

OIL ANALYSIS REPORT

Sample Rating Trend





Area [spb0004319] Machine Id 95032

Component Diesel Engine Fluid

PETRO CANADA 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

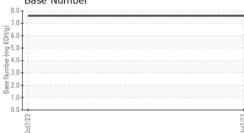
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0004319		
Sample Date		Client Info		07 Oct 2023		
Machine Age	mls	Client Info		294222		
Oil Age	mls	Client Info		10000		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	23		
Chromium	ppm	ASTM D5185m	>5	2		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	2		
Lead	ppm	ASTM D5185m	>30	2		
Copper	ppm	ASTM D5185m	>150	2		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 49	history1	history2
			limit/base			
Boron Barium	ppm	ASTM D5185m	limit/base	49		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	limit/base	49 3		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24 <1 743		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24 <1 743 1335	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24 <1 743 1335 809	 	
Boron 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 ASTM D5185m	limit/base	49 3 24 <1 743 1335 809 945		
Boron 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 ASTM D5185m	limit/base	49 3 24 <1 743 1335 809 945 2735		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	49 3 24 <1 743 1335 809 945 2735 current		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	49 3 24 <1 743 1335 809 945 2735 current 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base	49 3 24 <1 743 1335 809 945 2735 2735 current 5 7	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20	49 3 24 <1 743 1335 809 945 2735 current 5 7 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base	49 3 24 <1 743 1335 809 945 2735 current 5 7 2 2	 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	49 3 24 <1 743 1335 809 945 2735 <u>current</u> 5 7 2 <u>current</u> 0.1	 history1 history1 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >3 >20	49 3 24 <1 743 1335 809 945 2735 <i>current</i> 5 7 2 <i>current</i> 0.1 8.8	 history1 history1 history1	history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	limit/base >20 >20 limit/base >3 >20 >30 >30 limit/base	49 3 24 <1 743 1335 809 945 2735 Current 5 7 2 Current 0.1 8.8 20.2 Current	 history1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	limit/base >20 >20 limit/base >3 >20 >30 >30 limit/base	49 3 24 <1 743 1335 809 945 2735 <u>current</u> 5 7 2 <u>current</u> 0.1 8.8 20.2	 history1 history1 history1 history1	history2 history2 history2 history2 history2



OIL ANALYSIS REPORT

Base Number



Viscosity @ 100°C



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		14.0		
GRAPHS						
20 10 5 0 E E E E Non-ferrous Metal			0et7/23			
Copper 8 6 4 2 0 EXTENSION			0ct//23			
Viscosity @ 100°C			8.0	Base Number		

(^b/H03 ^{5.0}

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0.0

0ct7/23

0ct7/23 -

: 16 Oct 2023

: 17 Oct 2023



Diagnostician : Wes Davis Test Package : FLEET Contact: DOUG EDWARDS Certificate L2367 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)

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

Received

Diagnosed

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() 100°C) 15

5 1.

13 12

11-

Unique Number : 10697498

Laboratory

Sample No.

Lab Number

0ct7/23

: SBP0004319

: 05980203

T: (402)342-5485 F:

dedwards@sappbros.net

Sapp Bros. Fleet - West Point Location

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