

Machine Id  
**OE648**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON UHP 5W40 (13 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0088296</b>	PC0064512	PC0053485
Sample Date		Client Info		<b>08 May 2024</b>	10 Jun 2022	27 Sep 2021
Machine Age	hrs	Client Info		<b>2845</b>	2177	1728
Oil Age	hrs	Client Info		<b>0</b>	0	500
Filter Age	hrs	Client Info		<b>0</b>	0	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	<b>12</b>	12	10
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
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**

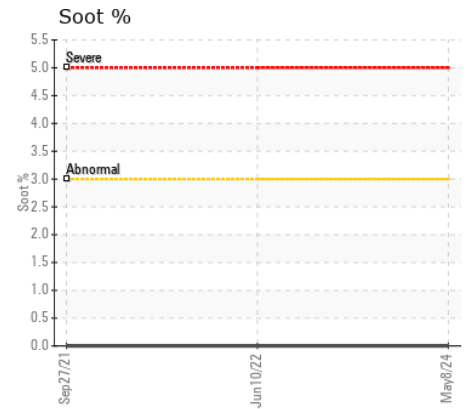
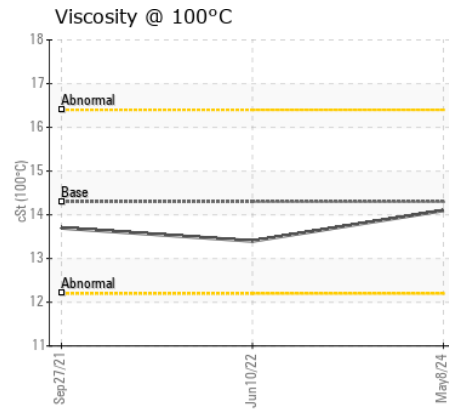
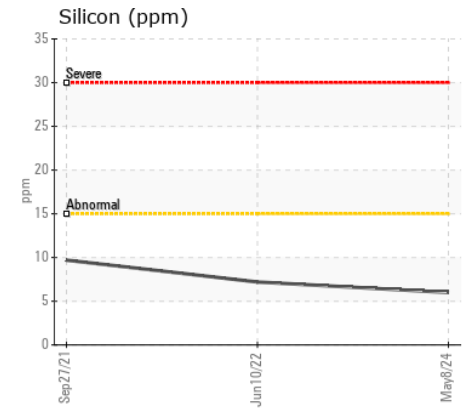
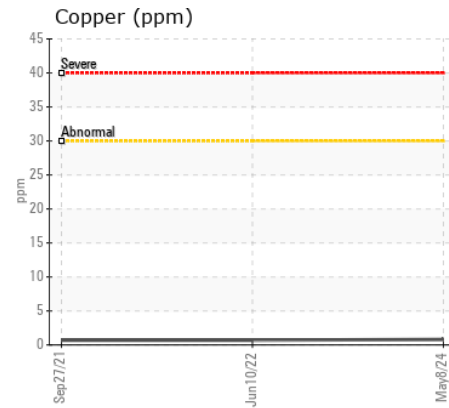
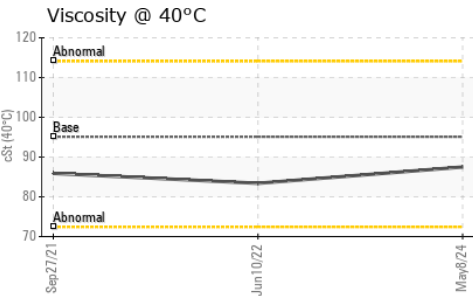
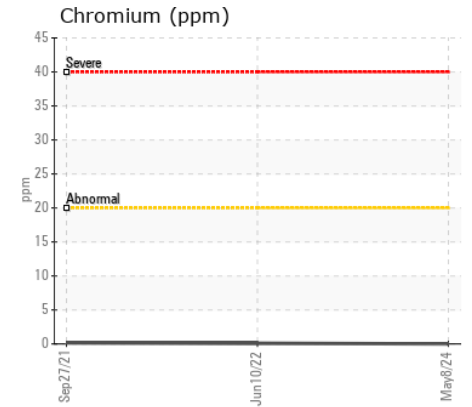
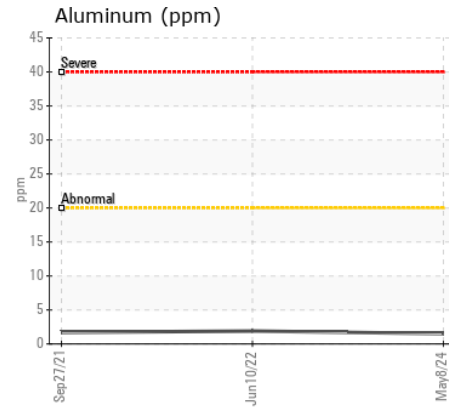
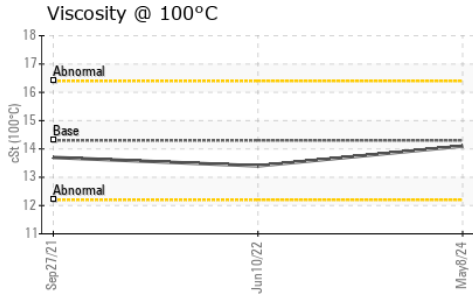
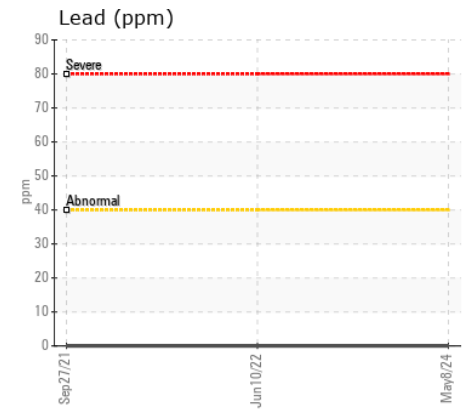
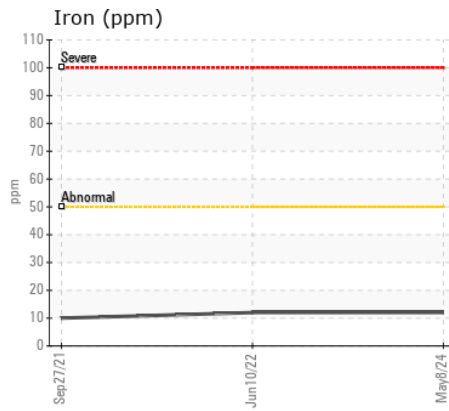
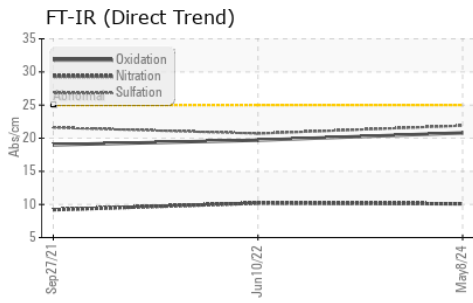
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>6</b>	7	10
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	10.2	9.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.9</b>	20.7	21.6
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*	>0.1	<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>4</b>	4	4
Boron	ppm	ASTM D5185(m)	65	<b>37</b>	44	38
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>57</b>	58	56
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>1071</b>	1114	1124
Calcium	ppm	ASTM D5185(m)	820	<b>825</b>	852	886
Phosphorus	ppm	ASTM D5185(m)	1160	<b>950</b>	1001	1063
Zinc	ppm	ASTM D5185(m)	1260	<b>1159</b>	1222	1249
Sulfur	ppm	ASTM D5185(m)	3000	<b>2502</b>	2785	2742
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.8</b>	19.7	19.0
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	<b>87.5</b>	83.4	85.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>14.1</b>	13.4	13.7
Viscosity Index (VI)	Scale	ASTM D2270*	169	<b>166</b>	163	163



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0088296  
**Lab Number** : 02636333  
**Unique Number** : 5785495  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
 151 Ram Forest Rd,  
 Stouffville, ON  
 CA L4A 2G8  
 Contact: Shannon Abbott  
 sabbott@gipi.com  
 T: (905)750-5900  
 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.