



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 259BCCAC 001449 (S/N 0YY201423)**

Component  
**Hydraulic System**

Fluid  
**TDH FLUID SAE 75W80 (10 GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. Oil and 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>WC0800497</b>	WC0758032	WC0664749
Sample Date		Client Info		<b>13 Dec 2023</b>	30 Mar 2023	17 May 2022
Machine Age	hrs	Client Info		<b>5792</b>	5533	5159
Oil Age	hrs	Client Info		<b>1050</b>	374	1000
Filter Age	hrs	Client Info		<b>259</b>	374	312
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>9</b>	7	3
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>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>75	<b>3</b>	1	1
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	VLITE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

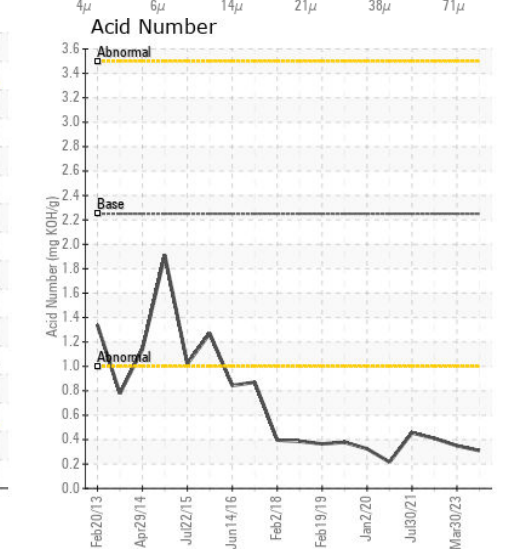
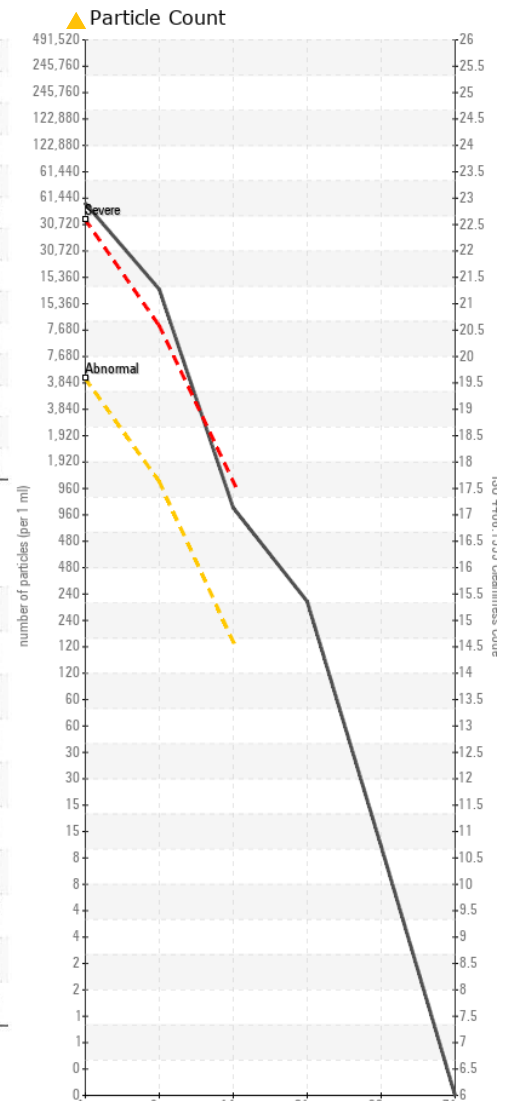
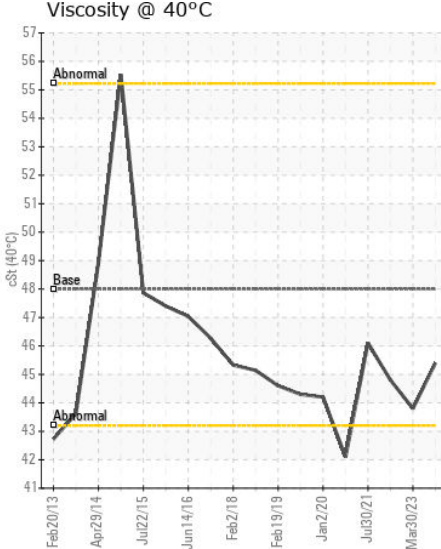
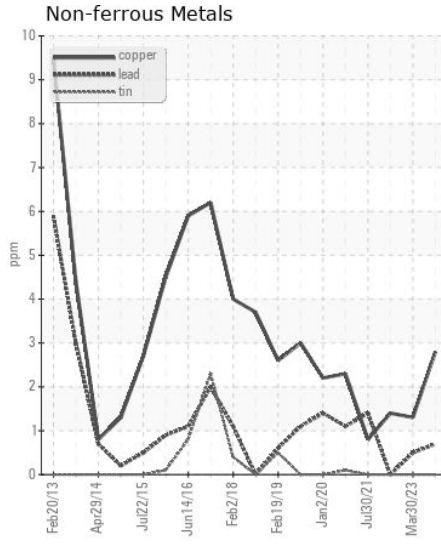
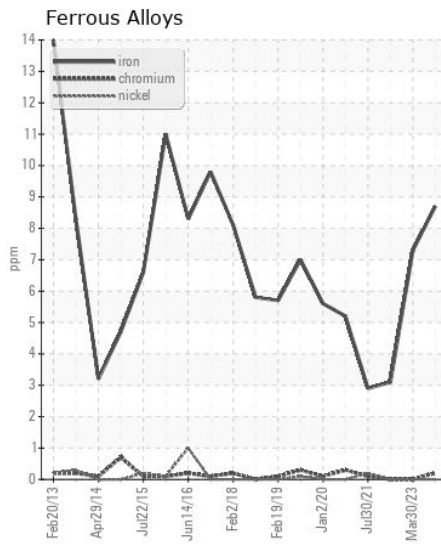
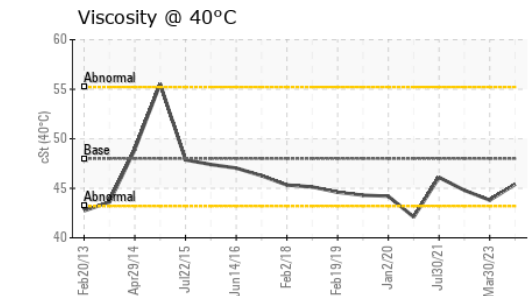
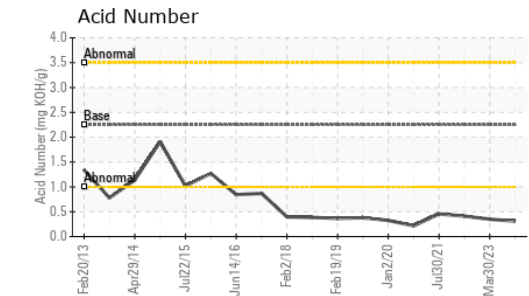
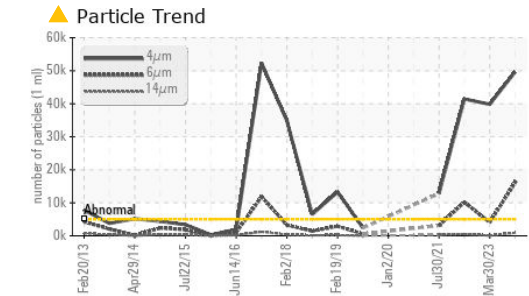
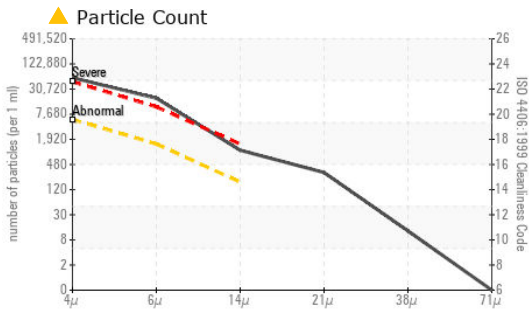
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>9</b>	7	3
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>▲ 49621</b>	▲ 39836	▲ 41427
