

# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area

**[W49140]**

Machine Id

**JOHN DEERE 331G 1T0331GKELF370893**

Component

**Diesel Engine**

Fluid

**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### ▲ Wear

Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated.

### 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>JR0200114</b>	---	---
Sample Date	Client Info		<b>15 Jan 2024</b>	---	---
Machine Age	hrs	Client Info	<b>1246</b>	---	---
Oil Age	hrs	Client Info	<b>1246</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.21	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	<b>▲ 76</b>	---
Chromium	ppm	ASTM D5185m	>11	<b>2</b>	---
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	---
Aluminum	ppm	ASTM D5185m	>31	<b>6</b>	---
Lead	ppm	ASTM D5185m	>26	<b>1</b>	---
Copper	ppm	ASTM D5185m	>26	<b>▲ 41</b>	---
Tin	ppm	ASTM D5185m	>4	<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>33</b>	---
Barium	ppm	ASTM D5185m		<b>0</b>	---
Molybdenum	ppm	ASTM D5185m		<b>83</b>	---
Manganese	ppm	ASTM D5185m		<b>2</b>	---
Magnesium	ppm	ASTM D5185m		<b>660</b>	---
Calcium	ppm	ASTM D5185m		<b>2108</b>	---
Phosphorus	ppm	ASTM D5185m		<b>876</b>	---
Zinc	ppm	ASTM D5185m		<b>1175</b>	---
Sulfur	ppm	ASTM D5185m		<b>2274</b>	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	<b>18</b>	---
Sodium	ppm	ASTM D5185m	>31	<b>4</b>	---
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	---

## INFRA-RED

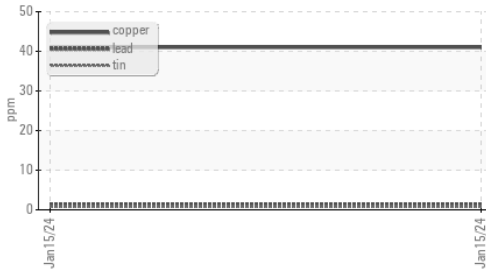
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>15.1</b>	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>29.2</b>	---

## FLUID DEGRADATION

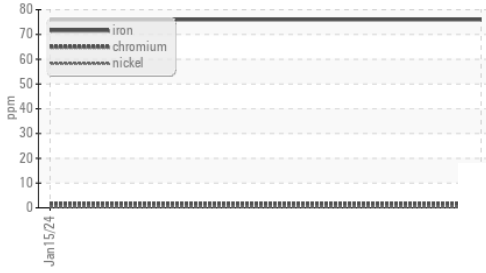
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>33.1</b>	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>6.5</b>	---

# OIL ANALYSIS REPORT

### ▲ Non-ferrous Metals



### ▲ Ferrous Alloys

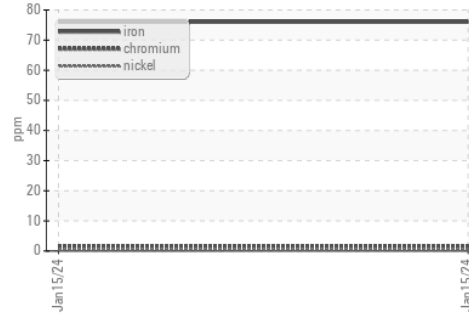


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual >0.21	<b>NEG</b>	---	---
Free Water	scalar	*Visual	<b>NEG</b>	---	---

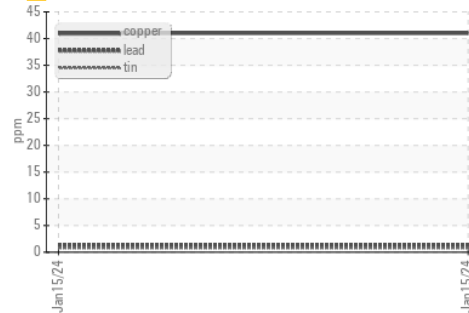
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 15.4	<b>15.3</b>	---	---

### GRAPHS

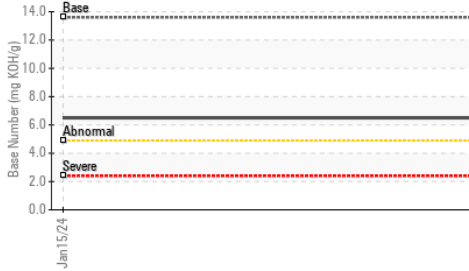
#### ▲ Ferrous Alloys



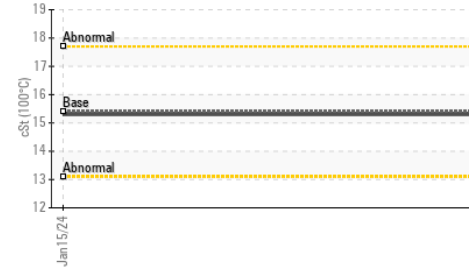
#### ▲ Non-ferrous Metals



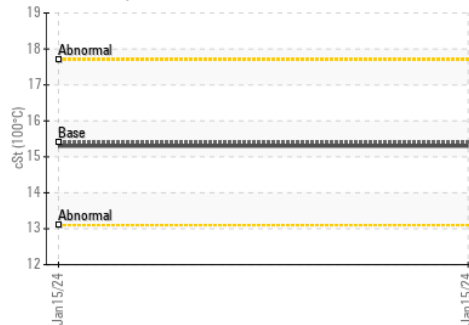
#### Base Number



#### Viscosity @ 100°C



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0200114 **Recieved** : 17 Jan 2024  
**Lab Number** : **06062510** **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833892 **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

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)

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