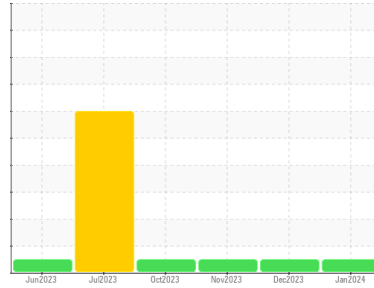




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**414045**

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>GFL0098956</b>	GFL0099013	GFL0098975
Sample Date	Client Info	<b>11 Jan 2024</b>	14 Dec 2023	13 Nov 2023
Machine Age	hrs	<b>1153</b>	989	842
Oil Age	hrs	<b>989</b>	842	842
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method >0.21	<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 >51	<b>13</b>	5	11
Chromium	ppm ASTM D5185m >11	<b>&lt;1</b>	0	<1
Nickel	ppm ASTM D5185m >5	<b>5</b>	2	2
Titanium	ppm ASTM D5185m	<b>0</b>	0	<1
Silver	ppm ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm ASTM D5185m >31	<b>5</b>	2	4
Lead	ppm ASTM D5185m >26	<b>&lt;1</b>	0	<1
Copper	ppm ASTM D5185m >26	<b>4</b>	2	14
Tin	ppm ASTM D5185m >4	<b>&lt;1</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>&lt;1</b>	1	7
Barium	ppm ASTM D5185m 0	<b>0</b>	0	9
Molybdenum	ppm ASTM D5185m 60	<b>55</b>	52	62
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm ASTM D5185m 1010	<b>1016</b>	877	869
Calcium	ppm ASTM D5185m 1070	<b>1138</b>	1035	1070
Phosphorus	ppm ASTM D5185m 1150	<b>979</b>	907	992
Zinc	ppm ASTM D5185m 1270	<b>1201</b>	1144	1151
Sulfur	ppm ASTM D5185m 2060	<b>3120</b>	2777	3467

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >22	<b>4</b>	3	8
Sodium	ppm ASTM D5185m >31	<b>0</b>	<1	<1
Potassium	ppm ASTM D5185m >20	<b>9</b>	4	13

## INFRA-RED

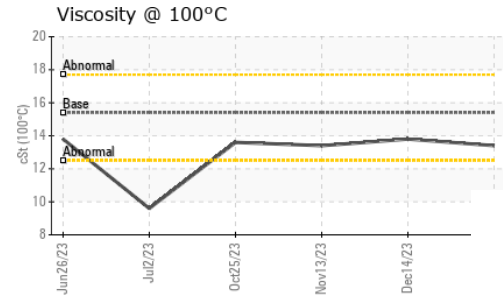
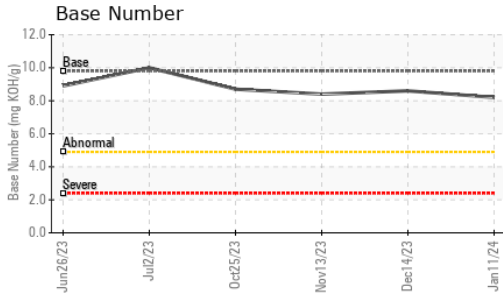
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.2</b>	0.1	0.2
Nitration	Abs/cm *ASTM D7624 >20	<b>6.6</b>	5.4	6.2
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.3</b>	17.7	18.8

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.0</b>	13.4	14.4
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>8.2</b>	8.6	8.4



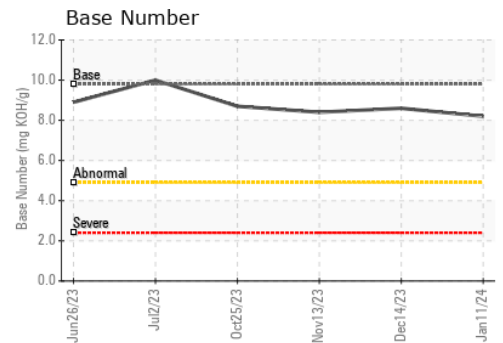
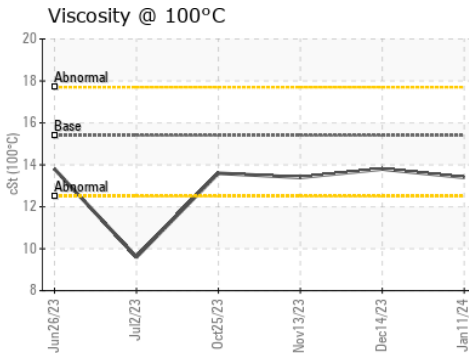
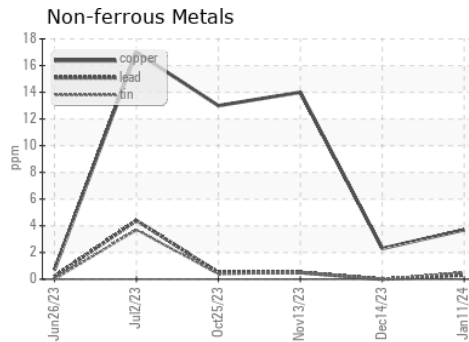
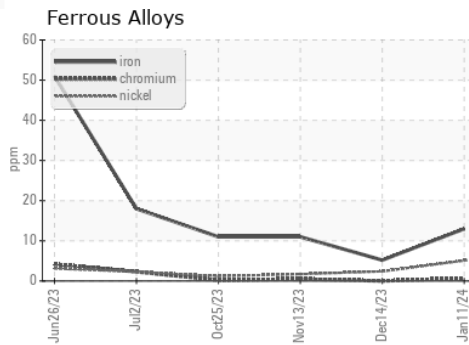
# OIL ANALYSIS REPORT



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	>0.21	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>13.4</b>	13.8	13.4

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098956 **Received** : 25 Jan 2024  
**Lab Number** : **06070306** **Diagnosed** : 25 Jan 2024  
**Unique Number** : 10846983 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 084 - Clarksville**  
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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)