

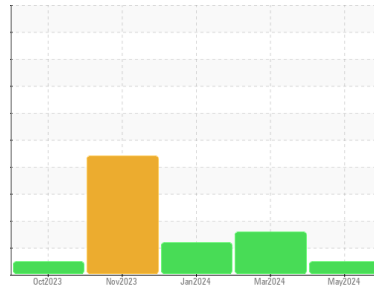


OIL ANALYSIS REPORT



Area
MINING
Machine Id
ME-66 CATERPILLAR 980M MK700460
Component
Hydraulic System
Fluid
CAT TDTO 10W (43 GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. 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			WC0910922	WC0909666	WC0880670
Sample Date	Client Info			07 May 2024	12 Mar 2024	22 Jan 2024
Machine Age	hrs	Client Info		6064	5546	5015
Oil Age	hrs	Client Info		500	2000	1500
Oil Changed	Client Info			Not Changed	N/A	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	4	4	6
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	6	▲ 11	7
Lead	ppm	ASTM D5185m	>10	<1	0	0
Copper	ppm	ASTM D5185m	>75	1	<1	2
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		2	<1	1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		8	0	11
Calcium	ppm	ASTM D5185m	2980	203	229	208
Phosphorus	ppm	ASTM D5185m	1100	800	727	716
Zinc	ppm	ASTM D5185m	1270	920	937	912
Sulfur	ppm	ASTM D5185m		1805	1978	1854

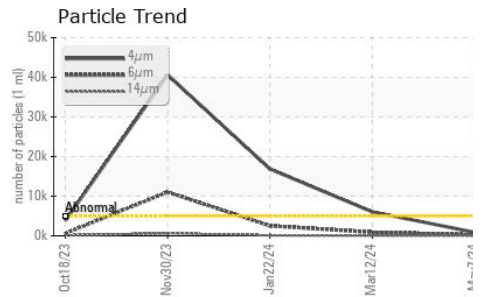
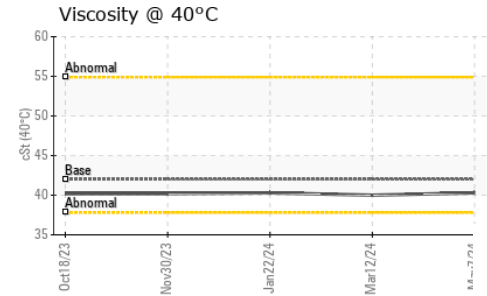
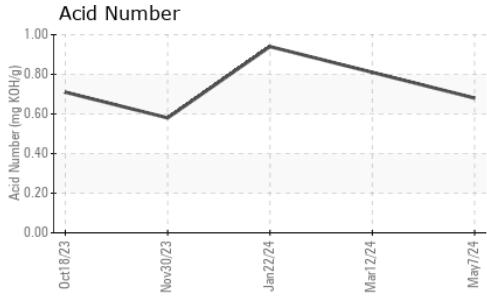
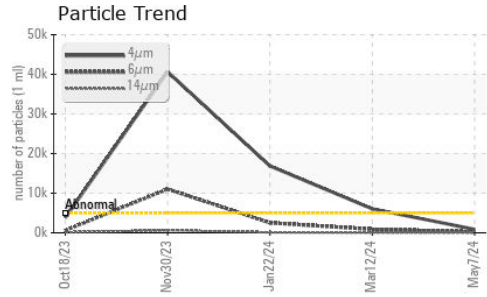
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	8	13	11
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	2	0	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	866	● 6042	▲ 16871	
Particles >6µm	ASTM D7647	>1300	225	896	▲ 2520	
Particles >14µm	ASTM D7647	>160	18	45	92	
Particles >21µm	ASTM D7647	>40	5	11	12	
Particles >38µm	ASTM D7647	>10	0	1	1	
Particles >71µm	ASTM D7647	>3	0	0	0	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	17/15/11	● 20/17/13	▲ 21/19/14	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.68	0.81	0.94



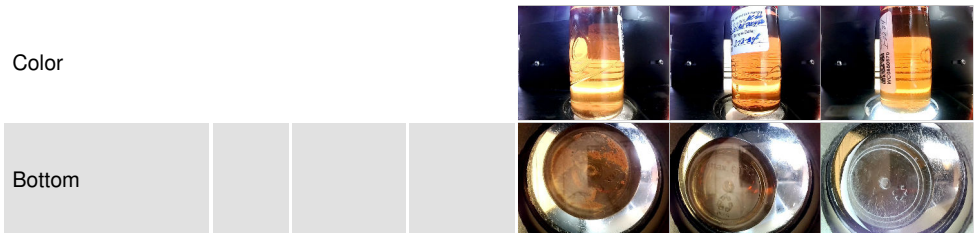
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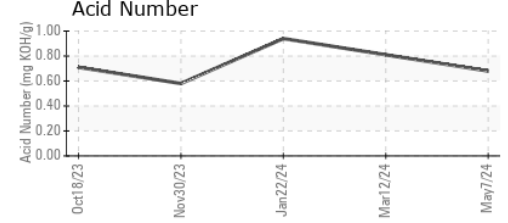
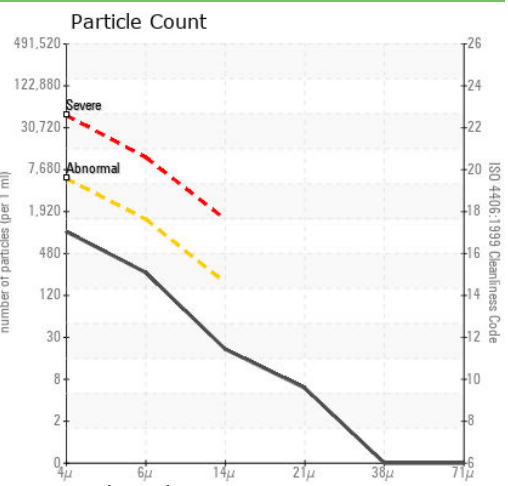
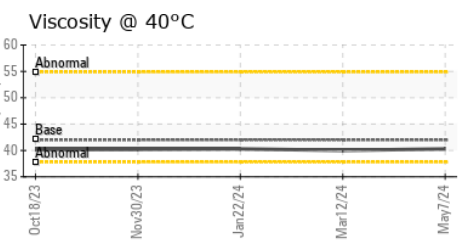
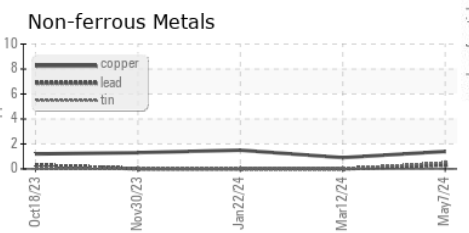
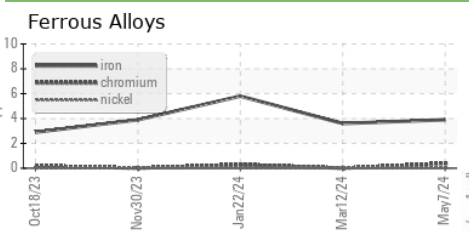
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	42.0	40.3	40.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910922 **Received** : 13 May 2024
Lab Number : 06177675 **Tested** : 14 May 2024
Unique Number : 11023728 **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)