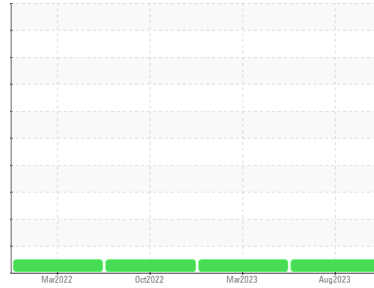




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**229028**

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>GFL0076933</b>	GFL0052986	GFL0055225
Sample Date	Client Info		<b>31 Aug 2023</b>	31 Mar 2023	05 Oct 2022
Machine Age	hrs	Client Info	<b>5100</b>	4513	4010
Oil Age	hrs	Client Info	<b>587</b>	503	590
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	>5	<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 >80	<b>15</b>	10	11
Chromium	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>8</b>	6	10
Lead	ppm	ASTM D5185m >30	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >150	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</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>11</b>	19	5
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>66</b>	85	62
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>987</b>	904	904
Calcium	ppm	ASTM D5185m 1070	<b>1201</b>	1132	1115
Phosphorus	ppm	ASTM D5185m 1150	<b>1016</b>	943	991
Zinc	ppm	ASTM D5185m 1270	<b>1256</b>	1235	1194
Sulfur	ppm	ASTM D5185m 2060	<b>3618</b>	3367	3516

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>4</b>	4	3
Sodium	ppm	ASTM D5185m	<b>2</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>9</b>	11	8

## INFRA-RED

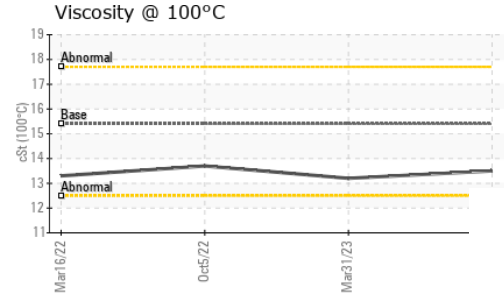
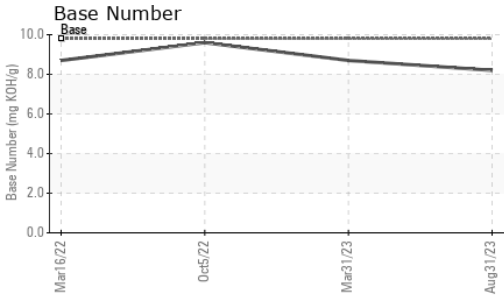
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.0</b>	8.7	10.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.4</b>	19.2	20.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.6</b>	16.0	17.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.2</b>	8.7	9.6



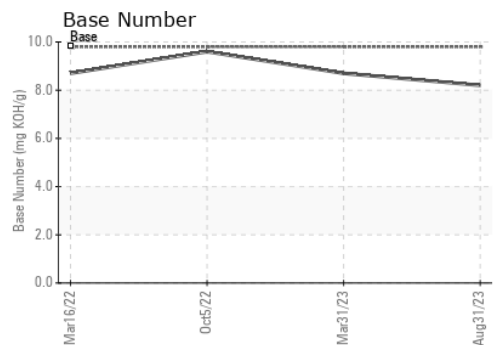
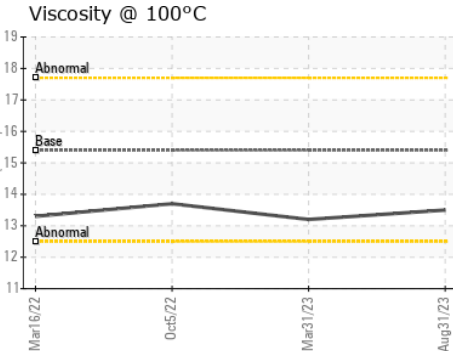
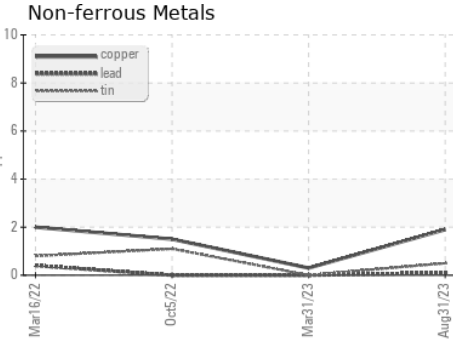
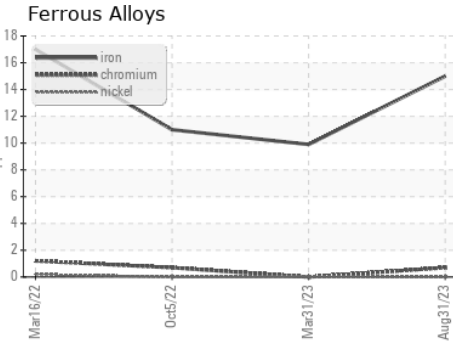
# OIL ANALYSIS REPORT



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>13.5</b>	13.2	13.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0076933 **Received** : 06 Sep 2023  
**Lab Number** : **05944092** **Diagnosed** : 07 Sep 2023  
**Unique Number** : 10634704 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 930 - Mosinee HC**  
 1372 State Highway 34  
 MOSINEE, WI  
 US 54455  
 Contact: Kirk Koss

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: