

Machine Id
M2 (S/N 1457407)
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		PCA0120745	PCA0120740	PCA0120749
Sample Date		Client Info		04 Jul 2024	10 Jun 2024	20 May 2024
Machine Age	hrs	Client Info		13176	12676	12176
Oil Age	hrs	Client Info		9030	8530	8030
Filter Age	hrs	Client Info		0	0	8030
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

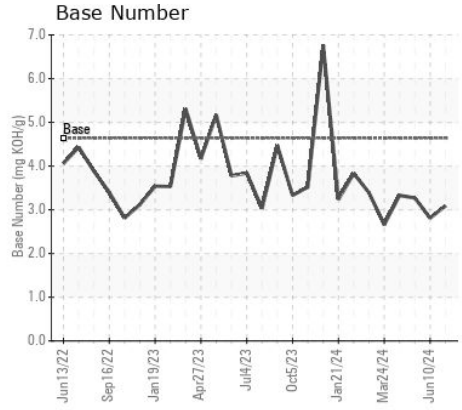
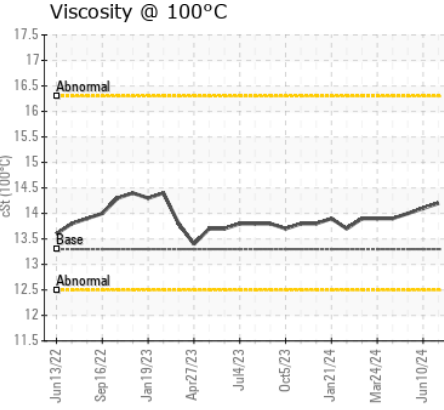
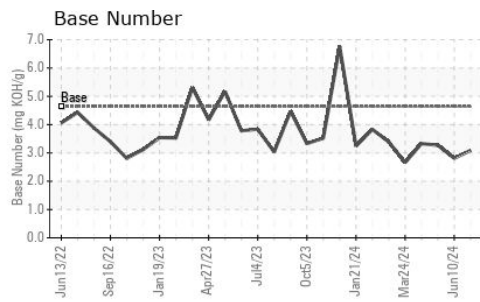
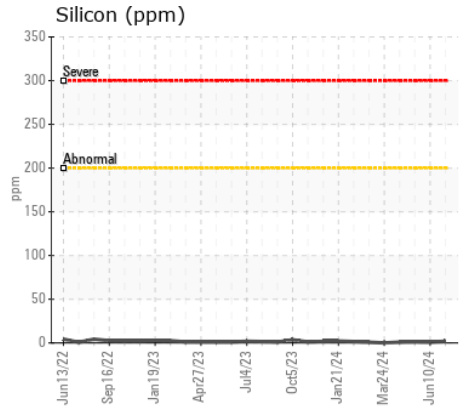
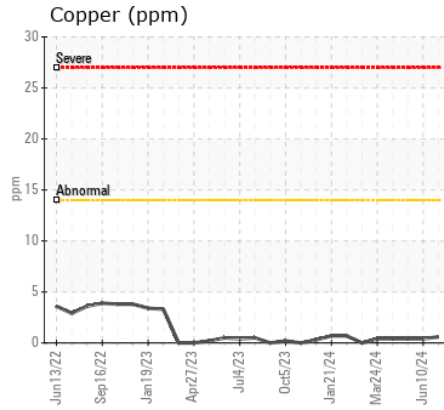
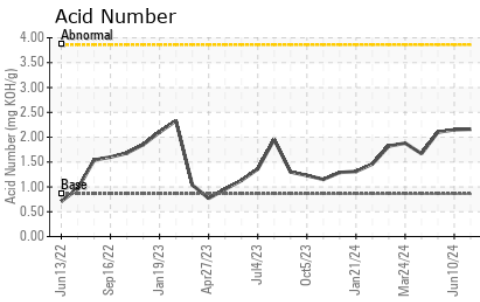
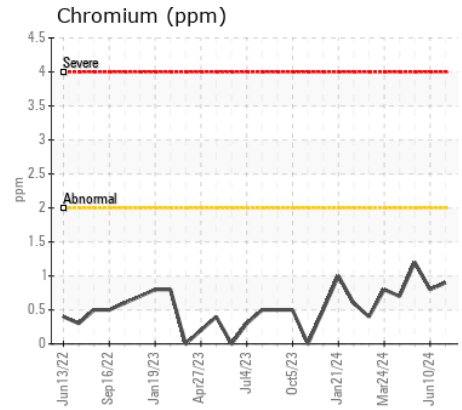
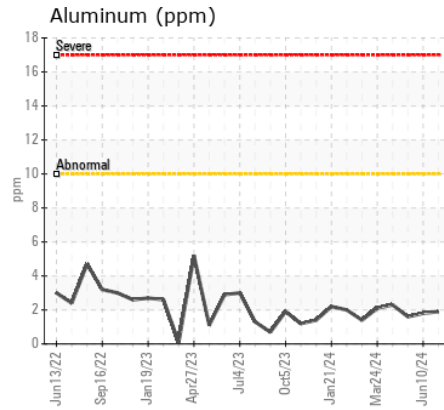
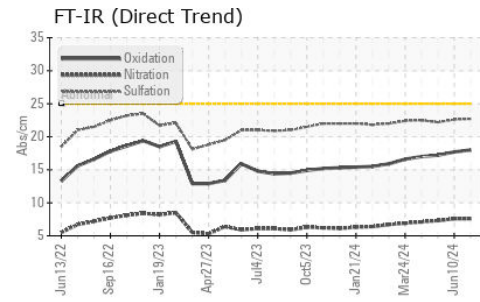
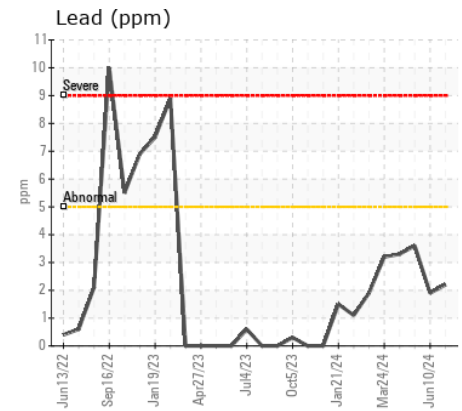
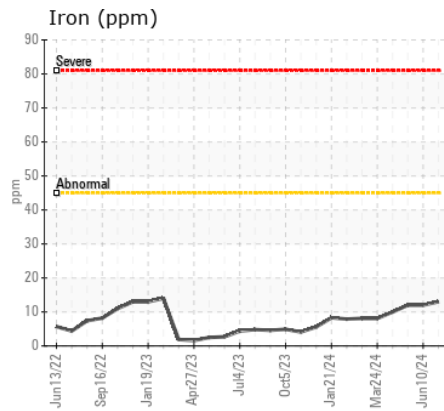
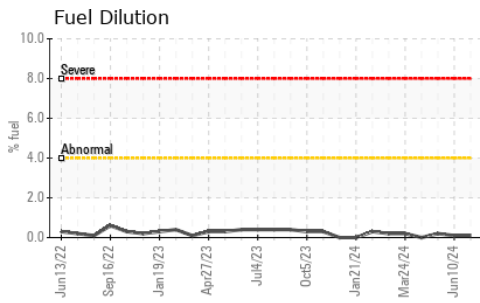
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>200	2	<1	1
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Fuel	%	ASTM D3524	>4.0	0.1	0.1	0.2
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	7.6	7.6	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	22.6	22.2
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		5	5	4
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	0	<1
Magnesium	ppm	ASTM D5185m		10	9	10
Calcium	ppm	ASTM D5185m	1351	1836	1849	1779
Phosphorus	ppm	ASTM D5185m	302	324	321	322
Zinc	ppm	ASTM D5185m	358	420	412	421
Sulfur	ppm	ASTM D5185m	2758	3399	3358	3439
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	17.7	17.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	2.16	2.15	2.10
Base Number (BN)	mg KOH/g	ASTM D2896	4.64	3.09	2.81	3.27
Visc @ 100°C	cSt	ASTM D445	13.3	14.2	14.1	14.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0120745 **Received** : 10 Jul 2024
Lab Number : 06232388 **Tested** : 12 Jul 2024
Unique Number : 11115881 **Diagnosed** : 12 Jul 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

AMERICAN PETROLEUM
 CARR 865 KM 0.2 CAMPANILA
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Certificate L2367
 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)