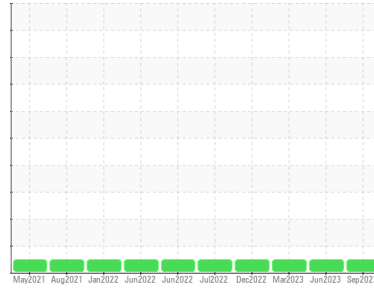




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**423020-864**

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>GFL0062197</b>	GFL0062227	GFL0062174
Sample Date	Client Info		<b>05 Sep 2023</b>	06 Jun 2023	15 Mar 2023
Machine Age	hrs	Client Info	<b>23484</b>	23041	22825
Oil Age	hrs	Client Info	<b>445</b>	21323	318
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>22</b>	41	23
Chromium	ppm	ASTM D5185m >20	<b>1</b>	2	1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	2	2
Lead	ppm	ASTM D5185m >40	<b>3</b>	8	2
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>12</b>	8	8
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	73	61
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1013</b>	1030	885
Calcium	ppm	ASTM D5185m 1070	<b>1251</b>	1228	1103
Phosphorus	ppm	ASTM D5185m 1150	<b>1093</b>	1135	964
Zinc	ppm	ASTM D5185m 1270	<b>1418</b>	1386	1133
Sulfur	ppm	ASTM D5185m 2060	<b>3908</b>	3572	3283

## CONTAMINANTS

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

## INFRA-RED

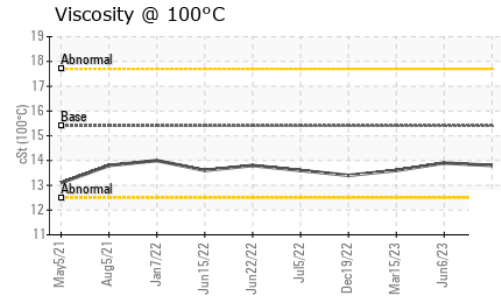
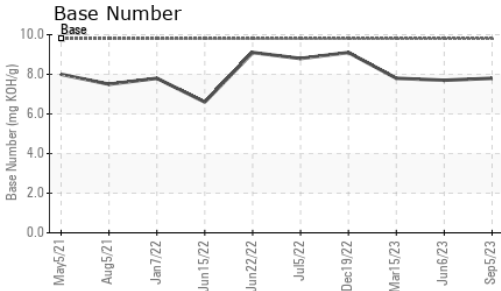
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.3</b>	11.5	9.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.2</b>	23.4	22.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.0</b>	19.0	17.7
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.8</b>	7.7	7.8



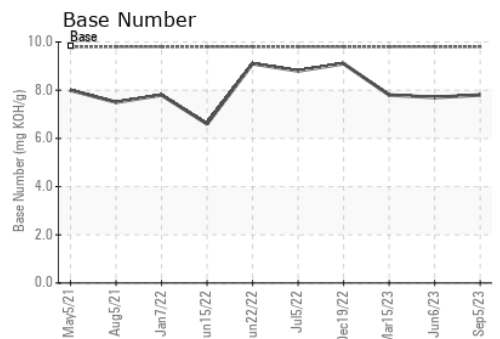
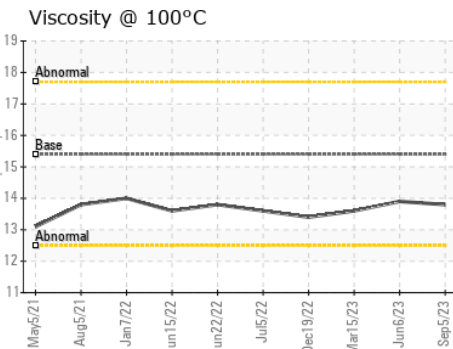
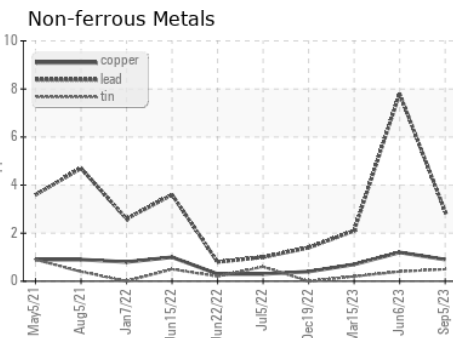
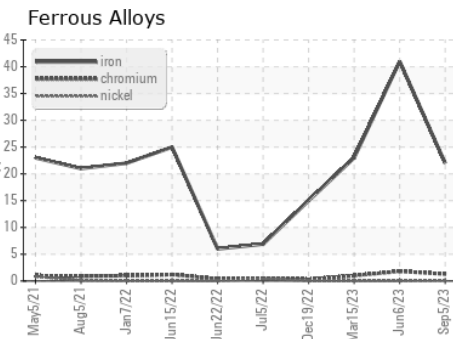
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.8</b>	13.9	13.6

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0062197  
**Lab Number** : 05946999  
**Unique Number** : 10642958  
**Test Package** : FLEET

**GFL Environmental - 626 - Cadillac Hauling**  
 1501 Ron Wilson St  
 Cadillac, MI  
 US 49601  
 Contact: GARY BREWER  
 gbrewerjr@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: