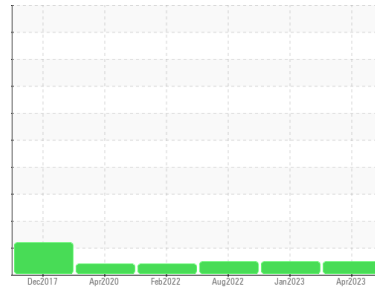




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
423 - CRANE

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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			WC0698830	WC0679392	WC0664452
Sample Date	Client Info			06 Apr 2023	25 Jan 2023	14 Aug 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			Not Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	11	11	10
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	8	8	8
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Antimony	ppm	ASTM D5185m		---	---	---
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	5	0	0	<1
Barium	ppm	ASTM D5185m	5	0	1	0
Molybdenum	ppm	ASTM D5185m	5	0	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	25	6	6	4
Calcium	ppm	ASTM D5185m	200	69	68	67
Phosphorus	ppm	ASTM D5185m	300	393	370	367
Zinc	ppm	ASTM D5185m	370	303	302	289
Sulfur	ppm	ASTM D5185m	2500	3544	3072	2912

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

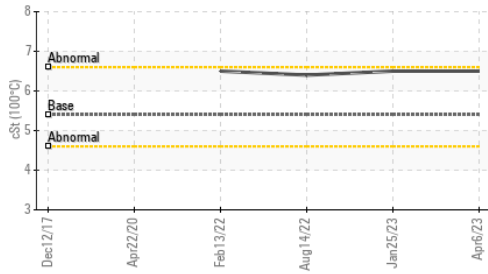
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	4260	961	2523
Particles >6µm		ASTM D7647	>1300	500	104	135
Particles >14µm		ASTM D7647	>160	43	13	22
Particles >21µm		ASTM D7647	>40	13	4	11
Particles >38µm		ASTM D7647	>10	0	2	1
Particles >71µm		ASTM D7647	>3	0	2	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/16/13	17/14/11	19/14/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.26	0.38	0.26

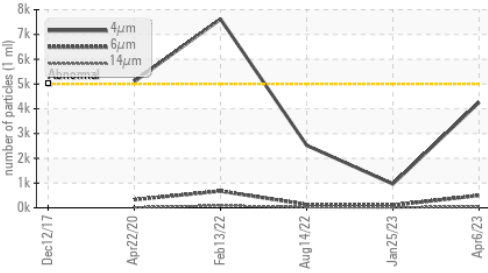


OIL ANALYSIS REPORT

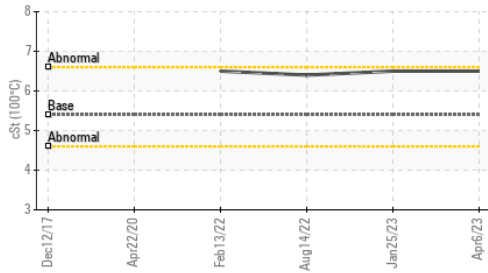
Viscosity @ 100°C



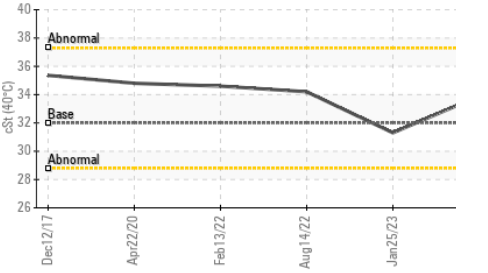
Particle Trend



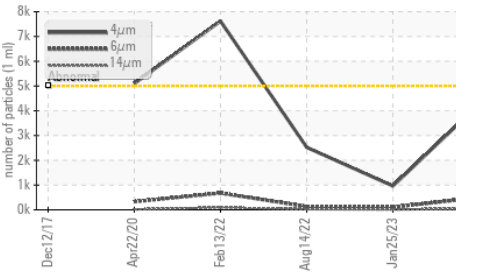
Viscosity @ 100°C



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

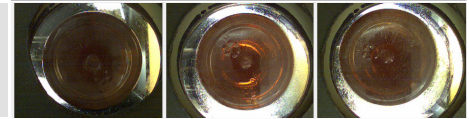
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	31.3	34.2
Visc @ 100°C	cSt	ASTM D445	5.4	6.5	6.4
Viscosity Index (VI)	Scale	ASTM D2270	102	167	141

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

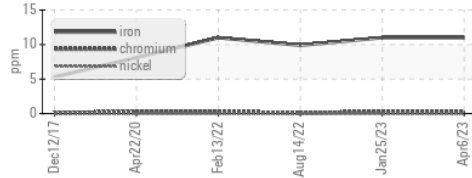


Bottom

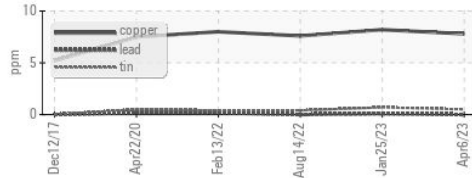


GRAPHS

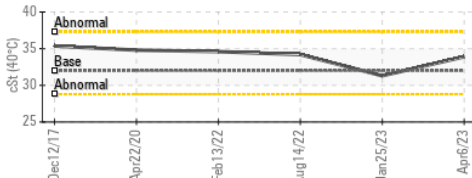
Ferrous Alloys



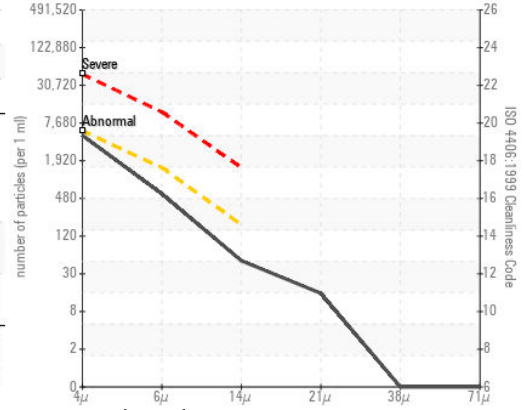
Non-ferrous Metals



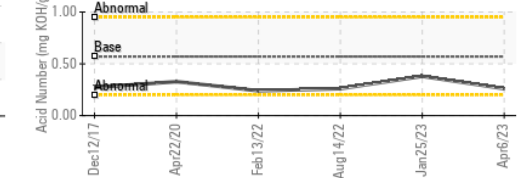
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0698830 **Received** : 14 Aug 2023
Lab Number : 05924242 **Diagnosed** : 15 Aug 2023
Unique Number : 10604189 **Diagnostician** : Wes Davis
Test Package : MOB 2 (Additional Tests: KV100, VI)

HIAB USA - HAGERSTOWN
 148 WESTERN MARYLAND PKWY
 HAGERSTOWN, MD
 US 21740
 Contact: CHUCK WISHARD
 CHUCK.WISHARD@HIAB.COM
 T: (240)625-0045
 F: (301)797-7284

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)