



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 328D EX-59**  
Component  
**Hydraulic System**  
Fluid  
**TDH FLUID SAE 70W80 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0034608</b>	DC0004060	DCM1030208
Sample Date		Client Info		<b>10 Dec 2023</b>	20 Aug 2020	19 Oct 2017
Machine Age	hrs	Client Info		<b>10306</b>	9285	8557
Oil Age	hrs	Client Info		<b>1749</b>	0	0
Filter Age	hrs	Client Info		<b>1749</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>10</b>	8	10
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>1</b>	1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>3</b>	2	3
Lead	ppm	ASTM D5185m	>10	<b>2</b>	1	2
Copper	ppm	ASTM D5185m	>75	<b>7</b>	5	6
Tin	ppm	ASTM D5185m	>10	<b>&lt;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

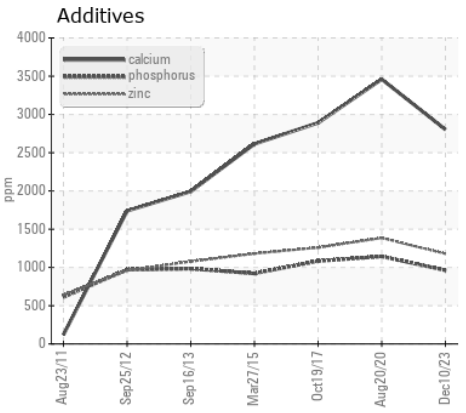
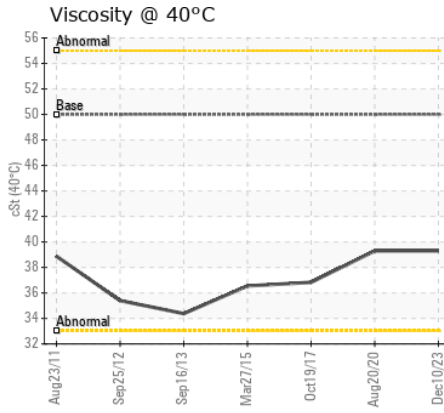
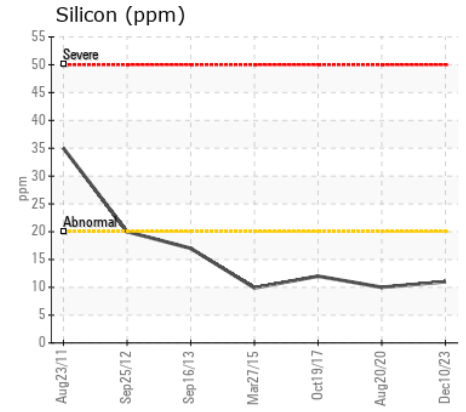
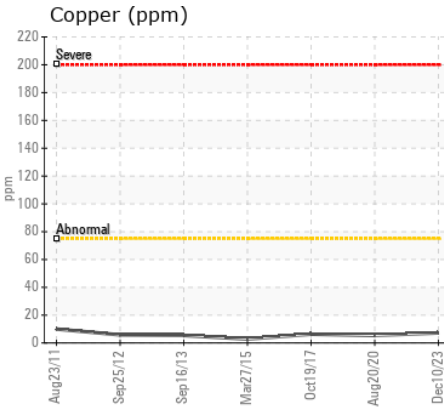
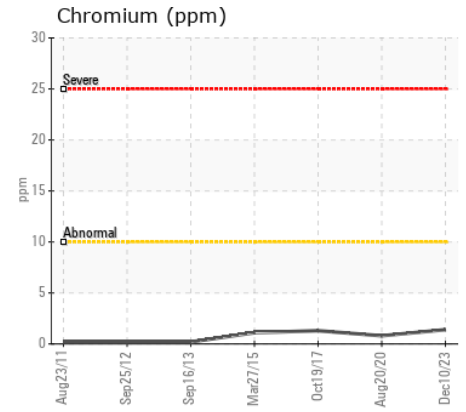
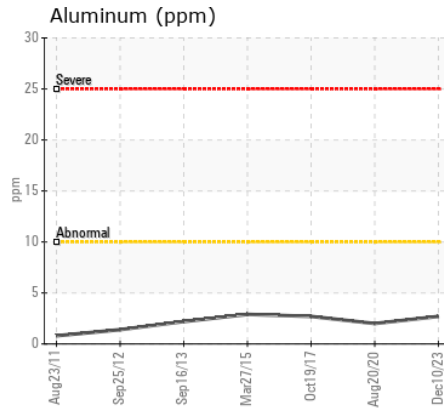
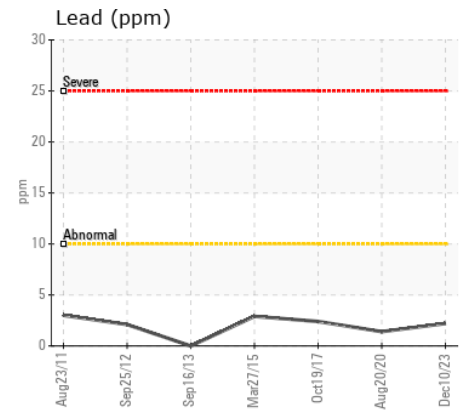
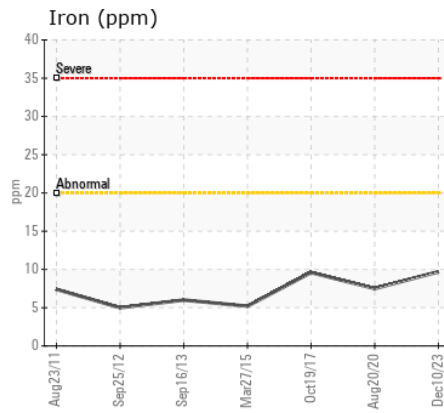
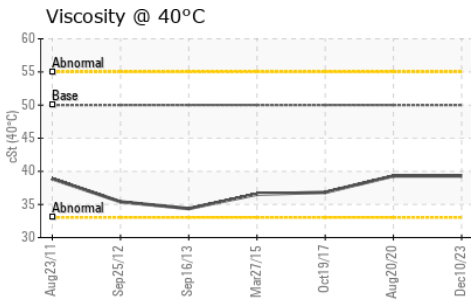
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>20	<b>11</b>	10	12
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>2</b>	3	3
Boron	ppm	ASTM D5185m	10	<b>81</b>	98	81
Barium	ppm	ASTM D5185m	10	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	10	<b>2</b>	<1	2
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	100	<b>32</b>	36	44
Calcium	ppm	ASTM D5185m	3500	<b>2803</b>	3460	2890
Phosphorus	ppm	ASTM D5185m	1150	<b>962</b>	1143	1083
Zinc	ppm	ASTM D5185m	1150	<b>1179</b>	1386	1260
Sulfur	ppm	ASTM D5185m	5000	<b>3870</b>	3238	3644
Visc @ 40°C	cSt	ASTM D445	50	<b>39.3</b>	39.3	36.83



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0034608  
**Lab Number** : 06103963  
**Unique Number** : 10902193  
**Test Package** : MOB 1

**Received** : 28 Feb 2024  
**Tested** : 29 Feb 2024  
**Diagnosed** : 01 Mar 2024 - Don Baldrige

**ROSS CONTRACTING INC.**  
 1007 RISING RIDGE ROAD  
 MOUNT AIRY, MD  
 US 21771

Contact: JONATHAN KUENTZ  
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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)

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