

## **OIL ANALYSIS REPORT**

ISO

## Machine Id QC230801HY

Component Hydraulic System

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

#### DIAGNOSIS

#### A 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.

AL)		w2024 Mar20	24 Apr2024 Apr2024	Apr2024 Apr2024 Apr2024 N	Tay2024	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0939635	WC0939632	WC0939631
Sample Date		Client Info		13 May 2024	10 May 2024	09 May 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	49	57	42
Iron	ppm	ASTM D5185m	>78	64	91	66
Chromium	ppm	ASTM D5185m	>2	<1	1	<1
Nickel	ppm	ASTM D5185m	>3	1	2	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>5	3	2	2
Lead	ppm	ASTM D5185m	>11	9	9	8
Copper	ppm	ASTM D5185m	>84	77	86	78
Tin	ppm	ASTM D5185m	>4	3	3	3
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6	100	122	105
Barium	ppm	ASTM D5185m	0	0	<1	1
Molybdenum	ppm	ASTM D5185m	0	0	0	0
Manganese	ppm	ASTM D5185m		18	23	18
Magnesium	ppm	ASTM D5185m	145	28	21	23
Calcium	ppm	ASTM D5185m	3570	3693	3500	3517
Phosphorus	ppm	ASTM D5185m	1290	1223	1236	1199
Zinc	ppm	ASTM D5185m	1640	1484	1419	1401
Sulfur	ppm	ASTM D5185m		3911	3578	3760
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>11	8	10	9
Sodium	ppm	ASTM D5185m	>23	18	19	17
Potassium	ppm	ASTM D5185m	>20	0	3	0
Water	%	ASTM D6304	>0.1669	0.069	0.061	0.058
ppm Water	ppm	ASTM D6304	>1669	697	613	582
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>A</b> 318162	<b>A</b> 391605	<b>A</b> 313172
Particles >6µm		ASTM D7647	>1300	🔺 203467	<b>1</b> 82567	<u> </u>
Particles >14µm		ASTM D7647	>160	<b>6</b> 5493	<b>1</b> 403	🔺 10616
Particles >21µm		ASTM D7647	>40	<b>A</b> 337	<u> </u>	▲ 623
Particles >38µm		ASTM D7647	>10	3	0	3
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>A</b> 25/25/20	<b>2</b> 6/25/18	▲ 25/25/21
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN) :03:51) Rev: 1	mg KOH/g	ASTM D8045	1.8	0.781	0.88	0.855 Submitted By: ?



# **OIL ANALYSIS REPORT**











VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	MODER	MODER	MODER
Debris	scalar	*Visual	NONE	MODER	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1669	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	57.0	62.7	63.3	62.4
Visc @ 100°C	cSt	ASTM D445	9.4	9.2	9.2	9.2
Viscosity Index (VI)	Scale	ASTM D2270	147	124	123	125
SAMPLE IMAGES		method	limit/base	current	history1	history2





: 13 May 2024

: 21 May 2024

WEARCHECK LUBRICATION SERVICES QA ACCOUNT 501 Madison Ave Cary, NC : 21 May 2024 - Jonathan Hester US 27513 Contact: WCLS CARY NC

Test Package : IND 2 (Additional Tests: KF, KV100, PQ, VI) Certificate 12367 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.

: WC0939635

Color

Bottom

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Received

Diagnosed

Tested

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

4406

Report Id: WEACARQA [WUSCAR] 06177113 (Generated: 05/21/2024 17:03:51) Rev: 1

Laboratory

Sample No.

Lab Number : 06177113

Unique Number : 11023166