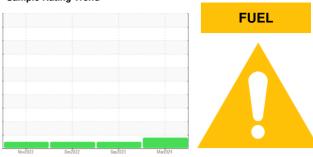


# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

**G84** 

Diesel Engine

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)** 

### **DIAGNOSIS**

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

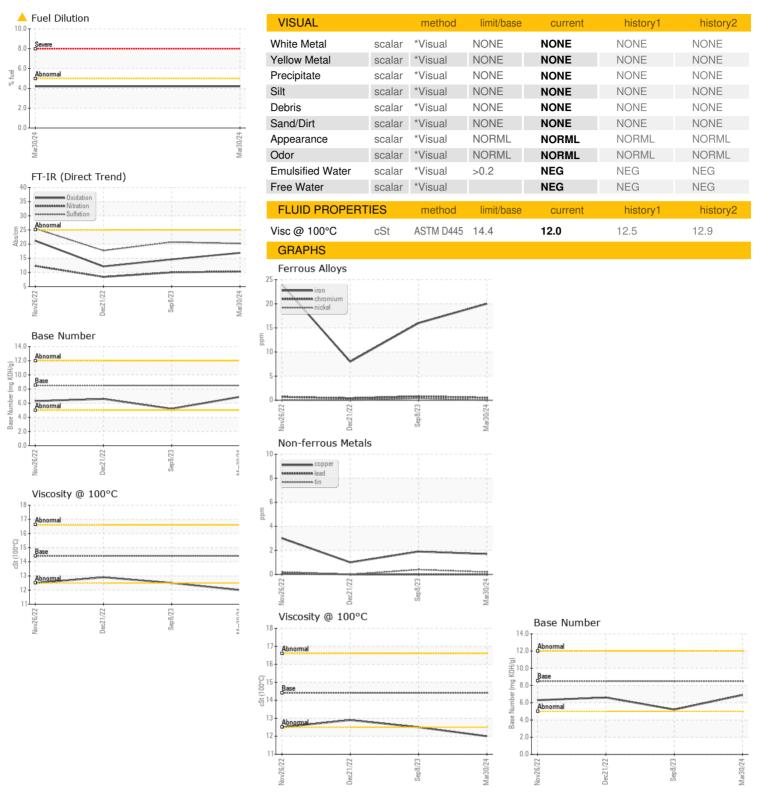
### **Fluid Condition**

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	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0874293	WC0784013	WC0758875
Sample Date		Client Info		30 Mar 2024	08 Sep 2023	21 Dec 2022
Machine Age	hrs	Client Info		7471	6894	6346
Oil Age	hrs	Client Info		1423	500	564
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	NORMAL	NORMAL
CONTAMINATIO	V	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	>80	20	16	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>30	3	2	1
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	2	2	1
Tin	ppm	ASTM D5185m	>5	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	12	13	30
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	12 0	13 0	30
Barium	ppm	ASTM D5185m	10	0	0	1
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 60	0 51	1 54
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	0 60 <1	0 51 <1	1 54 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 60 <1 861	0 51 <1 104	1 54 <1 131
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 60 <1 861 1253	0 51 <1 104 2115	1 54 <1 131 1950
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 60 <1 861 1253 1043	0 51 <1 104 2115 898	1 54 <1 131 1950 878
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	10 100 450 3000 1150 1350	0 60 <1 861 1253 1043 1211	0 51 <1 104 2115 898 1100	1 54 <1 131 1950 878 1029
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 ASTM D5185m	10 100 450 3000 1150 1350 4250	0 60 <1 861 1253 1043 1211 3376	0 51 <1 104 2115 898 1100 4206	1 54 <1 131 1950 878 1029 3126
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	10 100 450 3000 1150 1350 4250 limit/base >20	0 60 <1 861 1253 1043 1211 3376	0 51 <1 104 2115 898 1100 4206 history1	1 54 <1 131 1950 878 1029 3126 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >20	0 60 <1 861 1253 1043 1211 3376 current	0 51 <1 104 2115 898 1100 4206 history1	1 54 <1 131 1950 878 1029 3126 history2 5
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 Iimit/base >20 >158	0 60 <1 861 1253 1043 1211 3376 current 8 6	0 51 <1 104 2115 898 1100 4206 history1 9	1 54 <1 131 1950 878 1029 3126 history2 5 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20	0 60 <1 861 1253 1043 1211 3376 current 8 6 <1	0 51 <1 104 2115 898 1100 4206 history1 9 3	1 54 <1 131 1950 878 1029 3126 history2 5 0 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5	0 60 <1 861 1253 1043 1211 3376 current 8 6 <1 ▲ 4.2	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0	1 54 <1 131 1950 878 1029 3126 history2 5 0 2 <1.0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5	0 60 <1 861 1253 1043 1211 3376 current 8 6 <1 ▲ 4.2	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0 history1	1 54 <1 131 1950 878 1029 3126 history2 5 0 2 <1.0 history2
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	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5 limit/base >3	0 60 <1 861 1253 1043 1211 3376 current 8 6 <1 ▲ 4.2 current 0.6	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0 history1 0.7	1 54
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7844	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5 limit/base >3 >20	0 60 <1 861 1253 1043 1211 3376  current 8 6 <1  4.2  current 0.6 10.3	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0 history1 0.7 10.0	1 54
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5 limit/base >3 >20 >30	0 60 <1 861 1253 1043 1211 3376  current 8 6 <1 ▲ 4.2  current 0.6 10.3 20.2	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0 history1 0.7 10.0 20.7	1 54
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7624 *ASTM D7624 *ASTM D76145  method	10 100 450 3000 1150 1350 4250 limit/base >20 >158 >20 >5 limit/base >3 >20 >3 limit/base	0 60 <1 861 1253 1043 1211 3376  current 8 6 <1 ▲ 4.2  current 0.6 10.3 20.2  current	0 51 <1 104 2115 898 1100 4206 history1 9 3 3 <1.0 history1 0.7 10.0 20.7 history1	1 54 <1 131 1950 878 1029 3126 history2 5 0 2 <1.0 history2 0.3 8.4 17.7 history2



## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

: WC0874293 Lab Number : 06149973

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Unique Number: 10980051

Received : 16 Apr 2024 **Tested** Diagnosed

: 19 Apr 2024 : 19 Apr 2024 - Wes Davis Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

**Apple Valley Waste - EHT Location** 6626 Delilah Road Egg Harbor Township, NJ US 08234

Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

 $^st$  - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) T:

F: