



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 6494 (S/N 4FR00287)**  
Component  
**Transmission (Manual)**  
Fluid  
**TULCO LUBSOIL TO-4 30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TO10003669</b>	TO10002748	TO10002217
Sample Date		Client Info		<b>22 Jun 2024</b>	29 Sep 2023	24 Apr 2023
Machine Age	hrs	Client Info		<b>31455</b>	30989	30493
Oil Age	hrs	Client Info		<b>962</b>	496	982
Filter Age	hrs	Client Info		<b>962</b>	496	491
Oil Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

PQ		ASTM D8184	>95	<b>16</b>	13	16
Iron	ppm	ASTM D5185m	>200	<b>3</b>	3	2
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>7	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>1</b>	4	1
Lead	ppm	ASTM D5185m	>45	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>225	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	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

## CONTAMINATION

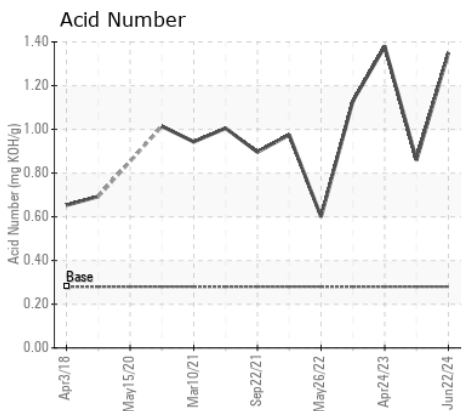
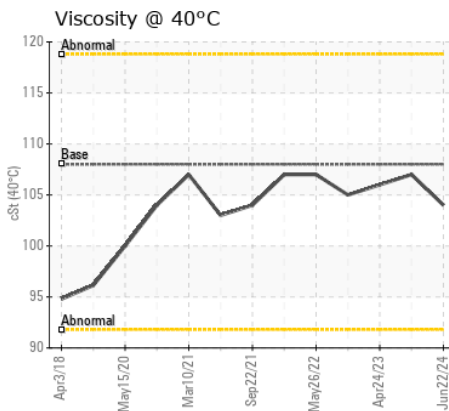
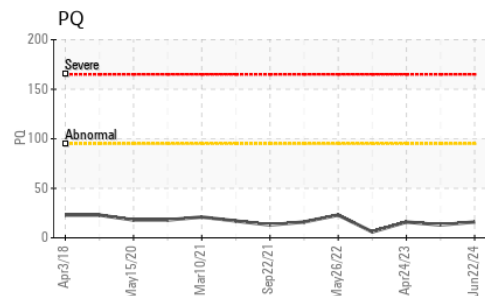
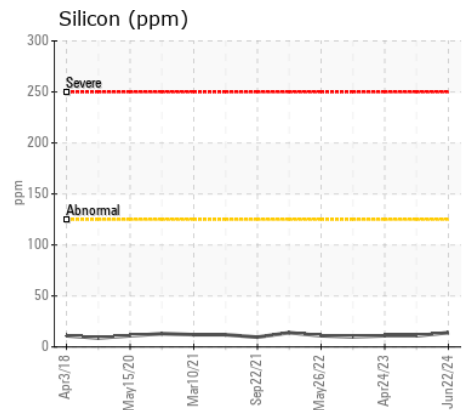
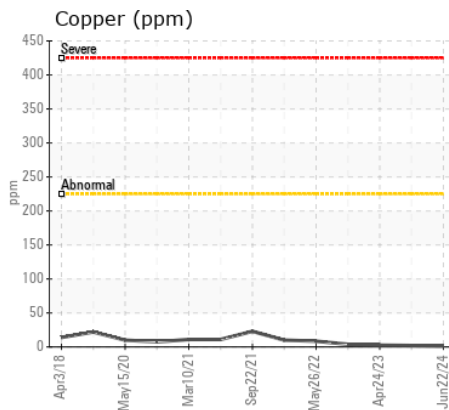
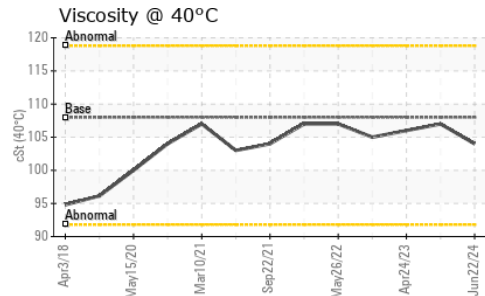
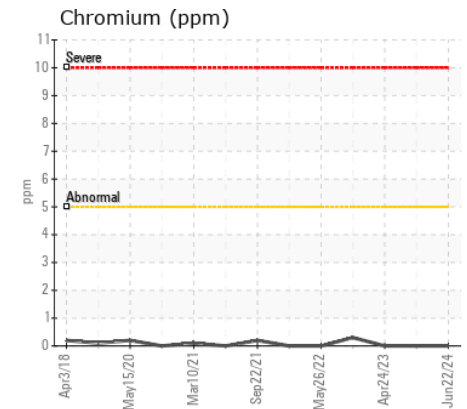
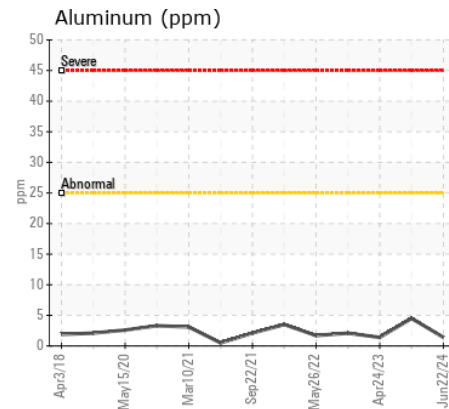
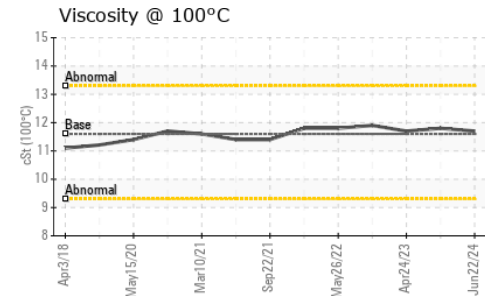
