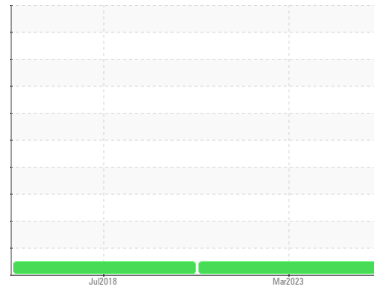


# OIL ANALYSIS REPORT



Machine Id  
**CATERPILLAR 12H GRADER 6438 (S/N 8MN00572)**  
Component  
**Right Chain Drive**  
Fluid  
**TULCO LUBSOIL TO-4 50 (--- GAL)**

Sample Rating Trend



**DIAGNOSIS**

**Recommendation**

Resample at the next service interval to monitor. ( Customer Sample Comment: 263 is machines hrs )

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

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

**SAMPLE INFORMATION** method limit/base current history1 history2

Sample Number	Client Info	<b>TO10001718</b>	TO1006383	---
Sample Date	Client Info	<b>20 Mar 2023</b>	14 Jul 2018	---
Machine Age	hrs	Client Info	<b>263</b>	13328
Oil Age	hrs	Client Info	<b>263</b>	0
Oil Changed	Client Info	<b>Not Chngd</b>	Not Chngd	---
Sample Status		<b>NORMAL</b>	NORMAL	---

**CONTAMINATION** method limit/base current history1 history2

Water	WC Method	>0.2	<b>NEG</b>	NEG	---
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**WEAR METALS** method limit/base current history1 history2

PQ		ASTM D8184		<b>97</b>	296	---
Iron	ppm	ASTM D5185m	>200	<b>64</b>	146	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m		<b>3</b>	2	---
Lead	ppm	ASTM D5185m		<b>0</b>	0	---
Copper	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Tin	ppm	ASTM D5185m		<b>0</b>	0	---
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

**ADDITIVES** method limit/base current history1 history2

Boron	ppm	ASTM D5185m		<b>0</b>	4	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	3	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	---
Magnesium	ppm	ASTM D5185m		<b>10</b>	14	---
Calcium	ppm	ASTM D5185m		<b>3472</b>	4127	---
Phosphorus	ppm	ASTM D5185m		<b>1047</b>	944	---
Zinc	ppm	ASTM D5185m		<b>1266</b>	1123	---
Sulfur	ppm	ASTM D5185m		<b>4310</b>	5386	---

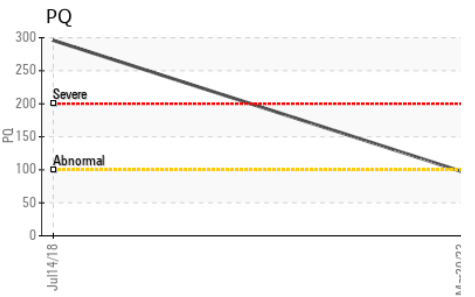
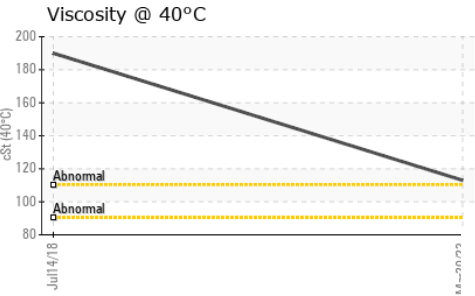
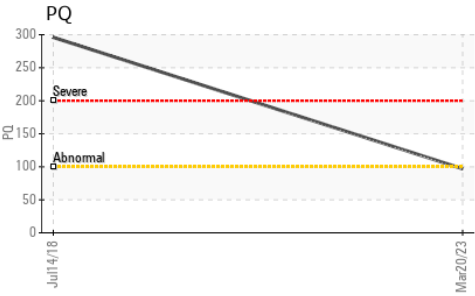
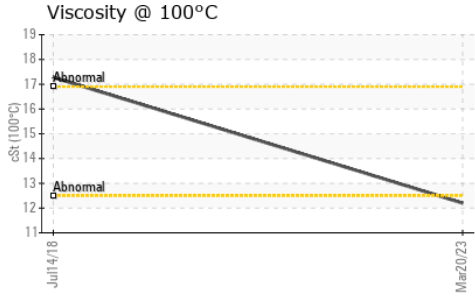
**CONTAMINANTS** method limit/base current history1 history2

Silicon	ppm	ASTM D5185m		<b>16</b>	13	---
Sodium	ppm	ASTM D5185m		<b>3</b>	1	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	---

**FLUID DEGRADATION** method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.14</b>	1.196	---
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# OIL ANALYSIS REPORT



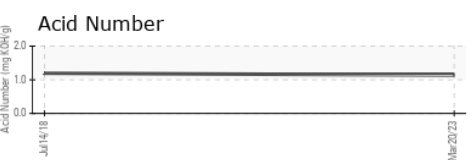
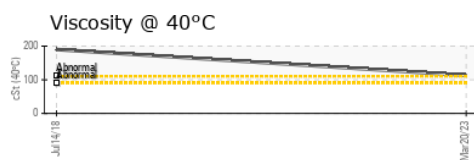
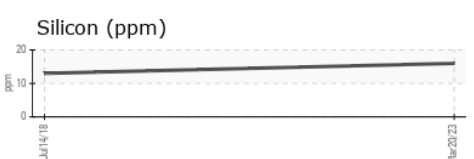
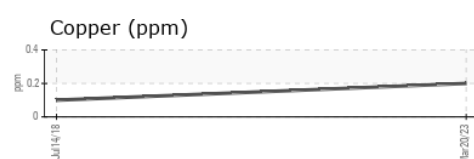
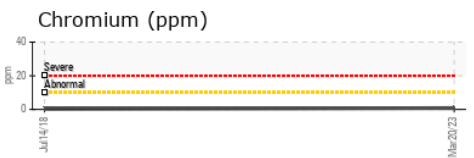
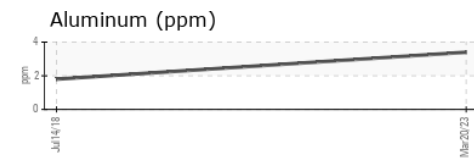
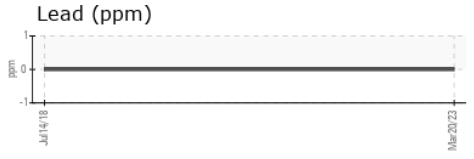
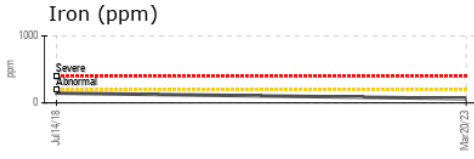
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>MODER</b>	LIGHT	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---
Free Water	scalar	*Visual		<b>NEG</b>	NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	<b>113</b>	190.0	---
Visc @ 100°C	cSt	ASTM D445	<b>12.2</b>	17.28	---
Viscosity Index (VI)	Scale	ASTM D2270	<b>97</b>	97	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color	no image	no image	no image
Bottom	no image	no image	no image

GRAPHS
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Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10001718      **Received** : 28 Mar 2023  
**Lab Number** : **05804117**      **Tested** : 31 Mar 2023  
**Unique Number** : 10401646      **Diagnosed** : 31 Mar 2023 - Jonathan Hester  
**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: DAVID MORRIS  
 dmorris@anchorstoneco.com

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)

T:  
F: