

OIL ANALYSIS REPORT

Sample Rating Trend





Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (3 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.

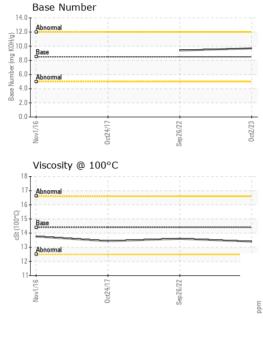
Fluid Condition

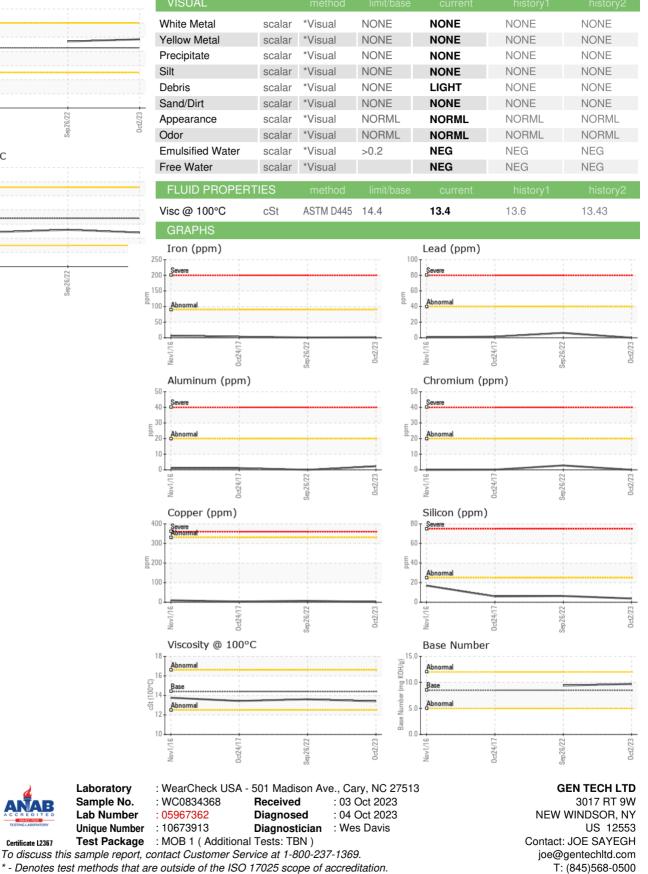
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Nov2016	6 Oct2017	Sep2022	Oct2023	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0834368	WC0699425	WCM1384230
Sample Date		Client Info		02 Oct 2023	26 Sep 2022	24 Oct 2017
Machine Age	hrs	Client Info		0	153	49
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
	2000		>90	1		3
Iron Chromium	ppm	ASTM D5185m	>90	-	<1	3 <1
	ppm	ASTM D5185m		0		
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	3
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	0	1
Lead	ppm	ASTM D5185m	>40	0	6	2
Copper	ppm	ASTM D5185m	>330	2	7	4
Tin	ppm	ASTM D5185m	>15	0	0	0
Antimony	ppm	ASTM D5185m				12
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Davas		LOTH DEVOE	050	07	40 -	4
Boron	ppm	ASTM D5185m	250	27	405	4
Barium	ppm ppm	ASTM D5185m ASTM D5185m	10	0	405 0	4
Barium	ppm	ASTM D5185m	10	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 63	0 74	0 60
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	10 100	0 63 0	0 74 <1	0 60 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 63 0 901	0 74 <1 377	0 60 <1 988
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 63 0 901 1065	0 74 <1 377 1399	0 60 <1 988 1151
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 63 0 901 1065 1037	0 74 <1 377 1399 985	0 60 <1 988 1151 1098
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	10 100 450 3000 1150 1350	0 63 0 901 1065 1037 1240	0 74 <1 377 1399 985 1149	0 60 <1 988 1151 1098 1204
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250	0 63 0 901 1065 1037 1240 3720	0 74 <1 377 1399 985 1149 3496	0 60 <1 988 1151 1098 1204 3031
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	10 100 450 3000 1150 1350 4250	0 63 0 901 1065 1037 1240 3720 current	0 74 <1 377 1399 985 1149 3496 history1	0 60 <1 988 1151 1098 1204 3031 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25	0 63 0 901 1065 1037 1240 3720 current 4	0 74 <1 377 1399 985 1149 3496 history1 6	0 60 <1 988 1151 1098 1204 3031 history2 6
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 method ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158	0 63 0 901 1065 1037 1240 3720 current 4 2	0 74 <1 377 1399 985 1149 3496 history1 6 <1	0 60 <1 988 1151 1098 1204 3031 history2 6 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS 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 ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 63 0 901 1065 1037 1240 3720 current 4 2 2 <1	0 74 <1 377 1399 985 1149 3496 <u>history1</u> 6 <1 2	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0
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	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base	0 63 0 901 1065 1037 1240 3720 current 4 2 <1 current	0 74 <1 377 1399 985 1149 3496 history1 6 <1 2 history1	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >6	0 63 0 901 1065 1037 1240 3720 current 4 2 <1 2 <1 0	0 74 <1 377 1399 985 1149 3496 <u>history1</u> 6 <1 2 <u>history1</u> 0.1	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0 0 history2 0
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	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >20	0 63 0 901 1065 1037 1240 3720 current 4 2 <1 current 0 4.5	0 74 <1 377 1399 985 1149 3496 <u>history1</u> 6 <1 2 <u>history1</u> 0.1 5.0	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0 0 history2 0 5.
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >20 >30 >30	0 63 0 901 1065 1037 1240 3720 current 4 2 <1 current 0 4.5 17.5 current	0 74 <1 377 1399 985 1149 3496 history1 6 <1 2 history1 0.1 5.0 19.7 history1	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0 history2 0 5. 15. 15.
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	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >6 >20 >30	0 63 0 901 1065 1037 1240 3720 current 4 2 <1 current 0 4.5 17.5	0 74 <1 377 1399 985 1149 3496 <u>history1</u> 6 <1 2 <u>history1</u> 0.1 5.0 19.7	0 60 <1 988 1151 1098 1204 3031 history2 6 4 0 history2 0 5. 15.



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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

Contact/Location: JOE SAYEGH - GENNEW

F: (845)568-3073