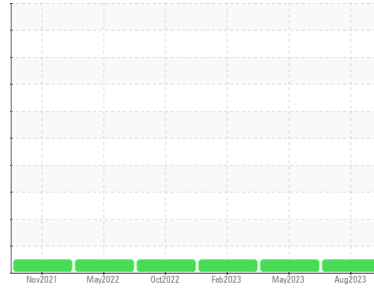




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id

**1312**

Component

**Diesel Engine**

Fluid

**DISEL 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>WC0844978</b>	WC0790621	WC0766301
Sample Date	Client Info			<b>08 Aug 2023</b>	01 May 2023	12 Feb 2023
Machine Age	mls	Client Info		<b>256691</b>	251208	245756
Oil Age	mls	Client Info		<b>6000</b>	0	6000
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
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>45</b>	26	28
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
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>6</b>	2	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	2	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>7</b>	12	21
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>68</b>	79	76
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>328</b>	380	132
Calcium	ppm	ASTM D5185m	3000	<b>1768</b>	1821	1908
Phosphorus	ppm	ASTM D5185m	1150	<b>916</b>	1012	920
Zinc	ppm	ASTM D5185m	1350	<b>1170</b>	1256	1136
Sulfur	ppm	ASTM D5185m	4250	<b>3280</b>	3605	3529

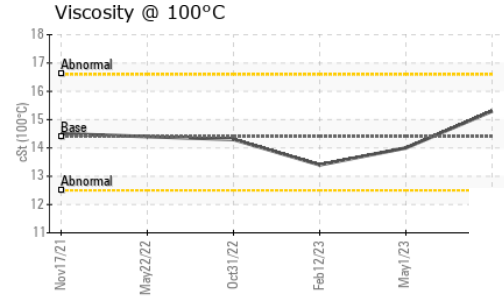
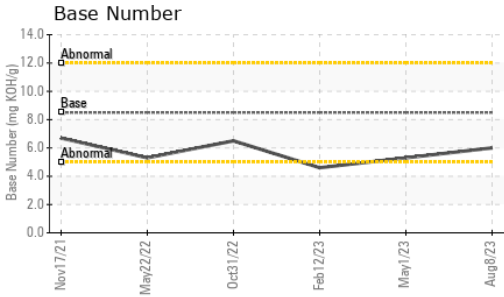
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>23</b>	6	5
Sodium	ppm	ASTM D5185m	>158	<b>41</b>	7	3
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>1.6</b>	0.8	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.1</b>	13.6	13.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>29.1</b>	27.4	26.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>29.4</b>	30.8	27.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.0</b>	5.3	4.6



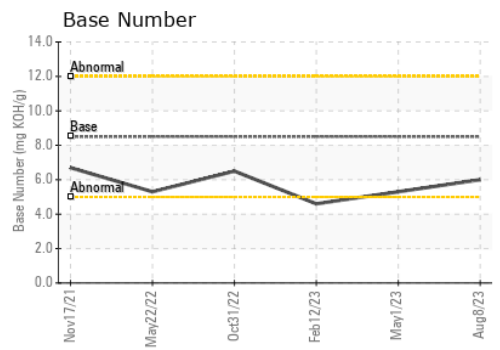
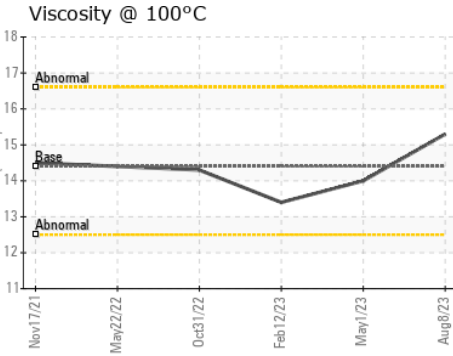
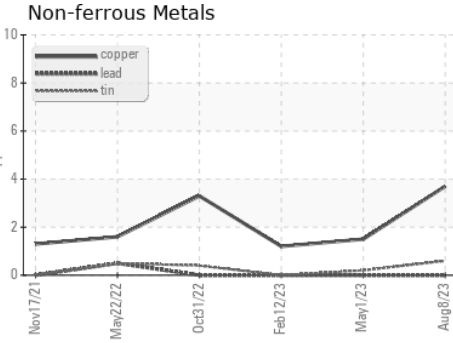
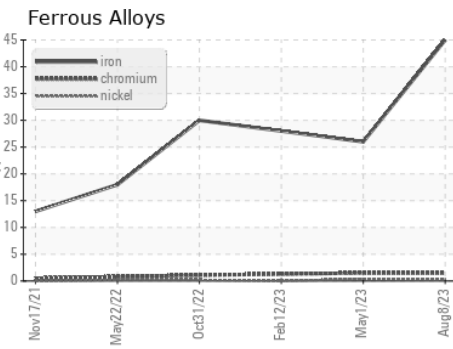
# OIL ANALYSIS REPORT



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>15.3</b>	14.0	13.4

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0844978 **Received** : 24 Aug 2023  
**Lab Number** : **05934082** **Diagnosed** : 26 Aug 2023  
**Unique Number** : 10619353 **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)