



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR D8K2LGP 001667 (S/N KLL00398)**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 46 (23 GAL)**

## RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0856304</b>	WC0823903	WC0557546
Sample Date		Client Info		<b>22 Mar 2024</b>	18 Sep 2023	11 Feb 2022
Machine Age	hrs	Client Info		<b>8199</b>	7524	6992
Oil Age	hrs	Client Info		<b>1500</b>	532	1500
Filter Age	hrs	Client Info		<b>600</b>	532	500
Oil Changed		Client Info		<b>Changed</b>	Not Chngd	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>6</b>	4	3
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>1</b>	<1	2
Lead	ppm	ASTM D5185m	>10	<b>2</b>	0	<1
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	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

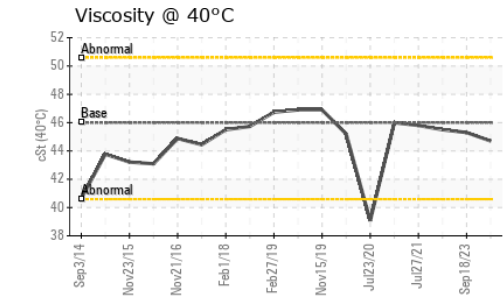
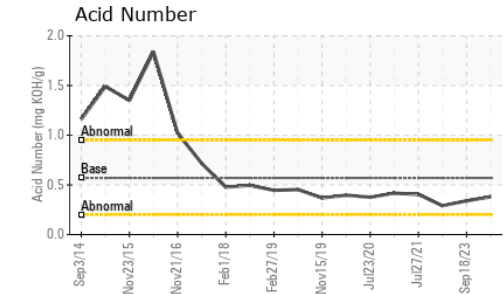
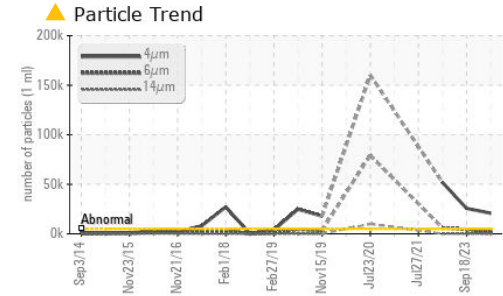
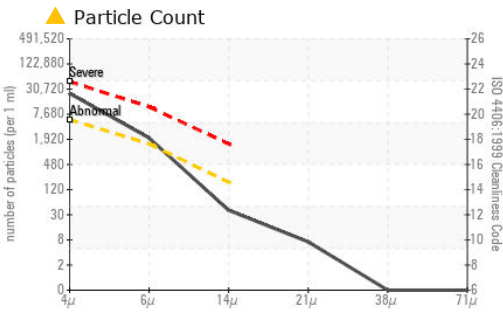
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 20792</b>	▲ 25647	▲ 51890
Particles >6µm		ASTM D7647	>1300	<b>● 1808</b>	▲ 4328	▲ 5989
Particles >14µm		ASTM D7647	>160	<b>34</b>	● 274	148
Particles >21µm		ASTM D7647	>40	<b>6</b>	▲ 84	28
Particles >38µm		ASTM D7647	>10	<b>0</b>	3	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 22/18/12</b>	▲ 22/19/15	▲ 23/20/14
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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		<b>0</b>	<1	1
Boron	ppm	ASTM D5185m	5	<b>2</b>	<1	4
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	5	<b>3</b>	2	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	25	<b>16</b>	15	11
Calcium	ppm	ASTM D5185m	200	<b>195</b>	174	193
Phosphorus	ppm	ASTM D5185m	300	<b>355</b>	326	354
Zinc	ppm	ASTM D5185m	370	<b>383</b>	380	388
Sulfur	ppm	ASTM D5185m	2500	<b>1252</b>	1121	1072
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	<b>0.38</b>	0.34	0.29
Visc @ 40°C	cSt	ASTM D445	46	<b>44.7</b>	45.3	45.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0856304  
**Lab Number** : 06147275  
**Unique Number** : 10977353  
**Test Package** : CONST

**Received** : 12 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 15 Apr 2024 - Wes Davis

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)

