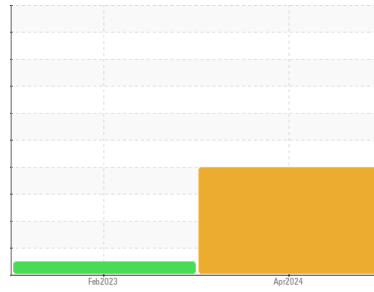




# PROBLEM SUMMARY

Sample Rating Trend



FUEL



Machine Id

**1630**

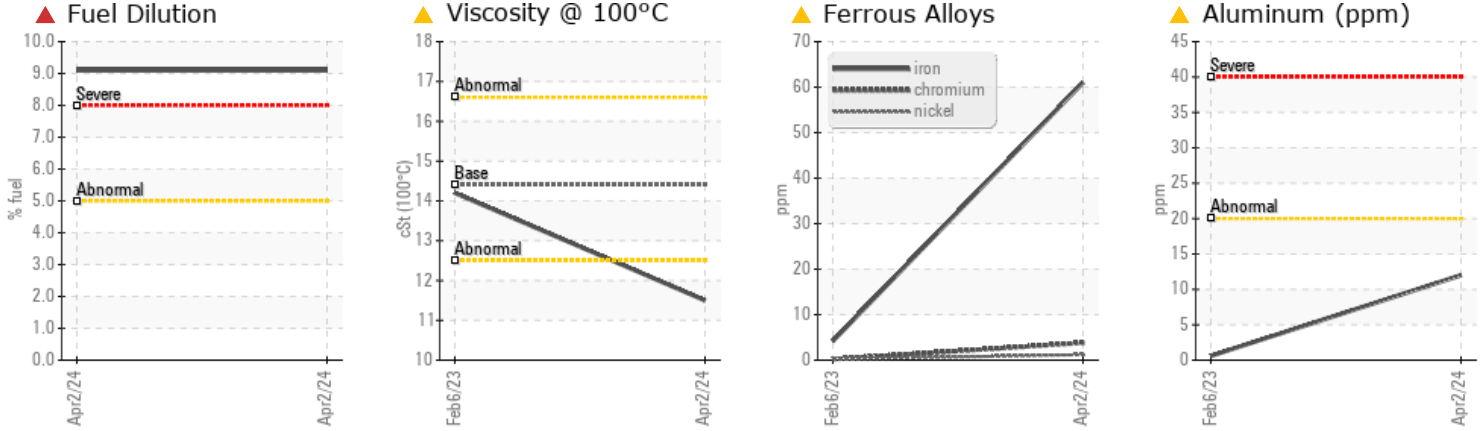
Component

**Diesel Engine**

Fluid

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

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. ( Customer Sample Comment: Cannot get hours ATM. Using miles for now. )

## PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	---
Iron	ppm	ASTM D5185m	>100	▲ 61	4	---
Aluminum	ppm	ASTM D5185m	>20	▲ 12	<1	---
Fuel	%	ASTM D3524	>5	▲ 9.1	<1.0	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.5	14.2	---

Customer Id: AVWHOM

Sample No.: WC0858193

Lab Number: 06143576

Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:

Angela Borella +1 800-237-1369

[angela.borella@wearcheckusa.com](mailto:angela.borella@wearcheckusa.com)

To change component or sample information:

Customer Service +1 1-800-237-1369

[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

## HISTORICAL DIAGNOSIS

NORMAL



### 06 Feb 2023 Diag: Wes Davis

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

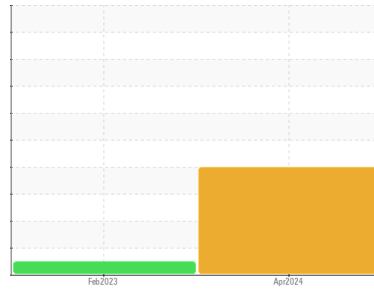
view report





# OIL ANALYSIS REPORT

## Sample Rating Trend



FUEL



Machine Id

**1630**

Component

**Diesel Engine**

Fluid

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

### DIAGNOSIS

#### ▲ Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. ( Customer Sample Comment: Cannot get hours ATM. Using miles for now. )

#### ▲ Wear

Aluminum and iron ppm levels are marginal. All other component wear rates are normal.

#### ▲ Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

#### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0858193</b>	WC0760027	---
Sample Date	Client Info		<b>02 Apr 2024</b>	06 Feb 2023	---
Machine Age	mls	Client Info	<b>216516</b>	18581	---
Oil Age	mls	Client Info	<b>520</b>	450	---
Oil Changed	Client Info		<b>Changed</b>	Changed	---
Sample Status			<b>SEVERE</b>	NORMAL	---

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol	WC Method		<b>NEG</b>	NEG	---

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>▲ 61</b>	4	---
Chromium	ppm	ASTM D5185m >20	<b>4</b>	<1	---
Nickel	ppm	ASTM D5185m >4	<b>1</b>	<1	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>▲ 12</b>	<1	---
Lead	ppm	ASTM D5185m >40	<b>2</b>	<1	---
Copper	ppm	ASTM D5185m >330	<b>2</b>	<1	---
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	---
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	---

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>7</b>	5	---
Barium	ppm	ASTM D5185m 10	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 100	<b>88</b>	61	---
Manganese	ppm	ASTM D5185m	<b>1</b>	<1	---
Magnesium	ppm	ASTM D5185m 450	<b>1256</b>	892	---
Calcium	ppm	ASTM D5185m 3000	<b>1520</b>	1052	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1422</b>	940	---
Zinc	ppm	ASTM D5185m 1350	<b>1693</b>	1170	---
Sulfur	ppm	ASTM D5185m 4250	<b>4702</b>	3581	---

