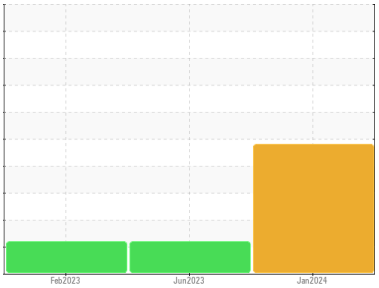
PROBLEM SUMMARY

Area
RONI
Machine Id
882
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (--- GAL)

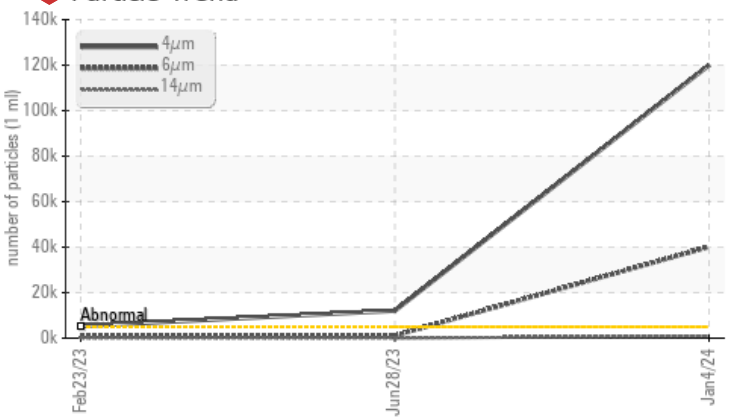
Sample Rating Trend



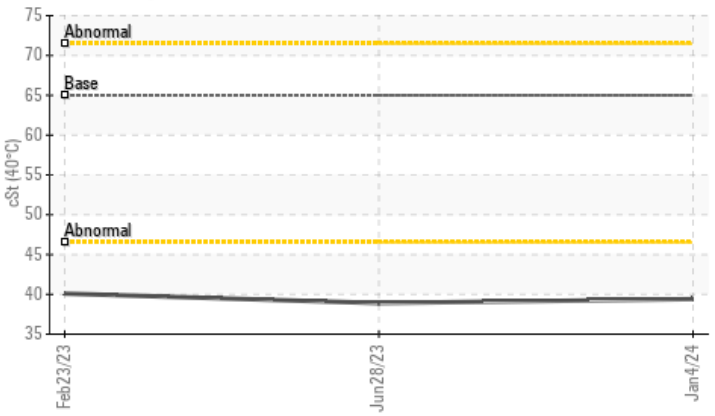
ISO

COMPONENT CONDITION SUMMARY

Particle Trend



Viscosity @ 40°C



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	ABNORMAL	ABNORMAL
Particles >4µm		ASTM D7647	>5000	**120021**	12093	5353
Particles >6µm		ASTM D7647	>1300	**40127**	1117	1166
Particles >14µm		ASTM D7647	>160	**921**	27	66
Particles >21µm		ASTM D7647	>40	**96**	7	18
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**24/23/17**	21/17/12	20/17/13
Visc @ 40°C	cSt	ASTM D7279(m)	65	**39.4**	38.9	40.1

Customer Id: RONVAU
Sample No.: WC0888508
Lab Number: 02609427
Test Package: MOBCE

To manage this report scan the QR code

To discuss the diagnosis or test data:
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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	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
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

28 Jun 2023 Diag: Kevin Marson

VISCOSITY

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.An increase in the iron level is noted. All other component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

23 Feb 2023 Diag: Kevin Marson

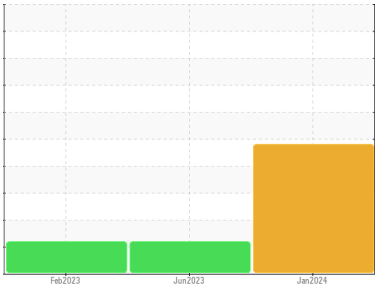
VISCOSITY

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
RONI
Machine Id
882
Component
Hydraulic System
Fluid
JOHN DEERE HYDRAU (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0888508**	LH0261445	LH0228983
Sample Date		Client Info		**04 Jan 2024**	28 Jun 2023	23 Feb 2023
Machine Age	hrs	Client Info		**0**	1147	500
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**SEVERE**	ABNORMAL	ABNORMAL

CONTAMINATION		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	**19**	20	14
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)		**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	**2**	1	1
Lead	ppm	ASTM D5185(m)	>10	**<1**	2	1
Copper	ppm	ASTM D5185(m)	>75	**9**	12	10
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

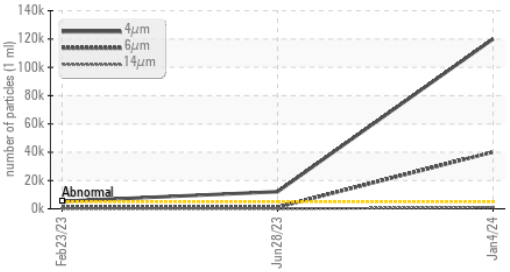
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	<1
Barium	ppm	ASTM D5185(m)		**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)		**0**	<1	<1
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**3**	4	3
Calcium	ppm	ASTM D5185(m)	87	**77**	87	92
Phosphorus	ppm	ASTM D5185(m)	727	**509**	660	687
Zinc	ppm	ASTM D5185(m)	900	**635**	808	818
Sulfur	ppm	ASTM D5185(m)	1500	**1276**	1523	1595
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**4**	4	3
Sodium	ppm	ASTM D5185(m)		**<1**	1	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	2	2

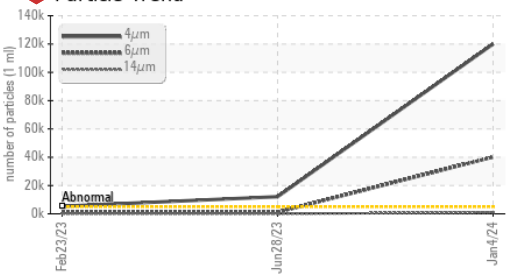
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**120021**	12093	5353
Particles >6µm		ASTM D7647	>1300	**40127**	1117	1166
Particles >14µm		ASTM D7647	>160	**921**	27	66
Particles >21µm		ASTM D7647	>40	**96**	7	18
Particles >38µm		ASTM D7647	>10	**5**	1	0
Particles >71µm		ASTM D7647	>3	**2**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**24/23/17**	21/17/12	20/17/13

OIL ANALYSIS REPORT

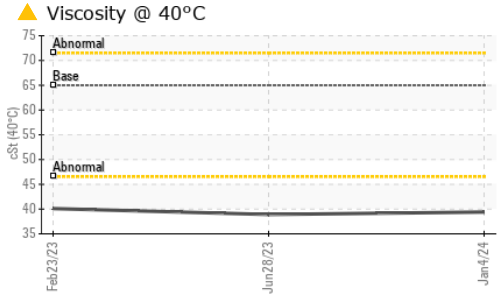
Particle Trend



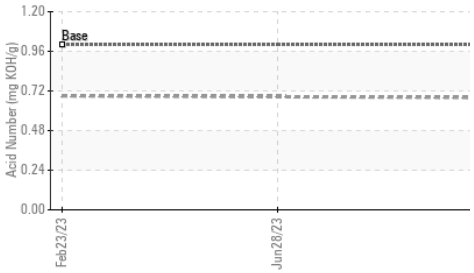
Particle Trend



Viscosity @ 40°C



Acid Number

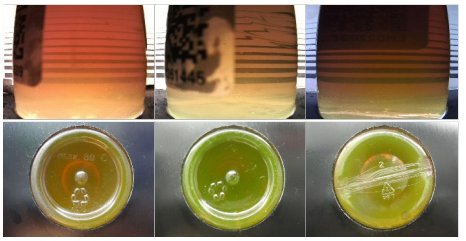


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	1.0	**0.68**	---	0.69

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	**VLITE**	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	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

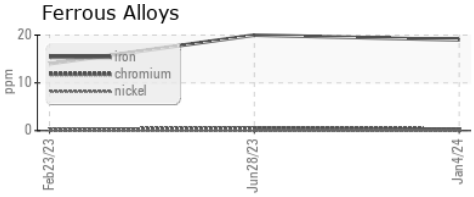
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	65	▲ **39.4**	▲ 38.9	▲ 40.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

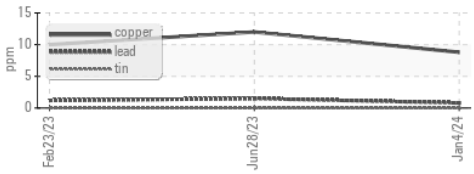


GRAPHS

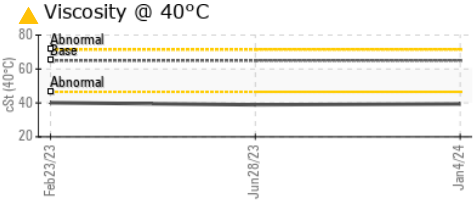
Ferrous Alloys



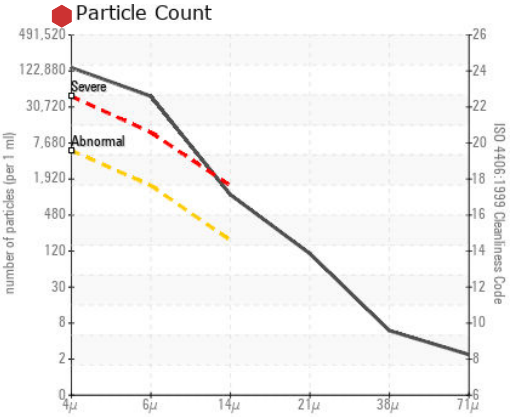
Non-ferrous Metals



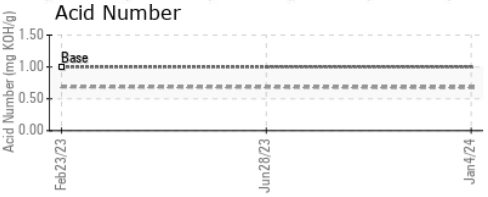
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **RONI/IRON SHORE EXCAVATING LTD.**
Sample No. : WC0888508 **Recieved** : 17 Jan 2024 100 MACINTOSH BLVD
Lab Number : 02609427 **Diagnosed** : 19 Jan 2024 VAUGHAN, ON
Unique Number : 5710513 **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: