



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 972K 001857 (S/N Z4W00391)**  
 Component  
**Hydraulic System**  
 Fluid  
**CASTROL DUAL RANGE HV HYD OIL ISO 46 (30 GAL)**

## RECOMMENDATION

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>WC0856301</b>	WC0823975	WC0823837
Sample Date		Client Info		<b>25 Mar 2024</b>	02 Nov 2023	16 Aug 2023
Machine Age	hrs	Client Info		<b>24224</b>	23446	22949
Oil Age	hrs	Client Info		<b>778</b>	1500	681
Filter Age	hrs	Client Info		<b>778</b>	497	681
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>7</b>	5	6
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</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>	3	3
Lead	ppm	ASTM D5185m	>10	<b>1</b>	0	0
Copper	ppm	ASTM D5185m	>75	<b>2</b>	2	2
Tin	ppm	ASTM D5185m	>10	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

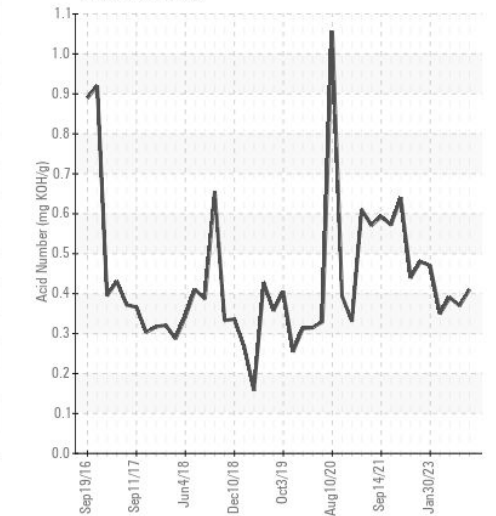
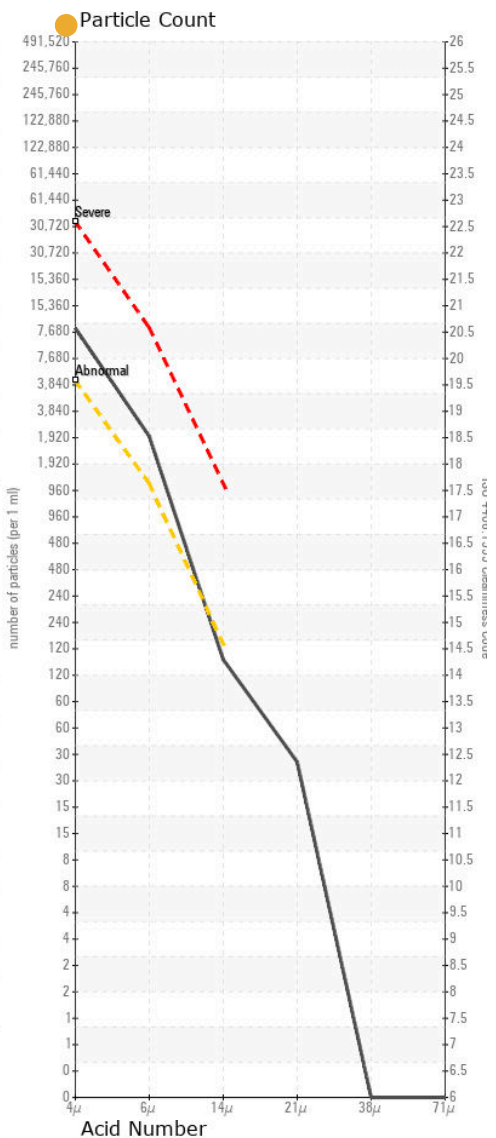
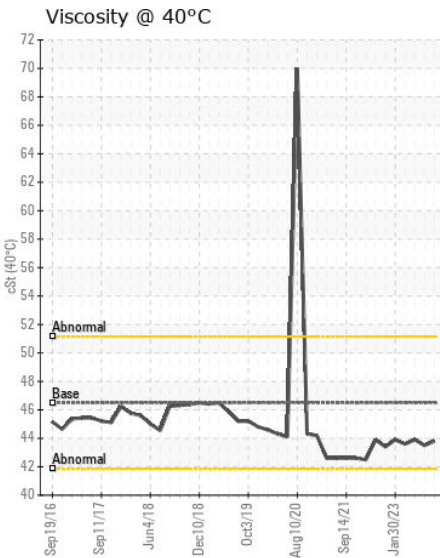
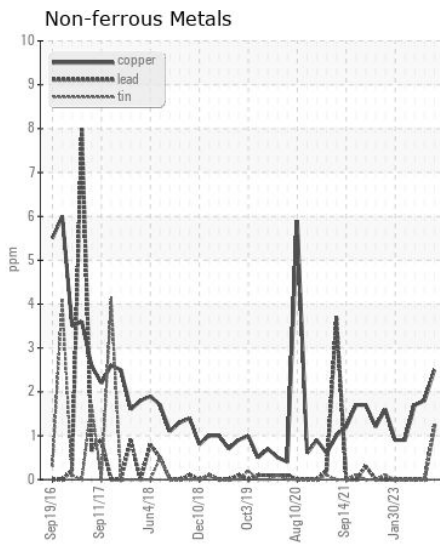
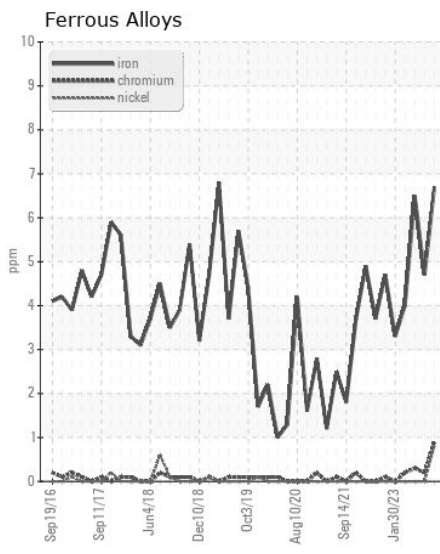
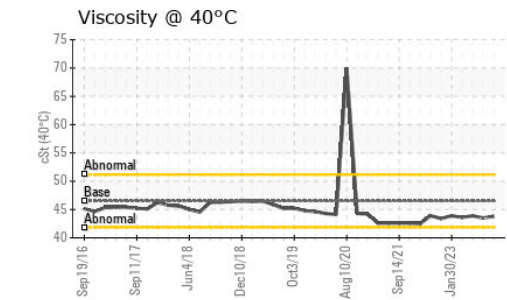
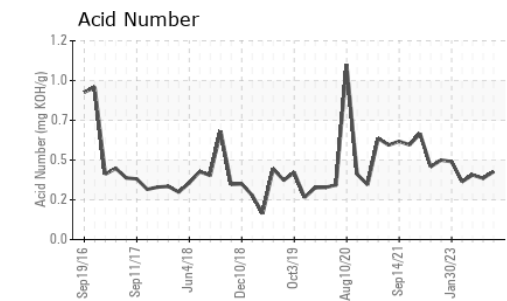
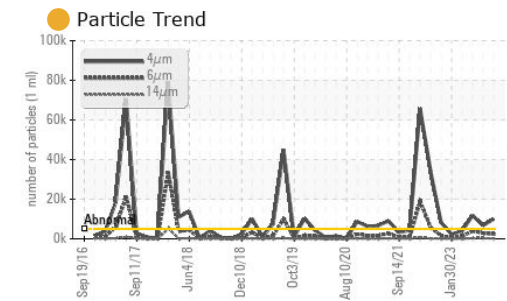
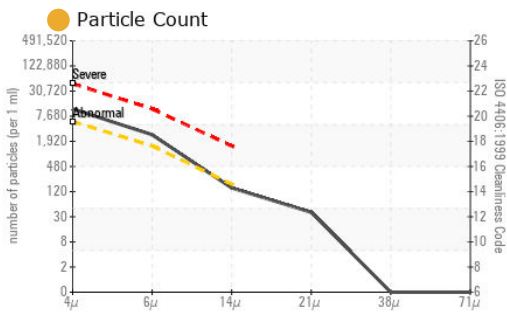
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>9944</b>	6737	11817
Particles >6µm		ASTM D7647	>1300	<b>2415</b>	2873	3963
Particles >14µm		ASTM D7647	>160	<b>130</b>	306	289
Particles >21µm		ASTM D7647	>40	<b>34</b>	60	57
Particles >38µm		ASTM D7647	>10	<b>0</b>	1	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>20/18/14</b>	20/19/15	21/19/15
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	0
Boron	ppm	ASTM D5185m		<b>6</b>	8	8
Barium	ppm	ASTM D5185m		<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m		<b>7</b>	6	8
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>71</b>	81	83
Calcium	ppm	ASTM D5185m		<b>250</b>	267	289
Phosphorus	ppm	ASTM D5185m		<b>419</b>	385	413
Zinc	ppm	ASTM D5185m		<b>456</b>	485	510
Sulfur	ppm	ASTM D5185m		<b>1221</b>	1201	1391
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.41</b>	0.37	0.39
Visc @ 40°C	cSt	ASTM D445	46.5	<b>43.8</b>	43.5	43.9



Certificate L2367

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

Sample No. : WC0856301

Lab Number : 06147270

Unique Number : 10977348

Test Package : CONST

Received : 12 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 15 Apr 2024 - Wes Davis

CJ MILLER LLC

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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)