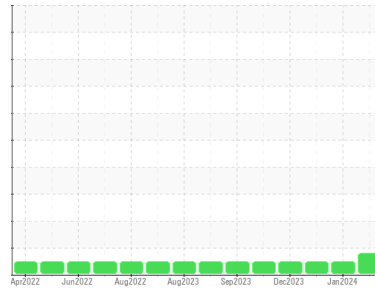


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
M6 (S/N 1457485)

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	history1	history2
Sample Number	Client Info			PCA0106208	PCA0106204	PCA0106198
Sample Date	Client Info			14 Feb 2024	23 Jan 2024	01 Jan 2024
Machine Age	hrs	Client Info		5764	5274	4774
Oil Age	hrs	Client Info		3890	3390	4774
Oil Changed	Client Info			N/A	Changed	N/A
Sample Status				ABNORMAL	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	11	6	16
Chromium	ppm	ASTM D5185m	>2	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	2	2
Lead	ppm	ASTM D5185m	>5	▲ 7	4	3
Copper	ppm	ASTM D5185m	>14	<1	<1	1
Tin	ppm	ASTM D5185m	>13	<1	<1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	<1	1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		12	8	11
Calcium	ppm	ASTM D5185m	1351	2562	1681	1769
Phosphorus	ppm	ASTM D5185m	302	441	281	368
Zinc	ppm	ASTM D5185m	358	638	407	437
Sulfur	ppm	ASTM D5185m	2758	4949	3067	3624

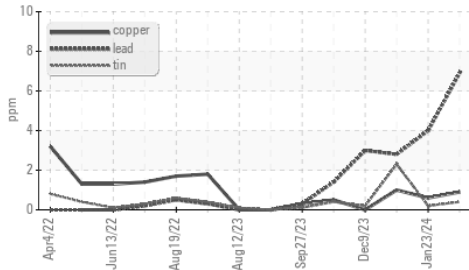
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>200	2	2	3
Sodium	ppm	ASTM D5185m		5	2	10
Potassium	ppm	ASTM D5185m	>20	4	3	2
Fuel	%	ASTM D3524	>4.0	0.3	0.3	0.1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.1	6.9	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	20.9	22.5

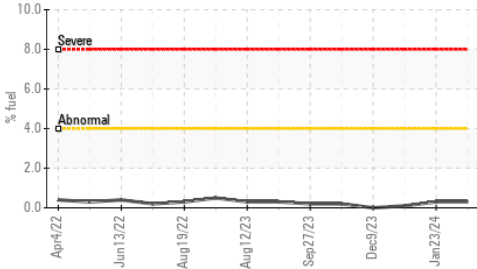
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	16.5	17.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	1.92	1.79	2.29
Base Number (BN)	mg KOH/g	ASTM D2896	4.64	3.30	3.44	3.16

OIL ANALYSIS REPORT

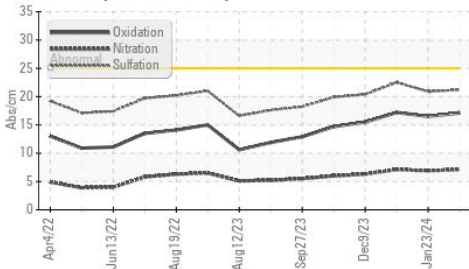
▲ Non-ferrous Metals



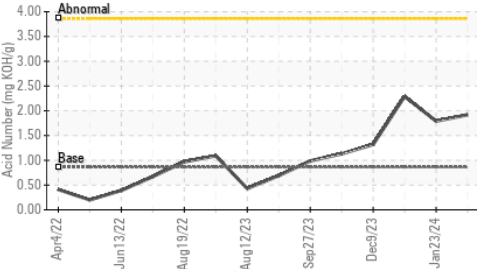
Fuel Dilution



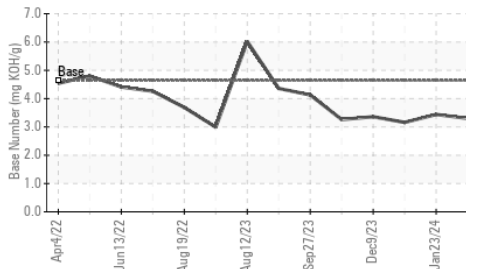
FT-IR (Direct Trend)



