

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

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 no indication of any contamination in the oil.

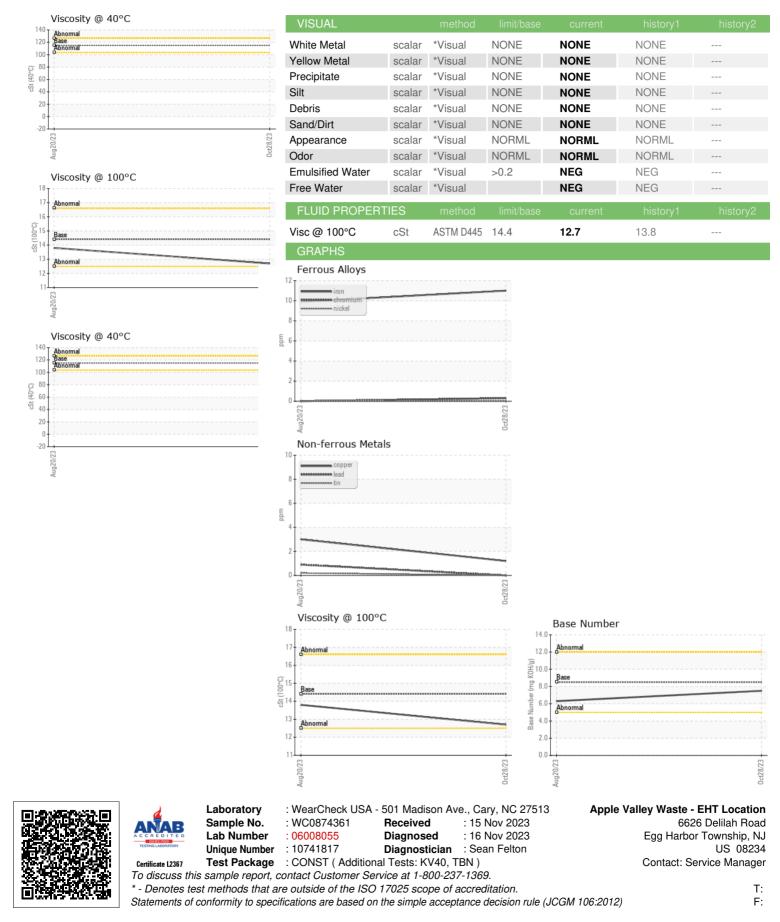
Fluid Condition

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		method	limit/base	current	history1	history2
			minubase			
Sample Number		Client Info		WC0874361	WC0783978	
Sample Date	la wa	Client Info		28 Oct 2023	20 Aug 2023	
Machine Age	hrs	Client Info		6206	5622	
Oil Age	hrs	Client Info		584 Observed	623 Observed	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	۷	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	11	10	
Chromium	ppm	ASTM D5185m	>4	<1	0	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>2	<1	0	
Aluminum	ppm	ASTM D5185m	>25	3	3	
Lead	ppm	ASTM D5185m	>45	0	<1	
Copper	ppm	ASTM D5185m	>85	1	3	
Tin	ppm	ASTM D5185m	>4	0	<1	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250			history2
	ppm ppm			current	history1	
Boron		ASTM D5185m	250	current 6	history1 4	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	current 6 0	history1 4 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	current 6 0 61	history1 4 0 70	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	current 6 0 61 <1	history1 4 0 70 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	current 6 0 61 <1 799	history1 4 0 70 <1 350	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	Current 6 0 61 <1 799 1241	history1 4 0 70 <1 350 1926	
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	250 10 100 450 3000 1150	Current 6 0 61 <1 799 1241 956	history1 4 0 70 <1 350 1926 1032	
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	250 10 100 450 3000 1150 1350	Current 6 0 61 <1 799 1241 956 1160	history1 4 0 70 <1 350 1926 1032 1286	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	Current 6 0 61 <1 799 1241 956 1160 3069	history1 4 0 70 <1 350 1926 1032 1286 3825	
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	250 10 100 450 3000 1150 1350 4250	Current 6 0 61 <1 799 1241 956 1160 3069 Current	history1 4 0 70 <1 350 1926 1032 1286 3825 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	250 10 100 450 3000 1150 1350 4250 Limit/base	Current 6 0 61 <1 799 1241 956 1160 3069 Current 5	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >30 >158	current 6 0 61 <1 799 1241 956 1160 3069 current 5 0	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >30 >158 >20	Current 6 0 61 <1 799 1241 956 1160 3069 Current 5 0 7	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >30 >158 >20	Current 6 0 61 <1 799 1241 956 1160 3069 Current 5 0 7 Current	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30 history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >30 >158 >20 limit/base	current 6 0 61 <1 799 1241 956 1160 3069 current 5 0 7 current 0 7 current 0.4	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30 history1 0.5	 history2 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	250 10 100 450 3000 1150 1350 4250 Iimit/base >30 >158 >20 Iimit/base >3 >20	current 6 0 61 <1 799 1241 956 1160 3069 current 5 0 7 current 0.4 8.7	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30 history1 0.5 9.5	 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	250 10 100 450 3000 1150 1350 4250 imit/base >30 >158 >20 imit/base >3 >20	Current 6 0 61 <1 799 1241 956 1160 3069 Current 5 0 7 Current 0.4 8.7 19.8 Current	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30 history1 0.5 9.5 21.8	 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 D7844 *ASTM D7624 *ASTM D7415	250 10 100 450 3000 1150 1350 4250 limit/base >30 >158 >20 limit/base >3 >20 >30 >30	Current 6 0 61 <1 799 1241 956 1160 3069 current 5 0 7 current 0.4 8.7 19.8	history1 4 0 70 <1 350 1926 1032 1286 3825 history1 5 8 30 history1 0.5 9.5 21.8 history1	 history2 history2 history2 history2



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Contact/Location: Service Manager - AVWEHT