

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

# FORD 2006 RANGER

**Gasoline Engine** 

### VALVOLINE PREMIUM CONVENTIONAL MOTOR OIL 5W20 (--- QTS)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Fluic

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

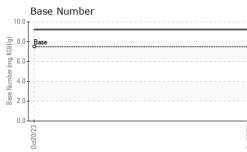
#### Fluid Condition

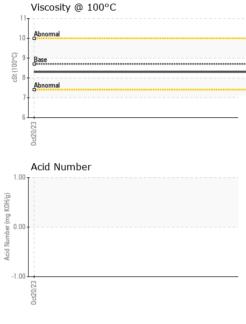
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

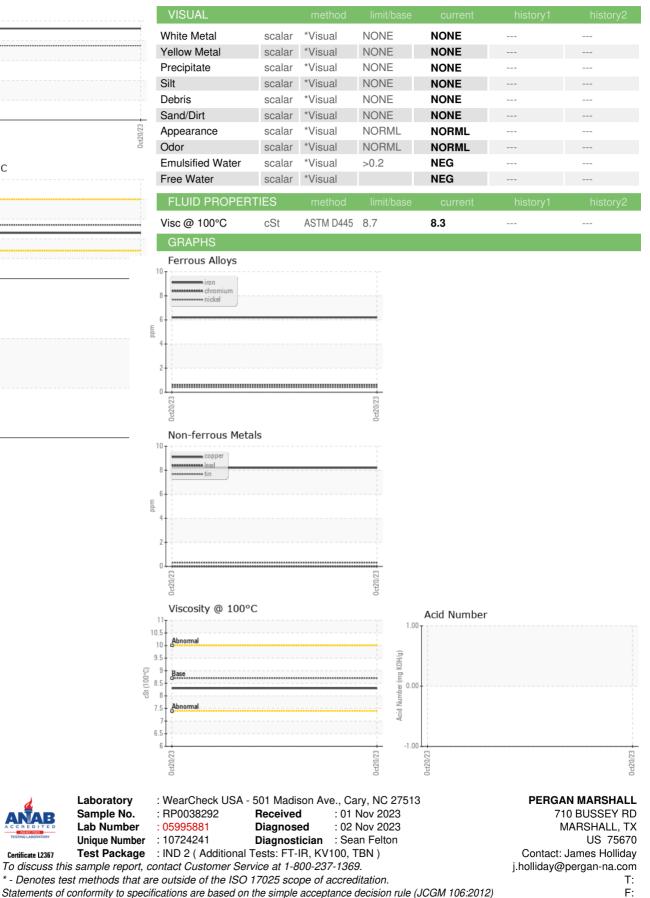
SAMPLE INFORM	<b>NATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		RP0038292		
Sample Date		Client Info		20 Oct 2023		
Machine Age	mls	Client Info		124066		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATIO	N .	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	6		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>5	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>40	3		
Lead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>155	8		
Tin	ppm	ASTM D5185m	>10	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
	ppm	no nii boroom				
ADDITIVES	ppm	method	limit/base	current	history1	history2
	ppm		limit/base		history1	
ADDITIVES		method	limit/base	current		history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2		history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 2 <1		history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 2 <1 72		history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 2 <1 72 <1		history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		current 2 <1 72 <1 412		history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2540	current           2           <1           72           <1           412           993	  	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2540 760	Current 2 <1 72 <1 412 993 592	   	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2540 760 830	Current 2 <1 72 <1 412 993 592 676		history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2540 760 830 limit/base	Current 2 <1 72 <1 412 993 592 676 Current		history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	2540 760 830 limit/base >30 >400	current           2           <1           72           <1           412           993           592           676           current           12	     history1 	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	2540 760 830 limit/base >30 >400	current           2           <1           72           <1           412           993           592           676           current           12           7	     history1 	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2540 760 830 limit/base >30 >400 >20	2         <1         72         <1         412         993         592         676         current         12         7         2	     history1  	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2540 760 830 limit/base >30 >400 >20	current         2         <1         72         <1         412         993         592         676         current         12         7         2         current	     history1   history1	history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2540 760 830 limit/base >30 >400 >20 limit/base	current           2           <1           72           <1           412           993           592           676           current           12           7           2           current           0.1	     history1   history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2540 760 830 limit/base >30 >400 >20 limit/base	current         2         <1         72         <1         993         592         676         current         12         7         2         current         0.1         9.1	history1 history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7844           *ASTM D7624           *ASTM D7415	2540 760 830 200 >30 >400 >20 20 <b>imit/base</b> >20 20 20	current         2         <1         72         <1         412         993         592         676         current         12         7         2         current         0.1         9.1         16.1	     history1   history1  history1	history2                        history2            history2                     history2   <
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7844           *ASTM D7624           *ASTM D7414	2540 760 830 <b>limit/base</b> >30 >400 >20 <b>limit/base</b> >20 >30 20 <b>limit/base</b>	current         2         <1         72         <1         993         592         676         current         12         7         2         current         0.1         9.1         16.1         current	       history1  history1  history1	history2



## **OIL ANALYSIS REPORT**







Certificate L2367

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