

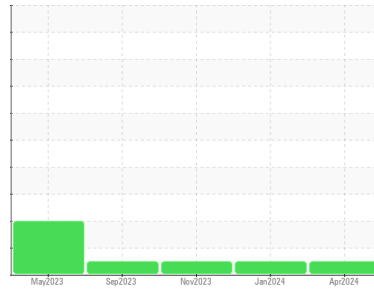


# OIL ANALYSIS REPORT



Machine Id  
**713014**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Current hours are 2936. Unsure of how the previous oil sample was submitted with 2949. )

### 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>GFL0096975</b>	GFL0096943	GFL0096982
Sample Date	Client Info		<b>12 Apr 2024</b>	29 Jan 2024	16 Nov 2023
Machine Age	hrs	Client Info	<b>2936</b>	2949	1723
Oil Age	hrs	Client Info	<b>2700</b>	1226	1203
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
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 >120	<b>13</b>	10	13
Chromium	ppm	ASTM D5185m >20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>2</b>	1	2
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	3	2
Lead	ppm	ASTM D5185m >40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	2	9
Tin	ppm	ASTM D5185m >15	<b>2</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>14</b>	11	11
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	10
Molybdenum	ppm	ASTM D5185m 60	<b>66</b>	61	66
Manganese	ppm	ASTM D5185m 0	<b>2</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>935</b>	820	822
Calcium	ppm	ASTM D5185m 1070	<b>1151</b>	1029	1119
Phosphorus	ppm	ASTM D5185m 1150	<b>1151</b>	954	982
Zinc	ppm	ASTM D5185m 1270	<b>1289</b>	1128	1133
Sulfur	ppm	ASTM D5185m 2060	<b>3632</b>	2670	3169

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	4	6
Sodium	ppm	ASTM D5185m	<b>2</b>	<1	0
Potassium	ppm	ASTM D5185m >20	<b>5</b>	5	9

## INFRA-RED

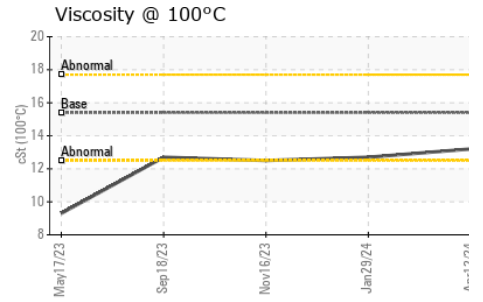
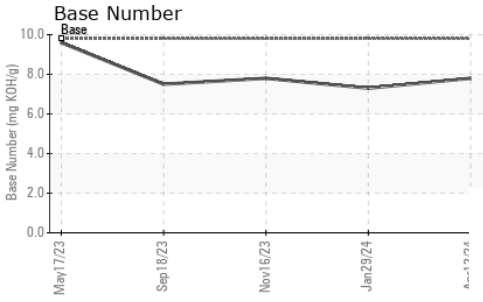
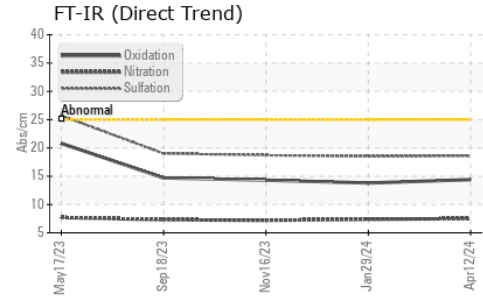
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.5</b>	7.4	7.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.6</b>	18.5	18.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.4</b>	13.8	14.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.8</b>	7.3	7.8



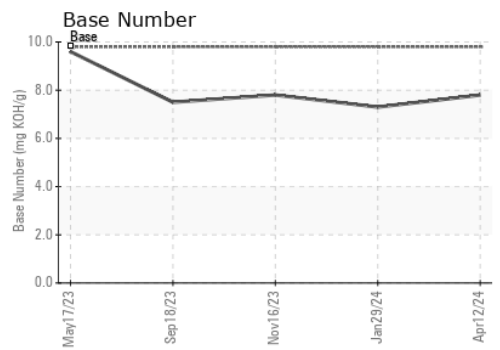
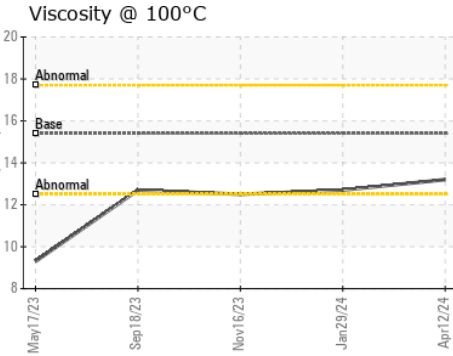
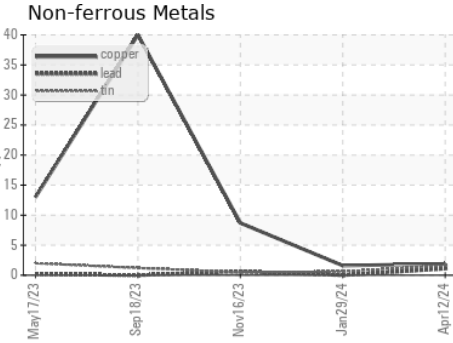
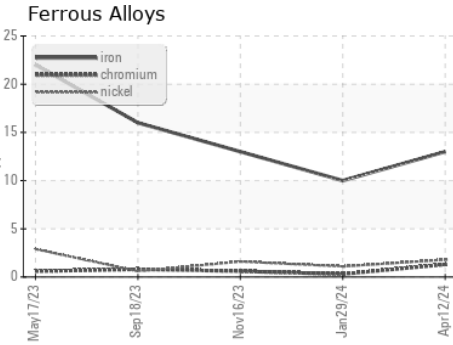
# OIL ANALYSIS REPORT



PARAMETER	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	13.2	12.7	12.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096975      **Received** : 17 Apr 2024  
**Lab Number** : 06152580      **Tested** : 18 Apr 2024  
**Unique Number** : 10982658      **Diagnosed** : 22 Apr 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 031 - Greenville/Spartanburg**  
 1635 Antioch Church Rd  
 Piedmont, SC  
 US 29673  
 Contact: TECHNICIAN ACCOUNT  
 catherine.anastasio@wearcheck.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)