

Area  
**[1238449]**  
Machine Id  
**114018**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0028551</b>	---	---
Sample Date		Client Info		<b>06 Mar 2024</b>	---	---
Machine Age	hrs	Client Info		<b>594</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	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)	>90	<b>47</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>2	<b>1</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>7</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>27</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>2</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

**CONTAMINATION**

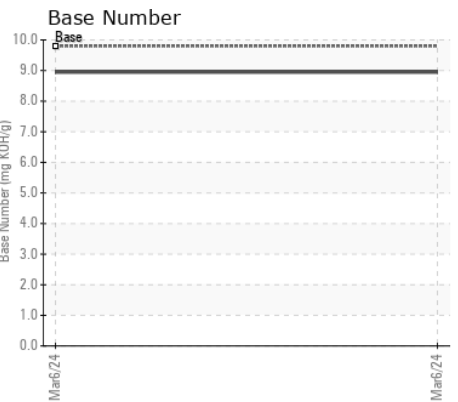
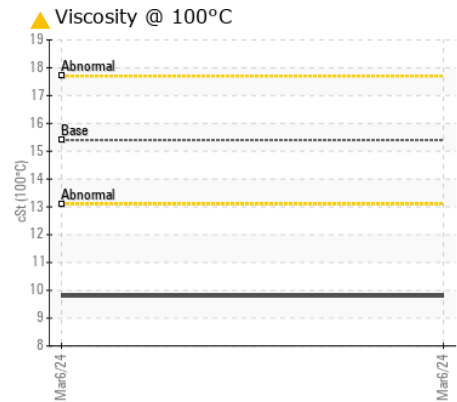
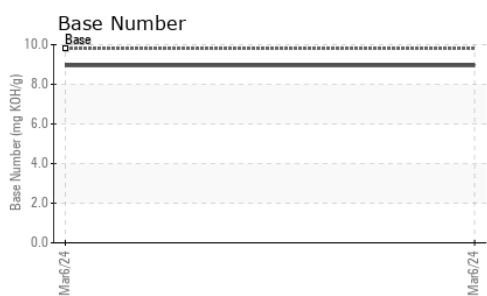
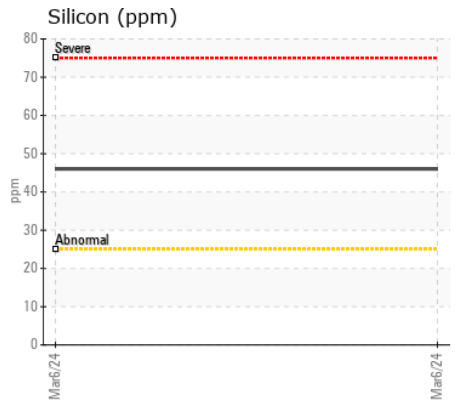
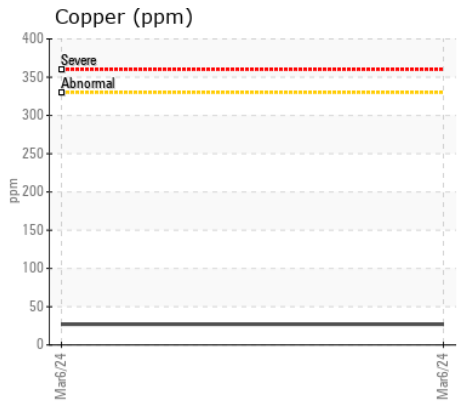
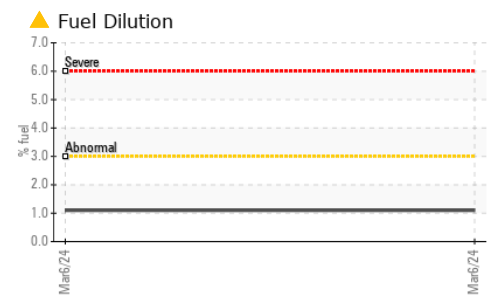
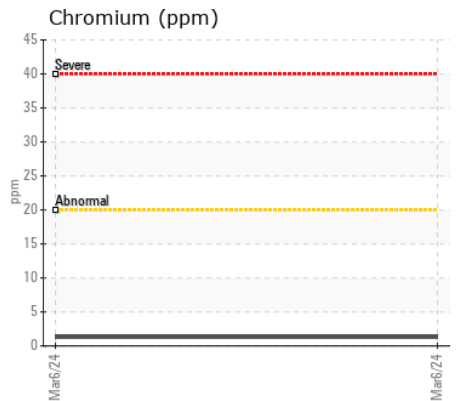
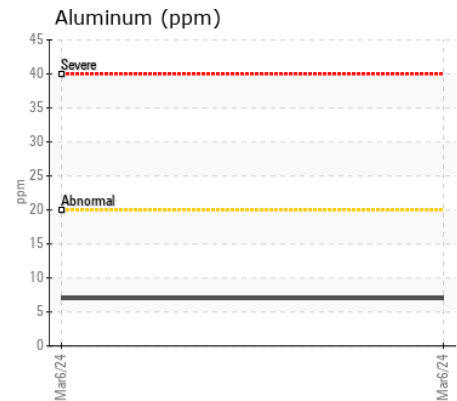
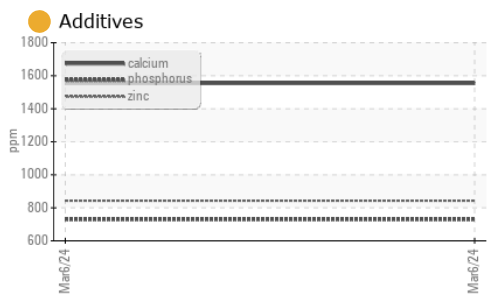
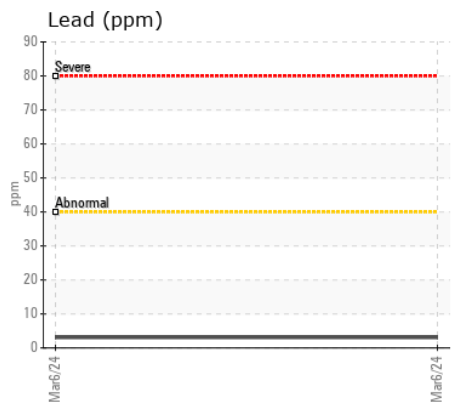
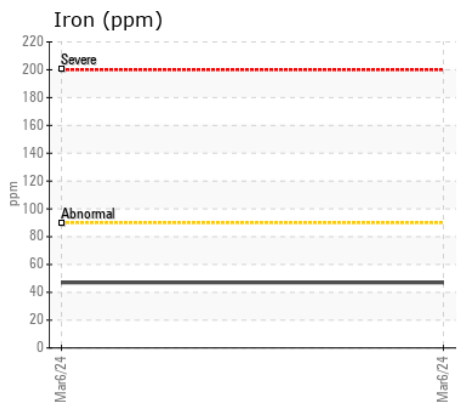
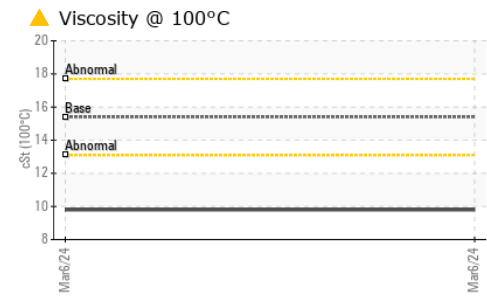
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring.

Silicon	ppm	ASTM D5185(m)	>25	<b>46</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>18</b>	---	---
Fuel	%	ASTM D7593*	>3.0	<b>▲ 1.1</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>6	<b>0.1</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.2</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>23.0</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>6</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>● 39</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>5</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	60	<b>49</b>	---	---
Manganese	ppm	ASTM D5185(m)	0	<b>5</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1010	<b>● 569</b>	---	---
Calcium	ppm	ASTM D5185(m)	1070	<b>● 1554</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	<b>● 730</b>	---	---
Zinc	ppm	ASTM D5185(m)	1270	<b>● 843</b>	---	---
Sulfur	ppm	ASTM D5185(m)	2060	<b>1984</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>21.7</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>8.95</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>▲ 9.8</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0028551 **Received** : 08 Mar 2024  
**Lab Number** : 02620748 **Tested** : 11 Mar 2024  
**Unique Number** : 5737858 **Diagnosed** : 11 Mar 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 207 - Pickering SW**  
 1034 TOY AVENUE, PICKERING YARD  
 PICKERING, ON  
 CA L1W 3P1  
 Contact: Ian Patton  
 ipatton@gflenv.com  
 T: (905)831-6297  
 F: (905)426-3577

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.