

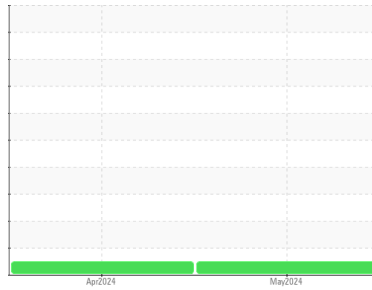


# OIL ANALYSIS REPORT



Area  
**MINING**  
Machine Id  
**ME-15 CATERPILLAR 980G MK700428**  
Component  
**Hydraulic System**  
Fluid  
**SHELL Spirax S4 CX 10W (--- GAL)**

### Sample Rating Trend



**NORMAL**



### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

#### 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>WC0927339</b>	WC0927328	---
Sample Date	Client Info			<b>07 May 2024</b>	04 Apr 2024	---
Machine Age	hrs	Client Info		<b>9245</b>	8774	---
Oil Age	hrs	Client Info		<b>9245</b>	0	---
Oil Changed	Client Info			<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

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

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>2</b>	2	---
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>23</b>	21	---
Calcium	ppm	ASTM D5185m		<b>245</b>	243	---
Phosphorus	ppm	ASTM D5185m		<b>770</b>	712	---
Zinc	ppm	ASTM D5185m		<b>941</b>	910	---
Sulfur	ppm	ASTM D5185m		<b>1930</b>	2117	---

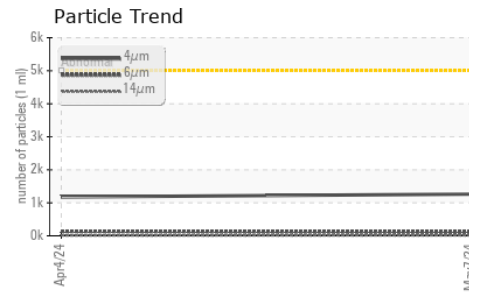
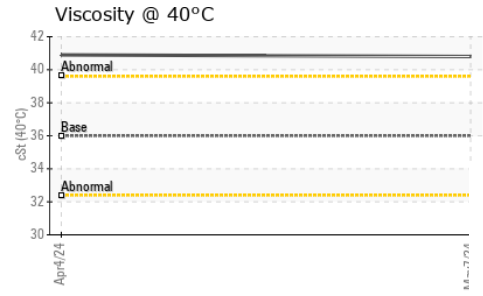
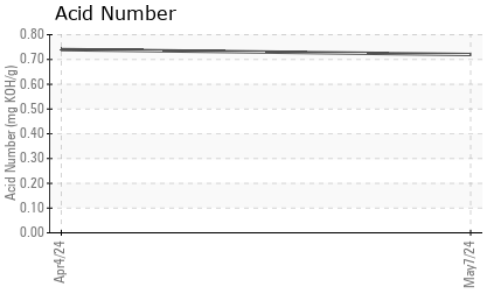
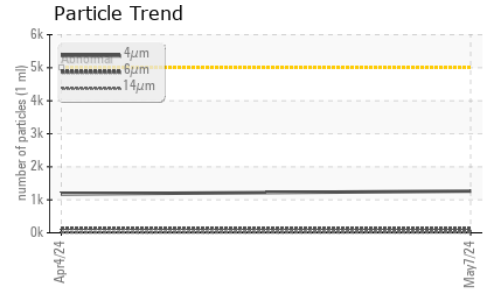
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	<b>2</b>	2	---
Sodium	ppm	ASTM D5185m		<b>0</b>	<1	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	<b>1264</b>	1176	---
Particles >6µm		ASTM D7647	>1300	<b>109</b>	130	---
Particles >14µm		ASTM D7647	>160	<b>12</b>	8	---
Particles >21µm		ASTM D7647	>40	<b>4</b>	2	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>17/14/11</b>	17/14/10	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.72</b>	0.74	---



