



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**

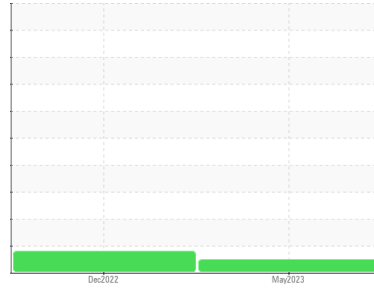


Area  
**[62005587858]**

Machine Id  
**101**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

Metal levels are typical for a new component breaking in.

### 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.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0799993</b>	WC0723384	---
Sample Date	Client Info		<b>25 May 2023</b>	08 Dec 2022	---
Machine Age	mls	Client Info	<b>34451</b>	24444	---
Oil Age	mls	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	---
Sample Status			<b>NORMAL</b>	MARGINAL	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	▲ 2.5	---
Water	WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol	WC Method		<b>NEG</b>	NEG	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>12</b>	36	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	<b>65</b>	<1	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>5</b>	22	---
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	---
Copper	ppm	ASTM D5185m >330	<b>4</b>	39	---
Tin	ppm	ASTM D5185m >15	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m	<b>1</b>	0	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>118</b>	44	---
Barium	ppm	ASTM D5185m 10	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 100	<b>7</b>	9	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	2	---
Magnesium	ppm	ASTM D5185m 450	<b>495</b>	681	---
Calcium	ppm	ASTM D5185m 3000	<b>1664</b>	1270	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1037</b>	933	---
Zinc	ppm	ASTM D5185m 1350	<b>1236</b>	1137	---
Sulfur	ppm	ASTM D5185m 4250	<b>4650</b>	3625	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	19	---
Sodium	ppm	ASTM D5185m >158	<b>2</b>	4	---
Potassium	ppm	ASTM D5185m >20	<b>13</b>	60	---

## INFRA-RED

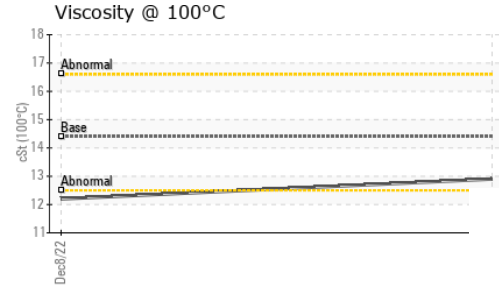
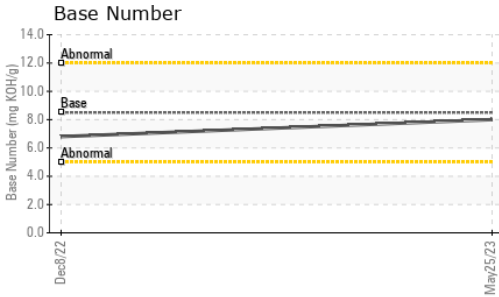
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.3	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.7</b>	9.1	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.2</b>	21.5	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.1</b>	15.1	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>8.0</b>	6.8	---



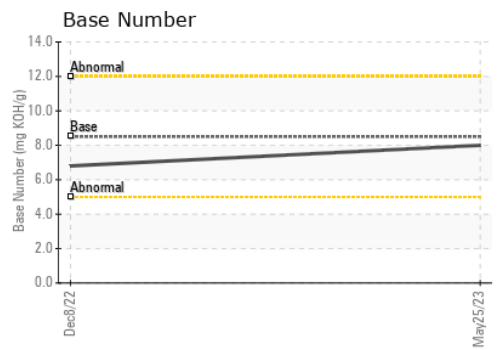
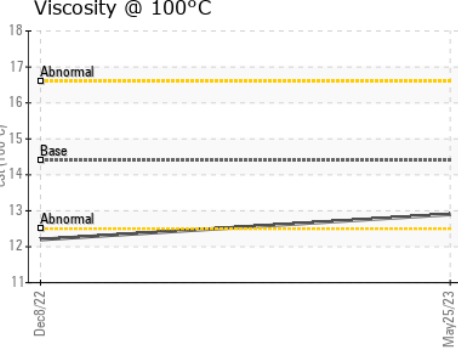
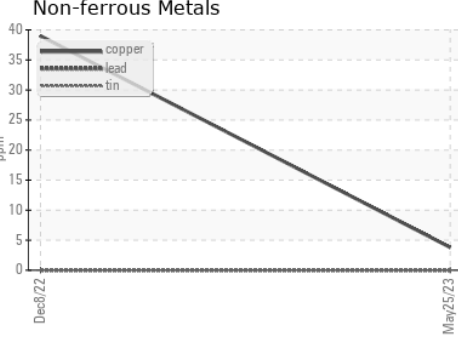
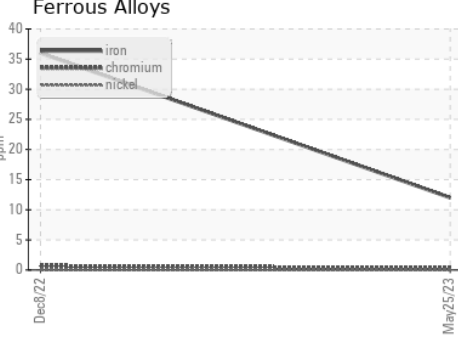
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.2

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0799993      **Received** : 09 Jun 2023  
**Lab Number** : 05870050      **Diagnosed** : 12 Jun 2023  
**Unique Number** : 10509834      **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**CASWELL COUNTY SCHOOL BUS**  
 353 COUNTY HOME ROAD  
 YANCEYVILLE, NC  
 US 27379  
 Contact: DEBRA MOORE  
 debra.moore@caswell.k12.nc.us  
 T: (336)694-4116  
 F:

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)