

Area RONI Machine Id 457 Component Hydraulic System Fluid JOHN DEERE HYDRAU XR (--- GAL)

## COMPONENT CONDITION SUMMARY



#### RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS						
Sample Status		ABN	ORMAL	NORMAL	NORMAL	
Particles >4µm	ASTM D7647 :	>5000 🔺 19	9938	751	1048	
Particles >6µm	ASTM D7647	>1300 🔺 🖊	488	127	125	
Oil Cleanliness	ISO 4406 (c)	>19/17/14 🔺 2	1/18/13	17/14/10	17/14/10	

Customer Id: RONVAU Sample No.: WC0872959 Lab Number: 02603250 Test Package: MOBCE



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RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Change Filter			?	We recommend you service the filters on this component.		
Resample			?	We recommend an early resample to monitor this condition.		

### **HISTORICAL DIAGNOSIS**



## 25 Sep 2023 Diag: Kevin Marson

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The condition of the oil is acceptable for the time in service.



view report

## 07 Jun 2023 Diag: Wes Davis



Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The condition of the oil is acceptable for the time in service.

#### 08 Mar 2023 Diag: Wes Davis





Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The condition of the oil is acceptable for the time in service.







## **OIL ANALYSIS REPORT**

Sample Rating Trend



457 Component **Hydraulic System** JOHN DEERE HYDRAU XR (--- GAL)

## DIAGNOSIS

Area **RONI** 

#### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

## Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

#### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0872959	LH0275085	LH0261565
Sample Date		Client Info		08 Dec 2023	25 Sep 2023	07 Jun 2023
Machine Age	hrs	Client Info		0	2697	2166
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	5	3	3
Chromium	ppm	ASTM D5185(m)	>10	1	1	1
Nickel	ppm	ASTM D5185(m)	>10	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	2	<1	<1
Lead	ppm	ASTM D5185(m)	>10	0	<1	<1
Copper	ppm	ASTM D5185(m)	>75	1	4	4
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		4	5	5
Barium	ppm	ASTM D5185(m)		<1	<1	0
Molybdenum	ppm	ASTM D5185(m)		0	0	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		2	3	4
Calcium	nnm					
	ppin	ASTM D5185(m)		180	202	244
Phosphorus	ppm	ASTM D5185(m) ASTM D5185(m)		180 610	202 588	244 666
Phosphorus Zinc	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		180 610 815	202 588 773	244 666 791
Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		180 610 815 1529	202 588 773 1494	244 666 791 1650
Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		180 610 815 1529 <1	202 588 773 1494 <1	244 666 791 1650 <1
Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	limit/base	180 610 815 1529 <1 current	202 588 773 1494 <1 history1	244 666 791 1650 <1 history2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) <b>method</b> ASTM D5185(m)	limit/base >20	180 610 815 1529 <1 current 3	202 588 773 1494 <1 history1 2	244 666 791 1650 <1 history2 3
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >20	180 610 815 1529 <1 current 3 2	202 588 773 1494 <1 history1 2 4	244 666 791 1650 <1 history2 3 2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >20 >20	180 610 815 1529 <1 <u>current</u> 3 2 2	202 588 773 1494 <1 history1 2 4 5	244 666 791 1650 <1 history2 3 2 4
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >20 >20 limit/base	180 610 815 1529 <1 current 3 2 2 2 current	202 588 773 1494 <1 history1 2 4 5 5 history1	244 666 791 1650 <1 history2 3 2 4 history2
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >20 >20 limit/base >5000	180 610 815 1529 <1 current 3 2 2 2 2 current 19938	202 588 773 1494 <1 history1 2 4 5 5 history1 751	244 666 791 1650 <1 <u>history2</u> 3 2 4 <u>history2</u> 1048
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m)	limit/base >20 >20 limit/base >5000 >1300	180 610 815 1529 <1 current 3 2 2 2 current ↓ 19938 ▲ 1488	202 588 773 1494 <1 <b>history1</b> 2 4 5 <b>history1</b> 751 127	244 666 791 1650 <1 <u>history2</u> 3 2 4 <u>history2</u> 1048 125
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m)	limit/base >20 >20 20 limit/base >5000 >1300 >160	180 610 815 1529 <1 current 3 2 2 2 current 19938 ▲ 19938 67	202 588 773 1494 <1 2 4 5 4 5 5 history1 751 127 8	244 666 791 1650 <1 <u>history2</u> 3 2 4 4 <u>history2</u> 1048 125 9
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Sodium Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m)     ASTM D7647     ASTM D7647     ASTM D7647     ASTM D7647     ASTM D7647	limit/base >20 >20 >20 limit/base >5000 >1300 >160 >40	180 610 815 1529 <1 current 3 2 2 current ▲ 19938 ▲ 1488 67 15	202 588 773 1494 <1 2 4 5 5 history1 751 127 8 3	244 666 791 1650 <1 history2 3 2 4 4 history2 1048 125 9 3
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Sodium Sodium Potassium FLUID CLEANLIN Particles >4μm Particles >14μm Particles >21μm Particles >38μm	ppm ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	180 610 815 1529 <1 current 3 2 2 current ▲ 19938 ▲ 1488 67 15 1	202 588 773 1494 <1 <b>history1</b> 2 4 5 <b>history1</b> 751 127 8 3 3 1	244 666 791 1650 <1 history2 3 2 4 4 history2 1048 125 9 3 3 1
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium PtUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10 >3	180 610 815 1529 <1 current 3 2 2 current ▲ 19938 ▲ 1488 67 15 1 0	202 588 773 1494 <1 <b>history1</b> 2 4 5 <b>history1</b> 751 127 8 3 1 127 8	244 666 791 1650 <1 history2 3 2 4 4 history2 1048 125 9 3 1 1 1 1
Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Potassium FLUID CLEANLIN Particles >4µm Particles >4µm Particles >4µm Particles >21µm Particles >38µm Particles >71µm Oil Cleanliness	ppm ppm ppm ppm ppm ppm ppm ESS	ASTM D5185(m)   ASTM D7647   ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160 >160 >40 >10 >3 >19/17/14	180 610 815 1529 <1 current 3 2 2 current 19938 ▲ 19938 ▲ 1488 67 15 1 1 0 ▲ 21/18/13	202 588 773 1494 <1 <b>history1</b> 2 4 5 <b>history1</b> 751 127 8 3 1 127 8 3 1 1 1 1 17/14/10	244 666 791 1650 <1 <u>history2</u> 3 2 4 <u>history2</u> 1048 125 9 3 1 125 9 3 1 1 1 1 1 1 1 1/14/10



# **OIL ANALYSIS REPORT**

Color

Bottom





FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.87		
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	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	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*	>0.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	43.1	45.5	43.2	40.4
SAMPLE IMAGES		method	limit/base	current	history1	history2
						States and sold the





Laboratory CALA Sample No. Lab Number : 02603250 : 15 Dec 2023 VAUGHAN, ON Diagnosed ISO 17025:2017 Accredited Laboratory Unique Number : 5696335 Diagnostician : Kevin Marson CA L4K 4P3 Test Package : MOBCE Contact: Service Team To discuss this sample report, contact Customer Service at 1-800-268-2131. service.team@roni.ca Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: Validity of results and interpretation are based on the sample and information as supplied. F:

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