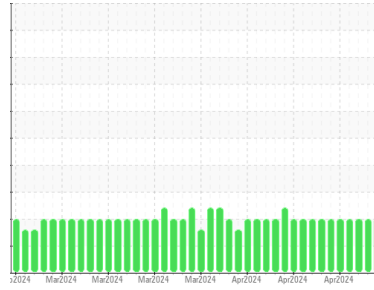




# OIL ANALYSIS REPORT

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>WC0929403</b>	WC0929402	WC0929401
Sample Date	Client Info		<b>19 Apr 2024</b>	18 Apr 2024	17 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	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>47	<b>102</b>	64	33	
Iron	ppm	ASTM D5185m	>78	<b>62</b>	75	55
Chromium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>3	<b>&lt;1</b>	1	1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>5	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>11	<b>9</b>	9	8
Copper	ppm	ASTM D5185m	>84	<b>78</b>	77	72
Tin	ppm	ASTM D5185m	>4	<b>3</b>	3	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	6	<b>117</b>	111	88
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>18</b>	21	16
Magnesium	ppm	ASTM D5185m	145	<b>23</b>	23	19
Calcium	ppm	ASTM D5185m	3570	<b>3459</b>	3463	2983
Phosphorus	ppm	ASTM D5185m	1290	<b>1212</b>	1179	974
Zinc	ppm	ASTM D5185m	1640	<b>1421</b>	1401	1128
Sulfur	ppm	ASTM D5185m		<b>3946</b>	3794	3099

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>11	<b>9</b>	9	8
Sodium	ppm	ASTM D5185m	>23	<b>21</b>	21	20
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Water	%	ASTM D6304	>0.1669	<b>0.041</b>	0.052	0.053
ppm Water	ppm	ASTM D6304	>1669	<b>418</b>	525	532

## FLUID CLEANLINESS

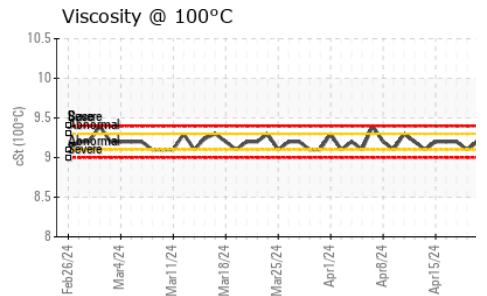
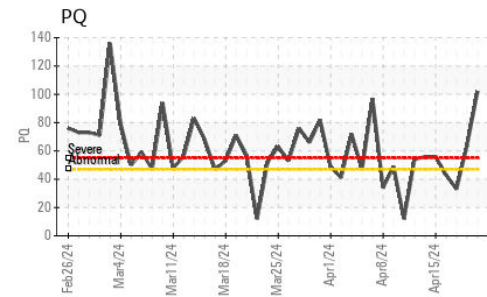
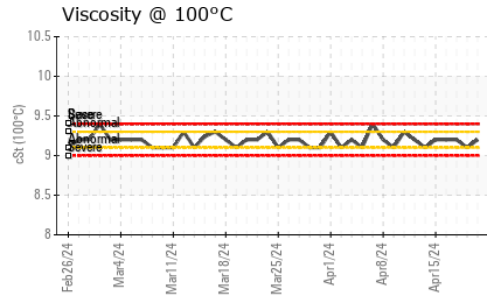
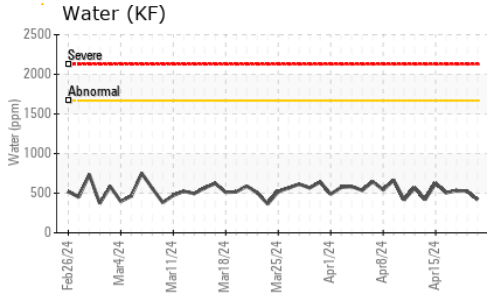
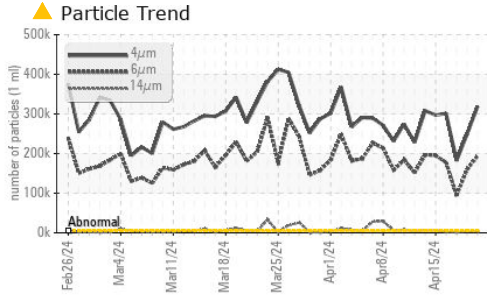
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 318709</b>	▲ 248924	▲ 182150
Particles >6µm	ASTM D7647	>1300	<b>▲ 194189</b>	▲ 159777	▲ 94297
Particles >14µm	ASTM D7647	>160	<b>▲ 3262</b>	▲ 3927	▲ 992
Particles >21µm	ASTM D7647	>40	<b>▲ 87</b>	▲ 125	▲ 56
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	2
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 25/25/19</b>	▲ 25/24/19	▲ 25/24/17

