



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL



Machine Id  
**CATERPILLAR 002377**  
Component  
**Hydraulic System**  
Fluid  
**= (--- GAL)**

## RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. Please specify the brand, type, and viscosity of the oil on your next sample.

## WEAR

All component wear rates are normal.

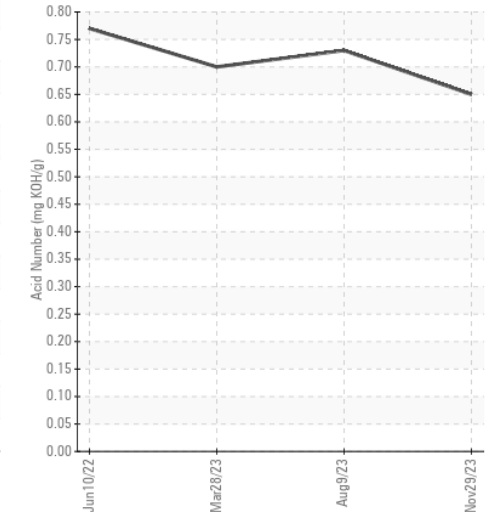
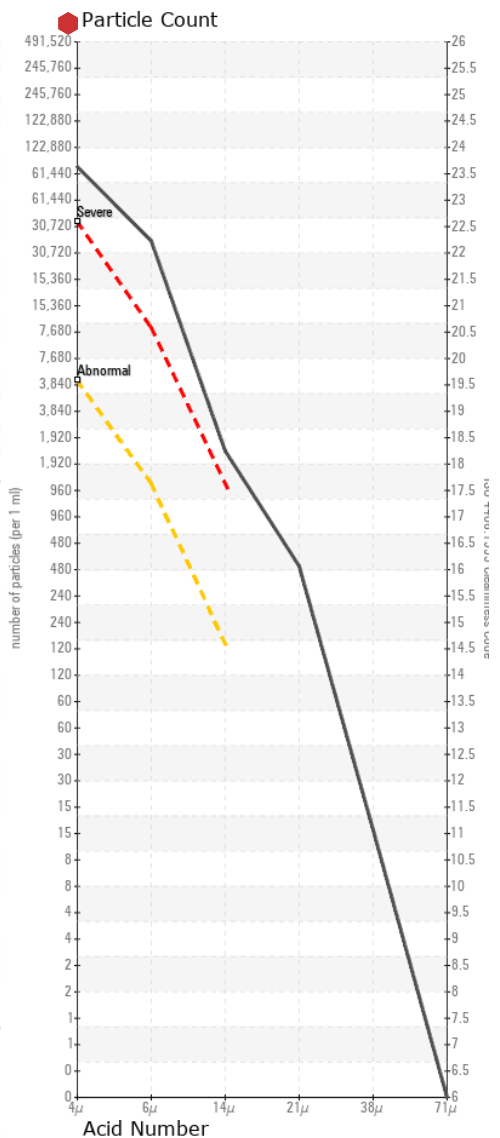
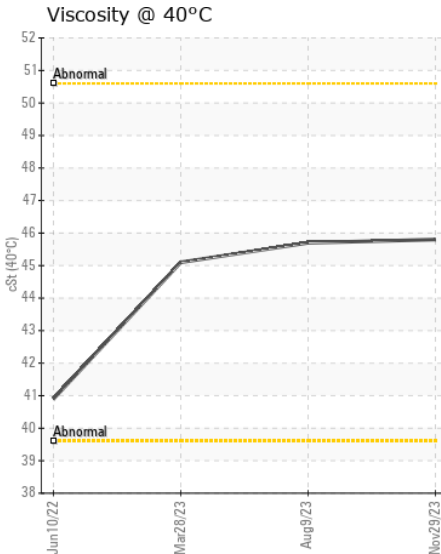
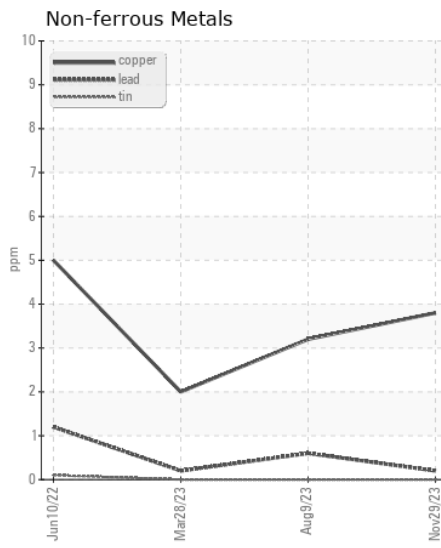
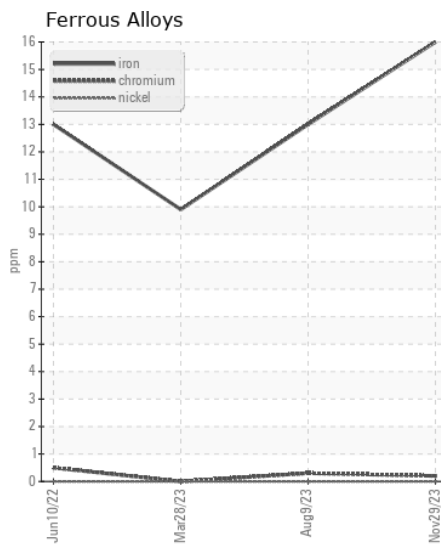
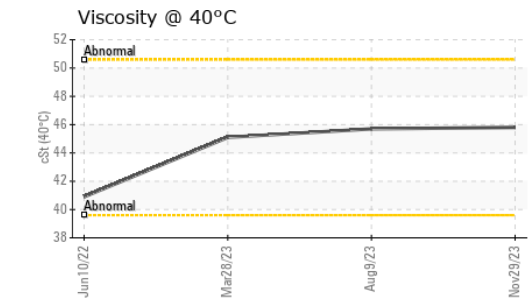
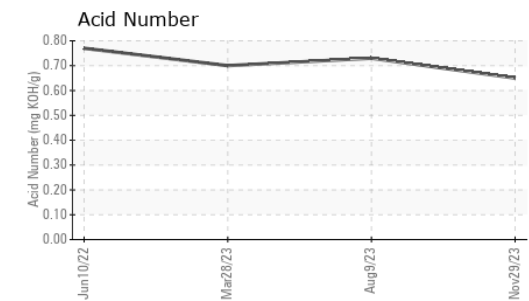
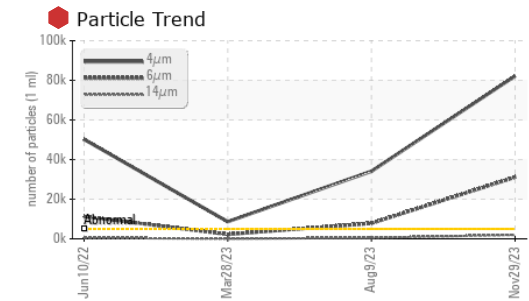
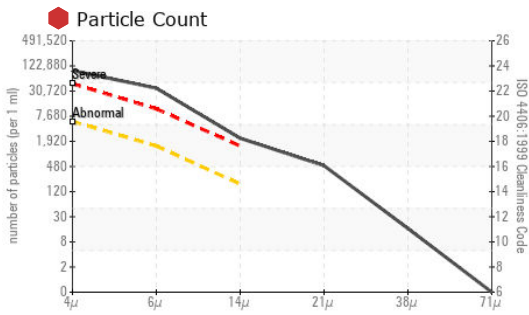
## CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

