



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		<b>TO10003649</b>	TO10003324	TO10003375
Sample Date		Client Info		<b>15 Jun 2024</b>	08 Apr 2024	04 Mar 2024
Machine Age	hrs	Client Info		<b>13913</b>	13425	13158
Oil Age	hrs	Client Info		<b>755</b>	267	1685
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	None
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

PQ		ASTM D8184		<b>40</b>	54	▲ 439
Iron	ppm	ASTM D5185m	>500	<b>59</b>	52	▲ 539
Chromium	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>30	<b>2</b>	<1	8
Lead	ppm	ASTM D5185m	>13	<b>0</b>	0	3
Copper	ppm	ASTM D5185m	>103	<b>6</b>	5	51
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

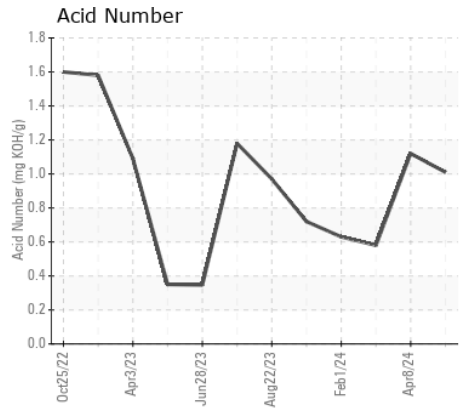
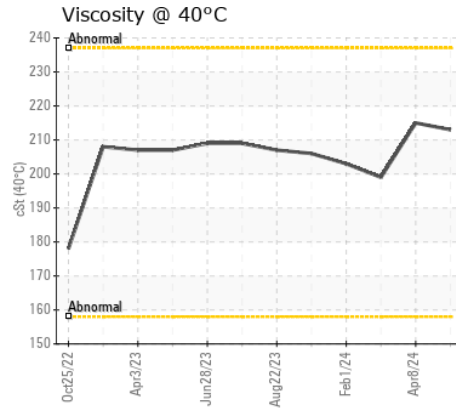
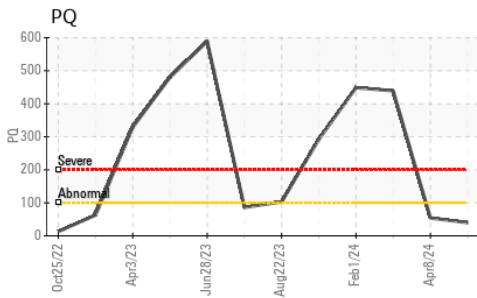
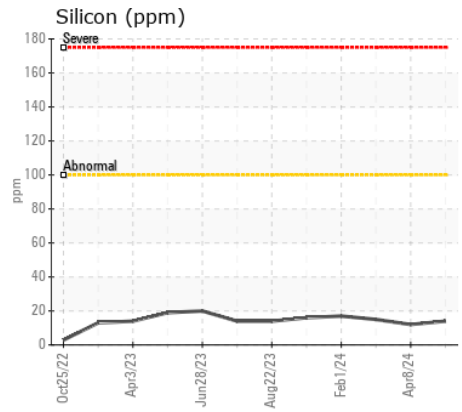
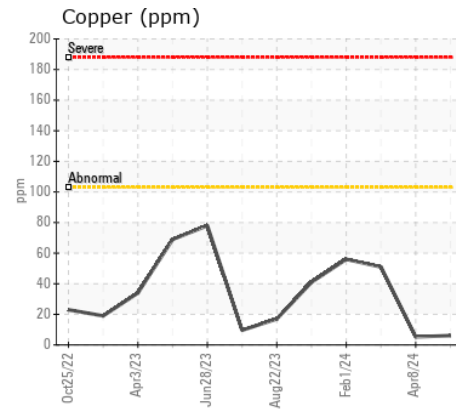
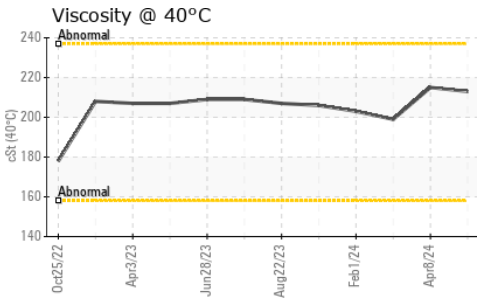
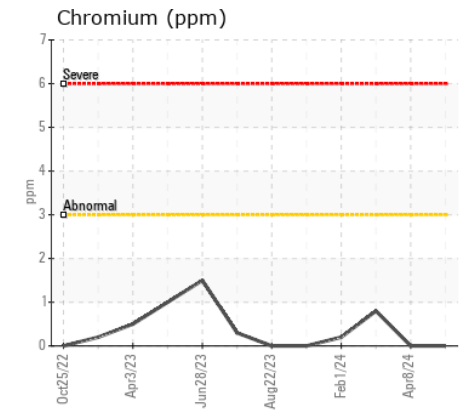
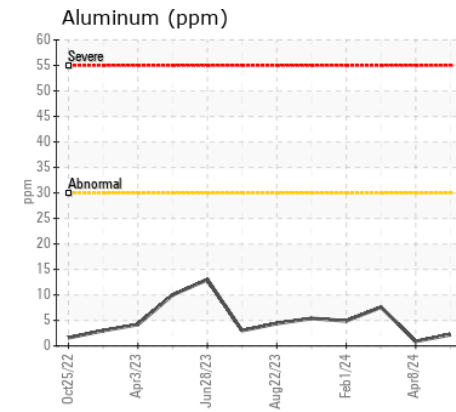
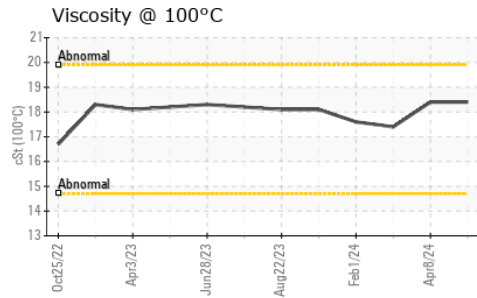
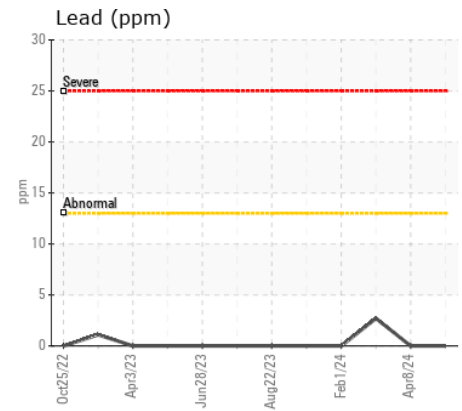
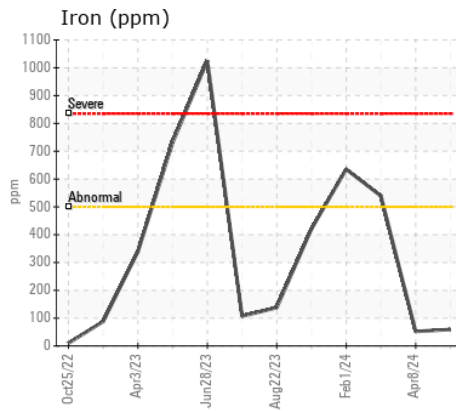
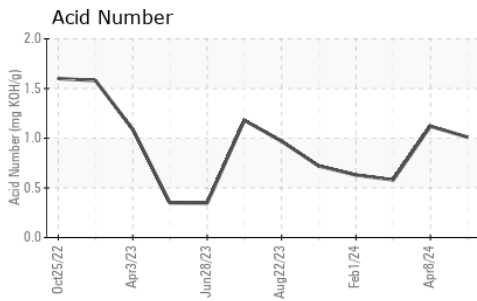
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	<b>14</b>	12	15
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	3
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	<b>NEG</b>	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		<b>5</b>	6	5
Boron	ppm	ASTM D5185m		<b>0</b>	0	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	6
Magnesium	ppm	ASTM D5185m		<b>13</b>	7	14
Calcium	ppm	ASTM D5185m		<b>3369</b>	2928	2736
Phosphorus	ppm	ASTM D5185m		<b>1078</b>	826	881
Zinc	ppm	ASTM D5185m		<b>1282</b>	1014	995
Sulfur	ppm	ASTM D5185m		<b>5918</b>	4714	4909
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.01</b>	1.12	0.58
Visc @ 40°C	cSt	ASTM D445		<b>213</b>	215	199
Visc @ 100°C	cSt	ASTM D445		<b>18.4</b>	18.4	17.4
Viscosity Index (VI)	Scale	ASTM D2270		<b>95</b>	94	93



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10003649  
**Lab Number** : 06216336  
**Unique Number** : 11089200  
**Test Package** : MOB 2 ( Additional Tests: KV100, PQ, VI )

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

Contact: MIKE SNYDER  
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 T: (417)850-9635

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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