



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**723001**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Confirm the source of the lubricant being utilized for top-up/fill.  
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0113228</b>	GFL0071298	GFL0057683
Sample Date		Client Info		<b>15 Apr 2024</b>	13 Mar 2023	28 Sep 2022
Machine Age	hrs	Client Info		<b>18724</b>	19666	20649
Oil Age	hrs	Client Info		<b>596</b>	596	1101
Filter Age	hrs	Client Info		<b>596</b>	596	1101
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	<b>19</b>	23	22
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>1</b>	2	3
Titanium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	4	4
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	2	2
Copper	ppm	ASTM D5185(m)	>330	<b>4</b>	4	4
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

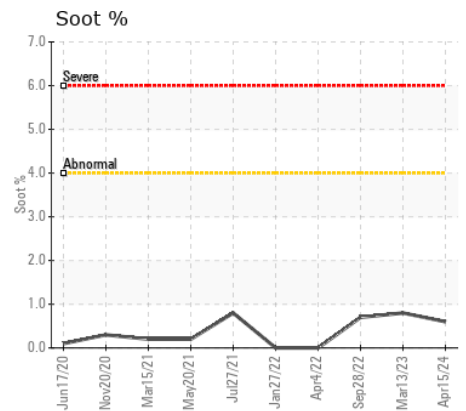
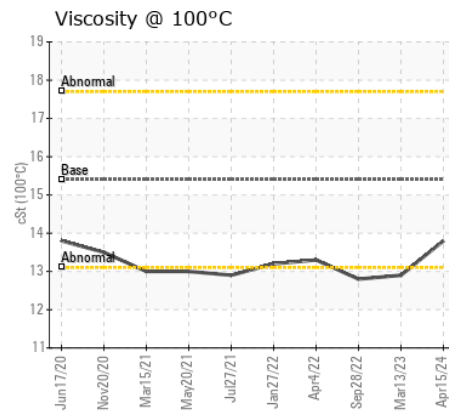
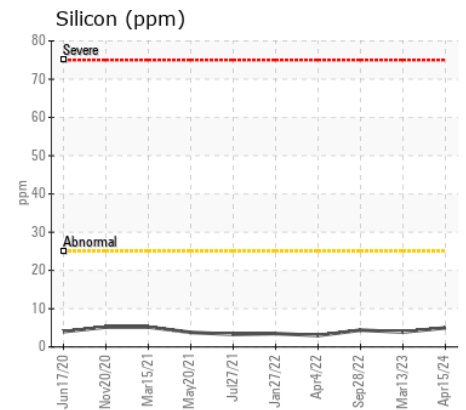
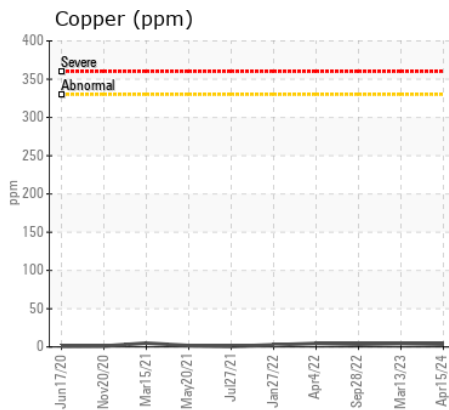
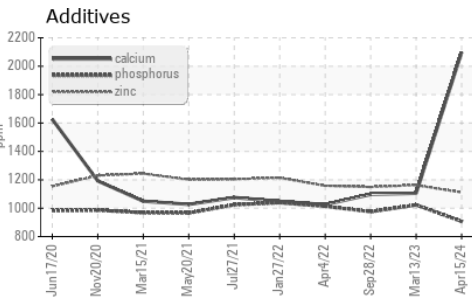
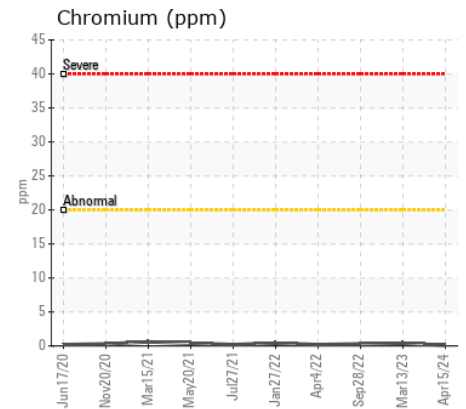
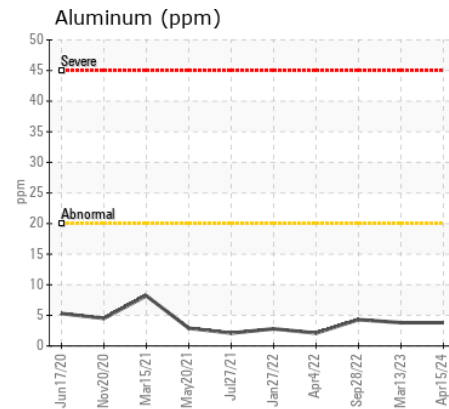
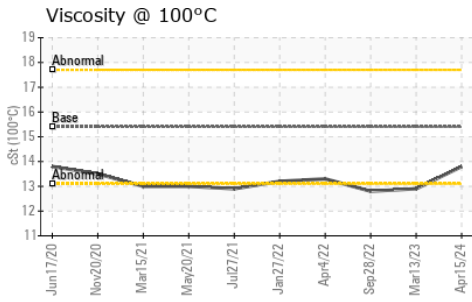
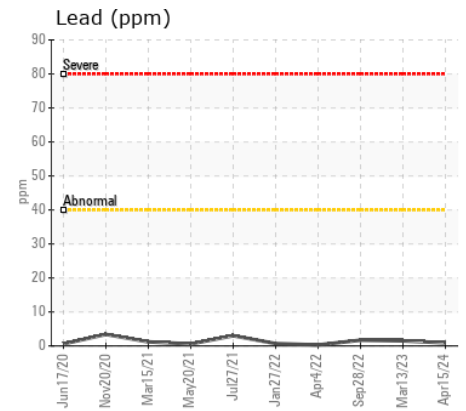
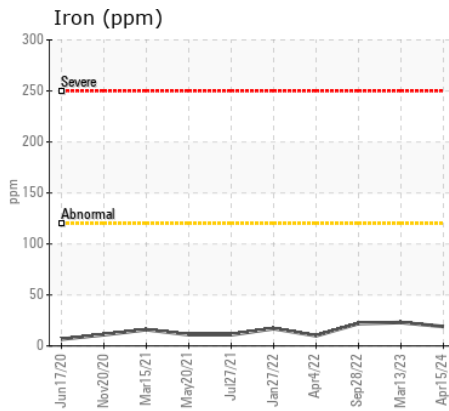
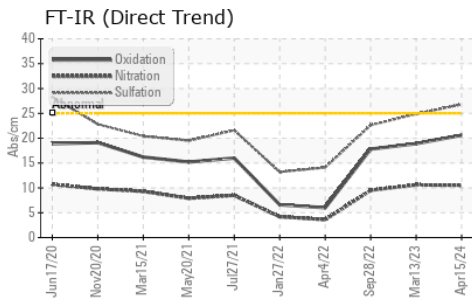
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	0	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	1.9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>4	<b>0.6</b>	0.8	0.7
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.5</b>	10.6	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>26.8</b>	24.9	22.6
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>8</b>	5	6
Boron	ppm	ASTM D5185(m)	0	<b>28</b>	2	3
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>7</b>	59	58
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>113</b>	927	915
Calcium	ppm	ASTM D5185(m)	1070	<b>2098</b>	1105	1097
Phosphorus	ppm	ASTM D5185(m)	1150	<b>907</b>	1023	975
Zinc	ppm	ASTM D5185(m)	1270	<b>1111</b>	1162	1149
Sulfur	ppm	ASTM D5185(m)	2060	<b>2661</b>	2308	2268
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.6</b>	18.9	17.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>13.8</b>	12.9	12.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0113228  
**Lab Number** : 02629127  
**Unique Number** : 5762259  
**Test Package** : MOB 1  
**Received** : 16 Apr 2024  
**Tested** : 16 Apr 2024  
**Diagnosed** : 16 Apr 2024 - Wes Davis

**GFL Environmental - 246 - Windsor**  
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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.