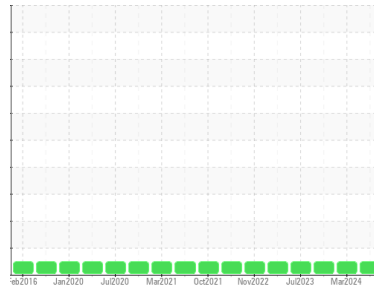


OIL ANALYSIS REPORT



Area
DE Samples - CAT LAB
Machine Id
CATERPILLAR 990 LOADER G 6427 (S/N BCR00127)
Component
Front Right Final Drive
Fluid
TULCO LUBSOIL TO-4 50 (10 GAL)

Sample Rating Trend



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	TO10002103	TO10003133	TO10002884
Sample Date	Client Info	31 May 2024	05 Mar 2024	13 Nov 2023
Machine Age	hrs	49260	48658	48135
Oil Age	hrs	4209	3607	3070
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION method limit/base current history1 history2

Water	WC Method	>0.2	NEG	NEG	NEG
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WEAR METALS method limit/base current history1 history2

PQ	ASTM D8184	>500	25	22	17
Iron	ppm	ASTM D5185m	>800	19	14
Chromium	ppm	ASTM D5185m	>10	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	2
Titanium	ppm	ASTM D5185m	>15	0	<1
Silver	ppm	ASTM D5185m	>2	0	<1
Aluminum	ppm	ASTM D5185m	>75	4	3
Lead	ppm	ASTM D5185m	>10	3	2
Copper	ppm	ASTM D5185m	>75	5	1
Tin	ppm	ASTM D5185m	>8	2	1
Vanadium	ppm	ASTM D5185m		0	<1
Cadmium	ppm	ASTM D5185m		0	<1

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m		0	0
Barium	ppm	ASTM D5185m		0	0
Molybdenum	ppm	ASTM D5185m		3	<1
Manganese	ppm	ASTM D5185m		2	<1
Magnesium	ppm	ASTM D5185m		27	20
Calcium	ppm	ASTM D5185m		4354	3860
Phosphorus	ppm	ASTM D5185m		906	793
Zinc	ppm	ASTM D5185m		1027	847
Sulfur	ppm	ASTM D5185m		5748	5068

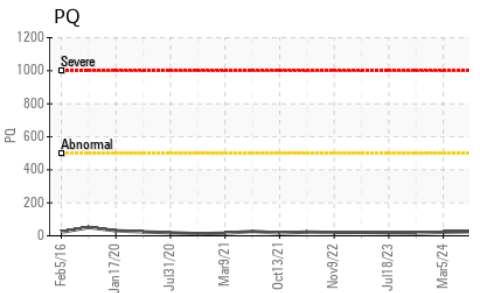
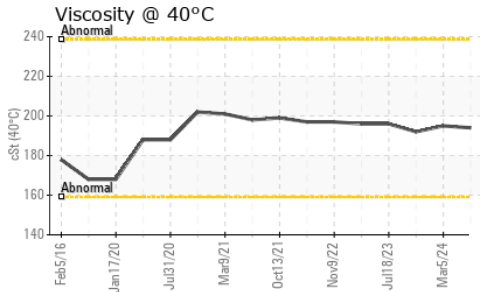
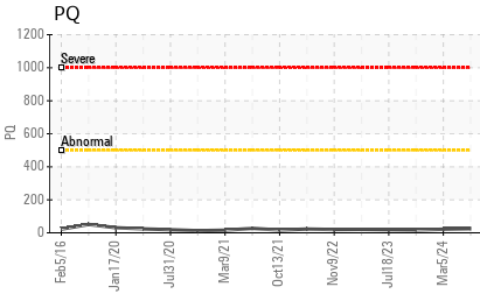
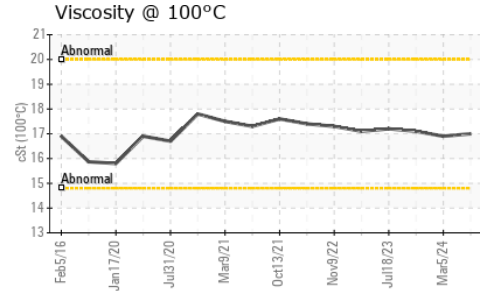
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>400	20	17
Sodium	ppm	ASTM D5185m		6	5
Potassium	ppm	ASTM D5185m	>20	4	2

FLUID DEGRADATION method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045		0.87	0.96
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OIL ANALYSIS REPORT

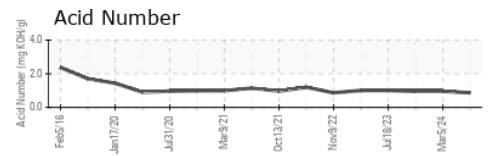
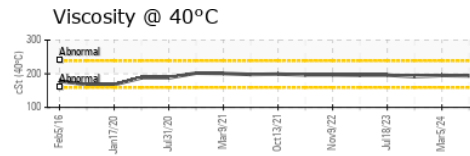
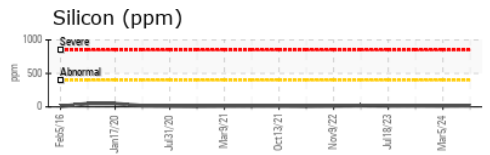
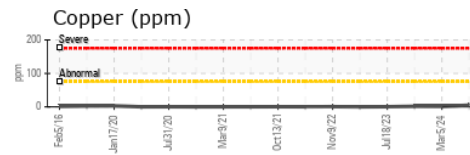
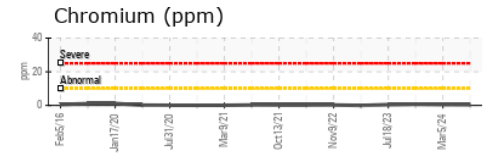
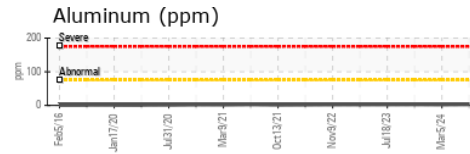
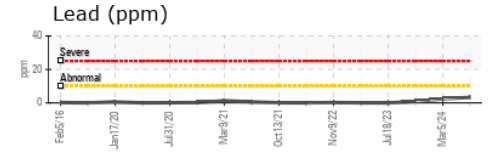
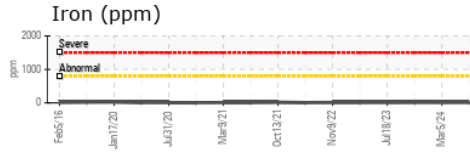


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	194	195	192
Visc @ 100°C	cSt	ASTM D445	17.0	16.9	17.1
Viscosity Index (VI)	Scale	ASTM D2270	92	91	94

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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10002103
Lab Number : 06205682
Unique Number : 11073143
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)