

**[W149737]** 

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

### DIAGNOSIS

GEN 04 Component

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

#### Fluid Condition

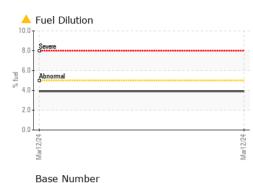
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

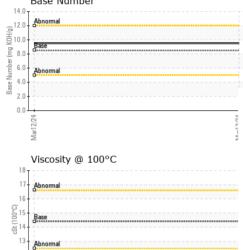
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0797294		
Sample Date		Client Info		12 Mar 2024		
Machine Age	hrs	Client Info		17		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				MARGINAL		
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	7		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	9		
Tin	ppm	ASTM D5185m	>15	1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
					· · · · · ·	
Boron	ppm	ASTM D5185m	250	13		
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	13 0		
				-		
Barium	ppm	ASTM D5185m	10	0	 	
Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 54 2 624		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 54 2 624 1427		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 54 2 624 1427 996		
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	10 100 450 3000 1150 1350	0 54 2 624 1427 996 1140	  	  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 54 2 624 1427 996		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base	0 54 2 624 1427 996 1140 3592 current	  	  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25	0 54 2 624 1427 996 1140 3592 current 9	   	   
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158	0 54 2 624 1427 996 1140 3592 current 9 2	   	   
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 54 2 624 1427 996 1140 3592 current 9 2 2 2	    history1 	    history2
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 <b>method</b> ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158	0 54 2 624 1427 996 1140 3592 current 9 2	    history1 	    history2 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 54 2 624 1427 996 1140 3592 current 9 2 2 2	    history1  	    history2  
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 >5	0 54 2 624 1427 996 1140 3592 <u>current</u> 9 2 2 2 2 3.9	    history1   	    history2  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >5 limit/base	0 54 2 624 1427 996 1140 3592 current 9 2 2 2 2 3.9 3.9	    history1      history1	    history2  
Barium Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 >5 <b>limit/base</b> >3	0 54 2 624 1427 996 1140 3592 <u>current</u> 9 2 2 2 2 3.9 <u>current</u> 0	    history1     history1	    history2    history2 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 >5 <b>limit/base</b> >3 >20	0 54 2 624 1427 996 1140 3592 <u>current</u> 9 2 2 2 2 2 3.9 <u>current</u> 0 4.7	     history1    history1	     history2    history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D524 *ASTM D7844 *ASTM D7624 *ASTM D7415	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 >5 <b>limit/base</b> >3 >20 >3 >20	0 54 2 624 1427 996 1140 3592 <u>current</u> 9 2 2 2 3.9 <u>current</u> 0 4.7 17.6	     history1   history1  history1	     history2   history2  history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7415	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 >5 20 >5 imit/base >3 >20 >30 >30 imit/base	0 54 2 624 1427 996 1140 3592 current 9 2 2 2 2 3.9 current 0 4.7 17.6 current	      history1   history1  history1	     history2   history2  history2   history2

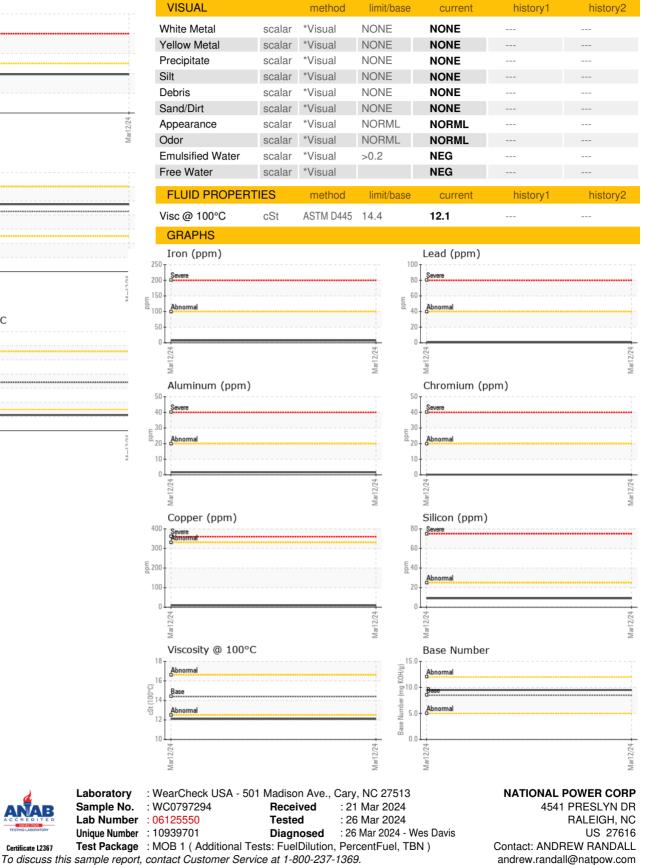


Mar12/24

# **OIL ANALYSIS REPORT**







Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Laboratory

Sample No.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Certificate L2367

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