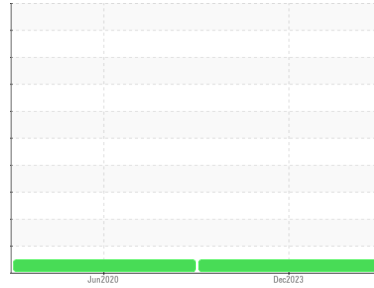




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**222057-632113**

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>GFL0078286</b>	GFLI-344877	---
Sample Date	Client Info		<b>05 Dec 2023</b>	08 Jun 2020	---
Machine Age	hrs	Client Info	<b>14527</b>	255760	---
Oil Age	hrs	Client Info	<b>0</b>	5000	---
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	---
Sample Status			<b>NORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	0.5	---
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>35</b>	19	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	0	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	<b>0</b>	0	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>6</b>	2	---
Lead	ppm	ASTM D5185m >40	<b>0</b>	2	---
Copper	ppm	ASTM D5185m >330	<b>1</b>	1	---
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	---
Antimony	ppm	ASTM D5185m	<b>---</b>	1	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>3</b>	191	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	116	---
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	---
Magnesium	ppm	ASTM D5185m 1010	<b>1015</b>	692	---
Calcium	ppm	ASTM D5185m 1070	<b>1145</b>	1621	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1106</b>	815	---
Zinc	ppm	ASTM D5185m 1270	<b>1331</b>	879	---
Sulfur	ppm	ASTM D5185m 2060	<b>3165</b>	---	---
Lithium	ppm	ASTM D5185m	<b>---</b>	0	---

## CONTAMINANTS

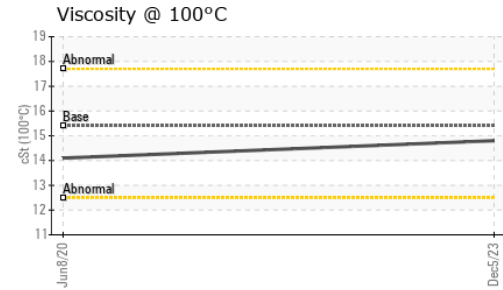
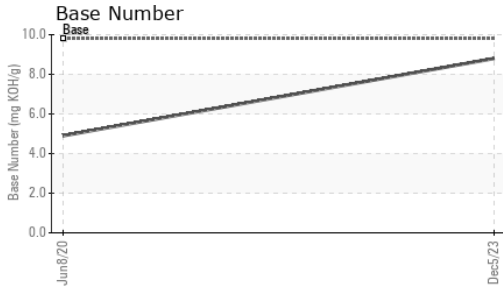
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	6	---
Sodium	ppm	ASTM D5185m	<b>7</b>	4	---
Potassium	ppm	ASTM D5185m >20	<b>4</b>	1	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.7</b>	8	---
Sulfation	Abs./1mm	*ASTM D7415 >30	<b>20.7</b>	---	---



# OIL ANALYSIS REPORT

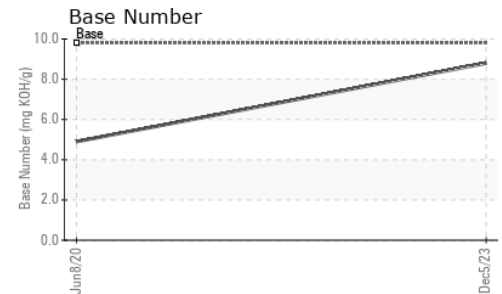
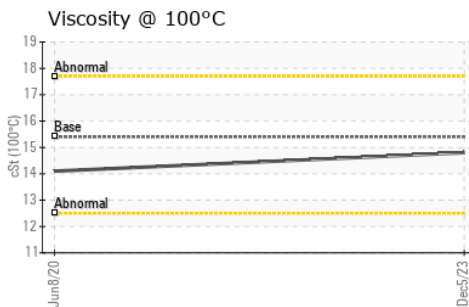
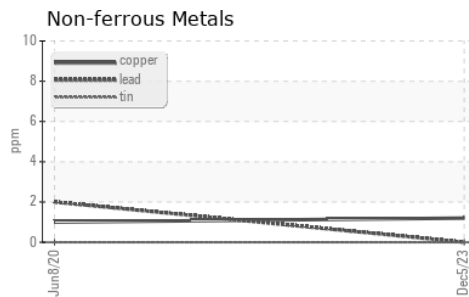
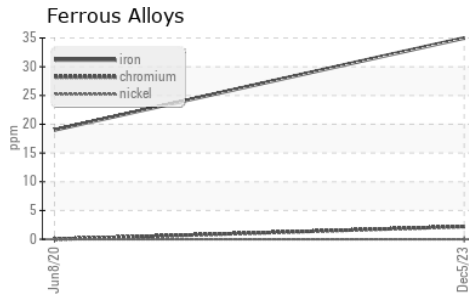


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.5</b>	13	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.8</b>	4.9	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---
Free Water	scalar	*Visual		<b>NEG</b>	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.8</b>	14.1	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0078286 **Received** : 11 Dec 2023  
**Lab Number** : **06031284** **Diagnosed** : 13 Dec 2023  
**Unique Number** : 10781075 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 844 - Princeton Hauling**  
 10129 Highway 62 West  
 Princeton, KY  
 US 42445  
**Contact: ROBERT THIBAUT**  
 robert.thibault@gflenv.com  
 T: (931)237-6045  
 F:

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)