## 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0800527</b>	WC0724622	WC0757994
Sample Date		Client Info		<b>29 Nov 2023</b>	09 Aug 2023	28 Mar 2023
Machine Age	hrs	Client Info		<b>4360</b>	3777	3144
Oil Age	hrs	Client Info		<b>583</b>	1500	644
Filter Age	hrs	Client Info		<b>583</b>	633	644
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	ABNORMAL	ATTENTION
Iron	ppm	ASTM D5185m	>20	<b>16</b>	13	10
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	0
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>75	<b>4</b>	3	2
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
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	4	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>82164</b>	34104	8650
Particles >6µm		ASTM D7647	>1300	<b>31142</b>	7828	2279
Particles >14µm		ASTM D7647	>160	<b>1994</b>	467	93
Particles >21µm		ASTM D7647	>40	<b>441</b>	104	12
Particles >38µm		ASTM D7647	>10	<b>14</b>	1	1
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>24/22/18</b>	22/20/16	20/18/14
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>LIGHT</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
Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Boron	ppm	ASTM D5185m		<b>3</b>	2	3
Barium	ppm	ASTM D5185m		<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	3	3
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>33</b>	31	34
Calcium	ppm	ASTM D5185m		<b>634</b>	596	607
Phosphorus	ppm	ASTM D5185m		<b>834</b>	758	756
Zinc	ppm	ASTM D5185m		<b>1044</b>	1005	1071
Sulfur	ppm	ASTM D5185m		<b>2870</b>	2734	2925
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.65</b>	0.73	0.70
Visc @ 40°C	cSt	ASTM D445		<b>45.8</b>	45.7	45.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800527 **Received** : 12 Jan 2024  
**Lab Number** : 06060154 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831536 **Diagnostician** : Wes Davis  
**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)

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