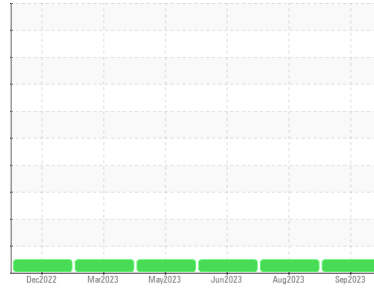




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**420031**  
 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>GFL0086875</b>	GFL0072530	GFL0068296
Sample Date	Client Info		<b>12 Sep 2023</b>	30 Aug 2023	07 Jun 2023
Machine Age	hrs	Client Info	<b>39340</b>	39340	28648
Oil Age	hrs	Client Info	<b>600</b>	39340	28648
Oil Changed	Client Info		<b>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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >80	<b>9</b>	7	3
Chromium	ppm	ASTM D5185m >5	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>1</b>	2	0
Lead	ppm	ASTM D5185m >30	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m >150	<b>2</b>	1	<1
Tin	ppm	ASTM D5185m >5	<b>2</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</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>5</b>	5	8
Barium	ppm	ASTM D5185m 0	<b>44</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	59	59
Manganese	ppm	ASTM D5185m 0	<b>1</b>	0	0
Magnesium	ppm	ASTM D5185m 1010	<b>884</b>	985	908
Calcium	ppm	ASTM D5185m 1070	<b>992</b>	1144	1065
Phosphorus	ppm	ASTM D5185m 1150	<b>915</b>	1000	1007
Zinc	ppm	ASTM D5185m 1270	<b>1129</b>	1247	1190
Sulfur	ppm	ASTM D5185m 2060	<b>3200</b>	3622	3241

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>3</b>	3	4
Sodium	ppm	ASTM D5185m	<b>2</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>5</b>	3	1

## INFRA-RED

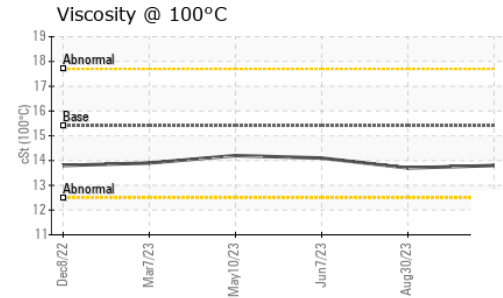
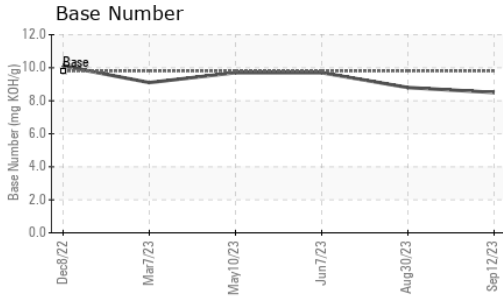
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.0</b>	5.7	4.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.9</b>	17.5	17.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.5</b>	13.2	13.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	8.8	9.7



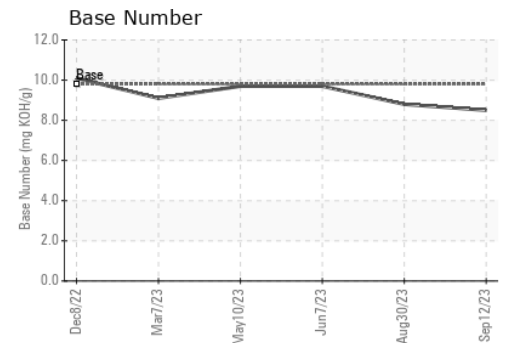
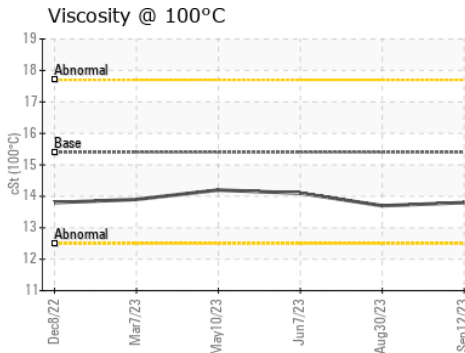
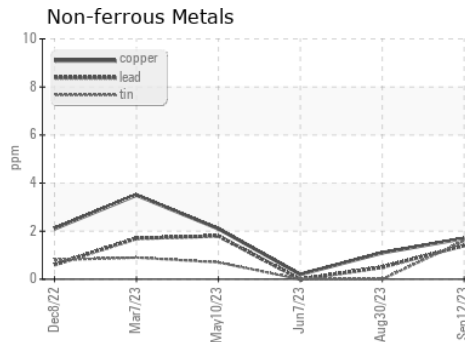
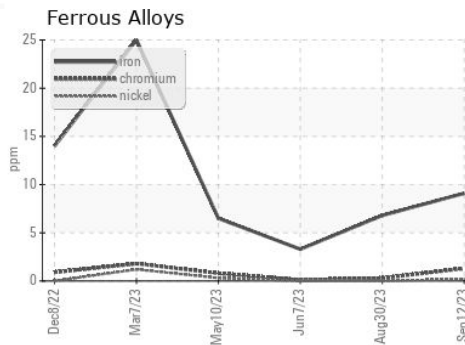
# OIL ANALYSIS REPORT



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	14.1

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0086875  
 Lab Number : 05952504  
 Unique Number : 10648463  
 Test Package : FLEET

Received : 15 Sep 2023  
 Diagnosed : 18 Sep 2023  
 Diagnostician : Wes Davis

**GFL Environmental - 419 - Metro Saginaw**  
 6950 N Michigan  
 Saginaw, MI  
 US 48604  
 Contact: Jeremy Hines  
 jhines@gflenv.com  
 T: (800)684-1277  
 F:

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)