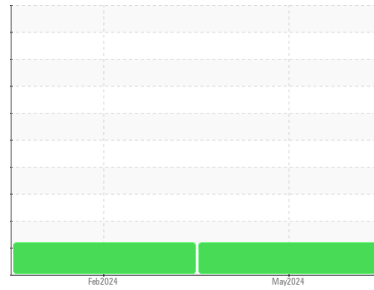




OIL ANALYSIS REPORT

Area
MINING
 Machine Id
ME-41 CATERPILLAR 980M KRS02439
 Component
Hydraulic System
 Fluid
CAT TDTO 10W (43 GAL)

Sample Rating Trend



ISO



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0910915	WC0880675	---
Sample Date	Client Info		07 May 2024	05 Feb 2024	---
Machine Age	hrs	Client Info	25677	25181	---
Oil Age	hrs	Client Info	1000	500	---
Oil Changed	Client Info		Not Chngd	Changed	---
Sample Status			ABNORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	16	<1	---
Chromium	ppm	ASTM D5185m >10	2	0	---
Nickel	ppm	ASTM D5185m >10	0	0	---
Titanium	ppm	ASTM D5185m	<1	0	---
Silver	ppm	ASTM D5185m	0	0	---
Aluminum	ppm	ASTM D5185m >10	2	0	---
Lead	ppm	ASTM D5185m >10	<1	0	---
Copper	ppm	ASTM D5185m >75	3	<1	---
Tin	ppm	ASTM D5185m >10	<1	0	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	3	---
Barium	ppm	ASTM D5185m	2	0	---
Molybdenum	ppm	ASTM D5185m	1	<1	---
Manganese	ppm	ASTM D5185m	<1	<1	---
Magnesium	ppm	ASTM D5185m	8	41	---
Calcium	ppm	ASTM D5185m 2980	193	285	---
Phosphorus	ppm	ASTM D5185m 1100	858	767	---
Zinc	ppm	ASTM D5185m 1270	962	966	---
Sulfur	ppm	ASTM D5185m	1968	1960	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	4	<1	---
Sodium	ppm	ASTM D5185m	0	<1	---
Potassium	ppm	ASTM D5185m >20	3	0	---

FLUID CLEANLINESS

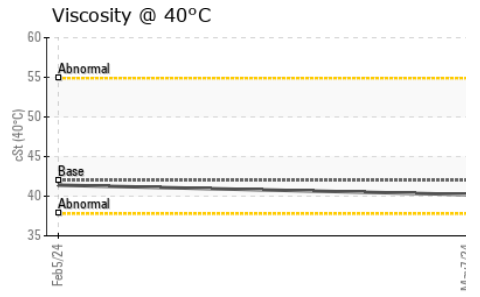
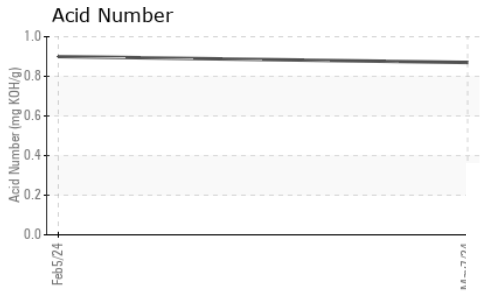
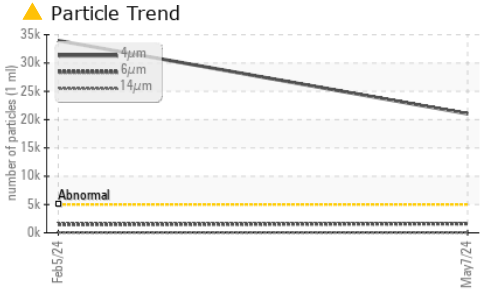
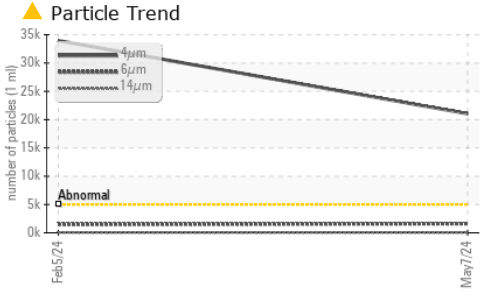
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 21038	▲ 33959	---
Particles >6µm	ASTM D7647	>1300	● 1610	● 1477	---
Particles >14µm	ASTM D7647	>160	44	33	---
Particles >21µm	ASTM D7647	>40	11	6	---
Particles >38µm	ASTM D7647	>10	1	0	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/18/13	▲ 22/18/12	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.87	0.90	---



OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	42.0	40.2	41.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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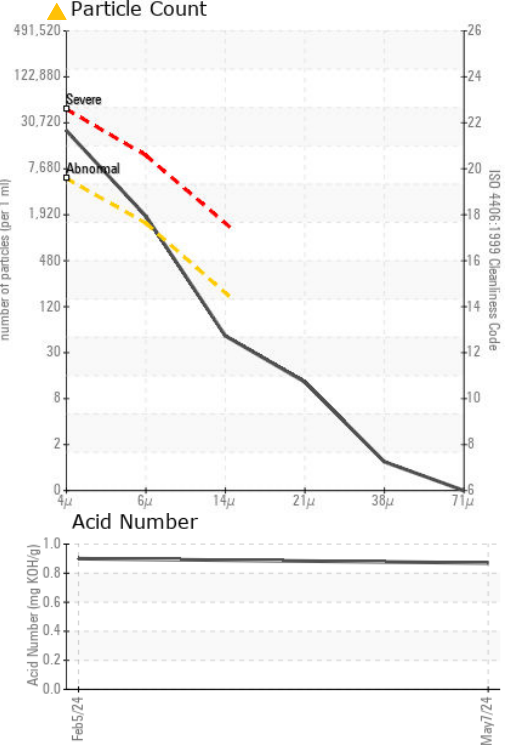
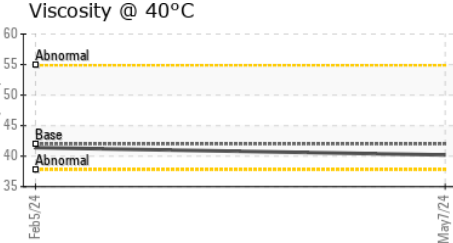
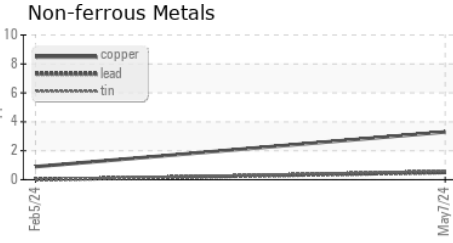
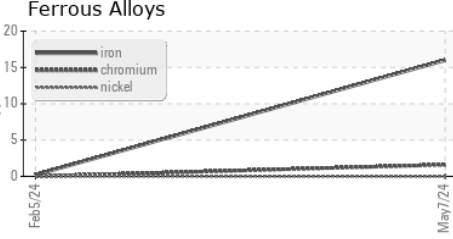
Color

no image

Bottom

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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910915 **Received** : 13 May 2024
Lab Number : 06177676 **Tested** : 14 May 2024
Unique Number : 11023729 **Diagnosed** : 15 May 2024 - Don Baldrige
Test Package : CONST

COVIA - CAMDEN - 094
 1700 SAND MILL RD
 CAMDEN, TN
 US 38320
 Contact: TRACY KEE
 tracy.kee@coviacorp.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)