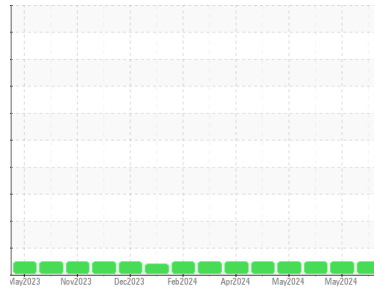




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**913151**

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>GFL0093455</b>	GFL0093444	GFL0109303
Sample Date	Client Info		<b>18 Jun 2024</b>	31 May 2024	08 May 2024
Machine Age	hrs	Client Info	<b>3409</b>	3302	3121
Oil Age	hrs	Client Info	<b>288</b>	181	575
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
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 >110	<b>3</b>	3	7
Chromium	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>7</b>	8	9
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	4	2
Lead	ppm	ASTM D5185m >45	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >85	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>8</b>	6	4
Barium	ppm	ASTM D5185m 0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m 60	<b>53</b>	58	56
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 1010	<b>945</b>	905	943
Calcium	ppm	ASTM D5185m 1070	<b>1136</b>	1144	1209
Phosphorus	ppm	ASTM D5185m 1150	<b>1095</b>	1004	1084
Zinc	ppm	ASTM D5185m 1270	<b>1300</b>	1235	1298
Sulfur	ppm	ASTM D5185m 2060	<b>3779</b>	3305	3640

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>5</b>	4	3
Sodium	ppm	ASTM D5185m	<b>1</b>	0	1
Potassium	ppm	ASTM D5185m >20	<b>4</b>	3	3

## INFRA-RED

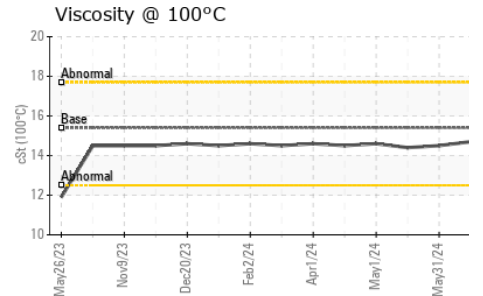
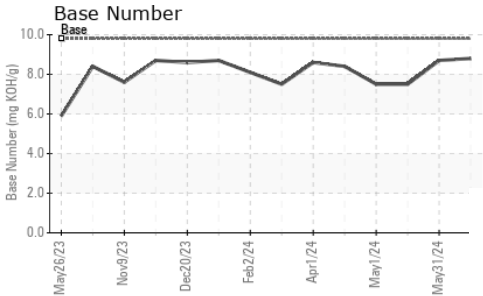
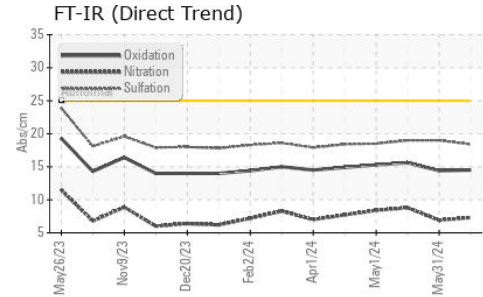
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.6	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.3</b>	6.9	8.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>18.4</b>	19.0	19.0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.5</b>	14.4	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.8</b>	8.7	7.5



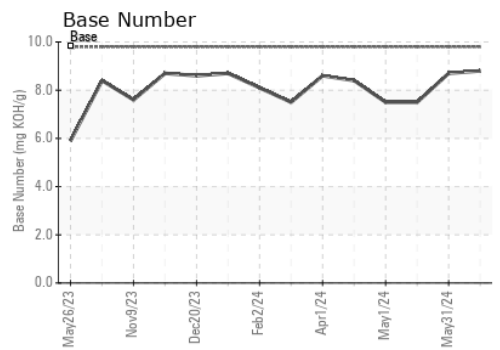
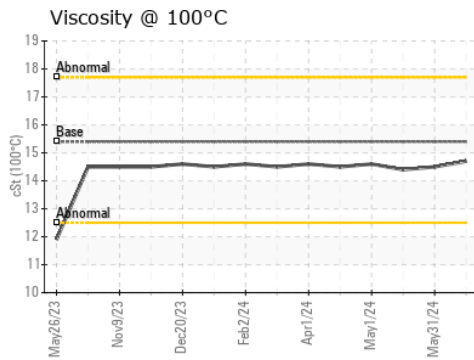
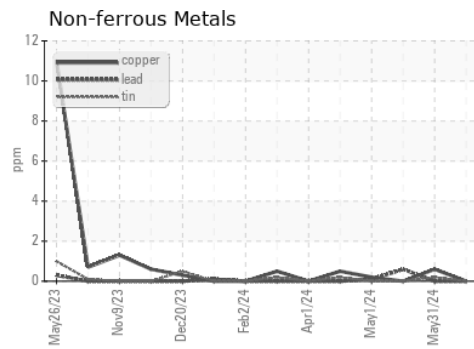
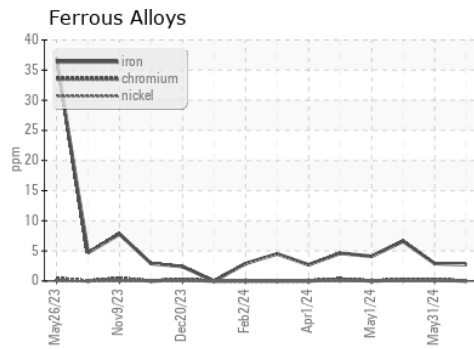
# OIL ANALYSIS REPORT



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	LIGHT	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	14.7	14.5

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0093455      **Received** : 19 Jun 2024  
**Lab Number** : 06214462      **Tested** : 20 Jun 2024  
**Unique Number** : 11087326      **Diagnosed** : 20 Jun 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 891 - Oklahoma City Hauling**  
 1001 South Rockwell  
 Oklahoma City, OK  
 US 73128  
 Contact: Andy Smith  
 andrew.smith@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)