

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

03 Oct 2022 Diag: Don Baldrige

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



01 Aug 2022 Diag: Don Baldrige

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view report



01 Jul 2022 Diag: Don Baldrige

NORMAL



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view report





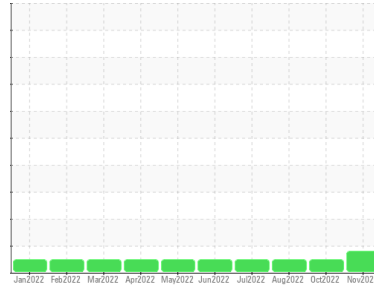
OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Machine Id
HSS - HIGH PRESS
Component
Hydraulic System
Fluid
TOTAL AZOLLA ZS22 (5 GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates for target ISO and system capacity.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 6 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0700549	WC0700544	WC0700532
Sample Date	Client Info		01 Nov 2022	03 Oct 2022	01 Aug 2022
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	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	4	<1	<1
Chromium	ppm	ASTM D5185m >20	0	0	0
Nickel	ppm	ASTM D5185m >20	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >20	0	<1	<1
Lead	ppm	ASTM D5185m >20	0	<1	<1
Copper	ppm	ASTM D5185m >20	1	<1	1
Tin	ppm	ASTM D5185m >20	0	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	2
Barium	ppm	ASTM D5185m	2	0	<1
Molybdenum	ppm	ASTM D5185m	0	<1	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	<1	<1
Calcium	ppm	ASTM D5185m	47	49	48
Phosphorus	ppm	ASTM D5185m	313	330	319
Zinc	ppm	ASTM D5185m	415	422	407
Sulfur	ppm	ASTM D5185m	1006	986	868

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	1	<1	<1
Sodium	ppm	ASTM D5185m	0	<1	<1
Potassium	ppm	ASTM D5185m >20	0	<1	0

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 6634	7280	4646
Particles >6µm	ASTM D7647	>640	498	836	486
Particles >14µm	ASTM D7647	>80	8	28	13
Particles >21µm	ASTM D7647	>20	1	3	2
Particles >38µm	ASTM D7647	>4	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 20/16/10	20/17/12	19/16/11

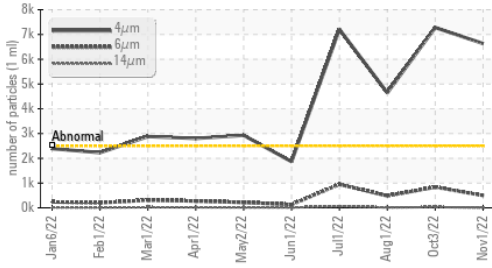
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.54	0.45	0.46

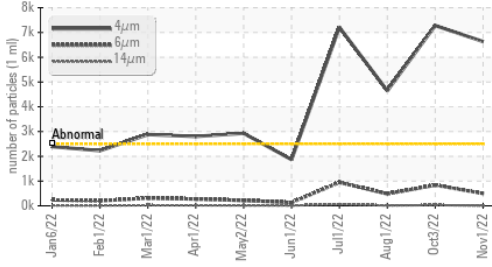


OIL ANALYSIS REPORT

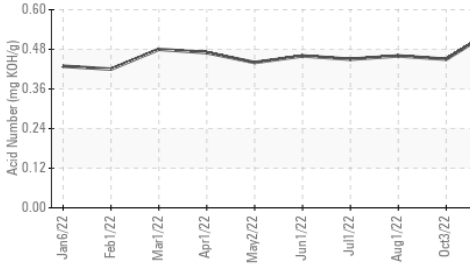
▲ Particle Trend



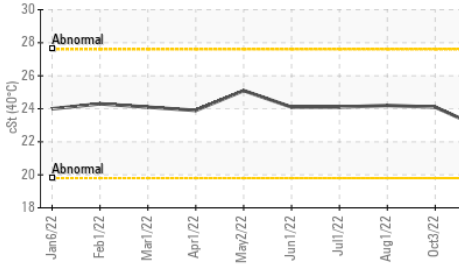
▲ Particle Trend



Acid Number



Viscosity @ 40°C



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	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

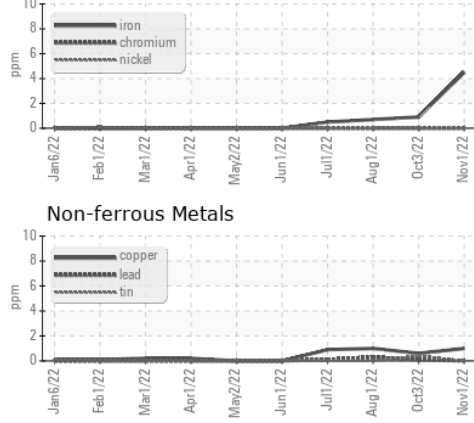
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	22.8	24.1	24.2

SAMPLE IMAGES

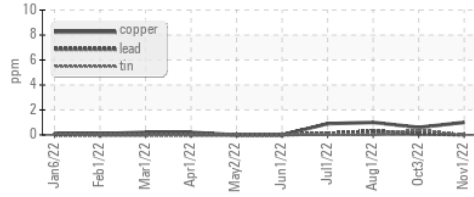


GRAPHS

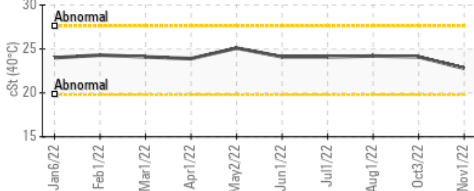
Ferrous Alloys



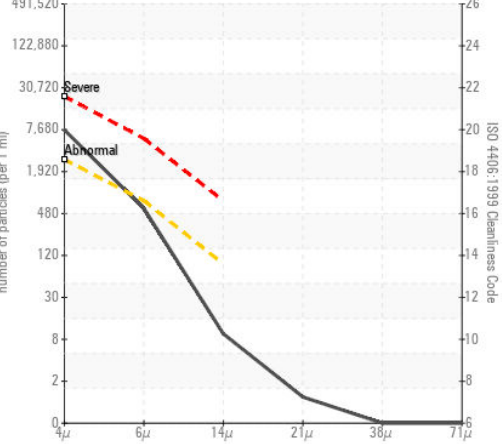
Non-ferrous Metals



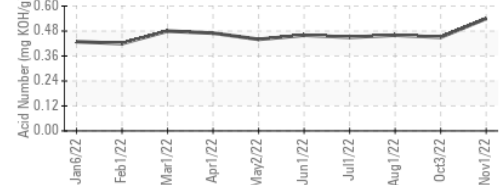
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0700549
 Lab Number : 05682756
 Unique Number : 10202328
 Test Package : PLANT

HAWE HYDRAULICS - HUNTERVILLE
 13020 JAMESBURG DR SUITE A
 HUNTERVILLE, NC
 US 28078
 Contact: Kristina Smith
 k.smith@hawe.com
 T: (704)927-5610
 F: (704)509-6302

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.

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