

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0066011		
Sample Date		Client Info		01 Jul 2023		
Machine Age	kms	Client Info		621967		
Oil Age	kms	Client Info		25000		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	14		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	0		
Titanium	ppm	ASTM D5185(m)		<1		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	2		
Lead	ppm	ASTM D5185(m)	>40	5		
Copper	ppm	ASTM D5185(m)	>330	1		
Tin	ppm	ASTM D5185(m)	>15	1		
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
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 250	current 5	history1	history2
	ppm ppm					
Boron		ASTM D5185(m)	250	5		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	250 10	5 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10	5 0 61		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100	5 0 61 <1		
Boron Barium Molybdenum Manganese Magnesium	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	5 0 61 <1 1042		
Boron 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)	250 10 100 450 3000	5 0 61 <1 1042 1192	 	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	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	5 0 61 <1 1042 1192 1130	 	
Boron 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)	250 10 100 450 3000 1150 1350	5 0 61 <1 1042 1192 1130 1315		
Boron 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	5 0 61 <1 1042 1192 1130 1315 2616		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	5 0 61 <1 1042 1192 1130 1315 2616 <1 current 4		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	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)	250 10 100 450 3000 1150 1350 4250 limit/base	5 0 61 <1 1042 1192 1130 1315 2616 <1 current 4 5	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 iimit/base >25	5 0 61 <1 1042 1192 1130 1315 2616 <1 current 4 5 2	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >20 >0.2	5 0 61 <1 1042 1192 1130 1315 2616 <1 current 4 5 2 2 0.091	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 iimit/base >25	5 0 61 <1 1042 1192 1130 1315 2616 <1 <i>current</i> 4 5 2 2 0.091 910	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >20 >0.2	5 0 61 <1 1042 1192 1130 1315 2616 <1 current 4 5 2 2 0.091	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >20 >0.2	5 0 61 <1 1042 1192 1130 1315 2616 <1 <i>current</i> 4 5 2 2 0.091 910	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D6304* ASTM D6304*	250 10 100 450 3000 1150 1350 4250 imit/base >25 >20 >0.2 >200 >0.2	5 0 61 <1 1042 1192 1130 1315 2616 <1 <u>current</u> 4 5 2 2 0.091 910 0.0	 history1 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm % ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304*	250 10 100 450 3000 1150 1350 4250 imit/base >20 >20 >0.2 >2000 imit/base	5 0 61 <1 1042 1192 1130 1315 2616 <1 <i>current</i> 4 5 2 2 0.091 910 0.0 <i>current</i>		history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water Glycol INFRA-RED Soot %	ppm % %	ASTM D5185(m) ASTM D5304* ASTM D6304* ASTM D7922*	250 10 100 450 3000 1150 1350 4250 imit/base >20 >20 >200 >2000 imit/base >3	5 0 61 <1 1042 1192 1130 1315 2616 <1 <i>current</i> 4 5 2 2 0.091 910 0.0 <i>current</i> 0		history2



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