



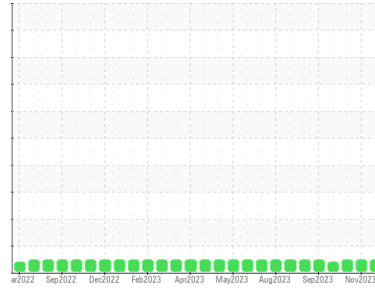
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**MONTGOMERY**  
 Machine Id  
**420046**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**



## 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>GFL0091298</b>	GFL0087988	GFL0092397
Sample Date	Client Info		<b>07 Dec 2023</b>	17 Nov 2023	31 Oct 2023
Machine Age	hrs	Client Info	<b>10207</b>	10082	9974
Oil Age	hrs	Client Info	<b>504</b>	379	271
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
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
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 >120	<b>14</b>	5	5
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>4</b>	0	<1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	2	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m >330	<b>2</b>	1	1
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>&lt;1</b>	2	1
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m 60	<b>61</b>	59	63
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1010	<b>980</b>	950	951
Calcium	ppm	ASTM D5185m 1070	<b>1070</b>	1047	1055
Phosphorus	ppm	ASTM D5185m 1150	<b>980</b>	928	1018
Zinc	ppm	ASTM D5185m 1270	<b>1236</b>	1209	1231
Sulfur	ppm	ASTM D5185m 2060	<b>2846</b>	2890	3493

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	8	6
Sodium	ppm	ASTM D5185m	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>3</b>	1	3

## INFRA-RED

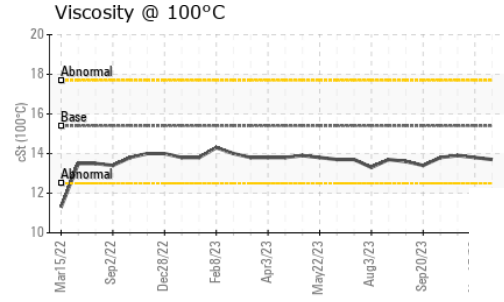
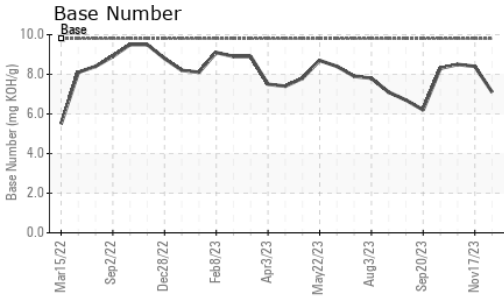
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.8</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.6</b>	6.9	6.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.1</b>	18.8	18.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.7</b>	14.7	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.1</b>	8.4	8.5



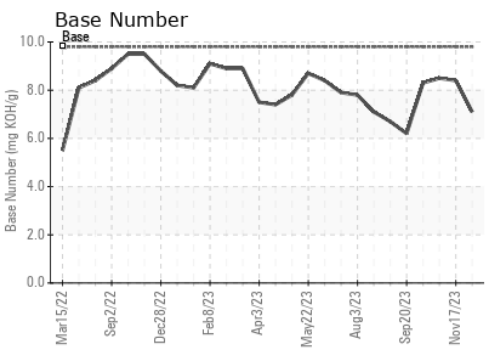
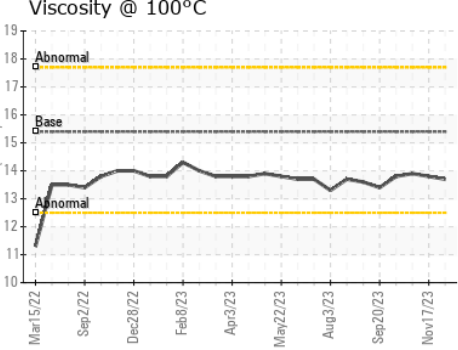
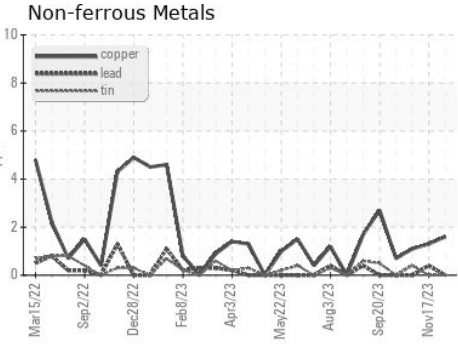
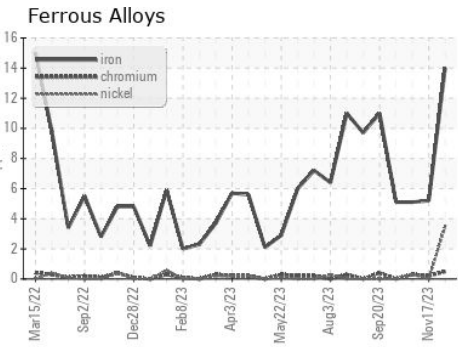
# OIL ANALYSIS REPORT



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	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>13.7</b>	13.8	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0091298 **Received** : 11 Dec 2023  
**Lab Number** : **06030187** **Diagnosed** : 12 Dec 2023  
**Unique Number** : 10779978 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee  
 Multiple Sites  
 Montgomery, AL  
 US 36108  
 Contact: RICHARD HATFIELD  
 rhatfield@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)