



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id  
**591**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (24 QTS)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0932846</b>	WC0697215	WC0671053
Sample Date		Client Info		<b>19 Jun 2024</b>	19 May 2022	17 Feb 2022
Machine Age	mls	Client Info		<b>263901</b>	245671	239235
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>ABNORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>18</b>	6	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>50	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>50	<b>6</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	2
Copper	ppm	ASTM D5185m	>330	<b>19</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

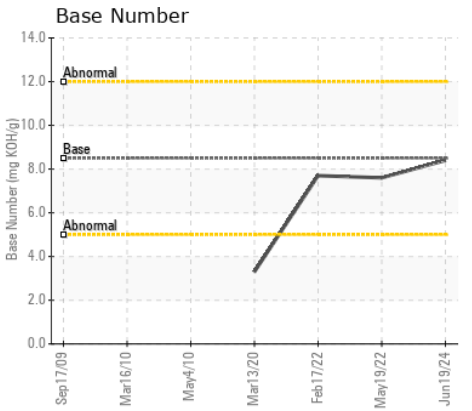
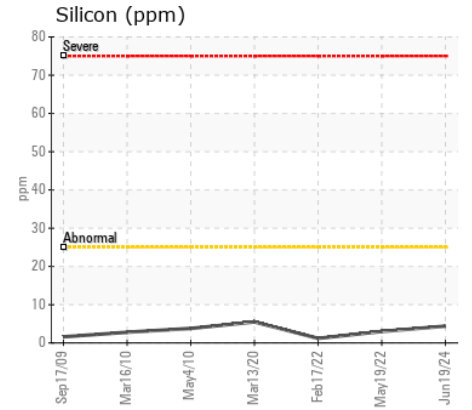
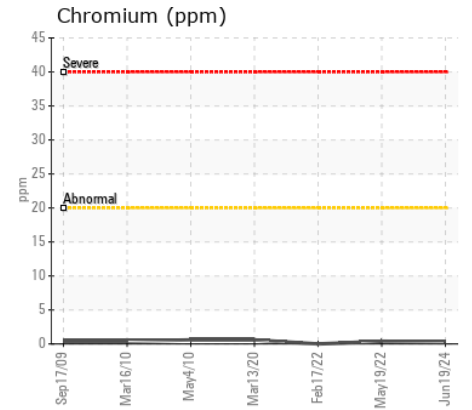
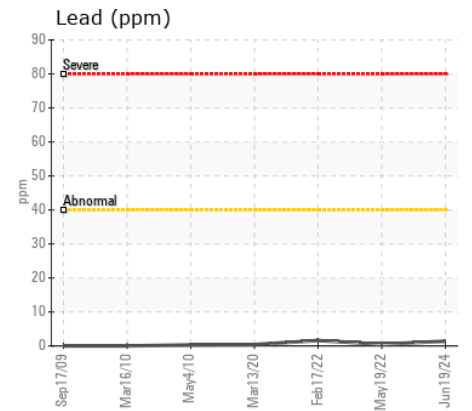
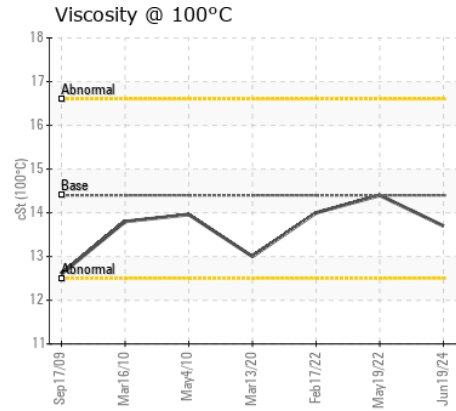
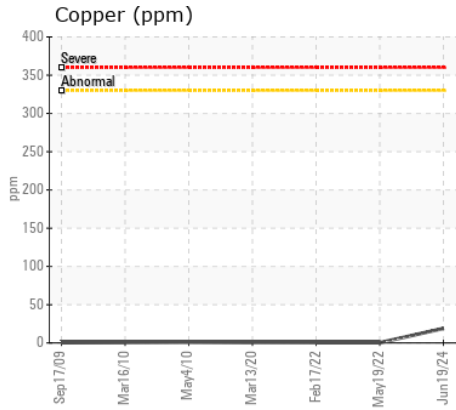
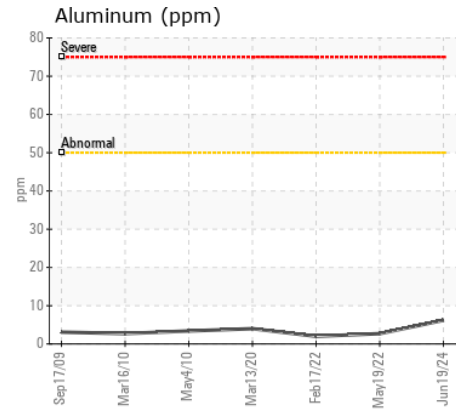
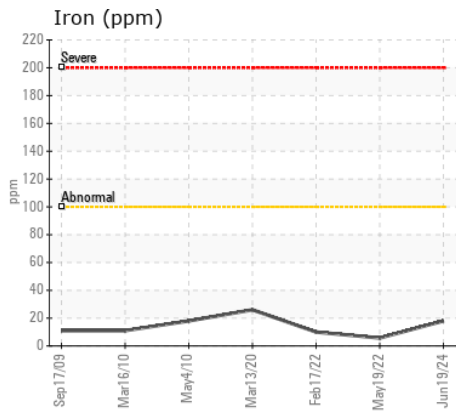
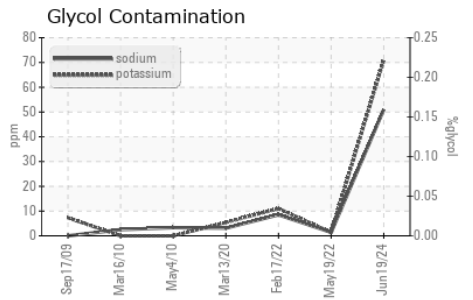
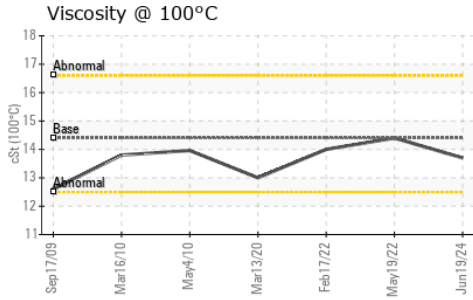
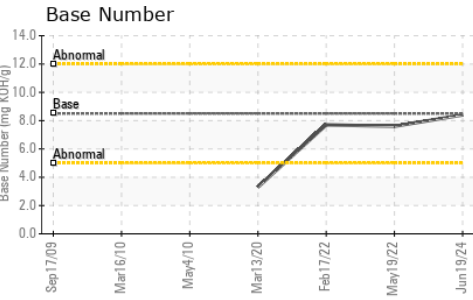
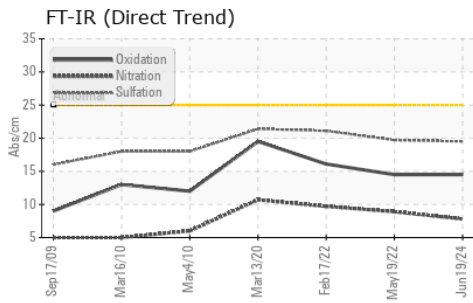
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	3	1
Potassium	ppm	ASTM D5185m	>20	<b>▲ 71</b>	1	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	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	8.9	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	19.7	21.1
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.

Sodium	ppm	ASTM D5185m	>158	<b>▲ 51</b>	1	8
Boron	ppm	ASTM D5185m	250	<b>15</b>	57	35
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>84</b>	84	83
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>617</b>	29	0
Calcium	ppm	ASTM D5185m	3000	<b>1713</b>	2163	2053
Phosphorus	ppm	ASTM D5185m	1150	<b>1053</b>	1031	898
Zinc	ppm	ASTM D5185m	1350	<b>1415</b>	1258	1123
Sulfur	ppm	ASTM D5185m	4250	<b>3562</b>	3141	2212
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.5</b>	14.5	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.4</b>	7.6	7.7
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.7</b>	14.4	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0932846 **Received** : 26 Jun 2024  
**Lab Number** : 06220938 **Tested** : 28 Jun 2024  
**Unique Number** : 11099135 **Diagnosed** : 28 Jun 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: Glycol, 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)