

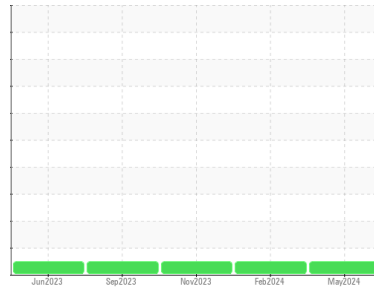


# OIL ANALYSIS REPORT



Machine Id  
**912024**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### Sample Rating Trend



**NORMAL**



## 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0116068</b>	GFL0092974	GFL0092958
Sample Date	Client Info		<b>22 May 2024</b>	22 Feb 2024	23 Nov 2023
Machine Age	hrs	Client Info	<b>2772</b>	2772	2772
Oil Age	hrs	Client Info	<b>2772</b>	2772	2707
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	>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>21</b>	20	12
Chromium	ppm	ASTM D5185m >20	<b>2</b>	1	0
Nickel	ppm	ASTM D5185m >5	<b>7</b>	7	3
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	3	1
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>4</b>	5	3
Tin	ppm	ASTM D5185m >15	<b>2</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>6</b>	3	2
Barium	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>64</b>	64	60
Manganese	ppm	ASTM D5185m 0	<b>1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>960</b>	960	982
Calcium	ppm	ASTM D5185m 1070	<b>1139</b>	1031	1089
Phosphorus	ppm	ASTM D5185m 1150	<b>1013</b>	1027	953
Zinc	ppm	ASTM D5185m 1270	<b>1247</b>	1273	1265
Sulfur	ppm	ASTM D5185m 2060	<b>2876</b>	2841	2874

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>7</b>	7	5
Sodium	ppm	ASTM D5185m	<b>4</b>	6	3
Potassium	ppm	ASTM D5185m >20	<b>12</b>	11	3

## INFRA-RED

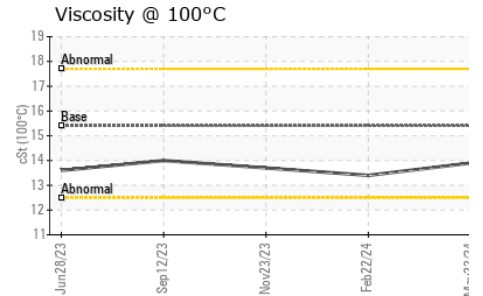
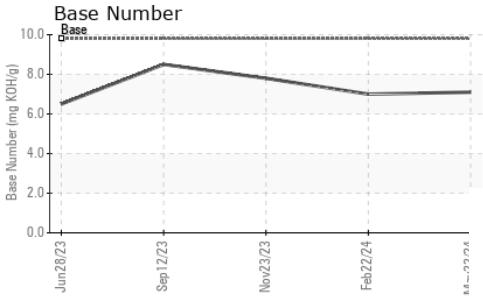
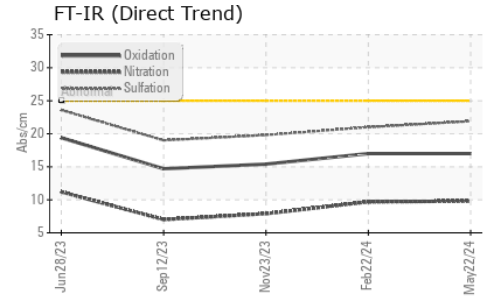
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>1.1</b>	0.9	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.8</b>	9.7	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.9</b>	21.0	19.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.0</b>	17.0	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.1</b>	7.0	7.8



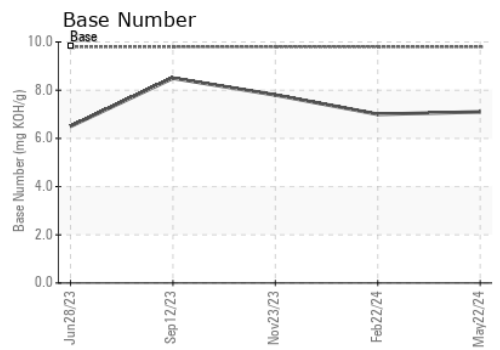
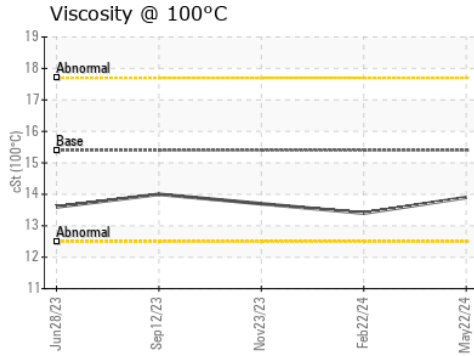
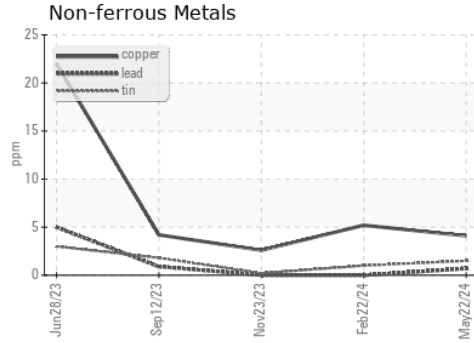
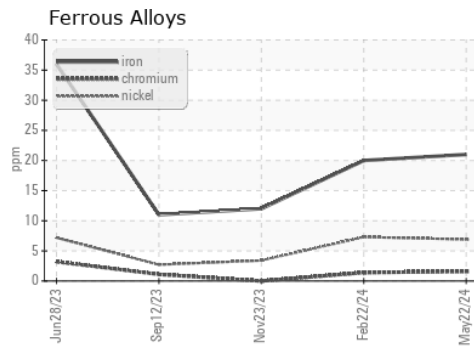
# OIL ANALYSIS REPORT



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	13.9	13.4

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116068      **Received** : 28 May 2024  
**Lab Number** : 06191893      **Tested** : 29 May 2024  
**Unique Number** : 11048645      **Diagnosed** : 30 May 2024 - Sean Felton  
**Test Package** : FLEET

**GFL Environmental - 463 - Cheboygan**  
 501 N. Western Ave  
 Cheboygan, MI  
 US 49721  
 Contact: Chris Gee  
 cgee@gflenv.com  
 T: (231)597-8553  
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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)