

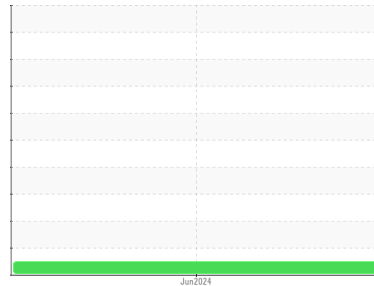


# OIL ANALYSIS REPORT



Area  
**MINING**  
Machine Id  
**ME-502 CATERPILLAR 988K TWX01543**  
Component  
**Rear Right Final Drive**  
Fluid  
**SHELL Spirax S4 CX 30 (--- GAL)**

### Sample Rating Trend



**NORMAL**



### 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 condition of the oil is acceptable for the time in service.

### SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>WC0944185</b>   | ---      | ---      |
| Sample Date   | Client Info |             | <b>05 Jun 2024</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>14009</b>       | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

### CONTAMINATION

|       | method    | limit/base | current    | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.2       | <b>NEG</b> | ---      | ---      |

### WEAR METALS

|          | method | limit/base  | current | history1     | history2 |
|----------|--------|-------------|---------|--------------|----------|
| Iron     | ppm    | ASTM D5185m | >800    | <b>47</b>    | ---      |
| Chromium | ppm    | ASTM D5185m | >10     | <b>&lt;1</b> | ---      |
| Nickel   | ppm    | ASTM D5185m | >5      | <b>0</b>     | ---      |
| Titanium | ppm    | ASTM D5185m | >15     | <b>1</b>     | ---      |
| Silver   | ppm    | ASTM D5185m | >2      | <b>0</b>     | ---      |
| Aluminum | ppm    | ASTM D5185m | >75     | <b>2</b>     | ---      |
| Lead     | ppm    | ASTM D5185m | >10     | <b>&lt;1</b> | ---      |
| Copper   | ppm    | ASTM D5185m | >75     | <b>25</b>    | ---      |
| Tin      | ppm    | ASTM D5185m | >8      | <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>21</b>    | ---      |
| Barium     | ppm    | ASTM D5185m |         | <b>0</b>     | ---      |
| Molybdenum | ppm    | ASTM D5185m |         | <b>3</b>     | ---      |
| Manganese  | ppm    | ASTM D5185m |         | <b>&lt;1</b> | ---      |
| Magnesium  | ppm    | ASTM D5185m |         | <b>25</b>    | ---      |
| Calcium    | ppm    | ASTM D5185m |         | <b>3190</b>  | ---      |
| Phosphorus | ppm    | ASTM D5185m |         | <b>906</b>   | ---      |
| Zinc       | ppm    | ASTM D5185m |         | <b>1146</b>  | ---      |
| Sulfur     | ppm    | ASTM D5185m |         | <b>5885</b>  | ---      |

### CONTAMINANTS

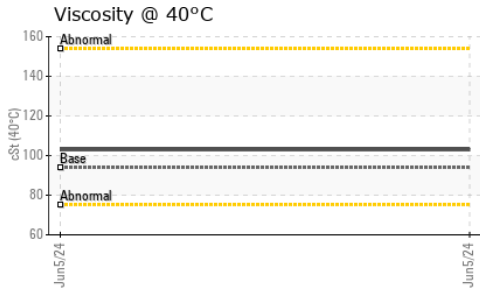
|           | method | limit/base  | current | history1  | history2 |
|-----------|--------|-------------|---------|-----------|----------|
| Silicon   | ppm    | ASTM D5185m | >400    | <b>16</b> | ---      |
| Sodium    | ppm    | ASTM D5185m |         | <b>0</b>  | ---      |
| Potassium | ppm    | ASTM D5185m | >20     | <b>2</b>  | ---      |

### VISUAL

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



# OIL ANALYSIS REPORT

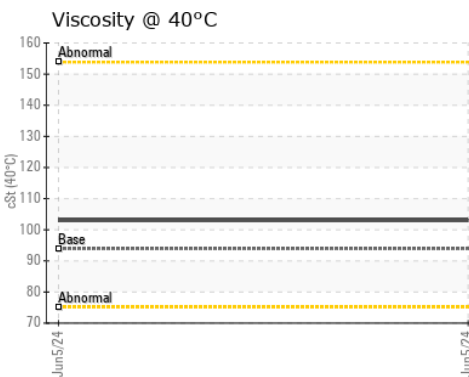
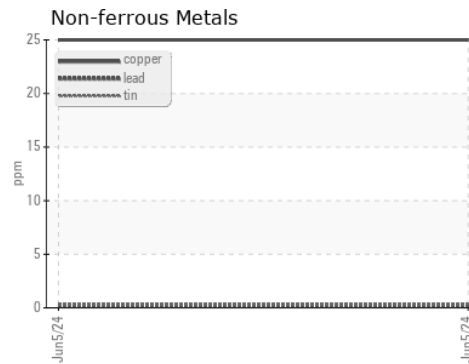
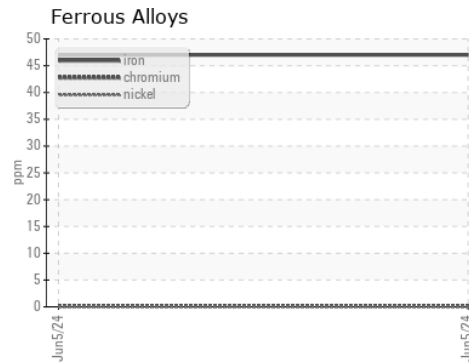


| FLUID PROPERTIES | method | limit/base | current | history1   | history2 |     |
|------------------|--------|------------|---------|------------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D445  | 93.9    | <b>103</b> | ---      | --- |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

|        |  |  |  |          |          |          |
|--------|--|--|--|----------|----------|----------|
| Color  |  |  |  | no image | no image | no image |
| Bottom |  |  |  | no image | no image | no image |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0944185  
**Lab Number** : **06208163**  
**Unique Number** : 11075624  
**Test Package** : CONST

**COVIA - OREGON - 004**  
 1446 DEVILS BACKBONE ROAD  
 OREGON, IL  
 US 61061-0156  
 Contact: Brian Bunnell  
 brian.bunnell@coviacorp.com  
 T: (815)677-8700  
 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)