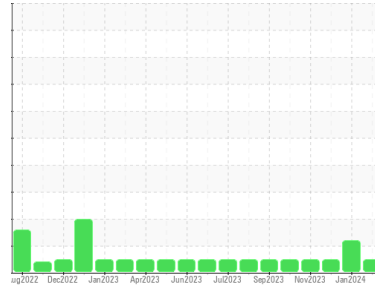




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**412044**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: resample )

### Wear

All component wear rates are normal.

### Contamination

Tests indicate that there is no fuel present in the oil. 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>GFL0103525</b>	GFL0103519	GFL0103497
Sample Date	Client Info		<b>25 Jan 2024</b>	18 Jan 2024	19 Dec 2023
Machine Age	hrs	Client Info	<b>4236</b>	4178	4039
Oil Age	hrs	Client Info	<b>909</b>	851	712
Oil Changed	Client Info		<b>N/A</b>	Not Changd	Not Changd
Sample Status			<b>NORMAL</b>	ABNORMAL	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 >120	<b>5</b>	10	8
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	2	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	4	2
Lead	ppm	ASTM D5185m >40	<b>0</b>	2	0
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>15</b>	10	17
Barium	ppm	ASTM D5185m 0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m 60	<b>86</b>	90	93
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	0
Magnesium	ppm	ASTM D5185m 1010	<b>872</b>	901	900
Calcium	ppm	ASTM D5185m 1070	<b>1008</b>	1016	1057
Phosphorus	ppm	ASTM D5185m 1150	<b>941</b>	907	848
Zinc	ppm	ASTM D5185m 1270	<b>1184</b>	1171	1182
Sulfur	ppm	ASTM D5185m 2060	<b>2771</b>	2891	2840

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	5	3
Sodium	ppm	ASTM D5185m	<b>3</b>	6	2
Potassium	ppm	ASTM D5185m >20	<b>8</b>	11	11
Fuel	%	ASTM D3524 >3.0	<b>0.3</b>	▲ 3.3	<1.0

## INFRA-RED

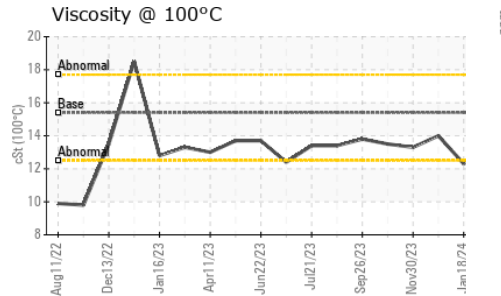
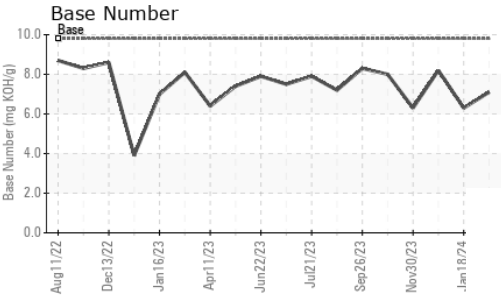
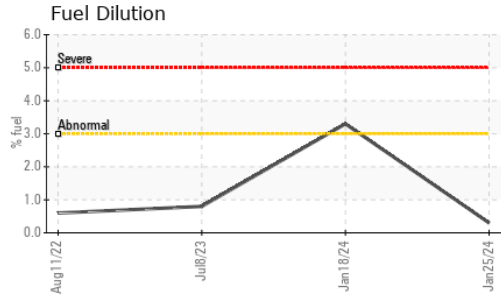
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.0</b>	8.8	6.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.1</b>	20.6	18.2

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.6</b>	16.7	14.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.1</b>	6.3	8.2



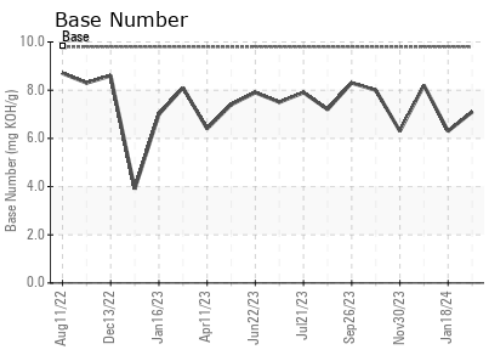
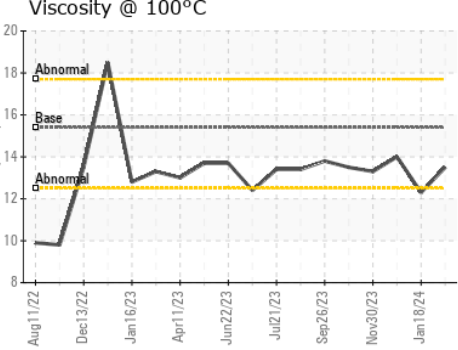
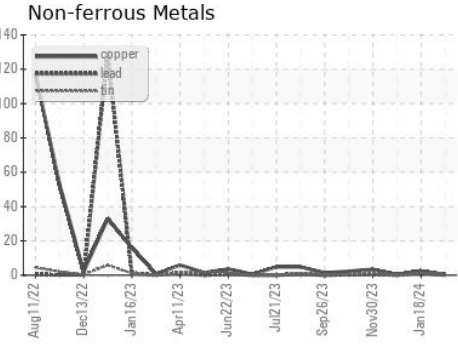
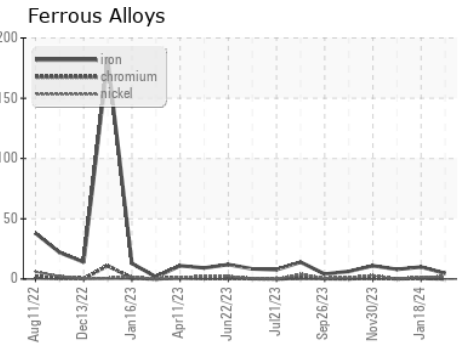
# OIL ANALYSIS REPORT



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>13.5</b>	▲ 12.3	14.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0103525 **Received** : 30 Jan 2024  
**Lab Number** : 06074307 **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10856398 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET ( Additional Tests: PercentFuel )

**GFL environmental - 867 - Trafford (Blount Hauling)**  
 1130 County Line Rd  
 Trafford, AL  
 US 35172  
 Contact: Jonathan Williams  
 jonathan.williams@gflenv.com

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)

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F: