



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
DE Samples - CAT LAB
Machine Id
CATERPILLAR 980H LOADER 6583 (S/N JMS05055)
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		TO10002067	TO10003054	TO10002730
Sample Date		Client Info		22 Jun 2024	08 Jan 2024	02 Oct 2023
Machine Age	hrs	Client Info		35189	34718	34179
Oil Age	hrs	Client Info		471	1103	564
Filter Age	hrs	Client Info		471	539	564
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>95	13	10	15
Iron	ppm	ASTM D5185m	>200	5	3	5
Chromium	ppm	ASTM D5185m	>5	0	0	0
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>7	0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	2
Lead	ppm	ASTM D5185m	>45	0	0	<1
Copper	ppm	ASTM D5185m	>225	4	7	4
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

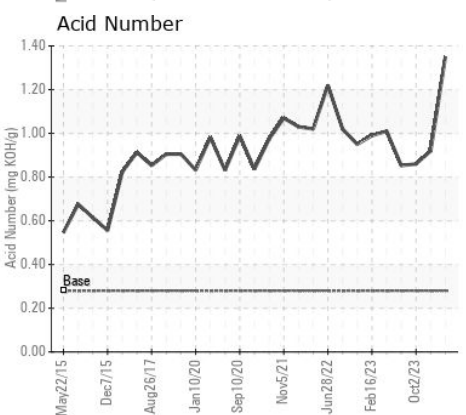
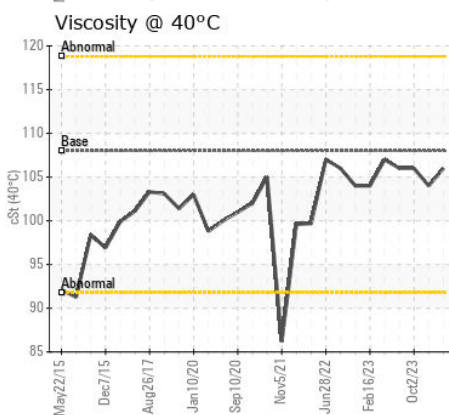
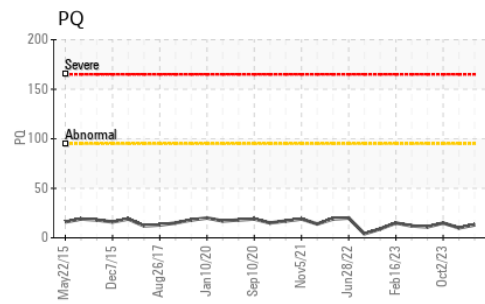
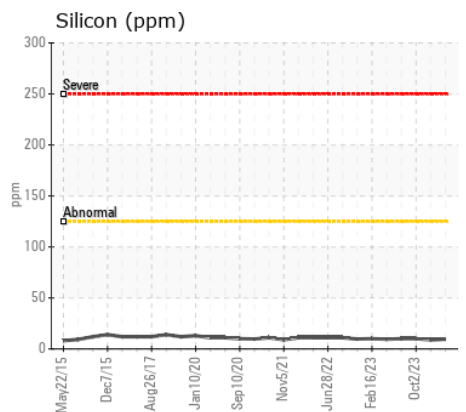
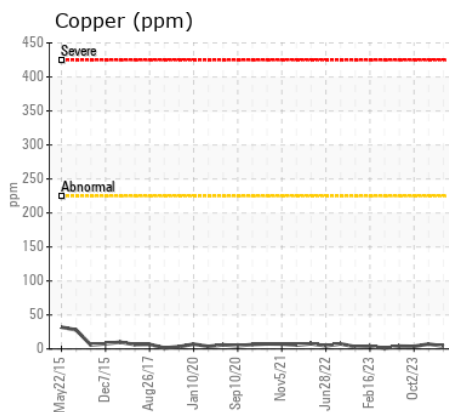
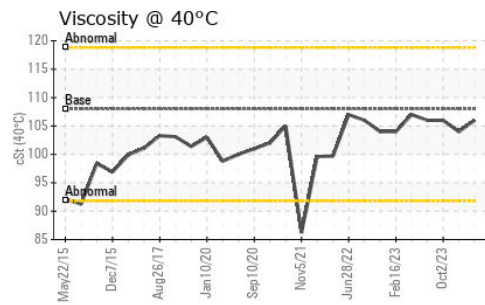
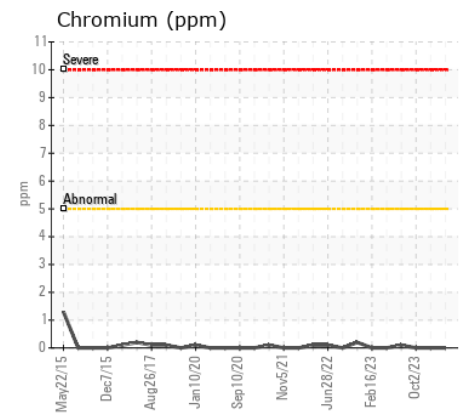
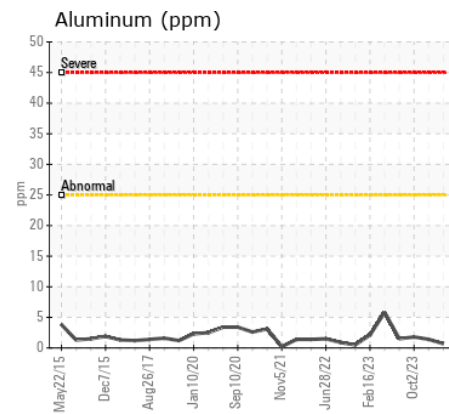
