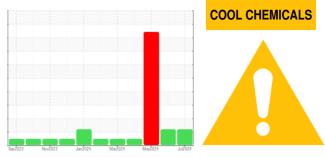


OIL ANALYSIS REPORT

Sample Rating Trend



42 Component Natural Gas Engine Fluid PETRO CANADA SENTRON LD 3000 (--- GAL)

DIAGNOSIS

Machine Id

A Recommendation

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

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Fuel content negligible. Test for glycol is negative.

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.

	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117253	PCA0117278	PCA0111893
Sample Date		Client Info		09 Jul 2024	30 May 2024	02 May 2024
Machine Age	hrs	Client Info		99612	98815	98190
Oil Age	hrs	Client Info		1157	360	690
Oil Changed		Client Info		N/A	Changed	Not Changd
Sample Status				MARGINAL	ABNORMAL	SEVERE
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	NEG
WEAR METALS	3	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	6	4	4
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	~ _	۰ <1	0	<1
Silver		ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	<1
Lead	ppm	ASTM D5185m	>9 >30	2	3	3
	ppm				4	2
Copper	ppm	ASTM D5185m	>35	1		
Tin	ppm	ASTM D5185m	>4	0	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	5	4	9
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	2	15	17	52
Manganese	ppm	ASTM D5185m	1	0	2	<1
Magnesium	ppm	ASTM D5185m	5	8	9	7
-			1220	1245	1367	1251
Calcium	ppm	ASTM D5185m		1245		
-	ppm ppm	ASTM D5185m ASTM D5185m	298	291	326	375
Calcium						
Calcium Phosphorus	ppm	ASTM D5185m	298	291	326	375
Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	298 350	291 344	326 374	375 351
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	298 350 1995	291 344 2137	326 374 2868	375 351 2708
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method	298 350 1995 limit/base	291 344 2137 current	326 374 2868 history1	375 351 2708 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	298 350 1995 limit/base	291 344 2137 current 2	326 374 2868 history1 3	375 351 2708 history2 4
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	298 350 1995 limit/base >+100	291 344 2137 current 2 23	326 374 2868 history1 3 25	375 351 2708 history2 4 ▲ 93
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	298 350 1995 limit/base >+100 >20	291 344 2137 current 2 23 ▲ 107	326 374 2868 history1 3 25 ▲ 108	375 351 2708 history2 4 ▲ 93 ▲ 436
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel	ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	298 350 1995 limit/base >+100 >20	291 344 2137 current 2 23 ▲ 107 0.0	326 374 2868 history1 3 25 ▲ 108 0.3	375 351 2708 history2 4 ▲ 93 ▲ 436 0.0
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel Glycol	ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D2982	298 350 1995 limit/base >+100 >20 >4.0	291 344 2137 current 2 23 ▲ 107 0.0 0.0	326 374 2868 history1 3 25 ▲ 108 0.3 	375 351 2708 history2 4 ▲ 93 ▲ 436 0.0 ▲ 0.10
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED	ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D2982 method	298 350 1995 <i>limit/base</i> >+100 >20 >4.0	291 344 2137 2 23 ▲ 107 0.0 0.0 0.0	326 374 2868 history1 3 25 ▲ 108 0.3 history1	375 351 2708 history2 4 ▲ 93 ▲ 436 0.0 ▲ 0.10 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot %	ppm ppm TS ppm ppm ppm % %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D2982 method *ASTM D7844	298 350 1995 >+100 >20 >4.0	291 344 2137 2 23 ▲ 107 0.0 0.0 current 0	326 374 2868 history1 3 25 ▲ 108 0.3 history1 0	375 351 2708 4 ▲ 93 ▲ 436 0.0 ▲ 0.10 history2 0
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration	ppm ppm pm ppm ppm % % % %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D2982 *ASTM D2982 method *ASTM D7844 *ASTM D7844	298 350 1995 >+100 >20 >4.0	291 344 2137	326 374 2868 history1 3 25 ▲ 108 0.3 history1 0 3.7	375 351 2708 4 ▲ 93 ▲ 436 0.0 ▲ 0.10 history2 0 4.1
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm pm ppm ppm % % % %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D3524 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7845	298 350 1995 >+100 >20 >4.0 Iimit/base >20 >30	291 344 2137 <u>current</u> 2 23 ▲ 107 0.0 0.0 <u>current</u> 0 4.1 14.8	326 374 2868 history1 3 25 ▲ 108 0.3 history1 0 3.7 14.1	375 351 2708 4 ▲ 93 ▲ 436 0.0 ▲ 0.10 ► 0.10 ► 04.1 14.9
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm % % % Abs/cm Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415	298 350 1995 >+100 >20 >20 >4.0 limit/base >20 >30 limit/base	291 344 2137 current 2 23 ▲ 107 0.0 0.0 current 0 4.1 14.8 current	326 374 2868 history1 3 25 ▲ 108 0.3 history1 0 3.7 14.1 history1	375 351 2708 4 3 3 4 3 3 436 0.0 0.10 6 10 10 history2 0 4.1 14.9 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm FS ppm ppm ppm % % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7844 *ASTM D7614	298 350 1995 >+100 >20 >20 >4.0 limit/base >20 >30 limit/base >25	291 344 2137 current 2 23 ▲ 107 0.0 0.0 current 0 4.1 14.8 current 8.4	326 374 2868 history1 3 25 108 0.3 history1 0 3.7 14.1 history1 7.9	375 351 2708 4 3 3 3 4 3 3 3 3 4 3 3 3 3 3 5 3 5 3 3 3 3



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