



# OIL ANALYSIS REPORT

WEAR	<b>MARGINAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**[125571]**  
 Machine Id  
**JOHN DEERE 644P 1DW644PATPLZ18039**  
 Component  
**Diesel Engine**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WE0006281</b>	WE0005735	---
Sample Date		Client Info		<b>23 Feb 2024</b>	30 Nov 2023	---
Machine Age	hrs	Client Info		<b>1559</b>	1043	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>MARGINAL</b>	ABNORMAL	---

## WEAR

The copper level has decreased, but is still abnormal.

Iron	ppm	ASTM D5185m	>51	<b>11</b>	39	---
Chromium	ppm	ASTM D5185m	>11	<b>1</b>	1	---
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	2	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>31	<b>4</b>	5	---
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>26	<b>▲ 49</b>	▲ 448	---
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

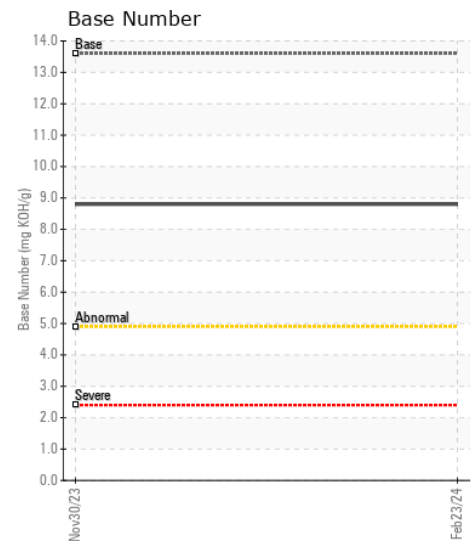
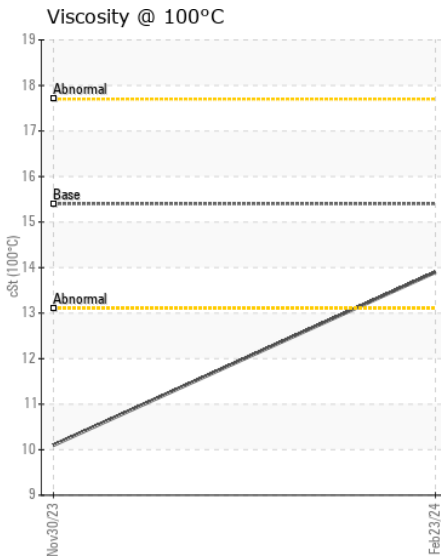
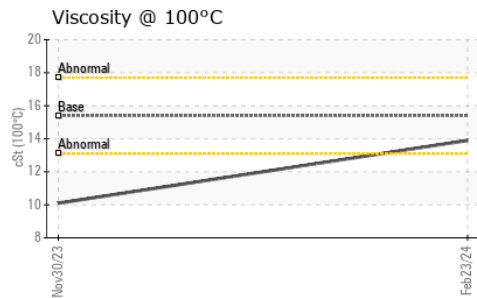
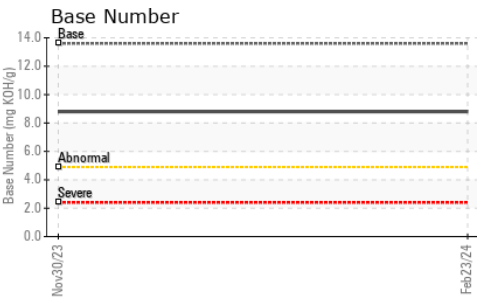
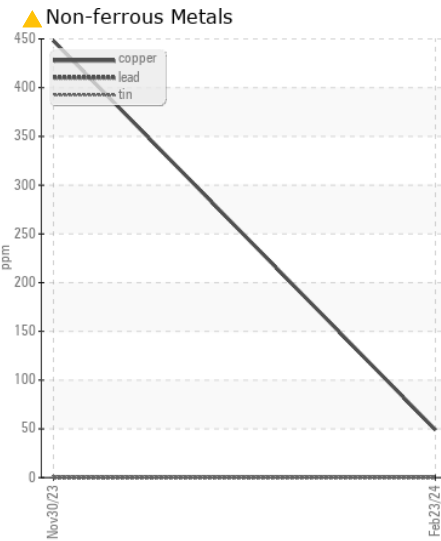
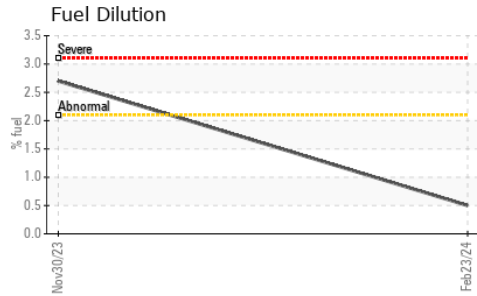
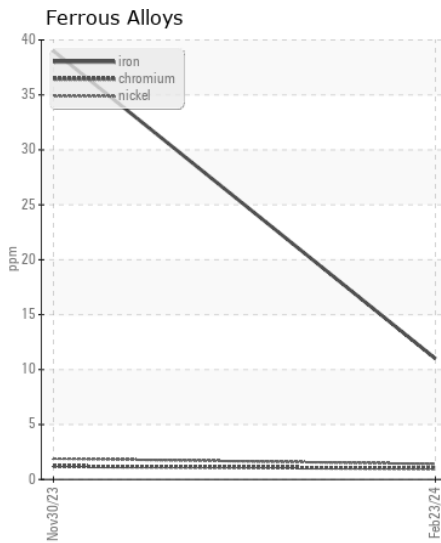
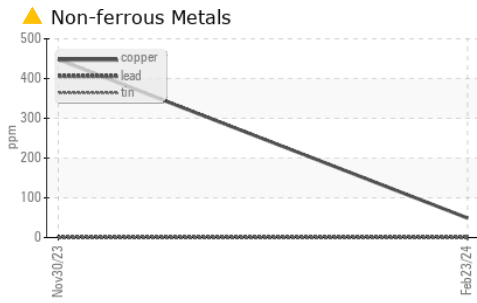
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>22	<b>9</b>	11	---
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	6	---
Fuel	%	ASTM D3524	>2.1	<b>0.5</b>	▲ 2.7	---
Water		WC Method	>0.21	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.6	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	9.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	23.3	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	---

## 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.

Sodium	ppm	ASTM D5185m	>31	<b>2</b>	5	---
Boron	ppm	ASTM D5185m		<b>236</b>	115	---
Barium	ppm	ASTM D5185m		<b>2</b>	4	---
Molybdenum	ppm	ASTM D5185m		<b>262</b>	263	---
Manganese	ppm	ASTM D5185m		<b>1</b>	6	---
Magnesium	ppm	ASTM D5185m		<b>760</b>	796	---
Calcium	ppm	ASTM D5185m		<b>1264</b>	1327	---
Phosphorus	ppm	ASTM D5185m		<b>832</b>	862	---
Zinc	ppm	ASTM D5185m		<b>1003</b>	1024	---
Sulfur	ppm	ASTM D5185m		<b>3037</b>	2916	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.3</b>	18.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>8.8</b>	8.8	---
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.9</b>	▲ 10.1	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : WE0006281

**Lab Number** : 06101406

**Unique Number** : 10899636

**Test Package** : CONST ( Additional Tests: PercentFuel, TBN )

**Received** : 27 Feb 2024

**Tested** : 29 Feb 2024

**Diagnosed** : 29 Feb 2024 - Jonathan Hester

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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