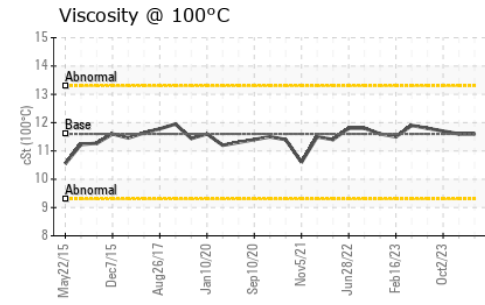
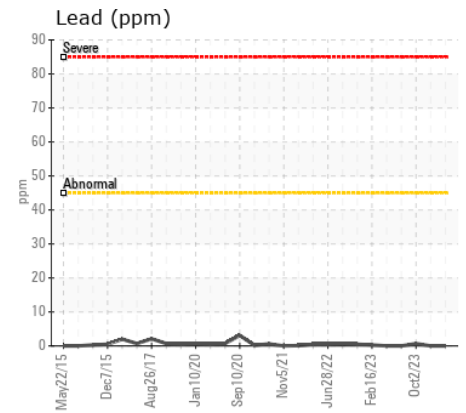
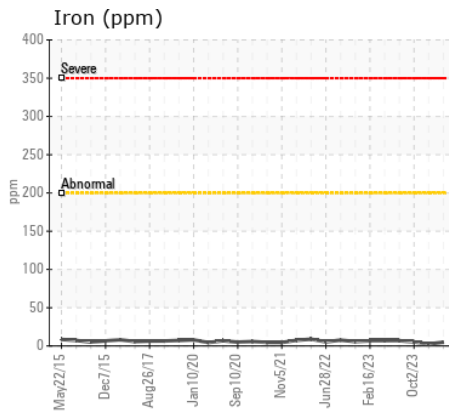
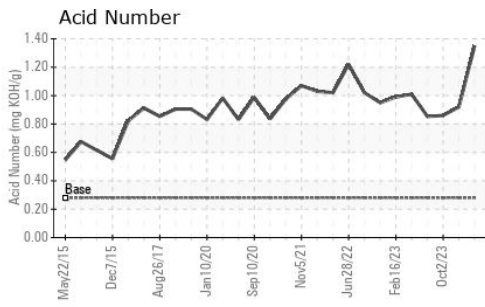
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185m	>125	10	9	10
Potassium	ppm	ASTM D5185m	>20	0	0	2
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		6	2	6
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	0	0
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	9	22	22	12
Calcium	ppm	ASTM D5185m	4500	3255	2982	2760
Phosphorus	ppm	ASTM D5185m	1150	954	881	864
Zinc	ppm	ASTM D5185m	1250	1092	1076	1077
Sulfur	ppm	ASTM D5185m	4500	4836	3909	4071
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	1.35	0.92	0.86
Visc @ 40°C	cSt	ASTM D445	108	106	104	106
Visc @ 100°C	cSt	ASTM D445	11.6	11.6	11.6	11.7
Viscosity Index (VI)	Scale	ASTM D2270	94	96	98	97



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002067
Lab Number : 06225320
Unique Number : 11103517
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

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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)