

Machine Id  
**RST1052**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON UHP 5W40 (6 LTR)**

**RECOMMENDATION**

Oil and filter 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>PC0081606</b>	PC0062397	PC0071445
Sample Date		Client Info		<b>27 May 2024</b>	21 Aug 2023	19 Jan 2023
Machine Age	hrs	Client Info		<b>3894</b>	3441	3034
Oil Age	hrs	Client Info		<b>0</b>	500	500
Filter Age	hrs	Client Info		<b>0</b>	500	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>8</b>	8	9
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	4	2
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>VLITE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

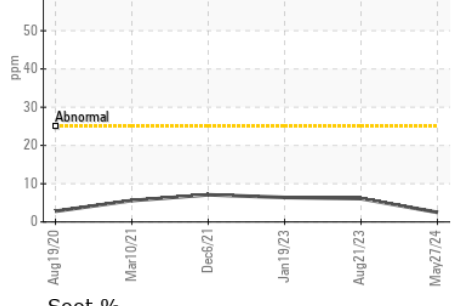
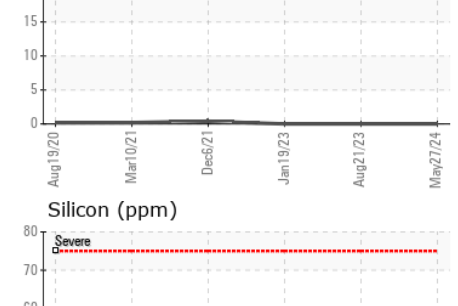
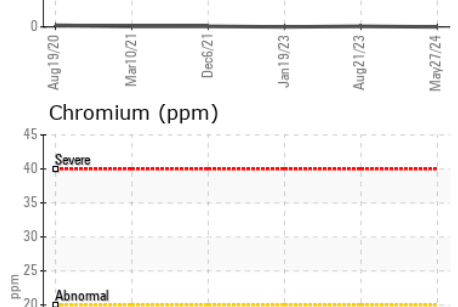
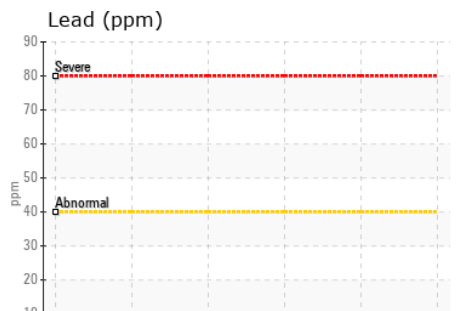
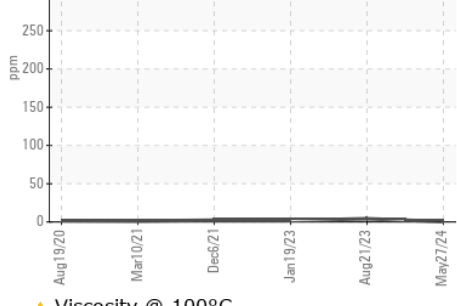
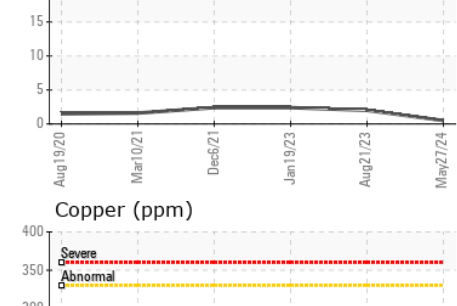
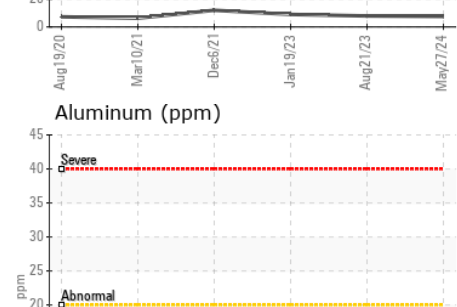
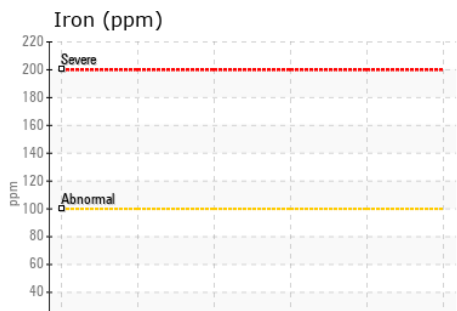
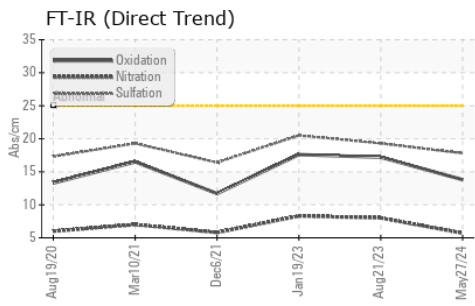
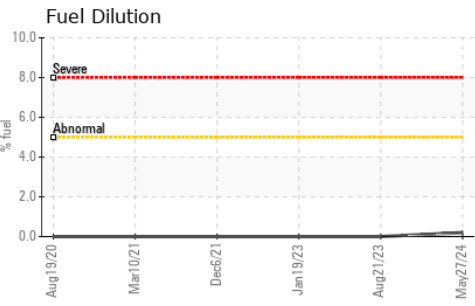
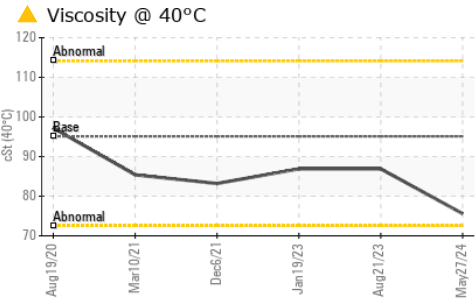
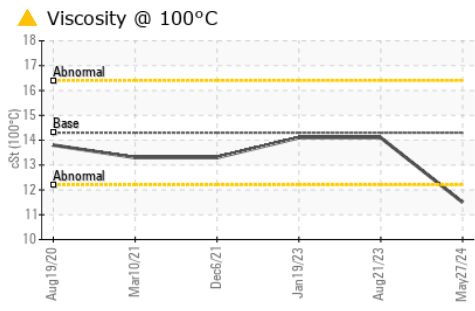
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>2</b>	6	6
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Fuel	%	ASTM D7593*	>5	<b>0.2</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*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>5.7</b>	8.0	8.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>17.8</b>	19.3	20.5
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*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	4	5
Boron	ppm	ASTM D5185(m)	65	<b>8</b>	46	49
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>59</b>	60	58
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>962</b>	1070	1100
Calcium	ppm	ASTM D5185(m)	820	<b>1024</b>	767	879
Phosphorus	ppm	ASTM D5185(m)	1160	<b>1015</b>	949	1123
Zinc	ppm	ASTM D5185(m)	1260	<b>1169</b>	1143	1246
Sulfur	ppm	ASTM D5185(m)	3000	<b>2585</b>	2744	3299
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>13.8</b>	17.2	17.6
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	<b>▲ 75.6</b>	86.9	86.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>▲ 11.5</b>	14.1	14.1
Viscosity Index (VI)	Scale	ASTM D2270*	169	<b>144</b>	167	167



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081606  
**Lab Number** : 02640706  
**Unique Number** : 5789868  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, KV40, PercentFuel, VI, Visual )  
**Received** : 10 Jun 2024  
**Tested** : 11 Jun 2024  
**Diagnosed** : 11 Jun 2024 - Kevin Marson  
 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.

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: