



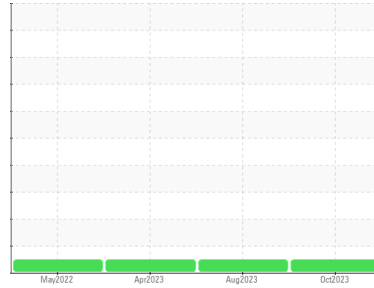
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4559**  
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>GFL0097702</b>	GFL0087301	GFL0072903
Sample Date	Client Info		<b>19 Oct 2023</b>	27 Aug 2023	26 Apr 2023
Machine Age	hrs	Client Info	<b>10574</b>	10193	9558
Oil Age	hrs	Client Info	<b>381</b>	466	600
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 >75	<b>34</b>	37	16
Chromium	ppm	ASTM D5185m >5	<b>2</b>	2	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >15	<b>2</b>	<1	2
Lead	ppm	ASTM D5185m >25	<b>4</b>	5	0
Copper	ppm	ASTM D5185m >100	<b>2</b>	2	0
Tin	ppm	ASTM D5185m >4	<b>&lt;1</b>	1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>1</b>	6	42
Barium	ppm	ASTM D5185m 0	<b>5</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	59	42
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>908</b>	945	520
Calcium	ppm	ASTM D5185m 1070	<b>1107</b>	1190	1461
Phosphorus	ppm	ASTM D5185m 1150	<b>1030</b>	1049	694
Zinc	ppm	ASTM D5185m 1270	<b>1215</b>	1293	862
Sulfur	ppm	ASTM D5185m 2060	<b>2731</b>	3456	2320

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	6	6
Sodium	ppm	ASTM D5185m	<b>4</b>	10	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	2

## INFRA-RED

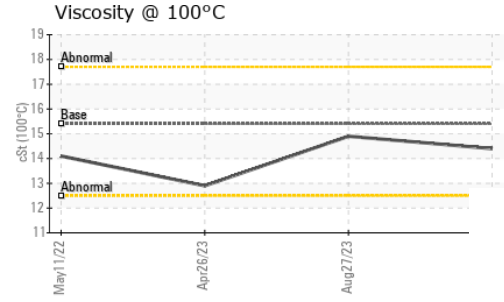
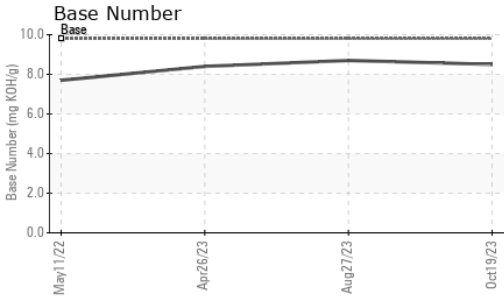
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	<b>2</b>	1.7	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.8</b>	12.5	6.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.5</b>	27.3	20.5

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.7</b>	20.1	18.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.5</b>	8.7	8.4



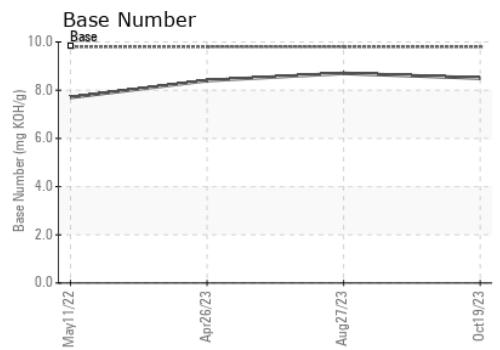
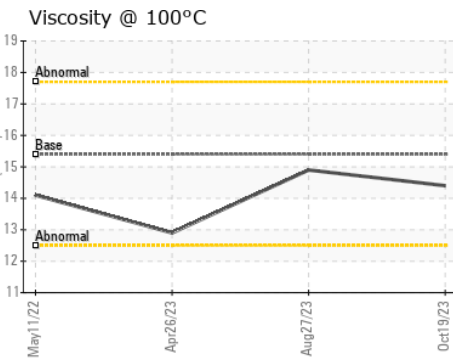
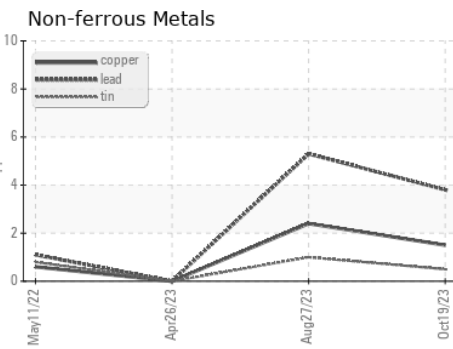
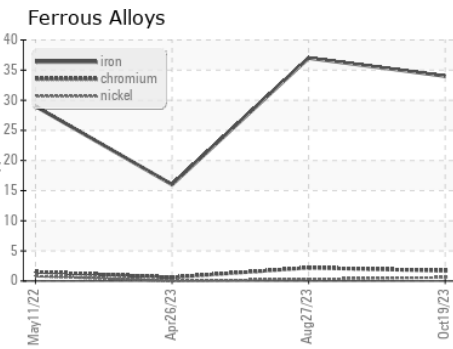
# OIL ANALYSIS REPORT



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>14.4</b>	14.9	12.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0097702 **Received** : 07 Nov 2023  
**Lab Number** : **06000294** **Diagnosed** : 07 Nov 2023  
**Unique Number** : 10728654 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 405 - Arbor Hills**  
 7400 Napier Rd  
 NORTHVILLE, MI  
 US 48168  
 Contact: Brittney Phillips  
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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)