



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 980M 6141 (S/N KRS00885)
Component
Rear Differential
Fluid
TULCO LUBSOIL TO-4 50 (17 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003324	TO10003375	TO10002968
Sample Date		Client Info		08 Apr 2024	04 Mar 2024	01 Feb 2024
Machine Age	hrs	Client Info		13425	13158	12901
Oil Age	hrs	Client Info		267	1685	1428
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		N/A	None	None
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		54	▲ 439	▲ 449
Iron	ppm	ASTM D5185m	>500	52	▲ 539	▲ 635
Chromium	ppm	ASTM D5185m	>3	0	<1	<1
Nickel	ppm	ASTM D5185m	>3	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>30	<1	8	5
Lead	ppm	ASTM D5185m	>13	0	3	0
Copper	ppm	ASTM D5185m	>103	5	51	56
Tin	ppm	ASTM D5185m	>5	0	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

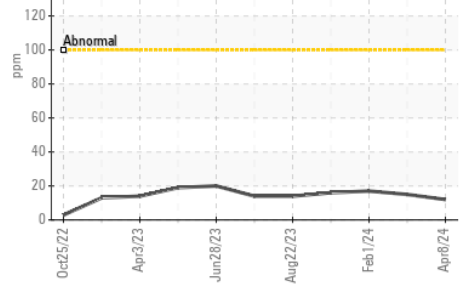
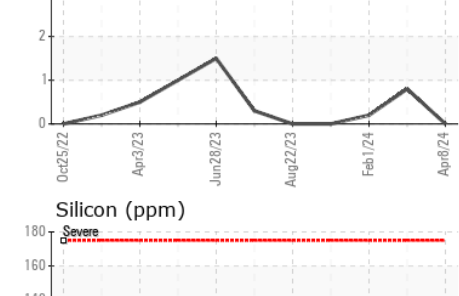
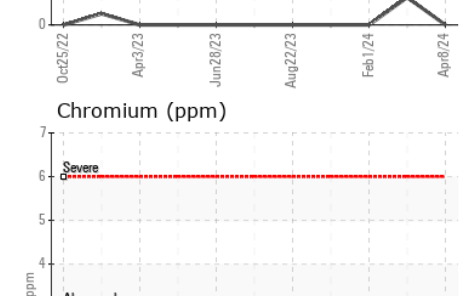
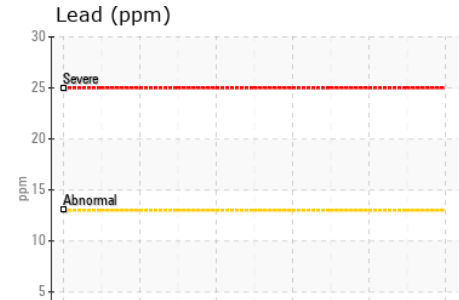
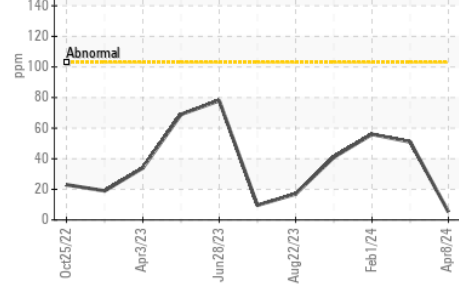
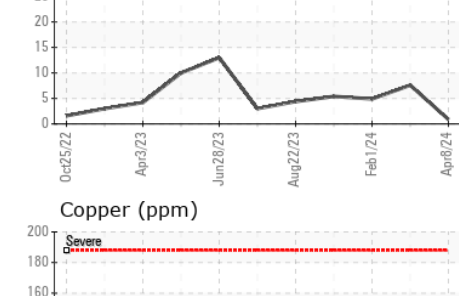
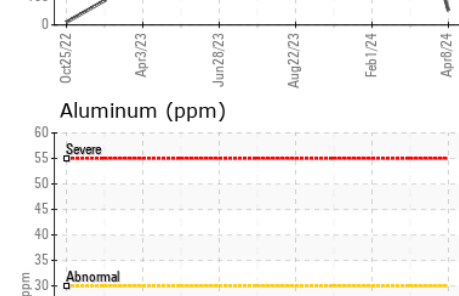
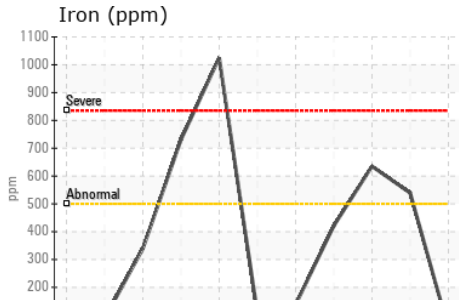
