



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 775D 6441 (S/N 8AS00350)
 Component
Transmission (Manual)
 Fluid
TULCO LUBSOIL TO-4 30 (28 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10002870	TO10002447	TO10002300
Sample Date		Client Info		13 Nov 2023	09 Aug 2023	26 May 2023
Machine Age	hrs	Client Info		42811	42272	41797
Oil Age	hrs	Client Info		539	970	495
Filter Age	hrs	Client Info		539	475	495
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ		ASTM D8184	>95	11	16	13
Iron	ppm	ASTM D5185m	>200	5	7	6
Chromium	ppm	ASTM D5185m	>5	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>7	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>25	2	<1	2
Lead	ppm	ASTM D5185m	>45	26	35	24
Copper	ppm	ASTM D5185m	>225	47	61	39
Tin	ppm	ASTM D5185m	>10	2	2	2
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT

CONTAMINATION

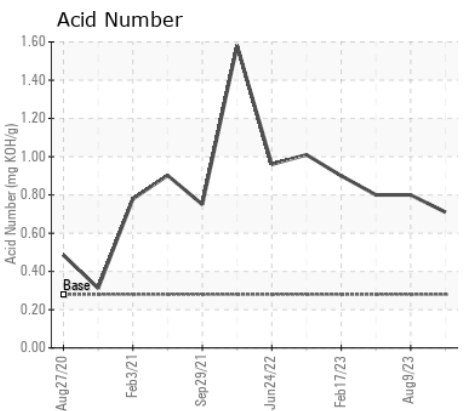
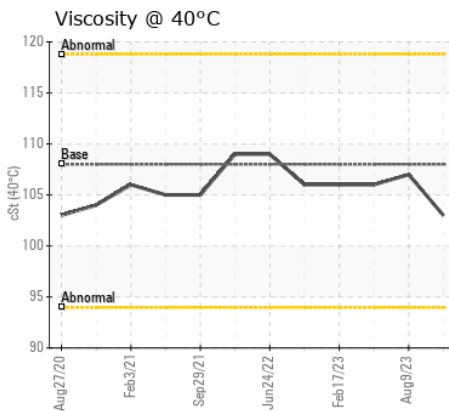
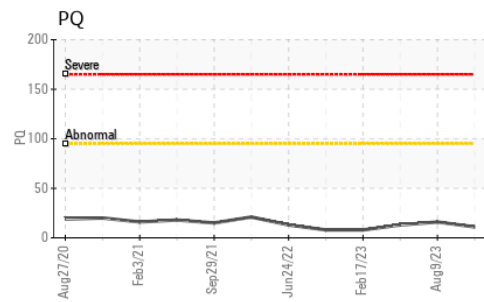
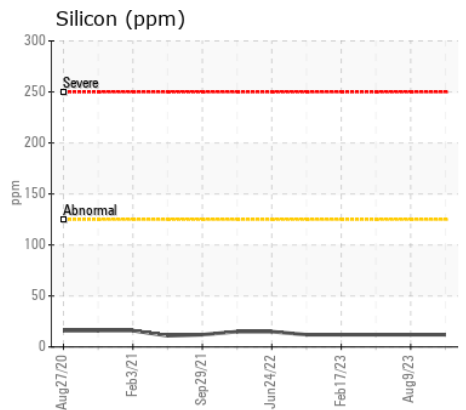
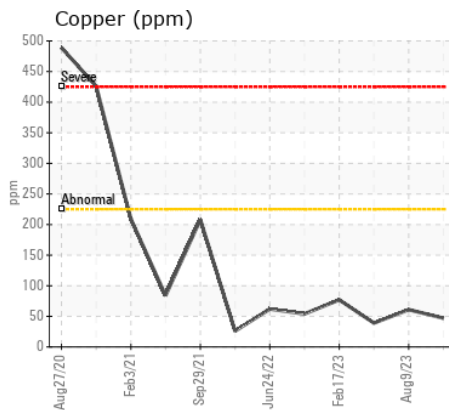
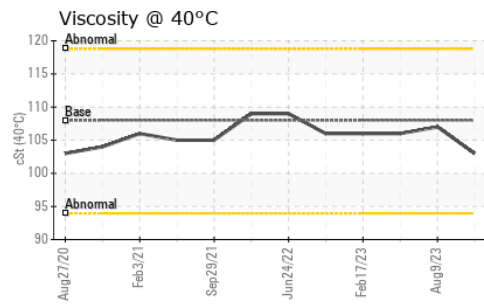
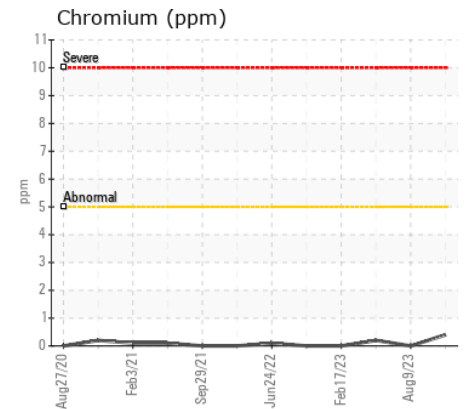
