



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
Liberty 1
 Component
Natural Gas Engine
 Fluid
PETRO CANADA SENTRON LD 3000 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0111972	PCA0117137	PCA0111968
Sample Date		Client Info		02 Apr 2024	01 Mar 2024	02 Feb 2024
Machine Age	hrs	Client Info		70936	70196	69528
Oil Age	hrs	Client Info		12726	11986	11318
Filter Age	hrs	Client Info		12726	11986	11318
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	0	4
Chromium	ppm	ASTM D5185m	>4	1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	1
Lead	ppm	ASTM D5185m	>30	1	<1	15
Copper	ppm	ASTM D5185m	>35	<1	0	2
Tin	ppm	ASTM D5185m	>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

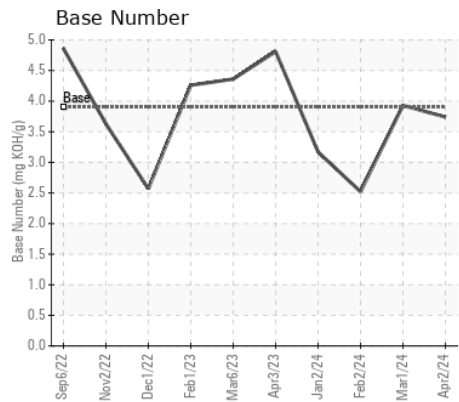
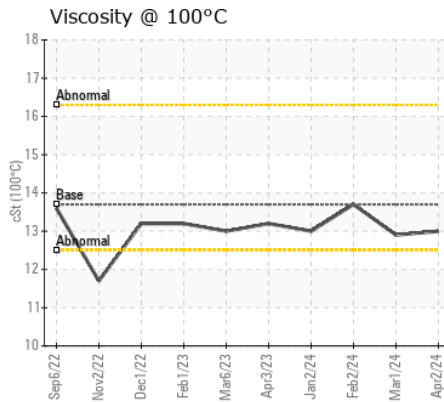
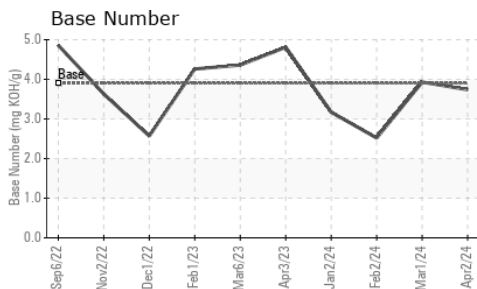
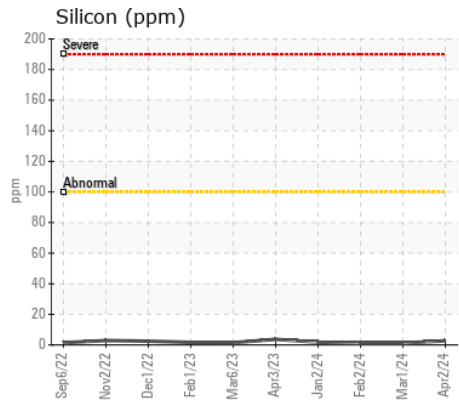
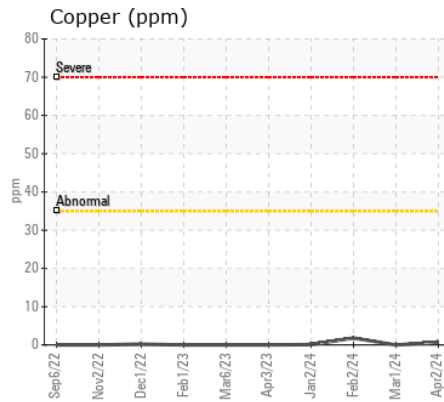
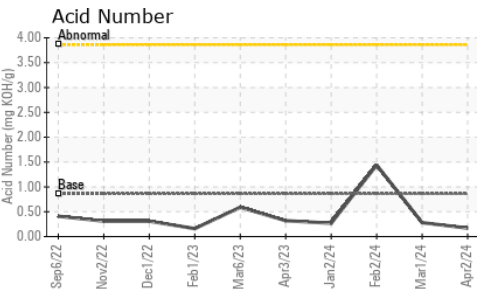
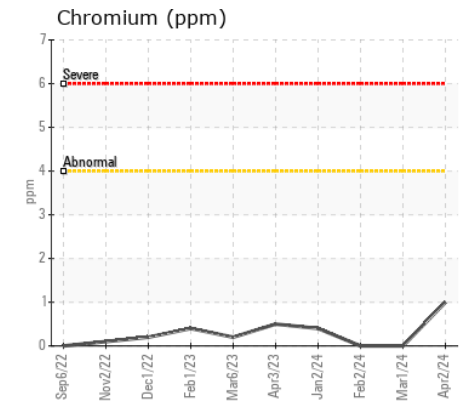
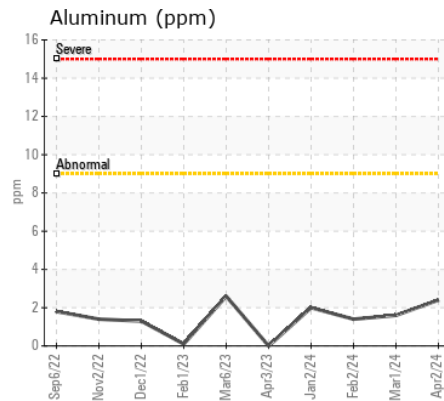
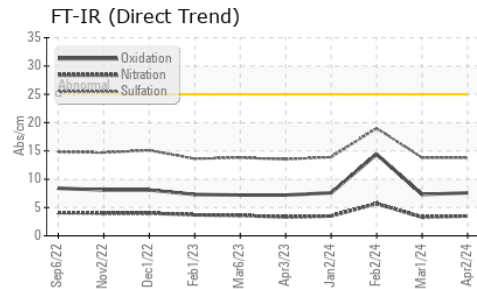
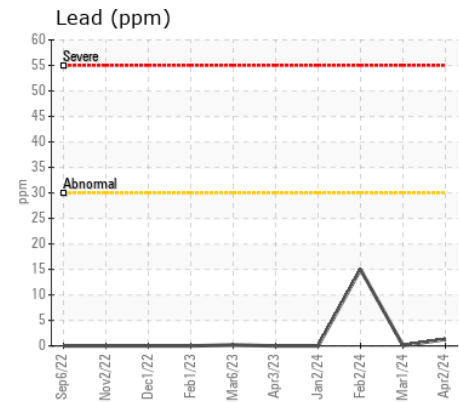
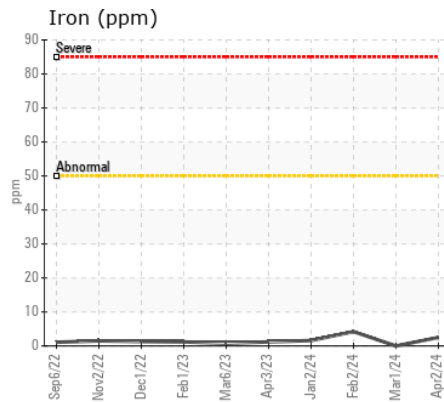
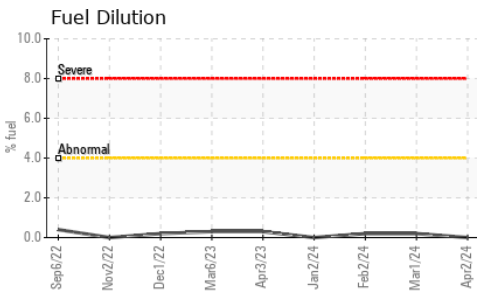
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	3	1	1
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel	%	ASTM D3524	>4.0	0.0	0.2	0.2
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	3.5	3.3	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	13.8	13.8	19.0
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		0	1	2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	2	2	<1	<1
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	5	10	9	16
Calcium	ppm	ASTM D5185m	1220	1716	1179	1406
Phosphorus	ppm	ASTM D5185m	298	395	270	327
Zinc	ppm	ASTM D5185m	350	457	342	396
Sulfur	ppm	ASTM D5185m	1995	3448	2240	2329
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.6	7.3	14.4
Acid Number (AN)	mg KOH/g	ASTM D8045	0.86	0.17	0.28	1.44
Base Number (BN)	mg KOH/g	ASTM D2896	3.9	3.74	3.93	2.52
Visc @ 100°C	cSt	ASTM D445	13.7	13.0	12.9	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0111972 **Received** : 11 Apr 2024
Lab Number : 06146065 **Tested** : 16 Apr 2024
Unique Number : 10976143 **Diagnosed** : 16 Apr 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

ENERVEST OPERATING - LIBERTY
 318 SINGLETON ROAD
 NORA, VA
 US 24272
 Contact: Service Manager

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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