

OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL

Machine Id MCI MOTOR COACH 2003 Component

Diesel Engine Fluid

{not provided} (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high.

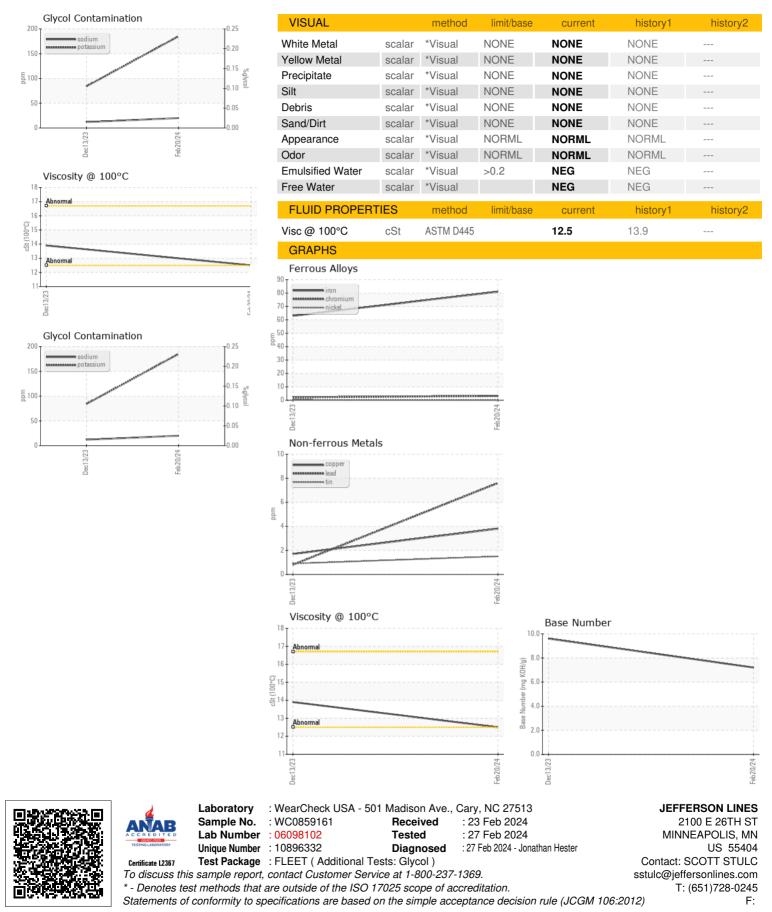
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0859161	WC0859133	
Sample Date		Client Info		20 Feb 2024	13 Dec 2023	
Machine Age	mls	Client Info		0	0	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	Changed	
Sample Status				ABNORMAL	ABNORMAL	
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	81	63	
Chromium	ppm	ASTM D5185m		3	2	
Nickel	ppm	ASTM D5185m	>4	<1	<1	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m		5	4	
Lead	ppm	ASTM D5185m	>50	8	<1	
Copper	ppm	ASTM D5185m		4	2	
Tin	ppm	ASTM D5185m	>4	2	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
//DDIIIVE0		methou	iiiiii/base	Current	history1	matoryz
	maa		IIIIII/Dase			
Boron	ppm mag	ASTM D5185m		9	28	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	IIIII/Jase		28 <1	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		9 0	28	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m		9 0 74 1	28 <1 52	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		9 0 74 1 911	28 <1 52 1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		9 0 74 1	28 <1 52 1 599	
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		9 0 74 1 911 1186	28 <1 52 1 599 1665	
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		9 0 74 1 911 1186 1045	28 <1 52 1 599 1665 873	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	9 0 74 1 911 1186 1045 1227	28 <1 52 1 599 1665 873 1007	
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	limit/base	9 0 74 1 911 1186 1045 1227 2925	28 <1 52 1 599 1665 873 1007 2586	
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 ASTM D5185m	limit/base	9 0 74 1 911 1186 1045 1227 2925 current	28 <1 52 1 599 1665 873 1007 2586 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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	limit/base	9 0 74 1 911 1186 1045 1227 2925 current 17	28 <1 52 1 599 1665 873 1007 2586 history1 16	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Silicon Sodium Potassium	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	limit/base >15	9 0 74 1 911 1186 1045 1227 2925 current 17 20	28 <1 52 1 599 1665 873 1007 2586 history1 16 12	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15	9 0 74 1 911 1186 1045 1227 2925 <u>current</u> 17 20 ▲ 185	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >15 >20	9 0 74 1 911 1186 1045 1227 2925 current 17 20 ▲ 185 NEG	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84 NEG	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D2982	limit/base >15 >20 limit/base >6	9 0 74 1 911 1186 1045 1227 2925 current 17 20 ▲ 185 NEG current 2.9	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84 NEG history1 2.2	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844	limit/base >15 >20 limit/base >6	9 0 74 1 911 1186 1045 1227 2925 current 17 20 17 20 185 NEG	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 16 12 84 84 NEG history1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	limit/base >15 >20 limit/base >6 >20	9 0 74 1 911 1186 1045 1227 2925 current 17 2925 current 17 20 ▲ 185 NEG current 2.9 13.0	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84 NEG history1 2.2 10.8	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm 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 ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >15 >20 limit/base >6 >20 >30 limit/base	9 0 74 1 911 1186 1045 1227 2925 current 17 20 ▲ 185 NEG 0 current 2.9 13.0 26.4 current	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84 NEG history1 2.2 10.8 26.1 history1	 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm 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 ASTM D5185m *ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	limit/base >15 >20 limit/base >6 >20 >30	9 0 74 1 911 1186 1045 1227 2925 current 17 20 ▲ 185 NEG current 2.9 13.0 26.4	28 <1 52 1 599 1665 873 1007 2586 history1 16 12 ▲ 84 NEG history1 2.2 10.8 2.2 10.8 26.1	 history2 history2 history2 history2



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Page 2 of 2