

Machine Id  
**ST224**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON UHP 5W40 (38 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0075281</b>	PC0064683	PC0058849
Sample Date		Client Info		<b>25 Sep 2023</b>	28 Apr 2022	18 Feb 2022
Machine Age	hrs	Client Info		<b>8634</b>	8187	7583
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>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>16</b>	9	6
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	0
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>2</b>	1	1
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	2	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

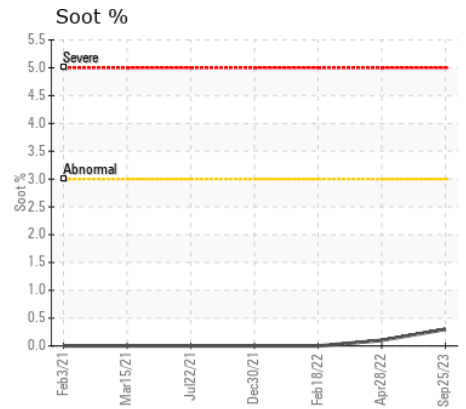
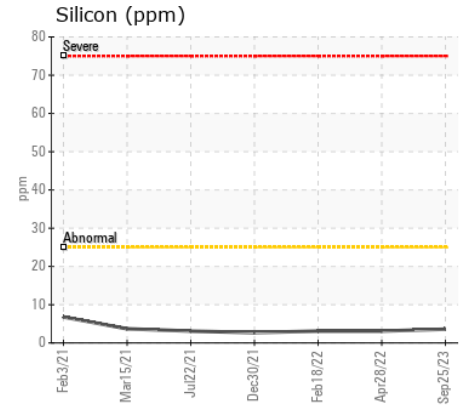
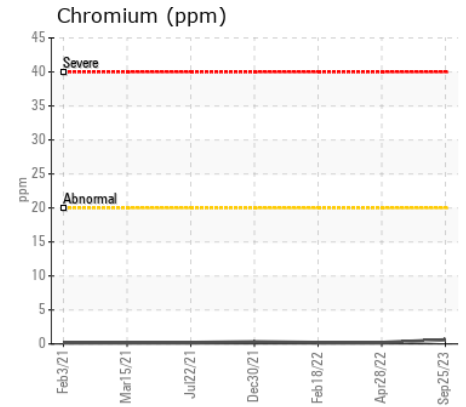
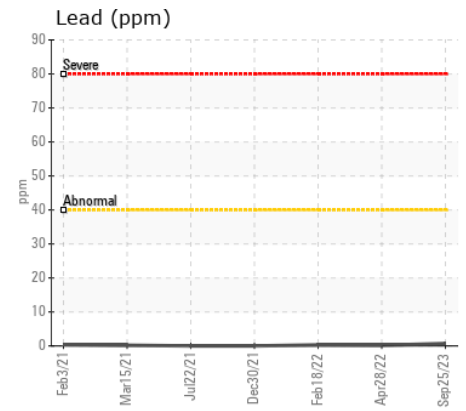
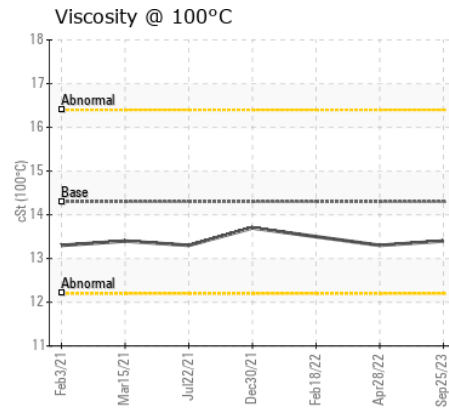
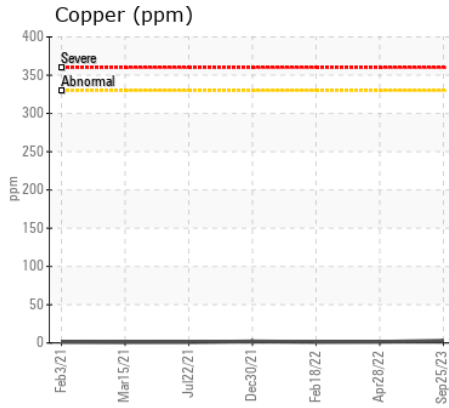
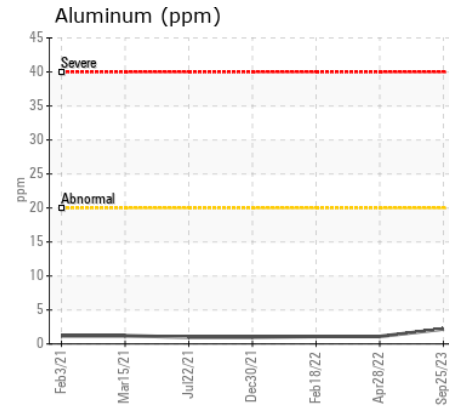
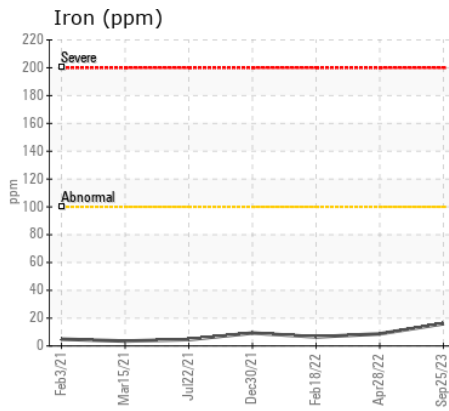
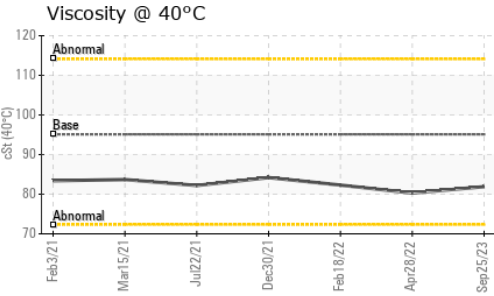
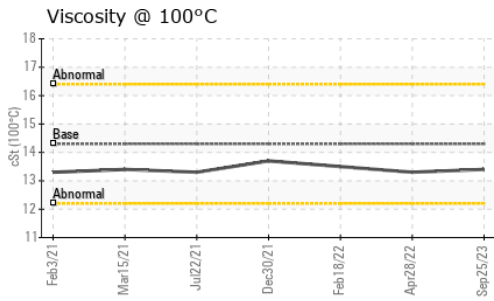
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
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>0.3</b>	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.2</b>	8.8	8.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.5</b>	22.0	21.0
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>24</b>	40	42
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>55</b>	54	54
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	1160	<b>1030</b>	1092	1056
Calcium	ppm	ASTM D5185(m)	820	<b>796</b>	813	803
Phosphorus	ppm	ASTM D5185(m)	1160	<b>951</b>	1042	984
Zinc	ppm	ASTM D5185(m)	1260	<b>1127</b>	1189	1150
Sulfur	ppm	ASTM D5185(m)	3000	<b>2667</b>	2744	2668
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.4</b>	18.0	17.6
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	<b>81.9</b>	80.3	82.3
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>13.4</b>	13.3	13.5
Viscosity Index (VI)	Scale	ASTM D2270*	169	<b>166</b>	168	167



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
**Sample No.** : PC0075281 **Received** : 10 Jan 2024  
**Lab Number** : 02607732 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 5708818 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI )

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.