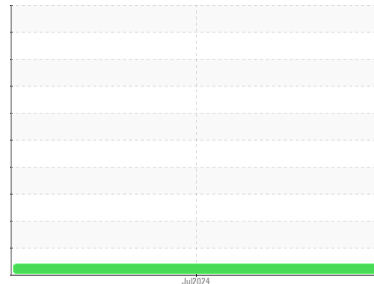


OIL ANALYSIS REPORT



Area
(RB36056)
 Machine Id
414105
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

Recommendation

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

Wear

Metal levels are typical for a new component breaking in.

Contamination

Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0125456	---	---
Sample Date	Client Info		11 Jul 2024	---	---
Machine Age	hrs	Client Info	600	---	---
Oil Age	hrs	Client Info	600	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ATTENTION	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	40	---	---
Chromium	ppm	ASTM D5185m >20	2	---	---
Nickel	ppm	ASTM D5185m >5	9	---	---
Titanium	ppm	ASTM D5185m >2	<1	---	---
Silver	ppm	ASTM D5185m >2	1	---	---
Aluminum	ppm	ASTM D5185m >20	20	---	---
Lead	ppm	ASTM D5185m >40	0	---	---
Copper	ppm	ASTM D5185m >330	150	---	---
Tin	ppm	ASTM D5185m >15	3	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	183	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 60	112	---	---
Manganese	ppm	ASTM D5185m 0	4	---	---
Magnesium	ppm	ASTM D5185m 1010	681	---	---
Calcium	ppm	ASTM D5185m 1070	1363	---	---
Phosphorus	ppm	ASTM D5185m 1150	704	---	---
Zinc	ppm	ASTM D5185m 1270	797	---	---
Sulfur	ppm	ASTM D5185m 2060	2604	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	73	---	---
Sodium	ppm	ASTM D5185m	4	---	---
Potassium	ppm	ASTM D5185m >20	50	---	---
Fuel	%	ASTM D3524 >3.0	0.3	---	---

INFRA-RED

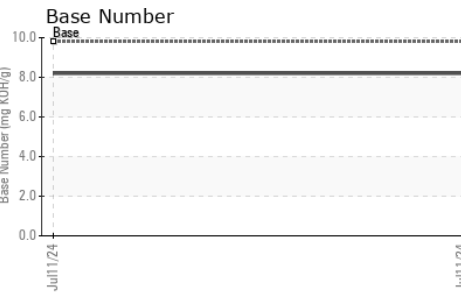
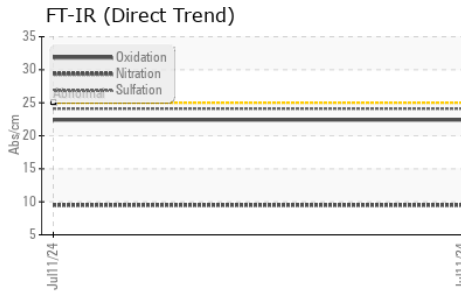
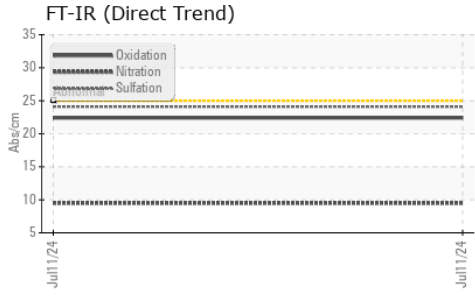
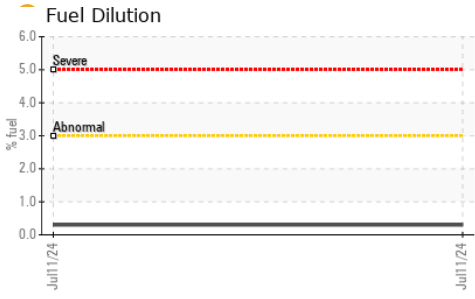
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.3	---	---
Nitration	Abs/cm	*ASTM D7624 >20	9.5	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	24.1	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.2	---	---



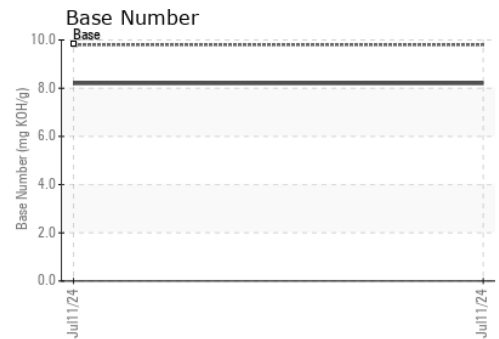
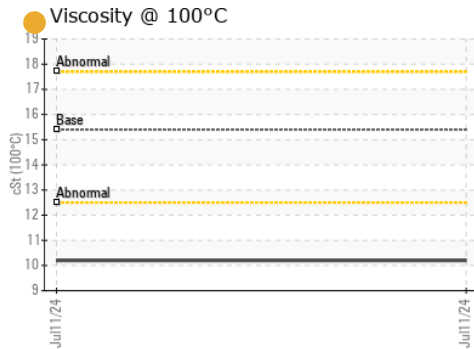
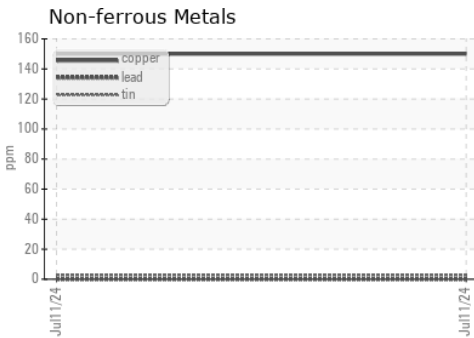
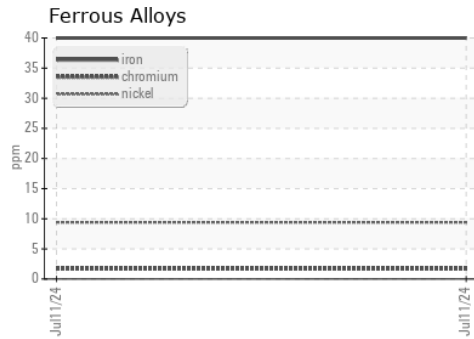
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
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	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	● 10.2	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0125456

Lab Number : 06239654

Unique Number : 11128488

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)

Received : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Sean Felton

GFL Environmental - 947 - WB Horicon HC

N7296 County Rd V

Horicon, WI

US 53032

Contact: Tim Kieffer

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