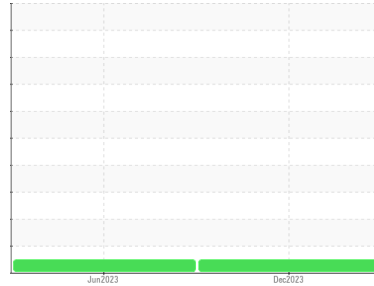




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**523075**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination 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	<b>GFL0098409</b>	GFL0079532	---
Sample Date	Client Info	<b>09 Dec 2023</b>	20 Jun 2023	---
Machine Age	hrs Client Info	<b>13143</b>	426265	---
Oil Age	hrs Client Info	<b>13143</b>	426265	---
Oil Changed	Client Info	<b>Changed</b>	Changed	---
Sample Status		<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	---
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 >100	<b>17</b>	9	---
Chromium	ppm ASTM D5185m >20	<b>2</b>	2	---
Nickel	ppm ASTM D5185m >4	<b>0</b>	0	---
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	<1	---
Silver	ppm ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm ASTM D5185m >20	<b>3</b>	0	---
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	---
Copper	ppm ASTM D5185m >330	<b>1</b>	<1	---
Tin	ppm ASTM D5185m >15	<b>0</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>268</b>	380	---
Barium	ppm ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm ASTM D5185m 60	<b>112</b>	114	---
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm ASTM D5185m 1010	<b>688</b>	649	---
Calcium	ppm ASTM D5185m 1070	<b>1476</b>	1558	---
Phosphorus	ppm ASTM D5185m 1150	<b>754</b>	698	---
Zinc	ppm ASTM D5185m 1270	<b>873</b>	870	---
Sulfur	ppm ASTM D5185m 2060	<b>2564</b>	3018	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>13</b>	9	---
Sodium	ppm ASTM D5185m	<b>3</b>	<1	---
Potassium	ppm ASTM D5185m >20	<b>5</b>	3	---

## INFRA-RED

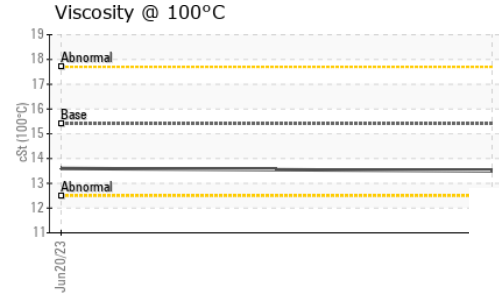
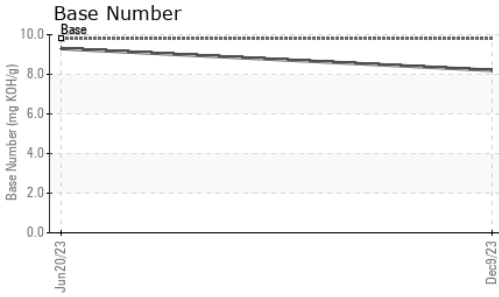
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.1	---
Nitration	Abs/cm *ASTM D7624 >20	<b>8.4</b>	5.2	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>23.2</b>	22.9	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>17.8</b>	15.6	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.2</b>	9.3	---



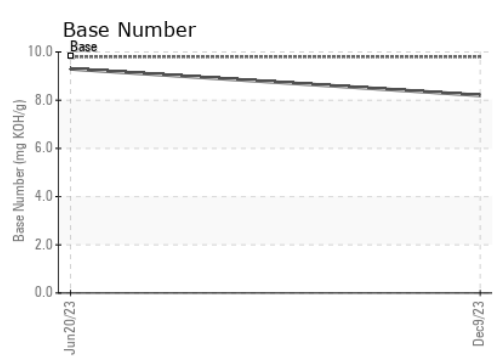
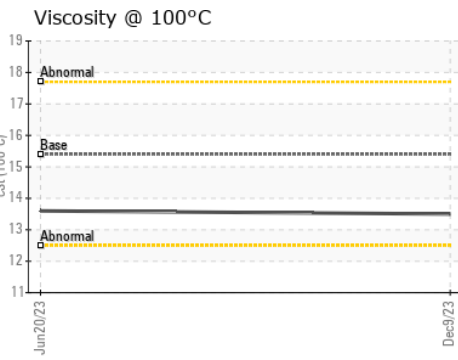
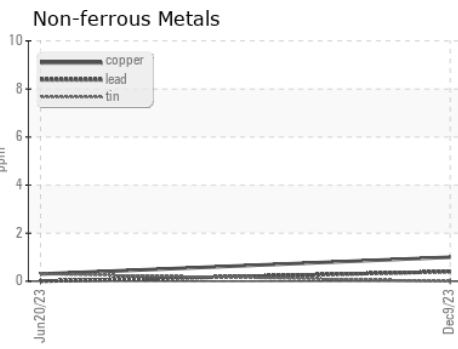
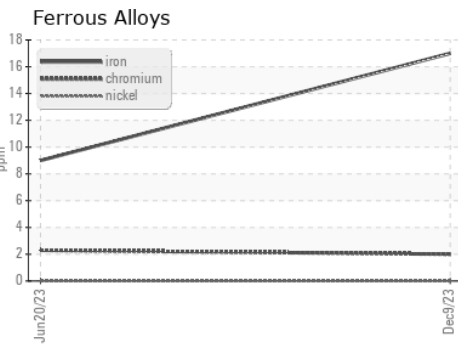
# OIL ANALYSIS REPORT



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	<b>13.5</b>	13.6	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098409 **Received** : 20 Dec 2023  
**Lab Number** : **06041249** **Diagnosed** : 22 Dec 2023  
**Unique Number** : 10796478 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 409 - Wood Island LF**  
 E10081 State Hwy M28  
 Wetmore, MI  
 US 49895  
 Contact: Service Manager

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: