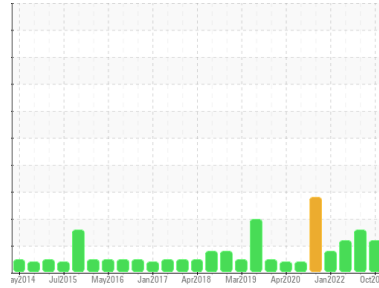




# PROBLEM SUMMARY

## Sample Rating Trend

ISO



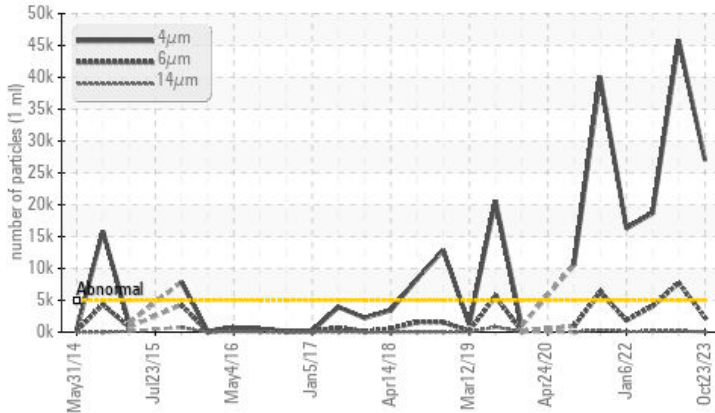
Machine Id  
**HITACHI 001661**

Component  
**Hydraulic System**

Fluid  
**CASTROL UNIVERSAL TRACTOR FLUID (40 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>5000	▲ 26996	▲ 45796	▲ 18670
Particles >6µm	ASTM D7647	>1300	▲ 2319	▲ 7731	▲ 4085
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/18/12	▲ 23/20/15	▲ 21/19/14

Customer Id: CJMHAM  
Sample No.: WC0823943  
Lab Number: 05997334  
Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

## HISTORICAL DIAGNOSIS

### 12 Jun 2023 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 23 Jun 2022 Diag: Doug Bogart

ISO



No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 06 Jan 2022 Diag: Don Baldrige

ISO



No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

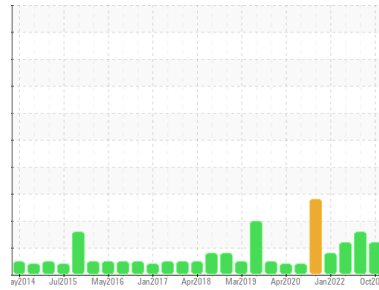
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**HITACHI 001661**

Component  
**Hydraulic System**

Fluid  
**CASTROL UNIVERSAL TRACTOR FLUID (40 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0823943</b>	WC0724667	WC0664829
Sample Date	Client Info		<b>23 Oct 2023</b>	12 Jun 2023	23 Jun 2022
Machine Age	hrs	Client Info	<b>11435</b>	11006	10506
Oil Age	hrs	Client Info	<b>1500</b>	500	569
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>17</b>	13	18
Chromium	ppm	ASTM D5185m >10	<b>7</b>	3	2
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>3</b>	4	6
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >75	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>2</b>	1	2
Barium	ppm	ASTM D5185m	<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m	<b>2</b>	2	2
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>49</b>	49	26
Calcium	ppm	ASTM D5185m	<b>181</b>	191	201
Phosphorus	ppm	ASTM D5185m	<b>281</b>	350	339
Zinc	ppm	ASTM D5185m	<b>378</b>	406	415
Sulfur	ppm	ASTM D5185m	<b>1288</b>	1401	1726

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>10</b>	6	9
Sodium	ppm	ASTM D5185m	<b>0</b>	1	0
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	2

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 26996</b>	▲ 45796	▲ 18670
Particles >6µm	ASTM D7647	>1300	<b>▲ 2319</b>	▲ 7731	▲ 4085
Particles >14µm	ASTM D7647	>160	<b>38</b>	▲ 168	137
Particles >21µm	ASTM D7647	>40	<b>8</b>	21	20
Particles >38µm	ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 22/18/12</b>	▲ 23/20/15	▲ 21/19/14

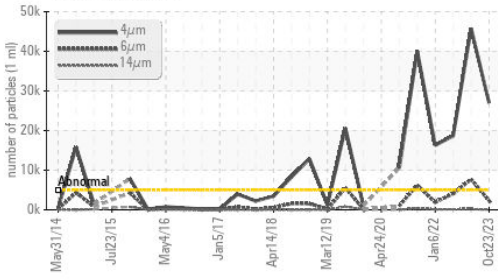
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.43</b>	0.50	0.68

