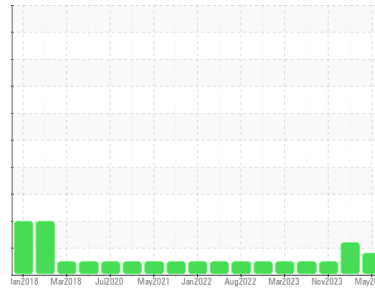


# OIL ANALYSIS REPORT



Area  
**DE Samples - CAT LAB**  
 Machine Id  
**CATERPILLAR 990H LOADER 6572 (S/N BWX00474)**  
 Component  
**Front Right Final Drive**  
 Fluid  
**TULCO LUBSOIL TO-4 50 (10 GAL)**

Sample Rating Trend



## DIAGNOSIS

- Recommendation**  
No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**  
The copper level is abnormal. All other component wear rates are normal.
- Contamination**  
There is no indication of any contamination in the oil.
- Fluid Condition**  
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>TO10002097</b>	TO10003379	TO10002841
Sample Date	Client Info		<b>29 May 2024</b>	04 Mar 2024	27 Nov 2023
Machine Age	hrs	Client Info	<b>32161</b>	31604	31072
Oil Age	hrs	Client Info	<b>5867</b>	5310	4778
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	Not Changed
Sample Status			<b>ABNORMAL</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
PQ	ASTM D8184	>500	<b>35</b>	30	22	
Iron	ppm	ASTM D5185m	>800	<b>35</b>	30	33
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	2	1
Titanium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>75	<b>3</b>	3	1
Lead	ppm	ASTM D5185m	>10	<b>9</b>	8	6
Copper	ppm	ASTM D5185m	>75	<b>▲ 82</b>	61	58
Tin	ppm	ASTM D5185m	>8	<b>6</b>	5	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>0</b>	1	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>31</b>	26	30
Calcium	ppm	ASTM D5185m		<b>3818</b>	3458	3923
Phosphorus	ppm	ASTM D5185m		<b>759</b>	767	863
Zinc	ppm	ASTM D5185m		<b>1017</b>	829	1015
Sulfur	ppm	ASTM D5185m		<b>5012</b>	4842	5031

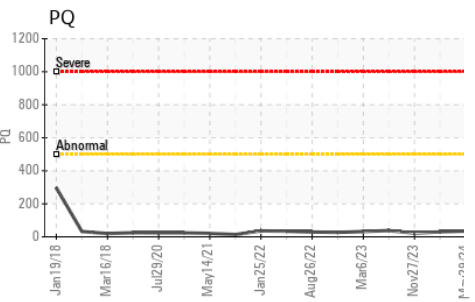
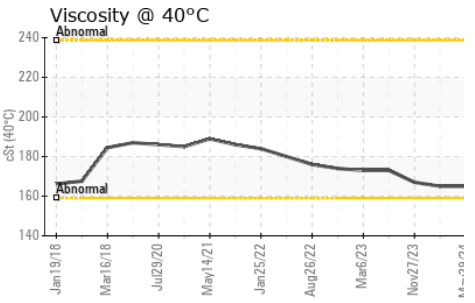
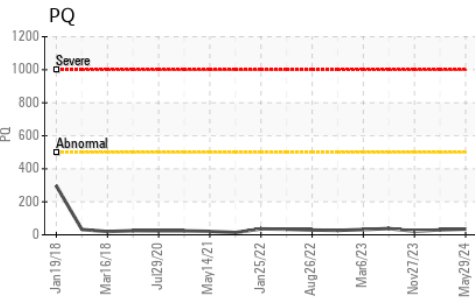
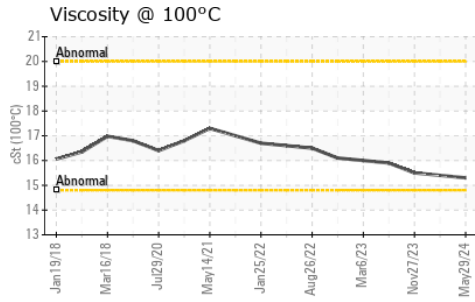
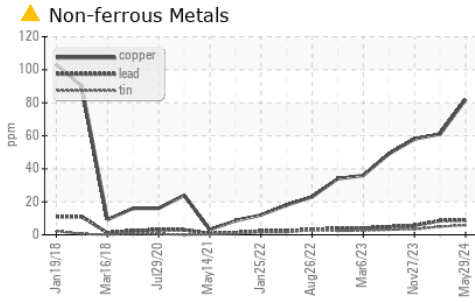
## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>400	<b>20</b>	18	19
Sodium	ppm	ASTM D5185m		<b>3</b>	5	0
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.87</b>	0.77	0.79

