

OIL ANALYSIS REPORT

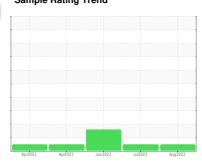
Sample Rating Trend

NORMAL

FORD 611 (S/N 1FM5K8AROHGC56634)

Gasoline Engine

PETRO CANADA SUPREME 5W20 MOTOR OIL (6 GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

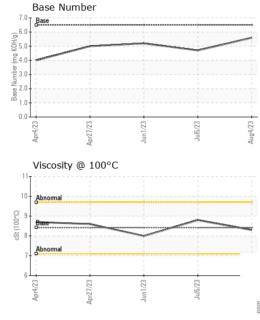
Fluid Condition

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

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100382	PCA0100379	PCA0097962
Sample Date		Client Info		04 Aug 2023	05 Jul 2023	01 Jun 2023
Machine Age	mls	Client Info		98034	96051	94329
Oil Age	mls	Client Info		1983	1722	1789
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	4	4	6
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	2	2	<1
Lead	ppm	ASTM D5185m	>50	<1	0	0
Copper	ppm	ASTM D5185m	>155	2	4	1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
A D D I TIII (E C						
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 60	history1 66	history2 64
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	183	60	66	64
Boron Barium	ppm	ASTM D5185m ASTM D5185m	183 0 36	60 2	66 0	64 8
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36	60 2 85	66 0 63	64 8 73
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0	60 2 85 <1	66 0 63 <1	64 8 73 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417	60 2 85 <1 653	66 0 63 <1 488	64 8 73 <1 569
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318	60 2 85 <1 653 1497	66 0 63 <1 488 1330 702 839	64 8 73 <1 569 1046 763 898
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773	60 2 85 <1 653 1497 886	66 0 63 <1 488 1330 702	64 8 73 <1 569 1046 763
Boron 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 ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845	60 2 85 <1 653 1497 886 1037	66 0 63 <1 488 1330 702 839	64 8 73 <1 569 1046 763 898
Boron 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 ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690	60 2 85 <1 653 1497 886 1037 3523	66 0 63 <1 488 1330 702 839 3083	64 8 73 <1 569 1046 763 898 3618
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base	60 2 85 <1 653 1497 886 1037 3523	66 0 63 <1 488 1330 702 839 3083 history1	64 8 73 <1 569 1046 763 898 3618
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base	60 2 85 <1 653 1497 886 1037 3523 current	66 0 63 <1 488 1330 702 839 3083 history1	64 8 73 <1 569 1046 763 898 3618 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400	60 2 85 <1 653 1497 886 1037 3523 current 26	66 0 63 <1 488 1330 702 839 3083 history1 16 6	64 8 73 <1 569 1046 763 898 3618 history2 19
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3	66 0 63 <1 488 1330 702 839 3083 history1 16 6	64 8 73 <1 569 1046 763 898 3618 history2 72 19 36
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3	66 0 63 <1 488 1330 702 839 3083 history1 16 6 0	64 8 73 <1 569 1046 763 898 3618 history2 19 36 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3 current	66 0 63 <1 488 1330 702 839 3083 history1 16 6 0 history1 0.1	64 8 73 <1 569 1046 763 898 3618 history2 19 36 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20 limit/base	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3 current 0 8.3	66 0 63 <1 488 1330 702 839 3083 history1 16 6 0 history1 0.1 7.9	64 8 73 <1 569 1046 763 898 3618 history2 19 36 history2 0.1 6.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	183 0 36 0 417 1318 773 845 2690 imit/base >30 >400 >20 imit/base	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3 current 0 8.3 18.5	66 0 63 <1 488 1330 702 839 3083 history1 16 6 0 history1 0.1 7.9 18.6	64 8 73 <1 569 1046 763 898 3618 history2 19 36 history2 0.1 6.8 17.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm	ASTM D5185m Method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20 limit/base >20 >30 limit/base	60 2 85 <1 653 1497 886 1037 3523 current 26 8 3 current 0 8.3 18.5 current	66 0 63 <1 488 1330 702 839 3083 history1 16 6 0 history1 0.1 7.9 18.6 history1	64 8 73 <1 569 1046 763 898 3618 history2 19 36 history2 0.1 6.8 17.8 history2



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VISUAL		method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	NEG	
FLUID PROPE	RTIFS	method	limit/base	current	historv1	history2	

I LOID I HOI	LITTLO						
Visc @ 100°C	cSt	ASTM D445	8.42	8.3	8.8	8	
GRAPHS							
Iron (ppm)				Lead (ppm)			
400 Severe				Severe	-		
200 Abnormal				E 100			
Abnormal				Abnormal	 		
0				0			
Apr4/23	Jun1/23 .	Jul5/23 .	Aug4/23	Apr4/23 Apr27/23	Jun1/23 -	Jul5/23	Aug4/23
Aluminum (ppm			ď	Chromium (p			A
Severe				50			
80				40 + 0			
Abnormal				Abnormal Abnormal			
20				10			
Apr4/23 +	Jun1/23 -	Jul5/23 -	Aug4/23	Apr4/23	Jun1/23 -	Jul5/23 -	Aug4/23
d,	ą	٦	Aug			7	Aug
Copper (ppm)				Silicon (ppm)			
250 - Severe				60			
E 150 Abnormal				Abnormal		_	
50				20			
Z3 Z3 Z3	- 53	23	23	23 23		- 53	23
Apr4/23	Jun1/23	Jul5/23	Aug4/23	Apr4/23	Jun1/23	Jul5/23	Aug4/23 -
Viscosity @ 100	°C			Base Numbe	r		
10 Abnormal				Base (M)			
(J.0001) ts				Bw) 4.0			
8 8 AL	$\overline{}$			quantum de la companya de la company			

: 28 Aug 2023

: 29 Aug 2023





Report Id: VILNOR [WUSCAR] 05936583 (Generated: 08/29/2023 13:46:44) Rev: 1

Laboratory Sample No. Lab Number

Unique Number : 10621854

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0100382 Received : 05936583

Diagnosed Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: TBN) 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)

VILLAGE OF NORTH RIVERSIDE

2345 S DESPLAINES NORTH RIVERSIDE, IL US 60546

Contact: Service Manager vznrdpw@gmail.com

T: F:

Contact/Location: Service Manager - VILNOR

Jun1/23