



Machine Id  
**414008**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

### 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>GFL0108432</b>	---	---
Sample Date		Client Info		<b>17 Jan 2024</b>	---	---
Machine Age	kms	Client Info		<b>10760</b>	---	---
Oil Age	kms	Client Info		<b>0</b>	---	---
Filter Age	kms	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>120	<b>29</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>5	<b>3</b>	---	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>6</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>6</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>269</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

### CONTAMINATION

Fuel content negligible. 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.

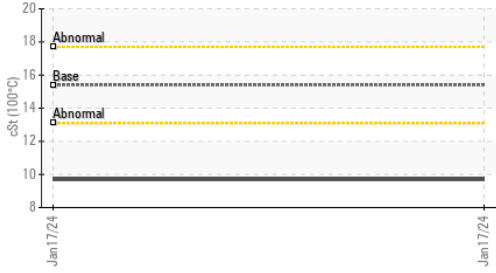
Silicon	ppm	ASTM D5185(m)	>25	<b>51</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>6</b>	---	---
Fuel	%	ASTM D7593*	>3.0	<b>0.8</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>4	<b>0.1</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.3</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>25.4</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

### FLUID CONDITION

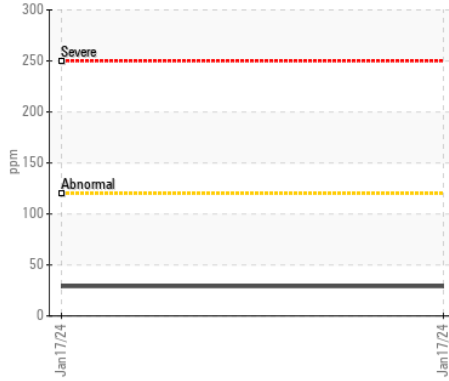
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>269</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>115</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>3</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>676</b>	---	---
Calcium	ppm	ASTM D5185(m)	1070	<b>1395</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>677</b>	---	---
Zinc	ppm	ASTM D5185(m)	1270	<b>787</b>	---	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>2050</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>22.0</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 9.7</b>	---	---

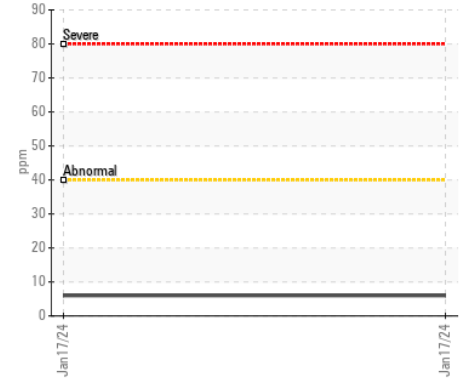
▲ Viscosity @ 100°C



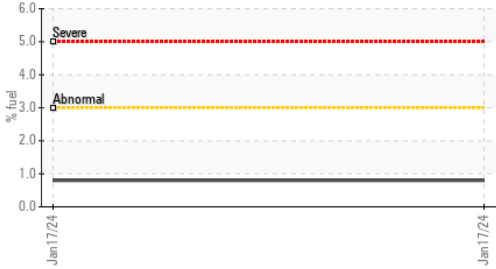
Iron (ppm)



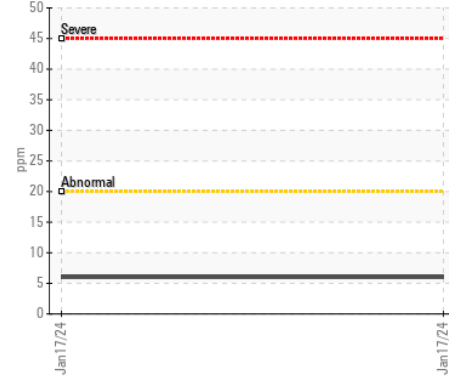
Lead (ppm)



