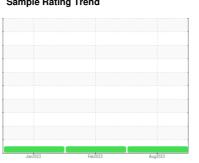


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Smith Ridge 2

Component **Natural Gas Engine**

PETRO CANADA SENTRON LD 3000 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

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.

Jan2023 Feb2023 Aug2023						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0091340	PCA0091300	PCA0077646
Sample Date		Client Info		07 Aug 2023	02 Feb 2023	05 Jan 2023
Machine Age	hrs	Client Info		122010	119235	118638
Oil Age	hrs	Client Info		122010	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	3	5	5
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	<1	<1
Lead	ppm	ASTM D5185m	>30	0	4	3
Copper	ppm	ASTM D5185m	>35	3	12	13
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	<1
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm ppm	ASTM D5185m	2	0 3	2	2
Molybdenum Manganese			2		2 <1	2
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5	3 <1 21	2 <1 17	2 0 11
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220	3 <1 21 1494	2 <1 17 1606	2 0 11 1423
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298	3 <1 21 1494 325	2 <1 17 1606 326	2 0 11 1423 282
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350	3 <1 21 1494 325 374	2 <1 17 1606 326 393	2 0 11 1423 282 348
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298	3 <1 21 1494 325	2 <1 17 1606 326	2 0 11 1423 282
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350	3 <1 21 1494 325 374	2 <1 17 1606 326 393	2 0 11 1423 282 348
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995	3 <1 21 1494 325 374 3029	2 <1 17 1606 326 393 3028	2 0 11 1423 282 348 2580
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995 limit/base	3 <1 21 1494 325 374 3029	2 <1 17 1606 326 393 3028 history1	2 0 11 1423 282 348 2580 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	2 1 5 1220 298 350 1995 limit/base	3 <1 21 1494 325 374 3029 current 2 2 <1	2 <1 17 1606 326 393 3028 history1	2 0 11 1423 282 348 2580 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m	2 1 5 1220 298 350 1995 Iimit/base >+100	3 <1 21 1494 325 374 3029 current 2 2	2 <1 17 1606 326 393 3028 history1 2	2 0 11 1423 282 348 2580 history2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 1 5 1220 298 350 1995 Iimit/base >+100	3 <1 21 1494 325 374 3029 current 2 2 <1	2 <1 17 1606 326 393 3028 history1 2 2	2 0 11 1423 282 348 2580 history2 2 0 7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3	2 0 11 1423 282 348 2580 history2 2 0 7 0.3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3 current	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3	2 0 11 1423 282 348 2580 history2 2 0 7 0.3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3 current 0	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3 history1 0.1	2 0 11 1423 282 348 2580 history2 2 0 7 0.3 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D76145	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3 current 0 4.6	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3 history1 0.1 6.3	2 0 11 1423 282 348 2580 history2 2 0 7 0.3 history2 0.1 5.8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D76145	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0 limit/base	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3 current 0 4.6 13.9	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3 history1 0.1 6.3 18.3	2 0 11 1423 282 348 2580 history2 2 0 7 0.3 history2 0.1 5.8 17.3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m ASTM D7824 *ASTM D7844 *ASTM D7624 *ASTM D7615 method	2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0 limit/base	3 <1 21 1494 325 374 3029 current 2 2 <1 0.3 current 0 4.6 13.9 current	2 <1 17 1606 326 393 3028 history1 2 2 6 0.3 history1 0.1 6.3 18.3	2 0 11 1423 282 348 2580 history2 2 0 7 0.3 history2 0.1 5.8 17.3



OIL ANALYSIS REPORT





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

: PCA0091340 : 05922910 : 10602857

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

: 11 Aug 2023 : 15 Aug 2023 Diagnostician : Sean Felton

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 - SMITH RIDGE

2305 SMITH RIDGE MCCLURE, VA

US 24269

Contact: Service Manager

T: F: