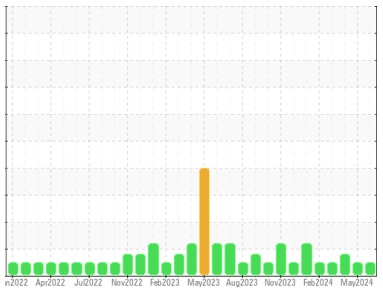
OIL ANALYSIS REPORT

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
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		**WC0921228**	WC0921223	WC0921218
Sample Date		Client Info		**03 Jun 2024**	01 May 2024	01 Apr 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	ATTENTION

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**	1	2
Chromium	ppm	ASTM D5185m	>20	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>20	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**1**	0	2
Lead	ppm	ASTM D5185m	>20	**<1**	0	1
Copper	ppm	ASTM D5185m	>20	**3**	3	3
Tin	ppm	ASTM D5185m	>20	**<1**	0	1
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	<1

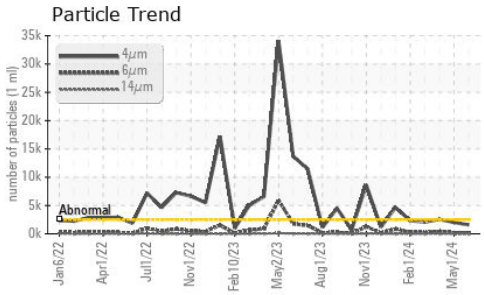
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	<1
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**0**	0	<1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m		**2**	<1	2
Calcium	ppm	ASTM D5185m		**46**	46	52
Phosphorus	ppm	ASTM D5185m		**301**	322	347
Zinc	ppm	ASTM D5185m		**427**	400	410
Sulfur	ppm	ASTM D5185m		**873**	989	889

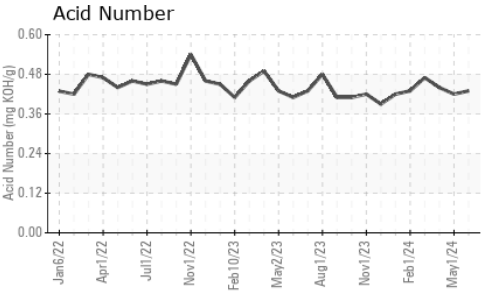
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**3**	3	3
Sodium	ppm	ASTM D5185m		**<1**	1	0
Potassium	ppm	ASTM D5185m	>20	**1**	0	2

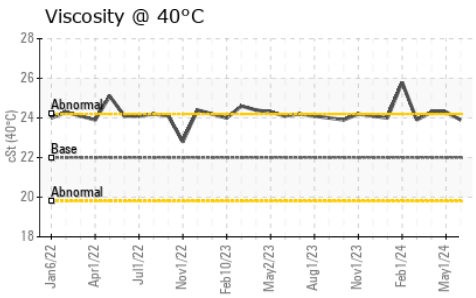
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**1577**	2015	2563
Particles >6µm		ASTM D7647	>640	**168**	160	396
Particles >14µm		ASTM D7647	>80	**9**	9	20
Particles >21µm		ASTM D7647	>20	**4**	2	3
Particles >38µm		ASTM D7647	>4	**0**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**18/15/10**	18/14/10	19/16/11

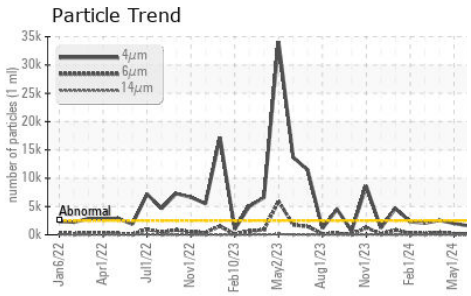
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.43**	0.42	0.44

OIL ANALYSIS REPORT







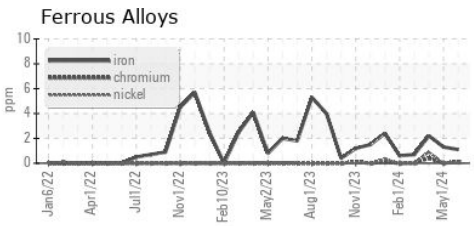


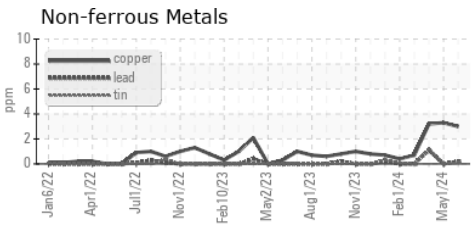
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

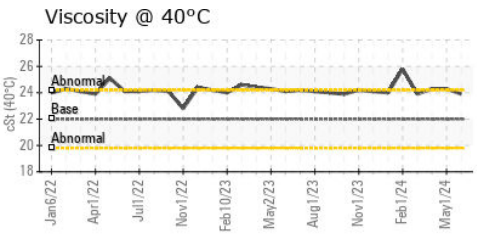
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	22	**23.9**	24.3	24.3

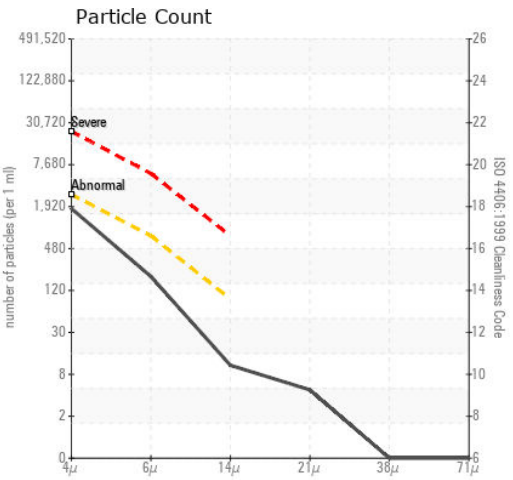
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

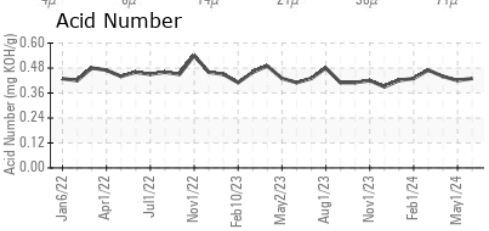
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0921228
Lab Number : 06199077
Unique Number : 11061200
Test Package : IND 2

Received : 04 Jun 2024
Tested : 05 Jun 2024
Diagnosed : 05 Jun 2024 - Wes Davis

Certificate L2367

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)

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