

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

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

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

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

## Fluid Condition

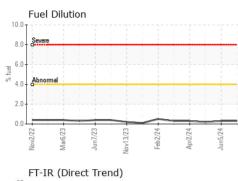
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

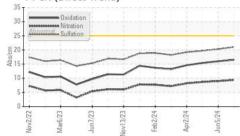
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117239	PCA0117125	PCA0117127
Sample Date		Client Info		08 Jul 2024	05 Jun 2024	01 May 2024
Machine Age	hrs	Client Info		161739	160951	160114
Oil Age	hrs	Client Info		10342	9554	0
Oil Changed		Client Info		Oil Added	Not Changd	Not Changd
Sample Status				NORMAL	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	12	13	10
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	4	2
Lead	ppm	ASTM D5185m	>30	4	6	4
Copper	ppm	ASTM D5185m	>35	2	5	2
Tin	ppm	ASTM D5185m	>4	<1	2	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	0	0	0
				-	0	
Barium	ppm	ASTM D5185m	1	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	1 2			
		ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	2	0 5	0 8	0
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	2 1	0 5 0	0 8 2	0 6 <1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5	0 5 0 9	0 8 2 10	0 6 <1 9
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220	0 5 0 9 1600	0 8 2 10 1742	0 6 <1 9 1572
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298	0 5 0 9 1600 350	0 8 2 10 1742 376	0 6 <1 9 1572 355
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	0 5 0 9 1600 350 444	0 8 2 10 1742 376 469	0 6 <1 9 1572 355 426
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	2 1 5 1220 298 350 1995 <b>limit/base</b>	0 5 0 9 1600 350 444 2406	0 8 2 10 1742 376 469 3067	0 6 <1 9 1572 355 426 2773
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	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100	0 5 0 9 1600 350 444 2406 current	0 8 2 10 1742 376 469 3067 history1	0 6 <1 9 1572 355 426 2773 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100	0 5 0 9 1600 350 444 2406 <u>current</u> 2	0 8 2 10 1742 376 469 3067 history1 4	0 6 <1 9 1572 355 426 2773 history2 3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0	0 8 2 10 1742 376 469 3067 history1 4 3	0 6 <1 9 1572 355 426 2773 history2 3 0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur Sulfur Silicon Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0 2	0 8 2 10 1742 376 469 3067 history1 4 3 6	0 6 <1 9 1572 355 426 2773 history2 3 0 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >20 >20	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0 2 0 2 0.3	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3	0 6 <1 9 1572 355 426 2773 history2 3 0 2 2 0.2
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	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >4.0	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0 2 0.3 2 0.3	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1	0 6 <1 9 1572 355 426 2773 history2 3 0 2 0.2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D3524 <b>method</b>	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >4.0	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0 2 0.3 2 0.3	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1 0.1	0 6 <1 9 1572 355 426 2773 history2 3 0 2 0.2 history2 0.2
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 D5844 *ASTM D7844 *ASTM D7844	2 1 5 1220 298 350 1995 <b>limit/base</b> >+100 >20 >20 >20 >20 >20 >4.0	0 5 0 9 1600 350 444 2406 <u>current</u> 2 0 2 0.3 2 0.3 2 0.3	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1 0.1 9.0	0 6 <1 9 1572 355 426 2773 history2 3 0 2 0.2 history2 0.2 0.1 8.7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5844 *ASTM D7844 *ASTM D7844	2 1 5 1220 298 350 1995 <b>imit/base</b> >+100 >20 >20 >20 >20 >4.0 <b>imit/base</b> >15 >25 <b>imit/base</b>	0 5 0 9 1600 350 444 2406 <i>current</i> 2 0 2 0.2 0.3 <i>current</i> 0.1 9.4 21.0 <i>current</i>	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1 0.1 9.0 20.3 history1	0 6 <1 9 1572 355 426 2773 history2 3 0 2 0.2 history2 0.1 8.7 19.7
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 1 5 1220 298 350 1995 <b>imit/base</b> >+100 >20 >20 >20 >4.0 <b>imit/base</b> >15 >25 <b>imit/base</b>	0 5 0 9 1600 350 444 2406 current 2 0 2 0.3 current 0.1 9.4 21.0 current 16.5	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1 0.1 9.0 20.3 history1 16.0	0 6 <1 9 1572 355 426 2773 history2 3 0 2 0.2 history2 0.1 8.7 19.7 history2 15.4
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm % % Abs/cm Abs/cm	ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7624 *ASTM D7415	2 1 5 1220 298 350 1995 <b>imit/base</b> >+100 >20 >20 >20 >20 >4.0 <b>imit/base</b> >15 >25 <b>imit/base</b>	0 5 0 9 1600 350 444 2406 <i>current</i> 2 0 2 0.2 0.3 <i>current</i> 0.1 9.4 21.0 <i>current</i>	0 8 2 10 1742 376 469 3067 history1 4 3 6 0.3 history1 0.1 9.0 20.3 history1	0 6 - (1 9 1572 355 426 2773 history2 3 0 2 0.2 2 0.2 history2 0.1 8.7 19.7 history2

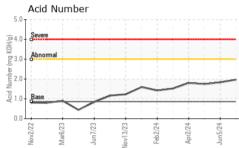


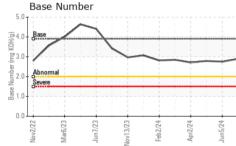
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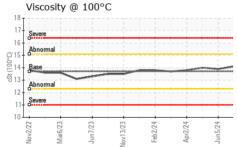
VISUAL











White	Metal		scala	ar	*Visual	NONE		NC	DNE		LIGHT	-	NO	NE
Yellov	v Metal		scala	ar	*Visual	NONE		NC	DNE		NONE		NO	NE
Precip	oitate		scala	ar	*Visual	NONE		NC	DNE		NONE		NO	NE
Silt			scala	ar	*Visual	NONE		NC	DNE		NONE		NO	NE
Debris	S		scala	ar	*Visual	NONE		-	DNE		NONE		NO	NE
Sand/	Dirt		scala	ar	*Visual	NONE		NC	DNE		NONE		NO	NE
Appea	arance		scala	ar	*Visual	NORML		NC	RML		NORN	1L	NO	RN
Odor			scala	ar	*Visual	NORML		NC	RML		NORM	1L	NO	RN
Emuls	sified Wat	ter	scala	ar	*Visual	>0.1		NE	G		NEG		NEC	G
Free \	Nater		scala	ar	*Visual			NE	G		NEG		NEC	G
FLU	JID PR	OPE	ERTIE	S	method	limit/ba	se	C	current		histo	ry1	hi	sto
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	d	Laboratory	: WearCheck USA - 501	Madison Ave.,	Cary, NC 27513	ENERVEST OPERATING - HATCHET
	ANAB	Sample No.	: PCA0117239	Received	: 16 Jul 2024	126 AILY ROAD
÷	ACCREDITED	Lab Number	: 06238556	Tested	: 17 Jul 2024	DANTE, VA
	TESTING LABORATORY	Unique Number	: 11127390	Diagnosed	: 18 Jul 2024 - Doug Boga	art US 24237
	Certificate L2367	Test Package	: MOB 2 ( Additional Tes	sts: FuelDilution	, PercentFuel )	Contact: Service Manager
誕生	To discuss this	s sample report,	contact Customer Service	ce at 1-800-237	-1369.	
	* - Denotes tes	st methods that	are outside of the ISO 17	7025 scope of a	ccreditation.	T:
<u>, 10, 10</u>	Statements of	conformity to sp	pecifications are based of	n the simple acc	eptance decision rule (J	<i>CGM 106:2012)</i> F:
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Report Id: ENEDANH [WUSCAR] 06238556 (Generated: 07/18/2024 12:26:32) Rev: 1

Submitted By: Chris Moore Page 2 of 2