

OIL ANALYSIS REPORT



Machine Id

T001275 (S/N 17-M-10-2193)

Component Diesel Engine Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a trace of moisture present in the oil. Test for glycol is negative.

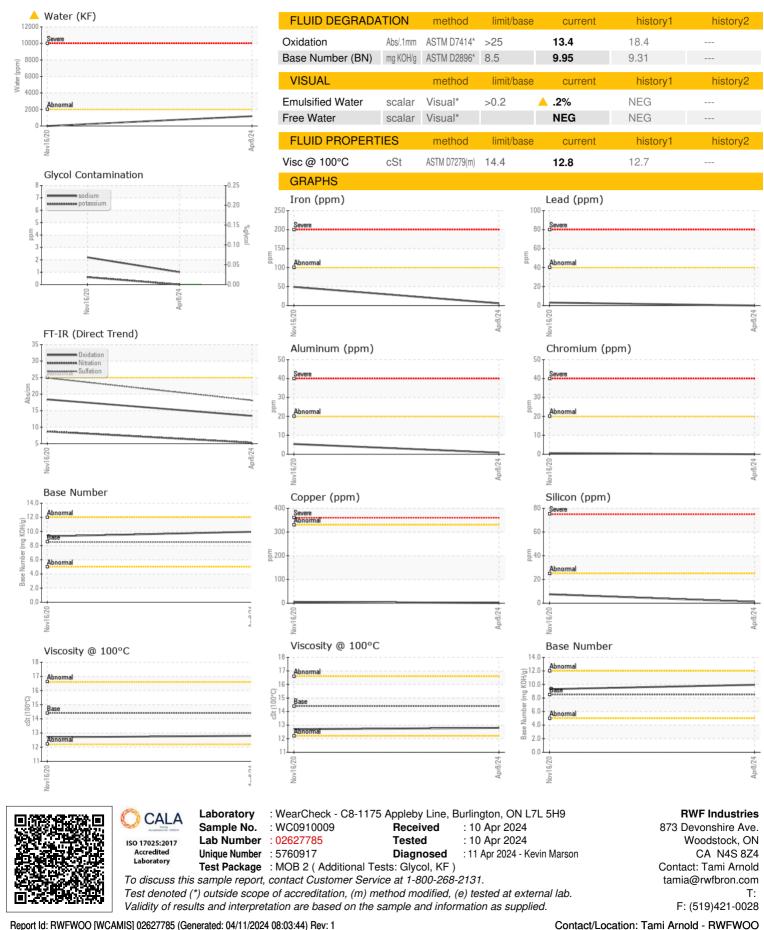
Fluid Condition

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		WC0910009	WC0507110	
Sample Date		Client Info		08 Apr 2024	16 Nov 2020	
Machine Age	hrs	Client Info		7355	3230	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	Not Changd	
Sample Status				MARGINAL	NORMAL	
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	6	49	
Chromium	ppm	ASTM D5185(m)	>20	0	<1	
Nickel	ppm	ASTM D5185(m)	>4	0	<1	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>3	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	<1	5	
Lead	ppm	ASTM D5185(m)	>40	0	3	
Copper	ppm	ASTM D5185(m)	>330	1	6	
Tin	ppm	ASTM D5185(m)	>15	0	<1	
Antimony	ppm	ASTM D5185(m)		0	<1	
Vanadium	ppm	ASTM D5185(m)		0	<1	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base 250	current 2	history1 276	history2
	ppm ppm	ASTM D5185(m)				
Boron		ASTM D5185(m)	250	2	276	
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	250 10	2 0	276 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10	2 0 59	276 0 131	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	250 10 100	2 0 59 0	276 0 131 <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)	250 10 100 450	2 0 59 0 984	276 0 131 <1 711	
Boron Barium 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)	250 10 100 450 3000	2 0 59 0 984 1051	276 0 131 <1 711 1577	
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)	250 10 100 450 3000 1150	2 0 59 0 984 1051 1034	276 0 131 <1 711 1577 718	
Boron 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	2 0 59 0 984 1051 1034 1213	276 0 131 <1 711 1577 718 899	
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	2 0 59 0 984 1051 1034 1213 2817	276 0 131 <1 711 1577 718 899 2380	
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) ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250	2 0 59 0 984 1051 1034 1213 2817 <1	276 0 131 <1 711 1577 718 899 2380 <1	
Boron 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 Iimit/base	2 0 59 0 984 1051 1034 1213 2817 <1 current	276 0 131 <1 711 1577 718 899 2380 <1 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 Imit/base	2 0 59 0 984 1051 1034 1213 2817 <1 current 1	276 0 131 <1 711 1577 718 899 2380 <1 history1 8	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 iimit/base >25 >158	2 0 59 0 984 1051 1034 1213 2817 <1 <1 current 1 1	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium 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 Iimit/base >25 >158 >20	2 0 59 0 984 1051 1034 1213 2817 <1 <1 current 1 1 0	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2 2 <1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm %	ASTM D5185(m) ASTM D5185(m)	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >0.2	2 0 59 0 984 1051 1034 1213 2817 <1 2817 <1 2817 <1 1 1 0 0 0.118	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2 2 <1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm 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 >158 >20 >0.2	2 0 59 0 984 1051 1034 1213 2817 <1 2817 <1 2817 <1 0 0 0 0 0.118 0 0.118	276 0 131 <1 711 1577 718 899 2380 <1 kistory1 8 2 2 <1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water ppm Water Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185(m) ASTM D5304* ASTM D6304*	250 10 100 450 3000 1150 1350 4250 Iimit/base >25 >158 >20 >0.2 >2000	2 0 59 0 984 1051 1034 1213 2817 <1 <1 current 1 1 0 0 ▲ 0.118 ▲ 1182 0.0	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2 2 <1 NEG	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Vater ppm Water Glycol INFRA-RED	ppm ppm %	ASTM D5185(m) ASTM D5182(m)	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 >200 >0.2 >2000 imit/base	2 0 59 0 984 1051 1034 1213 2817 <1 2817 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2 2 3 8 2 2 3 0 4 1 history1 NEG history1 0.6	 history2 -
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Water ppm Water Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5304* ASTM D6304* ASTM D6304* ASTM D7922*	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 >20 >0.2 >2000 imit/base >3	2 0 59 0 984 1051 1034 1213 2817 <1 1 1 1 0 0 0.118 ■ 0.118 ■ 1182 0.0	276 0 131 <1 711 1577 718 899 2380 <1 history1 8 2 2 3 8 2 3 8 2 3 8 2 3 8 2 3 8 2 3 8 2 3 8 2 3 8 2 3 8 1 3 1 5 7 1 8 3 8 9 9 2 3 80 5 1 1 1 5 7 7 1 8 9 9 2 3 80 5 1 1 1 5 7 7 1 8 9 9 2 3 80 5 1 1 1 1 5 7 7 1 1 1 5 7 7 1 8 9 9 2 3 80 5 2 3 80 5 1 1 1 1 1 5 7 7 1 1 1 1 5 7 7 1 8 9 9 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 2 3 80 5 5 1 80 5 80 5 2 3 80 5 5 1 80 5 1 80 5 80 80 5 1 80 80 80 80 80 80 80 80 80 80 80 80 80	 history2 -



OIL ANALYSIS REPORT



Page 2 of 2