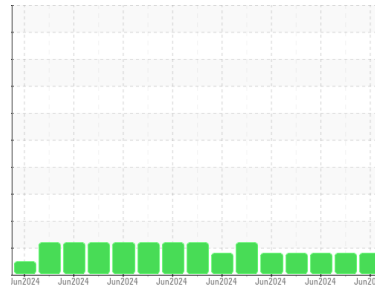




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**QC240601HY**

Component  
**Hydraulic System**

Fluid  
**JOHN DEERE HY-GARD HYD/TRANS (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 6 microns in size) present in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0952783</b>	WC0952782	WC0952779
Sample Date	Client Info		<b>25 Jun 2024</b>	24 Jun 2024	21 Jun 2024
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>47	<b>20</b>	17	14	
Iron	ppm	ASTM D5185m	>78	<b>14</b>	23	30
Chromium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	1
Aluminum	ppm	ASTM D5185m	>5	<b>1</b>	2	3
Lead	ppm	ASTM D5185m	>11	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>84	<b>11</b>	13	16
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	6	<b>0</b>	2	3
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m	145	<b>82</b>	90	101
Calcium	ppm	ASTM D5185m	3570	<b>3193</b>	3328	3868
Phosphorus	ppm	ASTM D5185m	1290	<b>979</b>	1082	1195
Zinc	ppm	ASTM D5185m	1640	<b>1096</b>	1234	1394
Sulfur	ppm	ASTM D5185m		<b>3790</b>	4118	4275

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>11	<b>12</b>	15	17
Sodium	ppm	ASTM D5185m	>23	<b>8</b>	10	8
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	3	4
Water	%	ASTM D6304	>0.1669	<b>0.039</b>	0.047	0.046
ppm Water	ppm	ASTM D6304	>1669	<b>397</b>	479	462

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 12311</b>	▲ 12138	▲ 14746
Particles >6µm	ASTM D7647	>1300	<b>681</b>	612	810
Particles >14µm	ASTM D7647	>160	<b>33</b>	32	9
Particles >21µm	ASTM D7647	>40	<b>14</b>	10	2
Particles >38µm	ASTM D7647	>10	<b>1</b>	2	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 21/17/12</b>	▲ 21/16/12	▲ 21/17/10

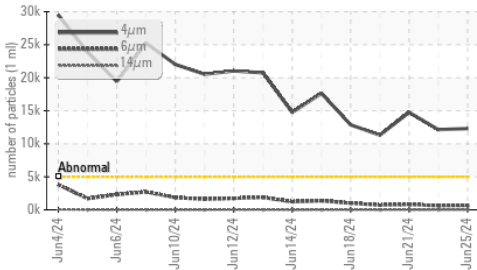
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	<b>1.19</b>	1.92	1.34

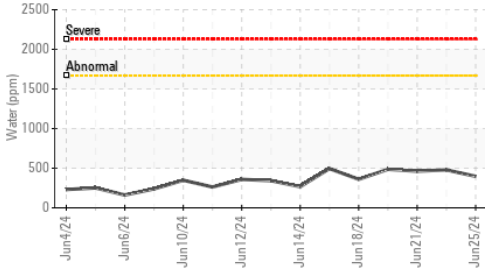


# OIL ANALYSIS REPORT

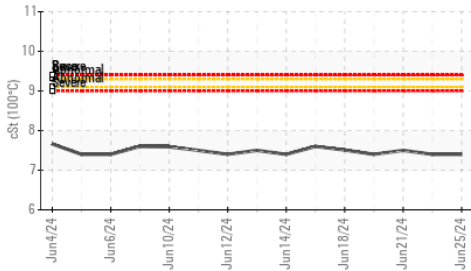
## Particle Trend



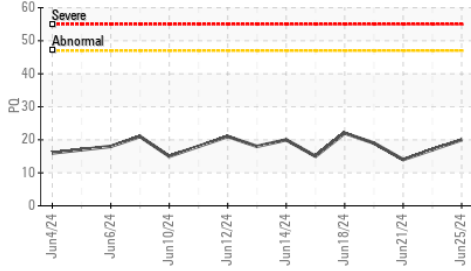
## Water (KF)



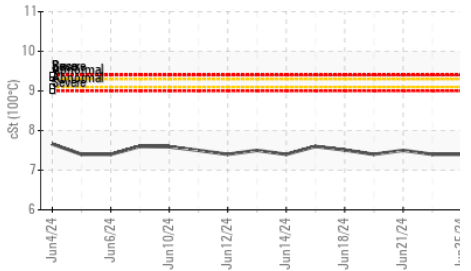
## Viscosity @ 100°C



## PQ



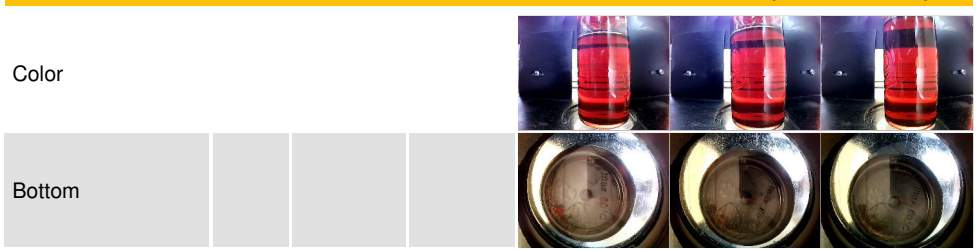
## Viscosity @ 100°C



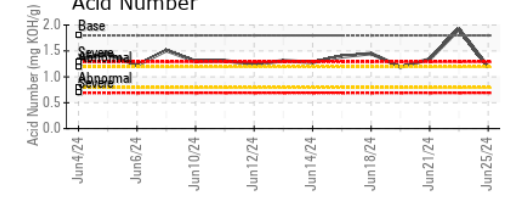
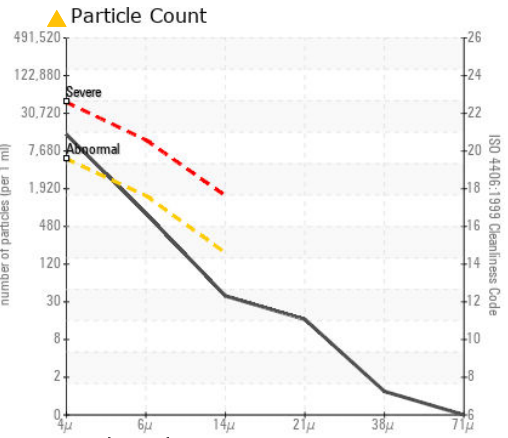
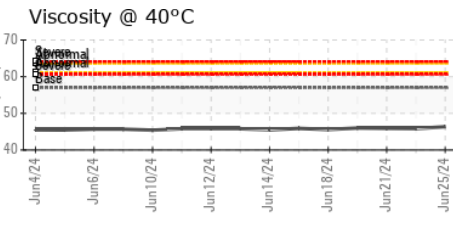
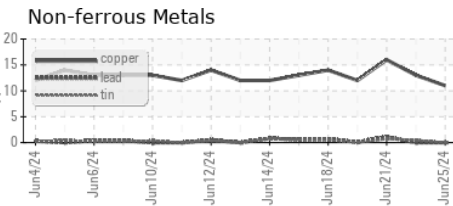
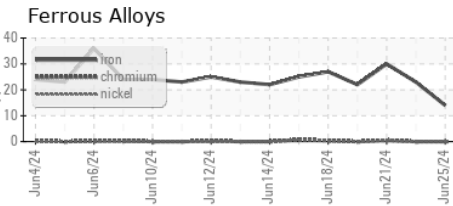
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1669	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.0	46.37	45.8
Visc @ 100°C	cSt	ASTM D445	9.4	7.4	7.5
Viscosity Index (VI)	Scale	ASTM D2270	147	122	125

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0952783 **Received** : 25 Jun 2024  
**Lab Number** : 06219660 **Tested** : 28 Jun 2024  
**Unique Number** : 11097857 **Diagnosed** : 28 Jun 2024 - Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PQ, VI )

**WEARCHECK LUBRICATION SERVICES QA ACCOUNT**  
 501 Madison Ave  
 Cary, NC  
 US 27513  
 Contact: WCLS CARY NC

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)

T: (919)379-4102  
 F: (919)379-4050