



# OIL ANALYSIS REPORT

Area  
**MINING**  
 Machine Id  
**ME-71 CATERPILLAR 349L HPD01020**  
 Component  
**Right Final Drive**  
 Fluid  
**SHELL Spirax S4 CX 30 (--- GAL)**

## Sample Rating Trend



**WEAR**



### DIAGNOSIS

#### ▲ Recommendation

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

#### ▲ Wear

Gear wear is indicated.

#### 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>WC0938475</b>   | ---      | ---      |
| Sample Date   | Client Info |             | <b>16 May 2024</b> | ---      | ---      |
| Machine Age   | hrs         | Client Info | <b>8534</b>        | ---      | ---      |
| Oil Age       | hrs         | Client Info | <b>815</b>         | ---      | ---      |
| Oil Changed   | Client Info |             | <b>Not Chngd</b>   | ---      | ---      |
| Sample Status |             |             | <b>ABNORMAL</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>▲ 951</b> | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >10  | <b>▲ 10</b>  | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >5   | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | ---      | ---      |
| Silver   | ppm    | ASTM D5185m >2   | <b>&lt;1</b> | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >75  | <b>3</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >10  | <b>2</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >75  | <b>&lt;1</b> | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >8   | <b>&lt;1</b> | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |

### ADDITIVES

|            | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>8</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>5</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>12</b>    | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>16</b>    | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>3322</b>  | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>915</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>988</b>   | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>6140</b>  | ---      | ---      |

### CONTAMINANTS

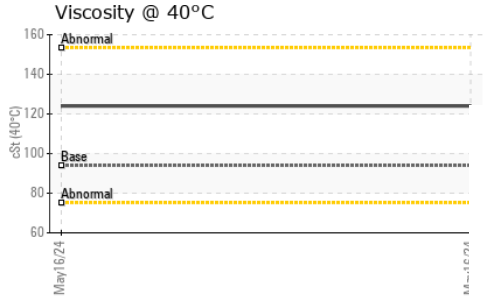
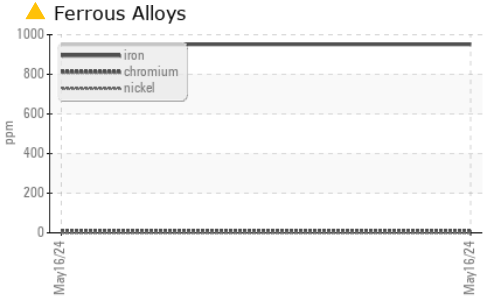
|           | method | limit/base       | current   | history1 | history2 |
|-----------|--------|------------------|-----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >400 | <b>17</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m      | <b>3</b>  | ---      | ---      |
| 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>MODER</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



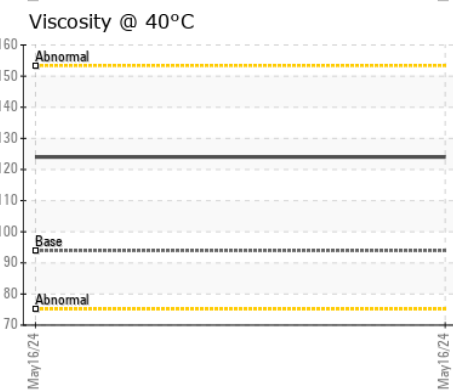
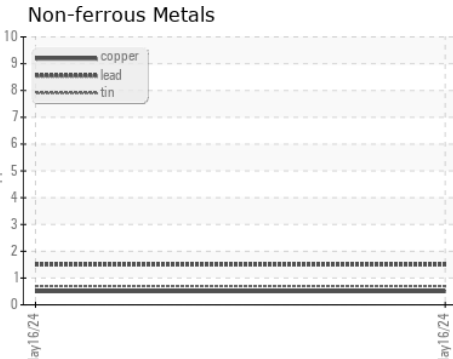
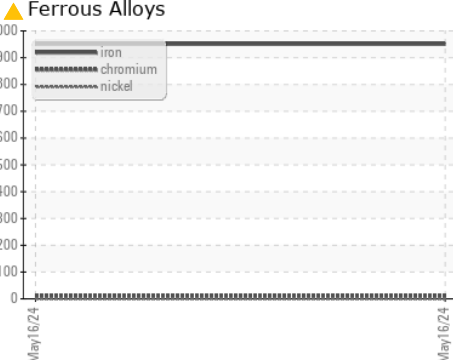
### FLUID PROPERTIES

| method      | limit/base | current        | history1   | history2 |     |
|-------------|------------|----------------|------------|----------|-----|
| Visc @ 40°C | cSt        | ASTM D445 93.9 | <b>124</b> | ---      | --- |

### SAMPLE IMAGES

| method | limit/base | current | history1 | history2 |          |
|--------|------------|---------|----------|----------|----------|
| Color  |            |         | no image | no image | no image |
| Bottom |            |         | no image | no image | no image |

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0938475      **Received** : 29 May 2024  
**Lab Number** : **06194468**      **Tested** : 31 May 2024  
**Unique Number** : 11056591      **Diagnosed** : 31 May 2024 - Sean Felton  
**Test Package** : CONST

**COVIA - TROUP - 084**  
 23769 STATE HWY 110 NORTH  
 TROUP, TX  
 US 75789  
 Contact: Forrest Howell  
 forrest.howell@coviacorp.com  
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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)