

OIL ANALYSIS REPORT

Sample Rating Trend

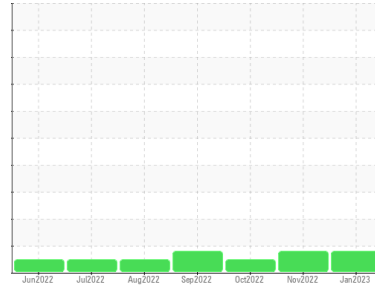
WEAR



Machine Id
M2 (S/N 1457402)

Component
Biogas Engine

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



DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The lead level is abnormal. All other 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	history 1	history 2
Sample Number	Client Info		PCA0089732	PCA0081148	PCA0081140
Sample Date	Client Info		19 Jan 2023	30 Nov 2022	25 Oct 2022
Machine Age	hrs	Client Info	3236	2715	2189
Oil Age	hrs	Client Info	3236	2715	2189
Oil Changed	Client Info		N/A	Not Changd	Not Changd
Sample Status			MARGINAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >45	13	13	11
Chromium	ppm	ASTM D5185m >2	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	<1	0	<1
Silver	ppm	ASTM D5185m >5	0	0	0
Aluminum	ppm	ASTM D5185m >10	3	3	3
Lead	ppm	ASTM D5185m >5	▲ 8	▲ 7	6
Copper	ppm	ASTM D5185m >14	3	4	4
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	<1	1	2
Barium	ppm	ASTM D5185m	0	0	1
Molybdenum	ppm	ASTM D5185m	2	1	3
Manganese	ppm	ASTM D5185m	2	<1	<1
Magnesium	ppm	ASTM D5185m	16	13	18
Calcium	ppm	ASTM D5185m 1351	1806	1690	1728
Phosphorus	ppm	ASTM D5185m 302	324	347	324
Zinc	ppm	ASTM D5185m 358	428	413	422
Sulfur	ppm	ASTM D5185m 2758	3286	3297	3519

CONTAMINANTS

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

INFRA-RED

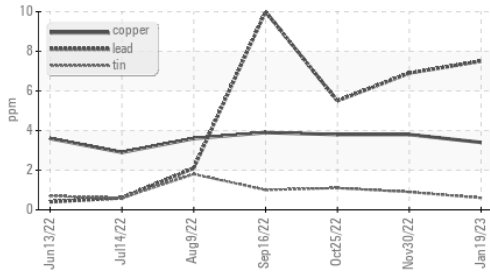
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	8.2	8.4	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.7	23.5	23.2

FLUID DEGRADATION

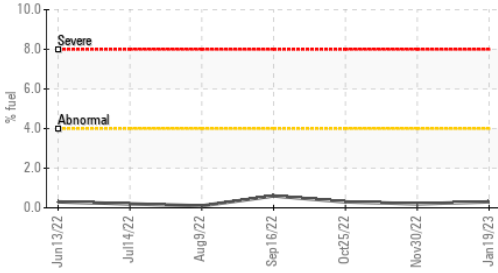
	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.5	19.4	18.6
Acid Number (AN)	mg KOH/g	ASTM D8045 0.86	2.10	1.85	1.68
Base Number (BN)	mg KOH/g	ASTM D2896 4.64	3.54	3.12	2.81

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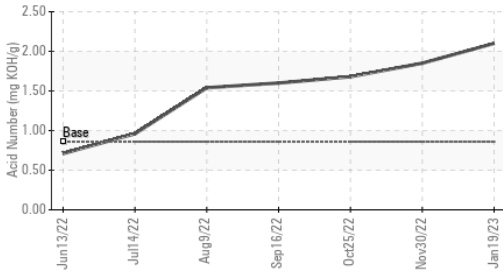
▲ Non-ferrous Metals



