



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**1954**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 5W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0810308</b>	WC0860357	WC0827070
Sample Date		Client Info		<b>02 Jan 2024</b>	20 Nov 2023	27 Jul 2023
Machine Age	mls	Client Info		<b>110728</b>	106491	98233
Oil Age	mls	Client Info		<b>0</b>	6000	6000
Filter Age	mls	Client Info		<b>0</b>	6000	6000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	3	6
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

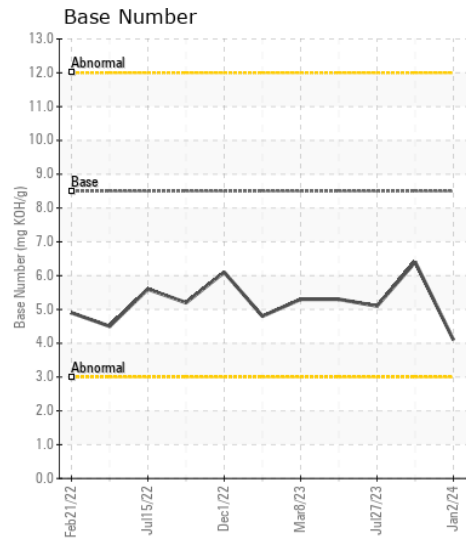
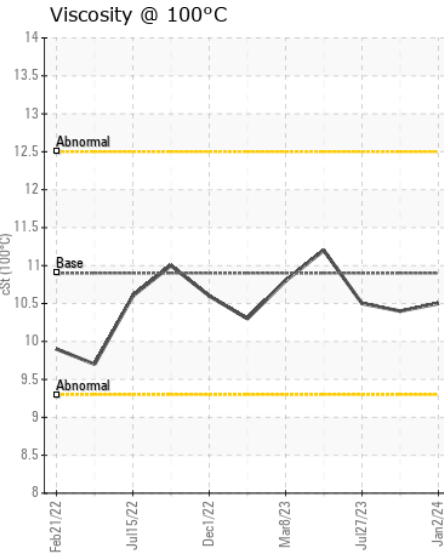
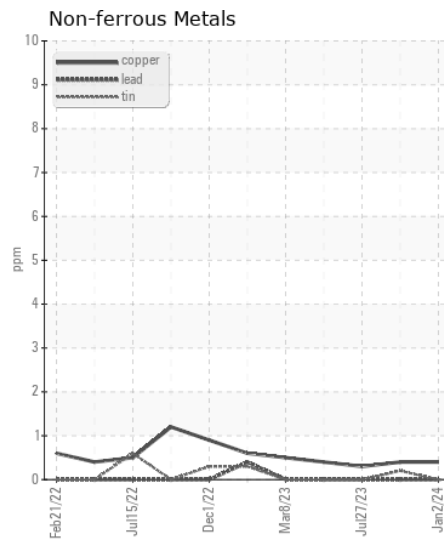
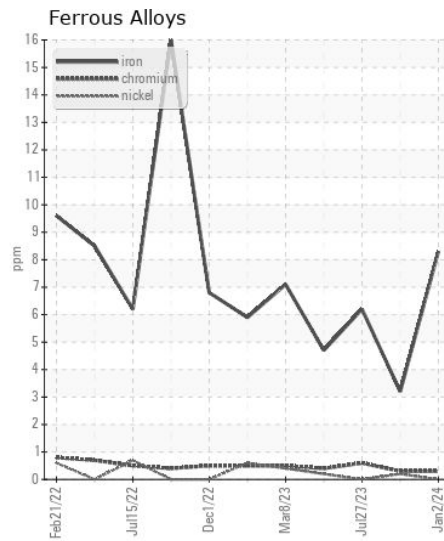
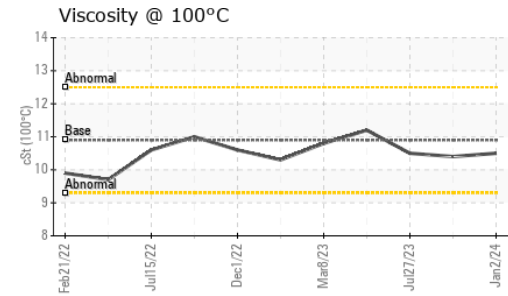
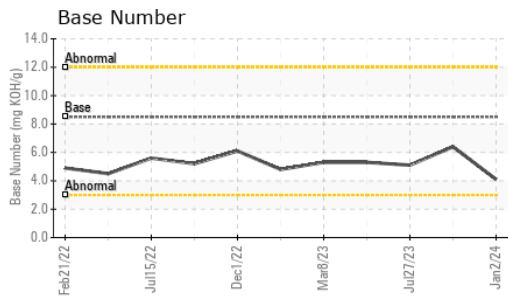
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>17</b>	7	16
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
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
Soot %	%	*ASTM D7844	>3	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.7</b>	7.5	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.6</b>	16.7	22.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## 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.

Sodium	ppm	ASTM D5185m		<b>0</b>	<1	2
Boron	ppm	ASTM D5185m	250	<b>30</b>	78	39
Barium	ppm	ASTM D5185m	10	<b>4</b>	<1	2
Molybdenum	ppm	ASTM D5185m	100	<b>207</b>	191	78
Manganese	ppm	ASTM D5185m		<b>3</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>611</b>	554	606
Calcium	ppm	ASTM D5185m	3000	<b>1174</b>	1113	1447
Phosphorus	ppm	ASTM D5185m	1150	<b>585</b>	561	788
Zinc	ppm	ASTM D5185m	1350	<b>690</b>	679	970
Sulfur	ppm	ASTM D5185m	4250	<b>2799</b>	2588	3812
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	10.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>4.1</b>	6.4	5.1
Visc @ 100°C	cSt	ASTM D445	10.9	<b>10.5</b>	10.4	10.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0810308 **Received** : 18 Jan 2024  
**Lab Number** : 06064125 **Diagnosed** : 20 Jan 2024  
**Unique Number** : 10835507 **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:

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)