



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR CS563 ROLLER 54244 (S/N 4KN01054)**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 68 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0913584</b>	WCMC172927	WCMC111403
Sample Date		Client Info		<b>10 Jun 2024</b>	15 Apr 2019	18 Jun 2014
Machine Age	hrs	Client Info		<b>2638</b>	763	4145
Oil Age	hrs	Client Info		<b>500</b>	1000	2000
Filter Age	hrs	Client Info		<b>500</b>	1000	1000
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>5</b>	6	19
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	4
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	3
Copper	ppm	ASTM D5185m	>75	<b>46</b>	59	▲ 225
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

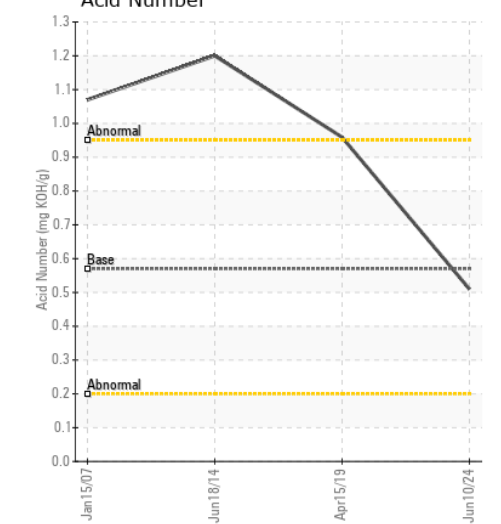
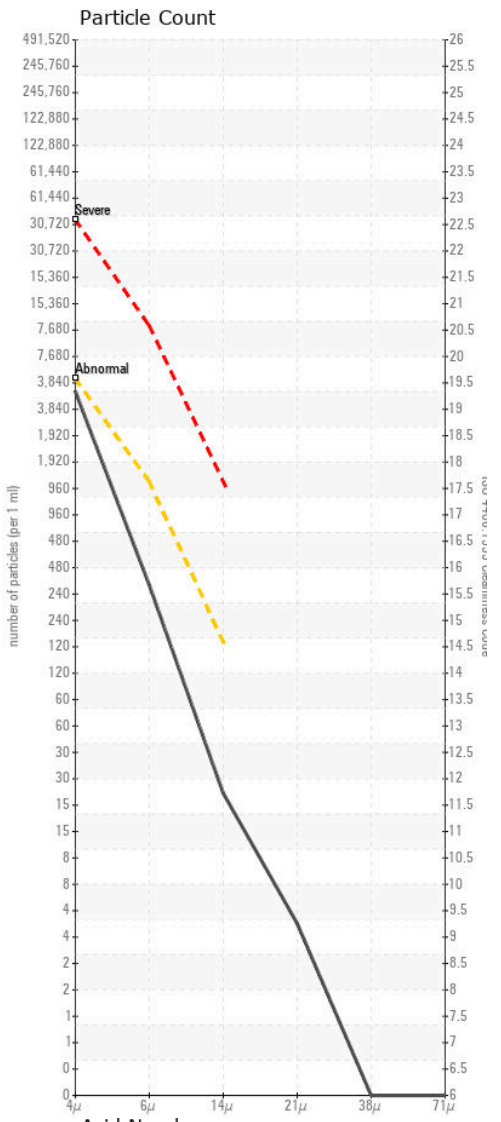
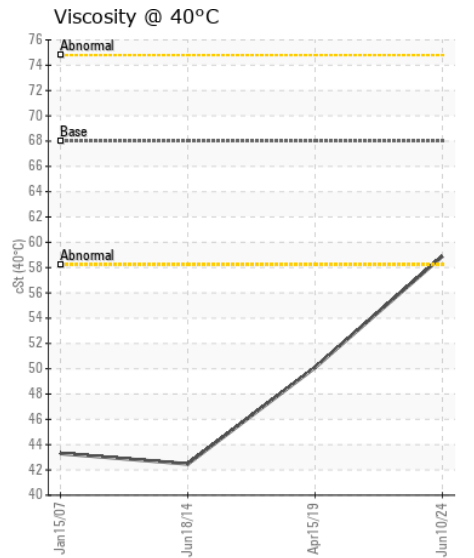
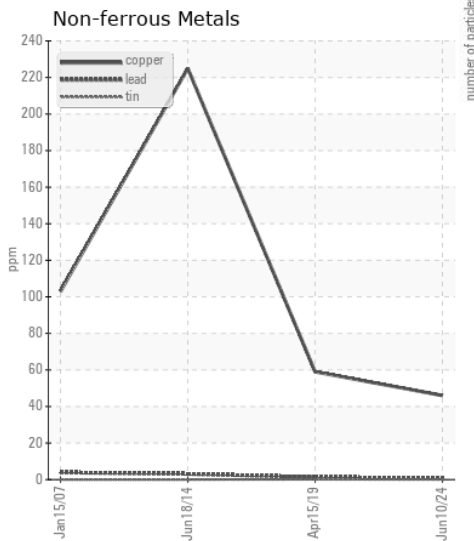
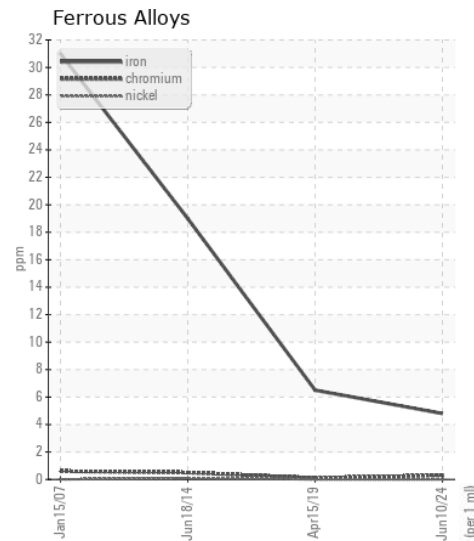
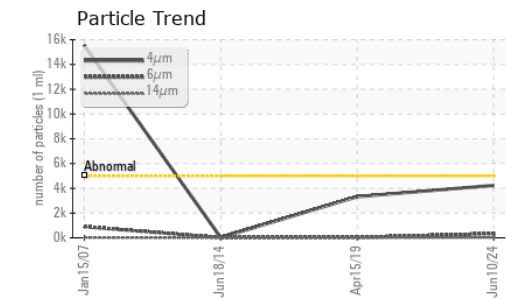
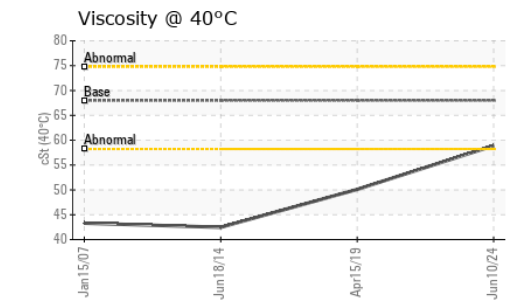
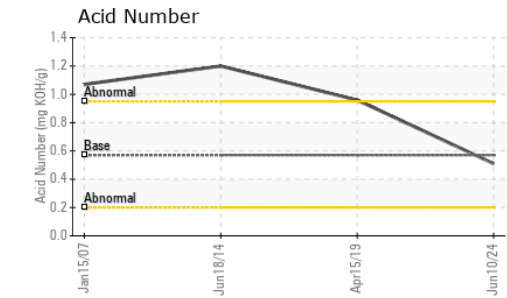
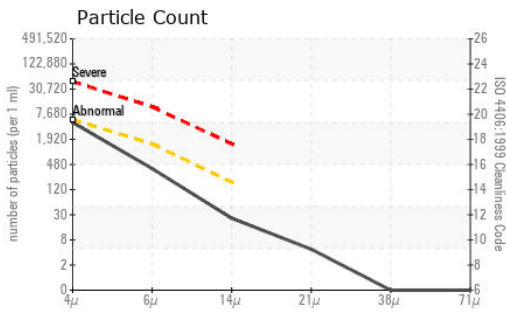
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>1</b>	2	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	7
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>4234</b>	3323	19
Particles >6µm		ASTM D7647	>1300	<b>336</b>	31	10
Particles >14µm		ASTM D7647	>160	<b>22</b>	7	1
Particles >21µm		ASTM D7647	>40	<b>4</b>	2	0
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>19/16/12</b>	19/12/10	11/10/7
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	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>	2	5
Boron	ppm	ASTM D5185m	5	<b>44</b>	132	23
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>10</b>	21	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	25	<b>47</b>	80	23
Calcium	ppm	ASTM D5185m	200	<b>395</b>	1079	2457
Phosphorus	ppm	ASTM D5185m	300	<b>453</b>	730	998
Zinc	ppm	ASTM D5185m	370	<b>556</b>	802	1067
Sulfur	ppm	ASTM D5185m	2500	<b>1406</b>	3760	4518
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.51</b>	0.959	1.20
Visc @ 40°C	cSt	ASTM D445	68	<b>58.9</b>	50.1	42.47



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0913584 **Received** : 19 Jun 2024  
**Lab Number** : 06214562 **Tested** : 20 Jun 2024  
**Unique Number** : 11087426 **Diagnosed** : 21 Jun 2024 - Don Baldrige  
**Test Package** : CONST

**SULLIVAN EASTERN INC**  
 2860 C SLATER RD  
 MORRISVILLE, NC  
 US 27560

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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)