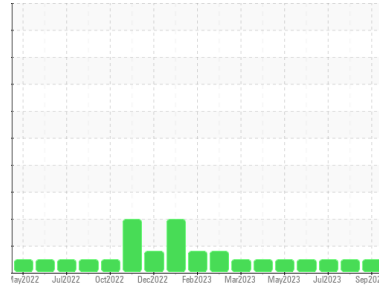


OIL ANALYSIS REPORT

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	PCA0096514	PCA0096508	PCA0096507	
Sample Date	Client Info	02 Sep 2023	31 Jul 2023	04 Jul 2023	
Machine Age	hrs	Client Info	7840	7340	6840
Oil Age	hrs	Client Info	3414	2914	2414
Oil Changed	Client Info	Changed	N/A	N/A	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >45	6	4	4
Chromium	ppm	ASTM D5185m >2	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >5	0	0	<1
Aluminum	ppm	ASTM D5185m >10	1	1	3
Lead	ppm	ASTM D5185m >5	0	<1	<1
Copper	ppm	ASTM D5185m >14	0	<1	<1
Tin	ppm	ASTM D5185m >13	1	1	1
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	0	0	<1
Molybdenum	ppm	ASTM D5185m	0	1	1
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	18	14	12
Calcium	ppm	ASTM D5185m 1351	1722	1654	1730
Phosphorus	ppm	ASTM D5185m 302	329	294	317
Zinc	ppm	ASTM D5185m 358	429	369	429
Sulfur	ppm	ASTM D5185m 2758	3643	3092	3523

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >200	2	1	2
Sodium	ppm	ASTM D5185m	2	1	0
Potassium	ppm	ASTM D5185m >20	<1	0	2
Fuel	%	ASTM D3524 >4.0	0.4	0.4	0.4

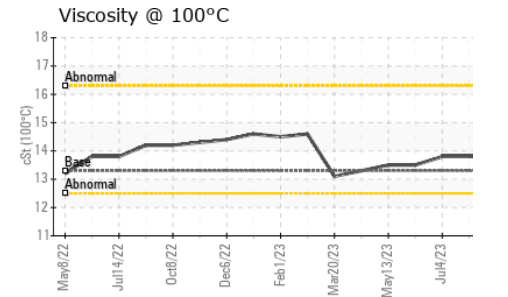
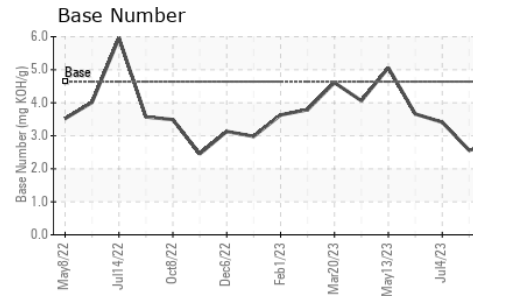
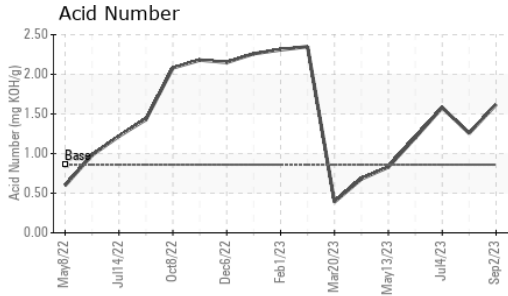
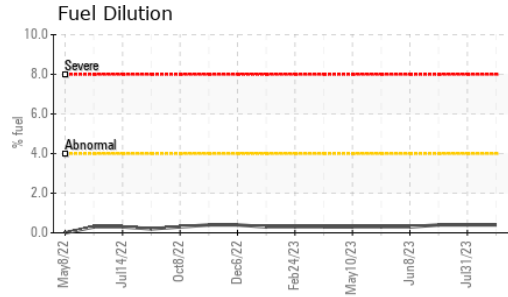
INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	6.5	6.3	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	20.0	19.8

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.4	14.7	14.6
Acid Number (AN)	mg KOH/g	ASTM D8045 0.86	1.62	1.256	1.58
Base Number (BN)	mg KOH/g	ASTM D2896 4.64	2.78	2.56	3.41

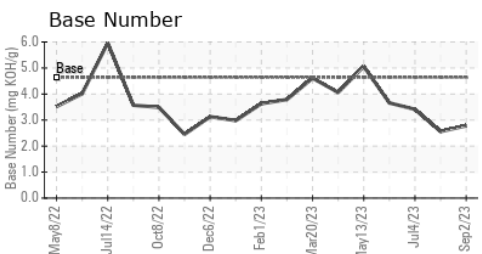
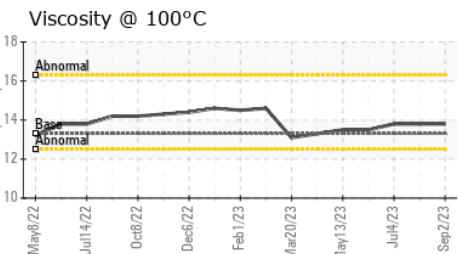
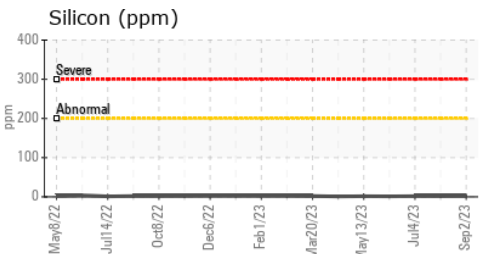
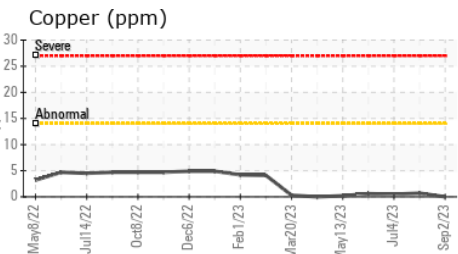
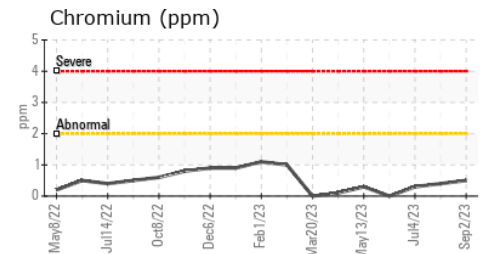
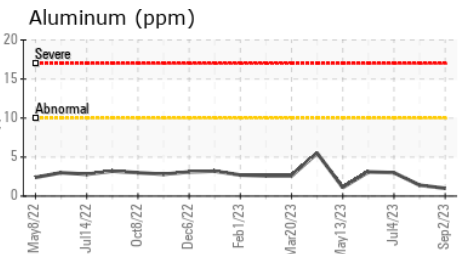
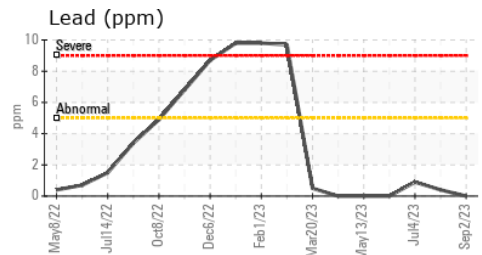
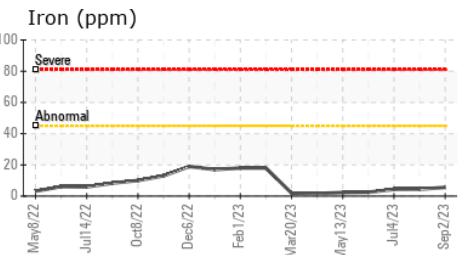
OIL ANALYSIS REPORT



PARAMETER	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	13.8	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0096514 **Received** : 12 Sep 2023
Lab Number : 05949397 **Diagnosed** : 15 Sep 2023
Unique Number : 10645356 **Diagnostician** : Angela Borella
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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)

AMERICAN PETROLEUM
 CARR 865 KM 0.2 CAMPANILA
 TOA BAJA, PR
 US 00949
 Contact: NEFTALI ORTIZ
 nortiz@americanpetroleumpr.com

T: (787)794-1985

F: