



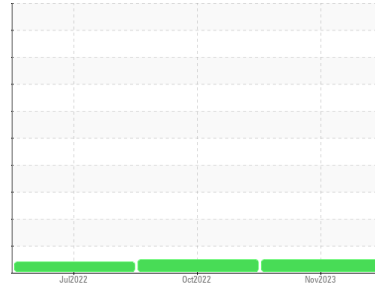
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**912010**  
 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>GFL0101489</b>	GFL0057360	GFL0055164
Sample Date	Client Info		<b>10 Nov 2023</b>	11 Oct 2022	08 Jul 2022
Machine Age	hrs	Client Info	<b>5317</b>	1623	932
Oil Age	hrs	Client Info	<b>1623</b>	932	932
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.5
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>24</b>	35	103
Chromium	ppm	ASTM D5185m >20	<b>1</b>	1	3
Nickel	ppm	ASTM D5185m >5	<b>6</b>	<1	13
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	1	6
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185m >330	<b>4</b>	23	77
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	2	6
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	4	40
Barium	ppm	ASTM D5185m 0	<b>0</b>	2	<1
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	66	103
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	5
Magnesium	ppm	ASTM D5185m 1010	<b>928</b>	876	798
Calcium	ppm	ASTM D5185m 1070	<b>1081</b>	1106	1473
Phosphorus	ppm	ASTM D5185m 1150	<b>945</b>	907	748
Zinc	ppm	ASTM D5185m 1270	<b>1205</b>	1205	1002
Sulfur	ppm	ASTM D5185m 2060	<b>2318</b>	2490	2644

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	8	67
Sodium	ppm	ASTM D5185m	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>3</b>	3	8

## INFRA-RED

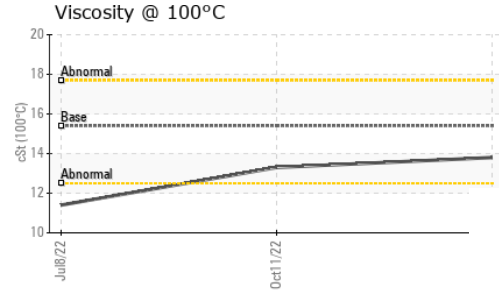
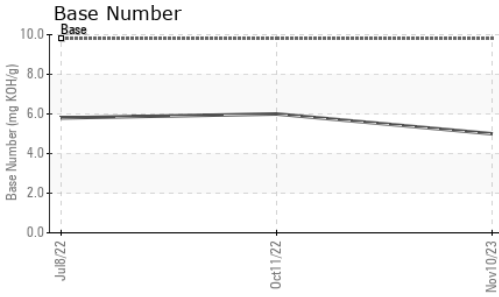
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1.2</b>	1.1	1.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.0</b>	10.8	12.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.3</b>	23.5	25.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>19.7</b>	21.5	27.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>5.0</b>	6.0	5.8



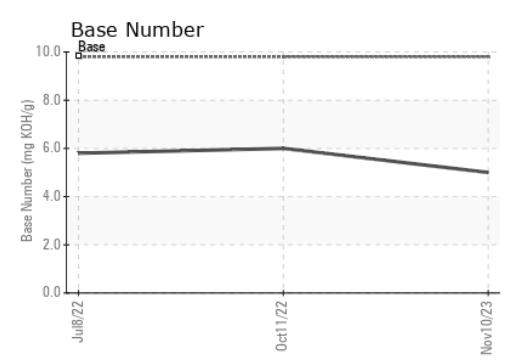
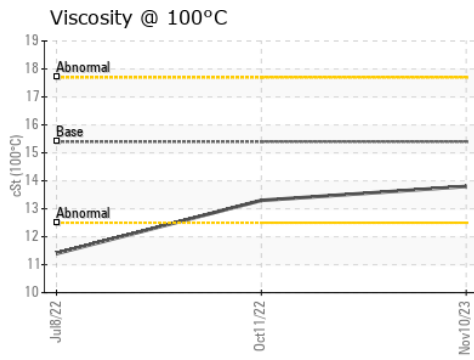
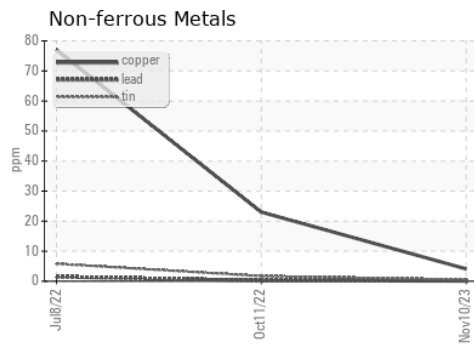
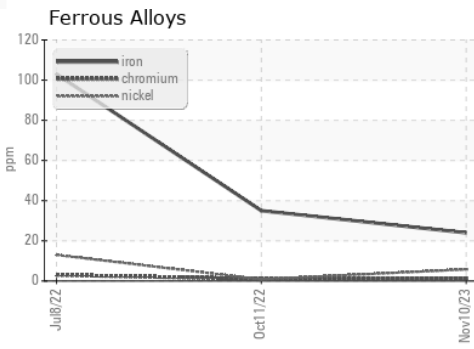
# OIL ANALYSIS REPORT



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>13.8</b>	13.3	▲ 11.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0101489 **Received** : 15 Nov 2023  
**Lab Number** : **06008065** **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10741827 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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

Certificate L2367  
 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)