



# OIL ANALYSIS REPORT

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

Machine Id  
**1688**  
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>WC0870748</b>	WC0772889	WC0697075
Sample Date		Client Info		<b>27 Nov 2023</b>	26 Jan 2023	05 May 2022
Machine Age	mls	Client Info		<b>69232</b>	54103	41427
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	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>9</b>	31	32
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	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	14	14
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
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

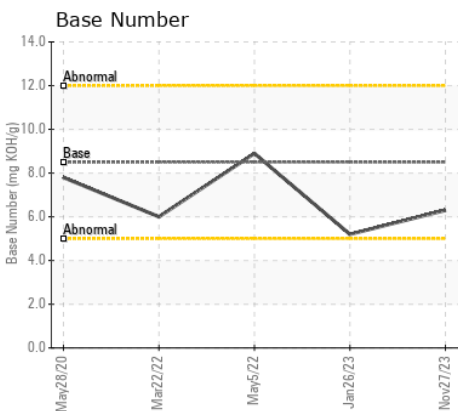
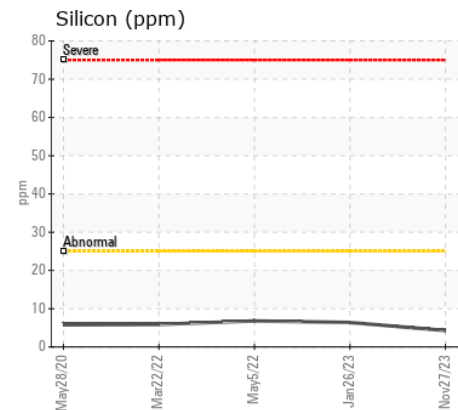
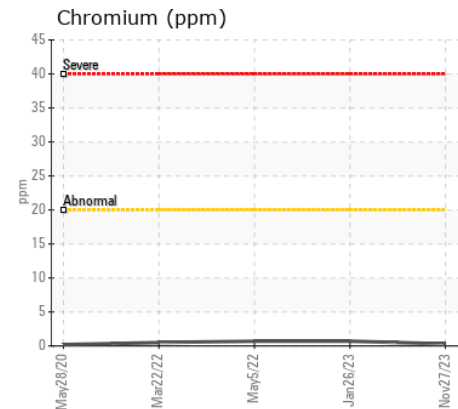
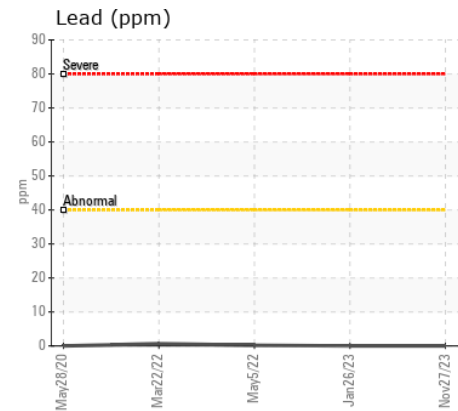
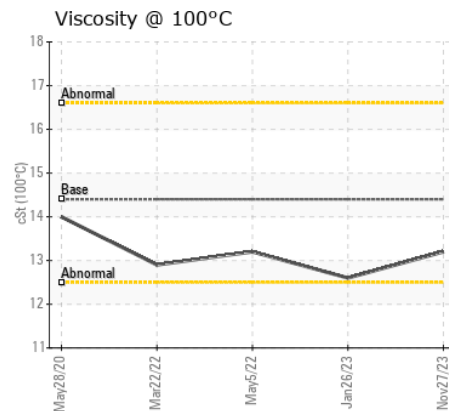
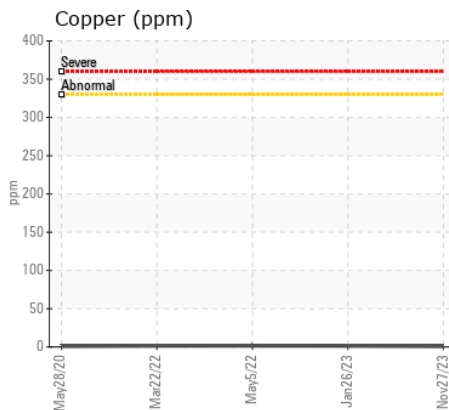
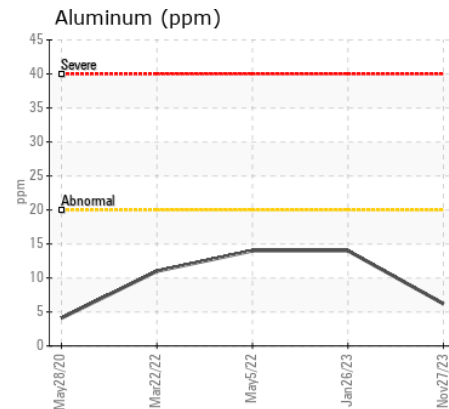
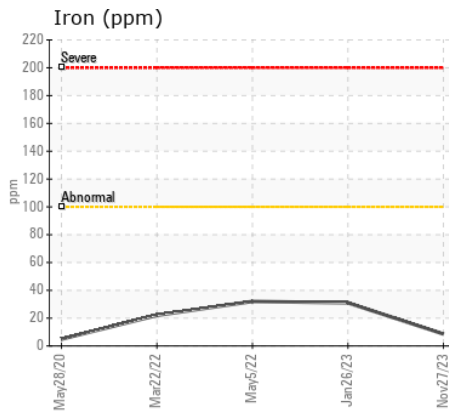
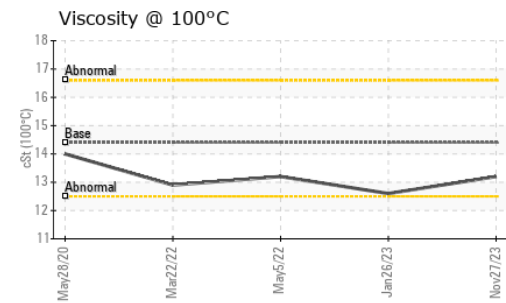
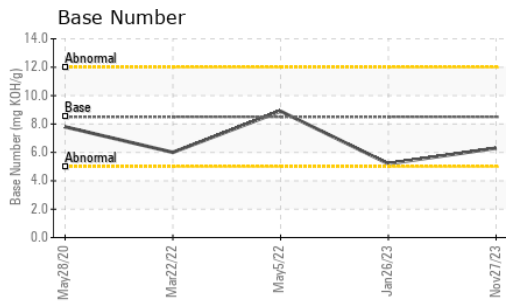
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	18	17
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>	0.8	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	11.5	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	24.2	26.1
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>3</b>	3	3
Boron	ppm	ASTM D5185m	250	<b>27</b>	13	33
Barium	ppm	ASTM D5185m	10	<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>76</b>	56	86
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>159</b>	93	16
Calcium	ppm	ASTM D5185m	3000	<b>1837</b>	2084	2193
Phosphorus	ppm	ASTM D5185m	1150	<b>992</b>	878	904
Zinc	ppm	ASTM D5185m	1350	<b>1139</b>	1067	1063
Sulfur	ppm	ASTM D5185m	4250	<b>3721</b>	3979	3086
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.0</b>	18.9	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.3</b>	5.2	8.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.2</b>	12.6	13.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870748 **Received** : 12 Jan 2024  
**Lab Number** : 06059764 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831146 **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)