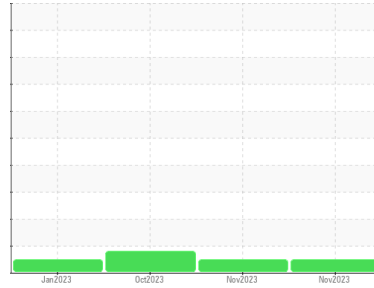




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**912014**

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

Tests indicate that there is no fuel present in the oil. 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>GFL0089131</b>	GFL0101537	GFL0093197
Sample Date	Client Info		<b>24 Nov 2023</b>	16 Nov 2023	09 Oct 2023
Machine Age	hrs	Client Info	<b>4646</b>	4614	4319
Oil Age	hrs	Client Info	<b>4614</b>	4319	2376
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	MARGINAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>19</b>	20	▲ 95
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >2	<b>4</b>	4	8
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	1	1
Lead	ppm	ASTM D5185m >45	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >85	<b>40</b>	2	5
Tin	ppm	ASTM D5185m >4	<b>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>82</b>	<1	3
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>68</b>	59	60
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>826</b>	889	920
Calcium	ppm	ASTM D5185m 1070	<b>1110</b>	1067	1043
Phosphorus	ppm	ASTM D5185m 1150	<b>958</b>	956	963
Zinc	ppm	ASTM D5185m 1270	<b>1101</b>	1171	1223
Sulfur	ppm	ASTM D5185m 2060	<b>2683</b>	2887	2172

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>21</b>	4	5
Sodium	ppm	ASTM D5185m	<b>4</b>	2	7
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	0
Fuel	%	ASTM D3524 >5	<b>0.6</b>	<1.0	<1.0

## INFRA-RED

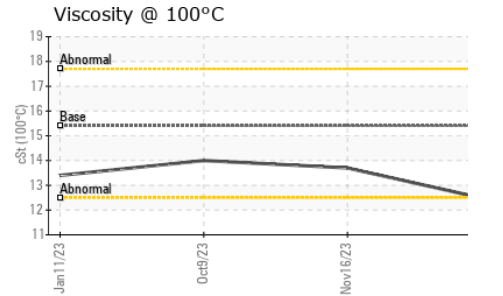
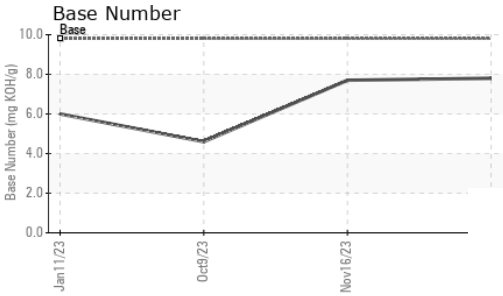
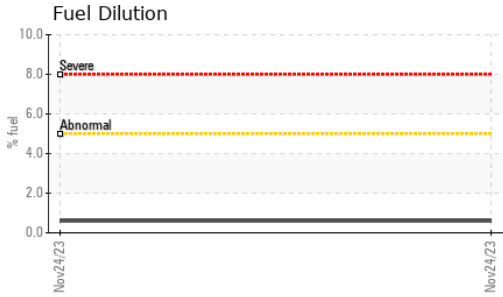
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	0.6	1.7
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.7</b>	7.6	11.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.4</b>	20.1	24.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.9</b>	15.5	20.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.8</b>	7.7	4.6



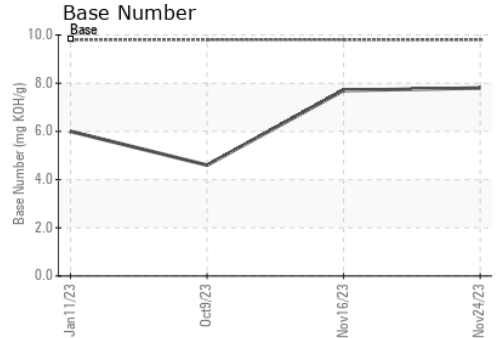
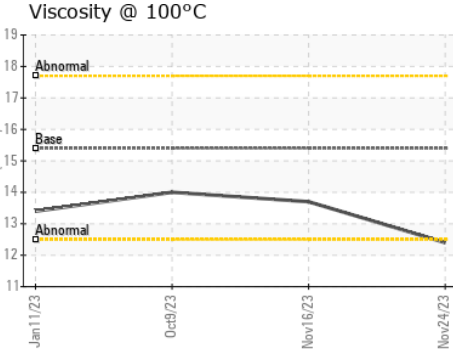
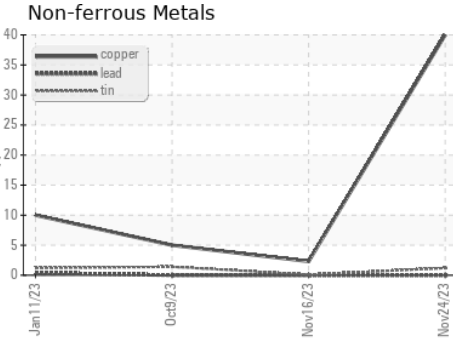
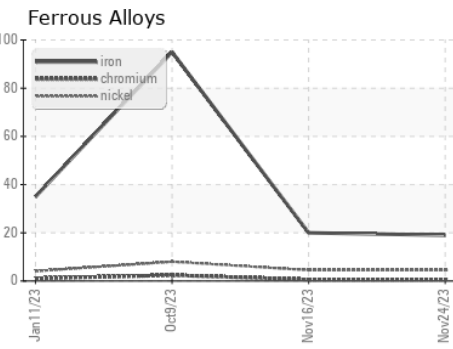
# OIL ANALYSIS REPORT



VISUAL	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>12.4</b>	13.7	14.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0089131 **Received** : 27 Nov 2023  
**Lab Number** : **06017716** **Diagnosed** : 29 Nov 2023  
**Unique Number** : 10756860 **Diagnostician** : Sean Felton  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 415 - Michigan East**  
 6200 Elmridge  
 Sterling Heights, MI  
 US 48313  
 Contact: Frank Wolak  
 fwolak@gflenv.com  
 T: (586)825-9514  
 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)