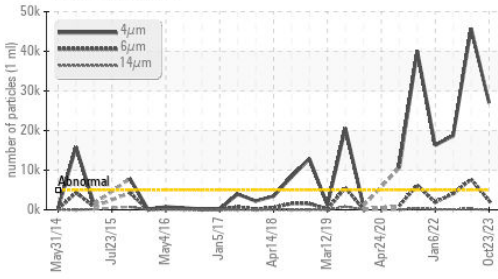


# OIL ANALYSIS REPORT

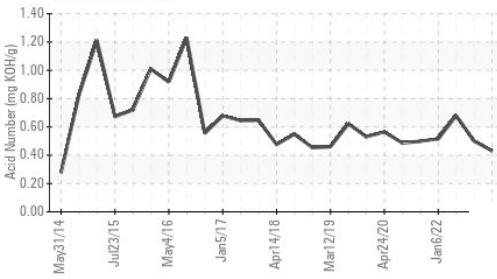
▲ Particle Trend



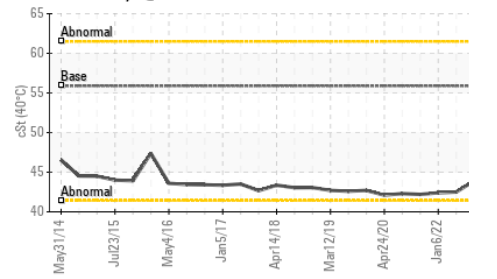
▲ Particle Trend



Acid Number



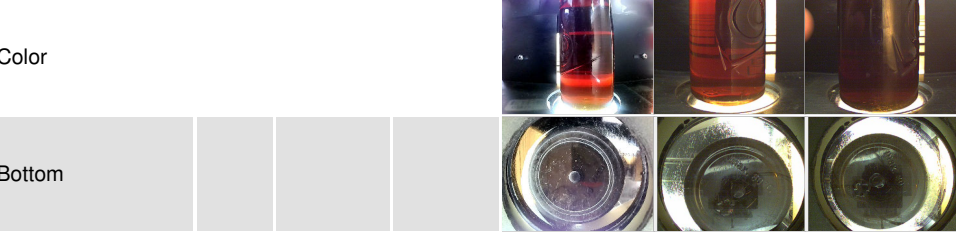
Viscosity @ 40°C



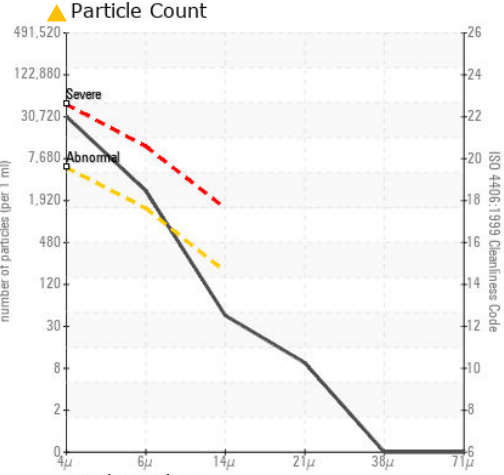
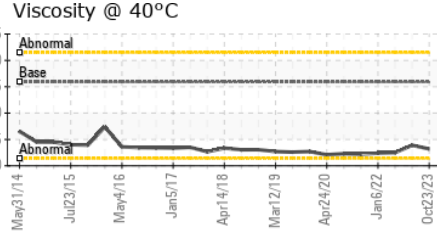
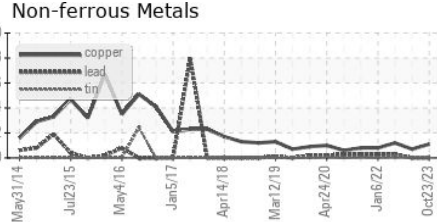
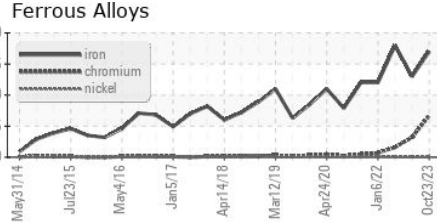
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	55.89	43.2	43.9	42.5

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0823943 **Received** : 02 Nov 2023  
**Lab Number** : 05997334 **Diagnosed** : 05 Nov 2023  
**Unique Number** : 10725694 **Diagnostician** : Don Baldrige  
**Test Package** : CONST

**CJ MILLER LLC**  
 2903 DEDE RD  
 FINKSBURG, MD  
 US 21048  
 Contact: JOE ROSS  
 jross@cjmillerllc.com  
 T: (410)239-8006  
 F: (410)239-1051

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)