

Machine Id  
**M3 (S/N 1457409)**  
Component  
**Biogas Engine**  
Fluid  
**PETRO CANADA SENTRON LD 8000 (--- GAL)**

**RECOMMENDATION**

We recommend that you drain the oil from the component if this has not already been done. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0120753</b>	PCA0120739	PCA0120747
Sample Date		Client Info		<b>09 Jun 2024</b>	17 May 2024	24 Apr 2024
Machine Age	hrs	Client Info		<b>12345</b>	11845	11340
Oil Age	hrs	Client Info		<b>7919</b>	7419	6919
Filter Age	hrs	Client Info		<b>0</b>	7419	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>45	<b>13</b>	13	12
Chromium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	3
Lead	ppm	ASTM D5185m	>5	<b>3</b>	5	4
Copper	ppm	ASTM D5185m	>14	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>13	<b>2</b>	3	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

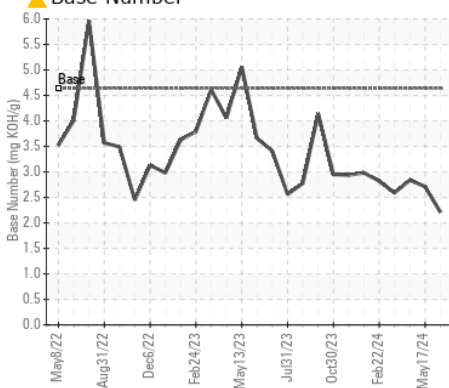
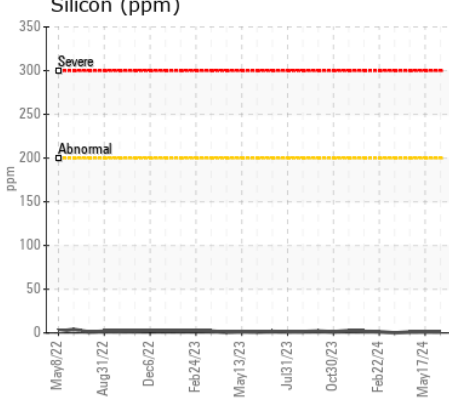
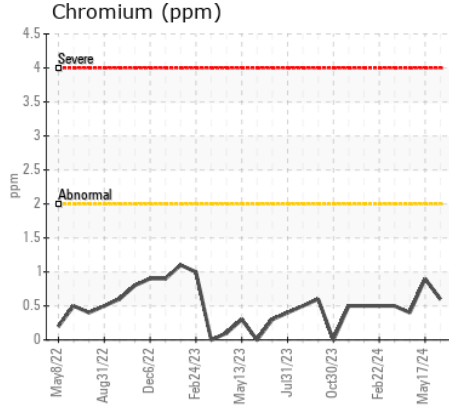
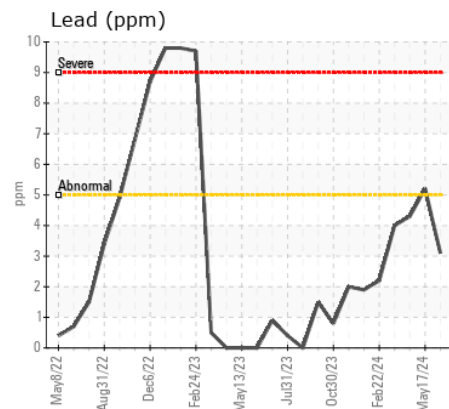
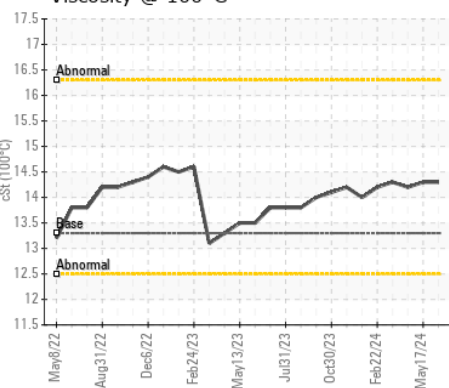
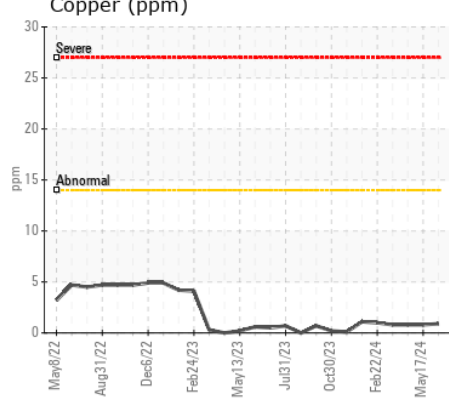
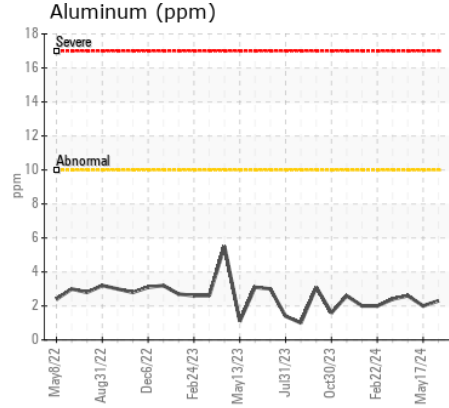
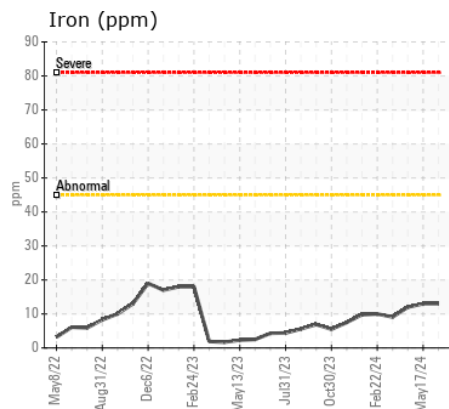
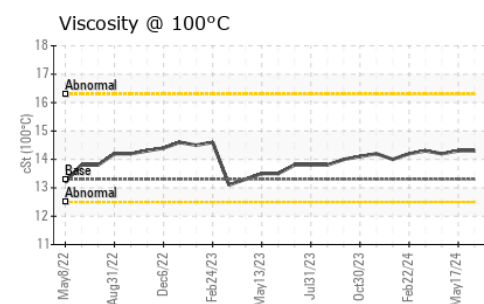
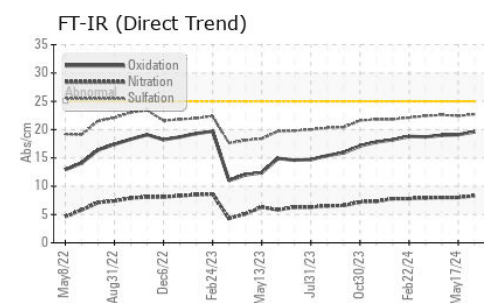
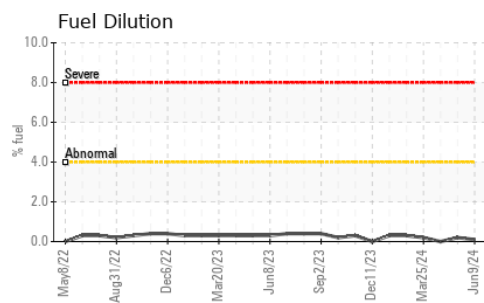
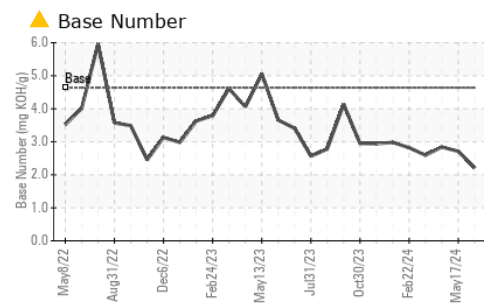
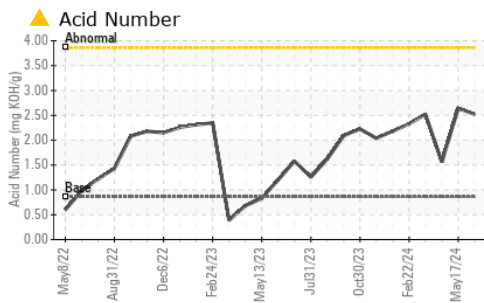
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>200	<b>1</b>	1	1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	2
Fuel	%	ASTM D3524	>4.0	<b>0.1</b>	0.2	0.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	8.0	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	22.4	22.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN level is low. The AN level is at the top-end of the recommended limit.

Sodium	ppm	ASTM D5185m		<b>5</b>	5	5
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>11</b>	12	15
Calcium	ppm	ASTM D5185m	1351	<b>1793</b>	1704	1679
Phosphorus	ppm	ASTM D5185m	302	<b>317</b>	308	330
Zinc	ppm	ASTM D5185m	358	<b>435</b>	419	450
Sulfur	ppm	ASTM D5185m	2758	<b>3334</b>	3200	3607
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.6</b>	19.1	19.0
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	<b>▲ 2.52</b>	2.64	1.561
Base Number (BN)	mg KOH/g	ASTM D2896	4.64	<b>▲ 2.21</b>	2.71	2.84
Visc @ 100°C	cSt	ASTM D445	13.3	<b>14.3</b>	14.3	14.2



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0120753 **Received** : 10 Jul 2024  
**Lab Number** : 06232390 **Tested** : 12 Jul 2024  
**Unique Number** : 11115883 **Diagnosed** : 12 Jul 2024 - Sean Felton  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**AMERICAN PETROLEUM**  
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To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)