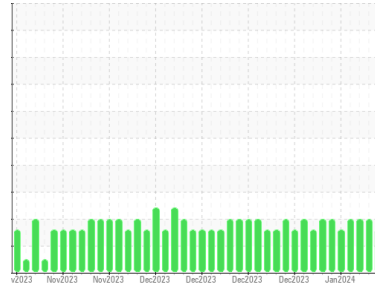




OIL ANALYSIS REPORT

Sample Rating Trend



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	WC0895294	WC0895293	WC0895292
Sample Date	Client Info	10 Jan 2024	09 Jan 2024	08 Jan 2024
Machine Age	hrs	0	0	0
Oil Age	hrs	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	27	40	46	
Iron	ppm	ASTM D5185m	>78	53	65	79
Chromium	ppm	ASTM D5185m	>2	<1	<1	1
Nickel	ppm	ASTM D5185m	>3	<1	<1	2
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>5	2	2	2
Lead	ppm	ASTM D5185m	>11	8	8	10
Copper	ppm	ASTM D5185m	>84	68	74	86
Tin	ppm	ASTM D5185m	>4	2	2	3
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	6	87	88	102
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	0	0	0	<1
Manganese	ppm	ASTM D5185m		17	19	22
Magnesium	ppm	ASTM D5185m	145	23	22	23
Calcium	ppm	ASTM D5185m	3570	3353	3231	3751
Phosphorus	ppm	ASTM D5185m	1290	1178	1000	1167
Zinc	ppm	ASTM D5185m	1640	1396	1344	1457
Sulfur	ppm	ASTM D5185m		3219	2869	3856

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>11	9	8	10
Sodium	ppm	ASTM D5185m	>23	17	18	16
Potassium	ppm	ASTM D5185m	>20	<1	0	2
Water	%	ASTM D6304	>0.1669	0.060	0.062	0.060
ppm Water	ppm	ASTM D6304	>1669	608	628	604

FLUID CLEANLINESS

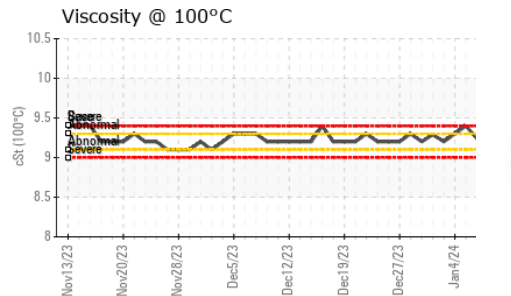
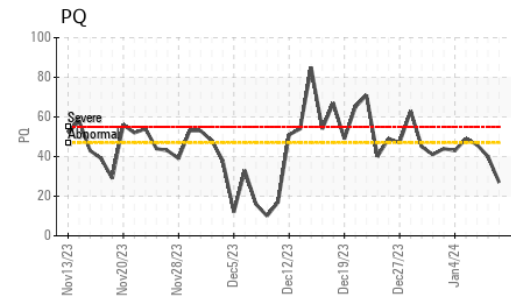
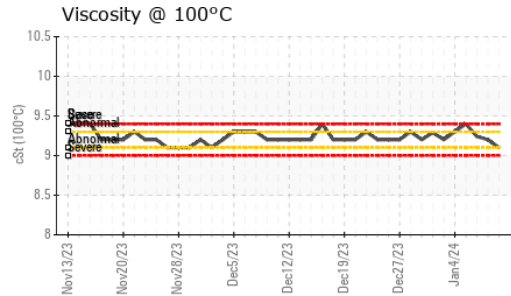
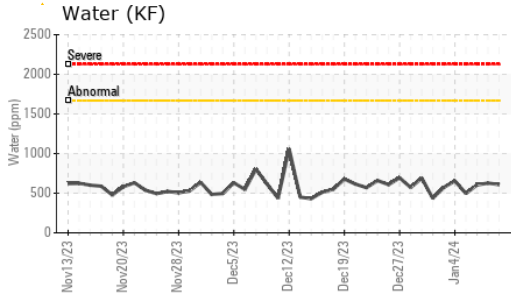
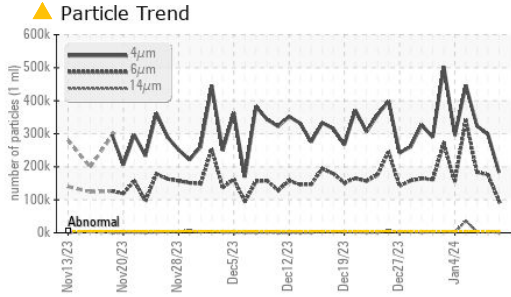
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	▲ 182703	▲ 297831	▲ 323922
Particles >6µm	ASTM D7647	>1300	▲ 96442	▲ 175623	▲ 183241
Particles >14µm	ASTM D7647	>160	▲ 520	▲ 2620	▲ 2649
Particles >21µm	ASTM D7647	>40	10	▲ 131	▲ 92
Particles >38µm	ASTM D7647	>10	0	1	2
Particles >71µm	ASTM D7647	>3	0	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 25/24/16	▲ 25/25/19	▲ 26/25/19

