



Machine Id  
**728002**  
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>GFL0113222</b>	GFL0113224	GFL0102870
Sample Date		Client Info		<b>18 Jun 2024</b>	17 May 2024	21 Mar 2024
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>15187</b>	0	14592
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	<b>7</b>	7	8
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>3</b>	2	4
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

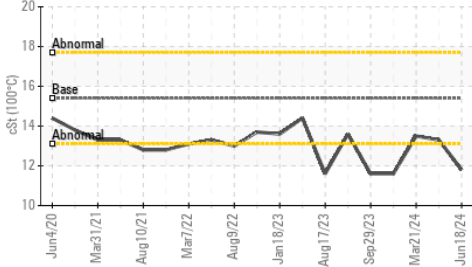
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	1	1
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	6	5
Fuel	%	ASTM D7593*	>3.0	<b>0.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>4	<b>0.2</b>	0.4	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.9</b>	8.5	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>23.0</b>	22.4	22.6
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>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

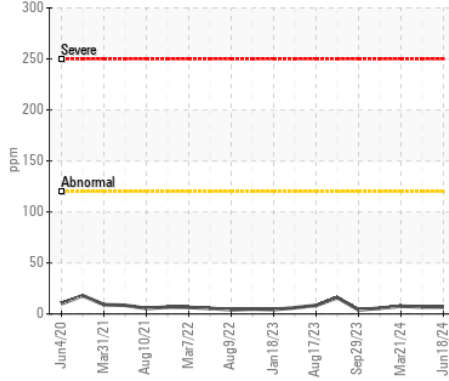
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	4	4
Boron	ppm	ASTM D5185(m)	0	<b>35</b>	113	98
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>37</b>	1	5
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>426</b>	20	69
Calcium	ppm	ASTM D5185(m)	1070	<b>1656</b>	2127	2042
Phosphorus	ppm	ASTM D5185(m)	1150	<b>701</b>	926	859
Zinc	ppm	ASTM D5185(m)	1270	<b>868</b>	1129	1090
Sulfur	ppm	ASTM D5185(m)	2060	<b>1978</b>	2791	2555
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.9</b>	16.3	17.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 11.8</b>	13.3	13.5

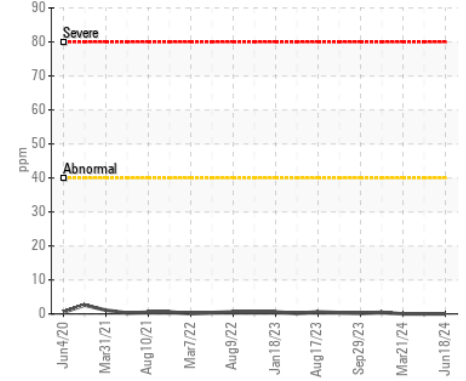
▲ Viscosity @ 100°C



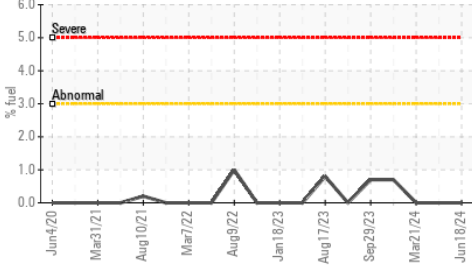
Iron (ppm)



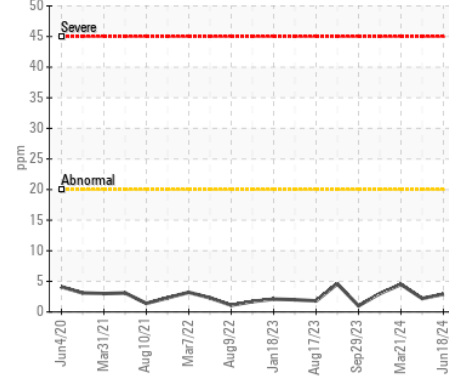
Lead (ppm)



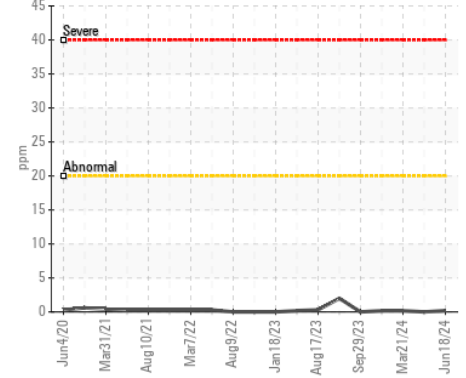
Fuel Dilution



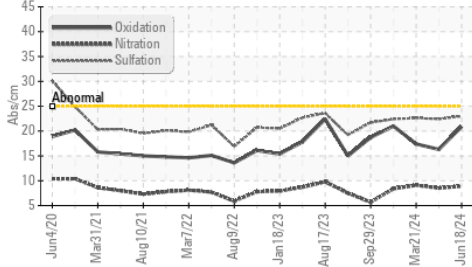
Aluminum (ppm)



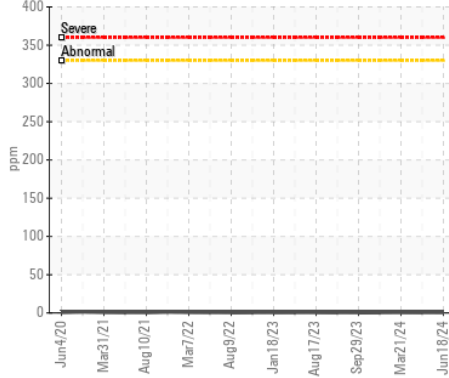
Chromium (ppm)



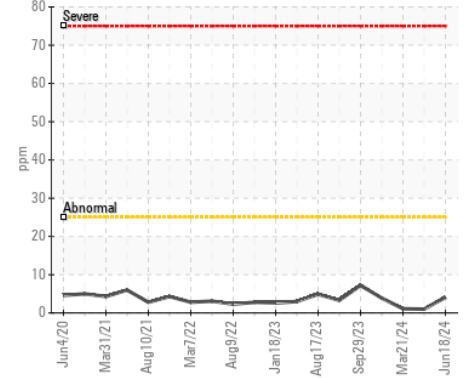
FT-IR (Direct Trend)



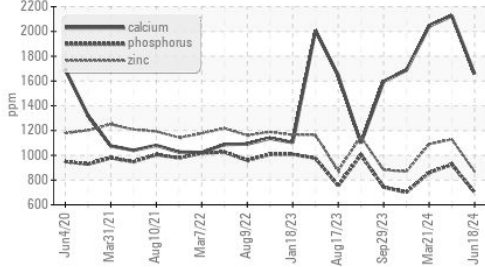
Copper (ppm)



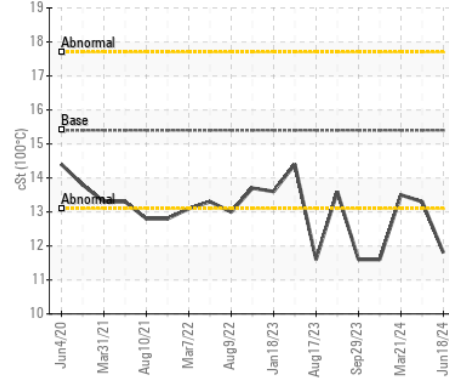
Silicon (ppm)



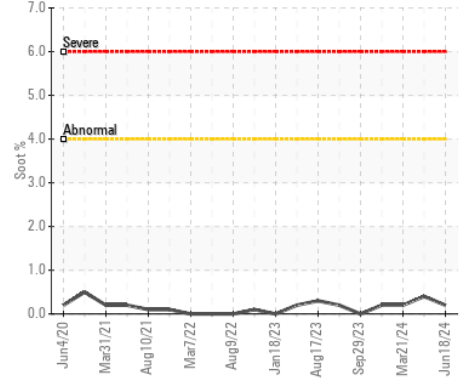
Additives



▲ Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0113222  
**Lab Number** : 02643184  
**Unique Number** : 5800723  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, Visual )

**GFL Environmental - 246 - Windsor**  
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 T: (519)944-8009  
 F:

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.