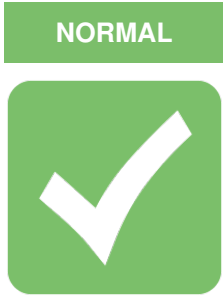
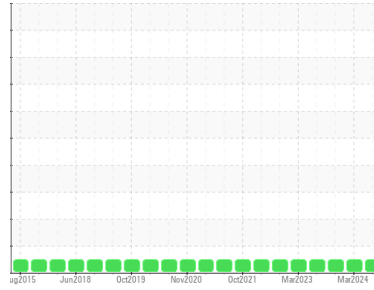


# OIL ANALYSIS REPORT



Area  
**DE Samples - CAT LAB**  
 Machine ID  
**CATERPILLAR 990 LOADER G 6427 (S/N BCR00127)**  
 Component  
**Rear Differential**  
 Fluid  
**TULCO LUBSOIL TO-4 50 (49 GAL)**

Sample Rating Trend



## DIAGNOSIS

- Recommendation**  
Resample at the next service interval to monitor.
- Wear**  
All 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>TO10002114</b>	TO10003371	TO10002886
Sample Date	Client Info		<b>31 May 2024</b>	05 Mar 2024	13 Nov 2023
Machine Age	hrs	Client Info	<b>49260</b>	48658	48135
Oil Age	hrs	Client Info	<b>4209</b>	3607	3070
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>25</b>	21	14
Iron	ppm	ASTM D5185m >500	<b>18</b>	13	13
Chromium	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >30	<b>4</b>	3	3
Lead	ppm	ASTM D5185m >13	<b>3</b>	2	1
Copper	ppm	ASTM D5185m >103	<b>7</b>	3	4
Tin	ppm	ASTM D5185m >5	<b>2</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>3</b>	<1	<1
Manganese	ppm	ASTM D5185m	<b>2</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>28</b>	21	0
Calcium	ppm	ASTM D5185m	<b>4433</b>	3805	4099
Phosphorus	ppm	ASTM D5185m	<b>892</b>	795	714
Zinc	ppm	ASTM D5185m	<b>1054</b>	855	980
Sulfur	ppm	ASTM D5185m	<b>5773</b>	5044	4338

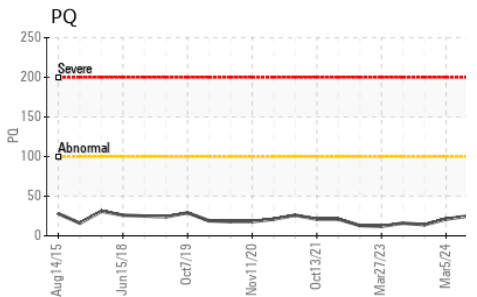
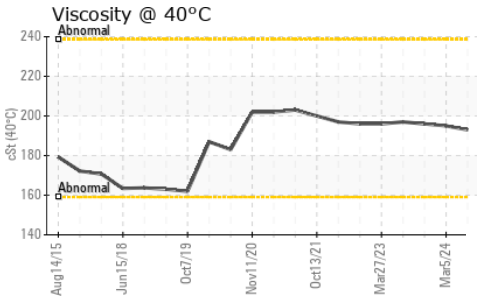
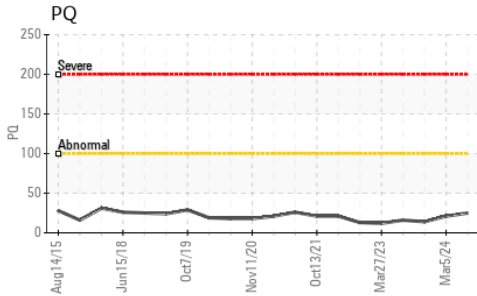
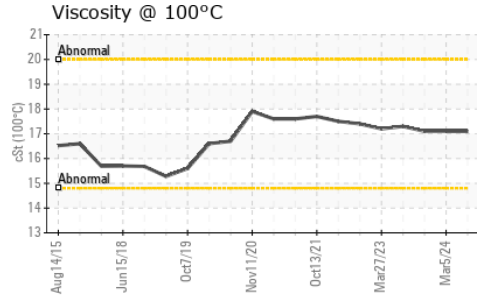
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>20</b>	16	20
Sodium	ppm	ASTM D5185m	<b>6</b>	5	4
Potassium	ppm	ASTM D5185m >20	<b>5</b>	3	0

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.95</b>	0.92	1.02

# OIL ANALYSIS REPORT



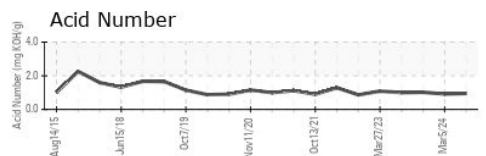
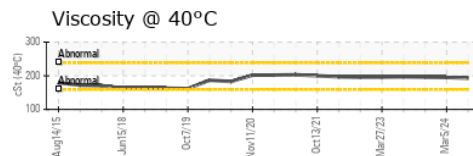
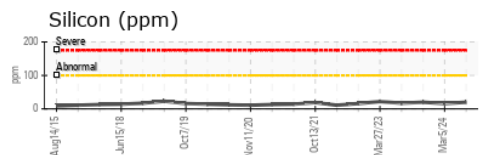
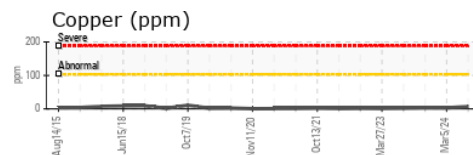
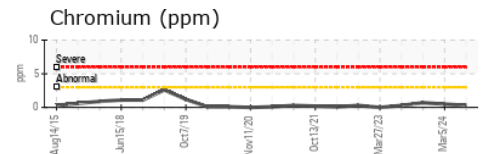
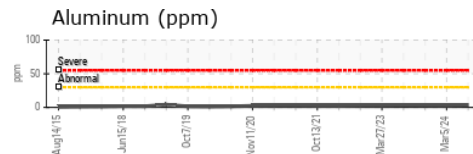
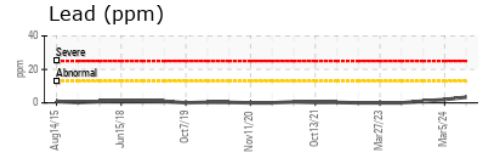
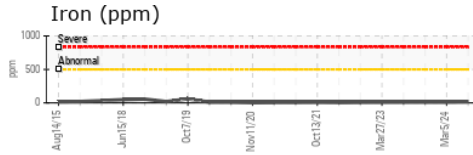
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	193	195	196
Visc @ 100°C	cSt	ASTM D445	17.1	17.1	17.1
Viscosity Index (VI)	Scale	ASTM D2270	94	93	92

**SAMPLE IMAGES**

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

**GRAPHS**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : TO10002114

**Lab Number** : 06205684

**Unique Number** : 11073145

**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )

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)

**Received** : 10 Jun 2024

**Tested** : 12 Jun 2024

**Diagnosed** : 12 Jun 2024 - Wes Davis

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US 74137

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