

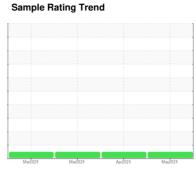
OIL ANALYSIS REPORT



WEST BAY CATERPILLAR 1017 (S/N F-17433)

Natural Gas Engine

PETRO CANADA SENTRON LD





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: All spark plugs and 6 cylinder heads were changed on 5/16/24. Coolant temp 210. Oil temp 190. Oil pressure 45psi)

All component wear rates are normal.

Contamination

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

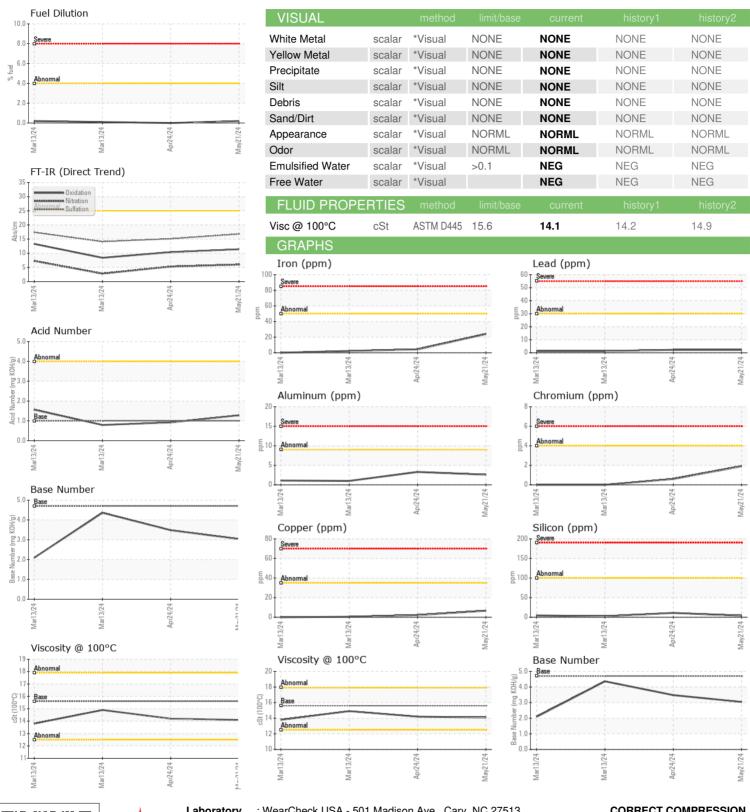
Fluid Condition

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.

Client Info	SYNTHETIC BLEND (100 GAL)	Mar202	4 Mar2024	Apr2024 M	ay2024	
Client Info Client Info Client Info Sees Client Info Sees	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		PCA0120476	PCA0120457	PCA0120464
Machine Age hrs Client Info 86852 86852 86852 1 Oil Age hrs Client Info 86852 86852 1 Oil Changed Client Info N/A Not Changed Changed Sample Status Normal NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Wear WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 24 4 0 Chromium ppm ASTM D5185m >2 <1 <1 0 Nickel ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >3 1 <1 0 Aluminum ppm ASTM D5185m >3 3 1 <1 0			Client Info		21 May 2024	24 Apr 2024	13 Mar 2024
Contamped Client Info N/A Not Changed Changed NoRMAL	Machine Age	hrs	Client Info		86852	86852	86852
NORMAL NORMAL NORMAL NORMAL	Oil Age	hrs	Client Info		86852	86852	1
CONTAMINATION method limit/base current history1 history2	Oil Changed		Client Info		N/A	Not Changd	Changed
Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >50 24 4 0 Chromium ppm ASTM D5185m >4 2 <1 0 Nickel ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >3 1 <1 0 Aluminum ppm ASTM D5185m >9 3 3 1 Lead ppm ASTM D5185m >30 2 2 1 Copper ppm ASTM D5185m >30 2 2 1 Vanadium ppm ASTM D5185m <1 <1 0 0 Cadmium ppm ASTM D5185m 0 <1 0 0 <td>Sample Status</td> <td></td> <td></td> <td></td> <th>NORMAL</th> <td>NORMAL</td> <td>NORMAL</td>	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINAT	ION	method	limit/base	current	history1	history2
Control Cont	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium	WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>50	24	4	0
Silver	Chromium	ppm	ASTM D5185m	>4	2	<1	0
ASTM D5185m	Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Ast Ast	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead	Silver	ppm	ASTM D5185m	>3	1	<1	0
Copper	Aluminum	ppm	ASTM D5185m	>9	3	3	1
Tin	Lead	ppm	ASTM D5185m	>30	2	2	1
Vanadium ppm ASTM D5185m <1 <1 0 Cadmium ppm ASTM D5185m <1 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 0 0 Barium ppm ASTM D5185m 0 <1 <1 0 Molybdenum ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 3 15 11 8 Calcium ppm ASTM D5185m 3 15 11 8 Calcium ppm ASTM D5185m 246 289 287 246 Zinc ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2	Copper	ppm	ASTM D5185m	>35	7	2	0
ADDITIVES	Tin	ppm	ASTM D5185m	>4	<1	2	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	0
Boron ppm ASTM D5185m 0 <1 0 0 0	Cadmium	ppm	ASTM D5185m		<1	<1	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 2 2 0 Manganese ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m	0	<1	0	0
Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 3 15 11 8 Calcium ppm ASTM D5185m 1402 1435 1338 1354 Phosphorus ppm ASTM D5185m 246 289 287 246 Zinc ppm ASTM D5185m 305 378 337 323 Sulfur ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >+100 4 11 5 Solicon ppm ASTM D5185m 9 0 0 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method	Barium	ppm	ASTM D5185m	0	<1	<1	0
Magnesium ppm ASTM D5185m 3 15 11 8 Calcium ppm ASTM D5185m 1402 1435 1338 1354 Phosphorus ppm ASTM D5185m 246 289 287 246 Zinc ppm ASTM D5185m 305 378 337 323 Sulfur ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 9 0 0 Sodium ppm ASTM D5185m 9 0 0 Potassium ppm ASTM D5185m 9 0 0 Potal % ASTM D5185m 9 0 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D5185m >20 4 1 0 Soot % <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>2</th> <td>2</td> <td>0</td>	Molybdenum	ppm	ASTM D5185m	0	2	2	0
Calcium ppm ASTM D5185m 1402 1435 1338 1354 Phosphorus ppm ASTM D5185m 246 289 287 246 Zinc ppm ASTM D5185m 305 378 337 323 Sulfur ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 11 5 Sodium ppm ASTM D5185m >+100 4 1 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1	Manganese	ppm	ASTM D5185m	0	<1	<1	0
Phosphorus ppm ASTM D5185m 246 289 287 246 Zinc ppm ASTM D5185m 305 378 337 323 Sulfur ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 11 5 Sodium ppm ASTM D5185m 9 0 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current	Magnesium	ppm	ASTM D5185m	3	15	11	8
Zinc ppm ASTM D5185m 305 378 337 323 325 325 325 326 3270 3059 30	Calcium	ppm	ASTM D5185m	1402	1435	1338	1354
Sulfur ppm ASTM D5185m 2310 2884 3270 3059 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 11 5 Sodium ppm ASTM D5185m 9 0 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D5185m >20 4 1 0 Soot % % ASTM D3524 >4.0 0.2 0.0 0.1 Soot % % *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1	Phosphorus	ppm	ASTM D5185m	246	289	287	246
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 11 5 Sodium ppm ASTM D5185m 9 0 0 Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28<	Zinc	ppm	ASTM D5185m	305	378	337	323
Silicon ppm ASTM D5185m >+100 4 11 5	Sulfur	ppm	ASTM D5185m	2310	2884	3270	3059
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 4 1 0 Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Silicon	ppm	ASTM D5185m	>+100	4	11	5
Fuel % ASTM D3524 >4.0 0.2 0.0 0.1 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 0 0 0 0 Nitration Abs/cm *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Sodium	ppm	ASTM D5185m		9	0	0
INFRA-RED	Potassium		ASTM D5185m	>20	4	1	0
Soot % % *ASTM D7844 0 0 0 Nitration Abs/cm *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Fuel	%	ASTM D3524	>4.0	0.2	0.0	0.1
Nitration Abs/cm *ASTM D7624 >20 6.0 5.3 2.8 Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current Limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Soot %	%	*ASTM D7844		0	0	0
Sulfation Abs/.1mm *ASTM D7415 >30 16.8 15.1 14.1 FLUID DEGRADATION method limit/base current Limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Vitration	Abs/cm	*ASTM D7624	>20	6.0	5.3	2.8
Oxidation Abs/.1mm *ASTM D7414 >25 11.4 10.4 8.4 Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Sulfation	Abs/.1mm	*ASTM D7415	>30	16.8		14.1
Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	FLUID DEGRA	OITAC	method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045 1.0 1.28 0.92 0.791	Oxidation	Abs/.1mm	*ASTM D7414	>25	11.4	10.4	8.4
. , , , , , , , , , , , , , , , , , , ,							
	Base Number (BN)	mg KOH/g	ASTM D2896	4.7	3.04	3.48	4.36



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: PCA0120476 Lab Number : 06191195 Unique Number : 11047947

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 May 2024 Tested : 30 May 2024

Diagnosed : 30 May 2024 - Don Baldridge

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) To discuss this sample report, contact Customer Service at 1-800-237-1369.

 st - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

CORRECT COMPRESSION

11903 CHIPPEWA HWY BEAR LAKE, MI US 49614

Contact: TONY MERRILL tony@correctcompression.com

T:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: