



# OIL ANALYSIS REPORT

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

Machine Id  
**JOHN DEERE 670P 1FF670PALPF000032**  
 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>WE0006882</b>	WE0006401	WE0005769
Sample Date		Client Info		<b>11 Apr 2024</b>	24 Jan 2024	02 Nov 2023
Machine Age	hrs	Client Info		<b>1965</b>	1485	1006
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>51	<b>23</b>	16	19
Chromium	ppm	ASTM D5185m	>11	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>5</b>	6	5
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m	>26	<b>5</b>	4	4
Tin	ppm	ASTM D5185m	>4	<b>1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
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.

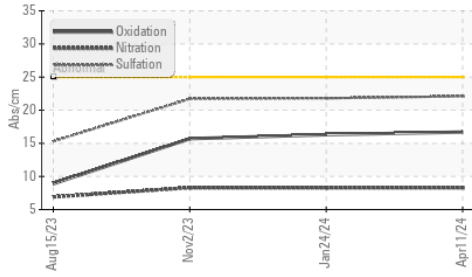
Silicon	ppm	ASTM D5185m	>22	<b>11</b>	9	16
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Fuel		WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.21	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	8.3	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	21.8	21.7
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

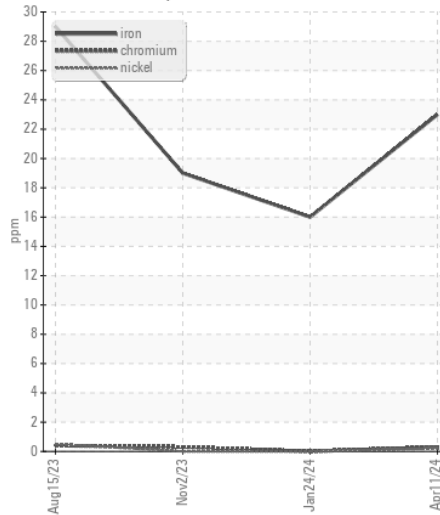
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>31	<b>&lt;1</b>	2	0
Boron	ppm	ASTM D5185m		<b>286</b>	309	264
Barium	ppm	ASTM D5185m		<b>1</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>294</b>	269	258
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m		<b>918</b>	873	803
Calcium	ppm	ASTM D5185m		<b>1568</b>	1446	1553
Phosphorus	ppm	ASTM D5185m		<b>1071</b>	945	880
Zinc	ppm	ASTM D5185m		<b>1192</b>	1129	1185
Sulfur	ppm	ASTM D5185m		<b>3418</b>	2973	3295
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.7</b>	16.3	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	13.6	<b>9.3</b>	9.6	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.7</b>	14.1	14.4

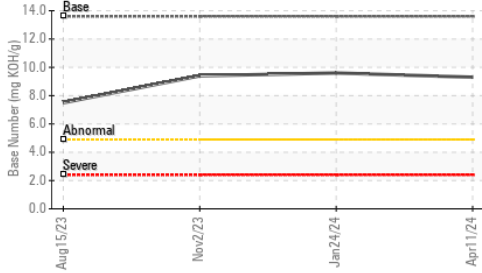
FT-IR (Direct Trend)



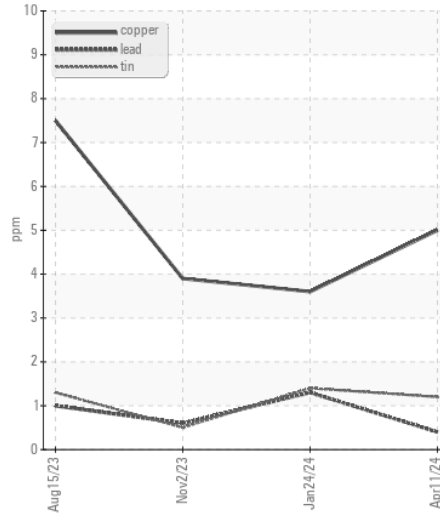
Ferrous Alloys



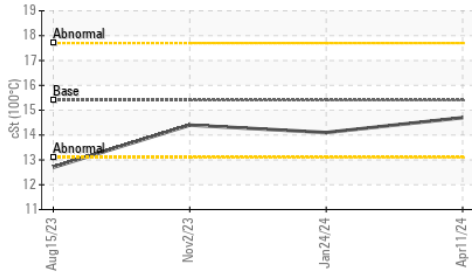
Base Number



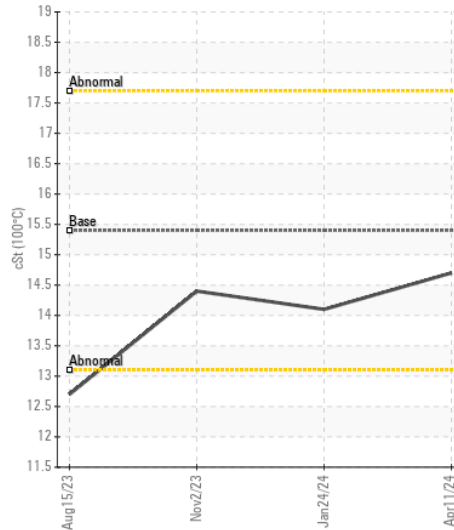
Non-ferrous Metals



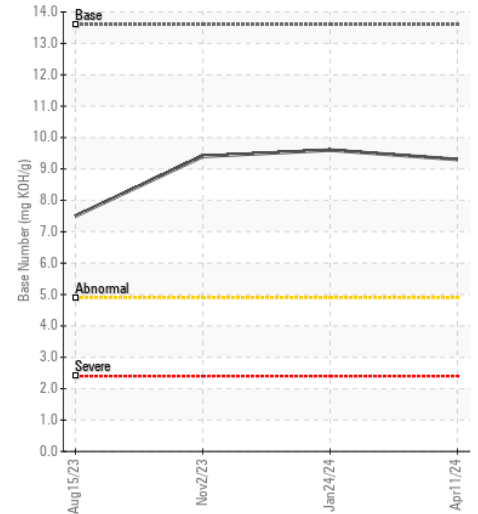
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WE0006882 **Received** : 15 Apr 2024  
**Lab Number** : 06148524 **Tested** : 16 Apr 2024  
**Unique Number** : 10978602 **Diagnosed** : 16 Apr 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)