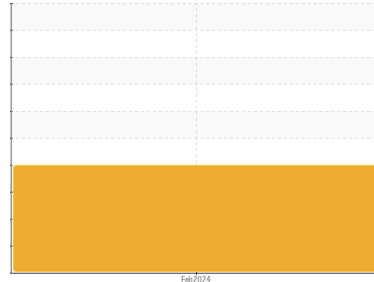




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**724011**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### ▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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

Sodium and/or potassium levels are high. Fuel content negligible. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Test for glycol is negative.

### ▲ Fluid Condition

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

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0110352</b>	---	---
Sample Date	Client Info	<b>09 Feb 2024</b>	---	---
Machine Age	hrs	Client Info	<b>36627</b>	---
Oil Age	hrs	Client Info	<b>640</b>	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	<b>93</b>	---
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	---
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	---
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	---
Aluminum	ppm	ASTM D5185m	>20	<b>▲ 5</b>	---
Lead	ppm	ASTM D5185m	>40	<b>6</b>	---
Copper	ppm	ASTM D5185m	>330	<b>8</b>	---
Tin	ppm	ASTM D5185m	>15	<b>1</b>	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	---

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	<b>16</b>	---
Barium	ppm	ASTM D5185m	0	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m	60	<b>105</b>	---
Manganese	ppm	ASTM D5185m	0	<b>2</b>	---
Magnesium	ppm	ASTM D5185m	1010	<b>1459</b>	---
Calcium	ppm	ASTM D5185m	1070	<b>1618</b>	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1612</b>	---
Zinc	ppm	ASTM D5185m	1270	<b>1862</b>	---
Sulfur	ppm	ASTM D5185m	2060	<b>5542</b>	---

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>▲ 39</b>	---
Sodium	ppm	ASTM D5185m		<b>▲ 83</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	---
Fuel	%	ASTM D3524	>2.0	<b>0.4</b>	---
Glycol	%	*ASTM D2982		<b>NEG</b>	---

## INFRA-RED

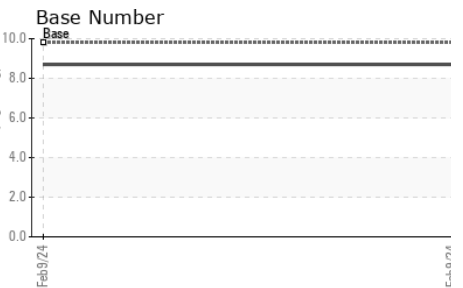
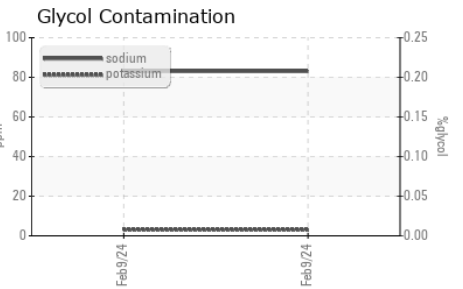
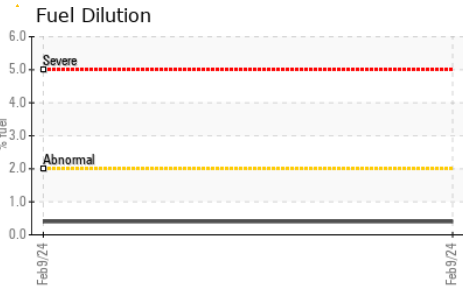
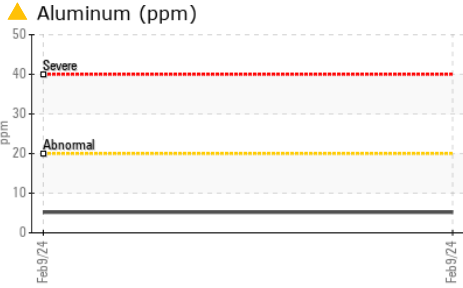
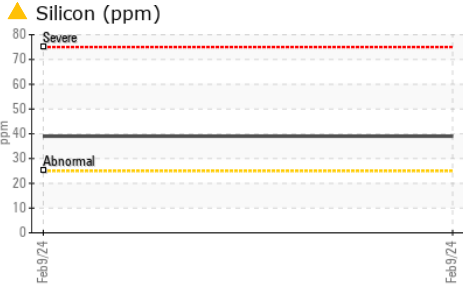
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.1</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.7</b>	---



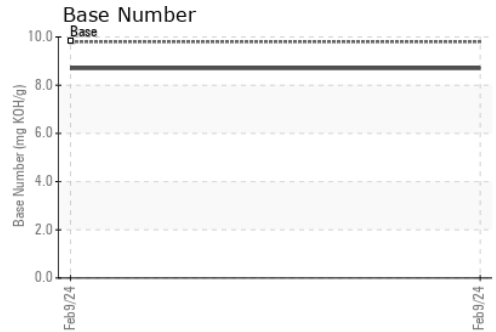
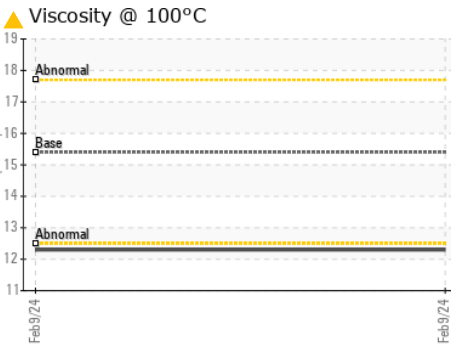
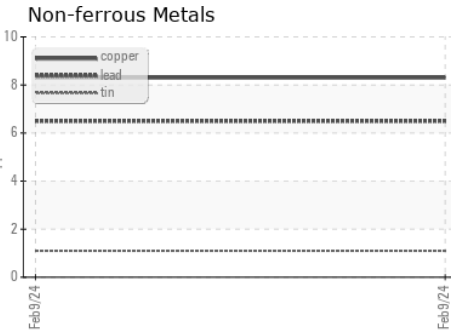
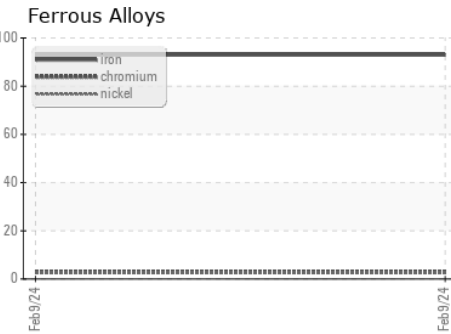
# OIL ANALYSIS REPORT



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	▲ 12.3	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110352  
**Lab Number** : 06090748  
**Unique Number** : 10883601  
**Test Package** : FLEET ( Additional Tests: FuelDilution, Glycol, PercentFuel )

**GFL Environmental - 622 - Traverse City Hauling**  
 160 Hughes Dr  
 Traverse City, MI  
 US 49686  
 Contact: TECHNICIAN ACCOUNT  
 aw.tc.maint@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: