



Machine Id  
**928001**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0097331</b>	GFL0090873	GFL0078506
Sample Date		Client Info		<b>04 Jan 2024</b>	21 Sep 2023	07 Jul 2023
Machine Age	hrs	Client Info		<b>10266</b>	0	199367
Oil Age	hrs	Client Info		<b>0</b>	9589	0
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	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	<b>5</b>	8	14
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	1	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	<1	2
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

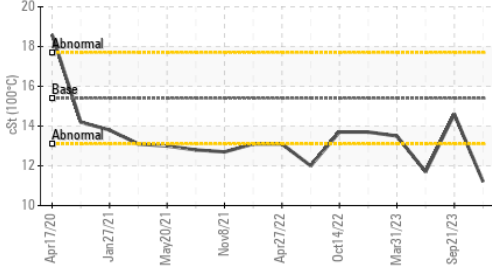
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	3	6
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	5	<1
Fuel	%	ASTM D7593*	>3.0	<b>2.3</b>	<1.0	0.8
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	0.0	NEG
Soot %	%	ASTM D7844*	>4	<b>0.2</b>	0.4	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.1</b>	8.4	9.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.3</b>	22.2	23.0
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

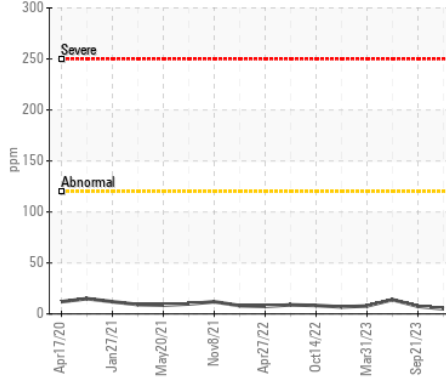
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	5	4
Boron	ppm	ASTM D5185(m)	0	<b>30</b>	73	28
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>40</b>	5	43
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>488</b>	69	543
Calcium	ppm	ASTM D5185(m)	1070	<b>1689</b>	2145	1664
Phosphorus	ppm	ASTM D5185(m)	1150	<b>701</b>	860	788
Zinc	ppm	ASTM D5185(m)	1270	<b>852</b>	1116	930
Sulfur	ppm	ASTM D5185(m)	2060	<b>2034</b>	2504	2001
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>21.6</b>	17.3	21.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 11.2</b>	14.6	▲ 11.7

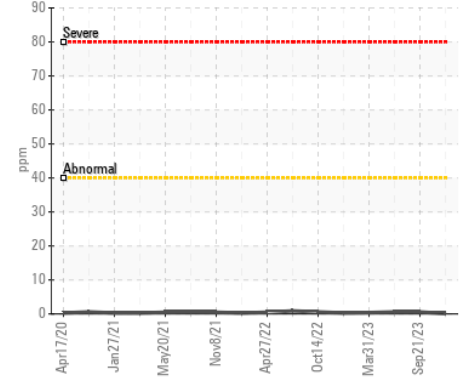
▲ Viscosity @ 100°C



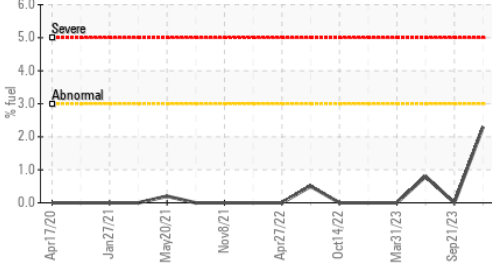
Iron (ppm)



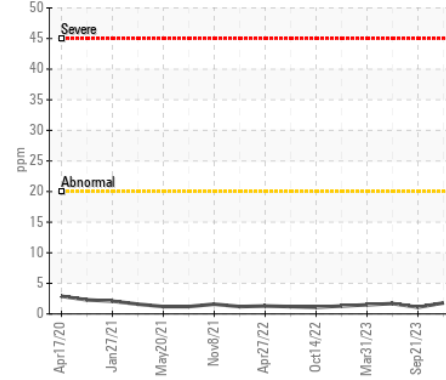
Lead (ppm)



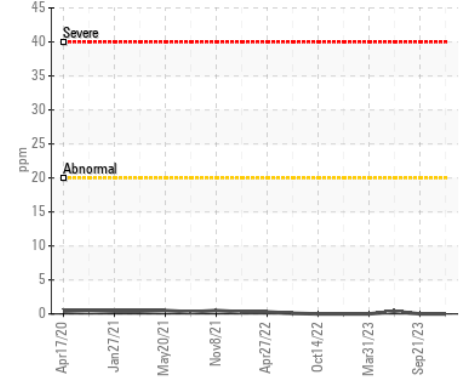
Fuel Dilution



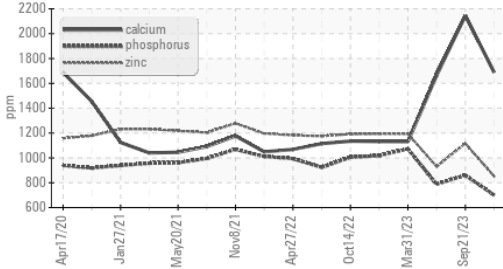
Aluminum (ppm)



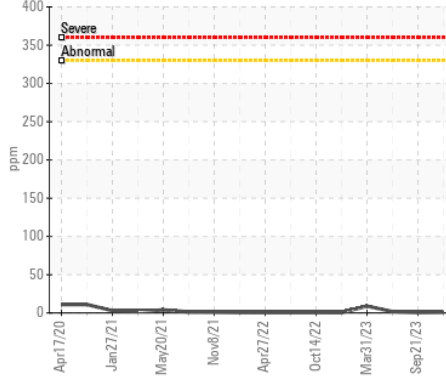
Chromium (ppm)



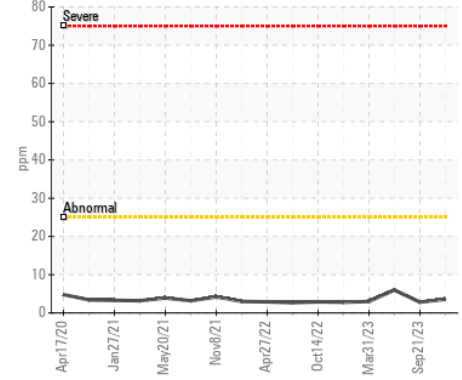
Additives



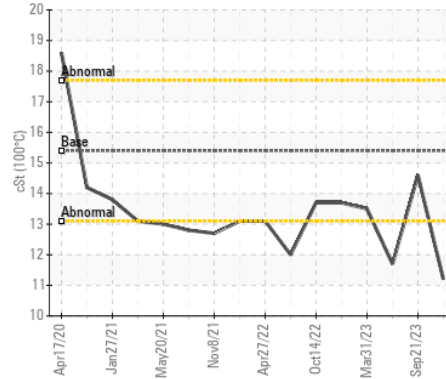
Copper (ppm)



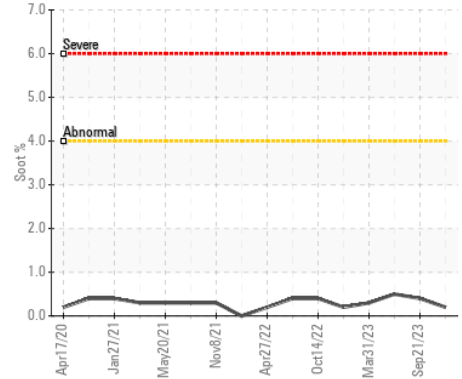
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0097331  
**Lab Number** : 02606718  
**Unique Number** : 5707804  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**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.