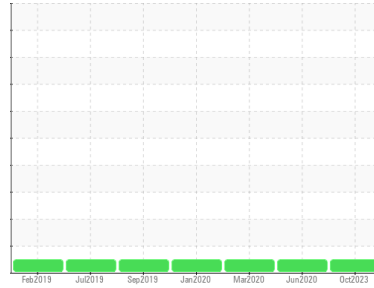




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**525053-651127**

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>GFL0098485</b>	GFLI-402636	GFLI-254188
Sample Date	Client Info	<b>12 Oct 2023</b>	01 Jun 2020	25 Mar 2020
Machine Age	hrs	<b>0</b>	0	0
Oil Age	hrs	<b>500</b>	450	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	0.9	0.6
Glycol	WC Method	<b>NEG</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	<b>16</b>	6	6
Chromium	ppm ASTM D5185m >4	<b>&lt;1</b>	0	0
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >25	<b>2</b>	5	5
Lead	ppm ASTM D5185m >45	<b>0</b>	0	0
Copper	ppm ASTM D5185m >85	<b>&lt;1</b>	1	1
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	0
Antimony	ppm ASTM D5185m	<b>---</b>	0	0
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>8</b>	318	290
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>52</b>	129	124
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	0	0
Magnesium	ppm ASTM D5185m 1010	<b>791</b>	651	760
Calcium	ppm ASTM D5185m 1070	<b>1136</b>	1686	1705
Phosphorus	ppm ASTM D5185m 1150	<b>881</b>	713	745
Zinc	ppm ASTM D5185m 1270	<b>1157</b>	834	855
Sulfur	ppm ASTM D5185m 2060	<b>2872</b>	---	---
Lithium	ppm ASTM D5185m	<b>---</b>	0	0

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	<b>5</b>	6	7
Sodium	ppm ASTM D5185m	<b>1</b>	3	4
Potassium	ppm ASTM D5185m >20	<b>4</b>	0	0

## INFRA-RED

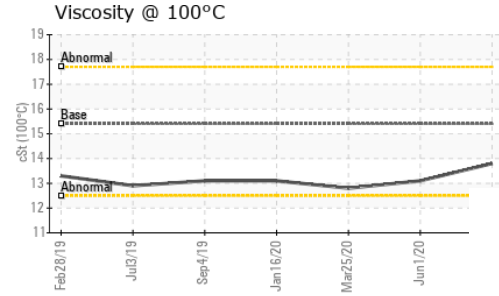
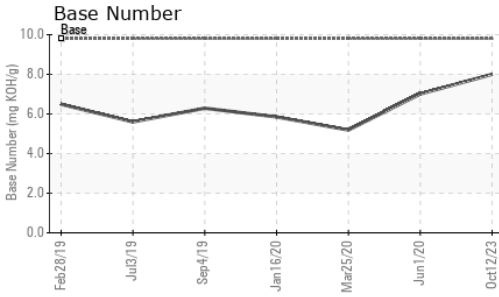
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0	0
Nitration	Abs/cm *ASTM D7624 >20	<b>6.0</b>	7	7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.3</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.3</b>	13	13
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.0</b>	7.01	5.19



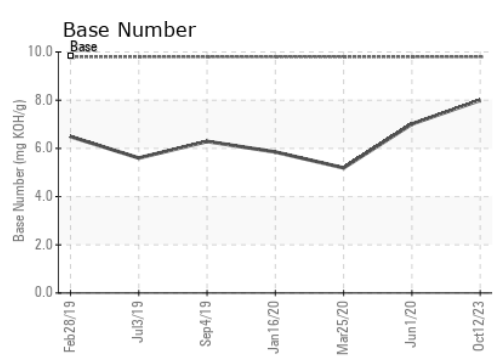
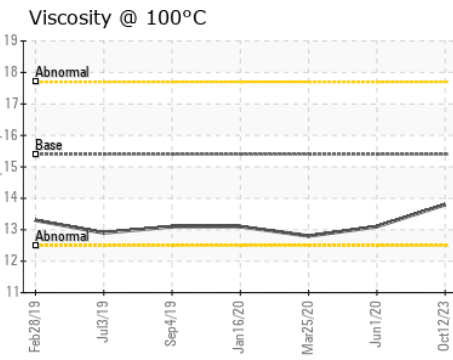
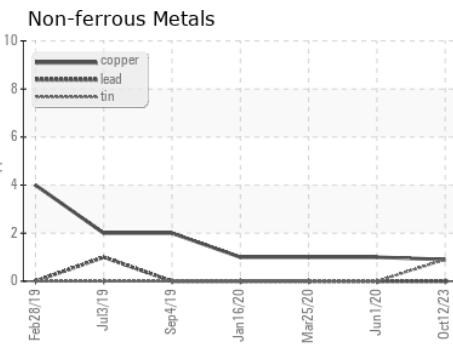
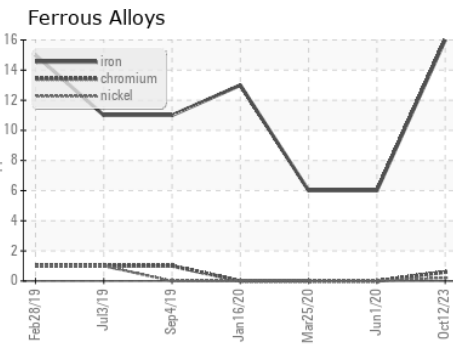
# OIL ANALYSIS REPORT



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>13.8</b>	13.1	12.8

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098485 **Received** : 23 Oct 2023  
**Lab Number** : **05986020** **Diagnosed** : 24 Oct 2023  
**Unique Number** : 10708682 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 846 - Mayfield Hauling**  
 3426 State Route 45  
 Mayfield, KY  
 US 42066  
 Contact: Jack Lindsey  
 jack.lindsey@gflenv.com  
 T: (270)970-3690  
 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)