



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**1852**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0870758</b>	---	---
Sample Date		Client Info		<b>01 Nov 2023</b>	---	---
Machine Age	mls	Client Info		<b>4241</b>	---	---
Oil Age	mls	Client Info		<b>0</b>	---	---
Filter Age	mls	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Not Chngd</b>	---	---
Filter Changed		Client Info		<b>Not Chngd</b>	---	---
Sample Status				<b>ATTENTION</b>	---	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>66</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m		<b>0</b>	---	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>19</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>32</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

## CONTAMINATION

Fuel content negligible. 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.

Silicon	ppm	ASTM D5185m	>25	<b>23</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>72</b>	---	---
Fuel	%	ASTM D3524	>5	<b>1.3</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.3</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

## FLUID CONDITION

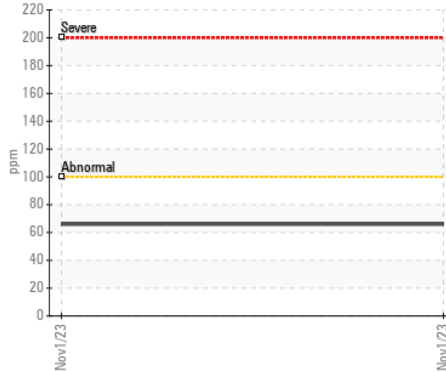
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	<b>5</b>	---	---
Boron	ppm	ASTM D5185m	250	<b>38</b>	---	---
Barium	ppm	ASTM D5185m	10	<b>4</b>	---	---
Molybdenum	ppm	ASTM D5185m	100	<b>50</b>	---	---
Manganese	ppm	ASTM D5185m		<b>4</b>	---	---
Magnesium	ppm	ASTM D5185m	450	<b>760</b>	---	---
Calcium	ppm	ASTM D5185m	3000	<b>1268</b>	---	---
Phosphorus	ppm	ASTM D5185m	1150	<b>772</b>	---	---
Zinc	ppm	ASTM D5185m	1350	<b>902</b>	---	---
Sulfur	ppm	ASTM D5185m	4250	<b>2402</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.8</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.8</b>	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>▲ 11.4</b>	---	---

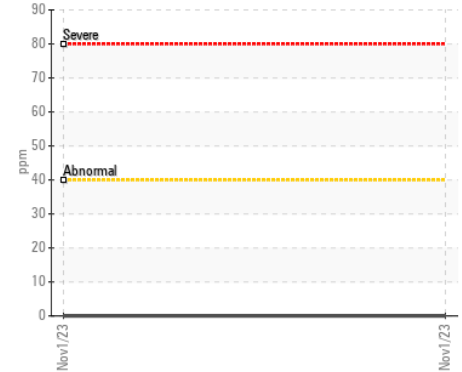
▲ Viscosity @ 100°C



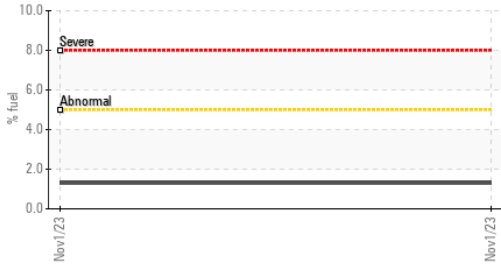
Iron (ppm)



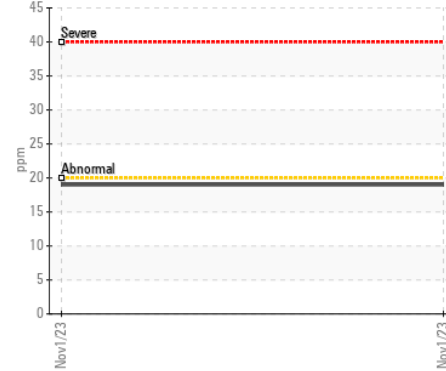
Lead (ppm)



