



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**1683**  
 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>WC0870747</b>	WC0806593	WC0772885
Sample Date		Client Info		<b>20 Nov 2023</b>	19 Apr 2023	24 Jan 2023
Machine Age	mls	Client Info		<b>144325</b>	130445	124195
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>24</b>	28	7
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<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>11</b>	10	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</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

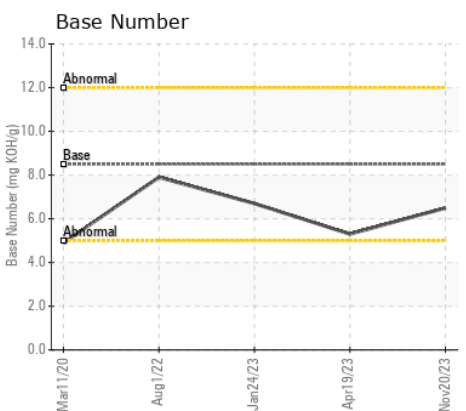
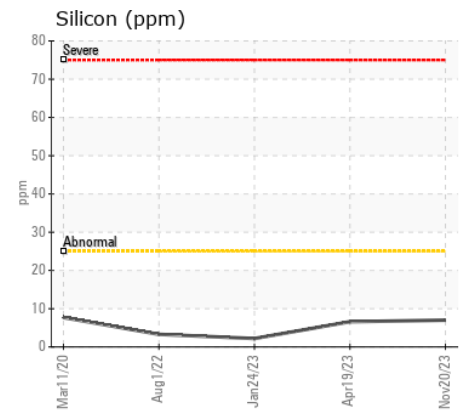
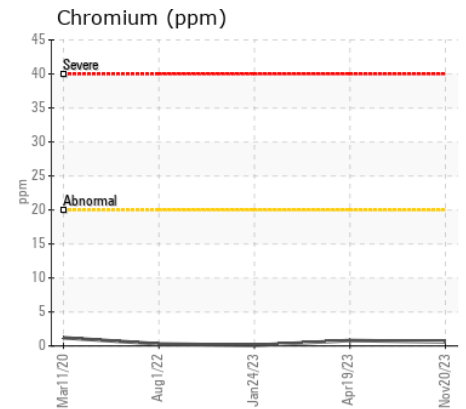
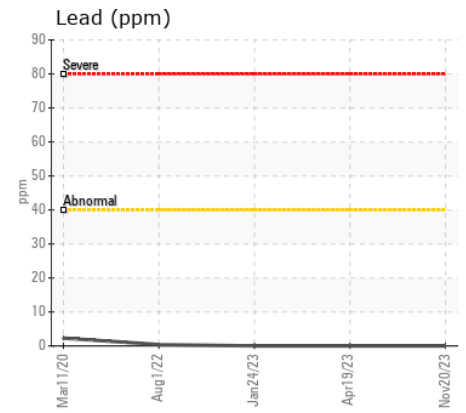
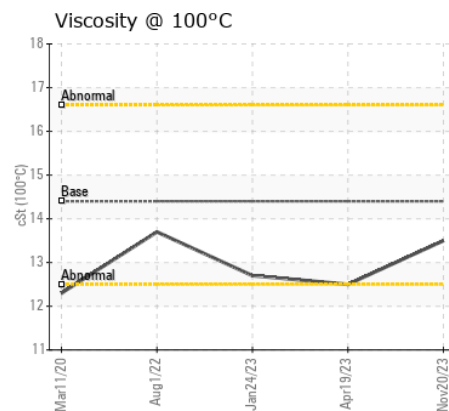
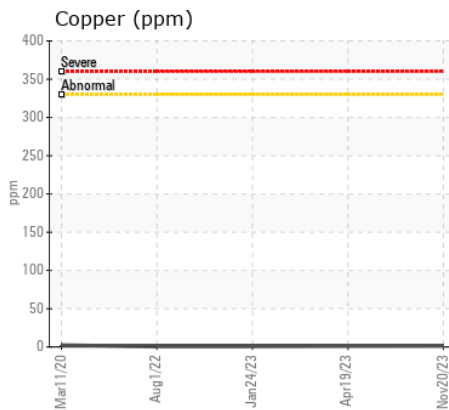
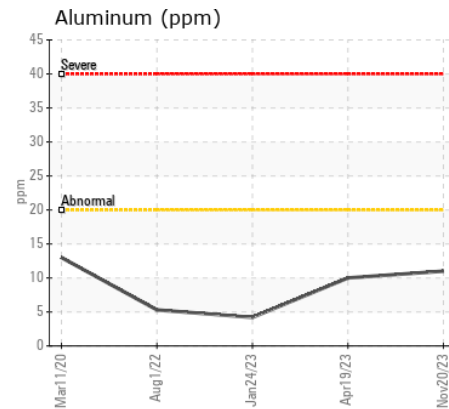
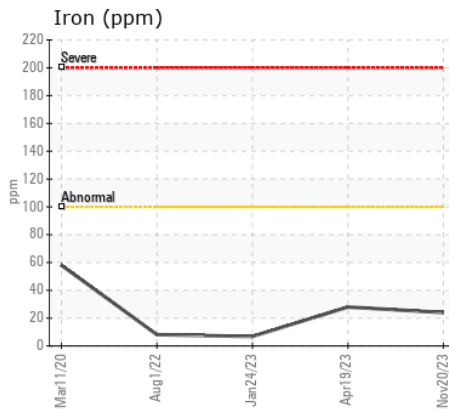
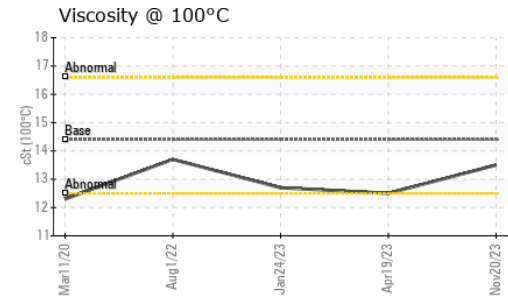
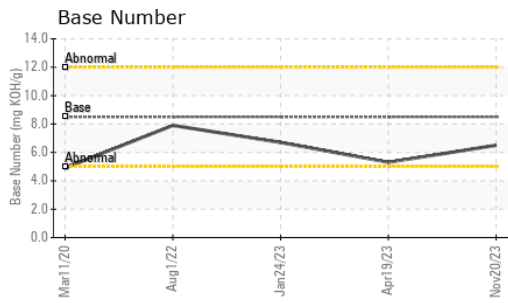
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	7	2
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	5	1
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>1.1</b>	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.5</b>	11.6	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	24.9	18.6
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>4</b>	3	1
Boron	ppm	ASTM D5185m	250	<b>11</b>	15	23
Barium	ppm	ASTM D5185m	10	<b>3</b>	2	0
Molybdenum	ppm	ASTM D5185m	100	<b>79</b>	92	53
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>122</b>	68	44
Calcium	ppm	ASTM D5185m	3000	<b>1990</b>	2320	1353
Phosphorus	ppm	ASTM D5185m	1150	<b>986</b>	1013	607
Zinc	ppm	ASTM D5185m	1350	<b>1165</b>	1225	735
Sulfur	ppm	ASTM D5185m	4250	<b>3715</b>	3765	2626
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.3</b>	20.2	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.5</b>	5.3	6.7
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.5</b>	12.5	12.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870747 **Received** : 12 Jan 2024  
**Lab Number** : 06059787 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831169 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
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 RALEIGH, NC  
 US 27610  
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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)