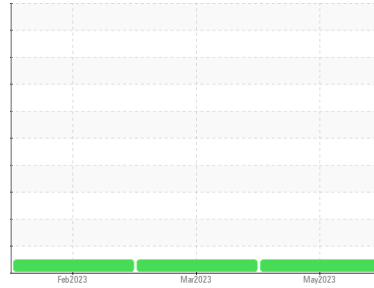




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**912102**  
 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>GFL0077820</b>	GFL0065092	GFL0065077
Sample Date	Client Info		<b>07 May 2023</b>	09 Mar 2023	09 Feb 2023
Machine Age	hrs	Client Info	<b>5050</b>	4017	3834
Oil Age	hrs	Client Info	<b>0</b>	0	0
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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>15</b>	12	69
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	4
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	<1	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	<1	5
Copper	ppm	ASTM D5185m >330	<b>4</b>	3	22
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	4
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>4</b>	11	1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>67</b>	59	67
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m 1010	<b>1017</b>	898	925
Calcium	ppm	ASTM D5185m 1070	<b>1148</b>	1172	1130
Phosphorus	ppm	ASTM D5185m 1150	<b>1058</b>	975	950
Zinc	ppm	ASTM D5185m 1270	<b>1365</b>	1253	1225
Sulfur	ppm	ASTM D5185m 2060	<b>3526</b>	3397	2115

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	4	10
Sodium	ppm	ASTM D5185m	<b>5</b>	3	9
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	8

## INFRA-RED

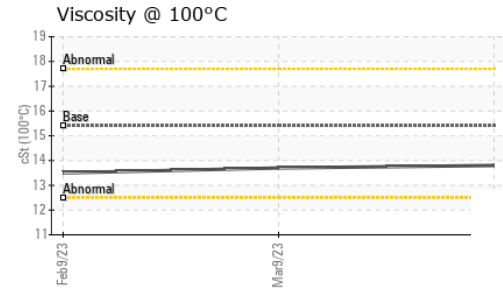
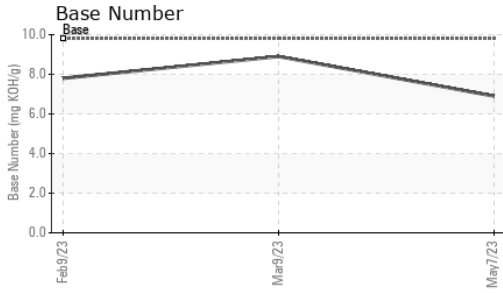
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.8</b>	0.5	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.9</b>	7.5	8.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.5</b>	18.6	19.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.8</b>	14.6	14.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>6.9</b>	8.9	7.8



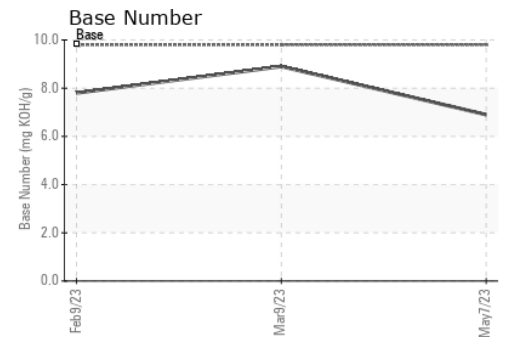
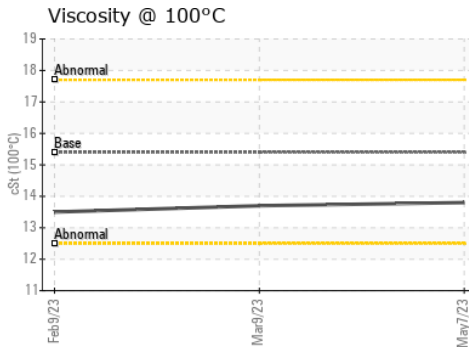
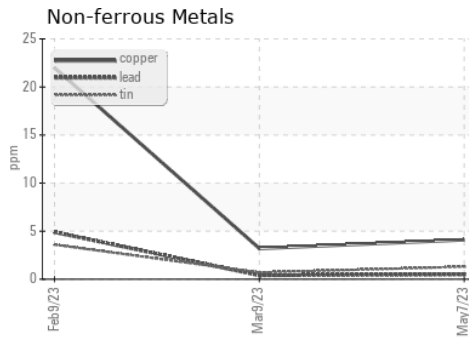
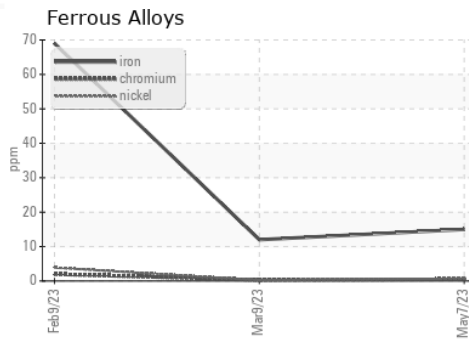
# OIL ANALYSIS REPORT



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	<b>13.8</b>	13.7	13.5

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0077820 **Received** : 11 Aug 2023  
**Lab Number** : **05922705** **Diagnosed** : 14 Aug 2023  
**Unique Number** : 10602652 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 650 - West Point Hauling**  
 7825 Parham Landing Road  
 West Point, VA  
 US 23181  
 Contact: Jason Smith  
 jasonsmith@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: