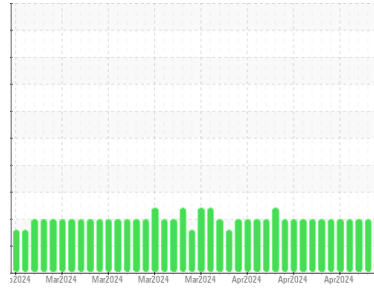




OIL ANALYSIS REPORT

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		WC0929406	WC0929403	WC0929402
Sample Date	Client Info		22 Apr 2024	19 Apr 2024	18 Apr 2024
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>47	28	102	64	
Iron	ppm	ASTM D5185m	>78	54	62	75
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	0	<1	1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>5	2	2	3
Lead	ppm	ASTM D5185m	>11	10	9	9
Copper	ppm	ASTM D5185m	>84	64	78	77
Tin	ppm	ASTM D5185m	>4	2	3	3
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	6	90	117	111
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		17	18	21
Magnesium	ppm	ASTM D5185m	145	23	23	23
Calcium	ppm	ASTM D5185m	3570	3324	3459	3463
Phosphorus	ppm	ASTM D5185m	1290	1017	1212	1179
Zinc	ppm	ASTM D5185m	1640	1320	1421	1401
Sulfur	ppm	ASTM D5185m		3733	3946	3794

CONTAMINANTS

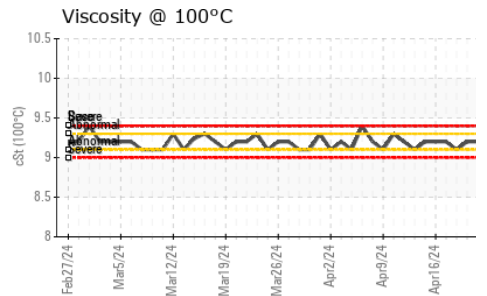
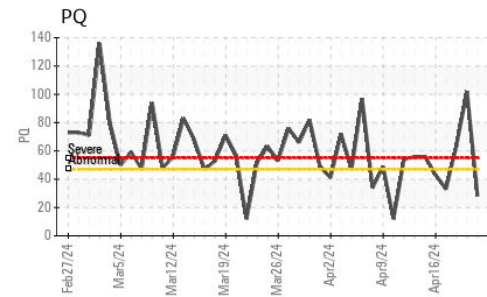
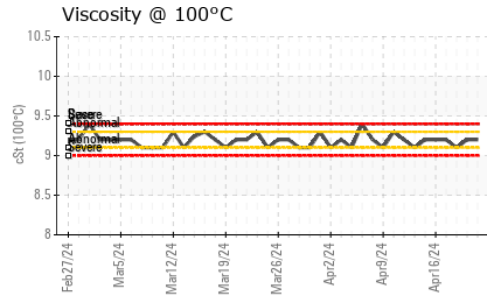
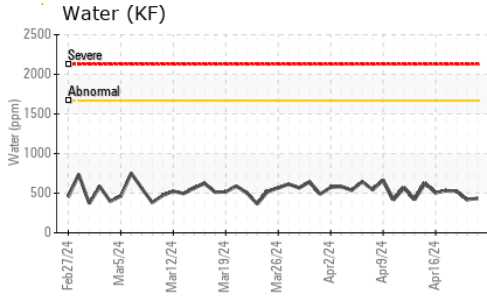
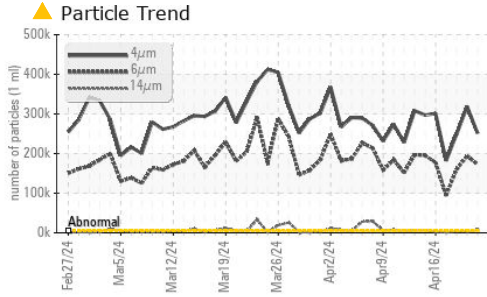
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>11	8	9	9
Sodium	ppm	ASTM D5185m	>23	14	21	21
Potassium	ppm	ASTM D5185m	>20	0	0	2
Water	%	ASTM D6304	>0.1669	0.043	0.041	0.052
ppm Water	ppm	ASTM D6304	>1669	435	418	525

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 251339	▲ 318709	▲ 248924
Particles >6µm	ASTM D7647	>1300	▲ 172735	▲ 194189	▲ 159777
Particles >14µm	ASTM D7647	>160	▲ 7999	▲ 3262	▲ 3927
Particles >21µm	ASTM D7647	>40	▲ 426	▲ 87	▲ 125
Particles >38µm	ASTM D7647	>10	4	1	0
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 25/25/20	▲ 25/25/19	▲ 25/24/19

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	0.95	0.81	1.02



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	MODER	NONE
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	62.38	62.9
Visc @ 100°C	cSt	ASTM D445	9.4	9.2	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	125	124

SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				
Bottom				

GRAPHS

Ferrous Alloys

Non-ferrous Metals

Viscosity @ 40°C

Particle Count

Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0929406 **Received** : 22 Apr 2024
Lab Number : 06155937 **Tested** : 26 Apr 2024
Unique Number : 10991360 **Diagnosed** : 26 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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