



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

Machine Id  
**JOHN DEERE 298**  
 Component  
**Hydraulic System**  
 Fluid  
**JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0217836</b>	JR0159545	JR0154212
Sample Date		Client Info		<b>19 Jun 2024</b>	07 Mar 2023	28 Nov 2022
Machine Age	hrs	Client Info		<b>5096</b>	3044	2514
Oil Age	hrs	Client Info		<b>1000</b>	0	536
Filter Age	hrs	Client Info		<b>1000</b>	0	536
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	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		<b>30</b>	12	11
Iron	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185m	>10	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>75	<b>&lt;1</b>	<1	3
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

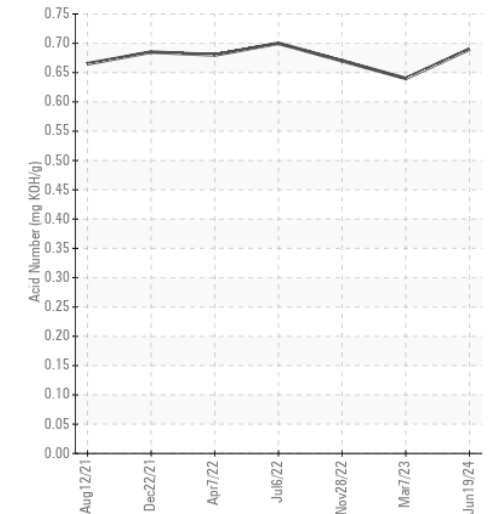
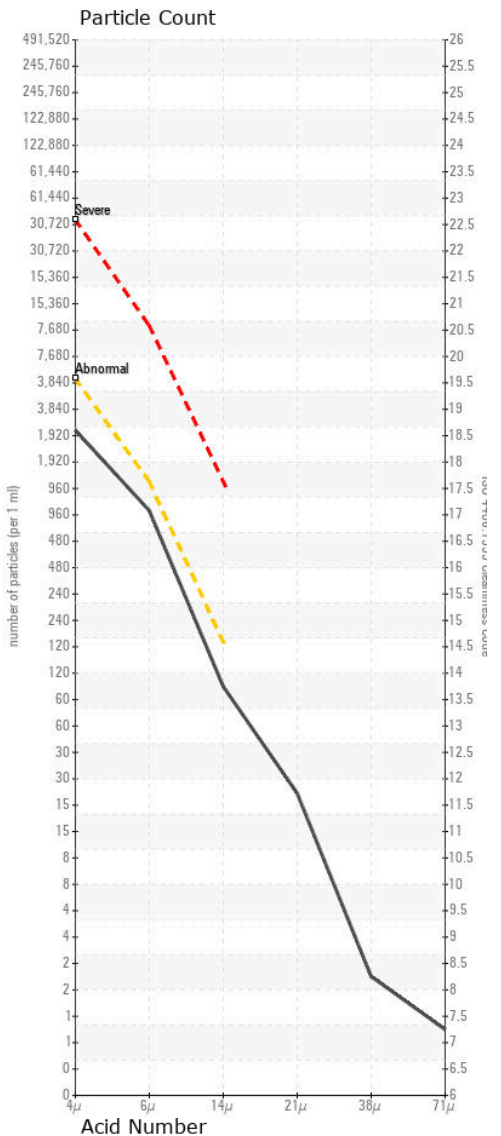
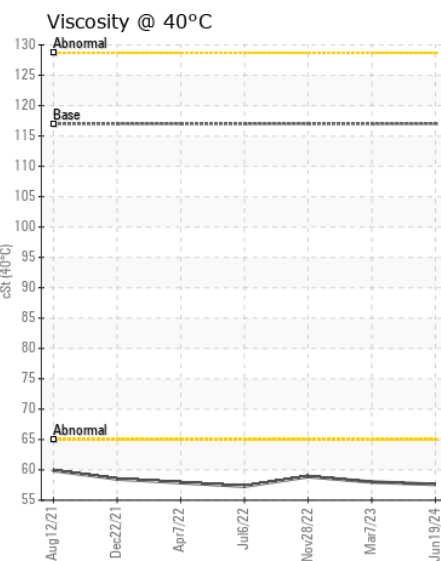
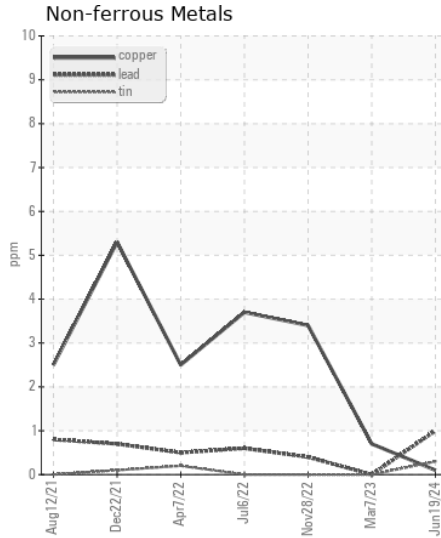
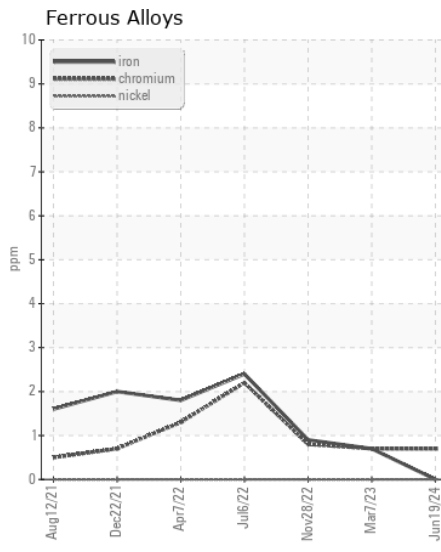
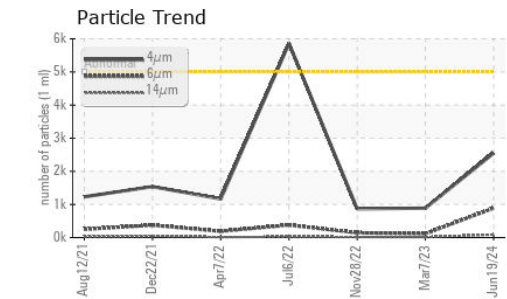
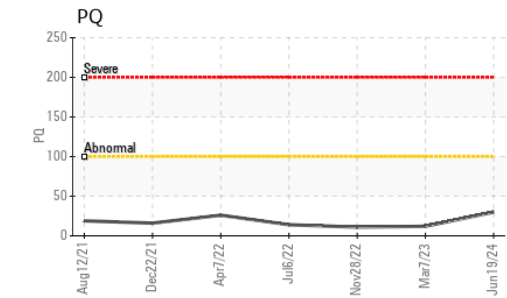
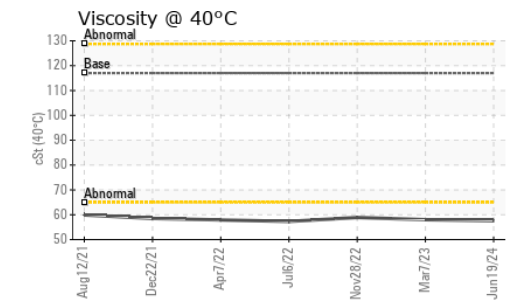
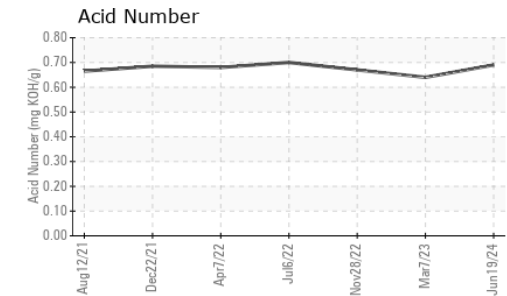
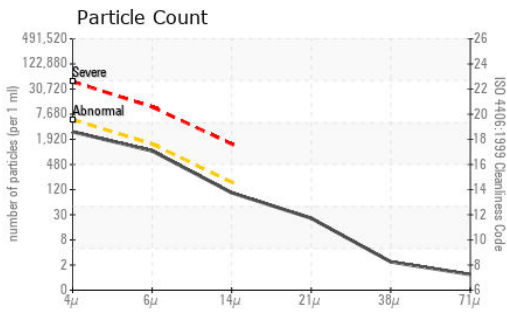
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>2549</b>	888	867
Particles >6µm		ASTM D7647	>1300	<b>890</b>	116	144
Particles >14µm		ASTM D7647	>160	<b>89</b>	12	16
Particles >21µm		ASTM D7647	>40	<b>22</b>	4	5
Particles >38µm		ASTM D7647	>10	<b>2</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/17/14</b>	17/14/11	17/14/11
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	>0.1	<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		<b>0</b>	<1	0
Boron	ppm	ASTM D5185m		<b>3</b>	0	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	2	3
Calcium	ppm	ASTM D5185m		<b>204</b>	111	107
Phosphorus	ppm	ASTM D5185m		<b>688</b>	572	605
Zinc	ppm	ASTM D5185m		<b>890</b>	728	805
Sulfur	ppm	ASTM D5185m		<b>1988</b>	1722	1746
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.69</b>	0.64	0.67
Visc @ 40°C	cSt	ASTM D445	117	<b>57.6</b>	58.0	58.9



Certificate L2367

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

Sample No. : JR0217836

Lab Number : 06224449

Unique Number : 11102646

Test Package : CONST ( Additional Tests: PQ )

Received : 01 Jul 2024

Tested : 02 Jul 2024

Diagnosed : 02 Jul 2024 - Don Baldrige

TOTAL DEVELOPMENT SOLUTIONS LLC

7805 PROGRESS CT

GAINESVILLE, VA

US 20155

Contact: JOE SEALE

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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