

# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**


Area  
**[VALLEY DRILLING]**  
 Machine Id  
**CATERPILLAR RIG 002 (S/N 6NZ22146)**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**


**DIAGNOSIS**
**Recommendation**

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

**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>JR0195287</b>	---	---
Sample Date	Client Info		<b>17 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>25612</b>	---	---
Oil Age	hrs	Client Info	<b>0</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>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>12</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>0</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>3</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>1</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>3</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<b>99</b>	---	---
Barium	ppm	ASTM D5185m 10	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 100	<b>87</b>	---	---
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 450	<b>135</b>	---	---
Calcium	ppm	ASTM D5185m 3000	<b>1942</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>1048</b>	---	---
Zinc	ppm	ASTM D5185m 1350	<b>1172</b>	---	---
Sulfur	ppm	ASTM D5185m 4250	<b>4149</b>	---	---

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	---	---
Sodium	ppm	ASTM D5185m >216	<b>5</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>2</b>	---	---

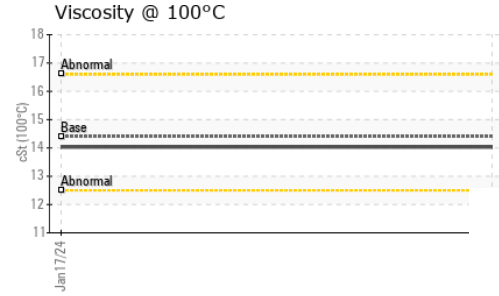
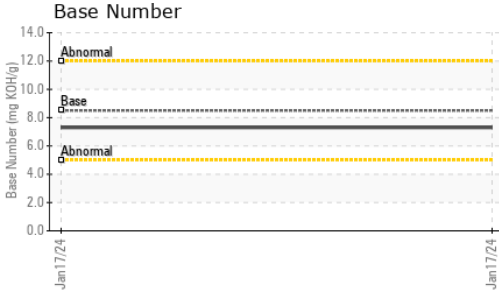
**INFRA-RED**

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.1</b>	---	---

**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.7</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	<b>7.3</b>	---	---

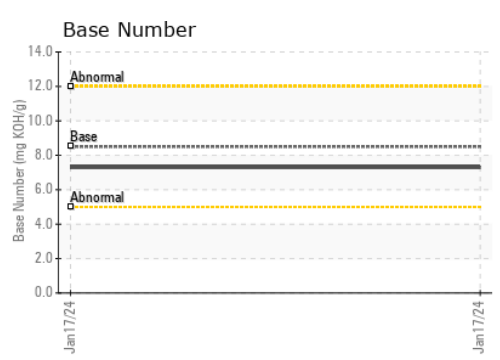
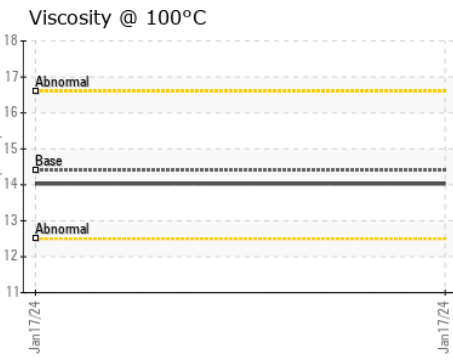
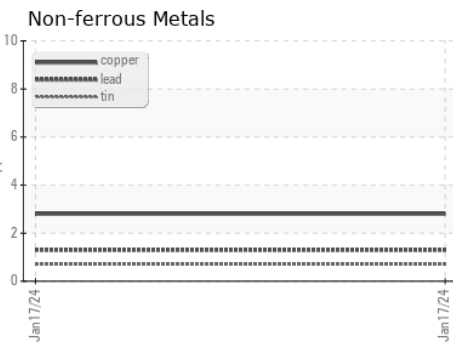
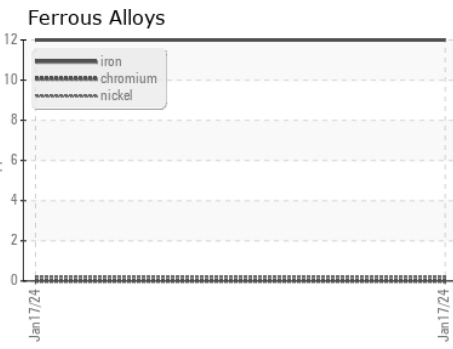
# OIL ANALYSIS REPORT



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	14.4	<b>14.03</b>	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0195287      **Recieved** : 18 Jan 2024  
**Lab Number** : 06064684      **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10836066      **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**JRE - STEPHENSON**  
 245 YARDMASTER COURT  
 STEPHENSON, VA  
 US 22656-1761  
 Contact: PHIL DAUGHERTY  
 pdaugherty@jamesriverequipment.com  
 T: x:  
 F: (540)693-2588

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)