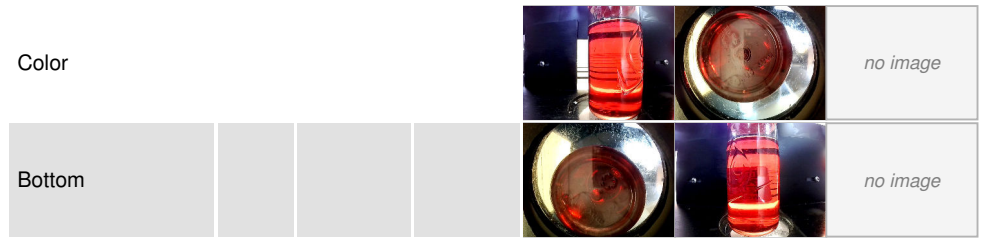
# OIL ANALYSIS REPORT



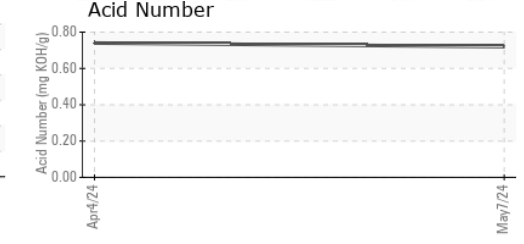
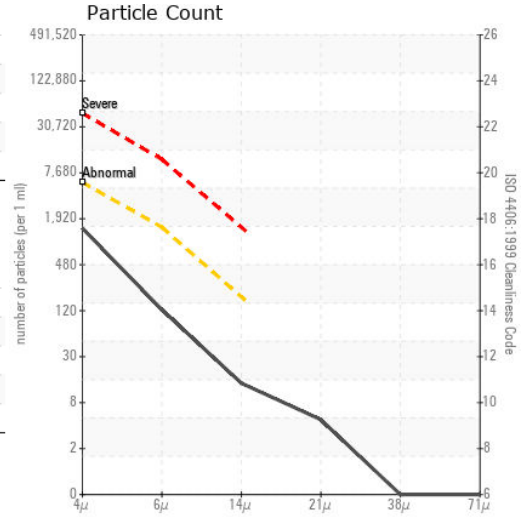
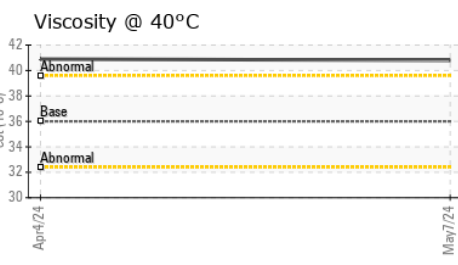
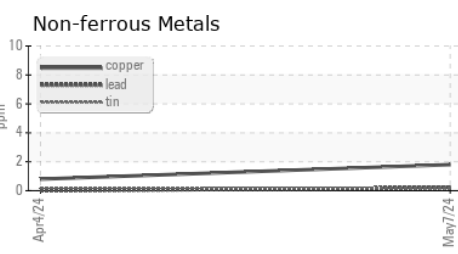
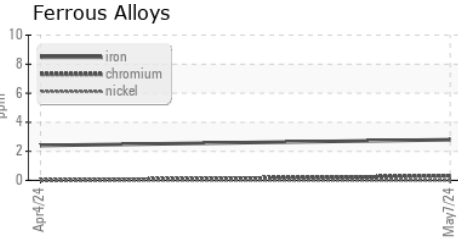
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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 36	<b>40.8</b>	40.9	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0927339      **Received** : 10 May 2024  
**Lab Number** : **06175391**      **Tested** : 13 May 2024  
**Unique Number** : 11021444      **Diagnosed** : 13 May 2024 - Wes Davis  
**Test Package** : CONST

**COVIA - TUSCALOOSA - 096**  
 2400 CRABTREE ROAD  
 TUSCALOOSA, AL  
 US 35405  
 Contact: Daid Hutson  
 david.hutson@coviacorp.com  
 T: (731)441-3376  
 F:

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)