



# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area

**MINING**

Machine Id

**ME-21 GRADALL TELEHANDLER 0160000925**

Component

**Hydraulic System**

Fluid

**SHELL Spirax S4 CX 10W (--- GAL)**

## DIAGNOSIS

### Recommendation

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

### Wear

The copper level is abnormal. All other metal levels are typical for a new component breaking in.

### 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		<b>WC0927345</b>	---	---
Sample Date	Client Info		<b>12 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>897</b>	---	---
Oil Age	hrs	Client Info	<b>897</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

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

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>6</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >10	<b>3</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>2</b>	---	---
Copper	ppm	ASTM D5185m >75	<b>▲ 350</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>7</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>1</b>	---	---
Manganese	ppm	ASTM D5185m	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>12</b>	---	---
Calcium	ppm	ASTM D5185m	<b>1887</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>660</b>	---	---
Zinc	ppm	ASTM D5185m	<b>685</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>3078</b>	---	---

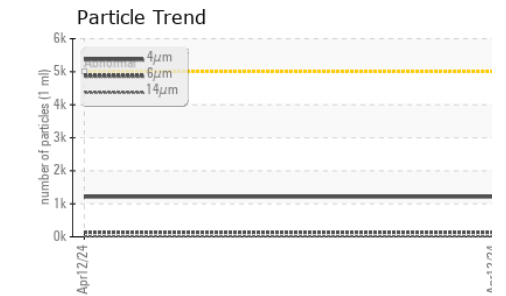
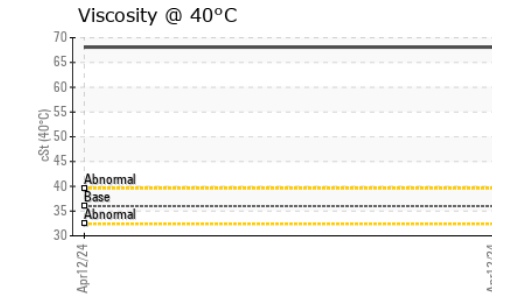
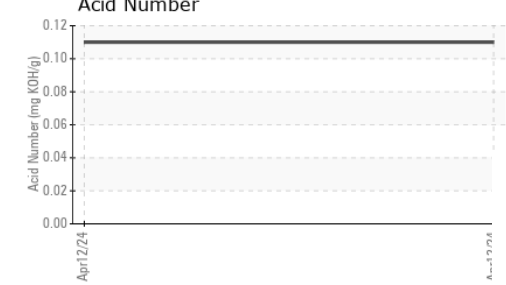
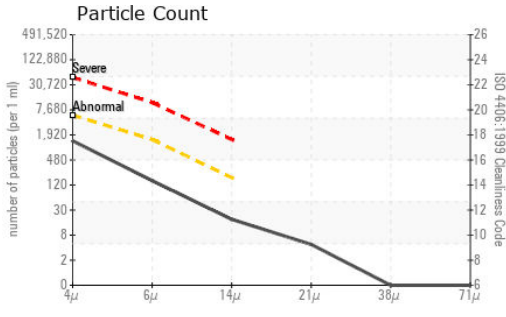
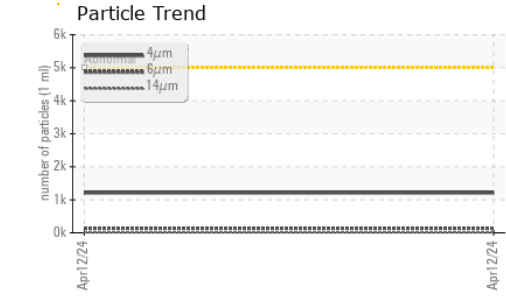
CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>8</b>	---	---
Sodium	ppm	ASTM D5185m	<b>4</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	---	---

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1212</b>	---	---
Particles >6µm	ASTM D7647	>1300	<b>135</b>	---	---
Particles >14µm	ASTM D7647	>160	<b>16</b>	---	---
Particles >21µm	ASTM D7647	>40	<b>4</b>	---	---
Particles >38µm	ASTM D7647	>10	<b>0</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/14/11</b>	---	---

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.11</b>	---	---



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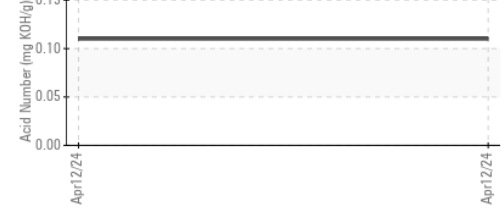
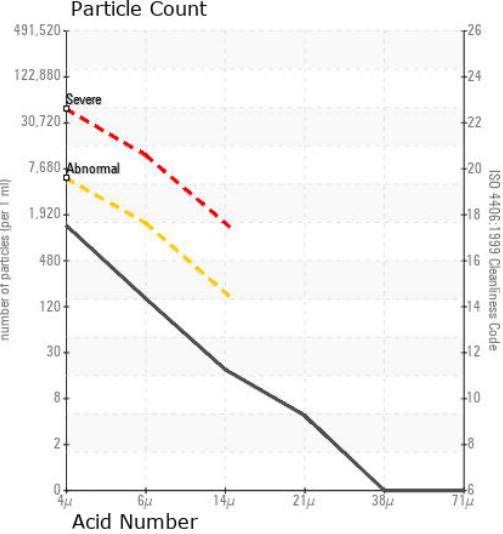
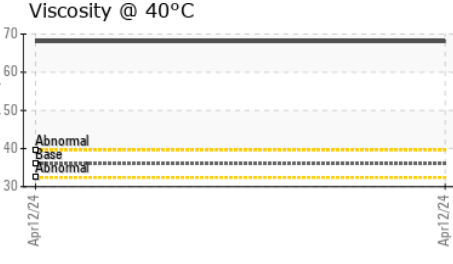
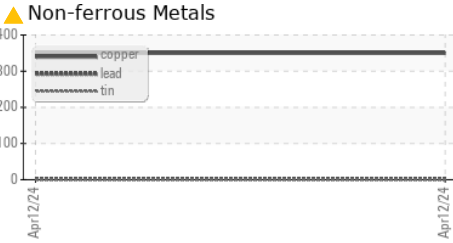
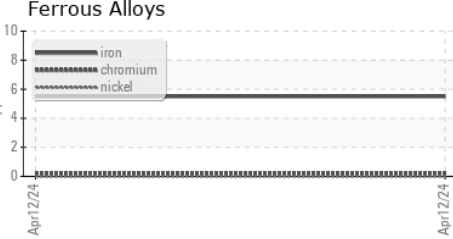
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*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 36	68.1	---	---

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0927345      **Received** : 16 Apr 2024  
**Lab Number** : 06150236      **Tested** : 17 Apr 2024  
**Unique Number** : 10980314      **Diagnosed** : 18 Apr 2024 - Don Baldrige  
**Test Package** : CONST

**COVIA - TUSCALOOSA - 096**  
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 US 35405  
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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)