

## **OIL ANALYSIS REPORT**

Sample Rating Trend



CT000090

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

#### DIAGNOSIS

#### Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

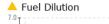
#### Fluid Condition

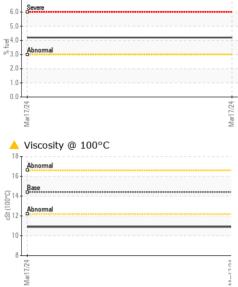
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

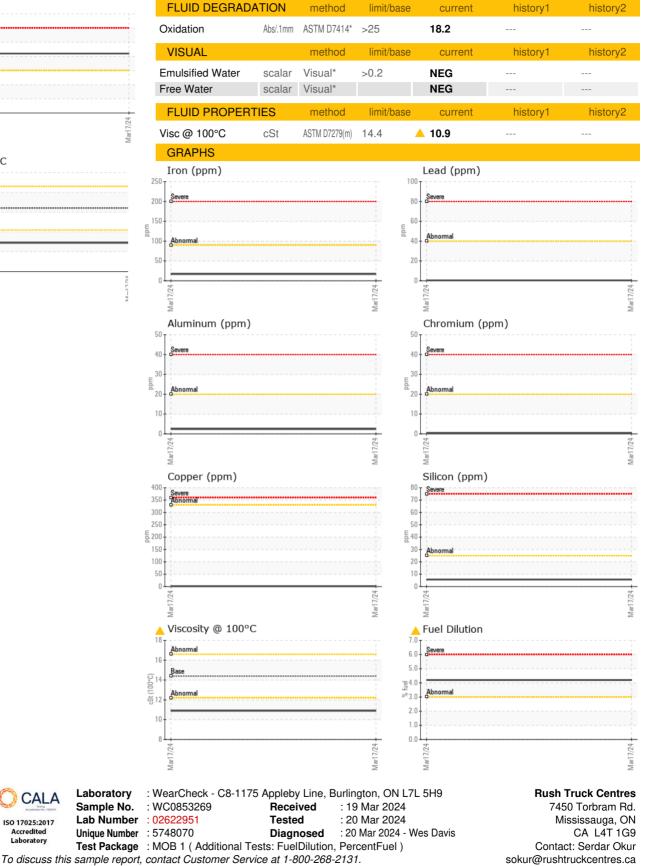
SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0853269		
Sample Date		Client Info		17 Mar 2024		
Machine Age	kms	Client Info		116556		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATIO	N	method	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 D5185(m)	>90	17		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>2	<1		
Titanium	ppm	ASTM D5185(m)	>2	0		
Silver	ppm	ASTM D5185(m)	>2	0		
Aluminum	ppm	ASTM D5185(m)	>20	2		
Lead	ppm	ASTM D5185(m)	>40	<1		
Copper	ppm	ASTM D5185(m)	>330	1		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
		mounou	IIIII/Dase	Current	Thistory I	Thistoryz
Boron	ppm	ASTM D5185(m)	250	53		
Boron Barium	ppm ppm					
		ASTM D5185(m)	250	53		
Barium	ppm	ASTM D5185(m) ASTM D5185(m)	250 10	53 0		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10	53 0 6		
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100	53 0 6 0		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150	53 0 6 0 646 1364 728		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350	53 0 6 0 646 1364 728 806	  	   
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150	53 0 6 0 646 1364 728 806 2623	  	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350	53 0 6 0 646 1364 728 806	    	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350	53 0 6 0 646 1364 728 806 2623	    	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	53 0 6 0 646 1364 728 806 2623 <1		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 Limit/base	53 0 6 0 646 1364 728 806 2623 <1 current	      history1	       history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 limit/base >25	53 0 6 0 646 1364 728 806 2623 <1 current 6	      history1	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158	53 0 6 0 646 1364 728 806 2623 <1 current 6 3	      history1	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20	53 0 6 0 646 1364 728 806 2623 <1 current 6 3 4	      history1	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 >3.0	53 0 6 0 646 1364 728 806 2623 <1 2623 <1 current 6 3 4 4 4.2	       history1   	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 >3.0 <b>limit/base</b>	53 0 6 0 646 1364 728 806 2623 <1 current 6 3 4 4 ▲ 4.2 current	       history1    history1	       history2    history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D7593*	250 10 100 450 3000 1150 1350 4250 Imit/base >25 >158 >20 >3.0 Imit/base >6	53 0 6 0 646 1364 728 806 2623 <1 <i>current</i> 6 3 4 4 4 4.2 <i>current</i> 0.4	      history1    history1	      history2     history2



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CALA

ISO 17025:2017 Accredited Laboratory

Laboratory

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Validity of results and interpretation are based on the sample and information as supplied.

F:

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