



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



Machine Id  
**JOHN DEERE 644K 1DW644KAVDE654303**

Component  
**Hydraulic System**

Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (10 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0212331</b>	JR0179325	JR0123995
Sample Date		Client Info		<b>08 May 2024</b>	06 Oct 2023	09 Aug 2022
Machine Age	hrs	Client Info		<b>11950</b>	11447	10917
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>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

PQ		ASTM D8184	>50	<b>19</b>	21	22
Iron	ppm	ASTM D5185m	>71	<b>19</b>	13	14
Chromium	ppm	ASTM D5185m	>11	<b>8</b>	6	4
Nickel	ppm	ASTM D5185m	>6	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>11	<b>6</b>	5	6
Lead	ppm	ASTM D5185m	>13	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>21	<b>1</b>	2	3
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

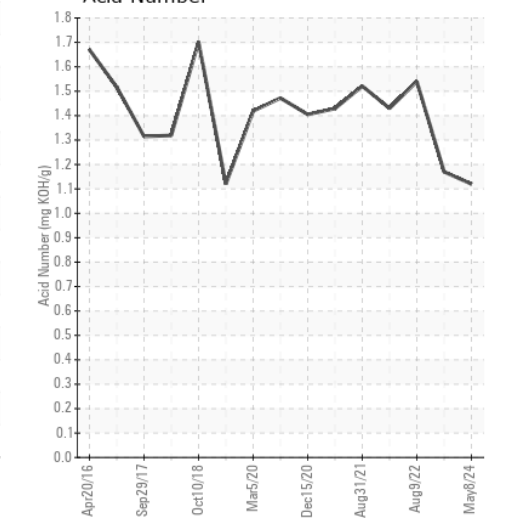
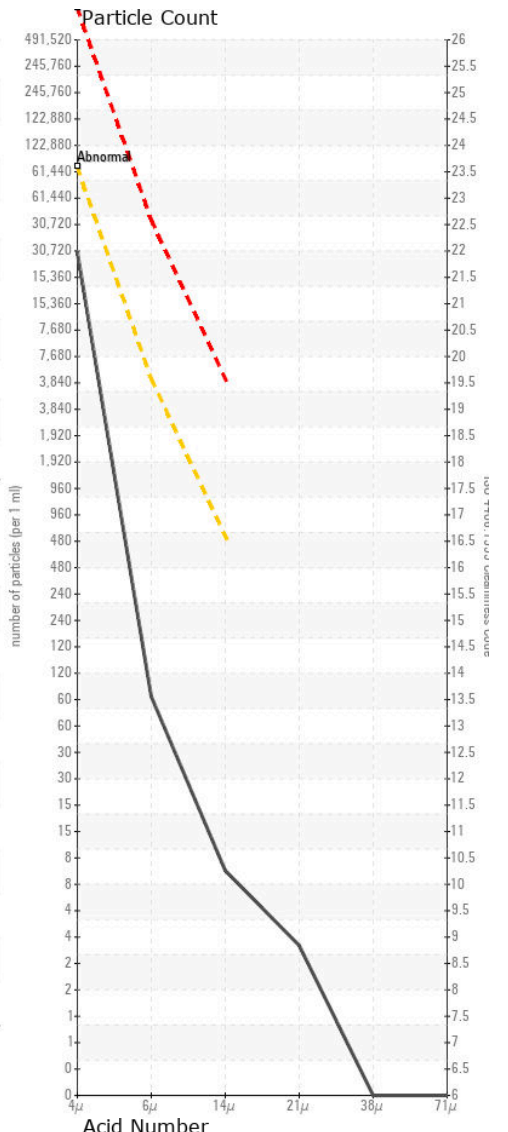
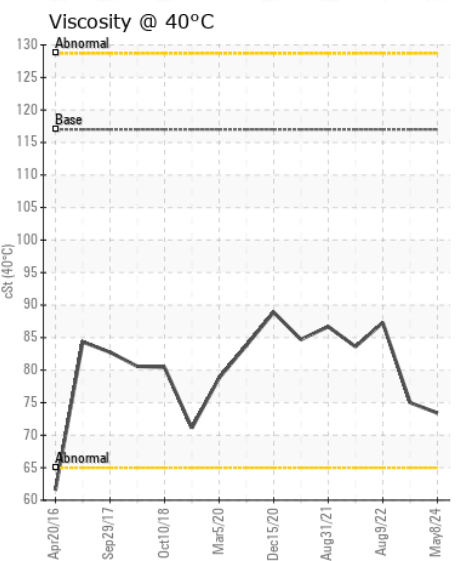
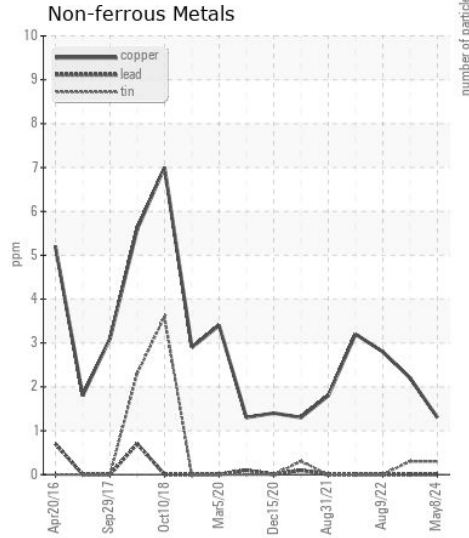
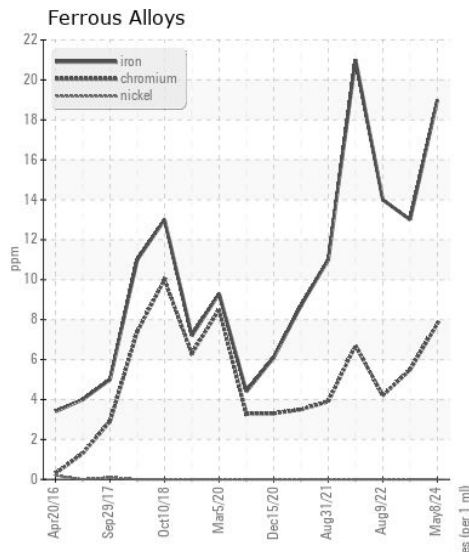
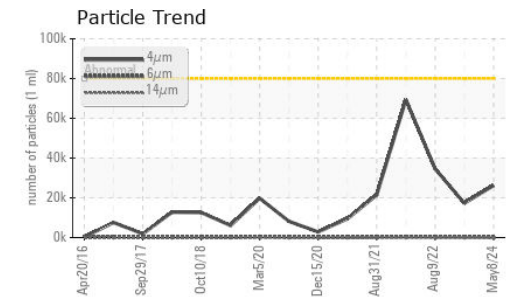
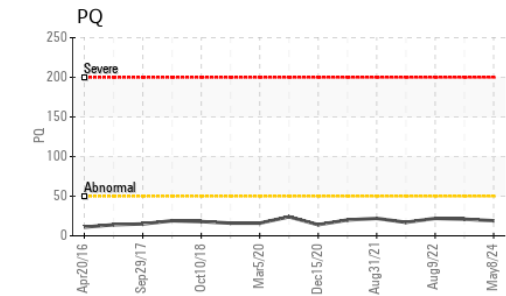
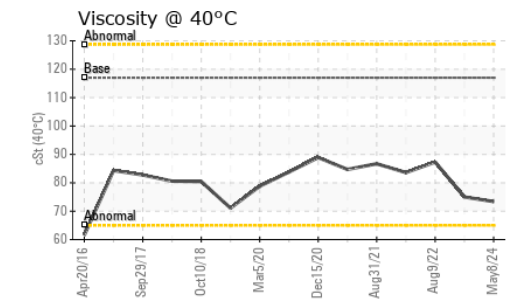
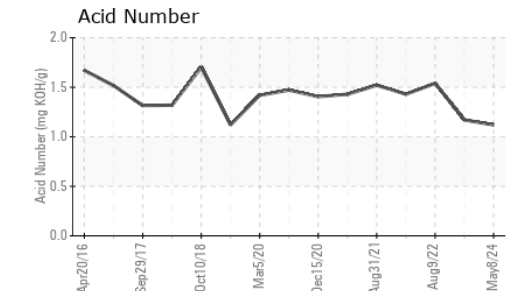
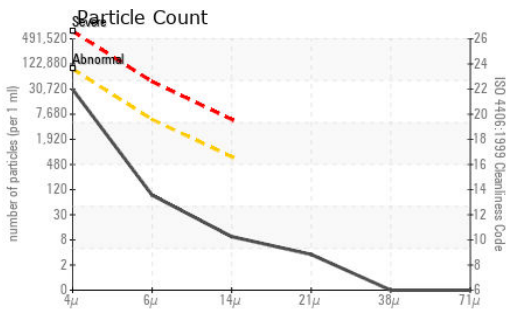
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>24	<b>12</b>	10	12
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	3
Water		WC Method	>0.075	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>80000	<b>26223</b>	17236	34587
Particles >6µm		ASTM D7647	>5000	<b>78</b>	223	240
Particles >14µm		ASTM D7647	>640	<b>8</b>	20	8
Particles >21µm		ASTM D7647	>160	<b>3</b>	7	0
Particles >38µm		ASTM D7647	>40	<b>0</b>	0	0
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>23/19/16	<b>22/13/10</b>	21/15/11	22/15/10
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	>0.075	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>21	<b>3</b>	2	0
Boron	ppm	ASTM D5185m		<b>187</b>	183	310
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>148</b>	149	213
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>490</b>	482	600
Calcium	ppm	ASTM D5185m		<b>884</b>	903	1189
Phosphorus	ppm	ASTM D5185m		<b>842</b>	832	826
Zinc	ppm	ASTM D5185m		<b>964</b>	1001	973
Sulfur	ppm	ASTM D5185m		<b>2850</b>	2532	2631
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.12</b>	1.17	1.54
Visc @ 40°C	cSt	ASTM D445	117	<b>73.4</b>	75.0	87.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0212331 **Received** : 14 May 2024  
**Lab Number** : 06178607 **Tested** : 15 May 2024  
**Unique Number** : 11029933 **Diagnosed** : 16 May 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: PQ )

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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