



# OIL ANALYSIS REPORT

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



Area  
**DE Samples - CAT LAB**  
Machine Id  
**CATERPILLAR 980H LOADER 6821 (S/N JMS06208)**  
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>TO10002062</b>	TO10003147	TO10002866
Sample Date		Client Info		<b>08 May 2024</b>	20 Feb 2024	13 Nov 2023
Machine Age	hrs	Client Info		<b>29374</b>	28828	28310
Oil Age	hrs	Client Info		<b>546</b>	1053	535
Filter Age	hrs	Client Info		<b>546</b>	518	535
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not 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>14</b>	12	17
Iron	ppm	ASTM D5185m	>200	<b>14</b>	4	4
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>7	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>45	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>225	<b>7</b>	3	3
Tin	ppm	ASTM D5185m	>10	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

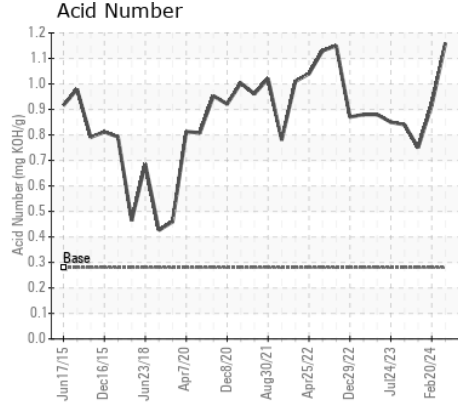
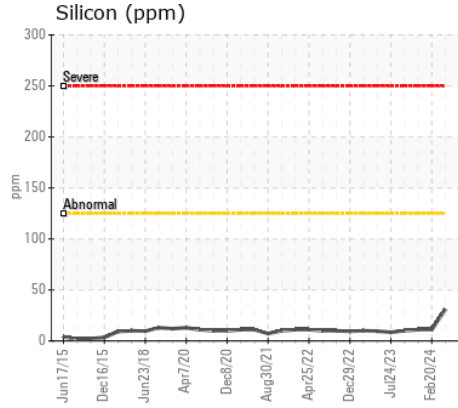
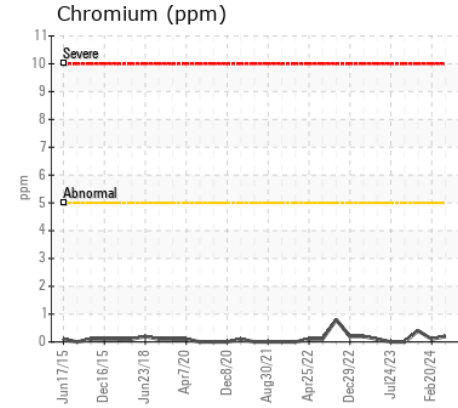
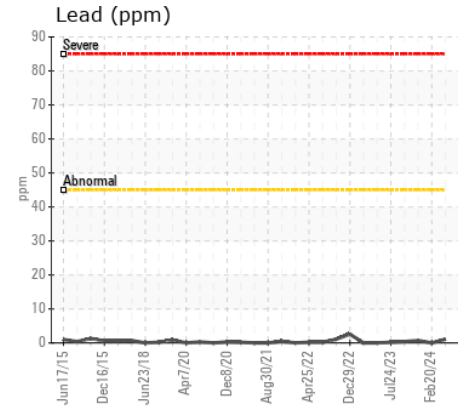
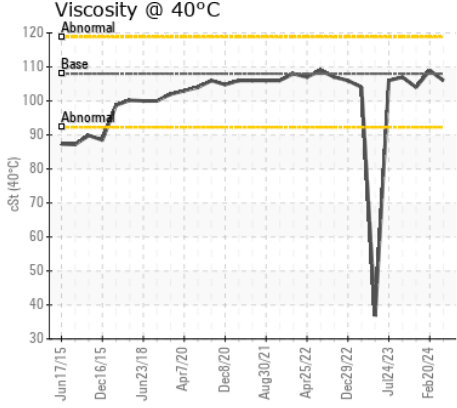
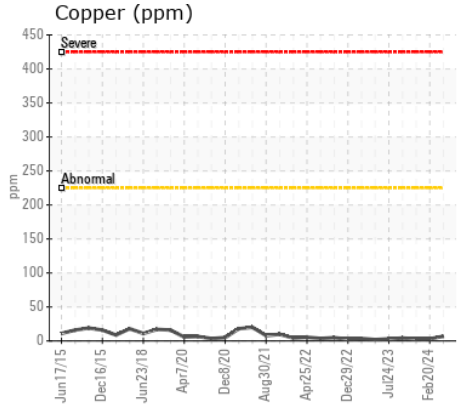
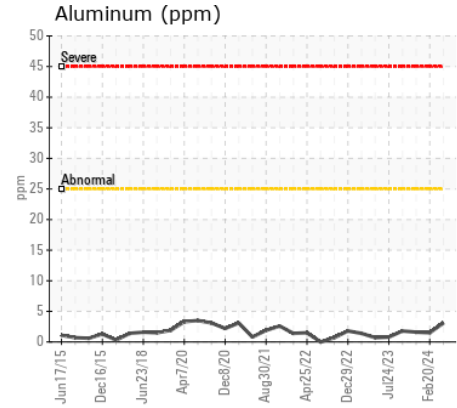
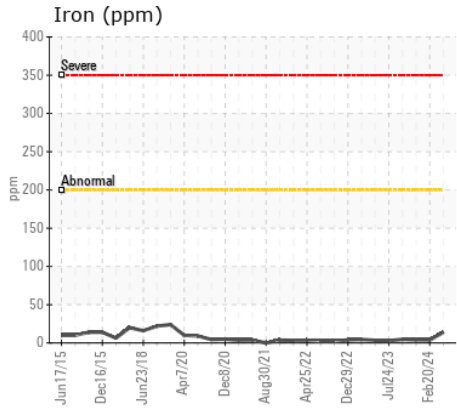
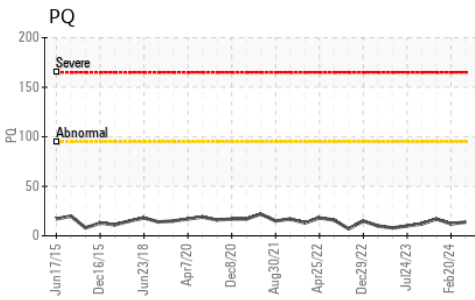
