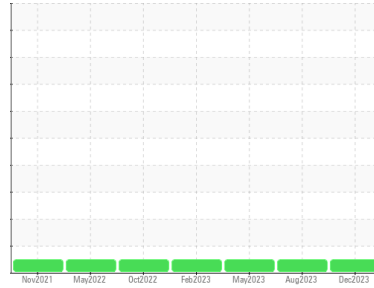




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id

**1312**

Component

**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 15W40 (--- 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0860405</b>	WC0844978	WC0790621
Sample Date	Client Info		<b>05 Dec 2023</b>	08 Aug 2023	01 May 2023
Machine Age	mls	Client Info	<b>252244</b>	256691	251208
Oil Age	mls	Client Info	<b>6000</b>	6000	0
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 >100	<b>48</b>	45	26
Chromium	ppm	ASTM D5185m >20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>4</b>	6	2
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>3</b>	4	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>65</b>	7	12
Barium	ppm	ASTM D5185m 10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 100	<b>71</b>	68	79
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 450	<b>312</b>	328	380
Calcium	ppm	ASTM D5185m 3000	<b>1674</b>	1768	1821
Phosphorus	ppm	ASTM D5185m 1150	<b>980</b>	916	1012
Zinc	ppm	ASTM D5185m 1350	<b>1197</b>	1170	1256
Sulfur	ppm	ASTM D5185m 4250	<b>3046</b>	3280	3605

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>12</b>	23	6
Sodium	ppm	ASTM D5185m >158	<b>6</b>	41	7
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	1

## INFRA-RED

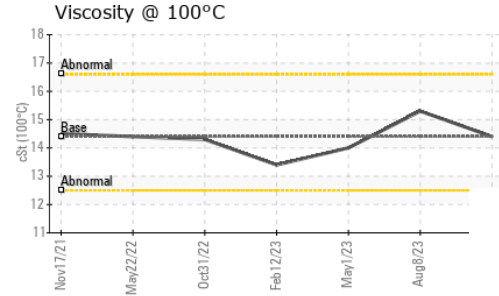
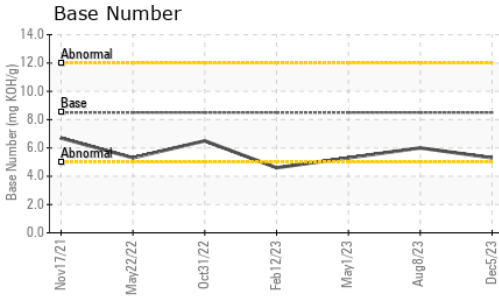
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.1</b>	1.6	0.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>13.9</b>	15.1	13.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>28.2</b>	29.1	27.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>32.4</b>	29.4	30.8
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>5.3</b>	6.0	5.3



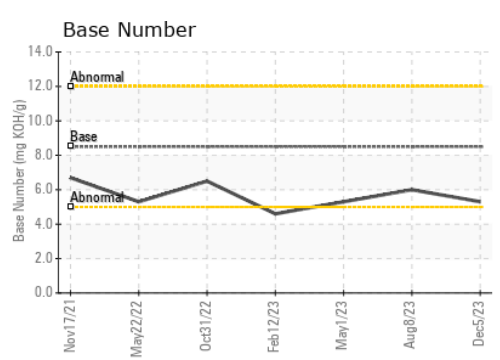
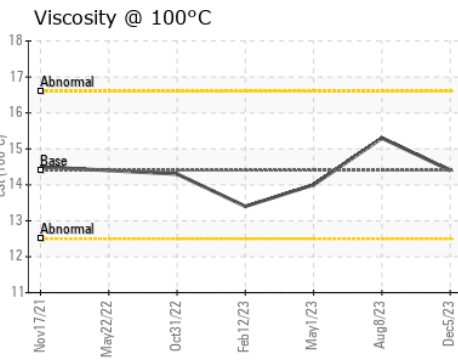
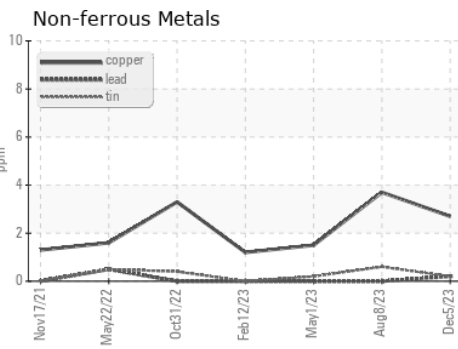
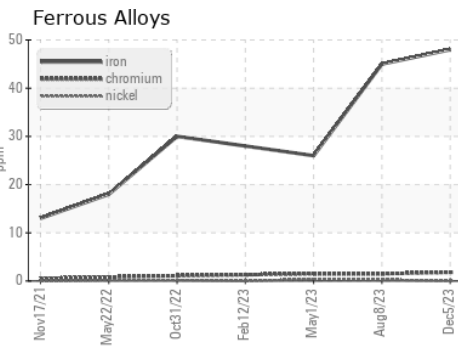
# OIL ANALYSIS REPORT



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	15.3	14.0

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0860405 **Received** : 07 Dec 2023  
**Lab Number** : **06027533** **Diagnosed** : 09 Dec 2023  
**Unique Number** : 10777324 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**TOWN OF CHAPEL HILL**  
 6900 MILLHOUSE RD  
 CHAPEL HILL, NC  
 US 27516  
 Contact: Lisa DePasqua  
 ldepasqua@townofchapelhill.org  
 T: (919)696-4941  
 F:

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)