

OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY

Machine Id

Dutchess County Amenia A050739886

Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (3 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

		Apr2016	May2017 May201	9 Apr2020 May2023	May2024	
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0921723	WC0799946	WC0429083
Sample Date		Client Info		20 May 2024	02 May 2023	26 Apr 2020
Machine Age	hrs	Client Info		0	0	875
Oil Age	hrs	Client Info		0	0	0
Oil Changed	1110	Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ABNORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	3	2	2
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m		2	1	1
Lead	ppm	ASTM D5185m		2	0	0
Copper	ppm	ASTM D5185m		- <1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Antimony	ppm	ASTM D5185m	210			0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
	nom					
Boron	ppm mqq	ASTM D5185m	250	18	12	history2 8 0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	18 0	12 0	8 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250	18 0 92	12	8
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10	18 0 92 0	12 0 46	8 0 58
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	18 0 92 0 801	12 0 46 <1	8 0 58 <1 1039
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	18 0 92 0 801 1186	12 0 46 <1 639 1444	8 0 58 <1 1039 1198
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 ASTM D5185m	250 10 100 450	18 0 92 0 801 1186 1103	12 0 46 <1 639	8 0 58 <1 1039
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	18 0 92 0 801 1186	12 0 46 <1 639 1444 1029	8 0 58 <1 1039 1198 1046
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	250 10 100 450 3000 1150 1350	18 0 92 0 801 1186 1103 1163 3507	12 0 46 <1 639 1444 1029 1256	8 0 58 <1 1039 1198 1046 1186
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	18 0 92 0 801 1186 1103 1163 3507	12 0 46 <1 639 1444 1029 1256 3880	8 0 58 <1 1039 1198 1046 1186 2671
Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250	18 0 92 0 801 1186 1103 1163 3507 current	12 0 46 <1 639 1444 1029 1256 3880 history1	8 0 58 <1 1039 1198 1046 1186 2671 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 >25	18 0 92 0 801 1186 1103 1163 3507 current 5	12 0 46 <1 639 1444 1029 1256 3880 history1 3	8 0 58 <1 1039 1198 1046 1186 2671 history2 5
Boron 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 method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	18 0 92 0 801 1186 1103 1163 3507 <u>current</u> 5 2	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	18 0 92 0 801 1186 1103 1163 3507 current 5 2 2 2 2 2 2	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base	18 0 92 0 801 1186 1103 1163 3507 <i>current</i> 5 2 2 2 2 <1.0 <i>current</i>	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 <1 <1 <1 <1 ≤1.5	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base >6	18 0 92 0 801 1186 1103 1163 3507 current 5 2 2 2 <1.0 current 0.2	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 <2.5 history1 0	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base >6	18 0 92 0 801 1186 1103 1163 3507 <i>current</i> 5 2 2 2 2 <1.0 <i>current</i>	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 <1 <1 <1 <1 ≤1.5	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel 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 limit/base >25 >158 >20 >3.0 limit/base >6 >20	18 0 92 0 801 1186 1103 1163 3507 current 5 2 2 2 <1.0 current 0.2 8.5 21.3	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 ≥.5 history1 0 5.2	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2 0.1 5.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel 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 limit/base >25 >158 >20 >3.0 limit/base >6 >20 >30	18 0 92 0 801 1186 1103 1163 3507 Current 5 2 2 2 <1.0 0.2 8.5 21.3 Current	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 <2.5 history1 0 5.2 14.9	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2 0.1 5.6 17.8 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D71844	250 10 100 450 3000 1150 1350 4250 iimit/base >25 >158 >20 >3.0 iimit/base >6 >20 >30 iimit/base	18 0 92 0 801 1186 1103 1163 3507 current 5 2 2 2 <1.0 current 0.2 8.5 21.3	12 0 46 <1 639 1444 1029 1256 3880 history1 3 <1 <1 <1 2.5 history1 0 5.2 14.9 history1	8 0 58 <1 1039 1198 1046 1186 2671 history2 5 3 2 <1.0 history2 0.1 5.6 17.8

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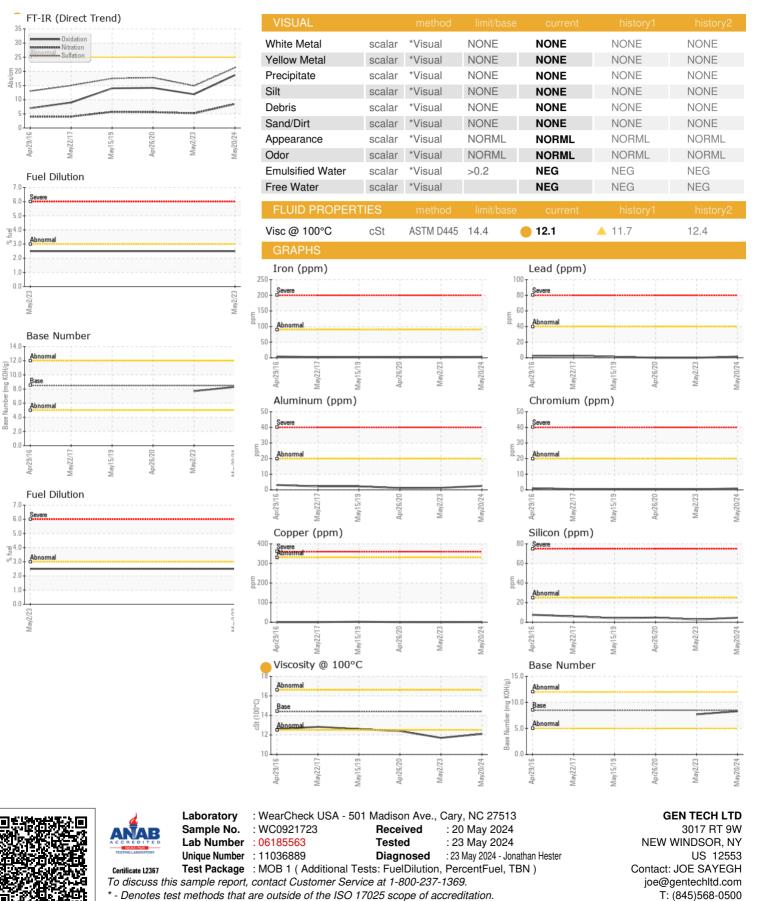
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OIL ANALYSIS REPORT



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

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