



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		TO10003315	TO10002987	TO10002801
Sample Date		Client Info		08 Apr 2024	01 Feb 2024	02 Nov 2023
Machine Age	hrs	Client Info		13425	12901	12384
Oil Age	hrs	Client Info		3623	3099	2582
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	None	None
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		196	204	168
Iron	ppm	ASTM D5185m	>500	373	406	368
Chromium	ppm	ASTM D5185m	>3	<1	<1	0
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	2	2	2
Lead	ppm	ASTM D5185m	>13	0	0	0
Copper	ppm	ASTM D5185m	>103	17	19	16
Tin	ppm	ASTM D5185m	>5	1	0	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

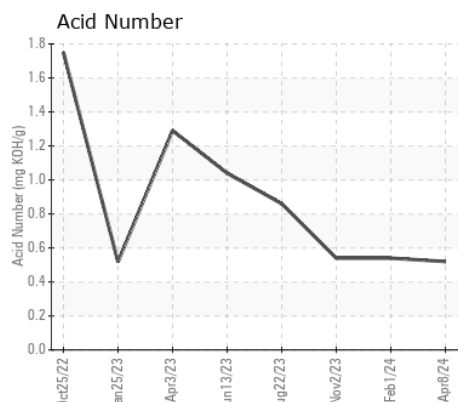
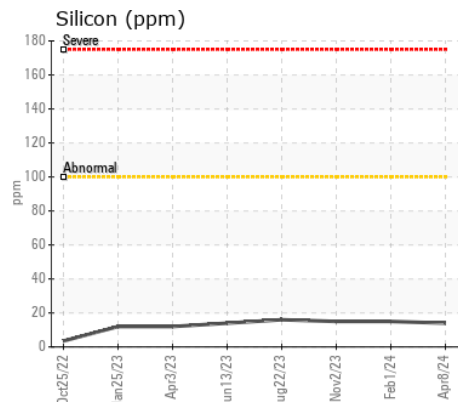
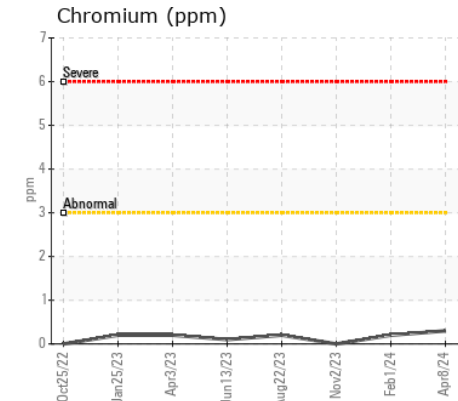
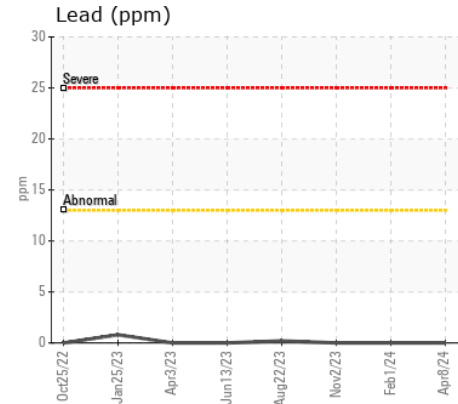
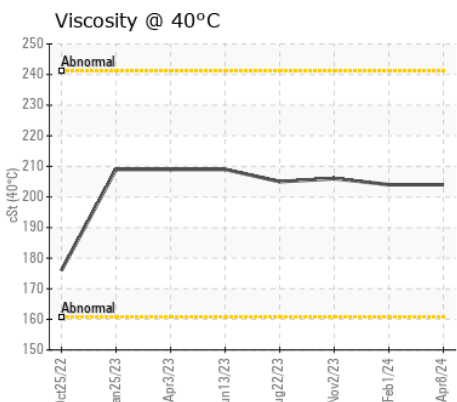
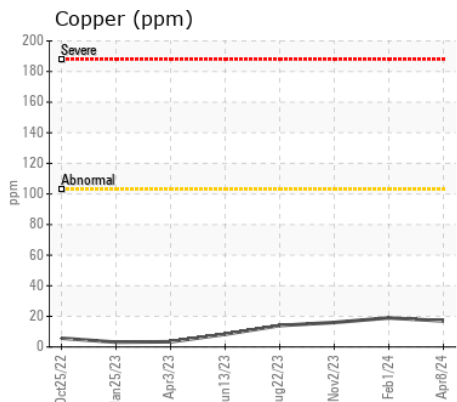
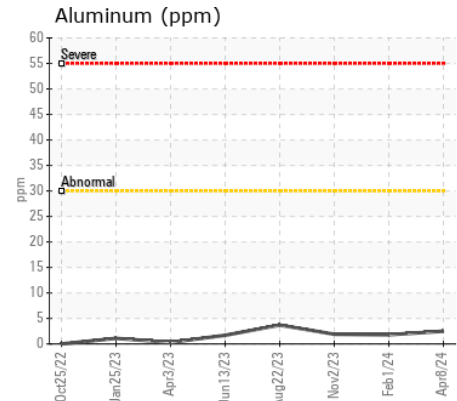
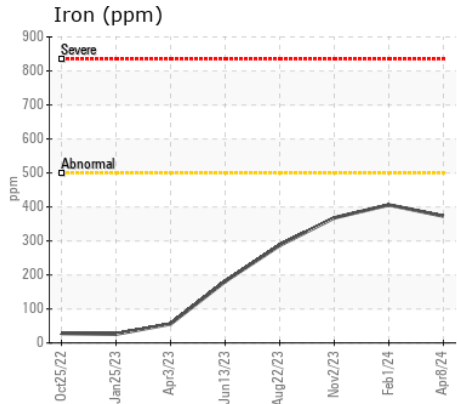
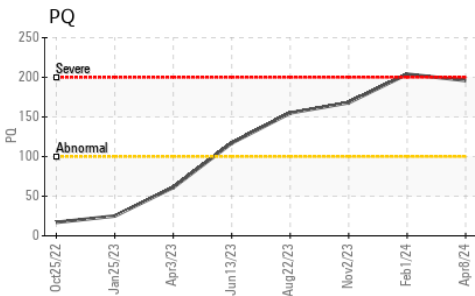
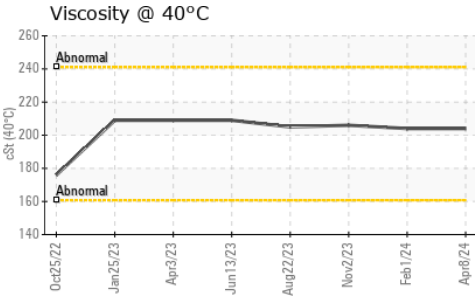
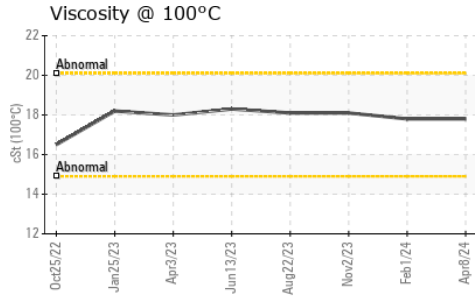
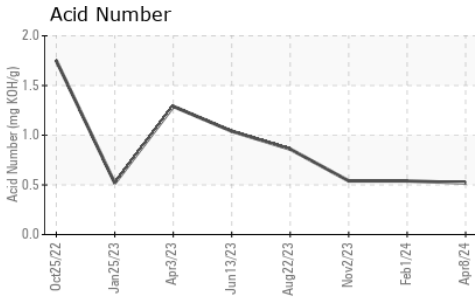
