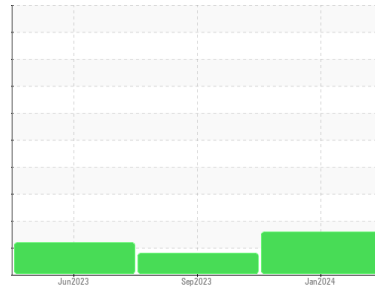




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**WC-9700B-0101-5 Chiller #1**  
 Component  
**Chiller**  
 Fluid  
**{not provided} (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### ▲ Wear

The copper level is abnormal. All other component wear rates are normal.

### ▲ Contamination

There is a moderate amount of silt (particulates < 6 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		<b>WC0836555</b>	WC0836523	WC0784747
Sample Date	Client Info		<b>09 Jan 2024</b>	20 Sep 2023	25 Jun 2023
Machine Age	hrs	Client Info	<b>701911</b>	69443	129111
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>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	<b>1</b>	1	<1
Chromium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >3	<b>2</b>	0	0
Lead	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m >8	<b>▲ 292</b>	▲ 260	▲ 235
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	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>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185m	<b>55</b>	58	64
Phosphorus	ppm	ASTM D5185m	<b>324</b>	288	323
Zinc	ppm	ASTM D5185m	<b>213</b>	236	271
Sulfur	ppm	ASTM D5185m	<b>988</b>	937	1155

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>2</b>	2	1
Sodium	ppm	ASTM D5185m	<b>0</b>	0	2
Potassium	ppm	ASTM D5185m >20	<b>1</b>	<1	0
Water	%	ASTM D6304 >0.01	<b>0.002</b>	0.00	0.006
ppm Water	ppm	ASTM D6304 >100	<b>21</b>	0.00	64.8

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>▲ 12931</b>	2912	3190
Particles >6µm	ASTM D7647	>2500	<b>1947</b>	288	647
Particles >14µm	ASTM D7647	>320	<b>45</b>	13	18
Particles >21µm	ASTM D7647	>80	<b>12</b>	1	2
Particles >38µm	ASTM D7647	>20	<b>4</b>	0	0
Particles >71µm	ASTM D7647	>4	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	<b>▲ 21/18/13</b>	19/15/11	19/17/11

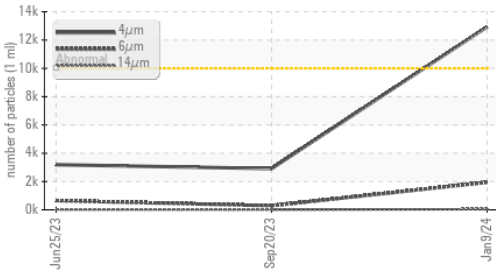
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.278</b>	0.291	0.305

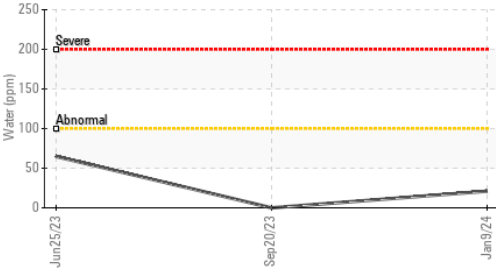


# OIL ANALYSIS REPORT

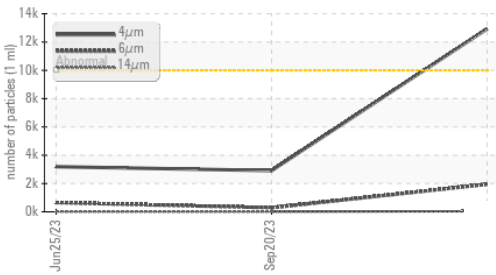
## Particle Trend



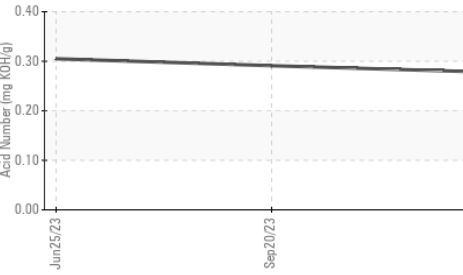
## Water (KF)



