



Machine Id  
**401198**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0112007</b>	GFL0111993	GFL0090404
Sample Date		Client Info		<b>16 May 2024</b>	21 Mar 2024	22 Jan 2024
Machine Age	kms	Client Info		<b>20574</b>	440064	430886
Oil Age	kms	Client Info		<b>0</b>	0	0
Filter Age	kms	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>120	<b>8</b>	8	12
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	4	8
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</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**

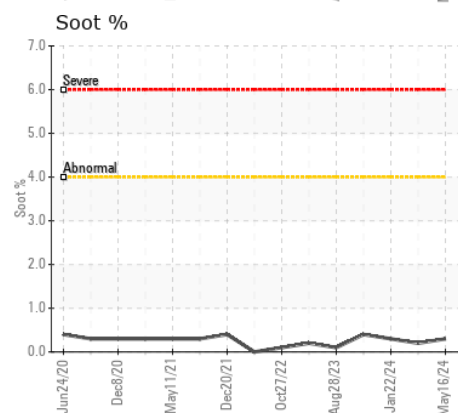
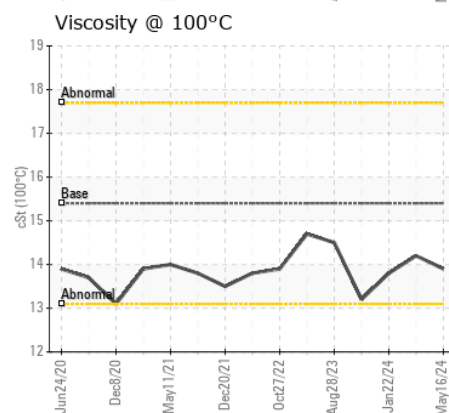
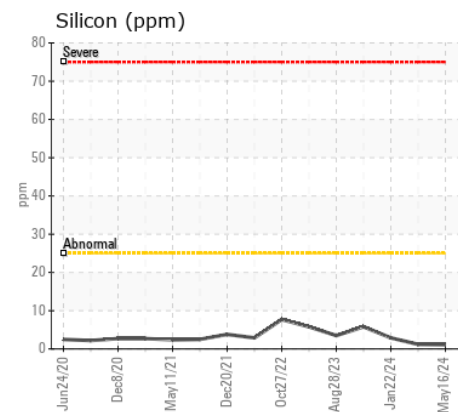
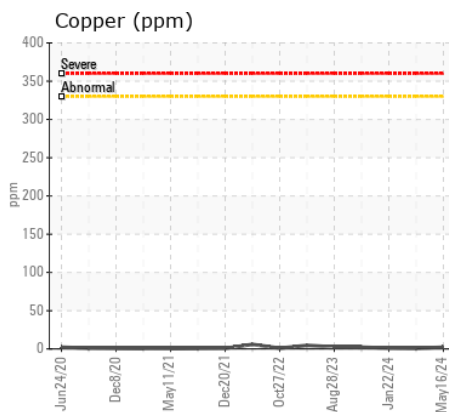
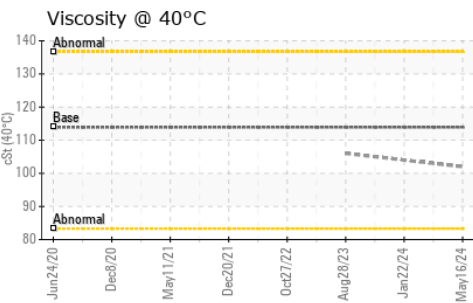
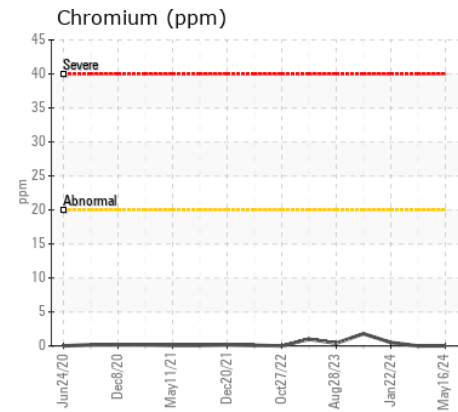
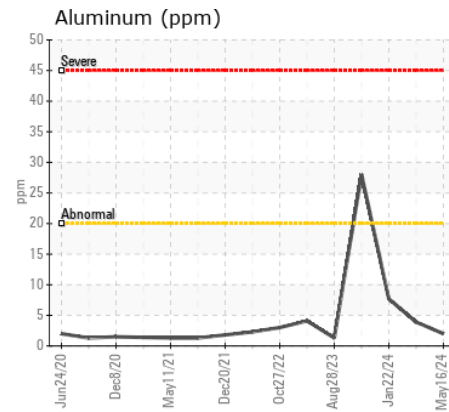
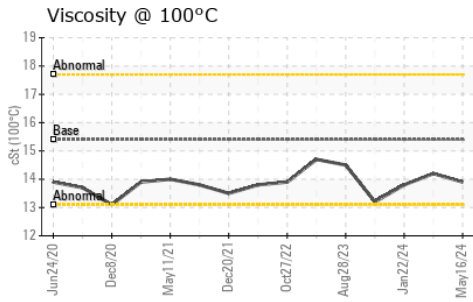
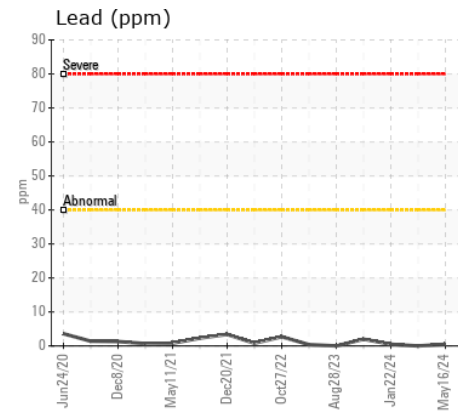
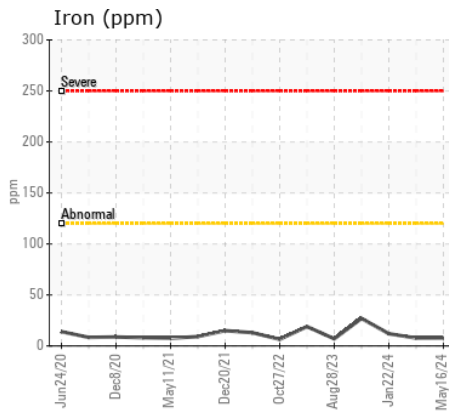
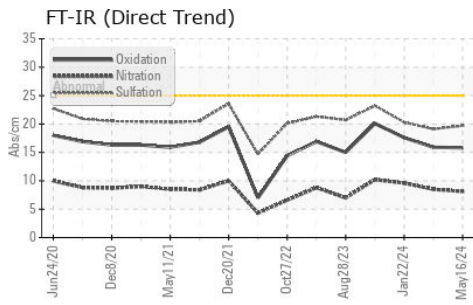
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>1</b>	1	3
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	1	2
Fuel		WC Method	>3.0	<b>&lt;1.0</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>0.3</b>	0.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.1</b>	8.5	9.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.7</b>	19.1	20.3
Silt	scalar	Visual*	NONE	<b>VLITE</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**

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>5</b>	3	4
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	2	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>59</b>	59	59
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>965</b>	985	955
Calcium	ppm	ASTM D5185(m)	1070	<b>1063</b>	1058	1038
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1013</b>	1003	1009
Zinc	ppm	ASTM D5185(m)	1270	<b>1211</b>	1192	1151
Sulfur	ppm	ASTM D5185(m)	2060	<b>2505</b>	2510	2590
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>15.8</b>	15.9	17.6
Visc @ 40°C	cSt	ASTM D7279(m)	113.9	<b>102</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	<b>13.9</b>	14.2	13.8
Viscosity Index (VI)	Scale	ASTM D2270*	142	<b>137</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0112007 **Received** : 21 May 2024  
**Lab Number** : 02636589 **Tested** : 22 May 2024  
**Unique Number** : 5785751 **Diagnosed** : 22 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )

**GFL Environmental - 216M**  
 2475 Beryl Drive  
 Oakville, ON  
 CA L6J 7X4  
 Contact: Matthew Guinness  
 mgunness@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.

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F: