



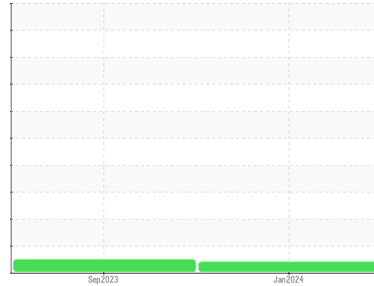
# OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id  
**713059**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. 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		<b>GFL0096874</b>	GFL0084005	---
Sample Date	Client Info		<b>11 Jan 2024</b>	11 Sep 2023	---
Machine Age	hrs	Client Info	<b>0</b>	1762	---
Oil Age	hrs	Client Info	<b>0</b>	1762	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>ATTENTION</b>	NORMAL	---

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>8</b>	13	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m >5	<b>4</b>	1	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	2	---
Copper	ppm	ASTM D5185m >330	<b>28</b>	148	---
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>34</b>	5	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>45</b>	64	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>527</b>	1066	---
Calcium	ppm	ASTM D5185m 1070	<b>1418</b>	1173	---
Phosphorus	ppm	ASTM D5185m 1150	<b>732</b>	1040	---
Zinc	ppm	ASTM D5185m 1270	<b>851</b>	1320	---
Sulfur	ppm	ASTM D5185m 2060	<b>1962</b>	3493	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	6	---
Sodium	ppm	ASTM D5185m	<b>2</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	---
Fuel	%	ASTM D3524 >3.0	<b>0.3</b>	<1.0	---

## INFRA-RED

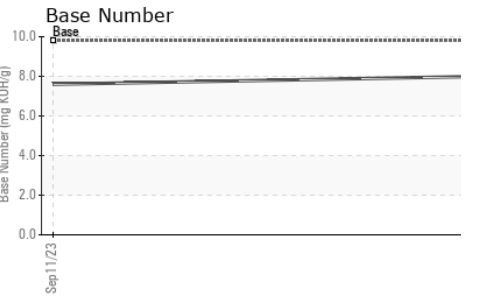
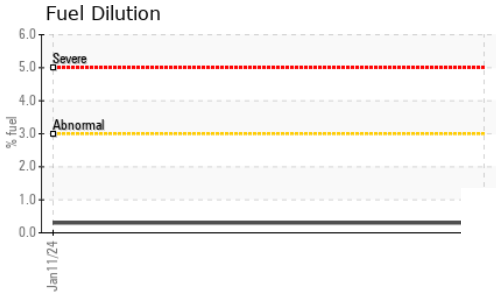
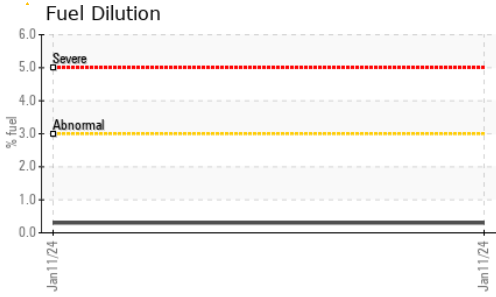
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.1</b>	7.7	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.1</b>	18.5	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>18.9</b>	14.2	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.0</b>	7.6	---



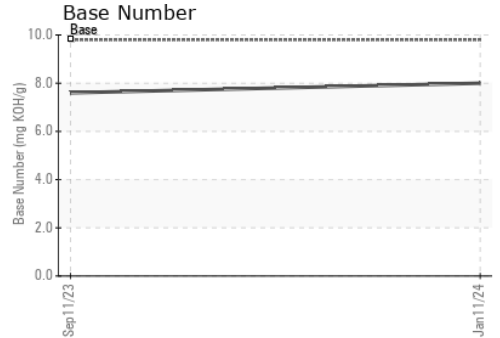
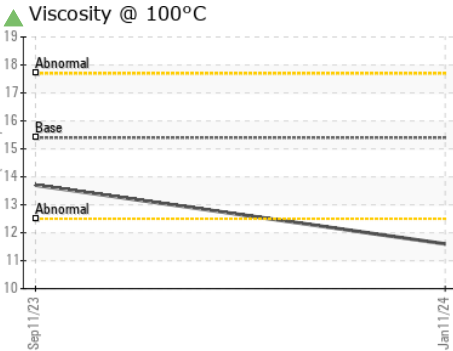
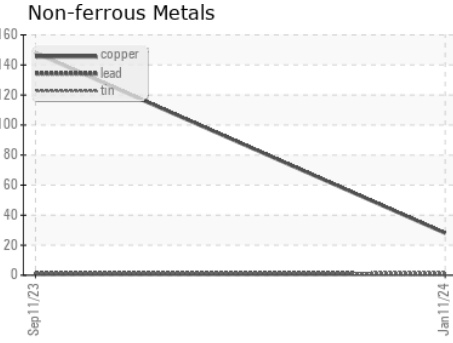
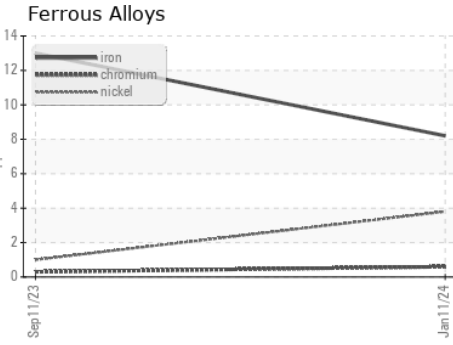
# OIL ANALYSIS REPORT



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 ▲ 11.6	13.7	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096874 **Received** : 26 Jan 2024  
**Lab Number** : 06071483 **Diagnosed** : 30 Jan 2024  
**Unique Number** : 10848160 **Diagnostician** : Sean Felton  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 401 - Fort Wayne Hauling**  
 4429 ALLEN MARTIN DR  
 FORT WAYNE, IN  
 US 46806  
 Contact: Zachory Roehm  
 zroehm@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)

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F: