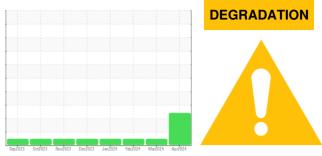


OIL ANALYSIS REPORT

Sample Rating Trend



48 Component Natural Gas Engine

Fluid PETRO CANADA SENTRON LD 3000 (--- GAL)

DIAGNOSIS

Machine Id

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

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

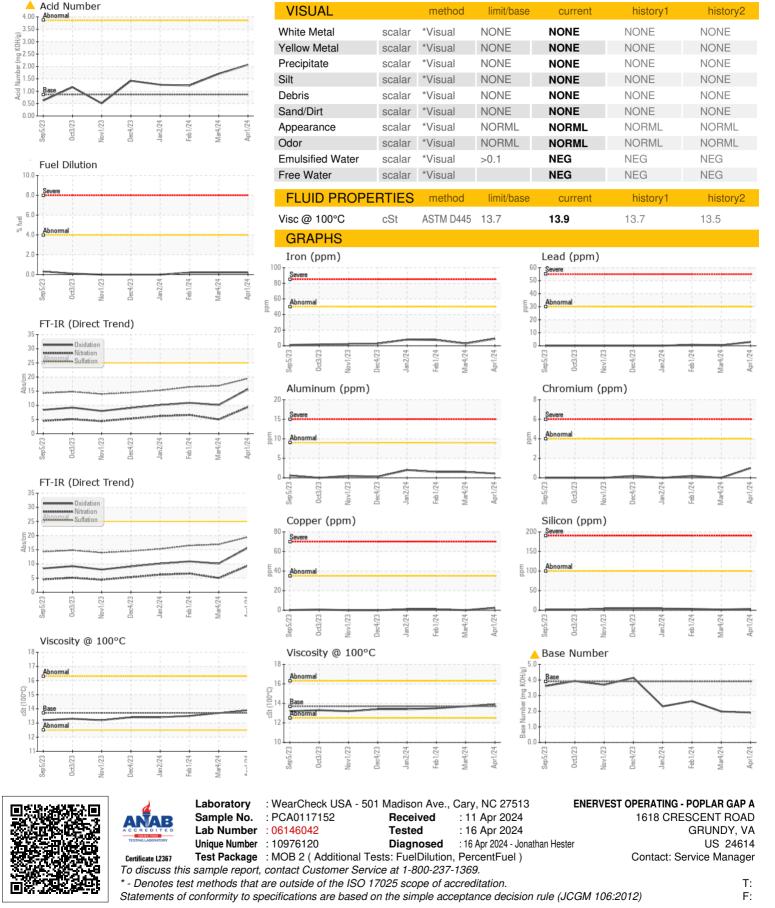
Fluid Condition

The BN level is low. The AN level is at the top-end of the recommended limit.

SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117152	PCA0117182	PCA0117162
Sample Date		Client Info		01 Apr 2024	04 Mar 2024	01 Feb 2024
Machine Age	hrs	Client Info		98414	97749	96998
Oil Age	hrs	Client Info		5407	4742	3991
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	9	3	7
Chromium	ppm	ASTM D5185m	>4	1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	1	2	2
Lead	ppm	ASTM D5185m	>30	3	<1	<1
Copper	ppm	ASTM D5185m	>35	2	<1	1
Tin	ppm	ASTM D5185m	>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Boron Barium	ppm ppm		5 1	0 0	0 0	0
Barium	ppm	ASTM D5185m ASTM D5185m	1	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	1 2	0 6	0 <1	0 3
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1	0 6 1	0 <1 <1	0 3 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5	0 6 1 9	0 <1 <1 10	0 3 <1 11
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220	0 6 1 9 1383	0 <1 <1 10 1410	0 3 <1 11 1283
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220 298	0 6 1 9 1383 315	0 <1 <1 10 1410 303	0 3 <1 11 1283 302
Barium 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	1 2 1 5 1220 298 350	0 6 1 9 1383 315 359	0 <1 <1 10 1410 303 394	0 3 <1 11 1283 302 347
Barium 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	1 2 1 5 1220 298 350 1995	0 6 1 9 1383 315 359 2521	0 <1 <1 10 1410 303 394 2405	0 3 <1 11 1283 302 347 2301
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 Iimit/base	0 6 1 9 1383 315 359 2521 current	0 <1 <1 10 1410 303 394 2405 history1	0 3 <1 11 1283 302 347 2301 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 Iimit/base	0 6 1 9 1383 315 359 2521 current 4	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1	0 3 <1 11 1283 302 347 2301 history2 4 7 32
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 Iimit/base >+100	0 6 1 9 1383 315 359 2521 current 4 7	0 <1 <1 10 1410 303 394 2405 history1 2 2 2	0 3 <1 11 1283 302 347 2301 history2 4 7
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 limit/base >+100 >20	0 6 1 9 1383 315 359 2521 current 4 7 37	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1	0 3 <1 11 1283 302 347 2301 history2 4 7 32
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 limit/base >+100 >20 >20	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2
Barium 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 D5185m	1 2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2
Barium 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 D5185m	1 2 1 5 1220 298 350 1995 limit/base >+100 >20 >4.0	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current 0	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1 0	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2 0
Barium 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 D51854 *ASTM D7844 *ASTM D7824	1 2 1 5 1220 298 350 1995 limit/base >+100 >20 >20 >20	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current 0 9.4	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1 0 5.0	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2 0 6.6
Barium 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 D7415	1 2 1 5 1220 298 350 1995 Imit/base >+100 >20 >4.0 Imit/base >20 >30 Imit/base	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current 0 9.4 19.5 current	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1 0 5.0 16.9 history1	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2 0 6.6 16.5 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAC	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	1 2 1 5 1220 298 350 1995 Imit/base >+100 >+100 >20 >4.0 Imit/base >20 >30 Imit/base >30	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current 0 9.4 19.5 current 15.7	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1 0 5.0 16.9 history1 10.1	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2 0.2 history2 0 6.6 16.5 history2 10.9
Barium 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 D7415	1 2 1 5 1220 298 350 1995 Imit/base >+100 >20 >4.0 Imit/base >20 >30 Imit/base	0 6 1 9 1383 315 359 2521 current 4 7 37 0.2 current 0 9.4 19.5 current	0 <1 <1 10 1410 303 394 2405 history1 2 2 2 1 0.2 history1 0 5.0 16.9 history1	0 3 <1 11 1283 302 347 2301 history2 4 7 32 0.2 history2 0 6.6 16.5 history2



OIL ANALYSIS REPORT



Contact/Location: Service Manager - ENEGRUPGA