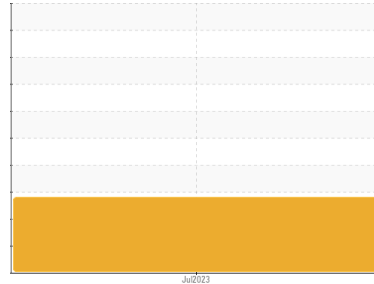




# PROBLEM SUMMARY

Sample Rating Trend



Machine Id

## 3201

Component

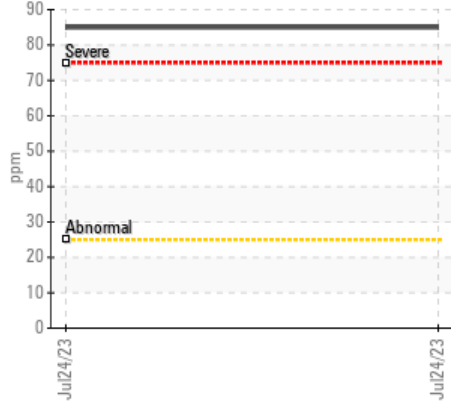
### Diesel Engine

Fluid

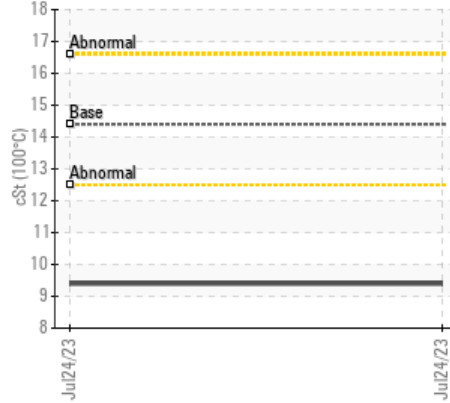
### DIESEL ENGINE OIL SAE 15W40 (--- GAL)

## COMPONENT CONDITION SUMMARY

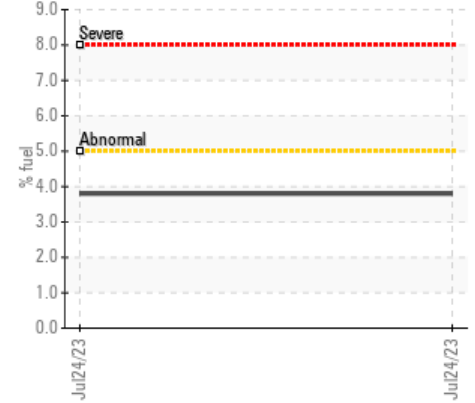
### ▲ Silicon (ppm)



### ▲ Viscosity @ 100°C



### ▲ Fuel Dilution



## RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			<b>ABNORMAL</b>	---	---
Silicon	ppm	ASTM D5185m	>25	▲ 85	---
Fuel	%	ASTM D3524	>5	▲ 3.8	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 9.4	---

Customer Id: APPLEVWB  
 Sample No.: WC0758995  
 Lab Number: 05925283  
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

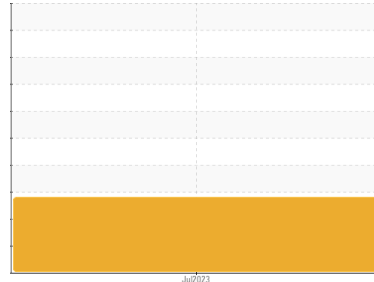
*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id

**3201**

Component

**Diesel Engine**

Fluid

**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.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material. Light fuel dilution occurring.

### 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.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0758995</b>	---	---
Sample Date	Client Info	<b>24 Jul 2023</b>	---	---
Machine Age	hrs	Client Info	<b>903</b>	---
Oil Age	hrs	Client Info	<b>0</b>	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>ABNORMAL</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>54</b>	---
Chromium	ppm	ASTM D5185m >20	<b>2</b>	---
Nickel	ppm	ASTM D5185m >4	<b>8</b>	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	---
Aluminum	ppm	ASTM D5185m >20	<b>6</b>	---
Lead	ppm	ASTM D5185m >40	<b>0</b>	---
Copper	ppm	ASTM D5185m >330	<b>183</b>	---
Tin	ppm	ASTM D5185m >15	<b>4</b>	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>151</b>	---
Barium	ppm	ASTM D5185m 10	<b>0</b>	---
Molybdenum	ppm	ASTM D5185m 100	<b>120</b>	---
Manganese	ppm	ASTM D5185m	<b>4</b>	---
Magnesium	ppm	ASTM D5185m 450	<b>798</b>	---
Calcium	ppm	ASTM D5185m 3000	<b>1503</b>	---
Phosphorus	ppm	ASTM D5185m 1150	<b>736</b>	---
Zinc	ppm	ASTM D5185m 1350	<b>956</b>	---
Sulfur	ppm	ASTM D5185m 4250	<b>3038</b>	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>▲ 85</b>	---
Sodium	ppm	ASTM D5185m >158	<b>11</b>	---
Potassium	ppm	ASTM D5185m >20	<b>14</b>	---
Fuel	%	ASTM D3524 >5	<b>▲ 3.8</b>	---
Glycol	%	*ASTM D2982	<b>NEG</b>	---

## INFRA-RED

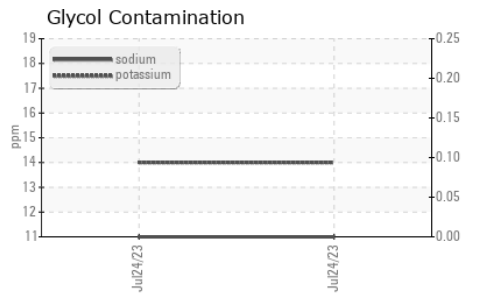
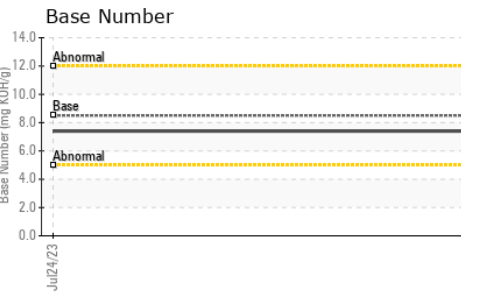
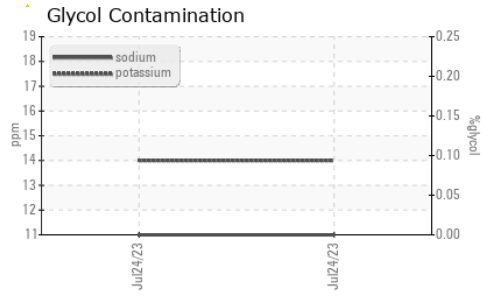
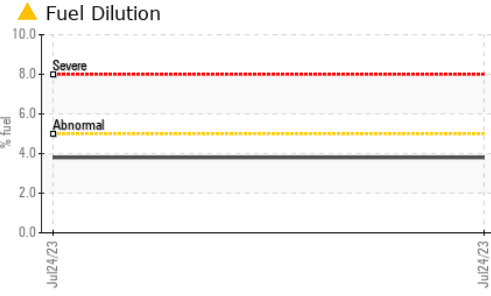
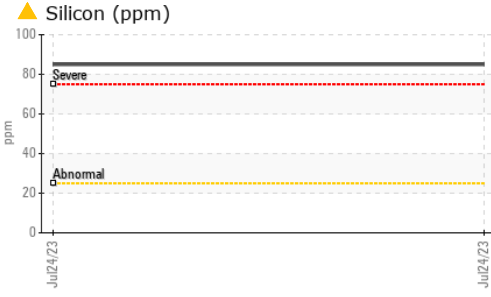
method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.3</b>	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.4</b>	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>22.3</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>7.4</b>	---



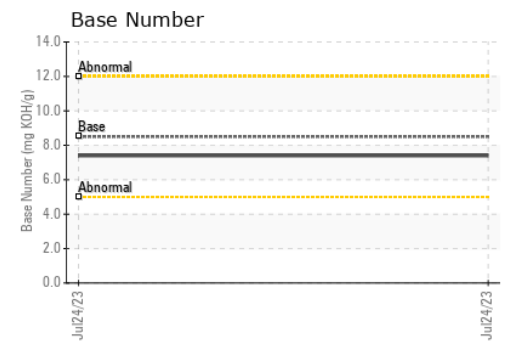
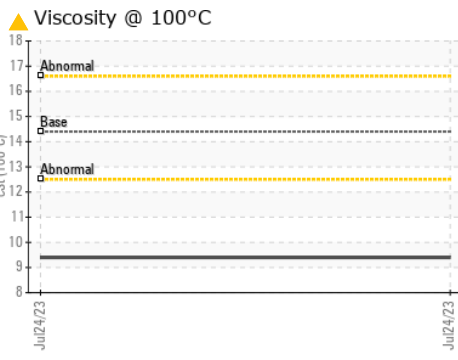
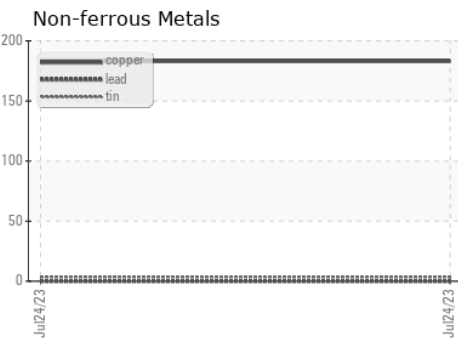
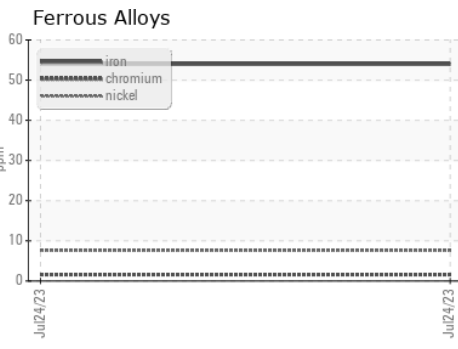
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 9.4	---	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0758995 **Received** : 15 Aug 2023  
**Lab Number** : 05925283 **Diagnosed** : 17 Aug 2023  
**Unique Number** : 10605230 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FuelDilution, Glycol, PercentFuel, TBN )

**Apple Valley Waste - Baltimore District**  
 240 S KRESSON ST  
 BALTIMORE, MD  
 US 21224  
 Contact: KEVIN HINSON  
 khinson@goldmedal.net

Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - 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)