



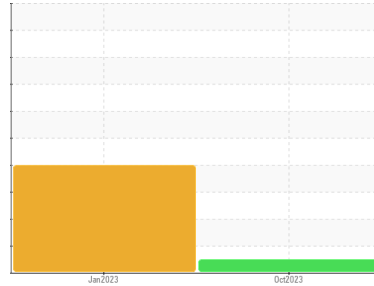
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
WL0187
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

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

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0066283	GFL0060368	---
Sample Date	Client Info		19 Oct 2023	16 Jan 2023	---
Machine Age	hrs	Client Info	500	500	---
Oil Age	hrs	Client Info	500	500	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			NORMAL	SEVERE	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	7	▲ 330	---
Chromium	ppm	ASTM D5185m >20	0	4	---
Nickel	ppm	ASTM D5185m >2	0	▲ 6	---
Titanium	ppm	ASTM D5185m >2	0	0	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >25	<1	17	---
Lead	ppm	ASTM D5185m >40	0	41	---
Copper	ppm	ASTM D5185m >330	0	94	---
Tin	ppm	ASTM D5185m >15	0	6	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	6	18	---
Barium	ppm	ASTM D5185m 0	0	0	---
Molybdenum	ppm	ASTM D5185m 60	60	50	---
Manganese	ppm	ASTM D5185m 0	0	3	---
Magnesium	ppm	ASTM D5185m 1010	890	690	---
Calcium	ppm	ASTM D5185m 1070	1076	976	---
Phosphorus	ppm	ASTM D5185m 1150	973	798	---
Zinc	ppm	ASTM D5185m 1270	1191	937	---
Sulfur	ppm	ASTM D5185m 2060	2959	3003	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	21	---
Sodium	ppm	ASTM D5185m	4	13	---
Potassium	ppm	ASTM D5185m >20	0	6	---
Fuel	%	ASTM D3524 >5	1.4	▲ 16.6	---

INFRA-RED

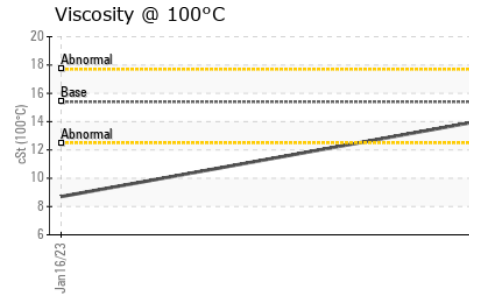
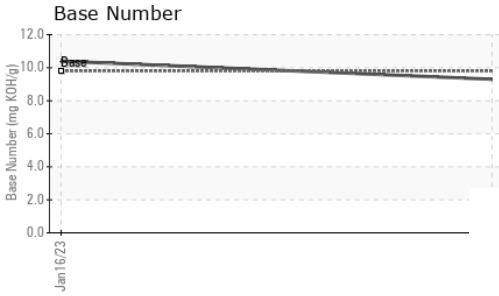
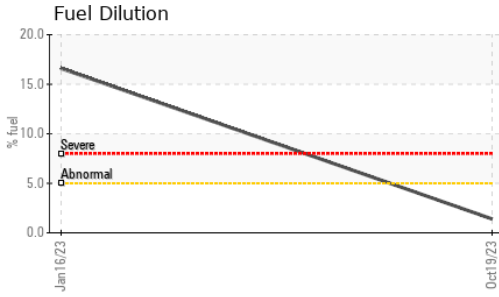
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	2.8	---
Nitration	Abs/cm	*ASTM D7624 >20	6.8	11.8	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.0	24.5	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.0	18.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.3	10.4	---



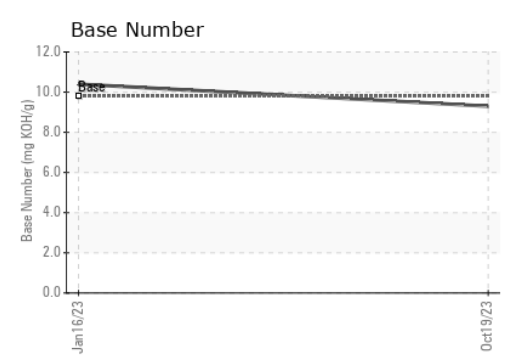
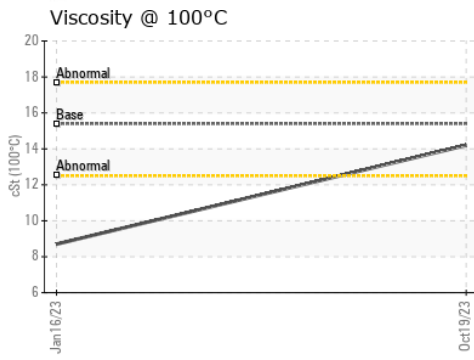
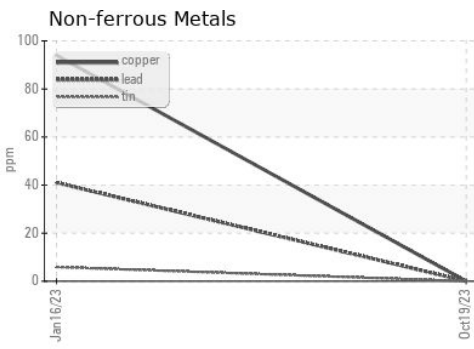
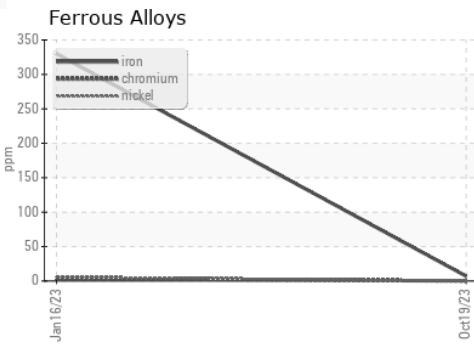
OIL ANALYSIS REPORT



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	14.2	▲ 8.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066283 **Received** : 06 Nov 2023
Lab Number : 05998724 **Diagnosed** : 07 Nov 2023
Unique Number : 10727084 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 938 - Hager City
 W9724 WIS-35
 HAGER CITY, WI
 US 54014
 Contact: ANDY KANE

Certificate L2367
 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)

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