



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**1646**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0870781</b>	WC0821403	WC0806566
Sample Date		Client Info		<b>03 Jan 2024</b>	23 Jun 2023	01 May 2023
Machine Age	mls	Client Info		<b>214025</b>	203927	200078
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	32	25
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
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>4</b>	9	10
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

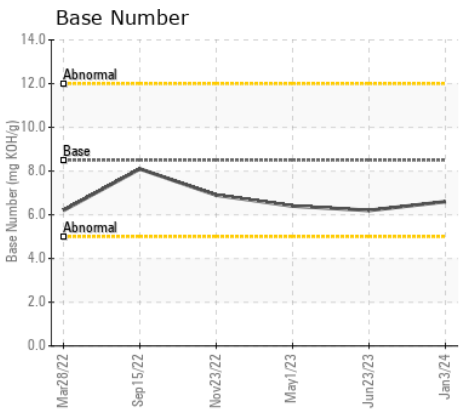
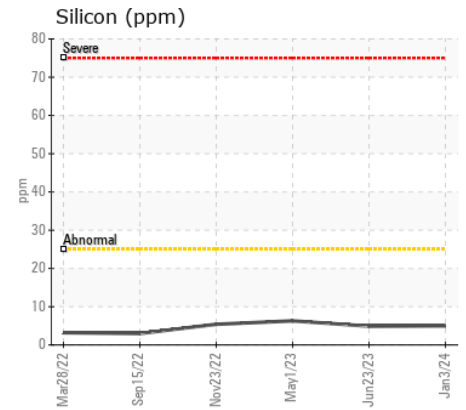
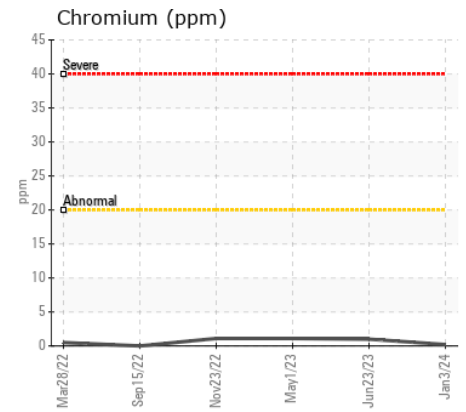
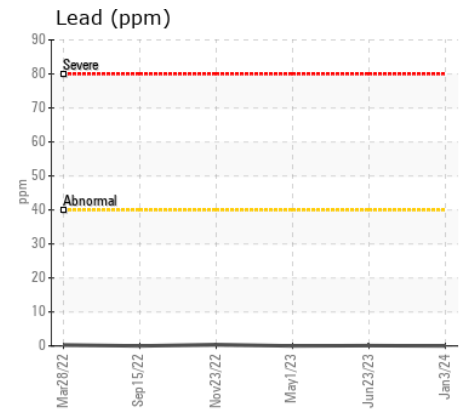
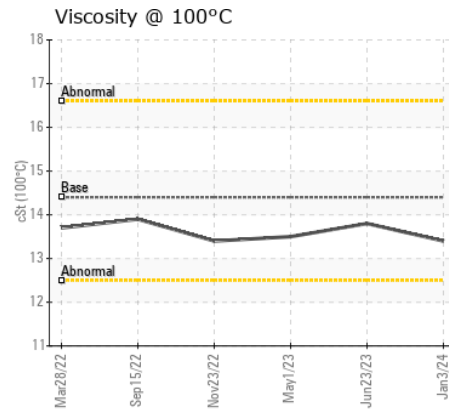
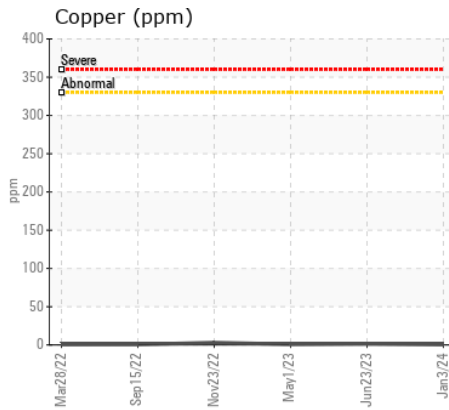
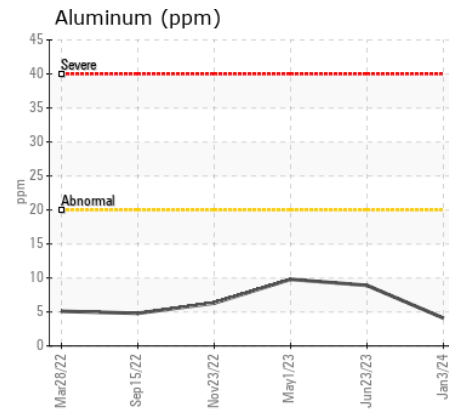
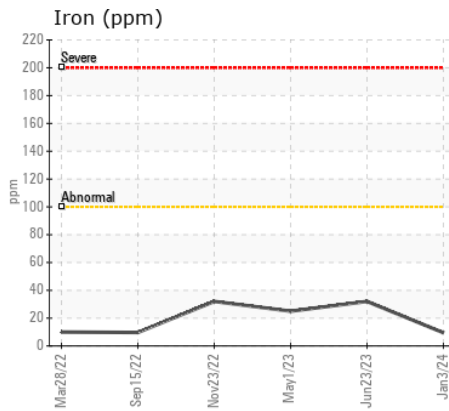
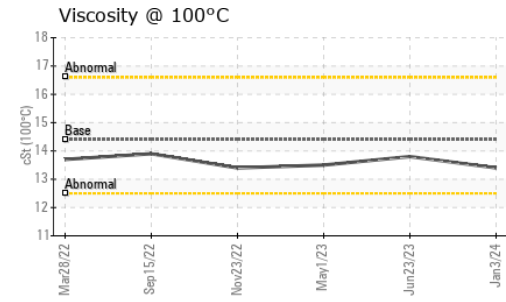
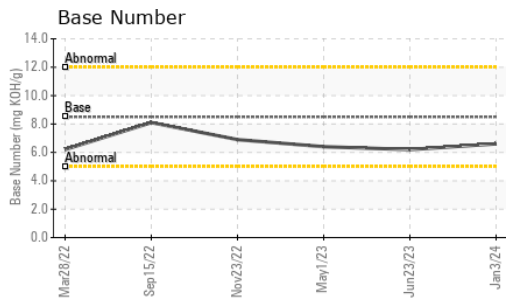
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	11	11
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>0.4</b>	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	11.9	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.5</b>	23.0	21.3
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	>158	<b>1</b>	9	10
Boron	ppm	ASTM D5185m	250	<b>43</b>	25	36
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	100	<b>88</b>	93	116
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>106</b>	70	80
Calcium	ppm	ASTM D5185m	3000	<b>2078</b>	2405	2847
Phosphorus	ppm	ASTM D5185m	1150	<b>1015</b>	1039	1285
Zinc	ppm	ASTM D5185m	1350	<b>1216</b>	1261	1584
Sulfur	ppm	ASTM D5185m	4250	<b>3765</b>	4320	4862
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	18.9	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.6</b>	6.2	6.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.4</b>	13.8	13.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870781 **Received** : 12 Jan 2024  
**Lab Number** : 06059892 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831274 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
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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)