



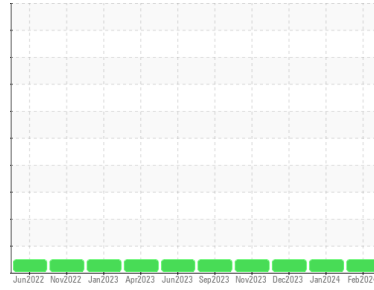
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**(72720V)**  
Machine Id  
**821028-101309**  
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>GFL0101991</b>	GFL0101978	GFL0101965	
Sample Date	Client Info	<b>07 Feb 2024</b>	26 Jan 2024	18 Dec 2023	
Machine Age	hrs	Client Info	<b>8361</b>	8271	7992
Oil Age	hrs	Client Info	<b>587</b>	497	218
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd	
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL	

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<b>&lt;1.0</b>	<1.0	<1.0
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 >90	<b>10</b>	8	2
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm ASTM D5185m >20	<b>4</b>	4	1
Lead	ppm ASTM D5185m >40	<b>0</b>	1	<1
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	<1	0
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	<1	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	5	3
Barium	ppm ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185m 60	<b>60</b>	57	57
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm ASTM D5185m 1010	<b>947</b>	902	902
Calcium	ppm ASTM D5185m 1070	<b>1119</b>	1005	1019
Phosphorus	ppm ASTM D5185m 1150	<b>1038</b>	1039	940
Zinc	ppm ASTM D5185m 1270	<b>1272</b>	1242	1154
Sulfur	ppm ASTM D5185m 2060	<b>3060</b>	3253	3001

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	4	3
Sodium	ppm ASTM D5185m	<b>5</b>	4	1
Potassium	ppm ASTM D5185m >20	<b>2</b>	4	<1

## INFRA-RED

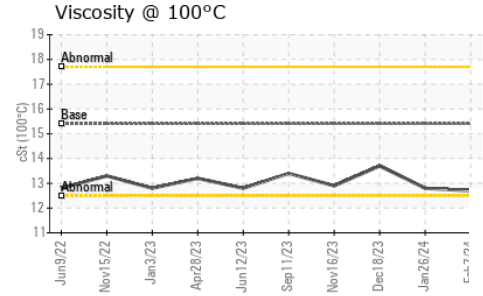
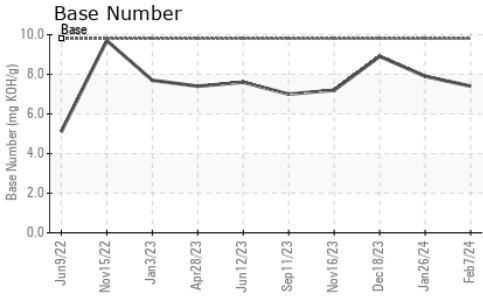
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	<b>0.3</b>	0.3	0.1
Nitration	Abs/cm *ASTM D7624 >20	<b>8.1</b>	7.5	5.3
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.4</b>	19.2	17.5

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>16.3</b>	15.6	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>7.4</b>	7.9	8.9



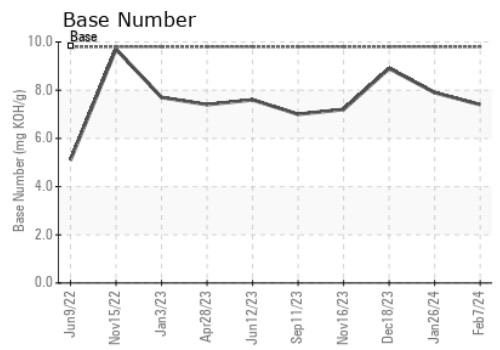
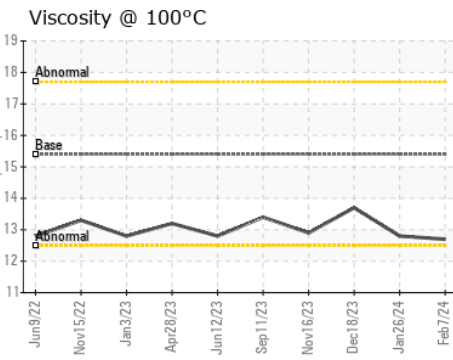
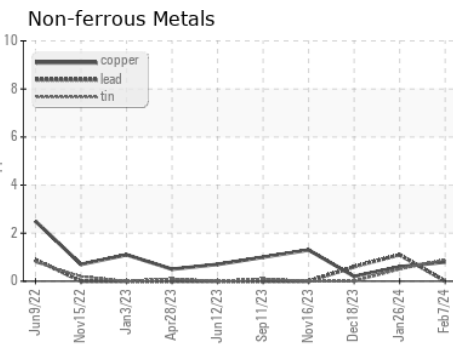
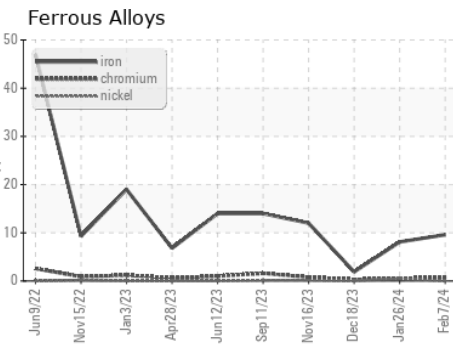
# OIL ANALYSIS REPORT



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	<b>12.7</b>	12.8	13.7

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0101991      **Received** : 08 Feb 2024  
**Lab Number** : 06084278      **Tested** : 09 Feb 2024  
**Unique Number** : 10871723      **Diagnosed** : 09 Feb 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 894 - Ada Hauling**  
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 Ada, OK  
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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)