



# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**2006**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	<b>GFL0077581</b>	---	---
Sample Date	Client Info	<b>26 May 2023</b>	---	---
Machine Age	hrs	Client Info	<b>18069</b>	---
Oil Age	hrs	Client Info	<b>521</b>	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>SEVERE</b>	---	---

## CONTAMINATION

method	limit/base	current	history 1	history 2
Glycol	WC Method	<b>NEG</b>	---	---

## WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185(m) >100	<b>66</b>	---
Chromium	ppm	ASTM D5185(m) >20	<b>5</b>	---
Nickel	ppm	ASTM D5185(m) >2	<b>1</b>	---
Titanium	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	---
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	---
Aluminum	ppm	ASTM D5185(m) >25	<b>9</b>	---
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	---
Copper	ppm	ASTM D5185(m) >330	<b>6</b>	---
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---

## ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m) 1	<b>12</b>	---
Barium	ppm	ASTM D5185(m) 1	<b>0</b>	---
Molybdenum	ppm	ASTM D5185(m) 60	<b>55</b>	---
Manganese	ppm	ASTM D5185(m) 1	<b>&lt;1</b>	---
Magnesium	ppm	ASTM D5185(m) 1010	<b>932</b>	---
Calcium	ppm	ASTM D5185(m) 1070	<b>822</b>	---
Phosphorus	ppm	ASTM D5185(m) 1150	<b>950</b>	---
Zinc	ppm	ASTM D5185(m) 1270	<b>1068</b>	---
Sulfur	ppm	ASTM D5185(m) 2060	<b>2271</b>	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---

## CONTAMINANTS

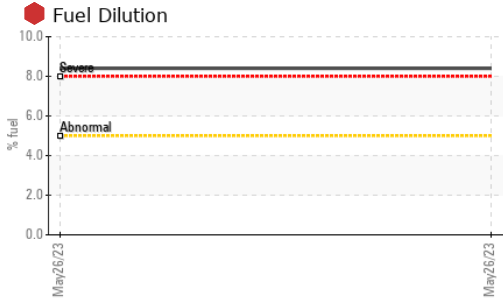
method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m) >25	<b>14</b>	---
Sodium	ppm	ASTM D5185(m)	<b>10</b>	---
Potassium	ppm	ASTM D5185(m) >20	<b>11</b>	---
Fuel	%	ASTM D7593* >5	<b>8.4</b>	---

## INFRA-RED

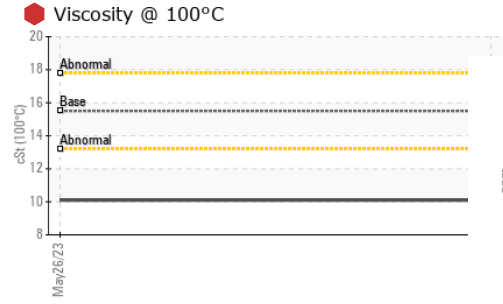
method	limit/base	current	history 1	history 2
Soot %	%	ASTM D7844* >3	<b>0.7</b>	---
Nitration	Abs/cm	ASTM D7624* >20	<b>14.0</b>	---
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>26.6</b>	---



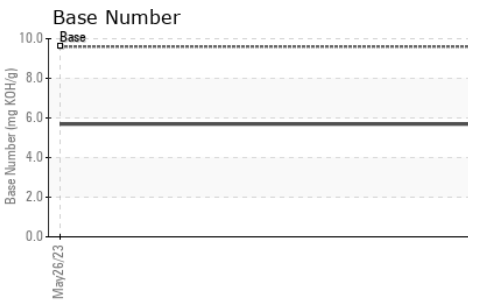
# OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>32.3</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	<b>5.69</b>	---	---

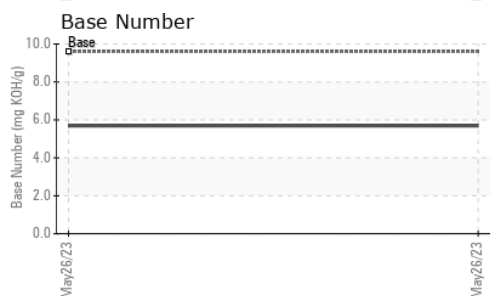
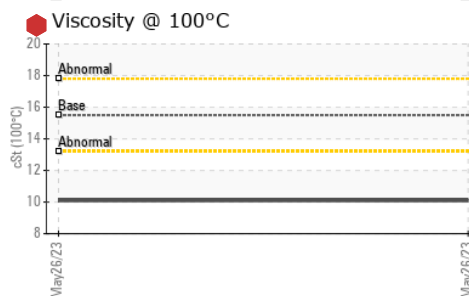
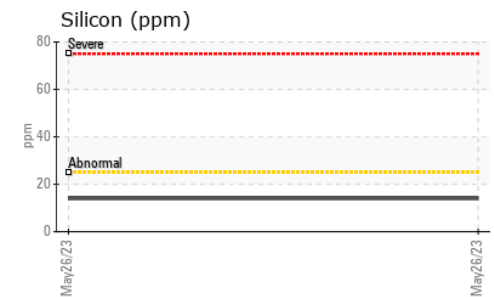
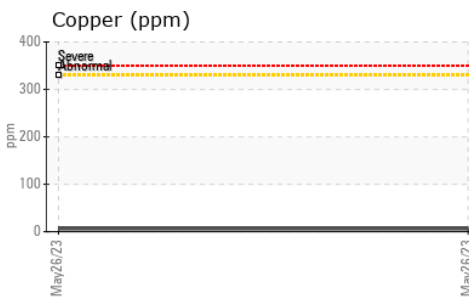
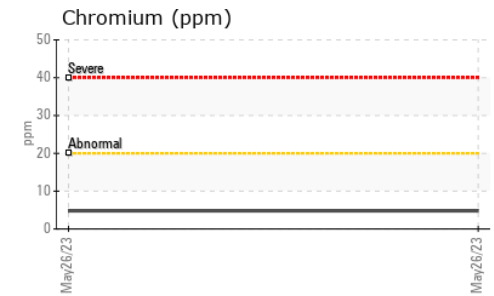
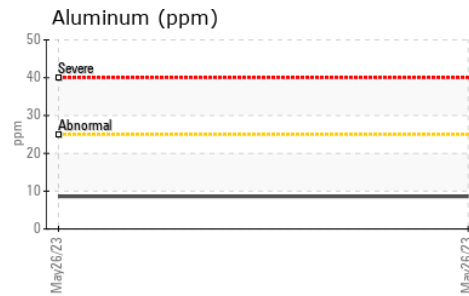
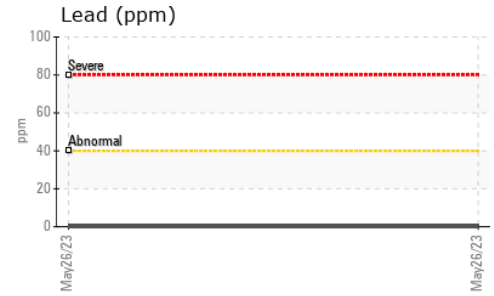
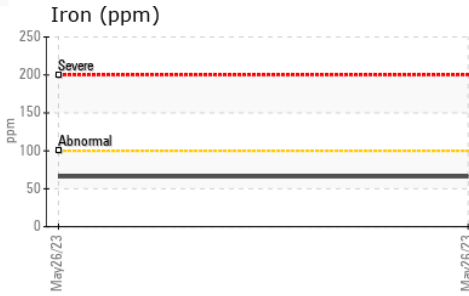


VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---
Free Water	scalar	Visual*		<b>NEG</b>	---	---



FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	<b>10.1</b>	---	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0077581 **Received** : 06 Jul 2023  
**Lab Number** : **02568196** **Diagnosed** : 07 Jul 2023  
**Unique Number** : 5605242 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

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