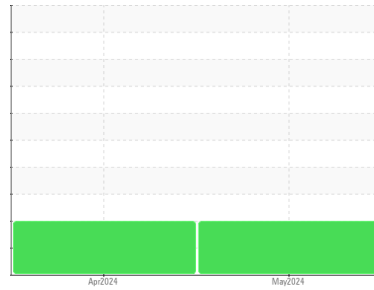




# OIL ANALYSIS REPORT

## Sample Rating Trend



Machine Id  
**814011**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### ▲ Contamination

Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

#### ● 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>GFL0120374</b>	GFL06136027	---
Sample Date	Client Info		<b>21 May 2024</b>	01 Apr 2024	---
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>N/A</b>	N/A	---
Sample Status			<b>ABNORMAL</b>	ABNORMAL	---

### 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 >90	<b>60</b>	35	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	1	---
Nickel	ppm	ASTM D5185m >2	<b>11</b>	7	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	1	---
Aluminum	ppm	ASTM D5185m >20	<b>6</b>	6	---
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m >330	<b>132</b>	95	---
Tin	ppm	ASTM D5185m >15	<b>4</b>	2	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>243</b>	409	---
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>130</b>	125	---
Manganese	ppm	ASTM D5185m 0	<b>5</b>	4	---
Magnesium	ppm	ASTM D5185m 1010	<b>660</b>	676	---
Calcium	ppm	ASTM D5185m 1070	<b>1385</b>	1425	---
Phosphorus	ppm	ASTM D5185m 1150	<b>676</b>	694	---
Zinc	ppm	ASTM D5185m 1270	<b>798</b>	789	---
Sulfur	ppm	ASTM D5185m 2060	<b>2300</b>	2585	---

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 111</b>	▲ 127	---
Sodium	ppm	ASTM D5185m	<b>1</b>	2	---
Potassium	ppm	ASTM D5185m >20	<b>10</b>	5	---
Fuel	%	ASTM D3524 >3.0	<b>&lt;1.0</b>	0.3	---

### INFRA-RED

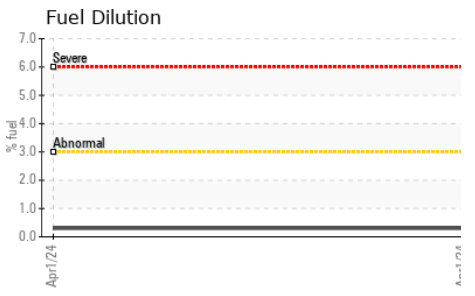
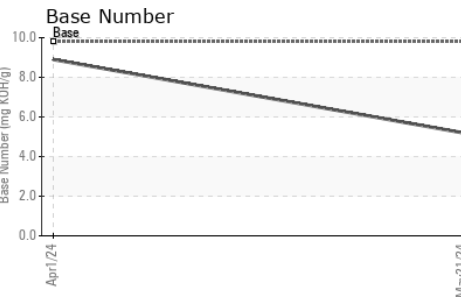
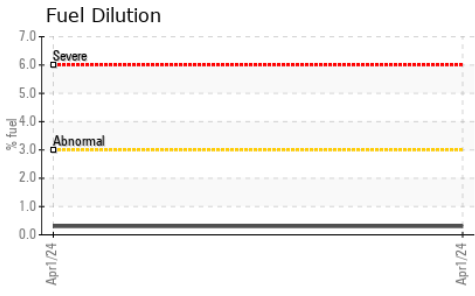
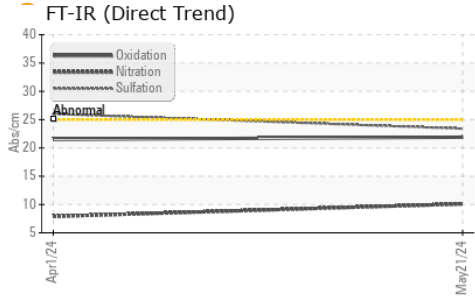
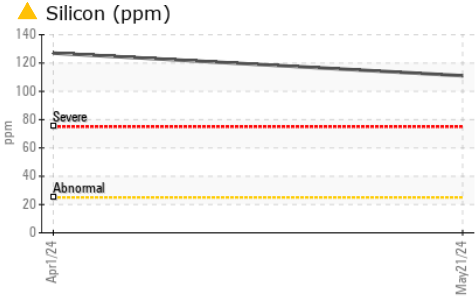
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>0.6</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.1</b>	7.9	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.4</b>	26.0	---

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.9</b>	21.5	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.2</b>	8.9	---



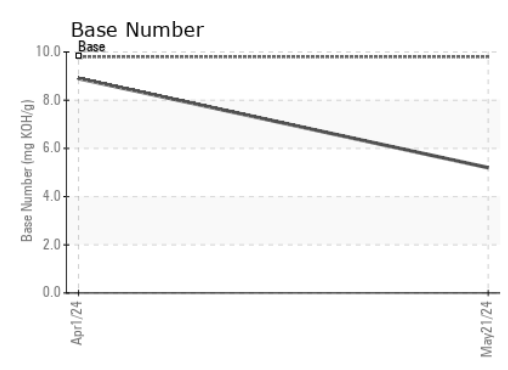
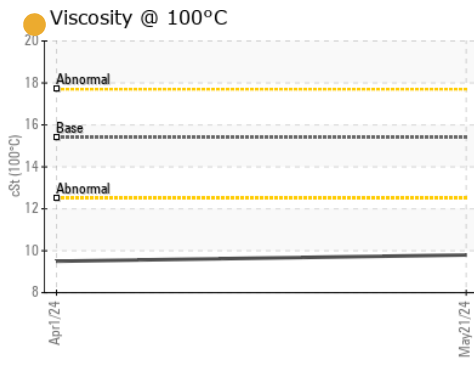
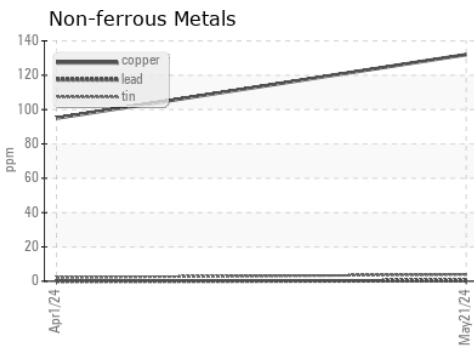
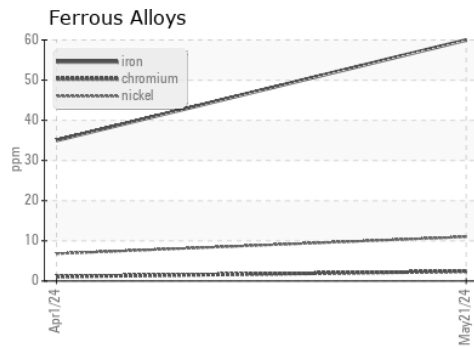
# OIL ANALYSIS REPORT



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	● 9.8	● 9.5

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0120374      **Received** : 03 Jun 2024  
**Lab Number** : 06197434      **Tested** : 04 Jun 2024  
**Unique Number** : 11059557      **Diagnosed** : 04 Jun 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests : FuelDilution )

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

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: