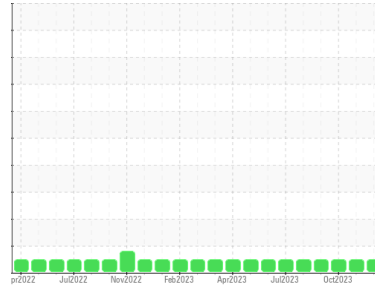


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
M4 (S/N 1457447)

Component
Biogas Engine

Fluid
PETRO CANADA SENTRON LD 8000 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0106197	PCA0106190	PCA0106182
Sample Date	Client Info		21 Dec 2023	13 Nov 2023	11 Oct 2023
Machine Age	hrs	Client Info	9486	8986	8486
Oil Age	hrs	Client Info	3534	8986	2534
Oil Changed	Client Info		N/A	N/A	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >45	13	8	9
Chromium	ppm	ASTM D5185m >2	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >10	2	2	2
Lead	ppm	ASTM D5185m >5	4	<1	2
Copper	ppm	ASTM D5185m >14	1	<1	<1
Tin	ppm	ASTM D5185m >13	3	2	2
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	1	0	<1
Manganese	ppm	ASTM D5185m	<1	<1	0
Magnesium	ppm	ASTM D5185m	10	11	8
Calcium	ppm	ASTM D5185m 1351	1743	1705	1751
Phosphorus	ppm	ASTM D5185m 302	363	330	335
Zinc	ppm	ASTM D5185m 358	446	425	417
Sulfur	ppm	ASTM D5185m 2758	3462	2964	3042

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	2	1	2
Sodium	ppm	ASTM D5185m	<1	4	3
Potassium	ppm	ASTM D5185m >20	2	<1	<1
Fuel	%	ASTM D3524 >4.0	0.2	0.3	0.3

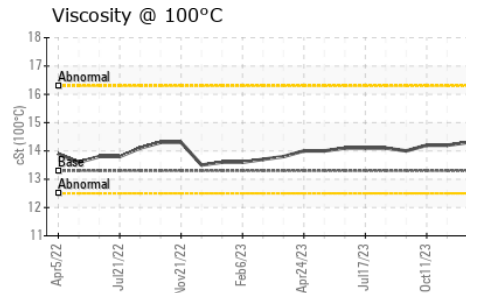
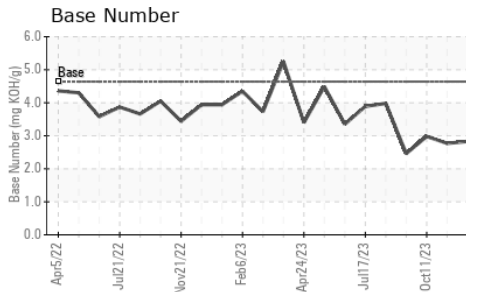
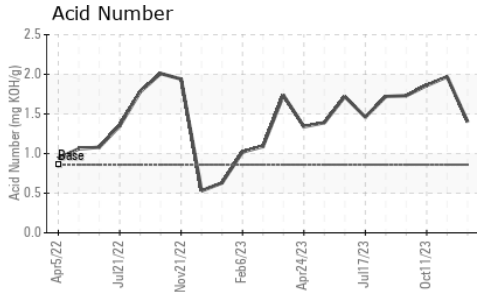
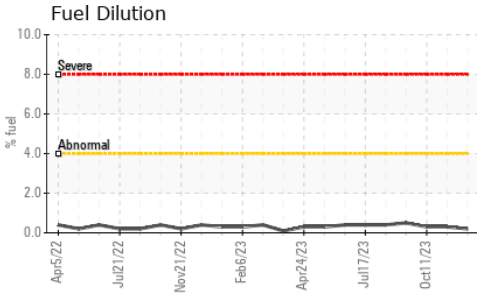
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.6	7.4	7.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.7	22.8	22.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.7	18.6	18.0
Acid Number (AN)	mg KOH/g	ASTM D8045 0.86	1.40	1.97	1.86
Base Number (BN)	mg KOH/g	ASTM D2896 4.64	2.83	2.77	2.98