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	<b>0.81</b>	1.02	0.91



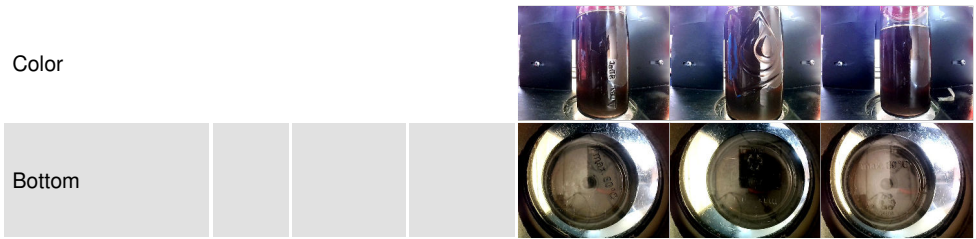
# OIL ANALYSIS REPORT



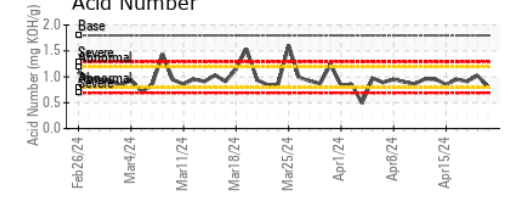
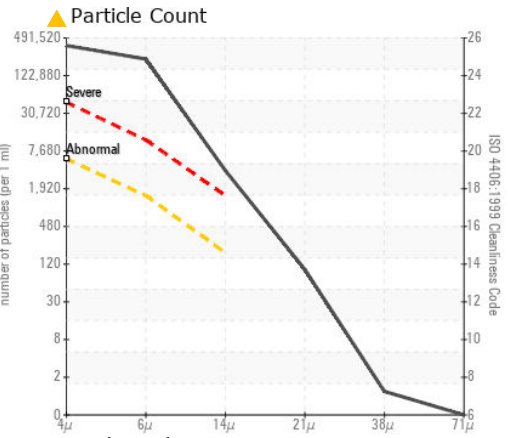
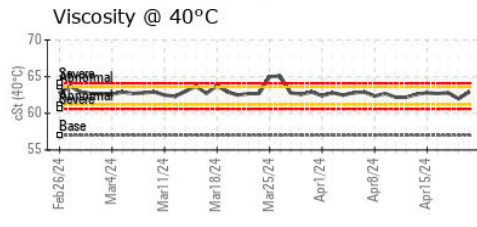
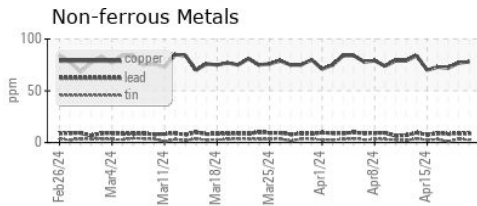
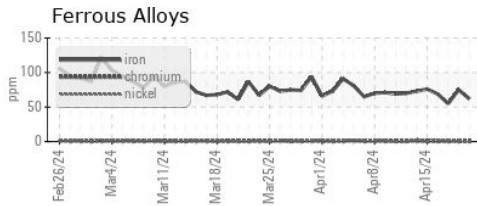
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	MODER	MODER
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	62.9	62.0
Visc @ 100°C	cSt	ASTM D445	9.4	9.2	9.1
Viscosity Index (VI)	Scale	ASTM D2270	147	124	124

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0929403  
**Lab Number** : 06154370  
**Unique Number** : 10989793  
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PQ, VI )  
**Received** : 19 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 25 Apr 2024 - Jonathan Hester

**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)