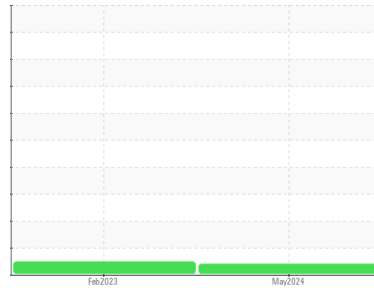




# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**INTERNATIONAL 829108**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA DURON HP 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

### Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. 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 no indication of any contamination in the oil.

### Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0122261</b>	GFL0071117	---
Sample Date	Client Info		<b>31 May 2024</b>	07 Feb 2023	---
Machine Age	hrs	Client Info	<b>8520</b>	68800	---
Oil Age	hrs	Client Info	<b>502</b>	0	---
Oil Changed	Client Info		<b>Changed</b>	N/A	---
Sample Status			<b>ABNORMAL</b>	NORMAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>9</b>	25	---
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	---
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	23	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	---
Copper	ppm	ASTM D5185(m)	>330	<b>17</b>	<1	---
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	<b>157</b>	3	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>10</b>	61	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>87</b>	981	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1990</b>	1114	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>935</b>	1125	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1067</b>	1231	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2829</b>	2653	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

## CONTAMINANTS

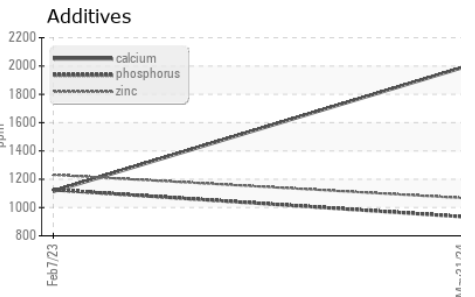
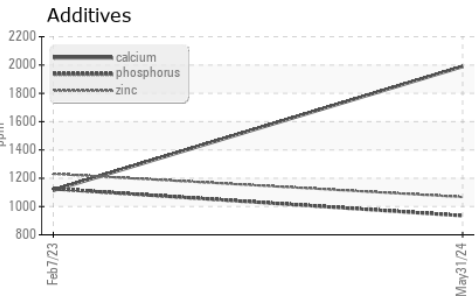
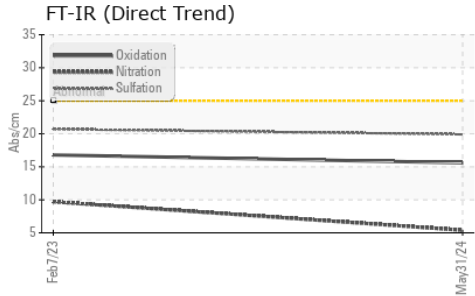
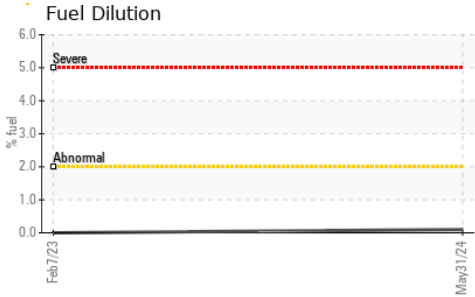
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	5	---
Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	---
Potassium	ppm	ASTM D5185(m)	>20	<b>9</b>	30	---
Fuel	%	ASTM D7593*	>2.0	<b>0.1</b>	<1.0	---

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>5.4</b>	9.7	---
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>19.9</b>	20.7	---



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	15.6	16.8	---

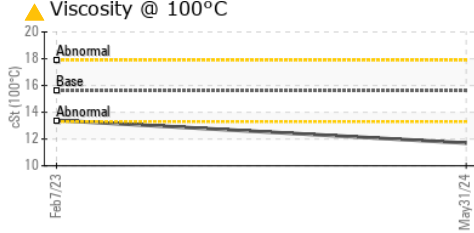
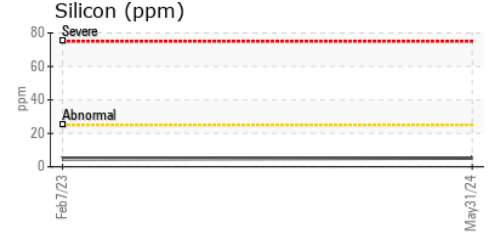
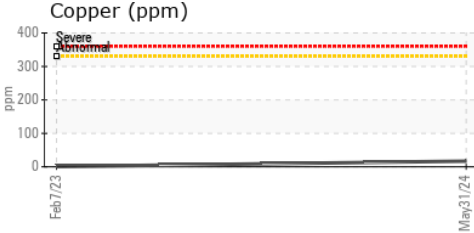
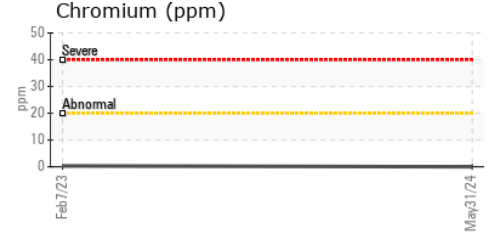
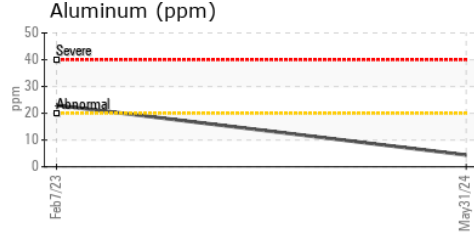
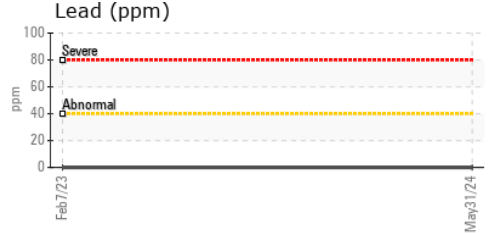
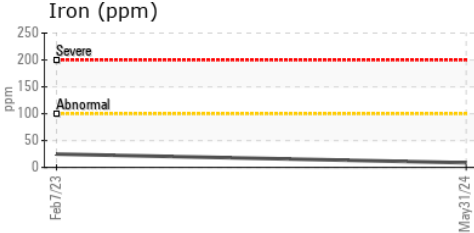
### VISUAL

method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	VLITE	---
Yellow Metal	scalar Visual*	NONE	NONE	---
Precipitate	scalar Visual*	NONE	NONE	---
Silt	scalar Visual*	NONE	NONE	---
Debris	scalar Visual*	NONE	NONE	---
Sand/Dirt	scalar Visual*	NONE	VLITE	---
Appearance	scalar Visual*	NORML	NORML	---
Odor	scalar Visual*	NORML	NORML	---
Emulsified Water	scalar Visual*	>0.2	NEG	---
Free Water	scalar Visual*	---	NEG	---

### FLUID PROPERTIES

method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.6	▲ 11.7	13.4	---

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 987 - Charlottetown**  
**Sample No.** : GFL0122261 **Received** : 06 Jun 2024 **7 Superior Crescent**  
**Lab Number** : 02640177 **Tested** : 07 Jun 2024 **Charlottetown, PE**  
**Unique Number** : 5789339 **Diagnosed** : 10 Jun 2024 - Kevin Marson **CA C1A 7N5**  
**Test Package** : MOB 1 ( Additional Tests: BottomAnalysis, FILTERPATCH, FuelDilution, PercentFuel, Viscosity) **Contact: Vicki Metcalfe**  
**To discuss this sample report, contact Customer Service at 1-800-268-2131.** **vmetcalfe@gflenv.com**

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. **T: (782)377-5918**  
 Validity of results and interpretation are based on the sample and information as supplied. **F: (506)453-9490**