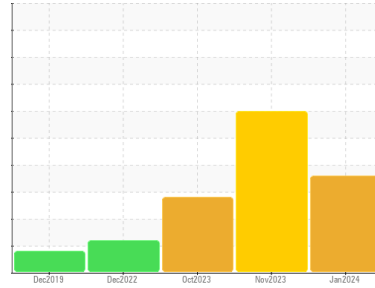




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**226042-670479**

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

Sodium and/or potassium levels remain high. Light fuel dilution occurring. Test for glycol is negative.

### Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0105133</b>	GFL0090317	GFL0090146
Sample Date	Client Info		<b>09 Jan 2024</b>	28 Nov 2023	05 Oct 2023
Machine Age	hrs	Client Info	<b>5562</b>	5439	5427
Oil Age	hrs	Client Info	<b>150</b>	600	150
Oil Changed	Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status			<b>ATTENTION</b>	ABNORMAL	SEVERE

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>23</b>	48	26
Chromium	ppm	ASTM D5185m >20	<b>4</b>	7	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	2	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>4</b>	5	9
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	2	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	4	3
Tin	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>14</b>	▲ 57	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>75</b>	100	50
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>702</b>	▲ 85	763
Calcium	ppm	ASTM D5185m 1070	<b>1400</b>	▲ 2118	845
Phosphorus	ppm	ASTM D5185m 1150	<b>1080</b>	1070	842
Zinc	ppm	ASTM D5185m 1270	<b>1216</b>	1208	1035
Sulfur	ppm	ASTM D5185m 2060	<b>3271</b>	3664	2891

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>14</b>	16	8
Sodium	ppm	ASTM D5185m	▲ <b>68</b>	▲ 188	39
Potassium	ppm	ASTM D5185m >20	▲ <b>60</b>	▲ 171	6
Fuel	%	ASTM D3524 >5	▲ <b>2.5</b>	0.8	11.6
Glycol	%	*ASTM D2982	<b>NEG</b>	▲ 0.06	NEG

## INFRA-RED

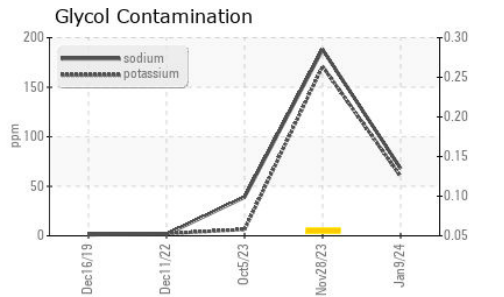
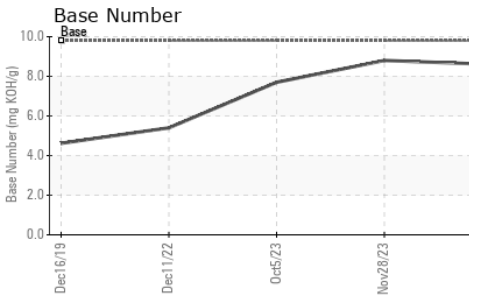
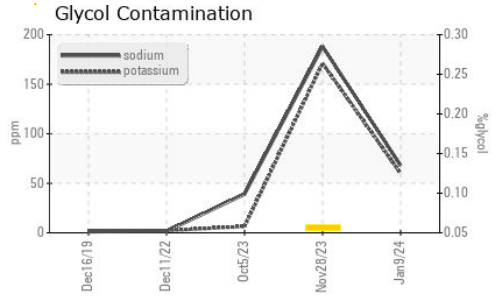
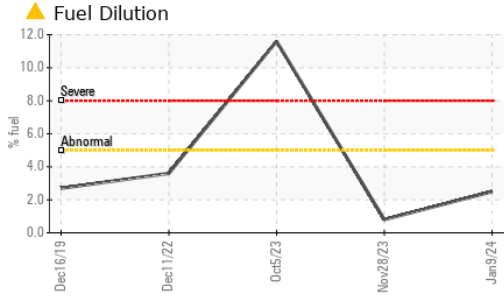
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.1	0.9
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.4</b>	7.5	7.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.0</b>	17.0	20.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.0</b>	12.7	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.6</b>	8.8	7.7



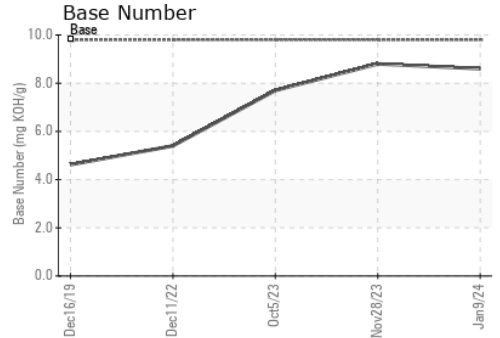
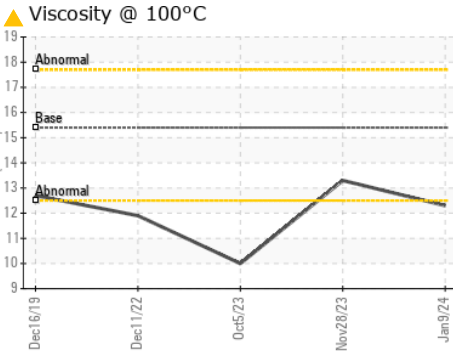
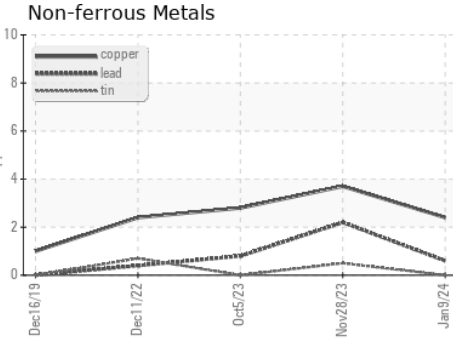
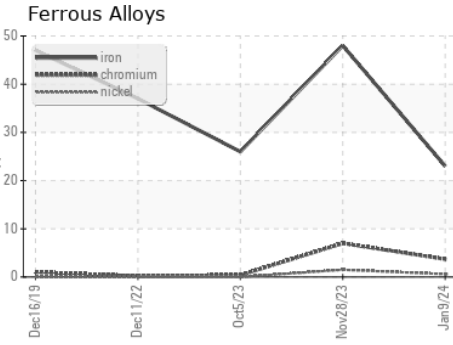
# OIL ANALYSIS REPORT



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	▲ 12.3	13.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0105133 **Received** : 12 Jan 2024  
**Lab Number** : 06059983 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831365 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 821 - Ozarks Hauling**  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536  
 Contact: Landen Johnson  
 landen.johnson@gflenv.com  
 T: (417)664-0010  
 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)