

Machine Id
M4 (S/N 1457447)
Component
Biogas Engine
Fluid
PETRO CANADA SENTRON LD 8000 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0120729	PCA0120736	PCA0106212
Sample Date		Client Info		23 Mar 2024	29 Feb 2024	27 Jan 2024
Machine Age	hrs	Client Info		10986	10486	9986
Oil Age	hrs	Client Info		5034	10486	4034
Filter Age	hrs	Client Info		0	4536	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>45	12	13	12
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	2
Lead	ppm	ASTM D5185m	>5	6	5	4
Copper	ppm	ASTM D5185m	>14	1	<1	1
Tin	ppm	ASTM D5185m	>13	3	3	3
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

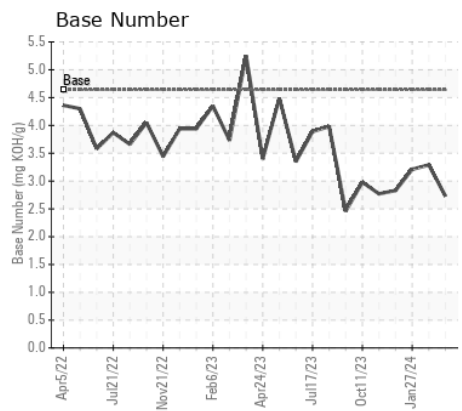
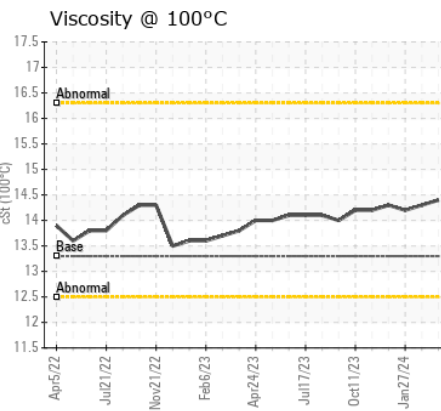
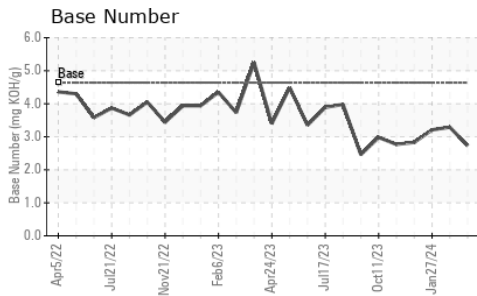
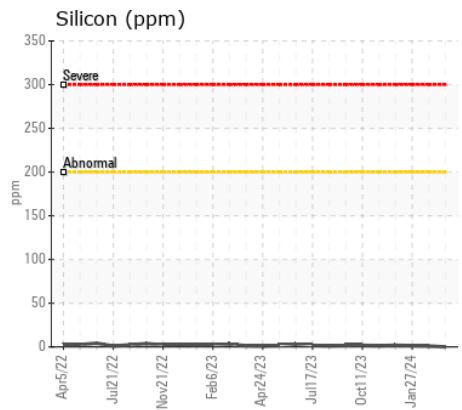
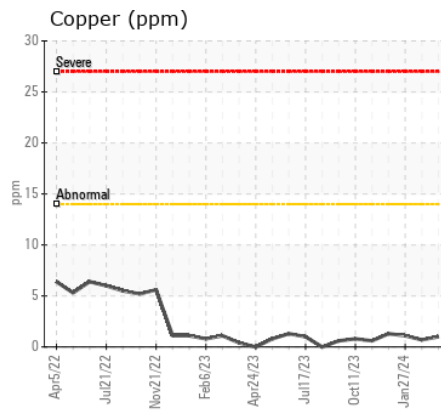
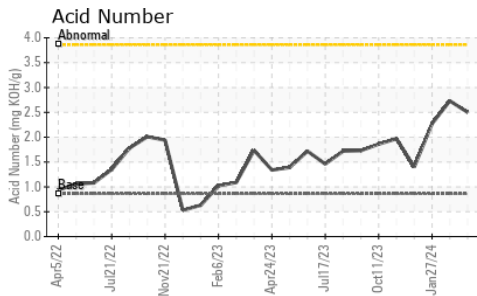
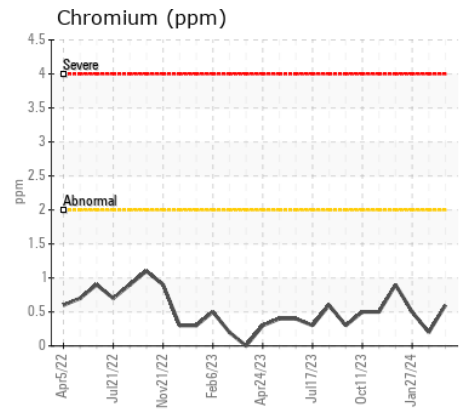
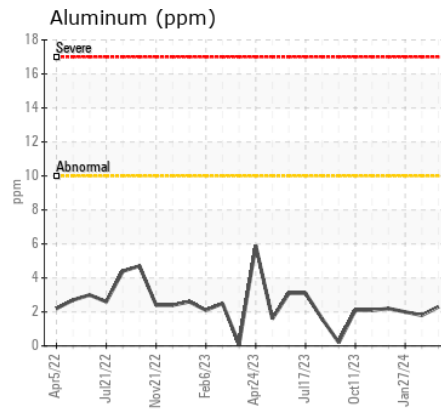
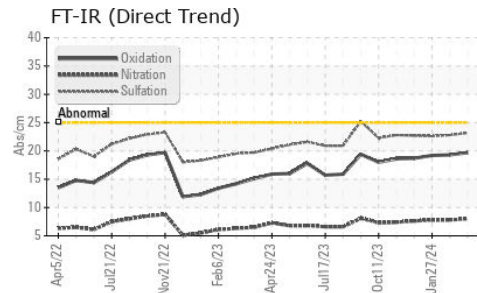
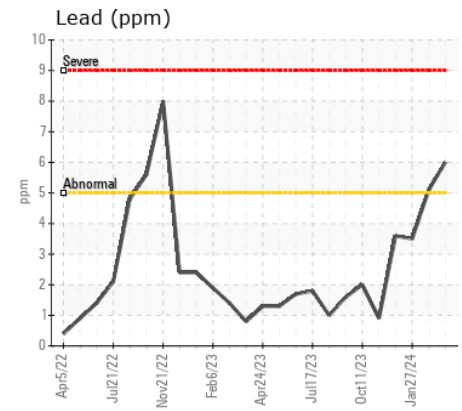
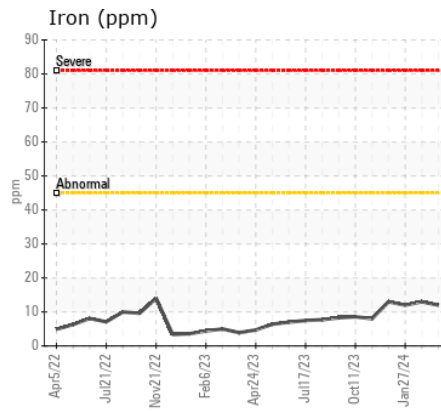
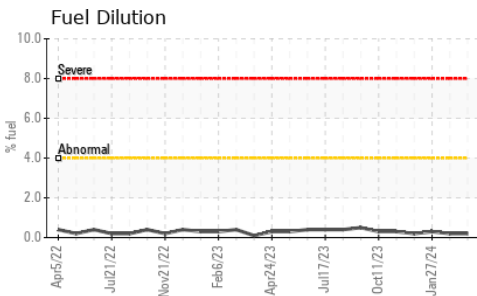
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>200	0	1	2
Potassium	ppm	ASTM D5185m	>20	3	<1	3
Fuel	%	ASTM D3524	>4.0	0.2	0.2	0.3
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.8	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	22.8	22.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m		4	4	2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		11	8	10
Calcium	ppm	ASTM D5185m	1351	1973	1867	1738
Phosphorus	ppm	ASTM D5185m	302	345	340	305
Zinc	ppm	ASTM D5185m	358	451	434	442
Sulfur	ppm	ASTM D5185m	2758	3853	3535	3196
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.7	19.3	19.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	2.50	2.73	2.27
Base Number (BN)	mg KOH/g	ASTM D2896	4.64	2.73	3.29	3.21
Visc @ 100°C	cSt	ASTM D445	13.3	14.4	14.3	14.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0120729

Lab Number : 06153268

Unique Number : 10983346

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 18 Apr 2024

Tested : 22 Apr 2024

Diagnosed : 22 Apr 2024 - Sean Felton

AMERICAN PETROLEUM

CARR 865 KM 0.2 CAMPANILA

TOA BAJA, PR

US 00949

Contact: NEFTALI ORTIZ

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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)