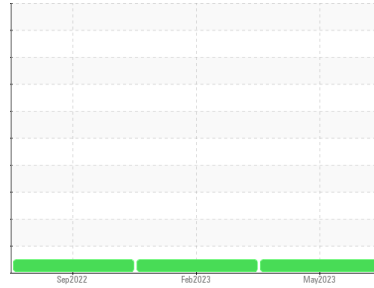


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
G200

Component
Biogas Engine

Fluid
PETRO CANADA SENTRON LD 5000 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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	history 1	history 2
Sample Number	Client Info		PCA0069050	PCA0069107	PCA0069037
Sample Date	Client Info		31 May 2023	21 Feb 2023	21 Sep 2022
Machine Age	hrs	Client Info	6944	5637	4233
Oil Age	hrs	Client Info	0	1637	0
Oil Changed	Client Info		Not Chngd	Not Chngd	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >45	17	13	5
Chromium	ppm	ASTM D5185m >2	1	1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >10	2	2	2
Lead	ppm	ASTM D5185m >5	9	10	2
Copper	ppm	ASTM D5185m >14	2	1	<1
Tin	ppm	ASTM D5185m >13	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 2	0	0	<1
Barium	ppm	ASTM D5185m 3	0	0	0
Molybdenum	ppm	ASTM D5185m 0	2	2	1
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 4	14	16	15
Calcium	ppm	ASTM D5185m 1727	2229	2179	2152
Phosphorus	ppm	ASTM D5185m 272	335	340	374
Zinc	ppm	ASTM D5185m 333	437	438	425
Sulfur	ppm	ASTM D5185m 3415	4242	4153	4313

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >200	2	3	4
Sodium	ppm	ASTM D5185m	5	5	2
Potassium	ppm	ASTM D5185m >20	<1	<1	<1

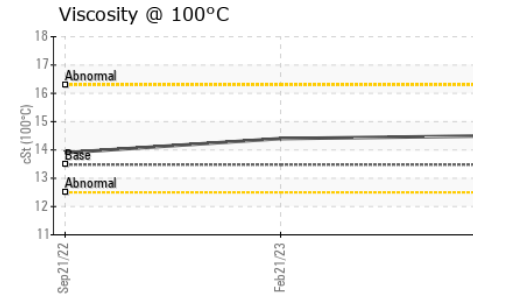
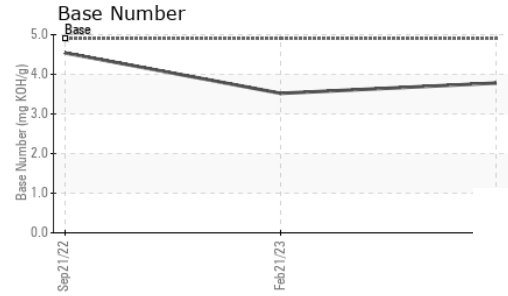
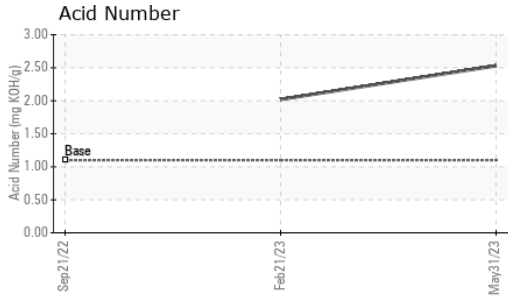
INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.1	7.6	6.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.5	21.9	21.0

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.1	17.2	14.2
Acid Number (AN)	mg KOH/g	ASTM D8045 1.1	2.53	2.02	---
Base Number (BN)	mg KOH/g	ASTM D2896 4.9	3.78	3.52	4.54

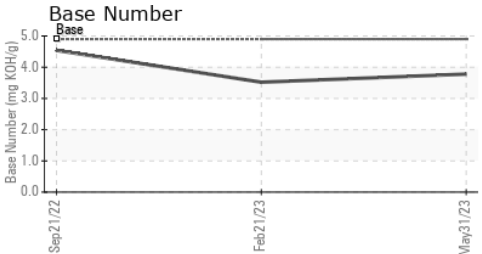
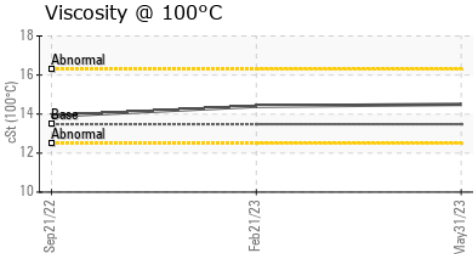
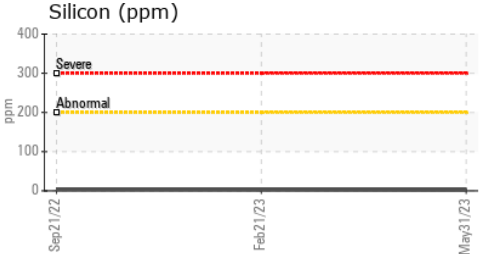
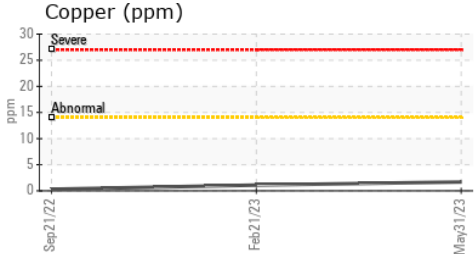
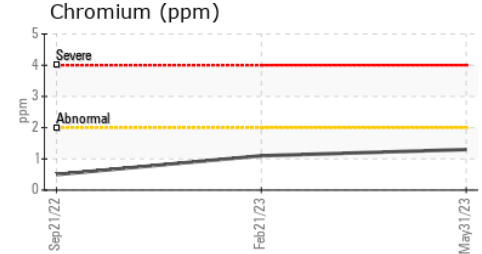
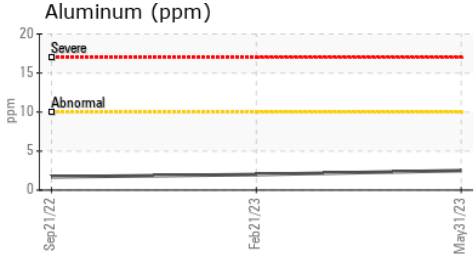
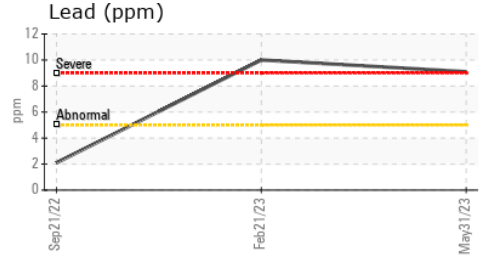
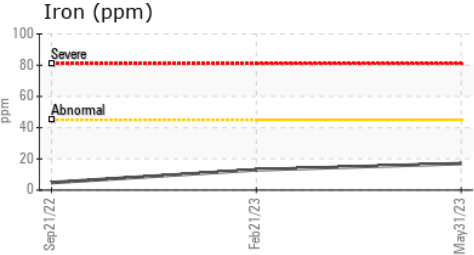
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	13.48	14.5	14.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0069050 **Received** : 29 Jun 2023
Lab Number : 05887513 **Diagnosed** : 04 Jul 2023
Unique Number : 10537996 **Diagnostician** : Don Baldrige
Test Package : MOB 2

MARBORG RECOVERY/DIANI
 14470 CALLE REAL
 GOLETA, CA
 US 93117
 Contact: Service Manager

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)

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F: