



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**1529**  
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>WC0870847</b>	WC0806616	WC0773026
Sample Date		Client Info		<b>26 Jan 2024</b>	03 May 2023	18 Jan 2023
Machine Age	mls	Client Info		<b>184116</b>	174055	169870
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>11</b>	46	19
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
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>12</b>	12	7
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>	<1	<1
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

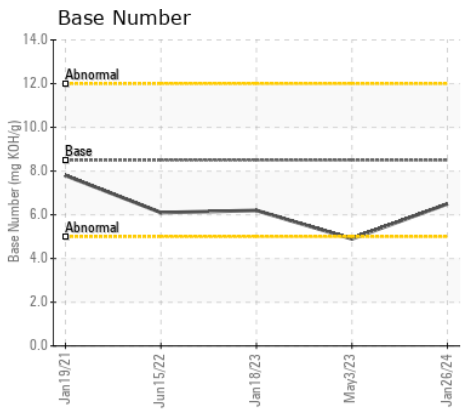
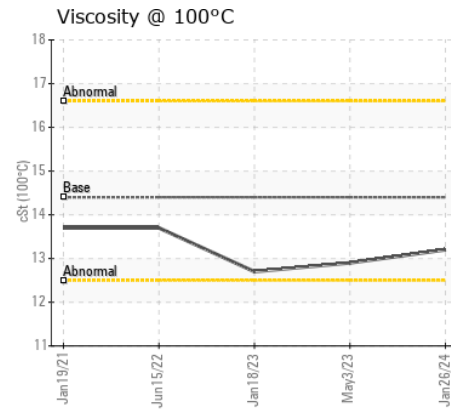
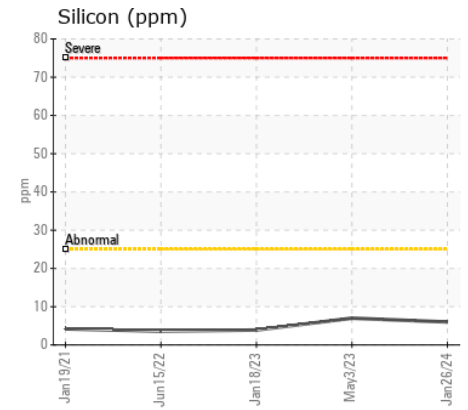
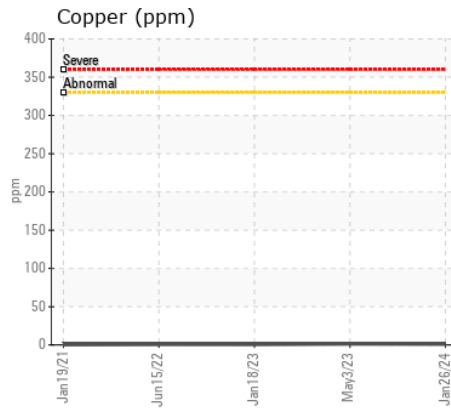
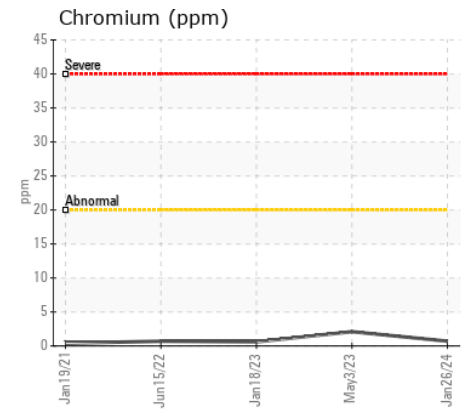
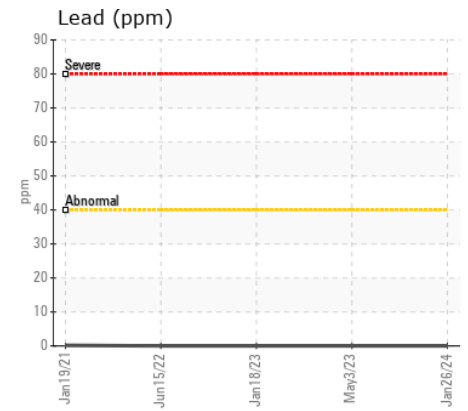
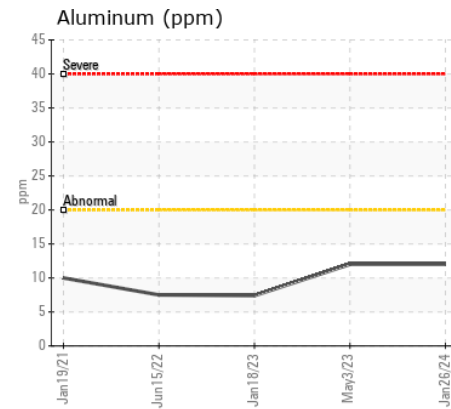
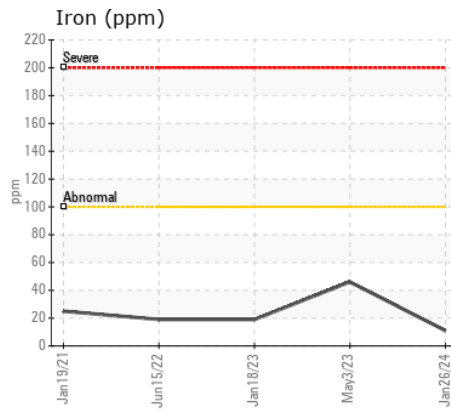
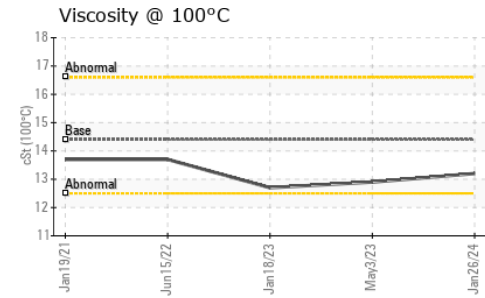
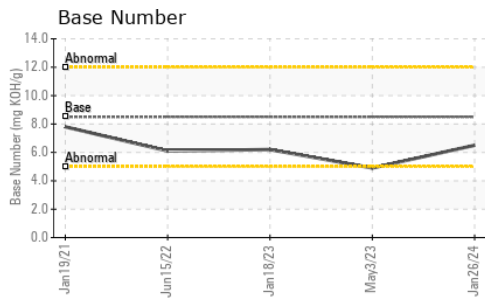
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	4
Potassium	ppm	ASTM D5185m	>20	<b>17</b>	8	3
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>	1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	13.0	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.5</b>	27.4	22.4
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>2</b>	3	2
Boron	ppm	ASTM D5185m	250	<b>44</b>	19	25
Barium	ppm	ASTM D5185m	10	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	100	<b>87</b>	90	79
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>118</b>	41	37
Calcium	ppm	ASTM D5185m	3000	<b>2060</b>	2275	2075
Phosphorus	ppm	ASTM D5185m	1150	<b>1080</b>	1026	927
Zinc	ppm	ASTM D5185m	1350	<b>1269</b>	1235	1117
Sulfur	ppm	ASTM D5185m	4250	<b>4152</b>	3696	4058
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	24.4	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.5</b>	4.9	6.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.2</b>	12.9	12.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870847 **Received** : 29 Feb 2024  
**Lab Number** : 06104863 **Tested** : 01 Mar 2024  
**Unique Number** : 10903093 **Diagnosed** : 01 Mar 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
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 F: x:

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)