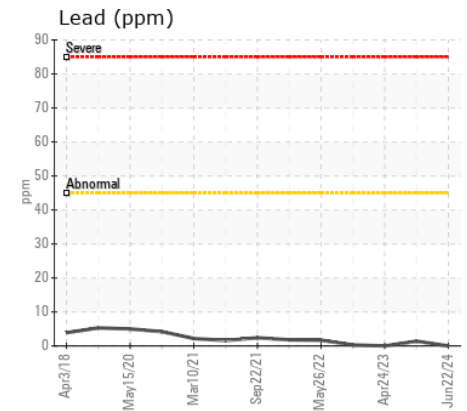
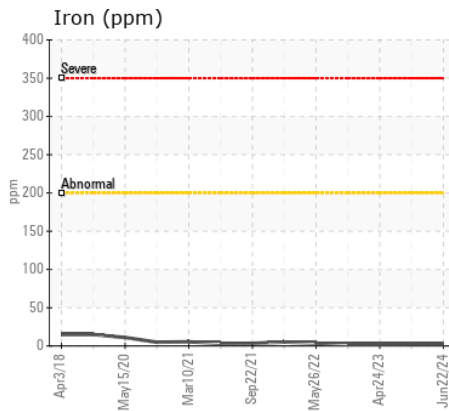
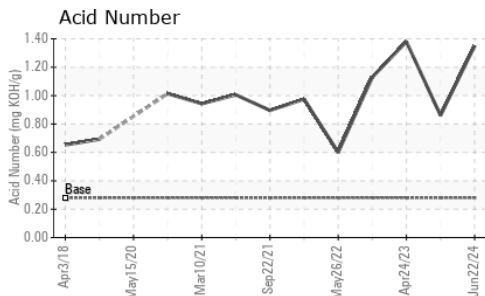
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185m	>125	<b>14</b>	11	11
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	4	0
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 AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	5	3
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	9	<b>18</b>	14	17
Calcium	ppm	ASTM D5185m	4500	<b>3381</b>	2858	3508
Phosphorus	ppm	ASTM D5185m	1150	<b>923</b>	870	1029
Zinc	ppm	ASTM D5185m	1250	<b>1058</b>	1082	1320
Sulfur	ppm	ASTM D5185m	4500	<b>4786</b>	4121	5333
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	<b>1.35</b>	0.86	1.38
Visc @ 40°C	cSt	ASTM D445	108	<b>104</b>	107	106
Visc @ 100°C	cSt	ASTM D445	11.6	<b>11.7</b>	11.8	11.7
Viscosity Index (VI)	Scale	ASTM D2270	94	<b>100</b>	98	97



Certificate L2367

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

Sample No. : TO10003669

Lab Number : 06225321

Unique Number : 11103518

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

Received : 01 Jul 2024

Tested : 02 Jul 2024

Diagnosed : 02 Jul 2024 - Wes Davis

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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