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>10</b>	4	---
Sodium	ppm	ASTM D5185m >158	<b>7</b>	0	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	---
Fuel	%	ASTM D3524 >5	<b>▲ 9.1</b>	<1.0	---

### INFRA-RED

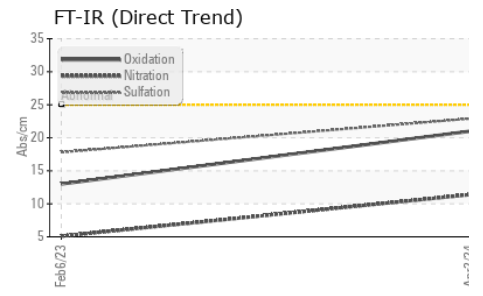
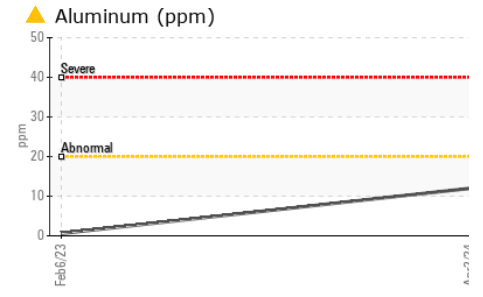
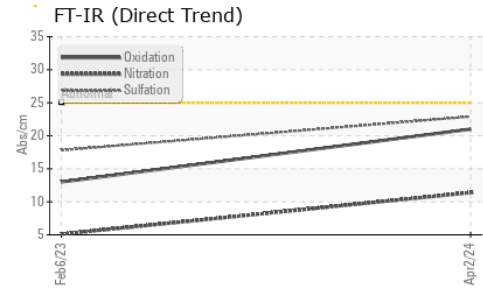
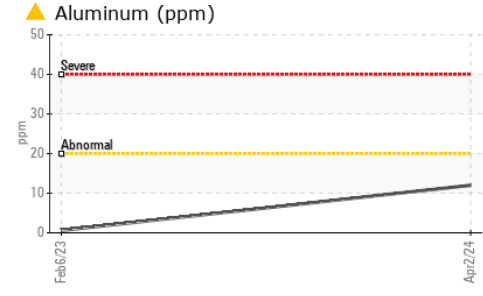
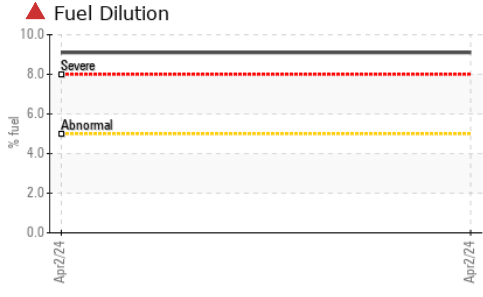
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.9</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.4</b>	5.1	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.9</b>	17.8	---

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.0</b>	13.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>7.0</b>	9.6	---



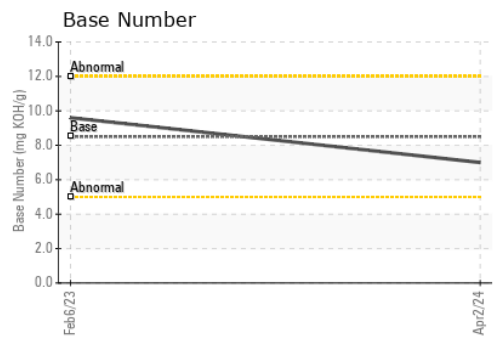
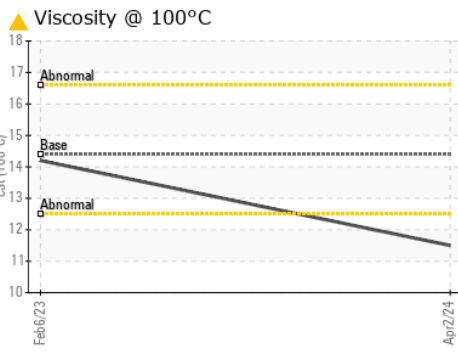
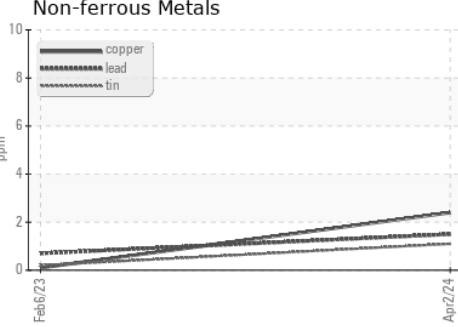
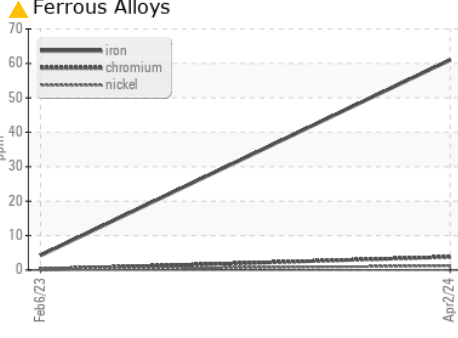
# OIL ANALYSIS REPORT



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	▲ 11.5	14.2

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0858193      **Received** : 09 Apr 2024  
**Lab Number** : 06143576      **Tested** : 15 Apr 2024  
**Unique Number** : 10968384      **Diagnosed** : 15 Apr 2024 - Angela Borella  
**Test Package** : CONST ( Additional Tests : FuelDilution, PercentFuel, TBN )

**Apple Valley Waste - Hometown Location**  
 155 Airport Road  
 Selinsgrove, PA  
 US 17870  
 Contact: Service Manager

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)