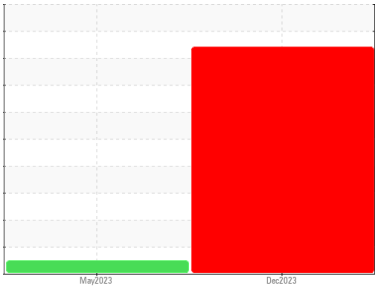
PROBLEM SUMMARY

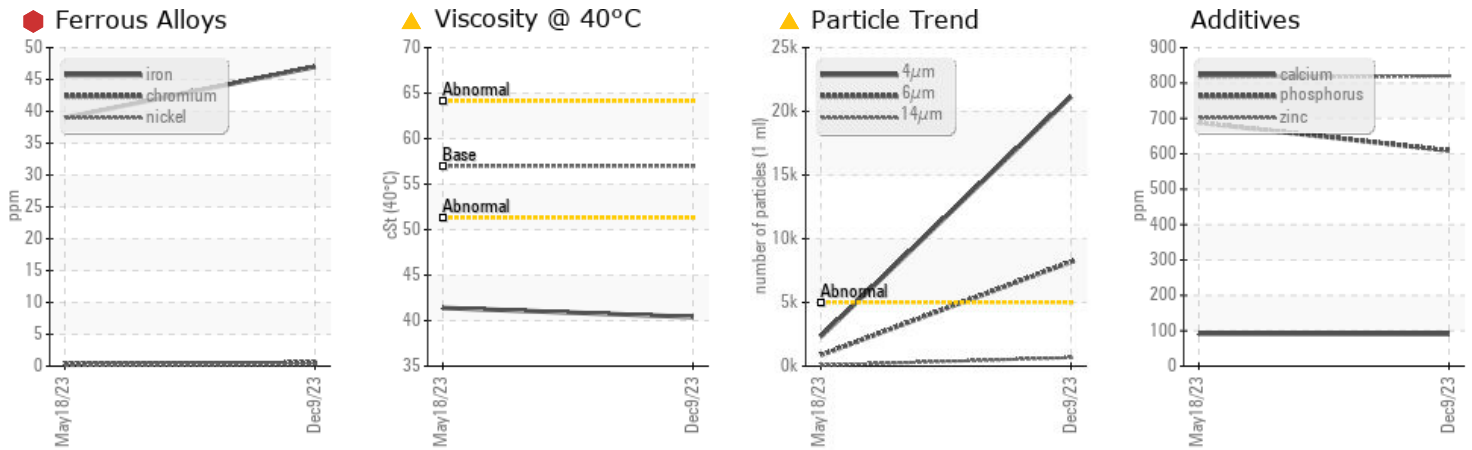
Sample Rating Trend



WEAR

Area
ORIN CONTRACTORS
Machine Id
881
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	NORMAL	---
Iron	ppm	ASTM D5185(m)	>20	**47**	39	---
Particles >4µm		ASTM D7647	>5000	**21144**	2312	---
Particles >6µm		ASTM D7647	>1300	**8184**	863	---
Particles >14µm		ASTM D7647	>160	**669**	65	---
Particles >21µm		ASTM D7647	>40	**111**	14	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**22/20/17**	18/17/13	---
Visc @ 40°C	cSt	ASTM D7279(m)	57.0	**40.4**	41.4	---

Customer Id: RONVAU
Sample No.: WC0872893
Lab Number: 02603254
Test Package: MOBCE

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

18 May 2023 Diag: Kevin Marson

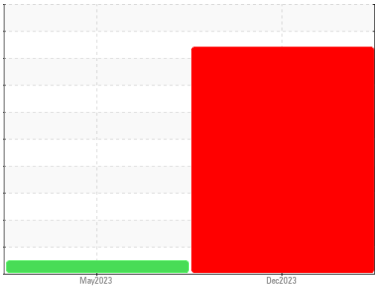
NORMAL

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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
ORIN CONTRACTORS
Machine Id
881
Component
Hydraulic System
Fluid
JOHN DEERE HY-GARD HYD/TRANS (--- GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0872893**	LH0256633	---
Sample Date		Client Info		**09 Dec 2023**	18 May 2023	---
Machine Age	hrs	Client Info		**0**	1195	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	Changed	---
Sample Status				**SEVERE**	NORMAL	---

