



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**TULSA [19243]**  
 Machine Id  
**60-09**  
 Component  
**Center Diesel Engine**  
 Fluid  
**SHELL 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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>WC0818624</b>	---	---
Sample Date	Client Info	<b>12 Sep 2023</b>	---	---
Machine Age	hrs Client Info	<b>4665</b>	---	---
Oil Age	hrs Client Info	<b>609</b>	---	---
Oil Changed	Client Info	<b>Changed</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>5</b>	---	---
Chromium	ppm ASTM D5185m >20	<b>&lt;1</b>	---	---
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	---	---
Titanium	ppm ASTM D5185m >2	<b>32</b>	---	---
Silver	ppm ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >25	<b>1</b>	---	---
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	---	---
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	---	---
Tin	ppm ASTM D5185m >15	<b>&lt;1</b>	---	---
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>96</b>	---	---
Barium	ppm ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m	<b>35</b>	---	---
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm ASTM D5185m	<b>627</b>	---	---
Calcium	ppm ASTM D5185m	<b>1625</b>	---	---
Phosphorus	ppm ASTM D5185m	<b>1115</b>	---	---
Zinc	ppm ASTM D5185m	<b>1355</b>	---	---
Sulfur	ppm ASTM D5185m	<b>4091</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>4</b>	---	---
Sodium	ppm ASTM D5185m >150	<b>2</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>3</b>	---	---

## INFRA-RED

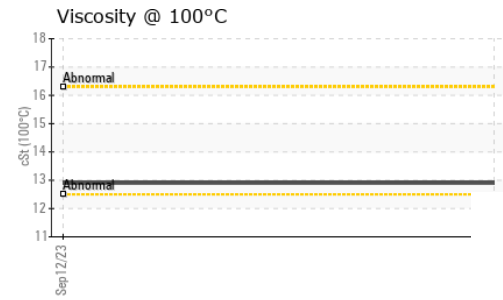
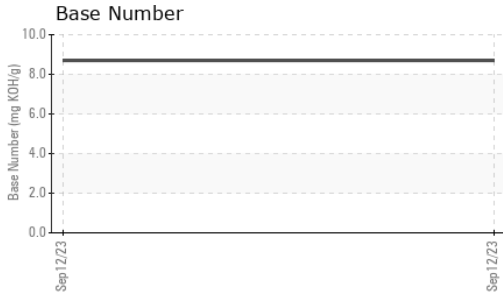
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>7.3</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>19.4</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>15.5</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896	<b>8.7</b>	---	---



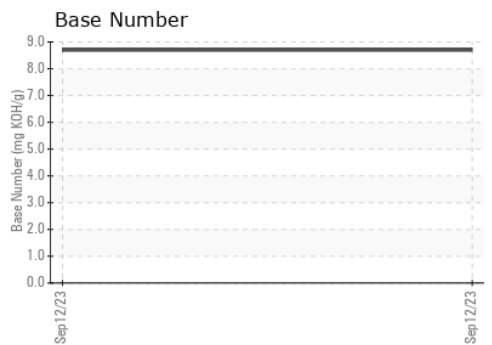
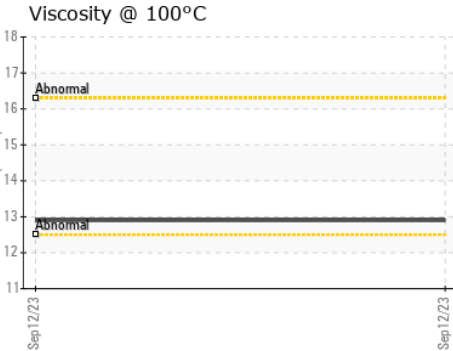
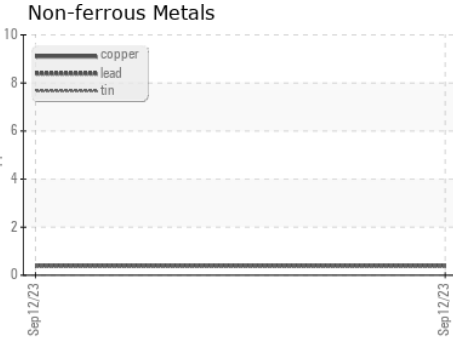
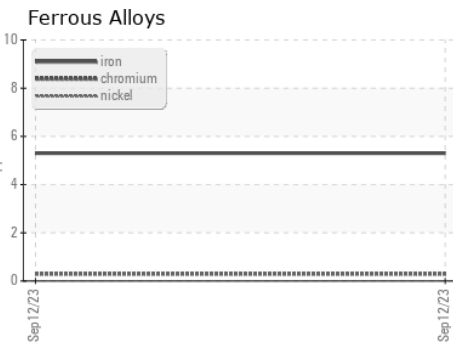
# OIL ANALYSIS REPORT



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	12.9	---	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0818624 **Received** : 03 Oct 2023  
**Lab Number** : 05968303 **Diagnosed** : 04 Oct 2023  
**Unique Number** : 10674854 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)