

# **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id **CATERPILLAR 315DL 40055686** Component **Diesel Engine** 

SHELL ROTELLA T3 15W40 (--- 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	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PE0003183		
Sample Date		Client Info		14 Feb 2024		
Machine Age	hrs	Client Info		8899		
Oil Age	hrs	Client Info		350		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	6		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m	>2	<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	1		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
				•		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		history1	history2
	ppm ppm			current		
Boron Barium		ASTM D5185m	10	current 125		
Boron	ppm	ASTM D5185m ASTM D5185m	10 0	current 125 <1		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	10 0	current 125 <1 62		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10	current 125 <1 62 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10 10	current 125 <1 62 <1 415		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 0 10 10 2600	current     125     <1     62     <1     415     2023	  	
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	10 0 10 10 2600 1050	Current 125 <1 62 <1 415 2023 1135	   	
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	10 0 10 10 2600 1050 1250	current     125     <1     62     <1     415     2023     1135     1502	    	
Boron 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 ASTM D5185m <b>method</b>	10 0 10 2600 1050 1250 3900	Current 125 <1 62 <1 415 2023 1135 1502 4345		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	10 0 10 2600 1050 1250 3900 <b>limit/base</b>	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 <b>limit/base</b> >25	current     125     <1     62     <1     415     2023     1135     1502     4345     current     3	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 <b>Imit/base</b> >25 >20	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   <1   <1   current	      history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 limit/base >25 >20 limit/base >3	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   <1   current   0.2	      history1  	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 <i>limit/base</i> >25 >20 <i>limit/base</i>	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   0.2   6.6	     history1   history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 limit/base >25 >20 limit/base >3	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   <1   current   0.2	     history1   history1  history1	    history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 <i>limit/base</i> >25 >20 <i>limit/base</i>	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   0.2   6.6	      history1   history1  	     history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 0 10 2600 1050 1250 3900 <b>Imit/base</b> >25 <b>Imit/base</b> >20 <b>Imit/base</b> >3 >20	current   125   <1   62   <1   415   2023   1135   1502   4345   current   3   <1   <1   0.2   6.6   19.0	      history1  history1  history1	     history2  history2  history2

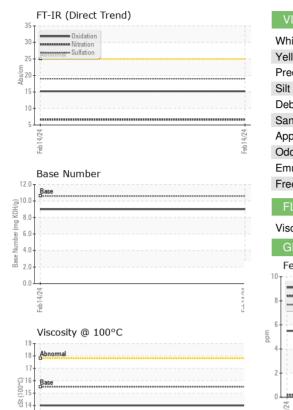


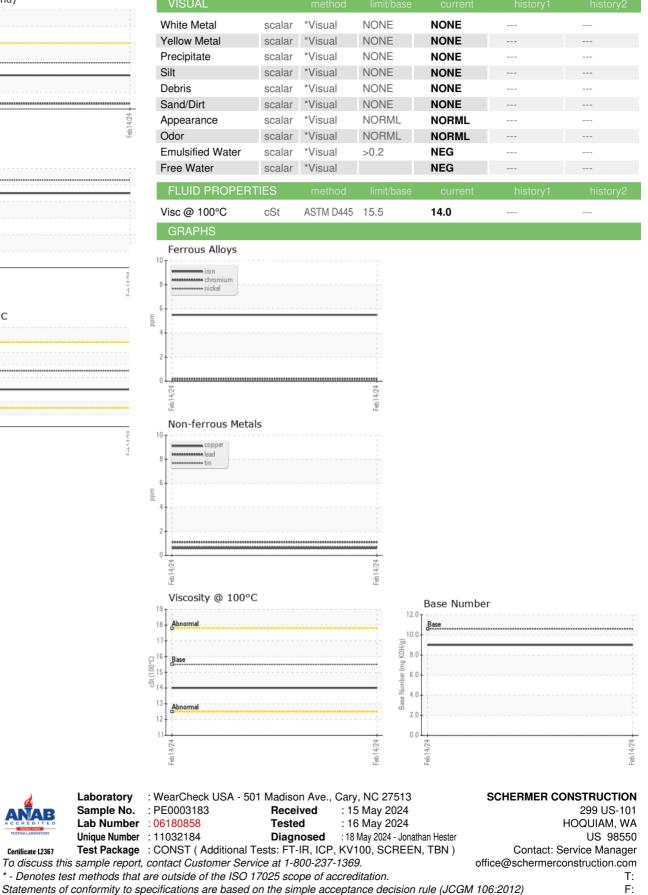
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