

# **OIL ANALYSIS REPORT**



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# Area [6100286939] Wachine Id

68 Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 40 (--- GAL)

## DIAGNOSIS

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm. Please specify the component make and model with your next sample.

#### A Wear

Aluminum ppm levels are severe. Piston wear is indicated.

#### Contamination

There is no indication of any contamination in the oil.

## Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WA0020856		
Sample Date		Client Info		12 Apr 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				SEVERE		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	38		
Chromium	ppm	ASTM D5185(m)	>20	2		
Nickel	ppm	ASTM D5185(m)	>4	2		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	<b>A</b> 71		
Lead	ppm	ASTM D5185(m)	>40	0		
Copper	ppm	ASTM D5185(m)	>330	7		
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
Boron	ppm	ASTM D5185(m)	250	121		
_ ·	ppm	( )				
Barium	ppm	ASTM D5185(m)	10	0		
Barium Molybdenum		. ,	10 100	0 9		
	ppm	ASTM D5185(m)		-		
Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)		9		
Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100	9 <1		
Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450	9 <1 46		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000	9 <1 46 2175		
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)	100 450 3000 1150	9 <1 46 2175 965		
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)	100 450 3000 1150 1350	9 <1 46 2175 965 1126	  	   
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)	100 450 3000 1150 1350	9 <1 46 2175 965 1126 2857	  	   
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)	100 450 3000 1150 1350 4250	9 <1 46 2175 965 1126 2857 <1		   
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)	100 450 3000 1150 1350 4250 <b>limit/base</b> >25	9 <1 46 2175 965 1126 2857 <1 current	     history1	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	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)	100 450 3000 1150 1350 4250 <b>limit/base</b> >25	9 <1 46 2175 965 1126 2857 <1 current 15	     history1 	     history2
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) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25 >216	9 <1 46 2175 965 1126 2857 <1 current 15 23	     history1	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25 >216	9 <1 46 2175 965 1126 2857 <1 <b>current</b> 15 23 17	     history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol	ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >216 >20	9 <1 46 2175 965 1126 2857 <1 <b>current</b> 15 23 17 0.0	     history1	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >216 >20 20	9 <1 46 2175 965 1126 2857 <1 <b>current</b> 15 23 17 0.0 <b>current</b>	     history1      history1	     history2     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm	ASTM D5185(m) ASTM D7922*	100 450 3000 1150 4250 <b>limit/base</b> >25 >216 >20 <b>limit/base</b> >3	9 <1 46 2175 965 1126 2857 <1 <b>current</b> 15 23 17 0.0 <b>current</b> 0.4	     history1     history1	      history2    history2



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Report Id: DDCDAR [WCAMIS] 02629108 (Generated: 04/17/2024 13:43:18) Rev: 1

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