



# OIL ANALYSIS REPORT

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

Machine Id  
**1754**  
 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>WC0870843</b>	WC0772905	WC0772960
Sample Date		Client Info		<b>24 Jan 2024</b>	01 May 2023	27 Jan 2023
Machine Age	mls	Client Info		<b>54197</b>	40886	34262
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>	MARGINAL	SEVERE

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>8</b>	38	39
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	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	18	7
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	6	56
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

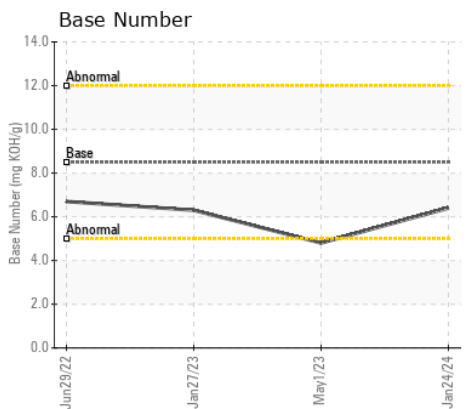
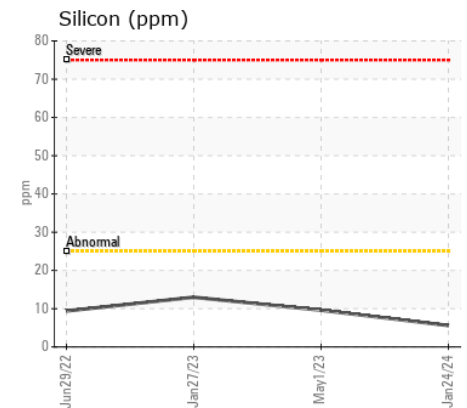
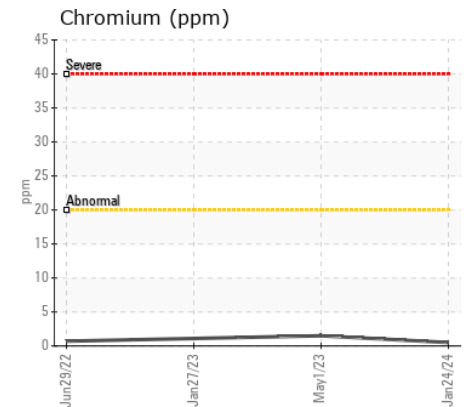
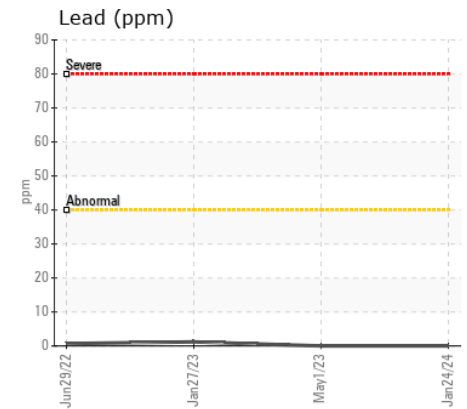
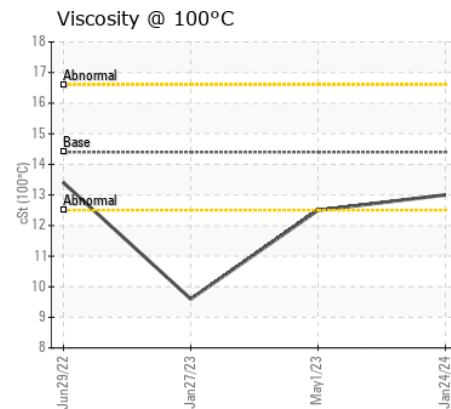
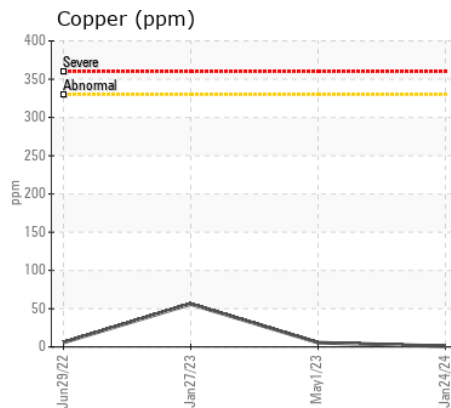
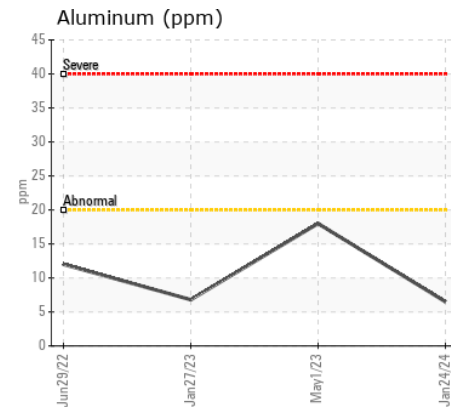
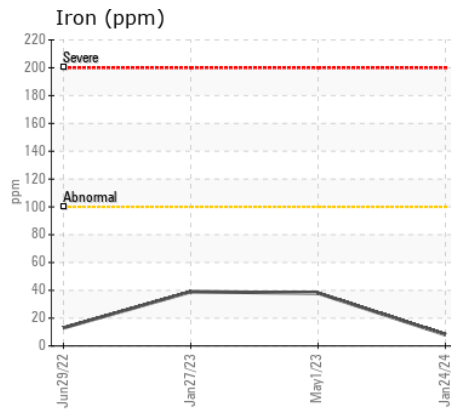
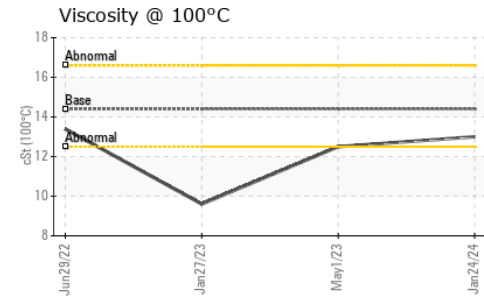
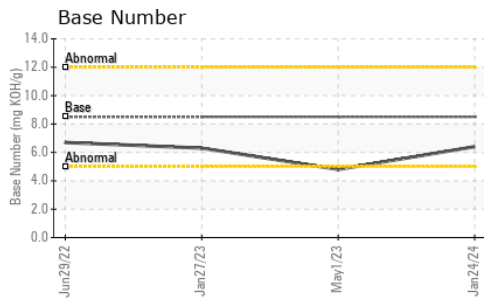
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	10	13
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	28	15
Fuel		WC Method	>5	<b>&lt;1.0</b>	▲ 4.4	▲ 8.3
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>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.3</b>	12.2	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.5</b>	25.6	20.7
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>	4	23
Boron	ppm	ASTM D5185m	250	<b>44</b>	20	30
Barium	ppm	ASTM D5185m	10	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	100	<b>87</b>	95	67
Manganese	ppm	ASTM D5185m		<b>0</b>	1	2
Magnesium	ppm	ASTM D5185m	450	<b>119</b>	67	174
Calcium	ppm	ASTM D5185m	3000	<b>2085</b>	2332	1695
Phosphorus	ppm	ASTM D5185m	1150	<b>1087</b>	973	792
Zinc	ppm	ASTM D5185m	1350	<b>1284</b>	1195	944
Sulfur	ppm	ASTM D5185m	4250	<b>4195</b>	3893	3356
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.5</b>	21.8	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.4</b>	4.8	6.3
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.0</b>	12.5	▲ 9.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870843  
**Lab Number** : 06104868  
**Unique Number** : 10903098  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 29 Feb 2024  
**Tested** : 01 Mar 2024  
**Diagnosed** : 01 Mar 2024 - Wes Davis

**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:

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)