



# OIL ANALYSIS REPORT

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

Machine Id  
**1701**  
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>WC0870789</b>	WC0821392	WC0792871
Sample Date		Client Info		<b>11 Jan 2024</b>	30 Jun 2023	29 Mar 2023
Machine Age	mls	Client Info		<b>79274</b>	69518	64204
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	Not Changd
Sample Status				<b>NORMAL</b>	MARGINAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>13</b>	28	14
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>7</b>	12	8
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

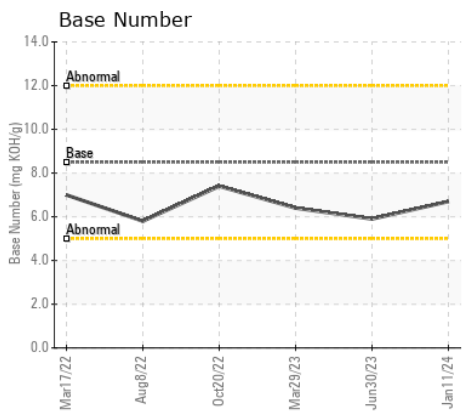
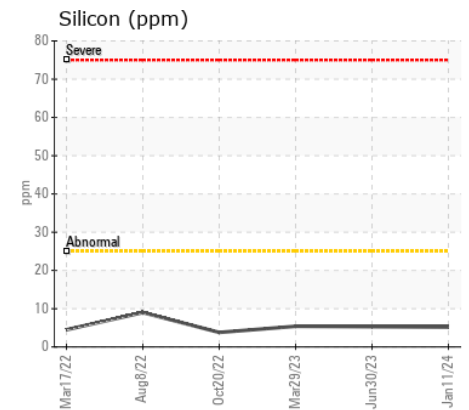
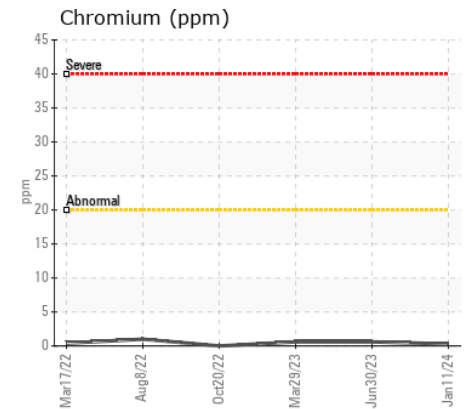
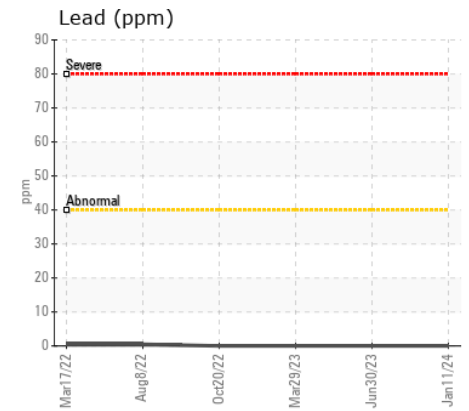
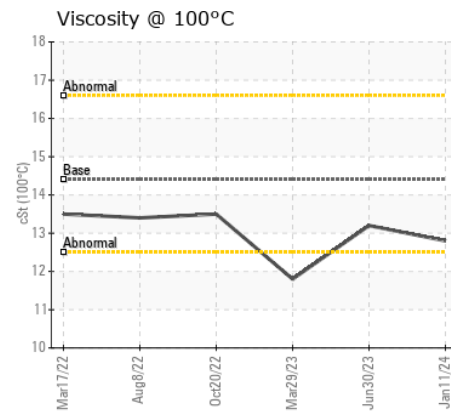
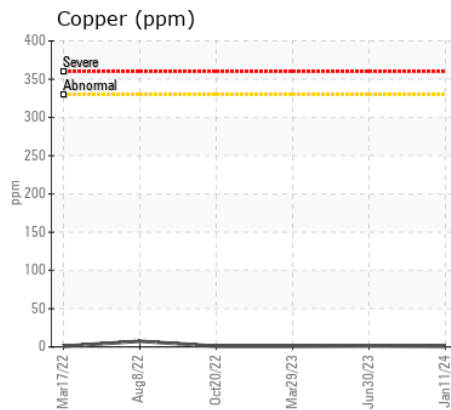
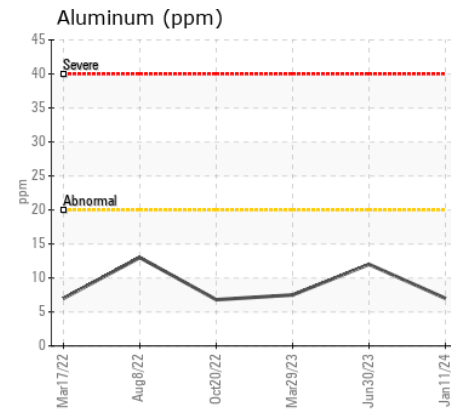
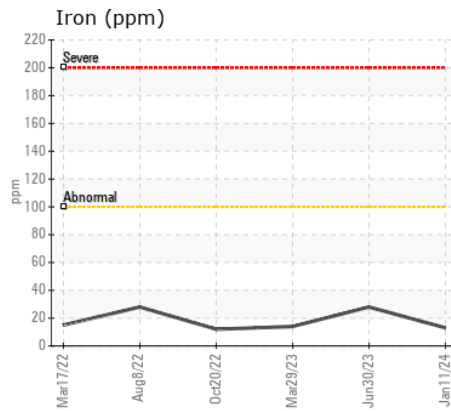
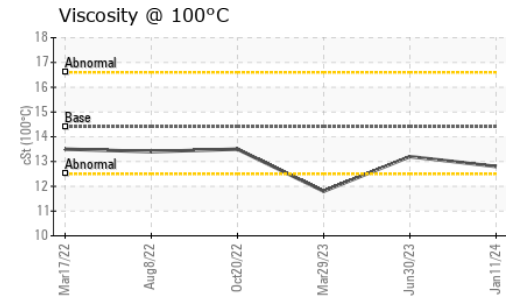
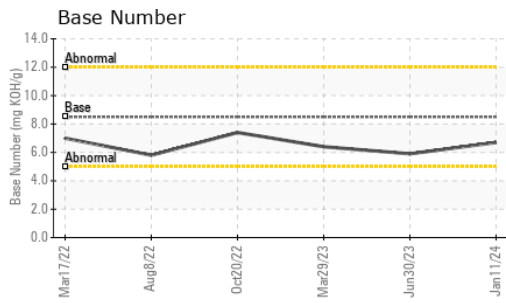
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	16	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	▲ 2.9	▲ 7.5
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.1</b>	12.0	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	23.2	19.7
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>	3	2
Boron	ppm	ASTM D5185m	250	<b>38</b>	24	40
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	100	<b>83</b>	87	88
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>102</b>	66	65
Calcium	ppm	ASTM D5185m	3000	<b>2006</b>	2233	2144
Phosphorus	ppm	ASTM D5185m	1150	<b>1012</b>	938	1019
Zinc	ppm	ASTM D5185m	1350	<b>1186</b>	1148	1215
Sulfur	ppm	ASTM D5185m	4250	<b>3587</b>	4154	3873
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.6</b>	19.1	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.7</b>	5.9	6.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.8</b>	13.2	▲ 11.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870789 **Received** : 16 Jan 2024  
**Lab Number** : 06061705 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10833087 **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)