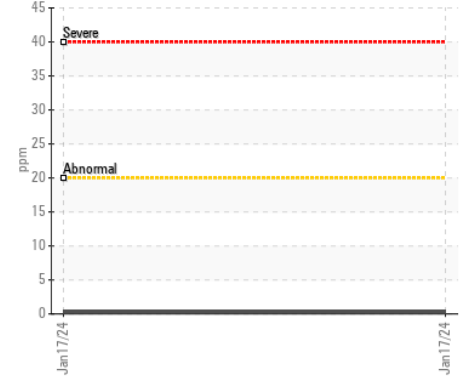
Fuel Dilution



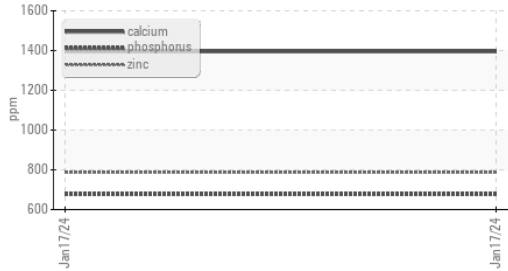
Aluminum (ppm)



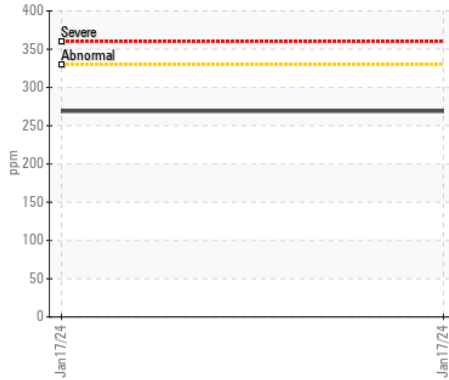
Chromium (ppm)



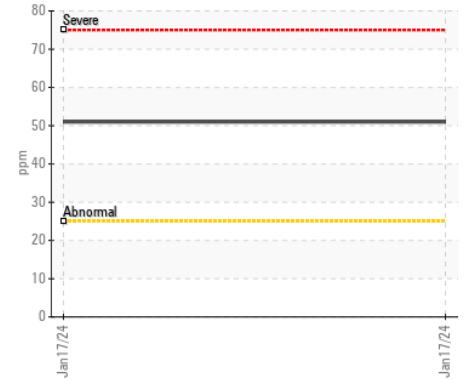
Additives



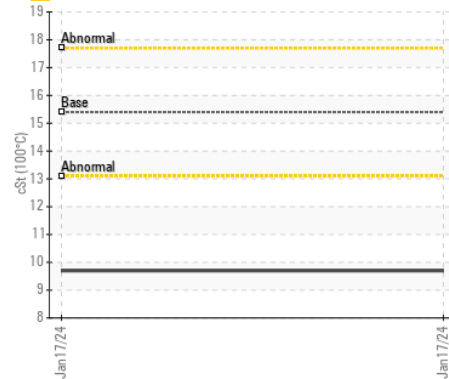
Copper (ppm)



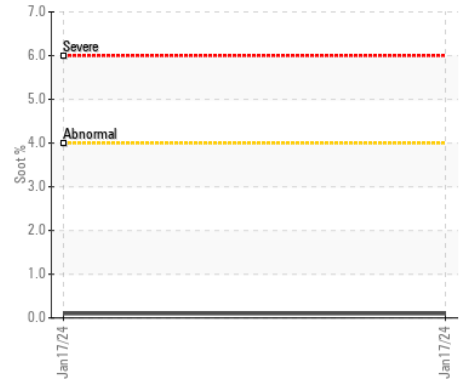
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling  
**Sample No.** : GFL0108432 **Received** : 22 Jan 2024 3668 Weston Road  
**Lab Number** : 02610124 **Diagnosed** : 23 Jan 2024 North York, ON  
**Unique Number** : 5711210 **Diagnostician** : Kevin Marson CA M9L 1W2  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel ) Contact: Amanda Cipollone  
 acipollone@gflenv.com

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.