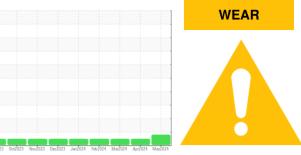


## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

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

### DIAGNOSIS

#### A Recommendation

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

#### 🔺 Wear

The copper level is abnormal. All other component wear rates are normal.

#### Contamination

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

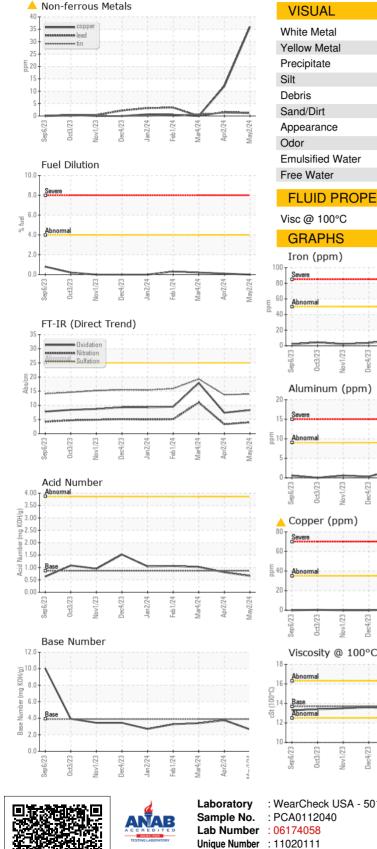
#### Fluid Condition

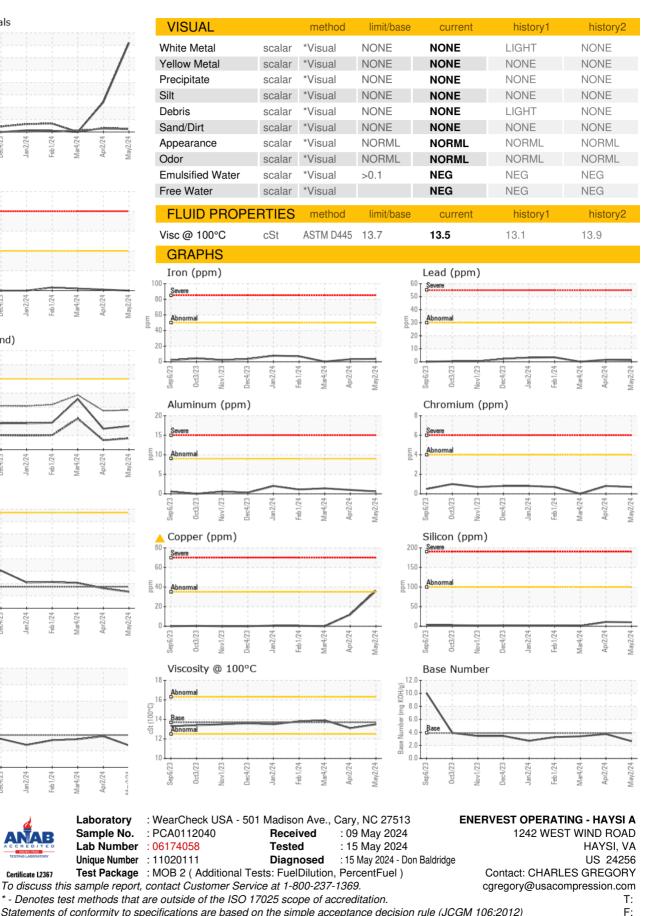
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0112040	PCA0117153	PCA0117184
Sample Date		Client Info		02 May 2024	02 Apr 2024	04 Mar 2024
Machine Age	hrs	Client Info		139433	138712	138052
Oil Age	hrs	Client Info		1027	306	5305
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	4	3	<1
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	<1	1	1
Lead	ppm	ASTM D5185m	>30	1	2	0
Copper	ppm	ASTM D5185m	>35	<u> </u>	12	0
Tin	ppm	ASTM D5185m	>4	1	1	<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	5	0	0	0
Boron Barium	ppm ppm		5 1	0 0		0
					0	
Barium	ppm	ASTM D5185m ASTM D5185m	1	0	0 <1	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	1 2	0 2	0 <1 2	0 <1
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1	0 2 <1	0 <1 2 1	0 <1 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5	0 2 <1 9	0 <1 2 1 8	0 <1 <1 7
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 2 <1 9 1321	0 <1 2 1 8 1254	0 <1 <1 7 1270
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1 2 1 5 1220 298	0 2 <1 9 1321 296	0 <1 2 1 8 1254 289	0 <1 <1 7 1270 277
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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 2 <1 9 1321 296 363	0 <1 2 1 8 1254 289 335	0 <1 <1 7 1270 277 348
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 2 <1 9 1321 296 363 2741	0 <1 2 1 8 1254 289 335 2574	0 <1 <1 7 1270 277 348 2050
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 2 <1 9 1321 296 363 2741 current	0 <1 2 1 8 1254 289 335 2574 history1	0 <1 7 1270 277 348 2050 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 2 <1 9 1321 296 363 2741 current 10	0 <1 2 1 8 1254 289 335 2574 history1 11	0 <1 <1 7 1270 277 348 2050 history2 1
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 <b>method</b> ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 Iimit/base >+100	0 2 <1 9 1321 296 363 2741 current 10 0	0 <1 2 1 8 1254 289 335 2574 history1 11 0	0 <1 <1 7 1270 277 348 2050 history2 1 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS 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 <b>limit/base</b> >+100 >20	0 2 <1 9 1321 296 363 2741 current 10 0 4	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 Jimit/base >+100 >20 >20 >4.0	0 2 <1 9 1321 296 363 2741 current 10 0 4 0.0	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 2 <1 0.2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >4.0	0 2 <1 9 1321 296 363 2741 10 0 4 0.0 current	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 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 <b>TS</b> ppm ppm ppm %	ASTM D5185m ASTM D5185m	1 2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >4.0	0 2 <1 9 1321 296 363 2741 current 10 0 4 0.0 4 0.0 current 0	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1 0	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 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	1 2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 	0 2 -1 9 1321 296 363 2741 current 10 0 4 0.0 4 0.0 current 0 4.0	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1 0 3.3	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 0.2 history2 0 11.0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7415	1 2 1 5 1220 298 350 1995 Imit/base >+100 >20 >4.0 Imit/base >20 >20 >30 Imit/base	0 2 3 1321 296 363 2741 0 10 0 4 0.0 4 0.0 0 4.0 14.0 14.0 14	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1 0 3.3 13.7 history1	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 0.2 history2 0 11.0 19.3 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	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 >20 >4.0 Imit/base >20 >30 Imit/base	0 2 3 1321 296 363 2741 0 10 0 4 0.0 4 0.0 0 4 0.0 0 4 0.0 0 4 0.0 0 4.0 14.0 1	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1 0 3.3 13.7 history1 7.4	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 0.2 history2 0 11.0 19.3 history2 17.9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7415	1 2 1 5 1220 298 350 1995 Imit/base >+100 >20 >4.0 Imit/base >20 >20 >30 Imit/base	0 2 3 1321 296 363 2741 0 10 0 4 0.0 4 0.0 0 4.0 14.0 14.0 14	0 <1 2 1 8 1254 289 335 2574 history1 11 0 3 0.1 history1 0 3.3 13.7 history1	0 <1 <1 7 1270 277 348 2050 history2 1 2 <1 0.2 history2 0 11.0 19.3 history2



# **OIL ANALYSIS REPORT**





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

Report Id: ENEHAYA [WUSCAR] 06174058 (Generated: 05/15/2024 20:26:12) Rev: 1

Certificate 12367

Contact/Location: CHARLES GREGORY - ENEHAYA