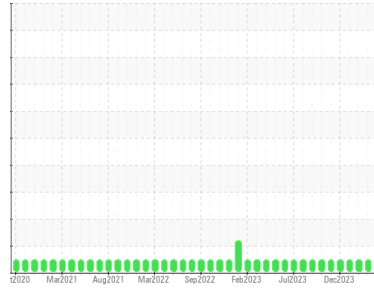




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
HAVE TEST BRANCH PSL/PSV TEST STAND (S/N AV714/1)
 Component
Hydraulic System
 Fluid
TOTAL AZOLLA ZS 22 (300 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is 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			WC0921217	WC0791152	WC0791147
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				NORMAL	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	<1	0	0
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		0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	0	0
Lead	ppm	ASTM D5185m	>20	1	0	0
Copper	ppm	ASTM D5185m	>20	2	<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		0	0	0
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		<1	0	0
Calcium	ppm	ASTM D5185m		61	49	47
Phosphorus	ppm	ASTM D5185m		387	328	334
Zinc	ppm	ASTM D5185m		463	406	442
Sulfur	ppm	ASTM D5185m		1484	879	1273

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

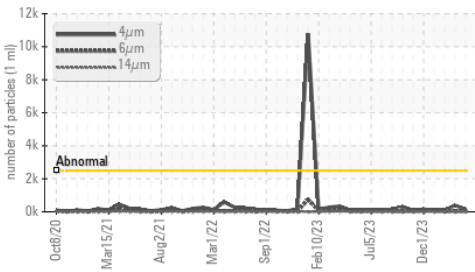
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	157	380	93
Particles >6µm		ASTM D7647	>640	46	46	38
Particles >14µm		ASTM D7647	>80	6	6	5
Particles >21µm		ASTM D7647	>20	1	2	1
Particles >38µm		ASTM D7647	>4	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	14/13/10	16/13/10	14/12/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.46	0.45	0.43

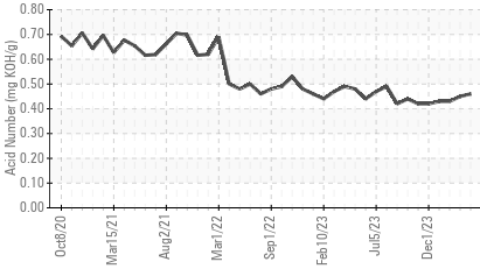


OIL ANALYSIS REPORT

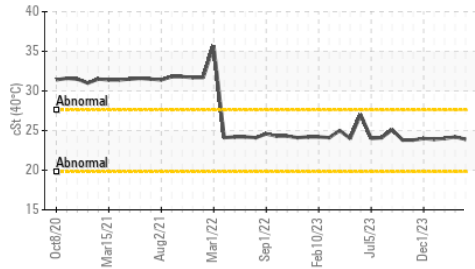
Particle Trend



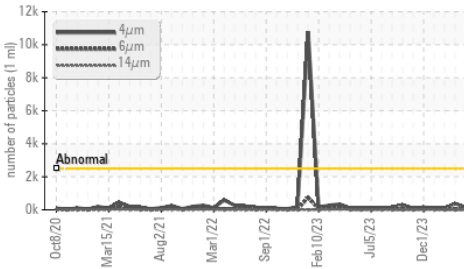
Acid Number



Viscosity @ 40°C



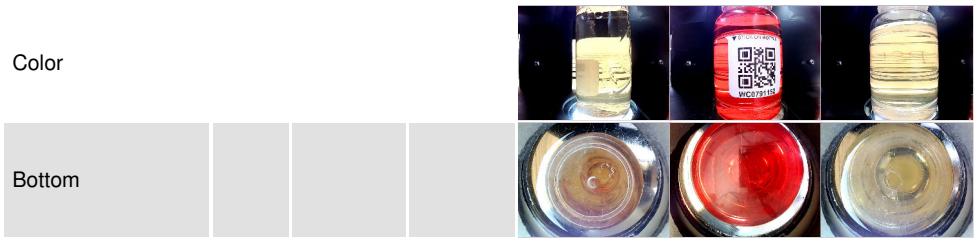
Particle Trend



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

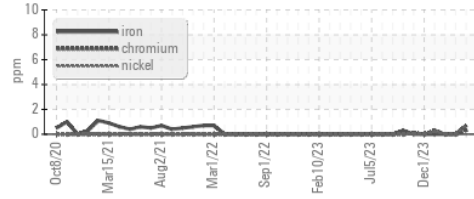
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	23.9	24.2	24.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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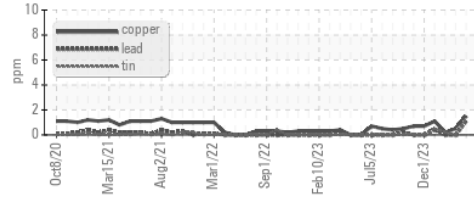


GRAPHS

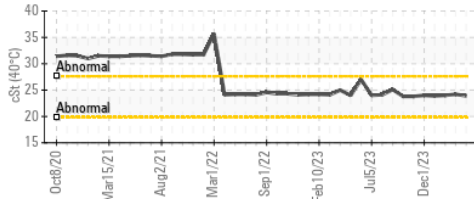
Ferrous Alloys



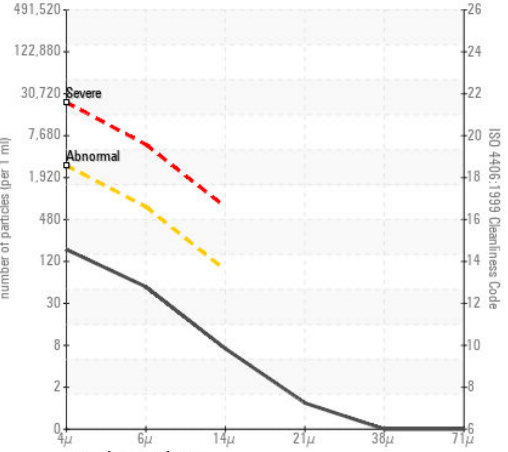
Non-ferrous Metals



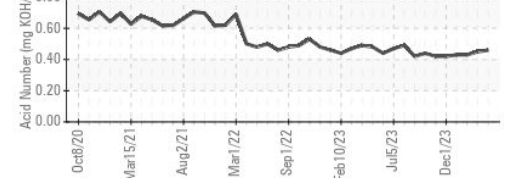
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0921217
Lab Number : 06136327
Unique Number : 10955792
Test Package : IND 2
Received : 02 Apr 2024
Tested : 03 Apr 2024
Diagnosed : 03 Apr 2024 - Wes Davis

HAWE HYDRAULICS - HUNTERVILLE
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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)