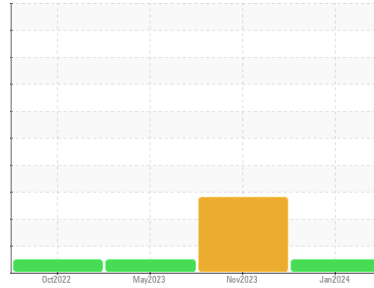




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**411052**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. 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>GFL0107502</b>	GFL0064698	GFL0072489
Sample Date	Client Info		<b>18 Jan 2024</b>	30 Nov 2023	12 May 2023
Machine Age	hrs	Client Info	<b>6180</b>	6043	5340
Oil Age	hrs	Client Info	<b>137</b>	611	615
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	SEVERE	NORMAL

## 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 >100	<b>3</b>	11	40
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	4	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	<1	12
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	3
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	4	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>39</b>	17	15
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	53	61
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m 1010	<b>957</b>	698	966
Calcium	ppm	ASTM D5185m 1070	<b>1168</b>	918	1289
Phosphorus	ppm	ASTM D5185m 1150	<b>1023</b>	787	926
Zinc	ppm	ASTM D5185m 1270	<b>1252</b>	946	1238
Sulfur	ppm	ASTM D5185m 2060	<b>3281</b>	2236	3140

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>2</b>	4	6
Sodium	ppm	ASTM D5185m	<b>2</b>	4	6
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	21
Fuel	%	ASTM D3524 >5	<b>0.6</b>	16.0	<1.0

## INFRA-RED

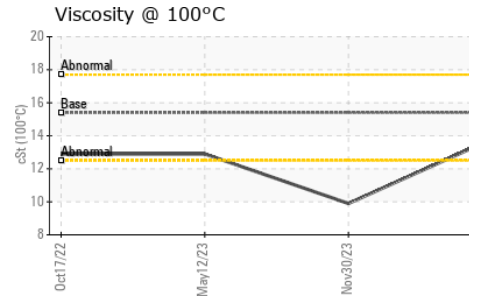
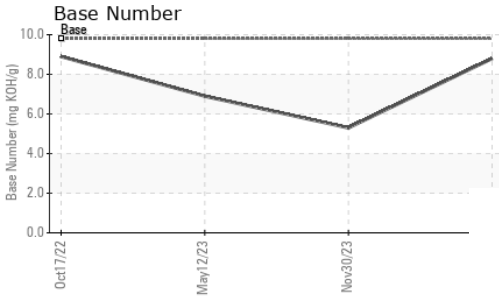
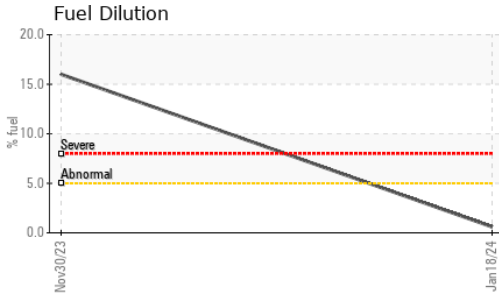
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.3</b>	8.5	10.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.9</b>	21.8	21.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.3</b>	18.8	18.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.8</b>	5.3	6.9



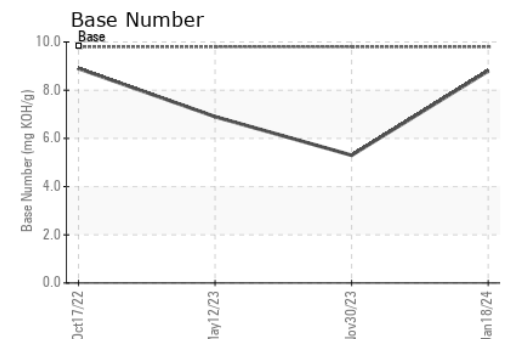
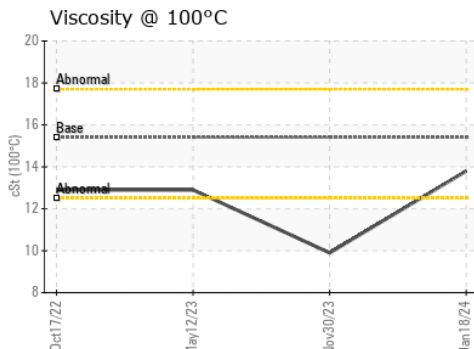
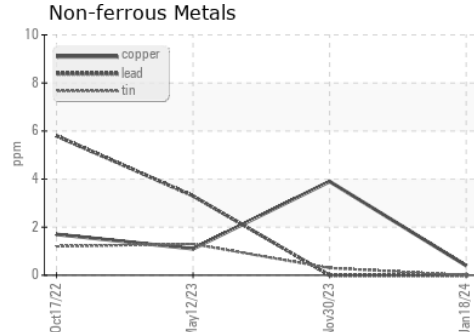
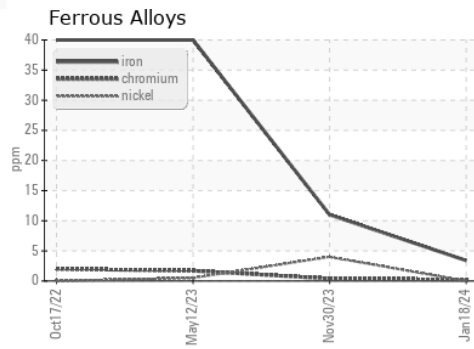
# OIL ANALYSIS REPORT



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	13.8	9.9	12.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0107502 **Received** : 23 Jan 2024  
**Lab Number** : 06068987 **Diagnosed** : 25 Jan 2024  
**Unique Number** : 10845664 **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL Environmental - 912 - Fort Atkinson HC**  
 1215 Klement St.  
 Fort Atkinson, WI  
 US 53538  
 Contact: LEONARD KOZLEUCHAR  
 leonard.kozleuchar@gflenv.com  
 T: (262)210-6528  
 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)