



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR AP1055E 001671 (S/N AP105KTJF00341)**  
Component  
**Hydraulic System**  
Fluid  
**TDH FLUID SAE 75W80 (45 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0800470</b>	WC0823893	WC0757903
Sample Date		Client Info		<b>02 Jan 2024</b>	11 Sep 2023	28 Feb 2023
Machine Age	hrs	Client Info		<b>10131</b>	9786	9036
Oil Age	hrs	Client Info		<b>1050</b>	750	1050
Filter Age	hrs	Client Info		<b>345</b>	750	389
Oil Changed		Client Info		<b>Changed</b>	Not Chngd	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

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

## CONTAMINATION

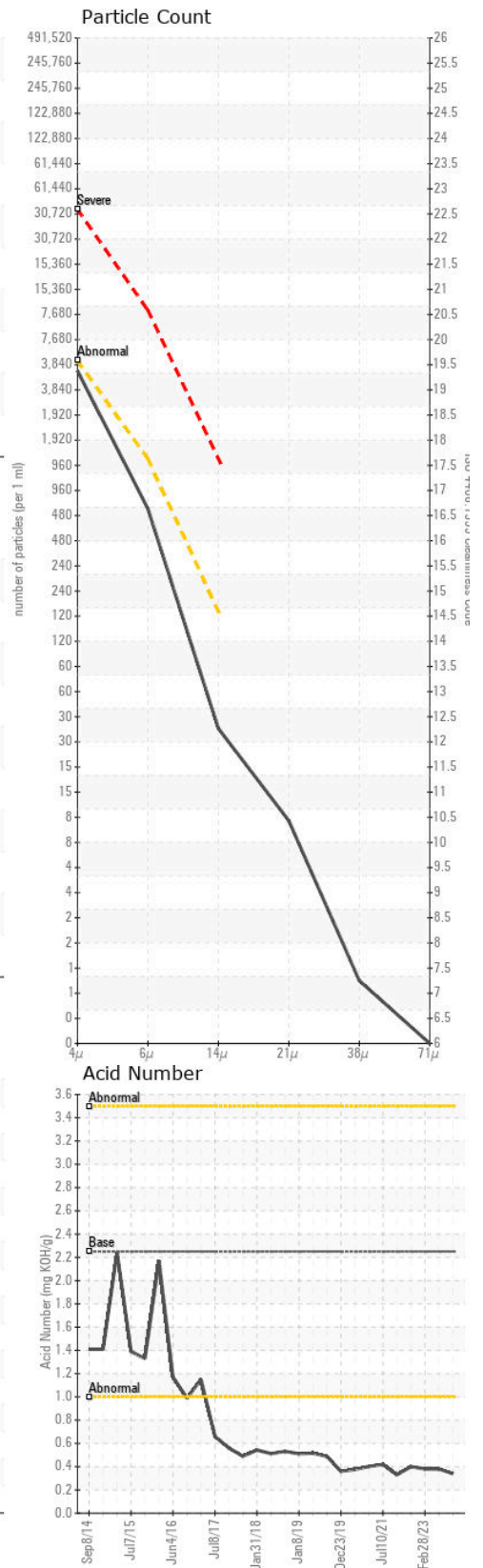
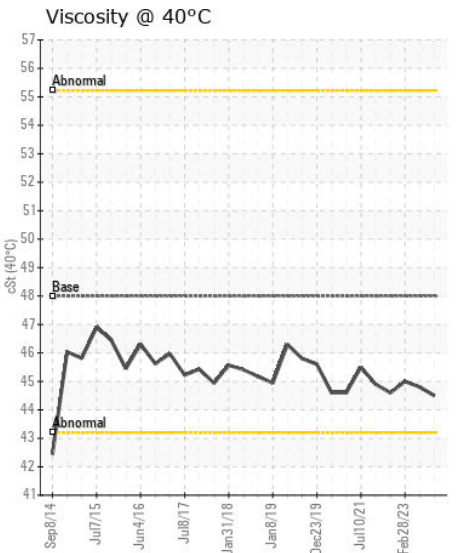
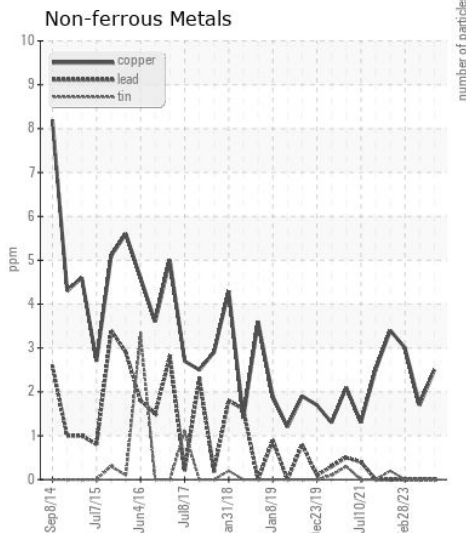
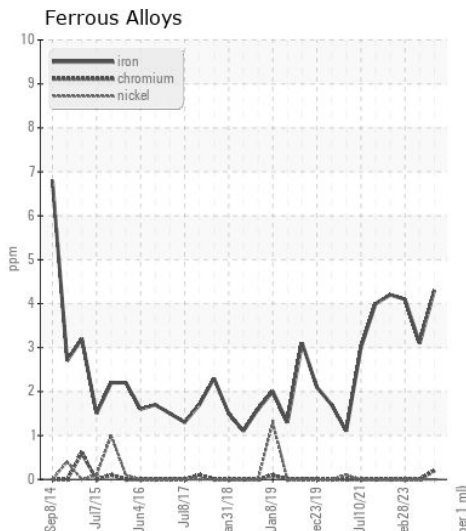
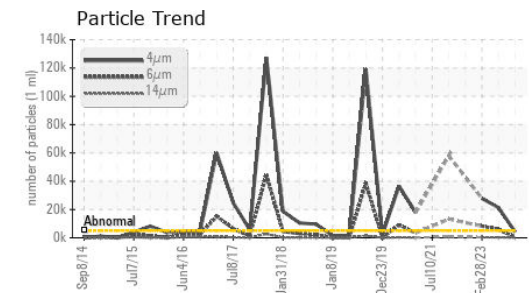
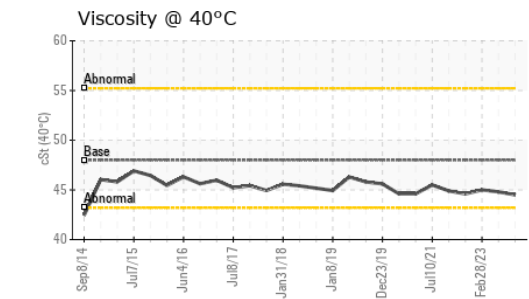
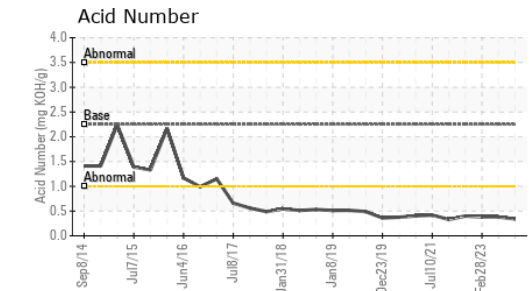
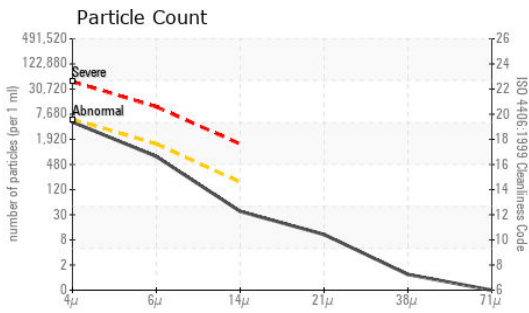
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>4362</b>	▲ 21309	▲ 27878
Particles >6µm		ASTM D7647	>1300	<b>654</b>	▲ 5864	▲ 8279
Particles >14µm		ASTM D7647	>160	<b>32</b>	▲ 268	▲ 371
Particles >21µm		ASTM D7647	>40	<b>9</b>	▲ 68	▲ 86
Particles >38µm		ASTM D7647	>10	<b>1</b>	2	3
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>19/17/12</b>	▲ 22/20/15	▲ 22/20/16
Silt	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	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>	<1	1
Boron	ppm	ASTM D5185m	10	<b>3</b>	<1	1
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	10	<b>3</b>	2	2
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	100	<b>61</b>	57	34
Calcium	ppm	ASTM D5185m	3500	<b>226</b>	189	208
Phosphorus	ppm	ASTM D5185m	1150	<b>380</b>	313	299
Zinc	ppm	ASTM D5185m	1150	<b>396</b>	369	358
Sulfur	ppm	ASTM D5185m	5000	<b>1146</b>	950	1134
Acid Number (AN)	mg KOH/g	ASTM D8045	2.25	<b>0.34</b>	0.38	0.38
Visc @ 40°C	cSt	ASTM D445	48	<b>44.5</b>	44.8	45.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800470 **Received** : 12 Jan 2024  
**Lab Number** : 06060161 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831543 **Diagnostician** : Don Baldrige  
**Test Package** : CONST

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)

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