

Machine Id  
**WESTERN STAR 420077**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0122273</b>	---	---
Sample Date		Client Info		<b>15 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>9932</b>	---	---
Oil Age	hrs	Client Info		<b>663</b>	---	---
Filter Age	hrs	Client Info		<b>663</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>29</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>9</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<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**

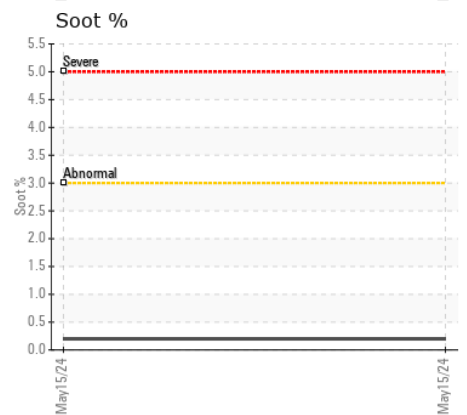
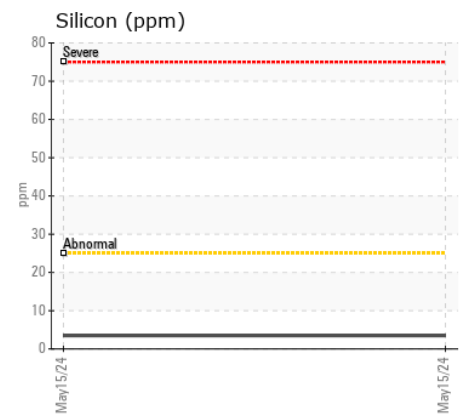
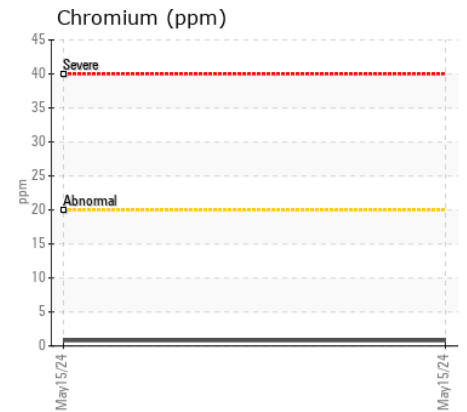
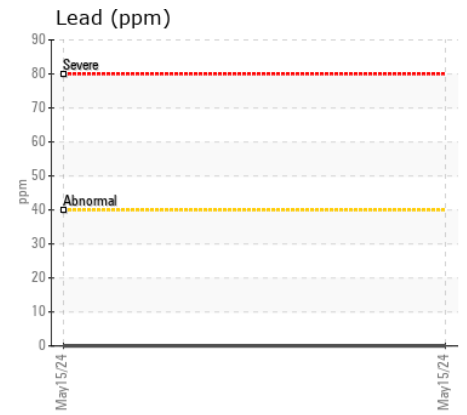
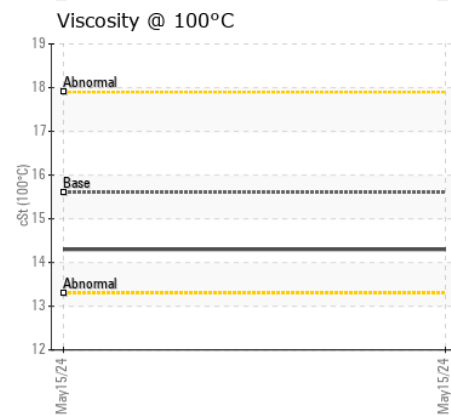
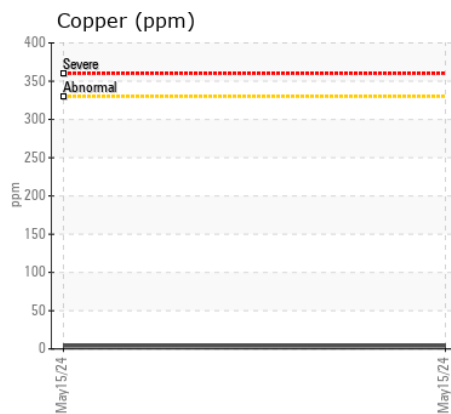
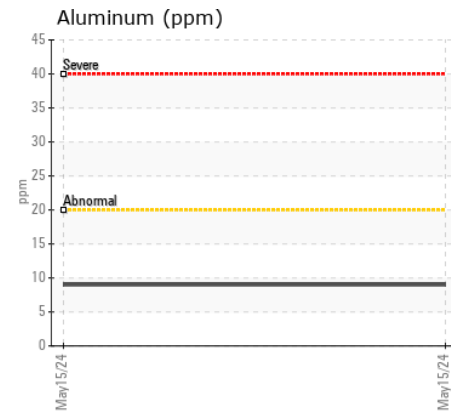
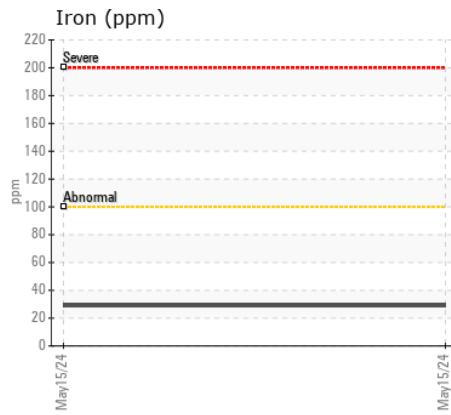
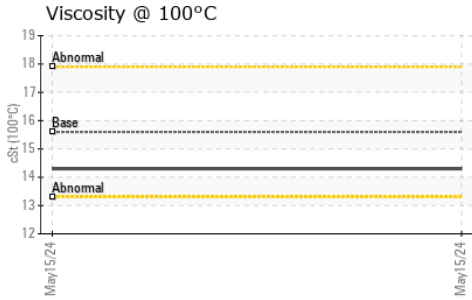
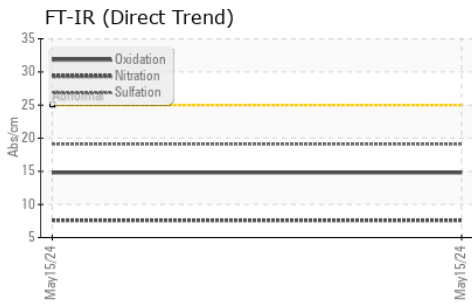
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>10</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0.2</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.6</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.1</b>	---	---
Silt	scalar	Visual*	NONE	<b>VLITE</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 condition of the oil is acceptable for the time in service.

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>60</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>979</b>	---	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1058</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>961</b>	---	---
Zinc	ppm	ASTM D5185(m)	1270	<b>1163</b>	---	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2442</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>14.8</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.3</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0122273 **Received** : 24 May 2024  
**Lab Number** : **02637372** **Tested** : 24 May 2024  
**Unique Number** : 5786534 **Diagnosed** : 24 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

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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.