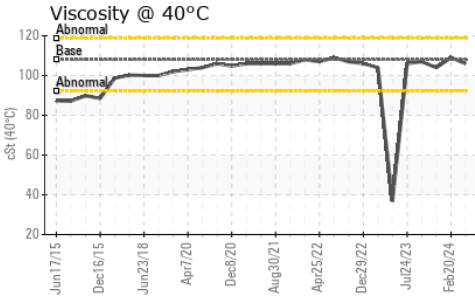
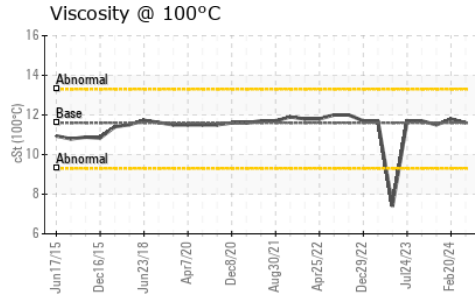
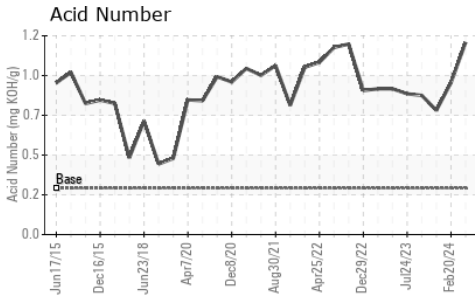
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185m	>125	<b>31</b>	11	11
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	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>2</b>	5	4
Boron	ppm	ASTM D5185m		<b>7</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>12</b>	0	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	9	<b>16</b>	24	0
Calcium	ppm	ASTM D5185m	4500	<b>3423</b>	3045	3048
Phosphorus	ppm	ASTM D5185m	1150	<b>953</b>	907	790
Zinc	ppm	ASTM D5185m	1250	<b>1112</b>	1120	1074
Sulfur	ppm	ASTM D5185m	4500	<b>5759</b>	4170	3646
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	<b>1.16</b>	0.917	0.75
Visc @ 40°C	cSt	ASTM D445	108	<b>106</b>	109	104
Visc @ 100°C	cSt	ASTM D445	11.6	<b>11.6</b>	11.8	11.5
Viscosity Index (VI)	Scale	ASTM D2270	94	<b>96</b>	96	97



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10002062 **Received** : 13 May 2024  
**Lab Number** : 06177814 **Tested** : 14 May 2024  
**Unique Number** : 11029140 **Diagnosed** : 14 May 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )

**ANCHOR STONE TULSA ROCK**  
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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)