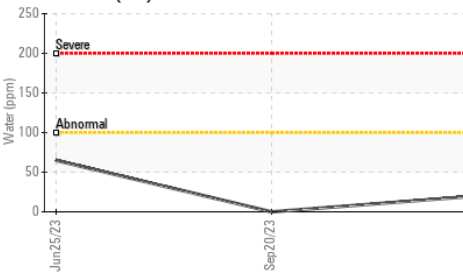
## Particle Trend



## Acid Number



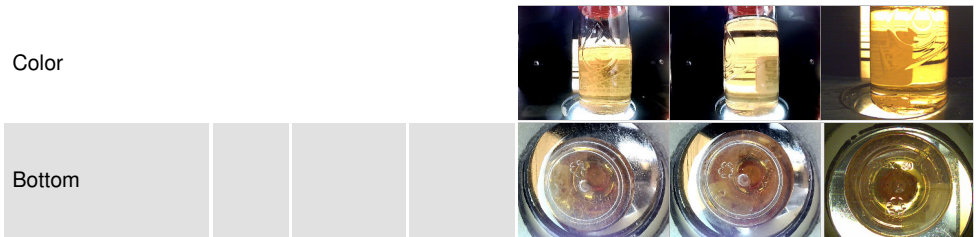
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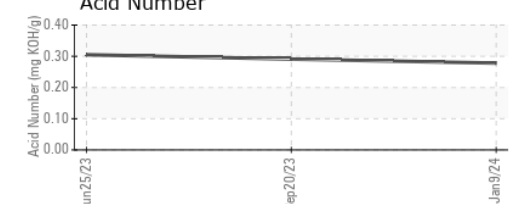
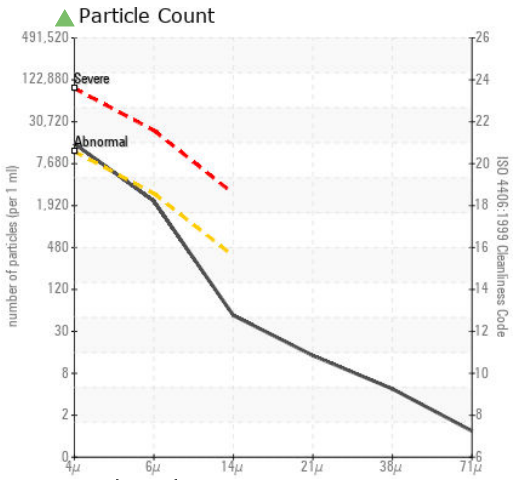
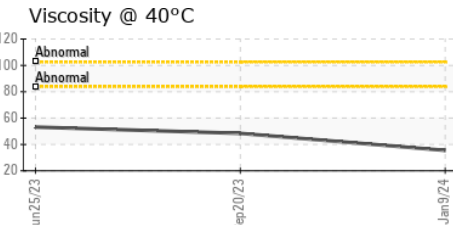
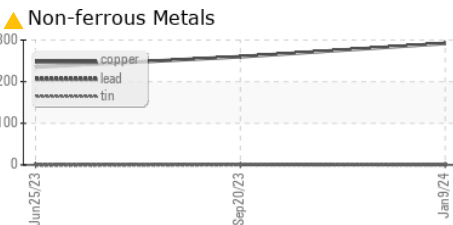
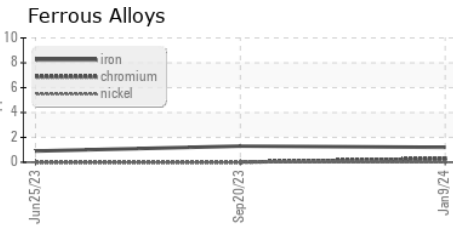
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.01	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	35.5	48.4	53.2

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



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0836555    Recieved : 16 Jan 2024  
 Lab Number : 06061240    Diagnosed : 30 Jan 2024  
 Unique Number : 10832622    Diagnostician : Doug Bogart  
 Test Package : PLANT

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)

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