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D8045	1.8	0.83	0.92	0.86



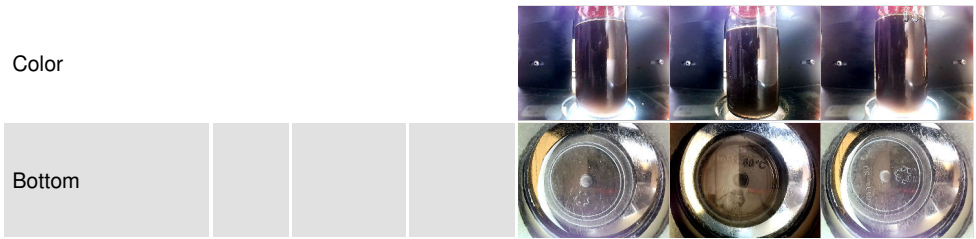
OIL ANALYSIS REPORT



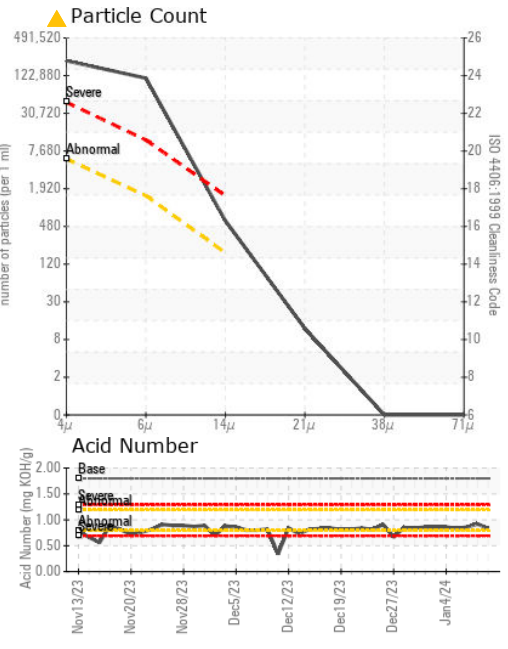
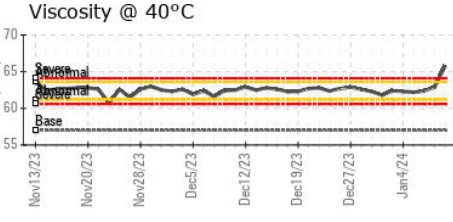
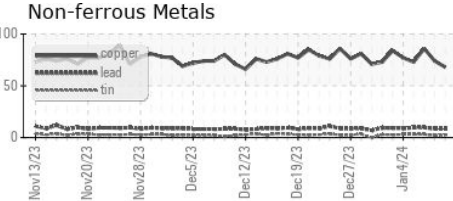
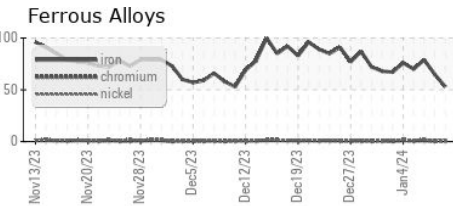
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	MODER	MODER
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	65.8	62.9
Visc @ 100°C	cSt	ASTM D445	9.4	9.1	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	114	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. : WC0895294 **Recieved** : 10 Jan 2024
Lab Number : 06056640 **Diagnosed** : 16 Jan 2024
Unique Number : 10822589 **Diagnostician** : 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