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	14	15	15
Potassium	ppm	ASTM D5185m	>20	0	1	0
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		2	0	2
Boron	ppm	ASTM D5185m		2	2	<1
Barium	ppm	ASTM D5185m		0	5	0
Molybdenum	ppm	ASTM D5185m		2	1	2
Manganese	ppm	ASTM D5185m		3	3	3
Magnesium	ppm	ASTM D5185m		19	18	20
Calcium	ppm	ASTM D5185m		2787	2924	2730
Phosphorus	ppm	ASTM D5185m		878	919	939
Zinc	ppm	ASTM D5185m		1008	1142	1150
Sulfur	ppm	ASTM D5185m		5243	5340	4538
Acid Number (AN)	mg KOH/g	ASTM D8045		0.52	0.54	0.54
Visc @ 40°C	cSt	ASTM D445		204	204	206
Visc @ 100°C	cSt	ASTM D445		17.8	17.8	18.1
Viscosity Index (VI)	Scale	ASTM D2270		94	94	96



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003315
Lab Number : 06149572
Unique Number : 10979650
Test Package : MOB 2 (Additional Tests: KV100, PQ, VI)

Received : 15 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 16 Apr 2024 - Wes Davis

ANCHOR STONE TULSA ROCK
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE
 TULSA, OK
 US 74137

Contact: MIKE SNYDER
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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)

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