



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**HITACHI 001661**

Component  
**Hydraulic System**

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

## RECOMMENDATION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0856125</b>	WC0823943	WC0724667
Sample Date		Client Info		<b>10 Apr 2024</b>	23 Oct 2023	12 Jun 2023
Machine Age	hrs	Client Info		<b>12030</b>	11435	11006
Oil Age	hrs	Client Info		<b>595</b>	1500	500
Filter Age	hrs	Client Info		<b>595</b>	429	500
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

The iron level is abnormal. The chromium level is abnormal.

Iron	ppm	ASTM D5185m	>20	<b>▲ 24</b>	17	13
Chromium	ppm	ASTM D5185m	>10	<b>▲ 12</b>	7	3
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>6</b>	3	4
Lead	ppm	ASTM D5185m	>10	<b>1</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>2</b>	1	<1
Tin	ppm	ASTM D5185m	>10	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

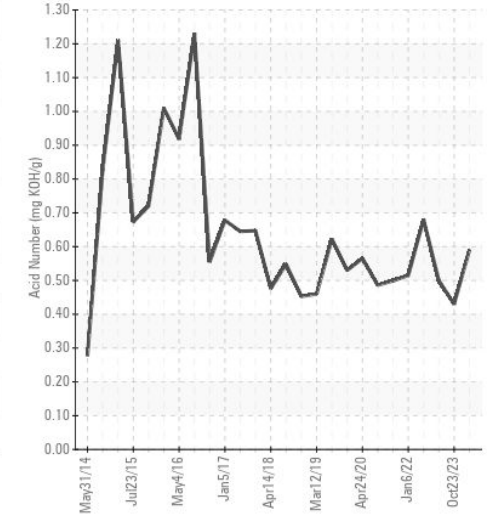
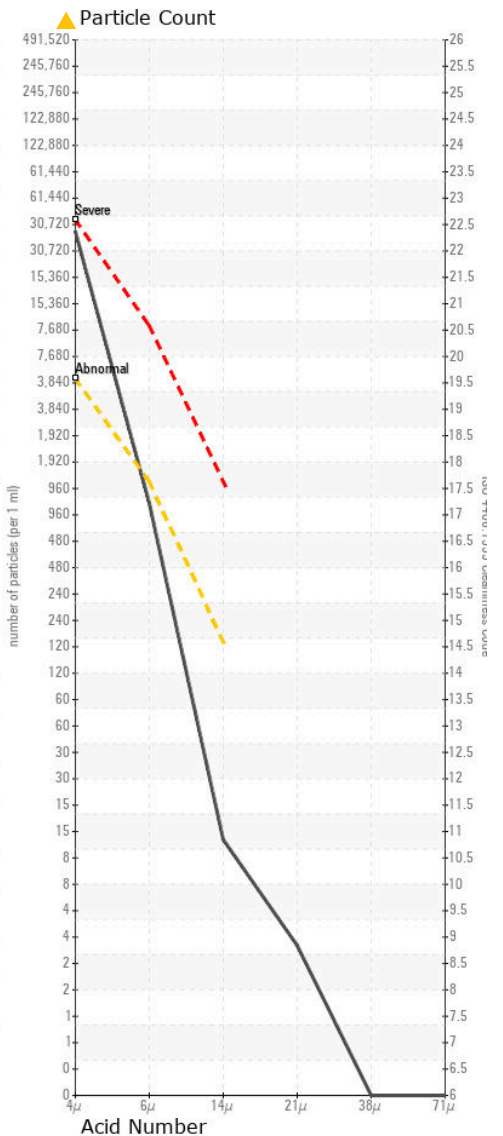
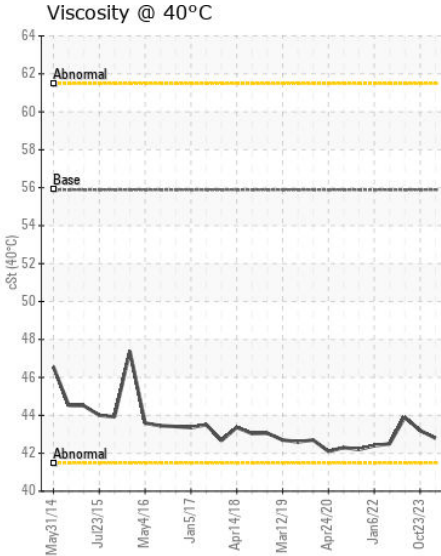
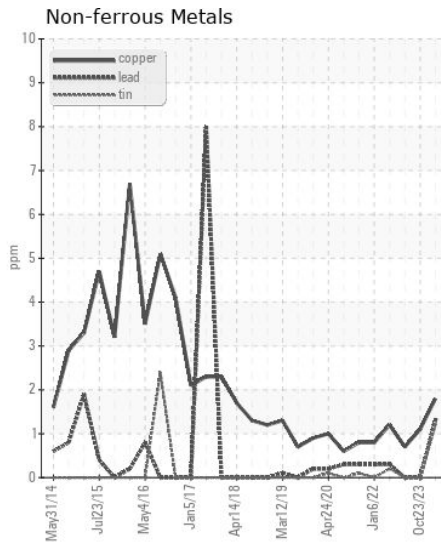
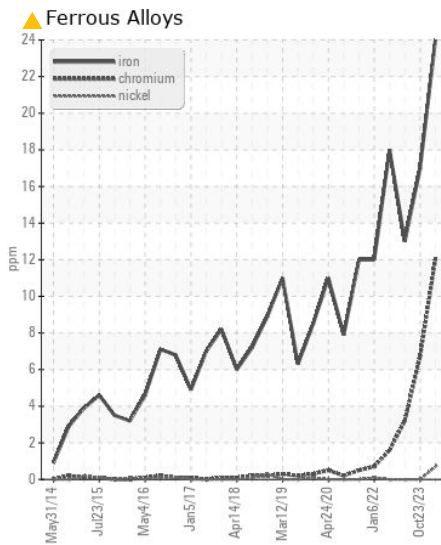
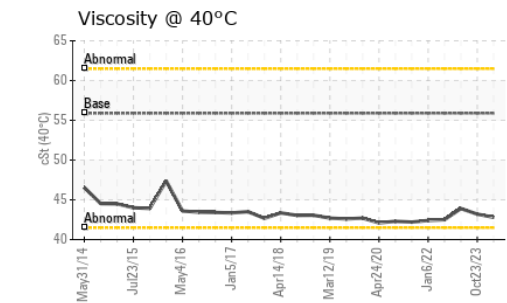
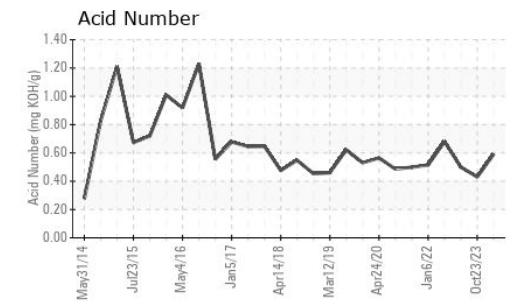
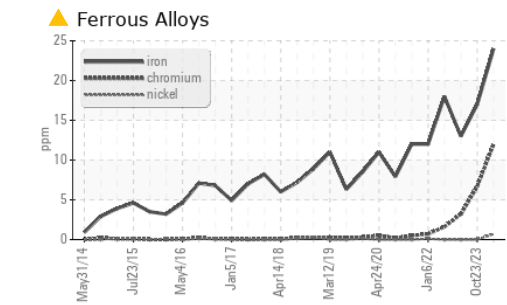
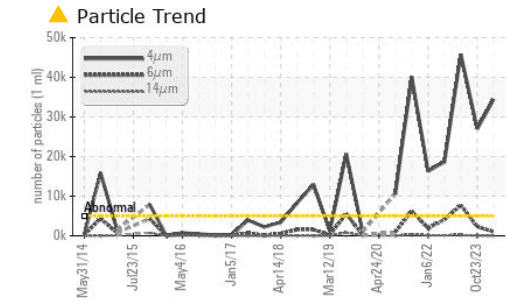
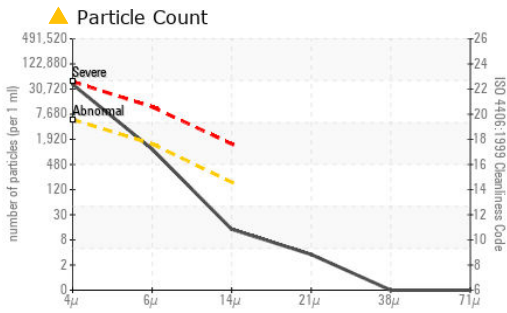
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>13</b>	10	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 34411</b>	▲ 26996	▲ 45796
Particles >6µm		ASTM D7647	>1300	<b>981</b>	● 2319	▲ 7731
Particles >14µm		ASTM D7647	>160	<b>12</b>	38	▲ 168
Particles >21µm		ASTM D7647	>40	<b>3</b>	8	21
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>▲ 22/17/11</b>	▲ 22/18/12	▲ 23/20/15
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	0	1
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	2	1
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	2	2
Manganese	ppm	ASTM D5185m		<b>1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>51</b>	49	49
Calcium	ppm	ASTM D5185m		<b>187</b>	181	191
Phosphorus	ppm	ASTM D5185m		<b>348</b>	281	350
Zinc	ppm	ASTM D5185m		<b>369</b>	378	406
Sulfur	ppm	ASTM D5185m		<b>1193</b>	1288	1401
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.59</b>	0.43	0.50
Visc @ 40°C	cSt	ASTM D445	55.89	<b>42.8</b>	43.2	43.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0856125

Lab Number : 06147273

Unique Number : 10977351

Test Package : CONST

Received : 12 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 16 Apr 2024 - Don Baldrige

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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)