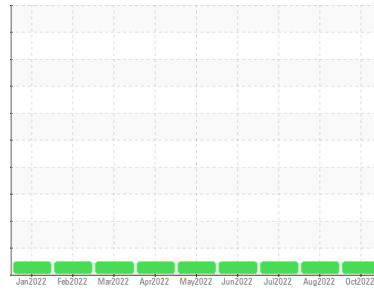




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**HSS - HIGH PRESS**  
 Component  
**Hydraulic System**  
 Fluid  
**TOTAL AZOLLA ZS 22 (5 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

### 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		<b>WC0700544</b>	WC0700532	WC0700529
Sample Date	Client Info		<b>03 Oct 2022</b>	01 Aug 2022	01 Jul 2022
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

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

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	2	1
Barium	ppm	ASTM D5185m	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185m	<b>49</b>	48	49
Phosphorus	ppm	ASTM D5185m	<b>330</b>	319	333
Zinc	ppm	ASTM D5185m	<b>422</b>	407	412
Sulfur	ppm	ASTM D5185m	<b>986</b>	868	990

## CONTAMINANTS

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

## FLUID CLEANLINESS

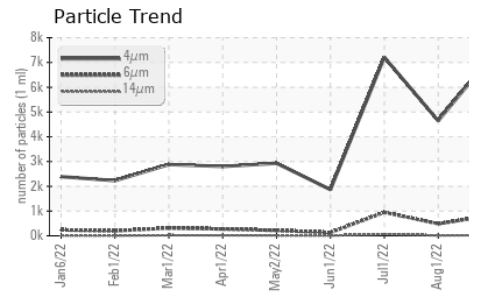
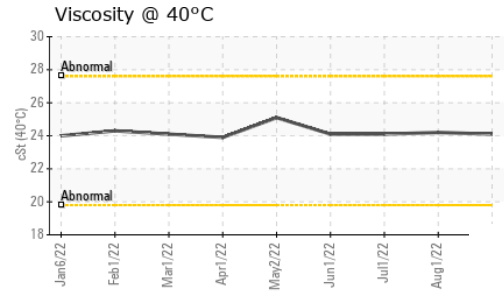
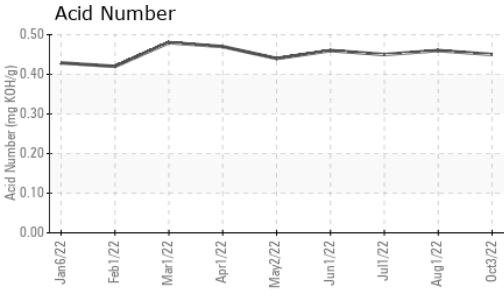
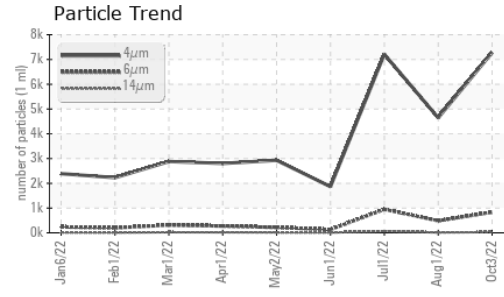
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>7280</b>	4646	7210
Particles >6µm	ASTM D7647	>2500	<b>836</b>	486	948
Particles >14µm	ASTM D7647	>160	<b>28</b>	13	62
Particles >21µm	ASTM D7647	>40	<b>3</b>	2	15
Particles >38µm	ASTM D7647	>10	<b>0</b>	0	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/18/14	<b>20/17/12</b>	19/16/11	20/17/13

## FLUID DEGRADATION

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



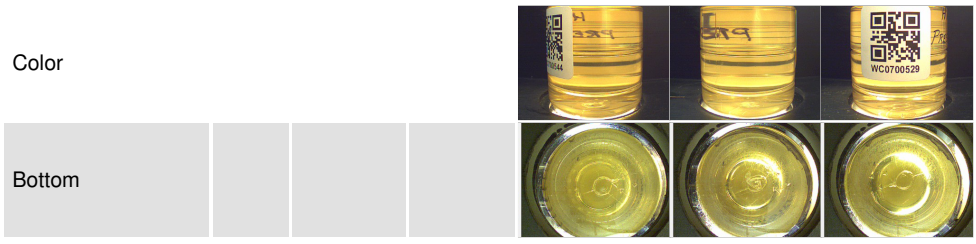
# OIL ANALYSIS REPORT



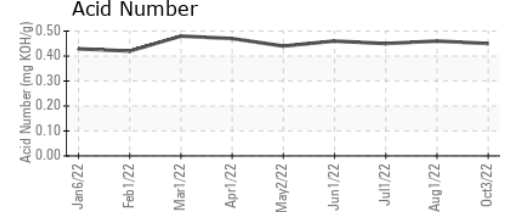
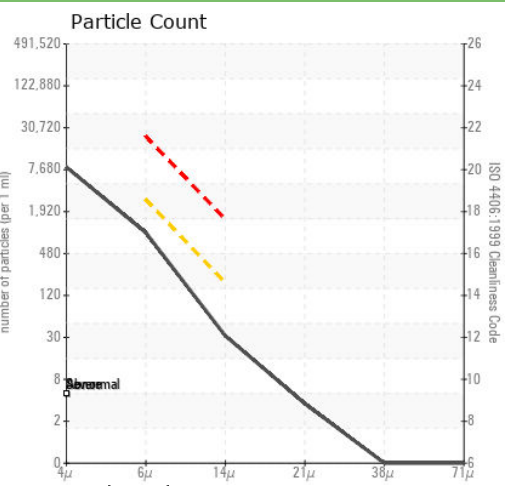
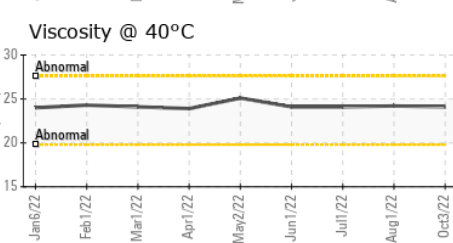
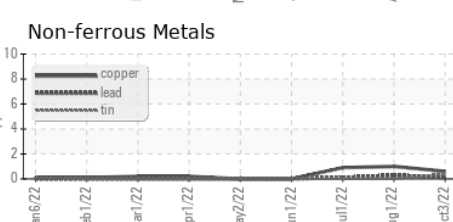
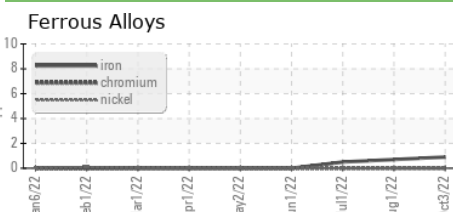
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	24.1	24.2	24.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0700544  
 Lab Number : 05657279  
 Unique Number : 10156831  
 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)