



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980M 6141 (S/N KRS00885)
Component
Front Differential
Fluid
TULCO LUBSOIL TO-4 50 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003641	TO10003315	TO10002987
Sample Date		Client Info		17 Jun 2024	08 Apr 2024	01 Feb 2024
Machine Age	hrs	Client Info		13913	13425	12901
Oil Age	hrs	Client Info		4111	3623	3099
Filter Age	hrs	Client Info		4111	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		None	N/A	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
		ASTM D8184		148	196	204
Iron	ppm	ASTM D5185m	>500	402	373	406
Chromium	ppm	ASTM D5185m	>3	0	<1	<1
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	2	2
Lead	ppm	ASTM D5185m	>13	0	0	0
Copper	ppm	ASTM D5185m	>103	18	17	19
Tin	ppm	ASTM D5185m	>5	<1	1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

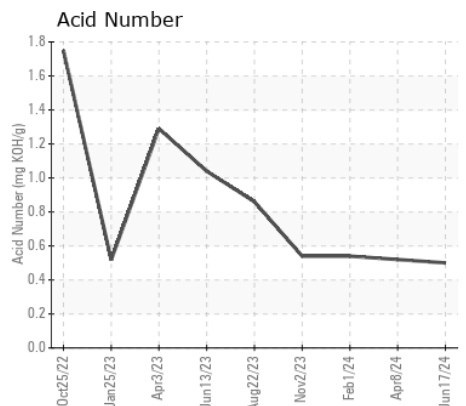
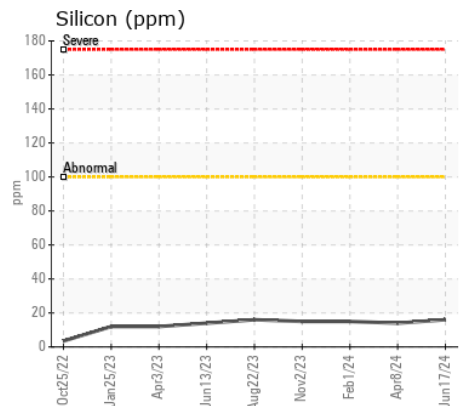
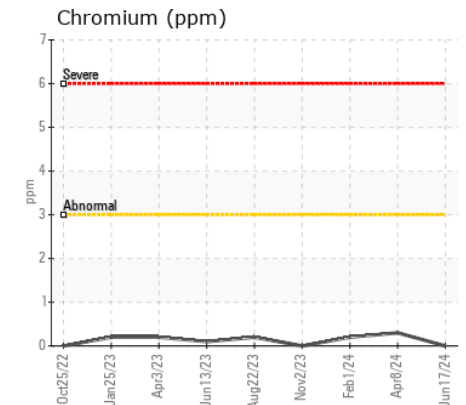
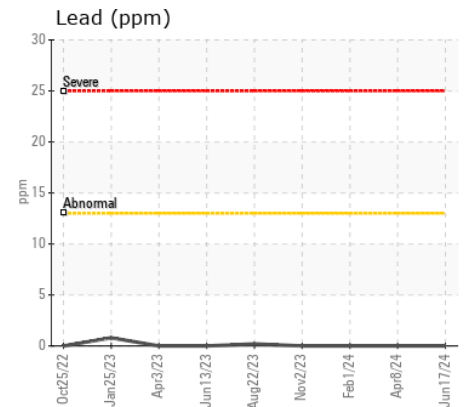
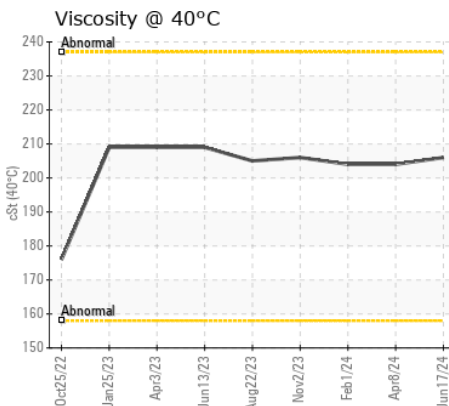
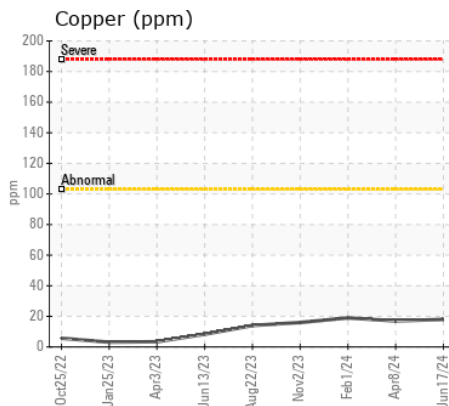
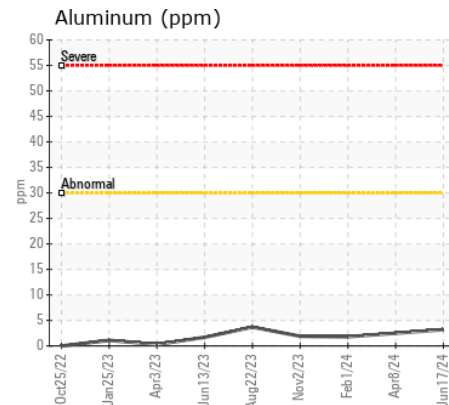
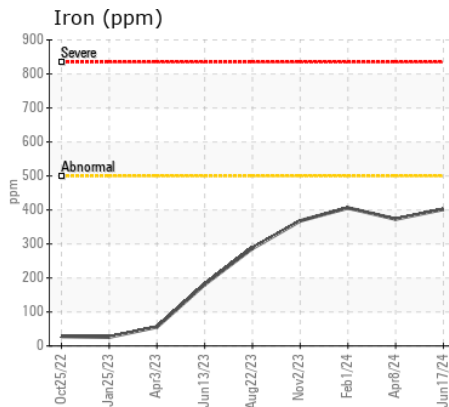
