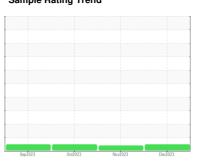


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id **45**Component

Natural Gas Engine

PETRO CANADA SENTRON LD 3000 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil

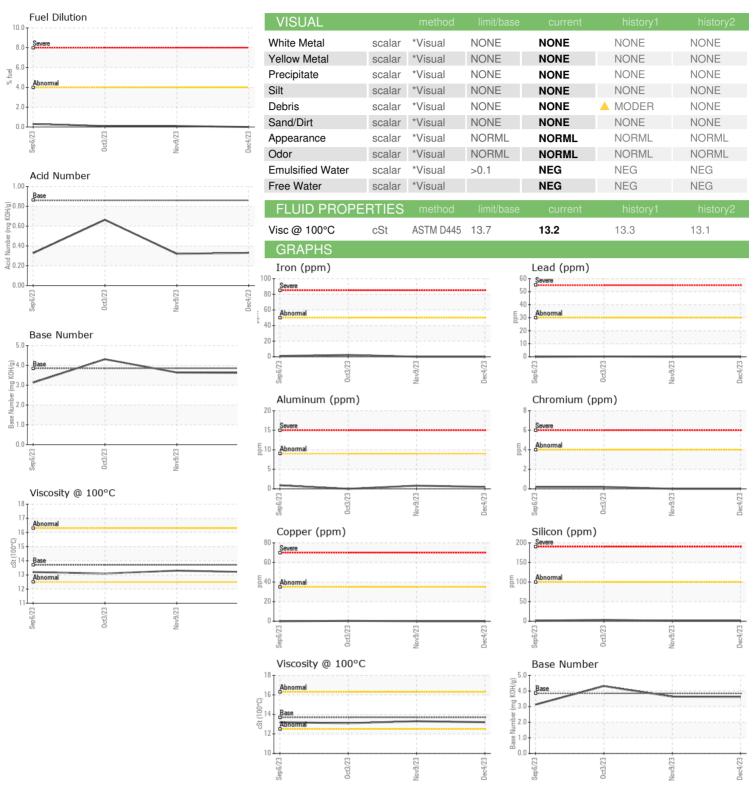
Fluid Condition

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 method	AL)						
Sample Number Client Info Q4 Dec 2023 09 Nov 2023 03 Oct 202		MATION.					
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 94419 98030 93366 Oil Age hrs Client Info 3610 3010 1851 Sample Status Not Changd Not	Sample Number						PCA0103419
Dil Age	Sample Date		Client Info		04 Dec 2023	09 Nov 2023	03 Oct 2023
Dil Changed Client Info Not Changd Not Changd Not Changed Northal Northal ABNORMAL ABNORMAL Northal Nort	Machine Age	hrs			94419		93366
NORMAL ABNORMAL NORMAL CONTAMINATION Mater WC Method Sol.1 NEG NEG	Oil Age	hrs	Client Info		3610	3010	1651
CONTAMINATION method limit/base current history1 history1 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron pp ASTM D5185m >50 0 0 2 Chromium ppm ASTM D5185m >4 0 0 <1 Nickel ppm ASTM D5185m >2 0 0 <1 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >3 0 0 0 Aluminum ppm ASTM D5185m >9 <1 <1 <1 0 Lead ppm ASTM D5185m >30 0 0 <1 <1 <1 Vanadium ppm ASTM D5185m >4 0 <1 <1 <1 <1 <1 <1 <1 <1	-		Client Info			Not Changd	Not Changd
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 2 Chromium ppm ASTM D5185m >4 0 0 <1	Sample Status				NORMAL	ABNORMAL	NORMAL
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >50 0 0 2 Chromium ppm ASTM D5185m >4 0 0 <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Chromium	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>50	0	0	2
Description	Chromium	ppm	ASTM D5185m	>4	0	0	
Silver	Nickel	ppm	ASTM D5185m	>2	0	0	<1
ASTM D5185m SP STM D5185m STM D51	Titanium	ppm	ASTM D5185m		0	0	0
Lead	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper	Aluminum	ppm	ASTM D5185m	>9	<1	<1	0
Tin	Lead	ppm	ASTM D5185m	>30	0	0	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 0 0 <1 Barium ppm ASTM D5185m 1 0 0 0 <1 Molybdenum ppm ASTM D5185m 1 0 0 0 <1 Manganese ppm ASTM D5185m 1 0 0 0 0 Magnesium ppm ASTM D5185m 1 0 0 0 0 Magnesium ppm ASTM D5185m 1220 1294 1284 1204 1294 Phosphorus ppm ASTM D5185m 1220 1294 1284 1204 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method <td>Copper</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>35</td> <th>0</th> <td>0</td> <td><1</td>	Copper	ppm	ASTM D5185m	>35	0	0	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history1 Boron ppm ASTM D5185m 5 0 0 <1	Tin	ppm	ASTM D5185m	>4	0	<1	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 5 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 2 0 0 <1 Manganese ppm ASTM D5185m 1 0 0 0 Magnesium ppm ASTM D5185m 5 11 9 8 Calcium ppm ASTM D5185m 1220 1294 1284 1204 Phosphorus ppm ASTM D5185m 298 285 290 274 Zinc ppm ASTM D5185m 350 358 352 348 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel %	Boron	ppm	ASTM D5185m	5	0	0	<1
Manganese ppm ASTM D5185m 1 0 0 0 Magnesium ppm ASTM D5185m 5 11 9 8 Calcium ppm ASTM D5185m 1220 1294 1284 1204 Phosphorus ppm ASTM D5185m 298 285 290 274 Zinc ppm ASTM D5185m 350 358 352 348 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D5185m >20 0 0 0 Soot % % *ASTM D5185m 0	Barium	ppm	ASTM D5185m	1	0	0	0
Magnesium ppm ASTM D5185m 5 11 9 8 Calcium ppm ASTM D5185m 1220 1294 1284 1204 Phosphorus ppm ASTM D5185m 298 285 290 274 Zinc ppm ASTM D5185m 350 358 352 348 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0.1 1 INFRA-RED method limit/base current history1 history1 Soot % *ASTM D7844 0 0 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <th>0</th> <td>0</td> <td><1</td>	Molybdenum	ppm	ASTM D5185m	2	0	0	<1
Calcium ppm ASTM D5185m 1220 1294 1284 1204 Phosphorus ppm ASTM D5185m 298 285 290 274 Zinc ppm ASTM D5185m 350 358 352 348 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D5185m >20 0 0 1 Fuel % ASTM D584m >4.0 0 0 0 Soot	Manganese	ppm	ASTM D5185m	1	0	0	0
Phosphorus ppm ASTM D5185m 298 285 290 274 Zinc ppm ASTM D5185m 350 358 352 348 Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >0 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0.1 0.1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 0 0 0 Nitration Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current </td <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>5</td> <th>11</th> <td>9</td> <td>8</td>	Magnesium	ppm	ASTM D5185m	5	11	9	8
Zinc	Calcium	ppm	ASTM D5185m	1220	1294	1284	1204
Sulfur ppm ASTM D5185m 1995 2387 2373 2691 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0 1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 0 0 0 0 Sout % % *ASTM D7624 >20 3.9 3.9	Phosphorus	ppm	ASTM D5185m	298	285	290	274
CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m >20 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0.1 0.1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86	Zinc	ppm	ASTM D5185m	350	358	352	348
Silicon ppm ASTM D5185m >+100 1 1 4 Sodium ppm ASTM D5185m 0 0 0 0 Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0.1 0.1 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Sulfur	ppm	ASTM D5185m	1995	2387	2373	2691
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 0 1 Fuel % ASTM D3524 >4.0 0.0 0.1 0.1 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Silicon	ppm	ASTM D5185m	>+100	1	1	4
Fuel % ASTM D3524 >4.0 0.0 0.1 0.1 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Sodium	ppm	ASTM D5185m		0	0	0
INFRA-RED	Potassium	ppm	ASTM D5185m	>20	0	0	1
Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Fuel	%	ASTM D3524	>4.0	0.0	0.1	0.1
Nitration Abs/cm *ASTM D7624 >20 3.9 3.9 3.6 Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current history1 history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 14.4 14.5 14.1 FLUID DEGRADATION method limit/base current Limit/base current history1 history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Soot %	%	*ASTM D7844		0	0	0
FLUID DEGRADATION method limit/base current history1 history1 Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Nitration	Abs/cm	*ASTM D7624	>20	3.9	3.9	3.6
Oxidation Abs/.1mm *ASTM D7414 >25 8.4 8.3 7.9 Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Sulfation	Abs/.1mm	*ASTM D7415	>30	14.4	14.5	14.1
Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	FLUID DEGRAI	OATION	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 0.86 0.33 0.32 0.664	Oxidation	Abs/.1mm	*ASTM D7414	>25	8.4	8.3	7.9
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.86		0.32	
	Base Number (BN)	mg KOH/g	ASTM D2896	3.85	3.62	3.64	4.31



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number**

: PCA0111929 : 06031786 : 10781577

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 11 Dec 2023 Recieved Diagnosed : 18 Dec 2023 Diagnostician : Wes Davis

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)

ENERVEST OPERATING - HAYSI BOOSTER

1705 BREAKS PARK ROAD HAYSI, VA

US 24256

T:

Contact: Service Manager