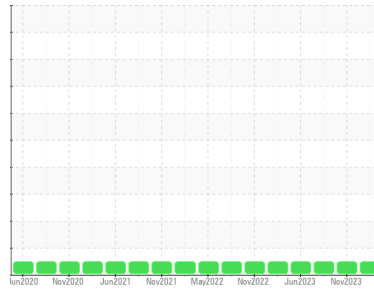


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 990K 6088 (S/N A9P00362)
 Component
Front Differential
 Fluid
TULCO LUBSOIL TO-4 50 (52 GAL)

Sample Rating Trend



NORMAL

DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

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	TO10003014	TO10002890	TO10002442	
Sample Date	Client Info	22 Mar 2024	06 Nov 2023	22 Aug 2023	
Machine Age	hrs	Client Info	15413	14829	14321
Oil Age	hrs	Client Info	3925	3341	2833
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION method limit/base current history1 history2

Water	WC Method	>.2	NEG	NEG	NEG
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WEAR METALS method limit/base current history1 history2

PQ		ASTM D8184		33	28	27
Iron	ppm	ASTM D5185m	>500	34	24	22
Chromium	ppm	ASTM D5185m	>3	<1	0	<1
Nickel	ppm	ASTM D5185m	>3	2	<1	1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	4	2	4
Lead	ppm	ASTM D5185m	>13	<1	0	<1
Copper	ppm	ASTM D5185m	>103	3	2	1
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	<1

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		<1	0	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		13	12	12
Calcium	ppm	ASTM D5185m		3399	3086	3526
Phosphorus	ppm	ASTM D5185m		979	925	972
Zinc	ppm	ASTM D5185m		1183	1146	1218
Sulfur	ppm	ASTM D5185m		5611	4788	5879

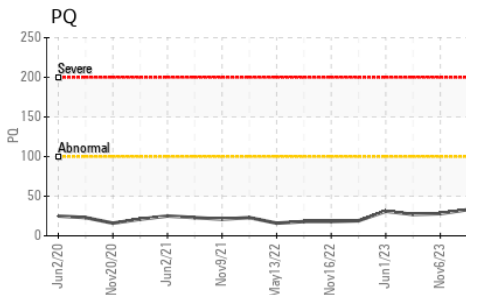
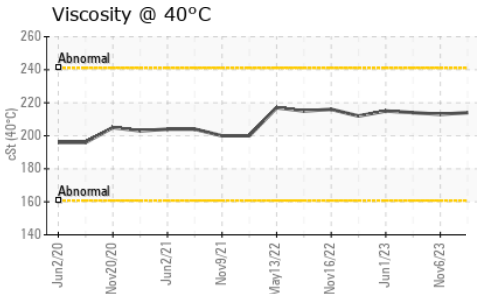
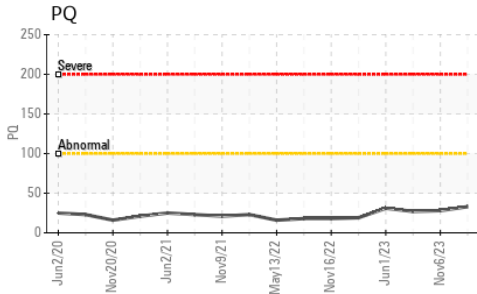
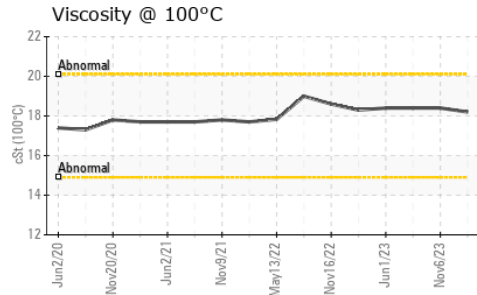
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>100	29	20	19
Sodium	ppm	ASTM D5185m		3	4	0
Potassium	ppm	ASTM D5185m	>20	3	0	3

FLUID DEGRADATION method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045		1.13	1.03	0.99
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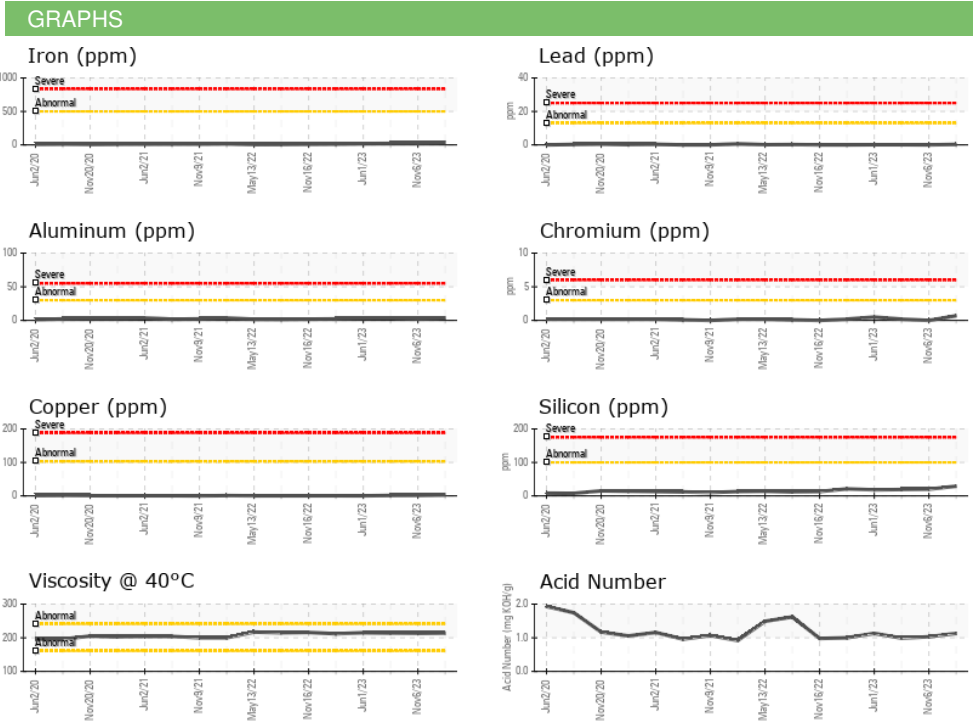
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	214	213	214
Visc @ 100°C	cSt	ASTM D445	18.2	18.4	18.4
Viscosity Index (VI)	Scale	ASTM D2270	93	95	94

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



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003014 **Received** : 29 Mar 2024
Lab Number : 06134168 **Tested** : 01 Apr 2024
Unique Number : 10953633 **Diagnosed** : 01 Apr 2024 - Wes Davis
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
 msnyder@anchorstoneco.com
 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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