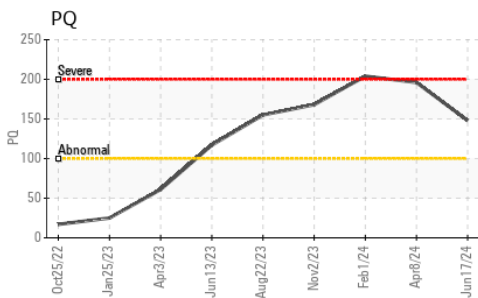
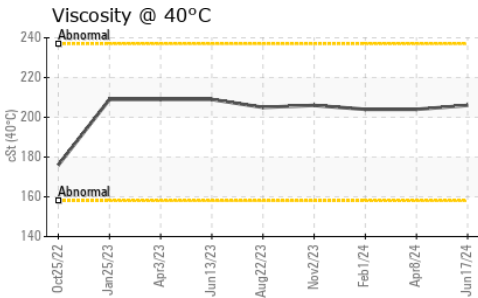
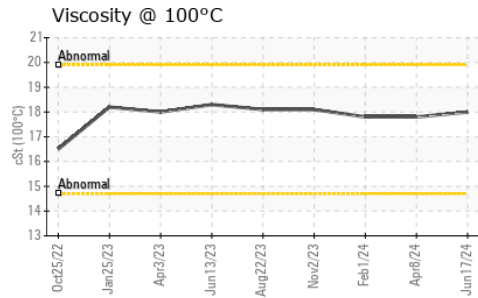
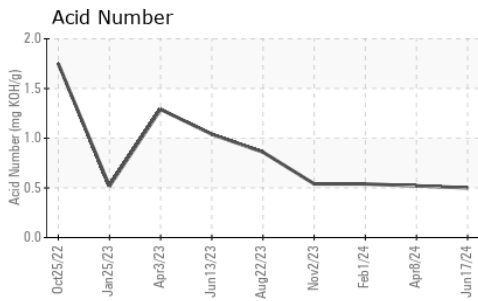
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	16	14	15
Potassium	ppm	ASTM D5185m	>20	2	0	1
Water		WC Method	>.2	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	>.2	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	0
Boron	ppm	ASTM D5185m		1	2	2
Barium	ppm	ASTM D5185m		0	0	5
Molybdenum	ppm	ASTM D5185m		<1	2	1
Manganese	ppm	ASTM D5185m		4	3	3
Magnesium	ppm	ASTM D5185m		23	19	18
Calcium	ppm	ASTM D5185m		3026	2787	2924
Phosphorus	ppm	ASTM D5185m		1028	878	919
Zinc	ppm	ASTM D5185m		1223	1008	1142
Sulfur	ppm	ASTM D5185m		5641	5243	5340
Acid Number (AN)	mg KOH/g	ASTM D8045		0.50	0.52	0.54
Visc @ 40°C	cSt	ASTM D445		206	204	204
Visc @ 100°C	cSt	ASTM D445		18.0	17.8	17.8
Viscosity Index (VI)	Scale	ASTM D2270		95	94	94



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003641 **Received** : 20 Jun 2024
Lab Number : 06216331 **Tested** : 21 Jun 2024
Unique Number : 11089195 **Diagnosed** : 21 Jun 2024 - 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)