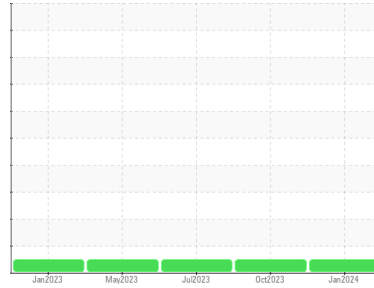




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**1640**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0858134</b>	WC0858124	WC0760064
Sample Date	Client Info		<b>24 Jan 2024</b>	31 Oct 2023	31 Jul 2023
Machine Age	hrs	Client Info	<b>12064</b>	11577	11127
Oil Age	hrs	Client Info	<b>520</b>	520	520
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >110	<b>32</b>	21	15
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>13</b>	12	2
Lead	ppm	ASTM D5185m >45	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m >4	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>9</b>	2	4
Barium	ppm	ASTM D5185m 10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 100	<b>60</b>	64	68
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 450	<b>902</b>	925	1058
Calcium	ppm	ASTM D5185m 3000	<b>1119</b>	1097	1303
Phosphorus	ppm	ASTM D5185m 1150	<b>993</b>	929	1130
Zinc	ppm	ASTM D5185m 1350	<b>1170</b>	1234	1444
Sulfur	ppm	ASTM D5185m 4250	<b>3021</b>	3319	4119

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>4</b>	6	5
Sodium	ppm	ASTM D5185m >158	<b>4</b>	1	4
Potassium	ppm	ASTM D5185m >20	<b>21</b>	28	4

## INFRA-RED

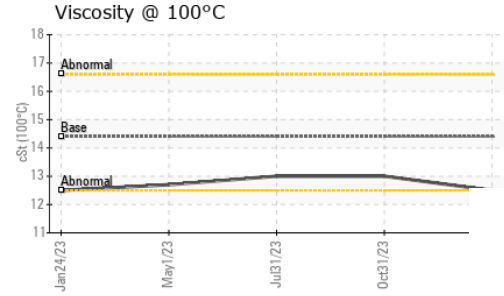
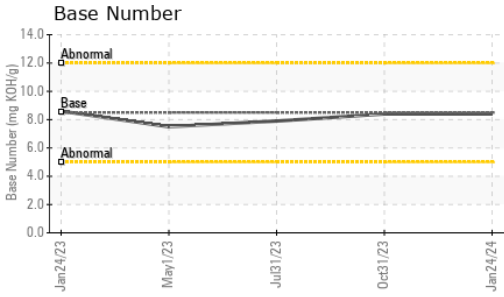
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.6</b>	0.5	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.7</b>	8.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.6</b>	20.3	19.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.2</b>	16.1	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>8.4</b>	8.4	7.9



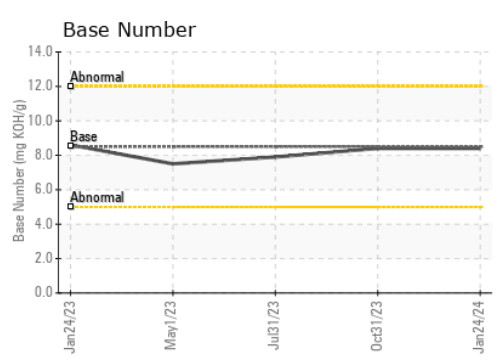
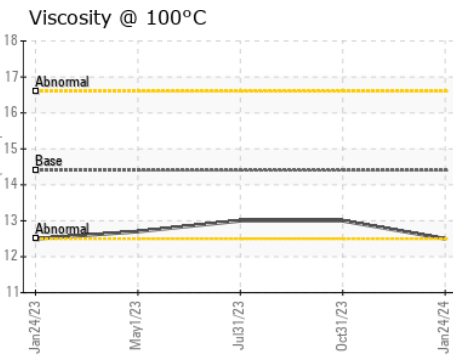
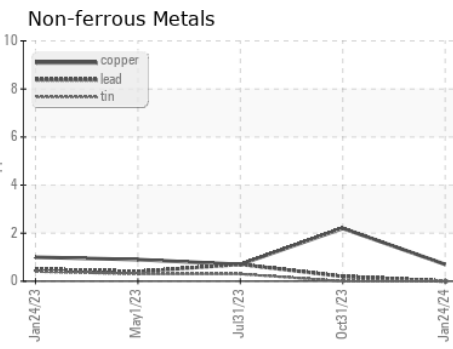
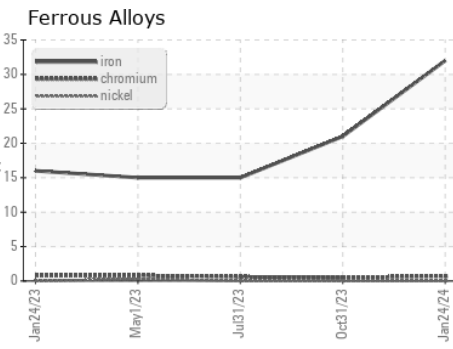
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.5</b>	13.0	13.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0858134      **Recieved** : 30 Jan 2024  
**Lab Number** : **06073554**      **Diagnosed** : 30 Jan 2024  
**Unique Number** : 10850231      **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: 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)

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