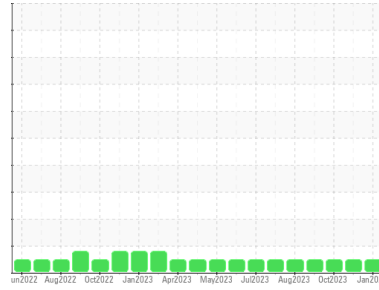


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
M2 (S/N 1457407)

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	PCA0106202	PCA0106187	PCA0106184
Sample Date	Client Info	21 Jan 2024	02 Dec 2023	30 Oct 2023
Machine Age	hrs	9662	9151	8652
Oil Age	hrs	0	5020	4520
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	8	6	4
Chromium	ppm ASTM D5185m >2	1	<1	0
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	1	1
Lead	ppm ASTM D5185m >5	2	0	0
Copper	ppm ASTM D5185m >14	<1	<1	0
Tin	ppm ASTM D5185m >13	5	4	3
Vanadium	ppm ASTM D5185m	0	<1	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	<1	0
Manganese	ppm ASTM D5185m	<1	0	0
Magnesium	ppm ASTM D5185m	11	11	11
Calcium	ppm ASTM D5185m 1351	1734	1846	1778
Phosphorus	ppm ASTM D5185m 302	358	336	341
Zinc	ppm ASTM D5185m 358	429	439	442
Sulfur	ppm ASTM D5185m 2758	3559	3164	3341

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >200	2	2	1
Sodium	ppm ASTM D5185m	0	2	3
Potassium	ppm ASTM D5185m >20	2	0	<1
Fuel	% ASTM D3524 >4.0	0.0	0.0	0.3

INFRA-RED

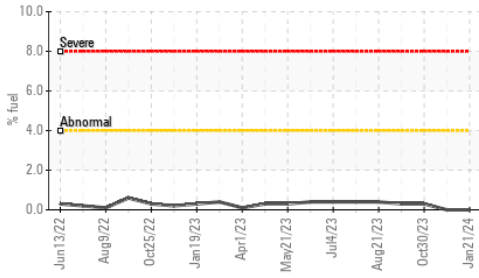
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm *ASTM D7624 >20	6.3	6.1	6.2
Sulfation	Abs/.1mm *ASTM D7415 >30	22.0	22.0	22.0

FLUID DEGRADATION

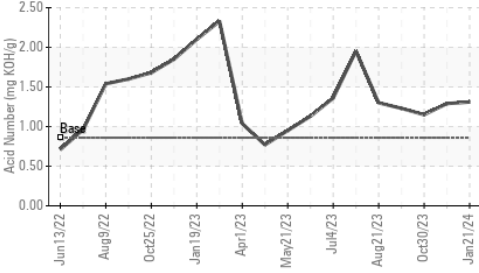
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.4	15.3	15.2
Acid Number (AN)	mg KOH/g ASTM D8045 0.86	1.31	1.29	1.15
Base Number (BN)	mg KOH/g ASTM D2896 4.64	3.24	6.76	3.52

OIL ANALYSIS REPORT

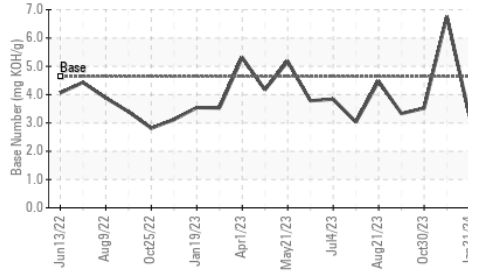
Fuel Dilution



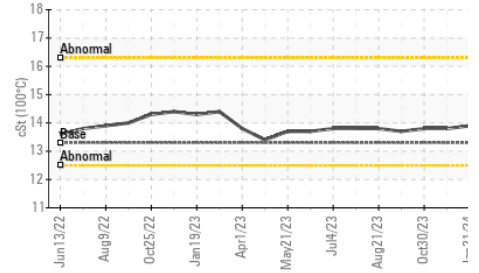
Acid Number



Base Number



Viscosity @ 100°C

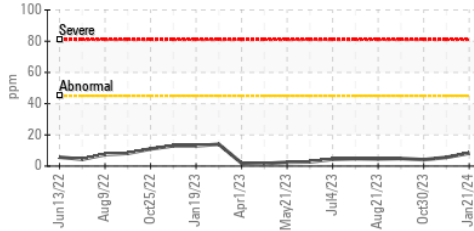


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

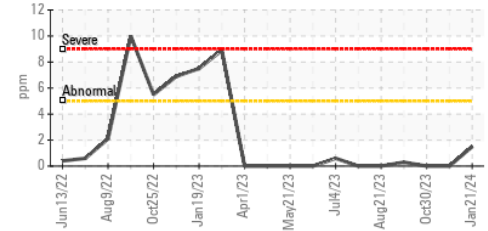
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.3	13.9	13.8

GRAPHS

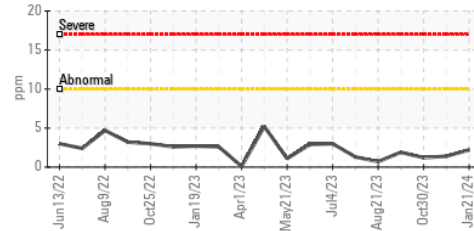
Iron (ppm)



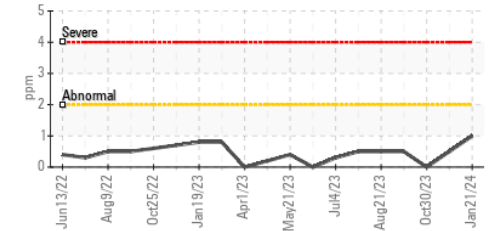
Lead (ppm)



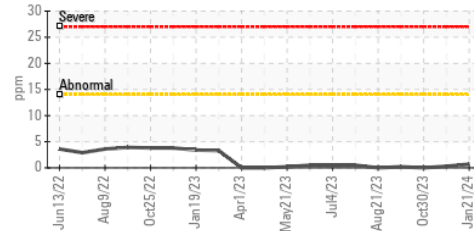
Aluminum (ppm)



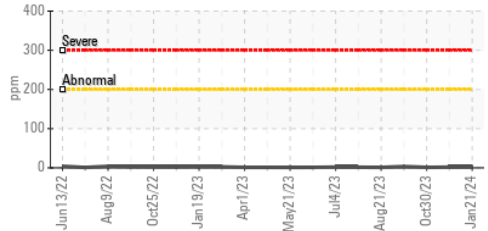
Chromium (ppm)



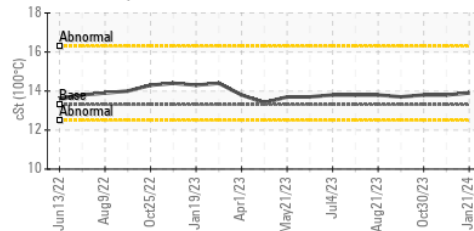
Copper (ppm)



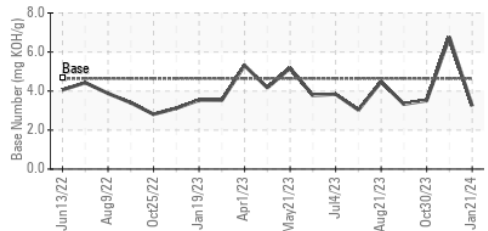
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0106202
Lab Number : 06066966
Unique Number : 10843643
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
 F:

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)