



# OIL ANALYSIS REPORT

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

Area

[127288]

Machine Id

**JOHN DEERE 460P 1DW460PAPPFB06219**

Component

**Diesel Engine**

Fluid

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

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WE0007798</b>	WE0006348	WE0005818
Sample Date		Client Info		<b>20 Jun 2024</b>	21 Feb 2024	10 Nov 2023
Machine Age	hrs	Client Info		<b>2121</b>	1471	1037
Oil Age	hrs	Client Info		<b>0</b>	0	500
Filter Age	hrs	Client Info		<b>0</b>	0	500
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>15</b>	11	13
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>7</b>	13	19
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>3</b>	4	3
Lead	ppm	ASTM D5185m	>26	<b>4</b>	2	6
Copper	ppm	ASTM D5185m	>26	<b>17</b>	▲ 47	▲ 298
Tin	ppm	ASTM D5185m	>4	<b>2</b>	3	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

There is no indication of any contamination in the oil.

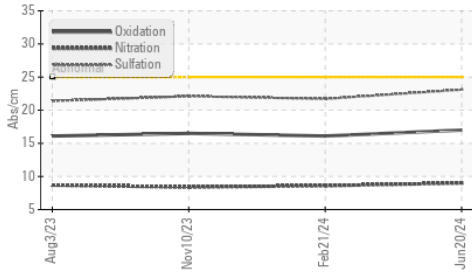
Silicon	ppm	ASTM D5185m	>22	<b>5</b>	7	7
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	<1
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	8.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.1</b>	21.7	22.1
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.21	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

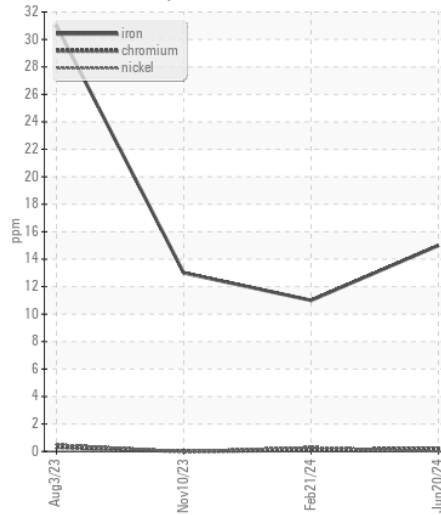
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>4</b>	4	6
Boron	ppm	ASTM D5185m		<b>130</b>	200	190
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>228</b>	208	204
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>805</b>	744	765
Calcium	ppm	ASTM D5185m		<b>1502</b>	1335	1472
Phosphorus	ppm	ASTM D5185m		<b>891</b>	883	894
Zinc	ppm	ASTM D5185m		<b>1088</b>	1040	1127
Sulfur	ppm	ASTM D5185m		<b>3526</b>	2939	3148
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	16.1	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>7.8</b>	8.6	8.9
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.7</b>	13.5	13.5

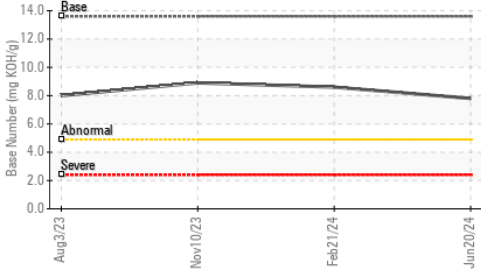
FT-IR (Direct Trend)



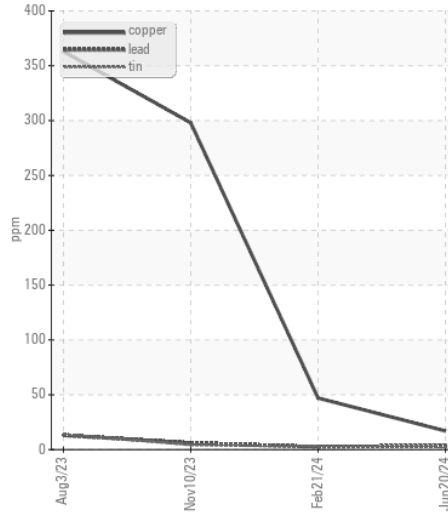
Ferrous Alloys



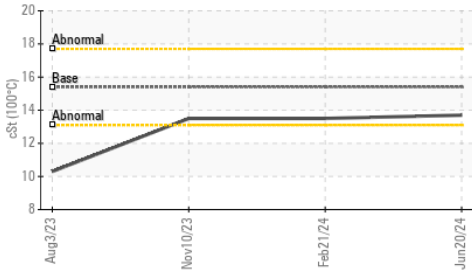
Base Number



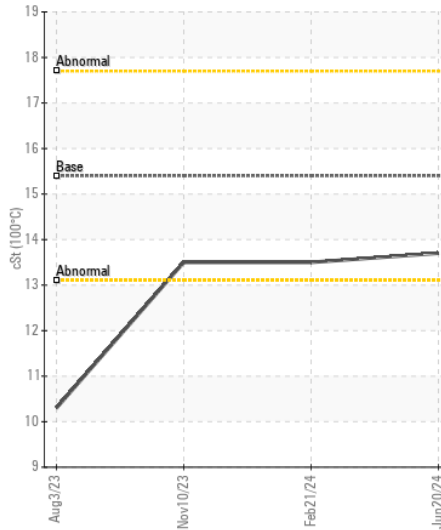
Non-ferrous Metals



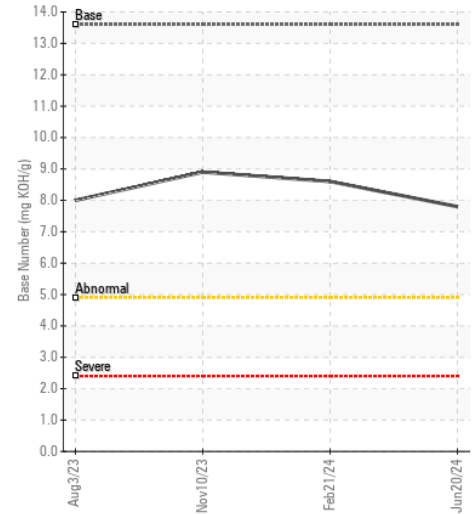
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WE0007798 **Received** : 24 Jun 2024  
**Lab Number** : 06218001 **Tested** : 25 Jun 2024  
**Unique Number** : 11096198 **Diagnosed** : 25 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**WARRIOR TRACTOR AND EQUIPMENT - NORTHPORT**  
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 NORTHPORT, AL  
 US 35476  
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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)