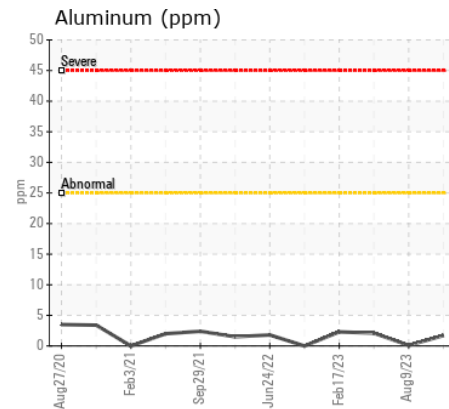
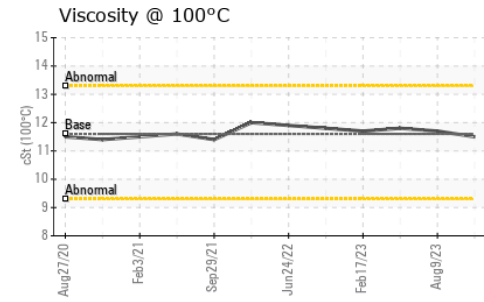
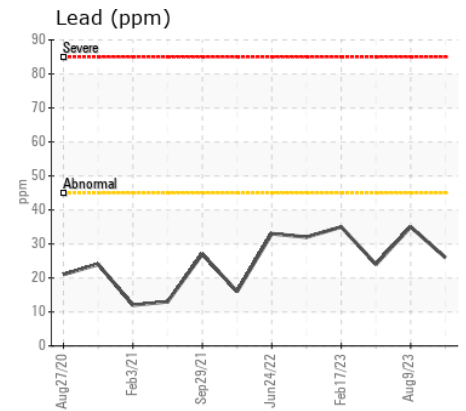
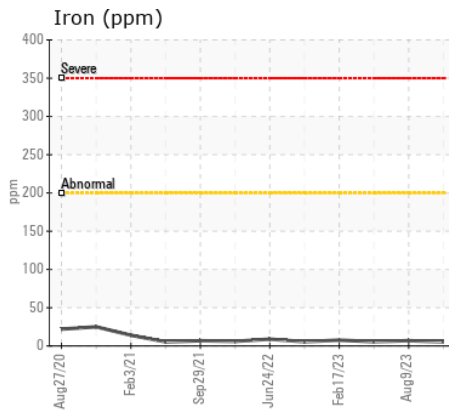
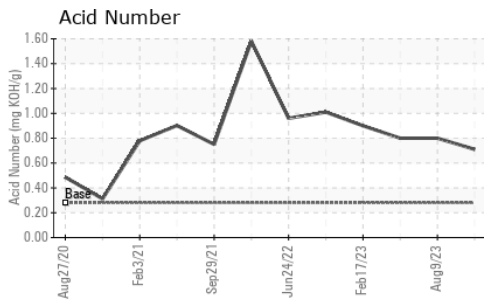
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185m	>125	12	12	12
Potassium	ppm	ASTM D5185m	>20	0	2	1
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		5	5	4
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	0	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	9	0	13	14
Calcium	ppm	ASTM D5185m	4500	2891	3273	3287
Phosphorus	ppm	ASTM D5185m	1150	751	922	935
Zinc	ppm	ASTM D5185m	1250	1044	1184	1181
Sulfur	ppm	ASTM D5185m	4500	3531	5072	5154
Acid Number (AN)	mg KOH/g	ASTM D8045	0.28	0.71	0.80	0.80
Visc @ 40°C	cSt	ASTM D445	108	103	107	106
Visc @ 100°C	cSt	ASTM D445	11.6	11.5	11.7	11.8
Viscosity Index (VI)	Scale	ASTM D2270	94	98	96	99



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002870 **Received** : 17 Nov 2023
Lab Number : 06011574 **Tested** : 20 Nov 2023
Unique Number : 10750718 **Diagnosed** : 20 Nov 2023 - Wes Davis
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)