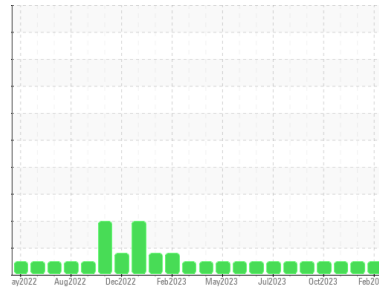


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
M3 (S/N 1457409)

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	PCA0106205	PCA0106199	PCA0106195
Sample Date	Client Info	22 Feb 2024	18 Jan 2024	11 Dec 2023
Machine Age	hrs Client Info	10340	9842	9340
Oil Age	hrs Client Info	5914	5414	4914
Oil Changed	Client Info	Changed	N/A	N/A
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	10	10	8
Chromium	ppm ASTM D5185m >2	<1	<1	<1
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m	<1	<1	0
Silver	ppm ASTM D5185m >5	0	0	0
Aluminum	ppm ASTM D5185m >10	2	2	3
Lead	ppm ASTM D5185m >5	2	2	2
Copper	ppm ASTM D5185m >14	1	1	<1
Tin	ppm ASTM D5185m >13	3	3	3
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	0	<1	0
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	<1	2	0
Manganese	ppm ASTM D5185m	0	0	<1
Magnesium	ppm ASTM D5185m	12	28	14
Calcium	ppm ASTM D5185m 1351	1679	1707	1637
Phosphorus	ppm ASTM D5185m 302	293	304	307
Zinc	ppm ASTM D5185m 358	440	452	424
Sulfur	ppm ASTM D5185m 2758	3130	3081	2972

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >200	2	2	3
Sodium	ppm ASTM D5185m	2	2	3
Potassium	ppm ASTM D5185m >20	3	3	3
Fuel	% ASTM D3524 >4.0	0.3	0.3	0.0

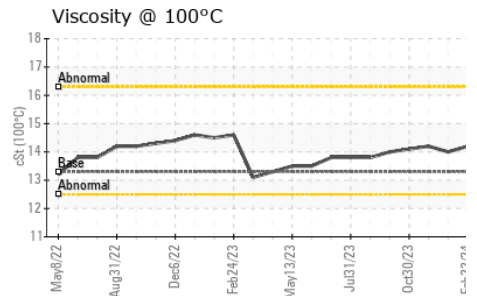
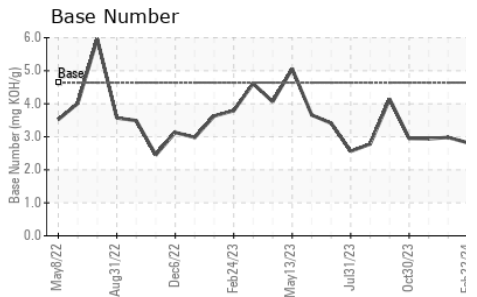
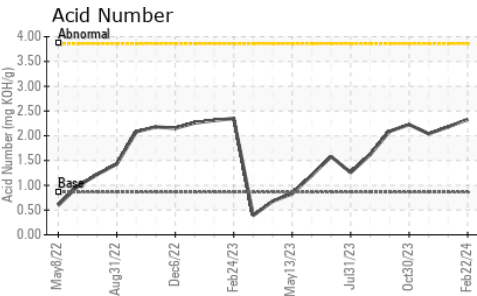
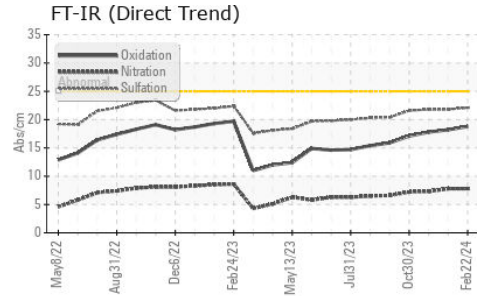
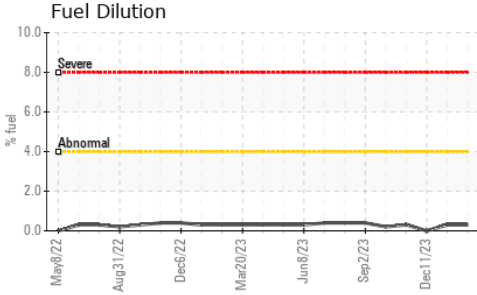
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	7.8	7.8	7.3
Sulfation	Abs/.1mm *ASTM D7415 >30	22.1	21.8	21.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.8	18.2	17.8
Acid Number (AN)	mg KOH/g ASTM D8045 0.86	2.33	2.18	2.04
Base Number (BN)	mg KOH/g ASTM D2896 4.64	2.82	2.98	2.94