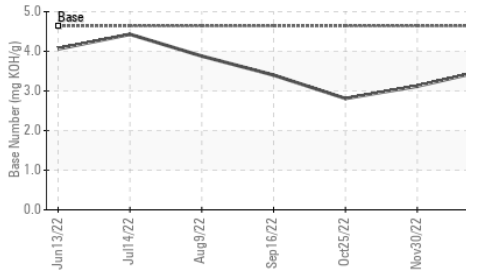
Fuel Dilution



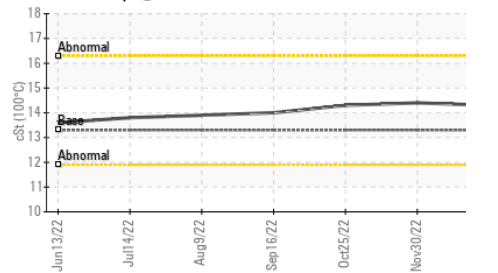
Acid Number



Base Number



Viscosity @ 100°C

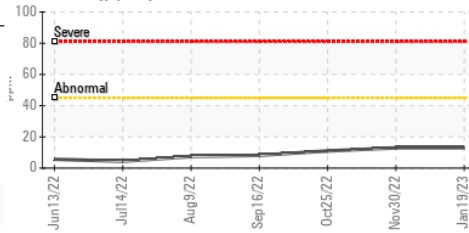


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

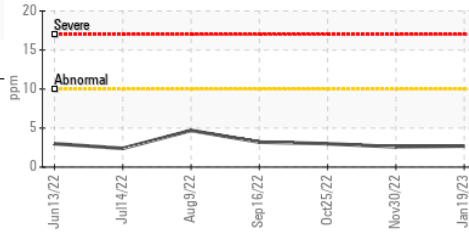
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	13.3	14.3	14.3

GRAPHS

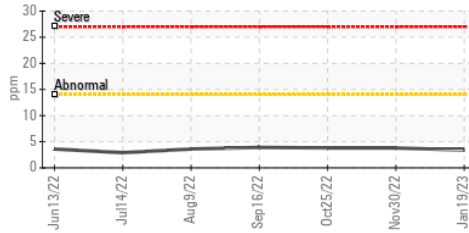
Iron (ppm)



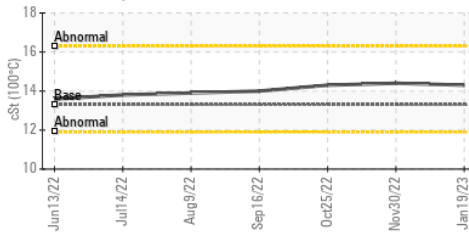
Aluminum (ppm)



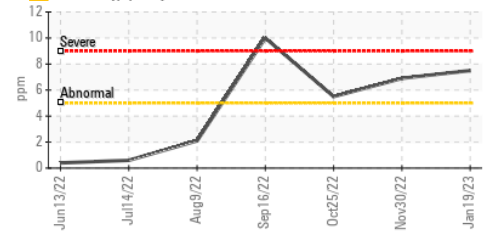
Copper (ppm)



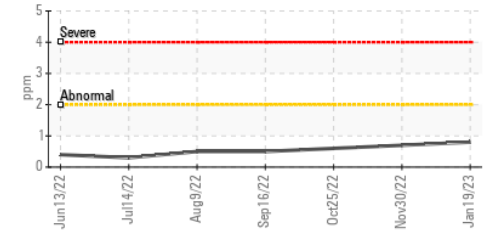
Viscosity @ 100°C



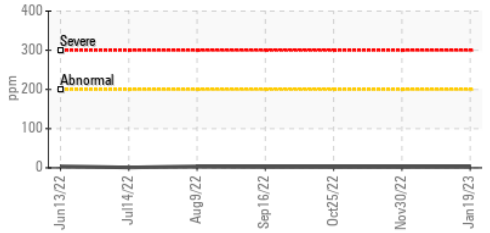
▲ Lead (ppm)



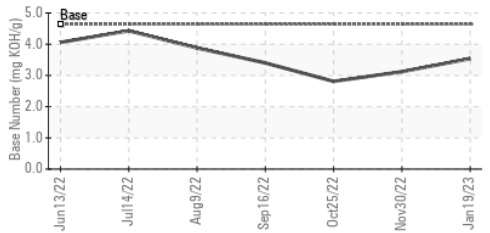
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0089732 **Received** : 02 Mar 2023
Lab Number : 05781982 **Diagnosed** : 04 Mar 2023
Unique Number : 10361652 **Diagnostician** : Doug Bogart
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)

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