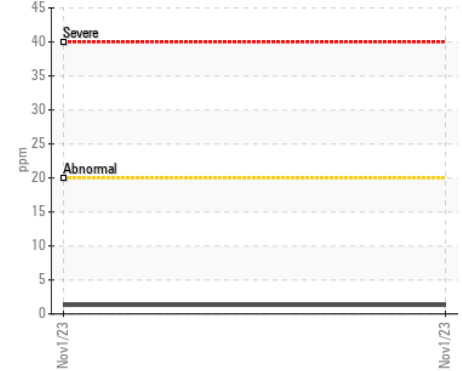
Fuel Dilution



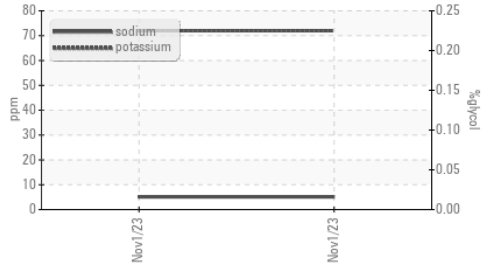
Aluminum (ppm)



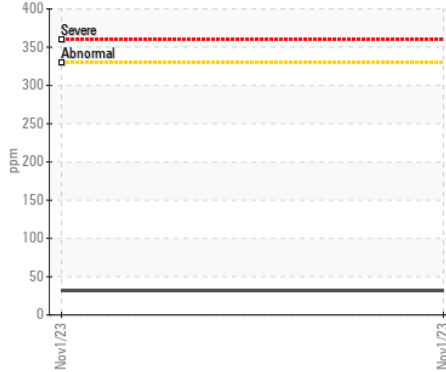
Chromium (ppm)



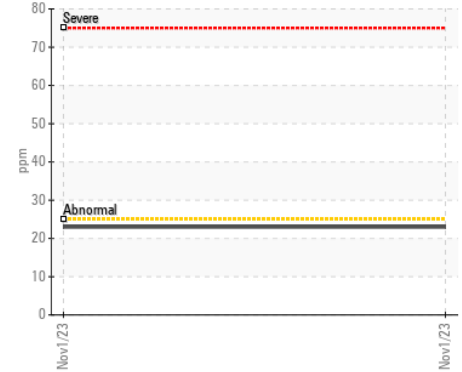
Glycol Contamination



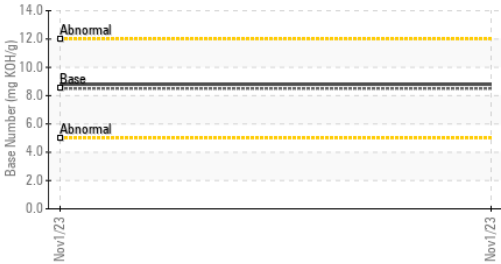
Copper (ppm)



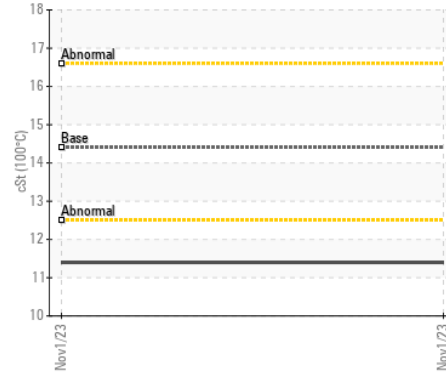
Silicon (ppm)



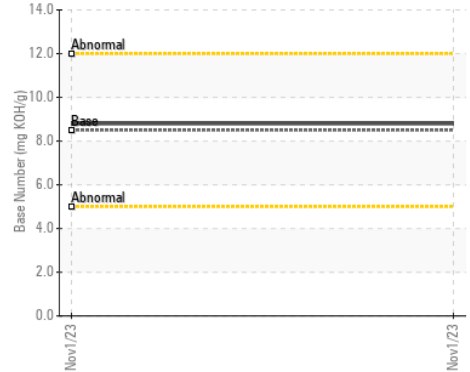
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870758 **Received** : 16 Jan 2024  
**Lab Number** : 06061739 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833121 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**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)