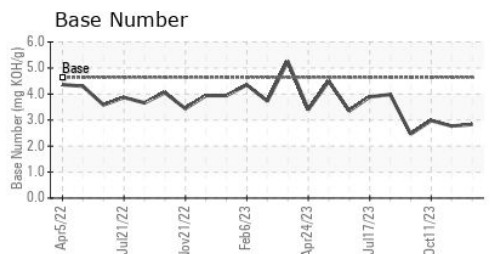
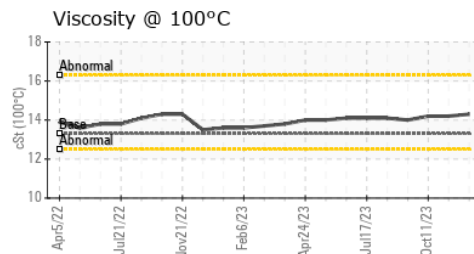
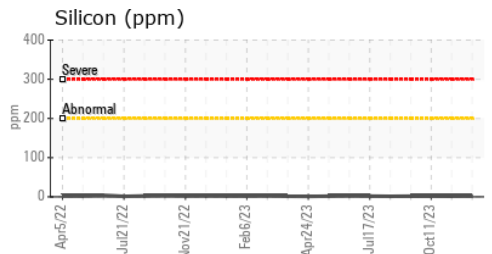
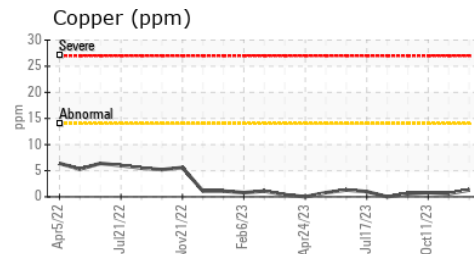
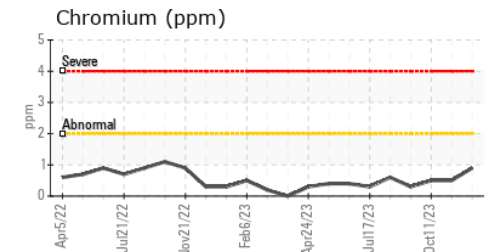
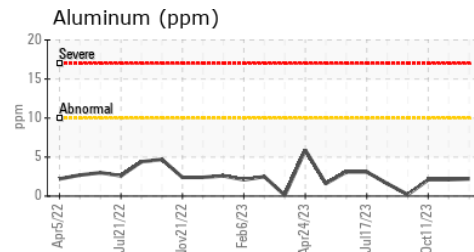
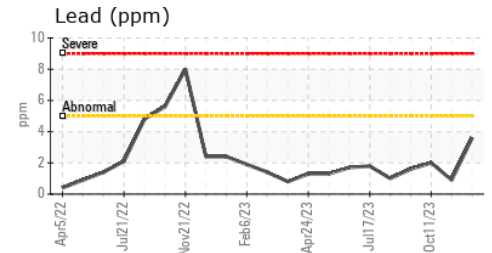
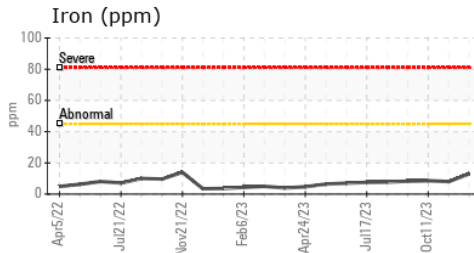
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.3	14.3	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106197 **Received** : 22 Jan 2024
Lab Number : 06066967 **Tested** : 07 Feb 2024
Unique Number : 10843644 **Diagnosed** : 07 Feb 2024 - Doug Bogart
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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 TOA BAJA, PR
 US 00949
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 nortiz@americanpetroleumpr.com
 T: (787)794-1985

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)

F: