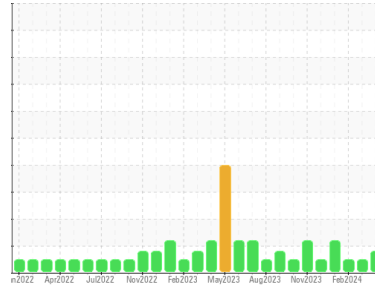




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



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

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 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			WC0921218	WC0791153	WC0791148
Sample Date	Client Info			01 Apr 2024	01 Mar 2024	01 Feb 2024
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				ATTENTION	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	2	<1	<1
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>20	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	0	0
Lead	ppm	ASTM D5185m	>20	1	0	0
Copper	ppm	ASTM D5185m	>20	3	<1	<1
Tin	ppm	ASTM D5185m	>20	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<1	0	<1
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		2	0	0
Calcium	ppm	ASTM D5185m		52	49	40
Phosphorus	ppm	ASTM D5185m		347	327	314
Zinc	ppm	ASTM D5185m		410	401	402
Sulfur	ppm	ASTM D5185m		889	892	859

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	3	2	2
Sodium	ppm	ASTM D5185m		0	2	<1
Potassium	ppm	ASTM D5185m	>20	2	<1	2

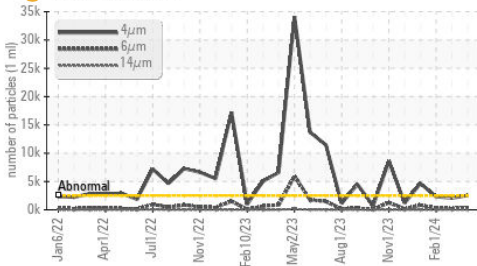
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	2563	2068	2330
Particles >6µm		ASTM D7647	>640	396	203	290
Particles >14µm		ASTM D7647	>80	20	14	12
Particles >21µm		ASTM D7647	>20	3	3	3
Particles >38µm		ASTM D7647	>4	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	19/16/11	18/15/11	18/15/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.44	0.47	0.43

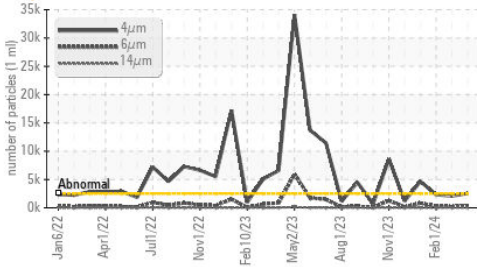


OIL ANALYSIS REPORT

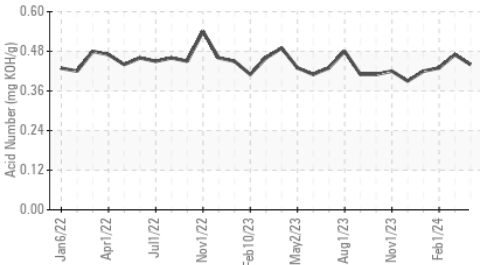
Particle Trend



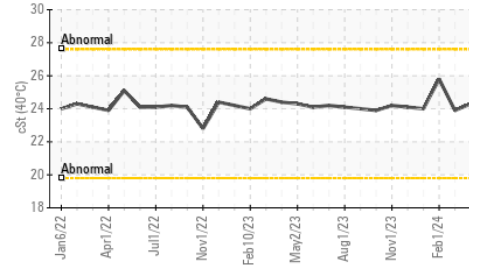
Particle Trend



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	24.3	23.9	25.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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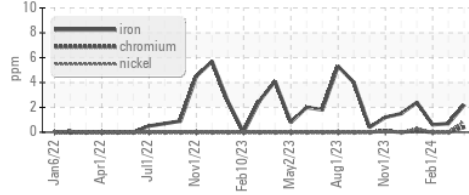
Color



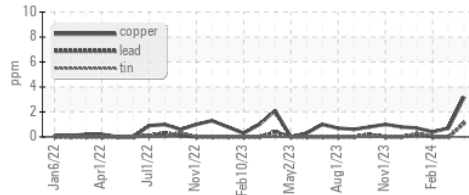
Bottom

GRAPHS

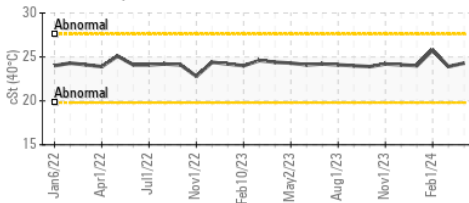
Ferrous Alloys



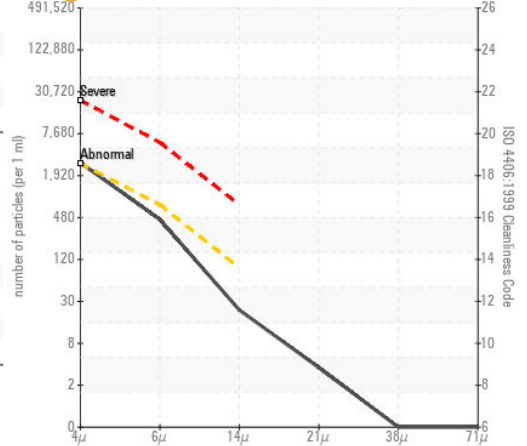
Non-ferrous Metals



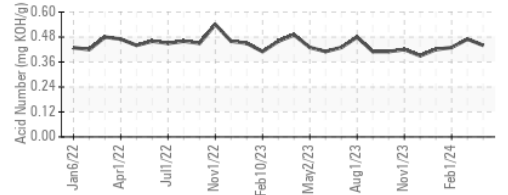
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0921218
 Lab Number : 06136326
 Unique Number : 10955791
 Test Package : IND 2

Received : 02 Apr 2024
 Tested : 03 Apr 2024
 Diagnosed : 03 Apr 2024 - Wes Davis

HAWE HYDRAULICS - HUNTERSVILLE
 13020 JAMESBURG DR SUITE A
 HUNTERSVILLE, 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)