

Machine Id  
**829113**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

**RECOMMENDATION**

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0122244</b>	---	---
Sample Date		Client Info		<b>02 Jun 2024</b>	---	---
Machine Age	hrs	Client Info		<b>8530</b>	---	---
Oil Age	hrs	Client Info		<b>438</b>	---	---
Filter Age	hrs	Client Info		<b>438</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

**WEAR**

Iron ppm levels are abnormal. Aluminum ppm levels are marginal. Cylinder, crank, or cam shaft wear is indicated.

PQ		ASTM D8184*		<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>75	<b>▲ 94</b>	---	---
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	---	---
Nickel	ppm	ASTM D5185(m)	>4	<b>2</b>	---	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>15	<b>▲ 15</b>	---	---
Lead	ppm	ASTM D5185(m)	>25	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>100	<b>13</b>	---	---
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

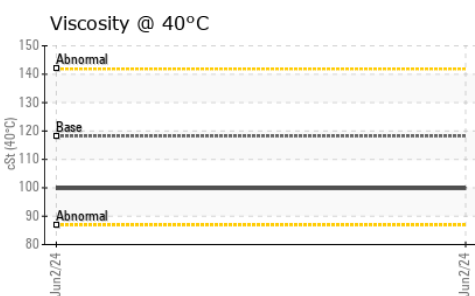
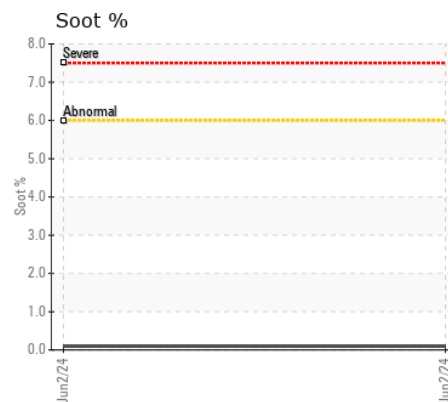
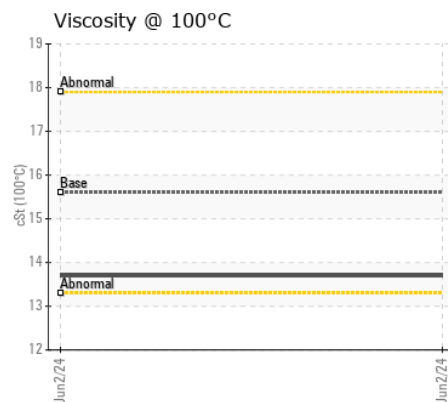
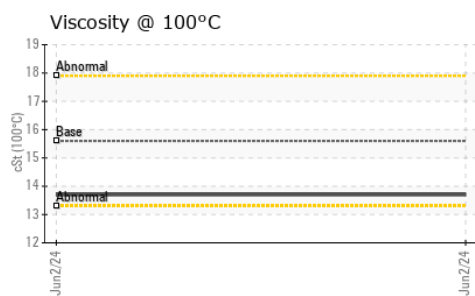
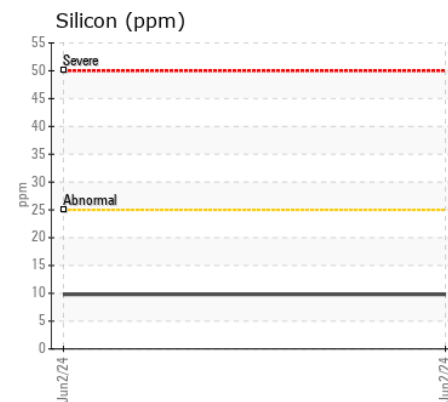
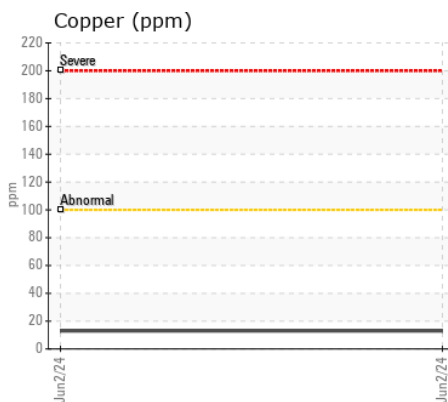
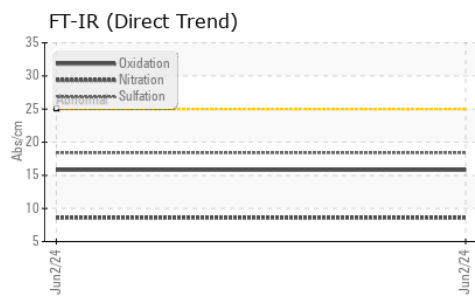
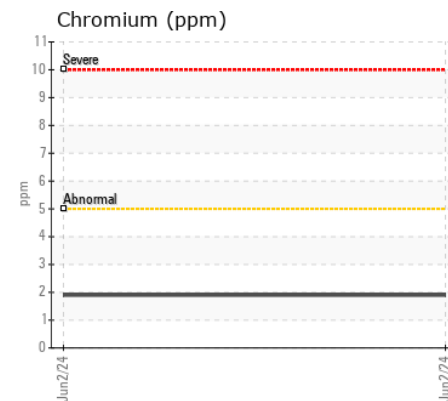
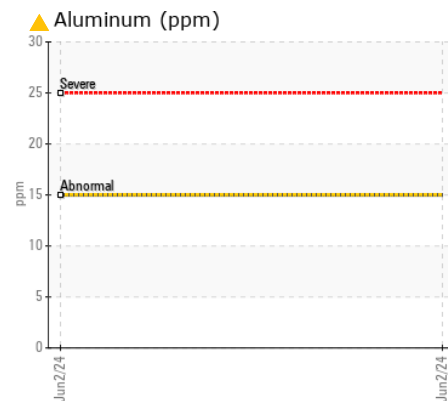
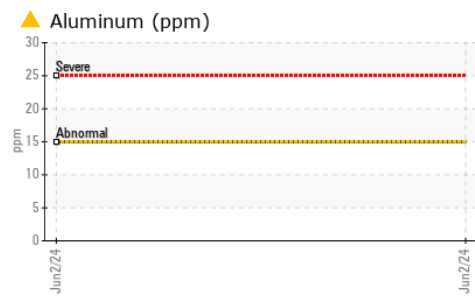
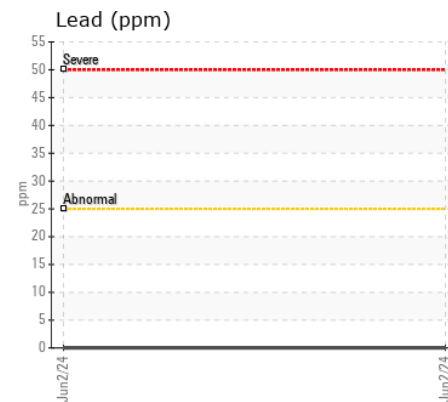
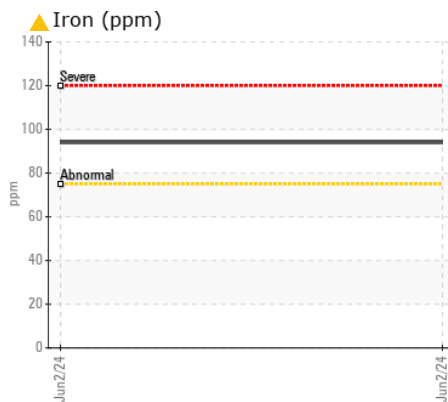
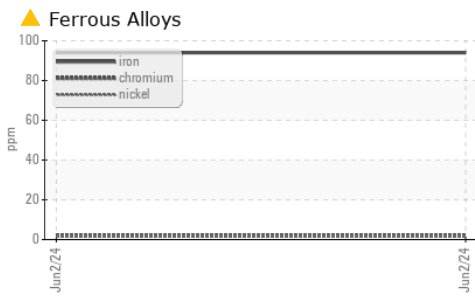
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>10</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>5</b>	---	---
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>6	<b>0.1</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.6</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.4</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

**FLUID CONDITION**

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>3</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>951</b>	---	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1035</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>960</b>	---	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1167</b>	---	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2386</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>15.8</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>99.8</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.7</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>138</b>	---	---



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0122244  
**Lab Number** : 02644505  
**Unique Number** : 5802044  
**Test Package** : MOB 1 ( Additional Tests: KV40, PQ, VI, Visual )

**GFL Environmental - 987 - Charlottetown**  
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*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.*