



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**1740**  
 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>WC0870859</b>	WC0870693	WC0806670
Sample Date		Client Info		<b>06 Feb 2024</b>	15 Nov 2023	16 Apr 2023
Machine Age	mls	Client Info		<b>84250</b>	79209	64306
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>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	6	9
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>10</b>	4	4
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>	0	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

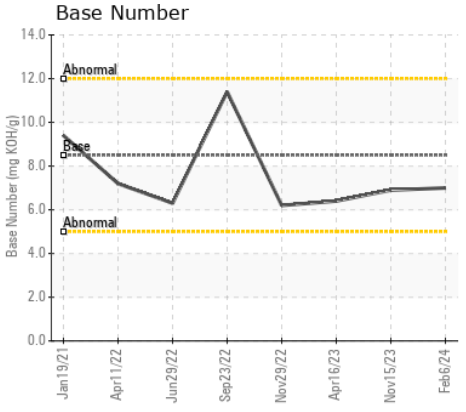
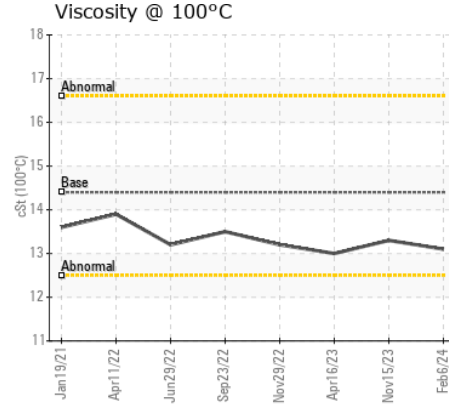
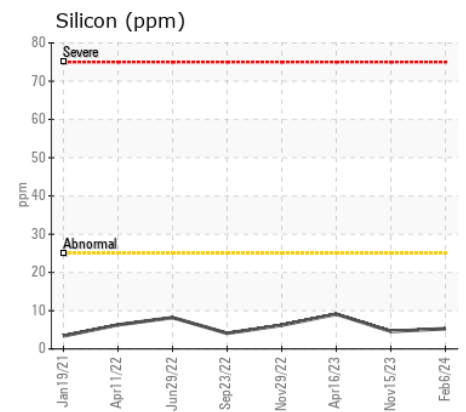
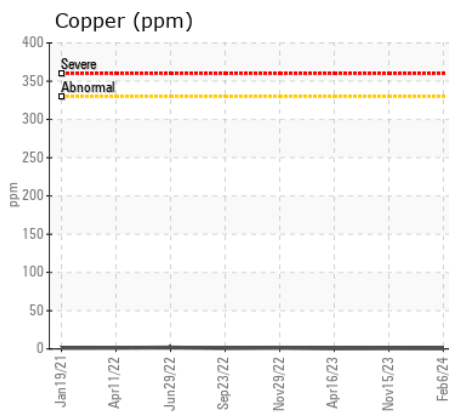
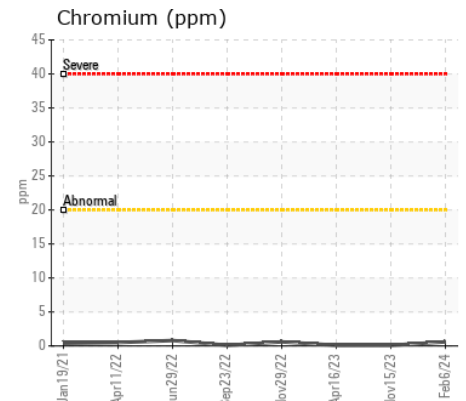
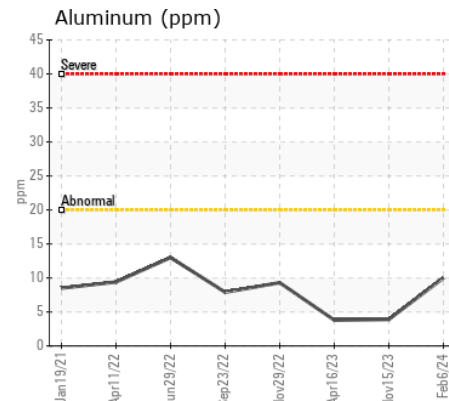
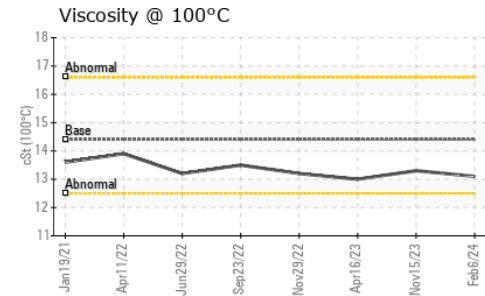
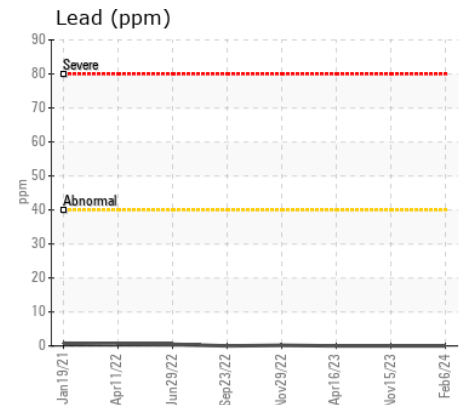
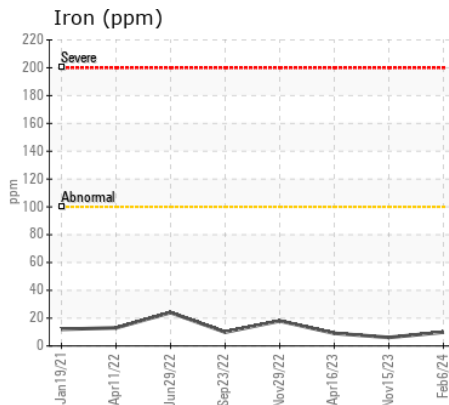
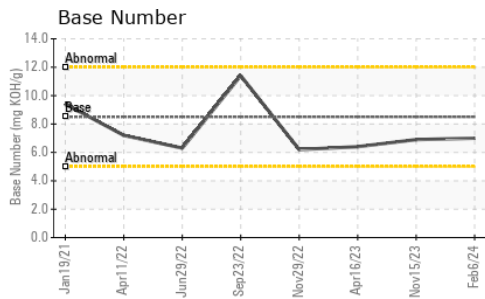
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	9
Potassium	ppm	ASTM D5185m	>20	<b>19</b>	3	7
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>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.4	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	18.1	16.9
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>6</b>	1	0
Boron	ppm	ASTM D5185m	250	<b>51</b>	39	39
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>88</b>	81	80
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>119</b>	143	120
Calcium	ppm	ASTM D5185m	3000	<b>2063</b>	2003	2079
Phosphorus	ppm	ASTM D5185m	1150	<b>1075</b>	1028	996
Zinc	ppm	ASTM D5185m	1350	<b>1278</b>	1223	1184
Sulfur	ppm	ASTM D5185m	4250	<b>4165</b>	3619	3409
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.4</b>	13.7	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.0</b>	6.9	6.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.1</b>	13.3	13.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870859 **Received** : 29 Feb 2024  
**Lab Number** : 06104857 **Tested** : 01 Mar 2024  
**Unique Number** : 10903087 **Diagnosed** : 01 Mar 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
 1551 ROCK QUARRY ROAD  
 RALEIGH, NC  
 US 27610  
 Contact: DEVIN WEBER  
 dweber@wcpss.net  
 T: (919)856-8076  
 F: x:

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)