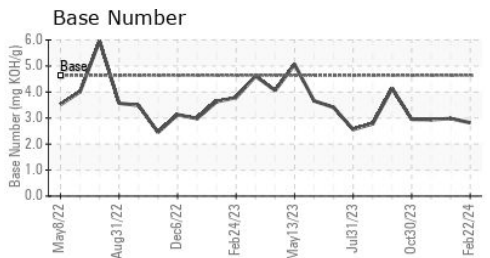
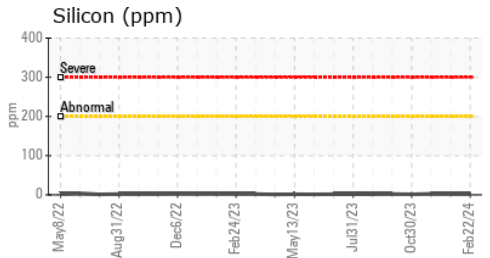
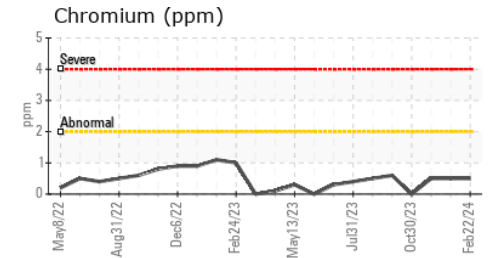
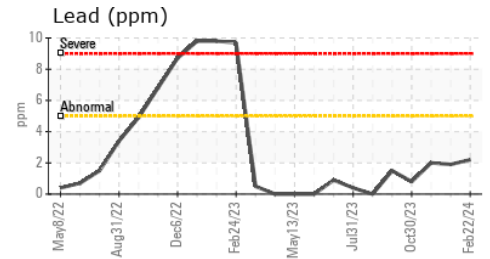
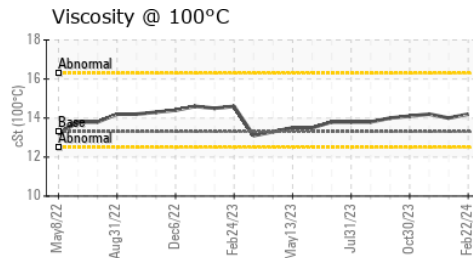
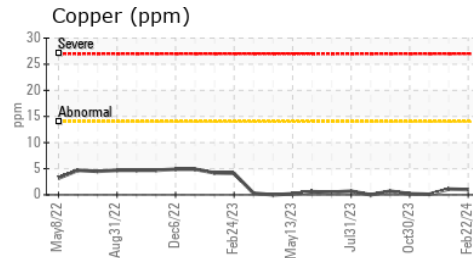
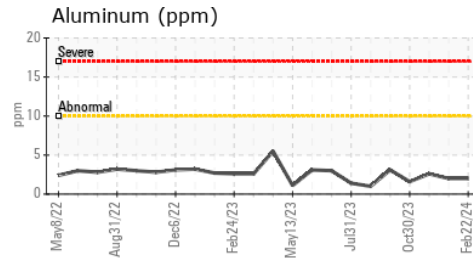
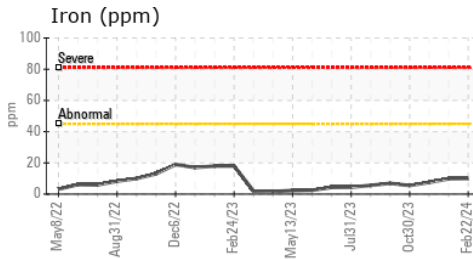
OIL ANALYSIS REPORT



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	14.2	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106205 **Received** : 07 Mar 2024
Lab Number : 06111607 **Tested** : 11 Mar 2024
Unique Number : 10915104 **Diagnosed** : 11 Mar 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

AMERICAN PETROLEUM
 CARR 865 KM 0.2 CAMPANILA
 TOA BAJA, PR
 US 00949
 Contact: NEFTALI ORTIZ
 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)