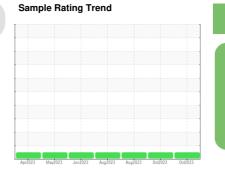


### **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method





NORMAL

# FORD 613 (S/N 1FM5K8AG4NGA27100)

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.

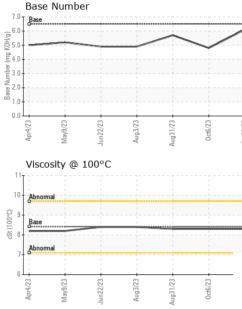
#### Fluid Condition

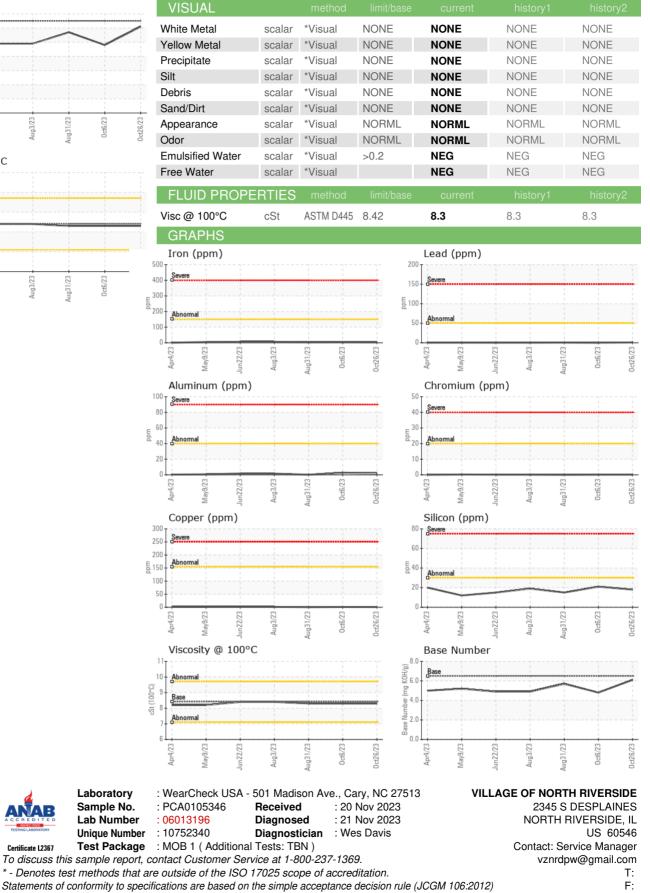
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM			iimi/base	current	nistory i	nistory2
Sample Number		Client Info		PCA0105346	PCA0105351	PCA0100397
Sample Date		Client Info		26 Oct 2023	06 Oct 2023	31 Aug 2023
Machine Age	mls	Client Info		27265	26194	23653
Oil Age	mls	Client Info		1071	2541	1698
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
-					-	-
CONTAMINATI	ON	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 METALS	e	method	limit/base	current	history1	history2
	3					
Iron	ppm	ASTM D5185m	>150	3	5	4
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm		>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	2	3	<1
Lead	ppm	ASTM D5185m	>50	<1	0	<1
Copper	ppm	ASTM D5185m	>155	<1	1	<1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 86	history1 30	history2 40
	ppm ppm		183			
Boron Barium	ppm	ASTM D5185m	183	86	30	40
Boron		ASTM D5185m ASTM D5185m	183 0 36	86 9	30 0	40 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36	86 9 68	30 0 67	40 0 66
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0	86 9 68 <1	30 0 67 <1 521	40 0 66 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417	86 9 68 <1 512	30 0 67 <1	40 0 66 <1 570
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	183 0 36 0 417 1318	86 9 68 <1 512 1212 732	30 0 67 <1 521 1151	40 0 66 <1 570 1279
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	86 9 68 <1 512 1212	30 0 67 <1 521 1151 658	40 0 66 <1 570 1279 725
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	183 0 36 0 417 1318 773 845 2690	86 9 68 <1 512 1212 732 810 3081	30 0 67 <1 521 1151 658 841 3226	40 0 66 <1 570 1279 725 904 3033
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	183 0 36 0 417 1318 773 845 2690	86 9 68 <1 512 1212 732 810 3081 current	30 0 67 <1 521 1151 658 841 3226 history1	40 0 66 <1 570 1279 725 904 3033 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 <b>limit/base</b> >30	86 9 68 <1 512 1212 732 810 3081 current 18	30 0 67 <1 521 1151 658 841 3226 history1 21	40 0 66 <1 570 1279 725 904 3033 history2 15
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 <b>imit/base</b> >30 >400	86 9 68 <1 512 1212 732 810 3081 <u>current</u> 18 1	30 0 67 <1 521 1151 658 841 3226 history1 21 5	40 0 66 <1 570 1279 725 904 3033 history2 15 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>imit/base</b> >30 >400 >20	86 9 68 <1 512 1212 732 810 3081 current 18 1 2	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2
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>imit/base</b> >30 >400	86 9 68 <1 512 1212 732 810 3081 current 18 1 2 2 current	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 1 history1	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>imit/base</b> >30 >400 >20	86 9 68 <1 512 1212 732 810 3081 current 18 1 2	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 2 history2 0
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>imit/base</b> >30 >400 >20	86 9 68 <1 512 1212 732 810 3081 current 18 1 2 2 current	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 1 history1	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	183 0 36 0 417 1318 773 845 2690 <b>limit/base</b> >30 >400 >20 <b>limit/base</b>	86 9 68 <1 512 1212 732 810 3081 current 18 1 2 2 current 0	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 1 history1 0	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 15 4 2 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>imit/base</i> >30 >400 >20 <i>imit/base</i>	86 9 68 <1 512 1212 732 810 3081 current 18 1 2 2 current 0 7.3	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 21 5 1 history1 0 8.6	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 history2 0 9.0
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 TS ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	183 0 36 0 417 1318 773 845 2690 <b>imit/base</b> >30 >20 20 <b>imit/base</b> >20 >30	86 9 68 <1 512 1212 732 810 3081 current 18 1 2 current 0 7.3 17.1 current	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 21 5 1 1 history1 0 8.6 19.7 history1	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 15 4 2 history2 0 9.0 18.5 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 D5185m	183 0 36 0 417 1318 773 845 2690 <b>imit/base</b> >30 >400 >20 <b>imit/base</b> >20 >20	86 9 68 <1 512 1212 732 810 3081 <u>current</u> 18 1 2 2 <u>current</u> 0 7.3 17.1	30 0 67 <1 521 1151 658 841 3226 history1 21 5 1 1 5 1 1 history1 0 8.6 19.7	40 0 66 <1 570 1279 725 904 3033 history2 15 4 2 2 history2 0 9.0 18.5



## **OIL ANALYSIS REPORT**





Certificate L2367

Contact/Location: Service Manager - VILNOR