

Machine Id  
**0149**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PC0080274</b>	PC0032180	PC0031580
Sample Date		Client Info		<b>09 Jan 2024</b>	27 Sep 2023	16 Jun 2023
Machine Age	kms	Client Info		<b>1134123</b>	1121273	1107698
Oil Age	kms	Client Info		<b>12778</b>	13575	2015
Filter Age	kms	Client Info		<b>12778</b>	13575	2015
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>34</b>	43	8
Chromium	ppm	ASTM D5185(m)	>20	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	<1
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	4	0
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

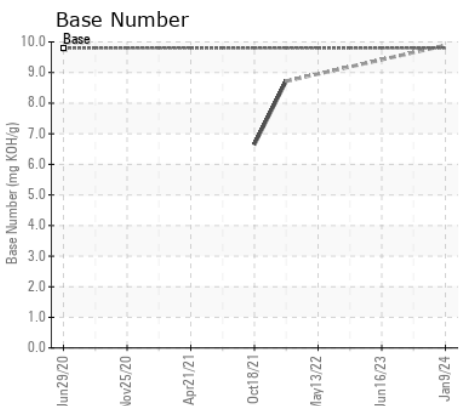
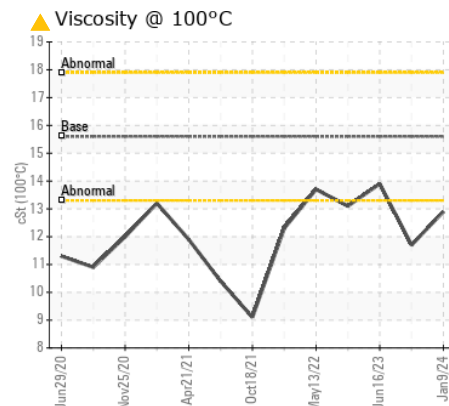
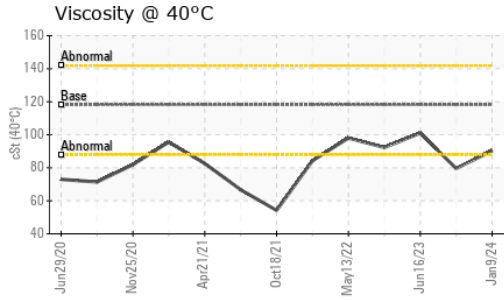
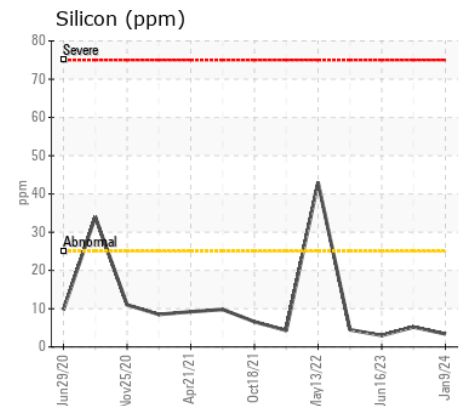
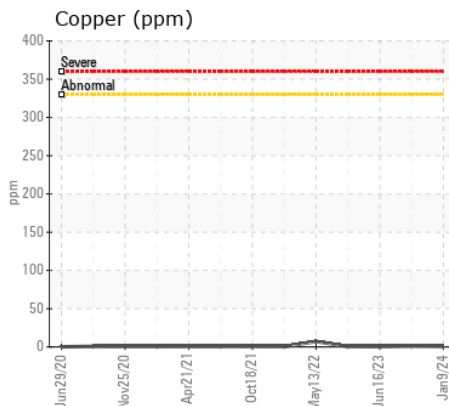
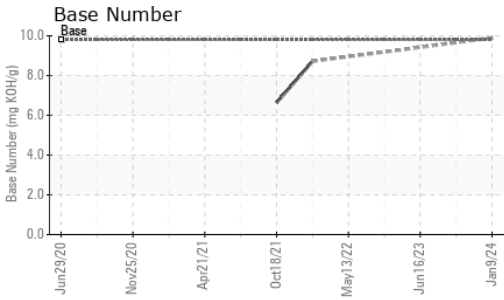
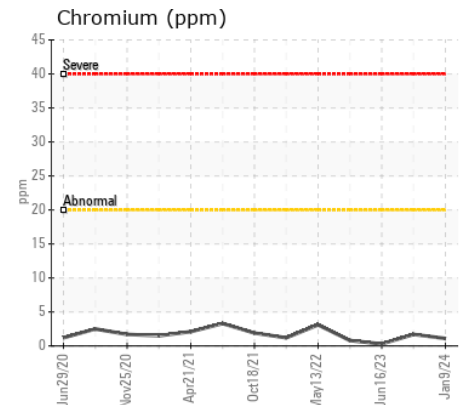
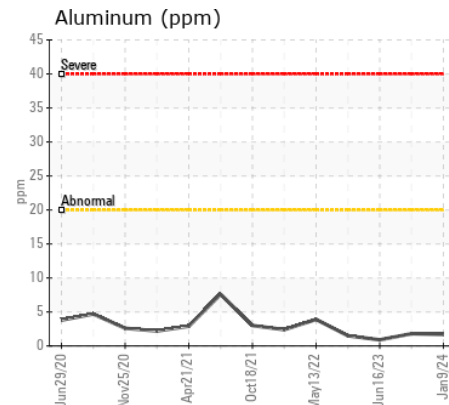
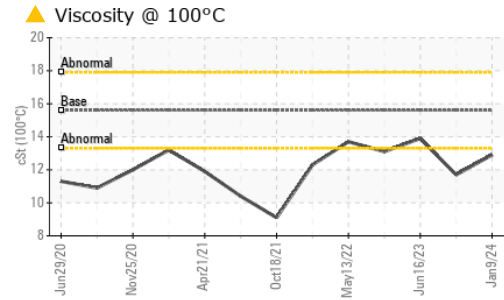
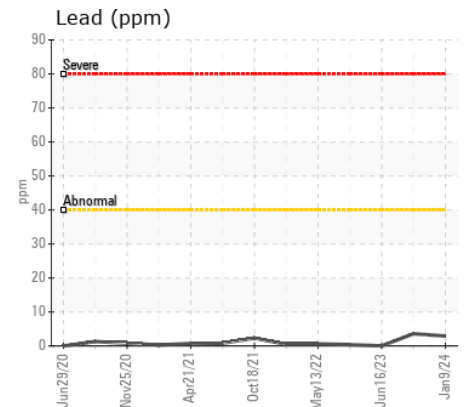
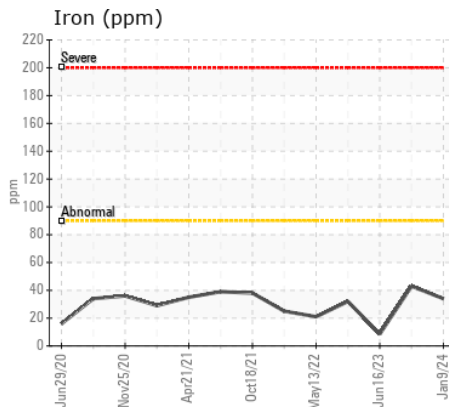
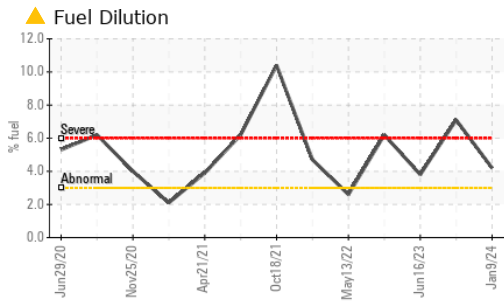
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	5	3
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	2	1
Fuel	%	ASTM D7593*	>3.0	<b>▲ 4.2</b>	7.1	▲ 3.8
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>6	<b>0.5</b>	0.6	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.1</b>	9.0	5.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.4</b>	21.0	18.9
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<b>5</b>	6	3
Boron	ppm	ASTM D5185(m)	0	<b>4</b>	16	23
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>58</b>	49	49
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>951</b>	766	789
Calcium	ppm	ASTM D5185(m)	1070	<b>1109</b>	1291	1247
Phosphorus	ppm	ASTM D5185(m)	1150	<b>980</b>	924	1040
Zinc	ppm	ASTM D5185(m)	1270	<b>1205</b>	1163	1157
Sulfur	ppm	ASTM D5185(m)	2060	<b>2444</b>	2260	2618
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.4</b>	16.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.89</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>90.3</b>	▲ 79.6	101
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>▲ 12.9</b>	▲ 11.7	13.9
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>140</b>	139	139



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0080274 **Received** : 10 Jan 2024  
**Lab Number** : 02607715 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 5708801 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, PercentFuel, VI )

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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.