

OIL ANALYSIS REPORT

Sample Rating Trend



STAG HILL TOWER 2090036

Diesel Engine

Fluid 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.

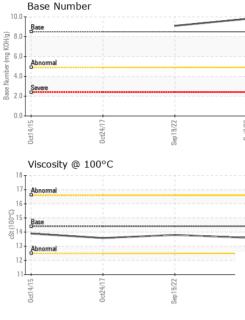
Fluid Condition

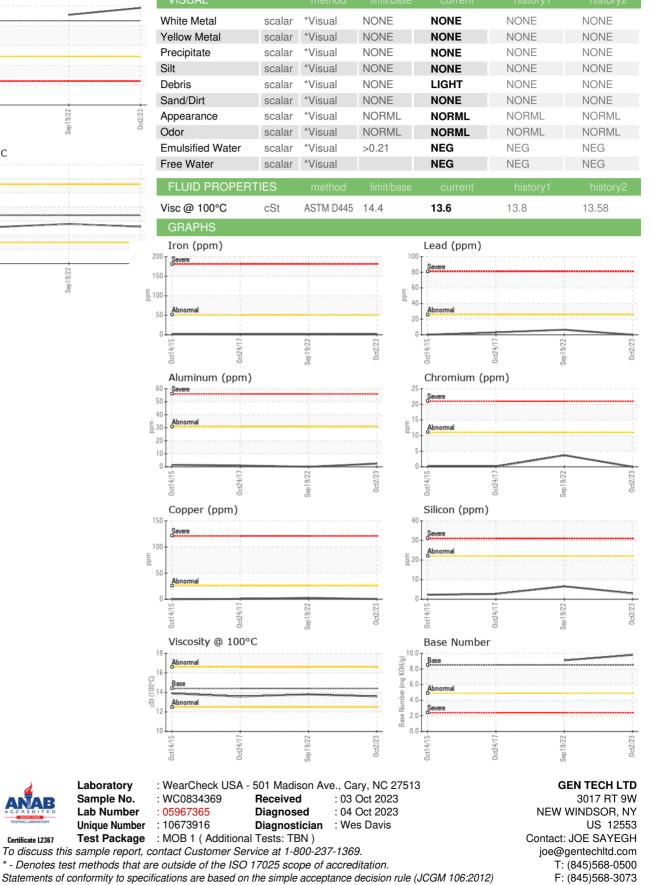
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Oct2015	5 Oct2017	Sep2022	0ct2023	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0834369	WC0699381	WCM1384253
Sample Date		Client Info		02 Oct 2023	19 Sep 2022	24 Oct 2017
Machine Age	hrs	Client Info		0	884	686
Oil Age	hrs	Client Info		0	0	20
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>2.1	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	1	1	1
Chromium	ppm	ASTM D5185m	>11	0	4	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>31	2	0	1
Lead	ppm	ASTM D5185m	>26	0	6	3
Copper	ppm	ASTM D5185m	>26	<1	3	<1
Tin	ppm	ASTM D5185m	>4	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
Boron	ppm	ASTM D5185m	250	25	400	<1
				•	0	0
Barium	ppm	ASTM D5185m	10	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10 100	0 62	0 75	69
				-		
Molybdenum	ppm	ASTM D5185m		62	75	69
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	100 450	62 0	75 <1	69 <1 1044 1165
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100 450	62 0 892	75 <1 360	69 <1 1044
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000	62 0 892 1057	75 <1 360 1448	69 <1 1044 1165
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150	62 0 892 1057 1024	75 <1 360 1448 986	69 <1 1044 1165 1103
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	100 450 3000 1150 1350	62 0 892 1057 1024 1228	75 <1 360 1448 986 1163	69 <1 1044 1165 1103 1183
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	100 450 3000 1150 1350 4250	62 0 892 1057 1024 1228 3535	75 <1 360 1448 986 1163 3613	69 <1 1044 1165 1103 1183 3093
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base	62 0 892 1057 1024 1228 3535 current	75 <1 360 1448 986 1163 3613 history1	69 <1 1044 1165 1103 1183 3093 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >22	62 0 892 1057 1024 1228 3535 current 3	75 <1 360 1448 986 1163 3613 history1 7	69 <1 1044 1165 1103 1183 3093 history2 3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >22 >158	62 0 892 1057 1024 1228 3535 current 3 1	75 <1 360 1448 986 1163 3613 history1 7 1	69 <1 1044 1165 1103 1183 3093 history2 3 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >22 >158 >20	62 0 892 1057 1024 1228 3535 current 3 1 <1	75 <1 360 1448 986 1163 3613 history1 7 1 2	69 <1 1044 1165 1103 1183 3093 history2 3 2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base	62 0 892 1057 1024 1228 3535 current 3 1 <1 <1	75 <1 360 1448 986 1163 3613 history1 7 1 2 kistory1	69 <1 1044 1165 1103 1183 3093 history2 3 2 2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i ppm i	ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3 >20	62 0 892 1057 1024 1228 3535 current 3 1 <1 <1 current 0	75 <1 360 1448 986 1163 3613 history1 7 1 2 2 history1 0.1	69 <1 1044 1165 1103 1183 3093 history2 3 2 2 2 history2 0
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	100 450 3000 1150 1350 4250 limit/base >22 >158 >20 limit/base >3 >20	62 0 892 1057 1024 1228 3535 current 3 1 <1 <1 current 0 4.7	75 <1 360 1448 986 1163 3613 history1 7 1 2 <u>history1</u> 0.1 5.3	69 <1 1044 1165 1103 1183 3093 history2 3 2 2 2 history2 0 4.
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	100 450 3000 1150 1350 4250 Iimit/base >22 >158 >20 Iimit/base >3 >20 >30	62 0 892 1057 1024 1228 3535 current 3 1 <1 <1 current 0 4.7 17.6	75 <1 360 1448 986 1163 3613 history1 7 1 2 history1 0.1 5.3 20.1	69 <1 1044 1165 1103 1183 3093 history2 3 2 2 2 history2 0 4. 14.
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 D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	100 450 3000 1150 1350 4250 imit/base >22 >158 >20 imit/base >3 >20 >30 >30	62 0 892 1057 1024 1228 3535 current 3 1 <1 <1 current 0 4.7 17.6 current	75 <1 360 1448 986 1163 3613 history1 7 1 2 history1 0.1 5.3 20.1 history1	69 <1 1044 1165 1103 1183 3093 history2 3 2 2 history2 0 4. 14. 14.



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Certificate L2367

Contact/Location: JOE SAYEGH - GENNEW