# OIL ANALYSIS REPORT

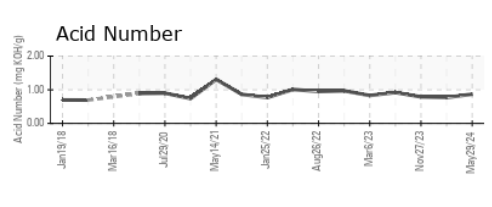
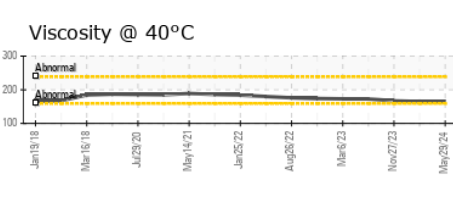
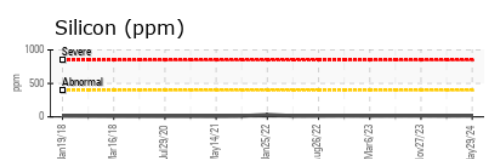
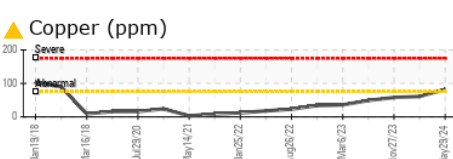
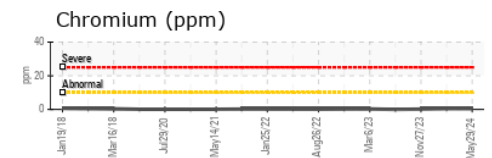
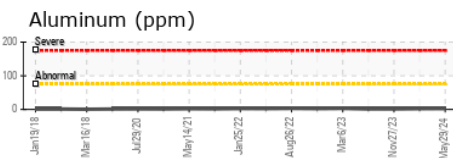
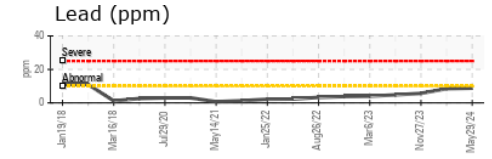
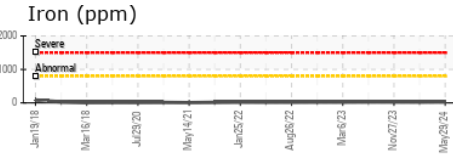


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	▲ HEAVY	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	165	165	167
Visc @ 100°C	cSt	ASTM D445	15.3	15.4	15.5
Viscosity Index (VI)	Scale	ASTM D2270	92	93	93

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10002097  
**Lab Number** : 06198324  
**Unique Number** : 11060447  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )  
**Received** : 03 Jun 2024  
**Tested** : 06 Jun 2024  
**Diagnosed** : 06 Jun 2024 - Jonathan Hester

**ANCHOR STONE TULSA ROCK**  
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE  
 TULSA, OK  
 US 74137  
 Contact: MIKE SNYDER  
 msnyder@anchorstoneco.com  
 T: (417)850-9635  
 F:

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)