Acid Number



Base Number

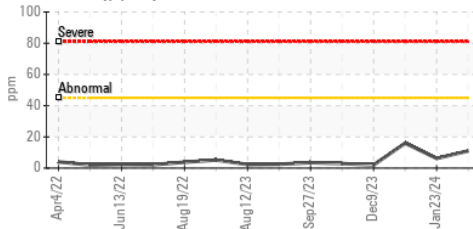


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

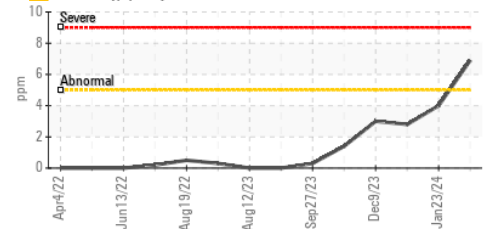
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.3	14.1	13.8

GRAPHS

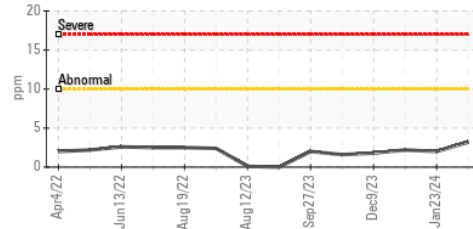
Iron (ppm)



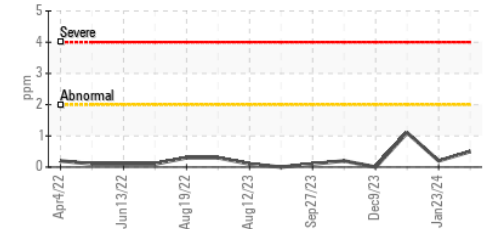
▲ Lead (ppm)



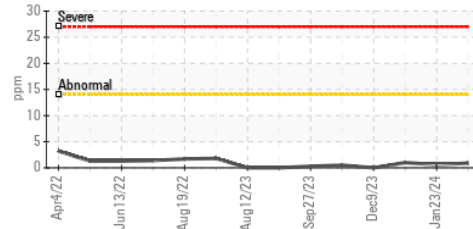
Aluminum (ppm)



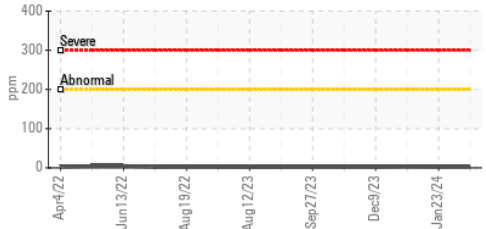
Chromium (ppm)



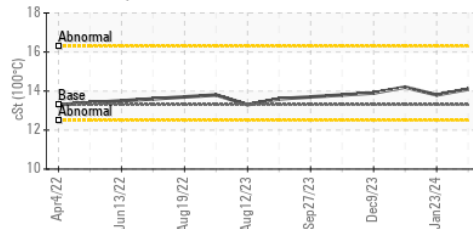
Copper (ppm)



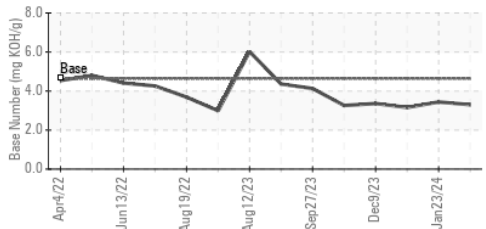
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : PCA0106208 Received : 07 Mar 2024
 Lab Number : 06111609 Tested : 11 Mar 2024
 Unique Number : 10915106 Diagnosed : 11 Mar 2024 - Sean Felton
 Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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 US 00949
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 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)