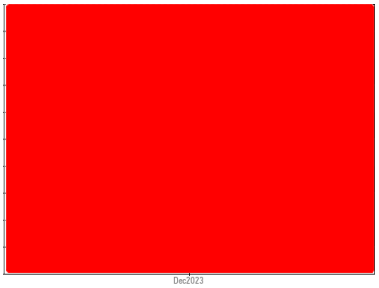
PROBLEM SUMMARY

Sample Rating Trend

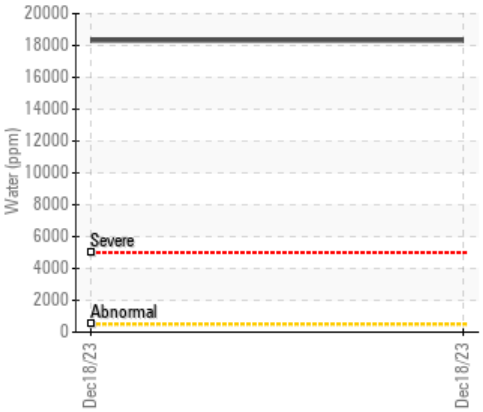


WATER

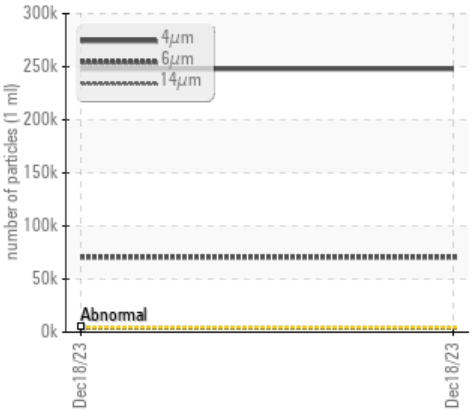
Machine Id
1300L TANK
Component
2 Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (1300 LTR)

COMPONENT CONDITION SUMMARY

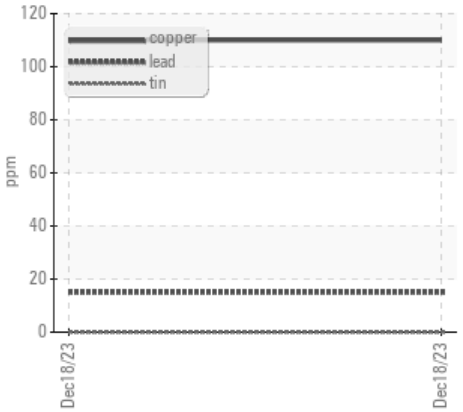
Water (KF)



Particle Trend



Non-ferrous Metals



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We advise that you check all areas where contaminants can enter the system. We advise that you follow the water drain-off procedure for this component, 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. We recommend that you change the oil. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Copper	ppm	ASTM D5185(m)	>20	▲ **110**	---	---
Water	%	ASTM D6304*	>0.05	⬢ **1.832**	---	---
ppm Water	ppm	ASTM D6304*	>500	⬢ **18324**	---	---
Particles >4µm		ASTM D7647	>5000	⬢ **247938**	---	---
Particles >6µm		ASTM D7647	>1300	⬢ **70658**	---	---
Particles >14µm		ASTM D7647	>160	⬢ **3923**	---	---
Particles >21µm		ASTM D7647	>40	⬢ **803**	---	---
Particles >38µm		ASTM D7647	>10	▲ **37**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	⬢ **25/23/19**	---	---
Precipitate	scalar	Visual*	NONE	▲ **LIGHT**	---	---
Appearance	scalar	Visual*	NORML	▲ **MILKY**	---	---
Emulsified Water	scalar	Visual*	>0.05	▲ **1%**	---	---
Free Water	scalar	Visual*		▲ **5%**	---	---

Customer Id: GOONAP
Sample No.: WC
Lab Number: 02604178
Test Package: IND 2

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

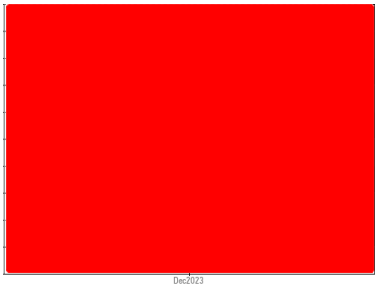
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you change the oil.
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.
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.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
1300L TANK
Component
2 Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (1300 LTR)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. We advise that you check all areas where contaminants can enter the system. We advise that you follow the water drain-off procedure for this component, 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. We recommend that you change the oil. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Copper ppm levels are abnormal. Oil cooler core leaching or motor piston wear is indicated.

Contamination

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

Fluid Condition

The white residue present in the sample is oil additive precipitate. The AN level is acceptable for this fluid.

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

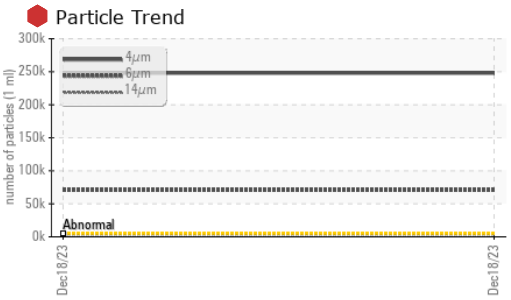
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	---	---
Iron	ppm	ASTM D5185(m)	>20	**41**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>20	**2**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**6**	---	---
Lead	ppm	ASTM D5185(m)	>20	**15**	---	---
Copper	ppm	ASTM D5185(m)	>20	▲ **110**	---	---
Tin	ppm	ASTM D5185(m)	>20	**0**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

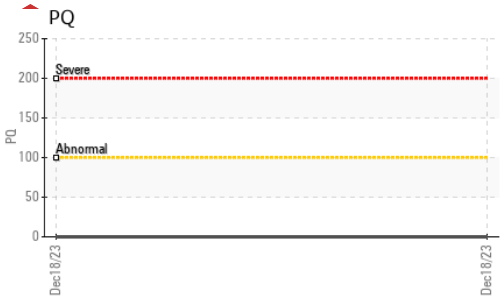
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**1**	---	---
Barium	ppm	ASTM D5185(m)	5	**<1**	---	---
Molybdenum	ppm	ASTM D5185(m)	5	**0**	---	---
Manganese	ppm	ASTM D5185(m)		**<1**	---	---
Magnesium	ppm	ASTM D5185(m)	25	**11**	---	---
Calcium	ppm	ASTM D5185(m)	200	**53**	---	---
Phosphorus	ppm	ASTM D5185(m)	300	**676**	---	---
Zinc	ppm	ASTM D5185(m)	370	**569**	---	---
Sulfur	ppm	ASTM D5185(m)	2500	**2261**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

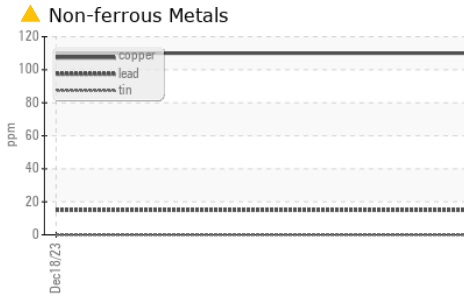
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**14**	---	---
Sodium	ppm	ASTM D5185(m)		**2**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Water	%	ASTM D6304*	>0.05	● **1.832**	---	---
ppm Water	ppm	ASTM D6304*	>500	● **18324**	---	---

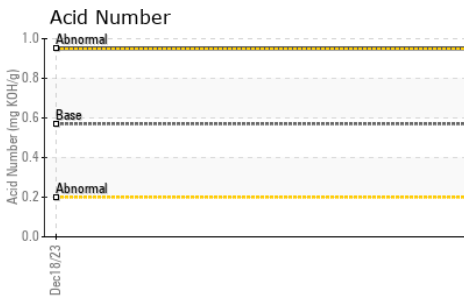
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	● **247938**	---	---
Particles >6µm		ASTM D7647	>1300	● **70658**	---	---
Particles >14µm		ASTM D7647	>160	● **3923**	---	---
Particles >21µm		ASTM D7647	>40	● **803**	---	---
Particles >38µm		ASTM D7647	>10	▲ **37**	---	---
Particles >71µm		ASTM D7647	>3	**2**	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	● **25/23/19**	---	---

OIL ANALYSIS REPORT









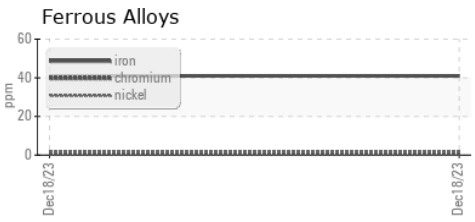
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.57	**0.95**	---	---

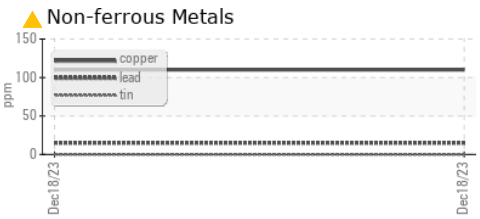
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	▲ **LIGHT**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	▲ **MILKY**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.05	▲ **1%**	---	---
Free Water	scalar	Visual*		▲ **5%**	---	---

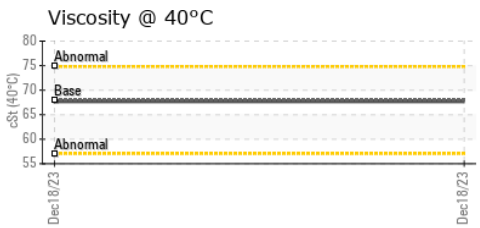
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	**67.7**	---	---

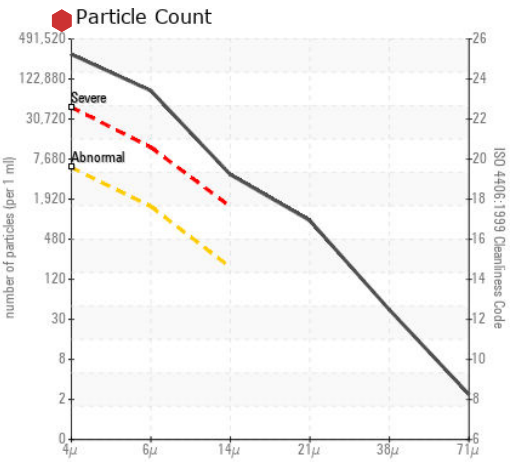
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

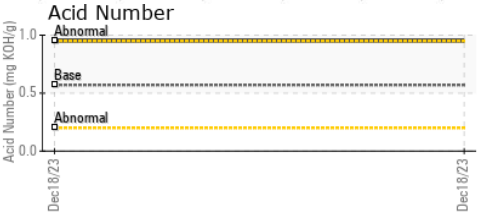
GRAPHS











ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Recieved** : 19 Dec 2023
Lab Number : 02604178 **Diagnosed** : 21 Dec 2023
Unique Number : 5697263 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: Bottom, KF, PQ, TAN Man)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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