Particles >6µm		ASTM D7647	>1300	<b>▲ 16109</b>	▲ 4077	▲ 10211
Particles >14µm		ASTM D7647	>160	<b>▲ 923</b>	62	▲ 499
Particles >21µm		ASTM D7647	>40	<b>▲ 271</b>	19	▲ 119
Particles >38µm		ASTM D7647	>10	<b>▲ 11</b>	2	4
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>▲ 23/21/17</b>	▲ 22/19/13	▲ 23/21/16
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	VLITE
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>	0	1
Boron	ppm	ASTM D5185m	10	<b>4</b>	3	0
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	10	<b>3</b>	3	2
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	100	<b>47</b>	37	23
Calcium	ppm	ASTM D5185m	3500	<b>406</b>	249	225
Phosphorus	ppm	ASTM D5185m	1150	<b>411</b>	363	333
Zinc	ppm	ASTM D5185m	1150	<b>447</b>	445	401
Sulfur	ppm	ASTM D5185m	5000	<b>1435</b>	1051	1241
Acid Number (AN)	mg KOH/g	ASTM D8045	2.25	<b>0.31</b>	0.35	0.41
Visc @ 40°C	cSt	ASTM D445	48	<b>45.4</b>	43.8	44.8



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800497 **Received** : 12 Jan 2024  
**Lab Number** : 06060165 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831547 **Diagnostician** : Don Baldrige  
**Test Package** : CONST

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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)