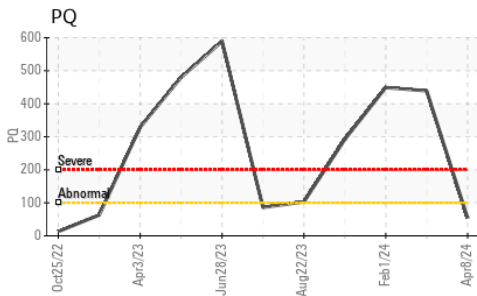
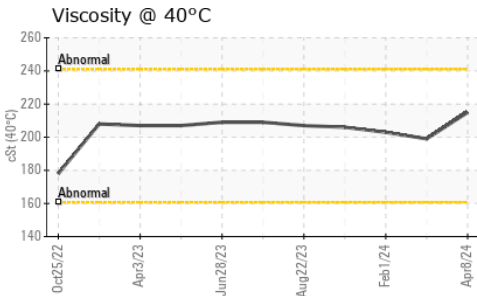
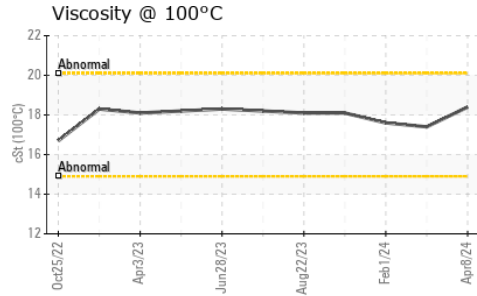
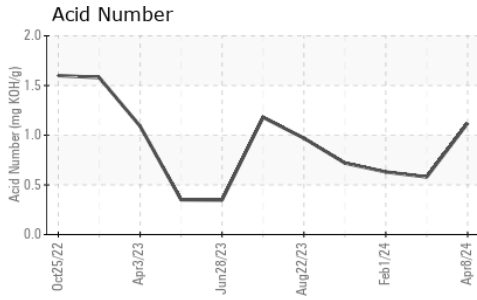
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	12	15	17
Potassium	ppm	ASTM D5185m	>20	0	3	2
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		6	5	0
Boron	ppm	ASTM D5185m		0	<1	<1
Barium	ppm	ASTM D5185m		0	0	5
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	6	5
Magnesium	ppm	ASTM D5185m		7	14	16
Calcium	ppm	ASTM D5185m		2928	2736	3111
Phosphorus	ppm	ASTM D5185m		826	881	925
Zinc	ppm	ASTM D5185m		1014	995	1185
Sulfur	ppm	ASTM D5185m		4714	4909	5336
Acid Number (AN)	mg KOH/g	ASTM D8045		1.12	0.58	0.63
Visc @ 40°C	cSt	ASTM D445		215	199	203
Visc @ 100°C	cSt	ASTM D445		18.4	17.4	17.6
Viscosity Index (VI)	Scale	ASTM D2270		94	93	93



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003324
Lab Number : 06149569
Unique Number : 10979647
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
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 US 74137

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 F:

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)