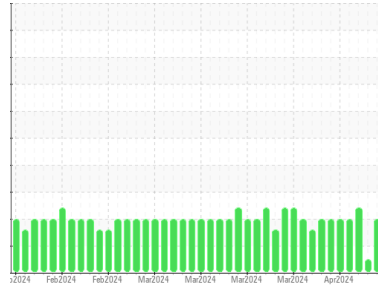




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**WCLSNC**  
 Machine Id  
**QC230801HY**  
 Component  
**Hydraulic System**  
 Fluid  
**JOHN DEERE HY-GARD HYD/TRANS (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of particulates 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>WC0929393</b>	WC0929392	WC0929389
Sample Date	Client Info		<b>09 Apr 2024</b>	08 Apr 2024	05 Apr 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

## WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>47	<b>49</b>	34	97	
Iron	ppm	ASTM D5185m	>78	<b>71</b>	70	65
Chromium	ppm	ASTM D5185m	>2	<b>1</b>	1	<1
Nickel	ppm	ASTM D5185m	>3	<b>1</b>	2	2
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>3</b>	4	3
Lead	ppm	ASTM D5185m	>11	<b>9</b>	9	9
Copper	ppm	ASTM D5185m	>84	<b>74</b>	79	78
Tin	ppm	ASTM D5185m	>4	<b>3</b>	3	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	6	<b>96</b>	107	99
Barium	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>19</b>	▲ 21	19
Magnesium	ppm	ASTM D5185m	145	<b>23</b>	23	21
Calcium	ppm	ASTM D5185m	3570	<b>3449</b>	3767	3514
Phosphorus	ppm	ASTM D5185m	1290	<b>1079</b>	▲ 1263	1068
Zinc	ppm	ASTM D5185m	1640	<b>1349</b>	1498	1354
Sulfur	ppm	ASTM D5185m		<b>3846</b>	3912	3770

## CONTAMINANTS

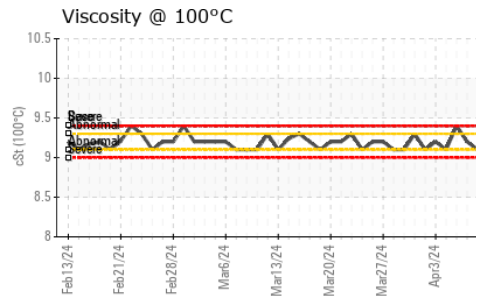
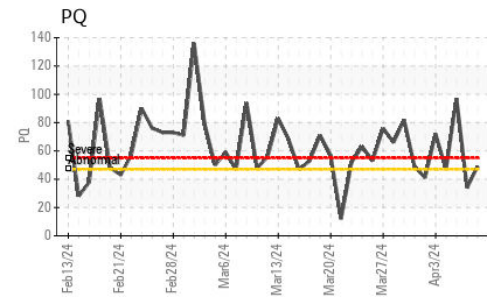
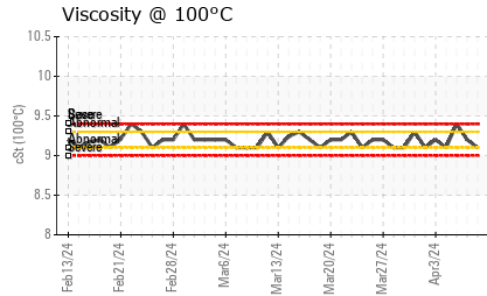
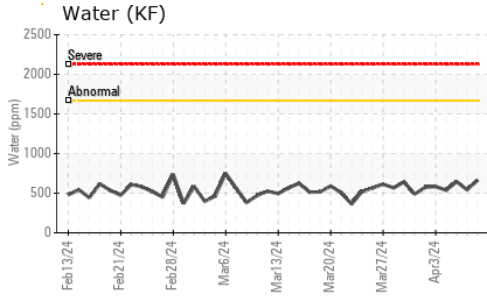
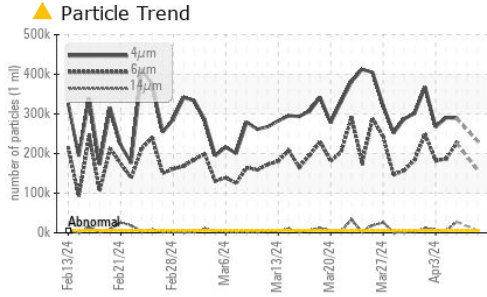
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>11	<b>10</b>	10	8
Sodium	ppm	ASTM D5185m	>23	<b>19</b>	21	17
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	2
Water	%	ASTM D6304	>0.1669	<b>0.066</b>	0.054	0.064
ppm Water	ppm	ASTM D6304	>1669	<b>664</b>	543	645

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ <b>231344</b>	---	▲ 289459
Particles >6µm	ASTM D7647	>1300	▲ <b>158447</b>	---	▲ 226223
Particles >14µm	ASTM D7647	>160	▲ <b>6219</b>	---	▲ 27905
Particles >21µm	ASTM D7647	>40	▲ <b>367</b>	---	▲ 2494
Particles >38µm	ASTM D7647	>10	<b>4</b>	---	▲ 21
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	1
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ <b>25/24/20</b>	---	▲ 25/25/22

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	<b>0.90</b>	0.95	0.89



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	<b>MODER</b>	MODER
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	62.7	62.36
Visc @ 100°C	cSt	ASTM D445	9.4	9.1	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	122	125

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0929393 **Received** : 09 Apr 2024  
**Lab Number** : **06143025** **Tested** : 15 Apr 2024  
**Unique Number** : 10967833 **Diagnosed** : 15 Apr 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)

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