



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**ST299**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON UHP 5W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0078307</b>	PC0064439	PC0047779
Sample Date		Client Info		<b>13 Feb 2024</b>	31 Aug 2022	18 Aug 2021
Machine Age	hrs	Client Info		<b>2174</b>	1540	1212
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)	>100	<b>8</b>	7	18
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	0	<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	3
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

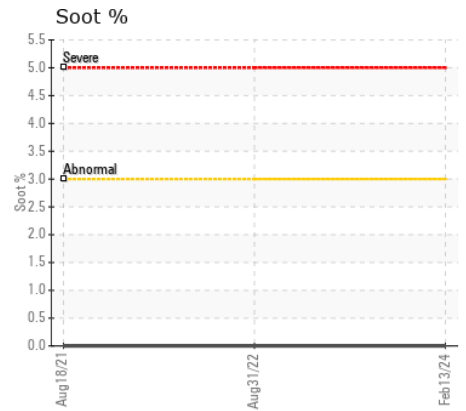
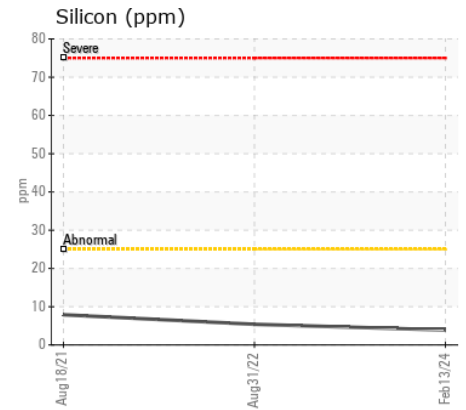
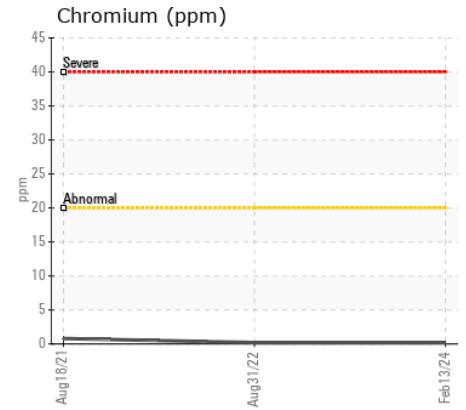
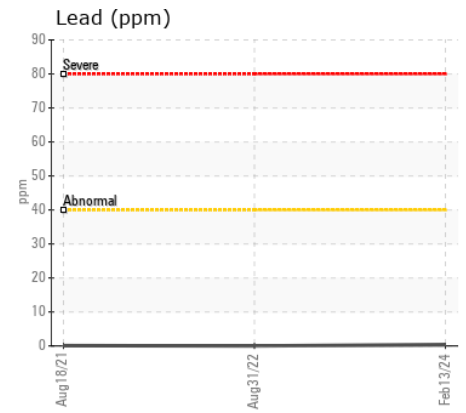
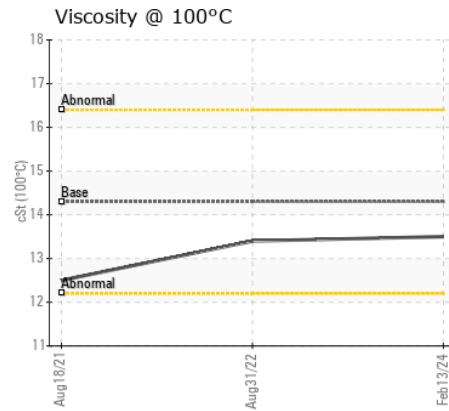
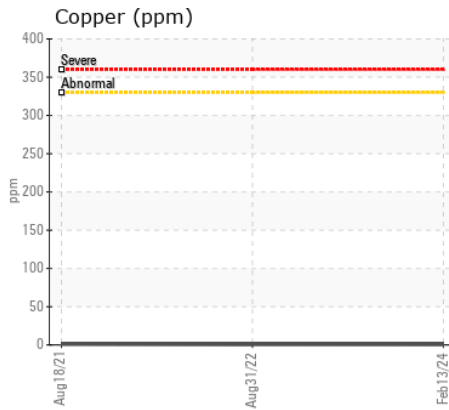
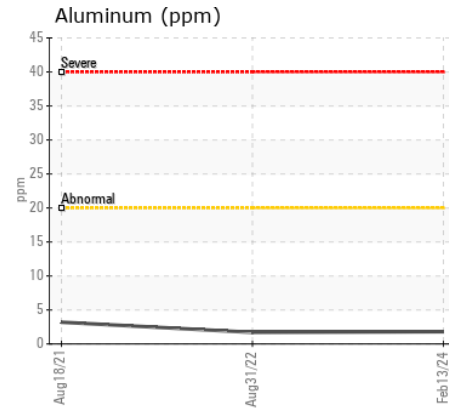
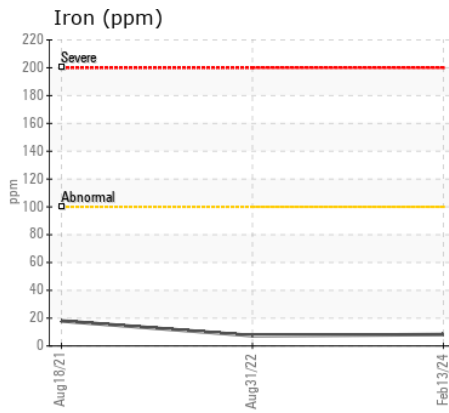
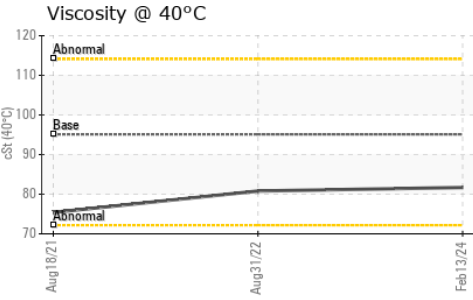
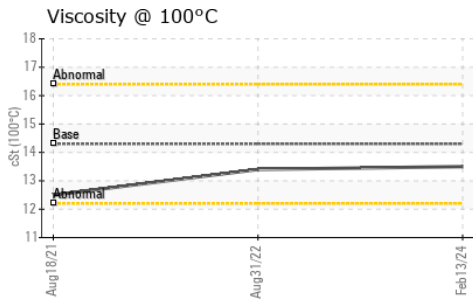
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	5	8
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Fuel		WC Method	>5	<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*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.9</b>	8.0	8.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.1</b>	19.6	19.7
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>4</b>	4	4
Boron	ppm	ASTM D5185(m)	65	<b>52</b>	53	48
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>56</b>	52	57
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>1084</b>	1029	1131
Calcium	ppm	ASTM D5185(m)	820	<b>817</b>	780	814
Phosphorus	ppm	ASTM D5185(m)	1160	<b>982</b>	1006	1088
Zinc	ppm	ASTM D5185(m)	1260	<b>1141</b>	1097	1248
Sulfur	ppm	ASTM D5185(m)	3000	<b>2835</b>	2633	2802
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>17.5</b>	18.0	18.2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	<b>81.7</b>	80.8	75.4
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>13.5</b>	13.4	12.5
Viscosity Index (VI)	Scale	ASTM D2270*	169	<b>168</b>	169	165



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0078307  
**Lab Number** : 02617408  
**Unique Number** : 5734518  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )  
**Received** : 22 Feb 2024  
**Tested** : 22 Feb 2024  
**Diagnosed** : 22 Feb 2024 - Wes Davis

Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
 151 Ram Forest Rd,  
 Stouffville, ON  
 CA L4A 2G8  
 Contact: Bill Acton  
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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: