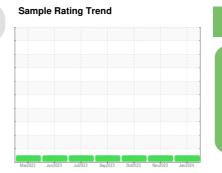


### **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method





NORMAL

# FORD 301 (S/N 1FM5K8ARZEGC13893)

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.

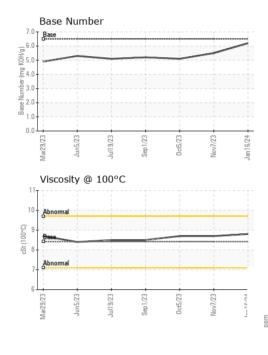
#### Fluid Condition

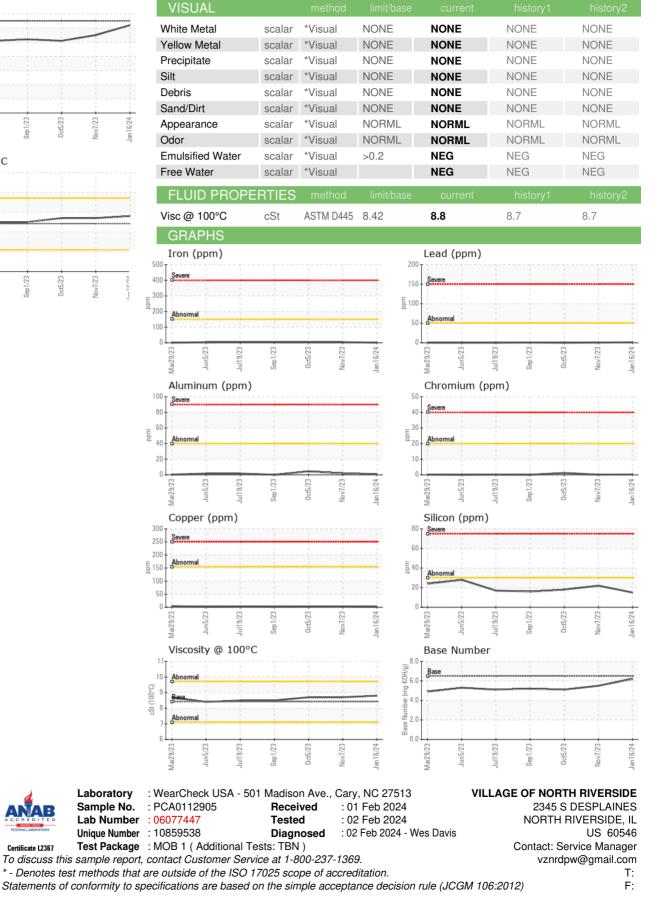
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number		Client Info		PCA0112905	PCA0105357	PCA0105343
Sample Date		Client Info		16 Jan 2024	07 Nov 2023	05 Oct 2023
Machine Age	mls	Client Info		114678	111949	110256
Oil Age	mls	Client Info		553	1693	2239
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT		mathad	limit/bass	ourropt	biotorut	biotom/0
CONTAMINAT		method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	<1	4	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m	-	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	<1	2	4
Lead	ppm	ASTM D5185m	>50	1	<1	0
Copper	ppm	ASTM D5185m	>155	1	3	3
Tin	ppm	ASTM D5185m	>100	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
	pp			•		
						history2
ADDITIVES			limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	183	106	68	36
Boron Barium	ppm	ASTM D5185m ASTM D5185m	183 0	106 0	68 9	36 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36	106 0 66	68 9 70	36 0 68
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0	106 0 66 <1	68 9 70 <1	36 0 68 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417	106 0 66 <1 556	68 9 70 <1 526	36 0 68 0 528
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318	106 0 66 <1 556 1094	68 9 70 <1 526 1247	36 0 68 0 528 1167
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773	106 0 66 <1 556 1094 709	68 9 70 <1 526 1247 734	36 0 68 0 528 1167 661
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 ASTM D5185m	183 0 36 0 417 1318 773 845	106 0 66 <1 556 1094 709 818	68 9 70 <1 526 1247 734 841	36 0 68 0 528 1167 661 851
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	183 0 36 0 417 1318 773	106 0 66 <1 556 1094 709	68 9 70 <1 526 1247 734	36 0 68 0 528 1167 661
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	183 0 36 0 417 1318 773 845	106 0 66 <1 556 1094 709 818	68 9 70 <1 526 1247 734 841	36 0 68 0 528 1167 661 851
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	183 0 36 0 417 1318 773 845 2690	106 0 66 <1 556 1094 709 818 2658	68 9 70 <1 526 1247 734 841 3061	36 0 68 0 528 1167 661 851 3173
Boron 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 ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690	106 0 66 <1 556 1094 709 818 2658 current	68 9 70 <1 526 1247 734 841 3061 history1	36 0 68 0 528 1167 661 851 3173 history2
Boron 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 ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30	106 0 66 <1 556 1094 709 818 2658 <u>current</u> 15	68 9 70 <1 526 1247 734 841 3061 history1 22	36 0 68 0 528 1167 661 851 3173 history2 18
Boron 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 ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >400	106 0 66 <1 556 1094 709 818 2658 <u>current</u> 15 1	68 9 70 <1 526 1247 734 841 3061 history1 22 3	36 0 68 0 528 1167 661 851 3173 history2 18 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >400 >20	106 0 66 <1 556 1094 709 818 2658 <u>current</u> 15 1 1 <1	68 9 70 <1 526 1247 734 841 3061 history1 22 3 2	36 0 68 0 528 1167 661 851 3173 history2 18 5 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >400 >20	106 0 66 <1 556 1094 709 818 2658 current 15 1 <1 <1 <1	68 9 70 <1 526 1247 734 841 3061 history1 22 3 2 2 history1	36 0 68 0 528 1167 661 851 3173 history2 18 5 1 1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 limit/base >30 >400 >20	106 0 66 <1 556 1094 709 818 2658 <u>current</u> 15 1 <1 <1 <1 0	68 9 70 <1 526 1247 734 841 3061 history1 22 3 2 2 history1 0	36 0 68 0 528 1167 661 851 3173 history2 18 5 1 1 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <i>limit/base</i> >30 >400 >20 <i>limit/base</i>	106 0 66 <1 556 1094 709 818 2658 <i>current</i> 15 1 5 1 <1 <1 <i>current</i> 0 6.4	68 9 70 <1 526 1247 734 841 3061 <b>history1</b> 22 3 2 3 2 <b>history1</b> 0 7.7	36 0 68 0 528 1167 661 851 3173 history2 18 5 1 1 history2 0 8.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >20 20 <b>limit/base</b> >20 >30 >30	106 0 66 <1 556 1094 709 818 2658 <i>current</i> 15 1 5 1 <1 <1 <1 <i>current</i> 0 6.4 16.5 <i>current</i>	68 9 70 <1 526 1247 734 841 3061 <b>history1</b> 22 3 2 2 <b>history1</b> 0 7.7 18.6 <b>history1</b>	36 0 68 0 528 1167 661 851 3173 history2 18 5 1 1 history2 0 8.3 19.2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 D7415	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >400 >20 <b>limit/base</b>	106 0 66 <1 556 1094 709 818 2658 <i>current</i> 15 1 <1 <1 <1 <i>current</i> 0 6.4 16.5	68 9 70 <1 526 1247 734 841 3061 history1 22 3 2 2 history1 0 7.7 18.6	36 0 68 0 528 1167 661 851 3173 history2 18 5 1 1 history2 0 8.3 19.2



## **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory

Sample No.

Lab Number

Contact/Location: Service Manager - VILNOR