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.1	**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	1	---
Iron	ppm	ASTM D5185(m)	>20	**47**	39	---
Chromium	ppm	ASTM D5185(m)	>10	**<1**	<1	---
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	---
Titanium	ppm	ASTM D5185(m)		**0**	<1	---
Silver	ppm	ASTM D5185(m)		**<1**	0	---
Aluminum	ppm	ASTM D5185(m)	>10	**3**	2	---
Lead	ppm	ASTM D5185(m)	>10	**1**	<1	---
Copper	ppm	ASTM D5185(m)	>75	**12**	11	---
Tin	ppm	ASTM D5185(m)	>10	**0**	0	---
Antimony	ppm	ASTM D5185(m)		**0**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

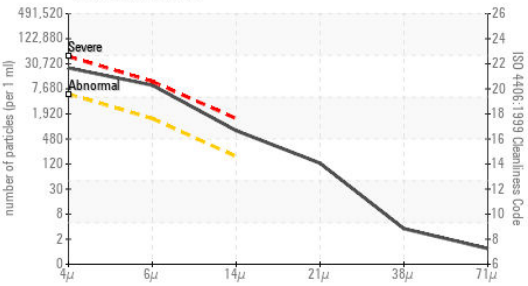
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	6	**<1**	<1	---
Barium	ppm	ASTM D5185(m)	0	**1**	<1	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	<1	---
Manganese	ppm	ASTM D5185(m)		**0**	<1	---
Magnesium	ppm	ASTM D5185(m)	145	**4**	3	---
Calcium	ppm	ASTM D5185(m)	3570	**91**	92	---
Phosphorus	ppm	ASTM D5185(m)	1290	**609**	688	---
Zinc	ppm	ASTM D5185(m)	1640	**820**	815	---
Sulfur	ppm	ASTM D5185(m)		**1515**	1591	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**6**	5	---
Sodium	ppm	ASTM D5185(m)		**1**	<1	---
Potassium	ppm	ASTM D5185(m)	>20	**1**	3	---

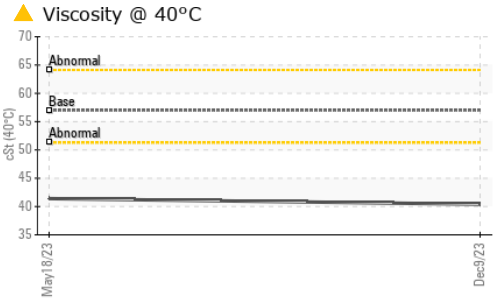
OIL ANALYSIS REPORT

Ferrous Alloys

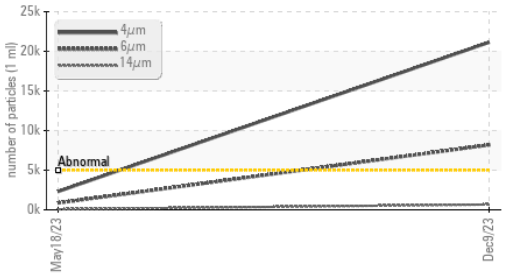
Particle Count



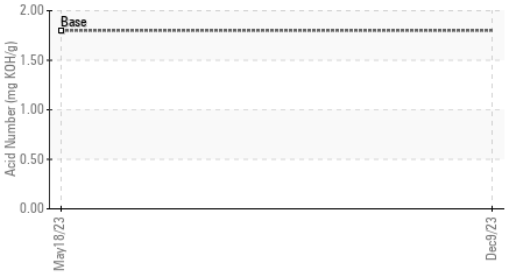
Viscosity @ 40°C



Particle Trend



Acid Number



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **21144**	2312	---
Particles >6µm		ASTM D7647	>1300	▲ **8184**	863	---
Particles >14µm		ASTM D7647	>160	▲ **669**	65	---
Particles >21µm		ASTM D7647	>40	▲ **111**	14	---
Particles >38µm		ASTM D7647	>10	**3**	1	---
Particles >71µm		ASTM D7647	>3	**1**	1	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/17**	18/17/13	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.8	**0.85**	---	---

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	**NONE**	NONE	---
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*	>0.1	**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	57.0	▲ **40.4**	41.4	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **RONI/IRON SHORE EXCAVATING LTD.**
Sample No. : WC0872893 **Recieved** : 14 Dec 2023 100 MACINTOSH BLVD
Lab Number : 02603254 **Diagnosed** : 15 Dec 2023 VAUGHAN, ON
Unique Number : 5696339 **Diagnostician** : Kevin Marson CA L4K 4P3
Test Package : MOBCE (Additional Tests: PQ) 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: