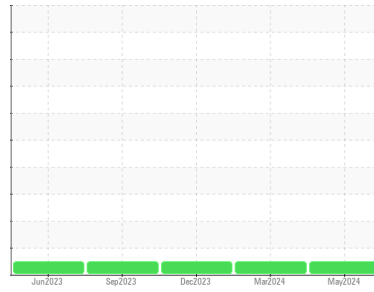




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**529057**

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>GFL0086966</b>	GFL0086984	GFL0086957
Sample Date	Client Info		<b>31 May 2024</b>	08 Mar 2024	04 Dec 2023
Machine Age	mls	Client Info	<b>661009</b>	661000	661000
Oil Age	mls	Client Info	<b>339</b>	600	400
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<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 >100	<b>17</b>	10	20
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	4
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	5	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>58</b>	59	56
Manganese	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>900</b>	971	934
Calcium	ppm	ASTM D5185m 1070	<b>1063</b>	1098	1040
Phosphorus	ppm	ASTM D5185m 1150	<b>1010</b>	1046	1028
Zinc	ppm	ASTM D5185m 1270	<b>1178</b>	1245	1234
Sulfur	ppm	ASTM D5185m 2060	<b>3413</b>	3696	2951

## CONTAMINANTS

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

## INFRA-RED

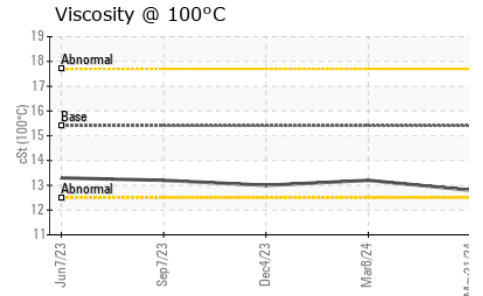
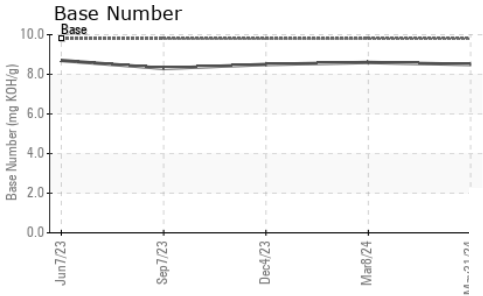
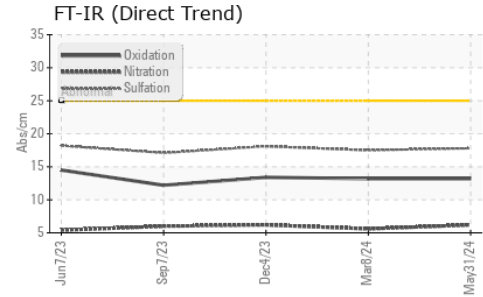
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.2</b>	5.6	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.8</b>	17.5	18.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.2</b>	13.2	13.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	8.6	8.5



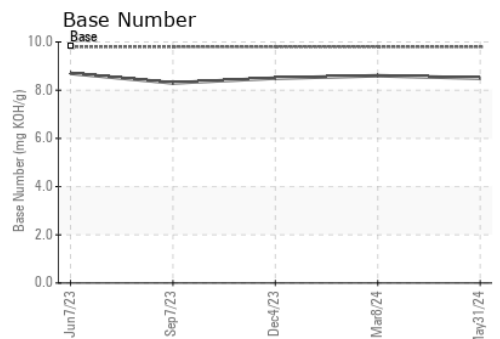
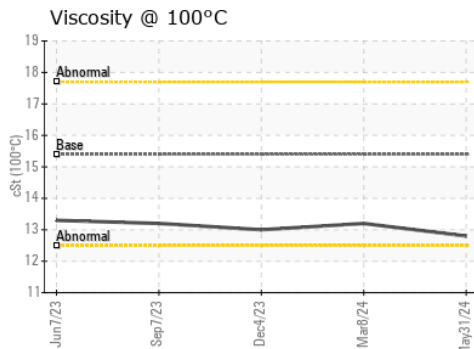
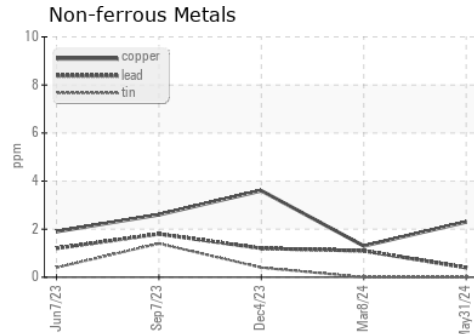
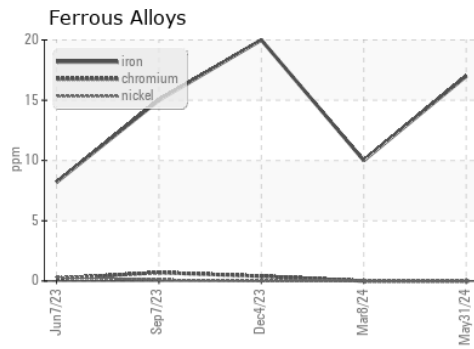
# OIL ANALYSIS REPORT



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>12.8</b>	13.2	13.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0086966      **Received** : 04 Jun 2024  
**Lab Number** : **06198818**      **Tested** : 05 Jun 2024  
**Unique Number** : 11060941      **Diagnosed** : 05 Jun 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 408 - Brown City**  
 4235 M-53  
 BROWN CITY, MI  
 US 48416  
 Contact: MARK WOMBLE

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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