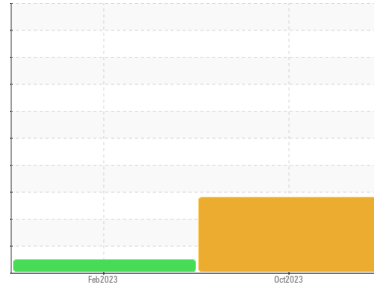




# COOLANT REPORT

Sample Rating Trend

OFF SPEC



Area  
**West Virginia**  
 Machine Id  
**[West Virginia] Coolant - Port Main Engine (Jacket)**  
 Component  
**Coolant**  
 Fluid  
**CATERPILLAR ELC (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

We recommend that you perform a partial drain and top off with straight antifreeze to increase level of glycol. ( Customer Sample Comment: Thurman Richardson )

### Corrosion

All metal levels are normal indicating no corrosion in the cooling system.

### Contaminants

There is no indication of any contamination in the coolant.

### ▲ Coolant Condition

The glycol level is lower than acceptable. The pH level of this fluid is within the acceptable limits.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info |             | <b>WC0804886</b>   | WC0735813   | ---      |
| Sample Date   | Client Info |             | <b>27 Oct 2023</b> | 19 Feb 2023 | ---      |
| Machine Age   | hrs         | Client Info | <b>26183</b>       | 0           | ---      |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | N/A         | ---      |
| Sample Status |             |             | <b>ABNORMAL</b>    | NORMAL      | ---      |

## PHYSICAL TEST RESULTS

|                        | method                 | limit/base | current       | history1 | history2 |
|------------------------|------------------------|------------|---------------|----------|----------|
| Specific Gravity       | *ASTM D1298            |            | <b>1.030</b>  | 1.028    | ---      |
| pH                     | Scale 0-14 ASTM D1287  |            | <b>8.81</b>   | 8.68     | ---      |
| Nitrites               | ppm AP-053:2009        |            | <b>636</b>    | 448      | ---      |
| Reserve Alkalinity     | Scale 0-20 *ASTM D1121 |            | <b>---</b>    | ---      | ---      |
| Percentage Glycol      | % ASTM D3321           |            | <b>▲ 23.3</b> | 22.0     | ---      |
| Freezing Point         | °F ASTM D3321          |            | <b>12</b>     | 14       | ---      |
| Total Dissolved Solids |                        |            | <b>129.5</b>  | 149.0    | ---      |
| Carboxylate            |                        |            | <b>fail</b>   | fail     | ---      |

## CORROSION INHIBITORS

|            | method         | limit/base | current      | history1 | history2 |
|------------|----------------|------------|--------------|----------|----------|
| Silicon    | ppm ASTM D6130 | 0          | <b>2</b>     | 6        | ---      |
| Phosphorus | ppm ASTM D6130 | 0          | <b>&lt;1</b> | 0        | ---      |
| Boron      | ppm ASTM D6130 | 0          | <b>0</b>     | 7        | ---      |
| Molybdenum | ppm ASTM D6130 | 950        | <b>156</b>   | 318      | ---      |

## CORROSION

|          | method         | limit/base | current      | history1 | history2 |
|----------|----------------|------------|--------------|----------|----------|
| Iron     | ppm ASTM D6130 | >15        | <b>5</b>     | 8        | ---      |
| Aluminum | ppm ASTM D6130 | >10        | <b>0</b>     | <1       | ---      |
| Copper   | ppm ASTM D6130 | >10        | <b>&lt;1</b> | 2        | ---      |
| Lead     | ppm ASTM D6130 | >10        | <b>&lt;1</b> | <1       | ---      |
| Tin      | ppm ASTM D6130 | >10        | <b>&lt;1</b> | 0        | ---      |
| Zinc     | ppm ASTM D6130 |            | <b>0</b>     | 0        | ---      |

## CONTAMINANTS

|          | method         | limit/base | current   | history1 | history2 |
|----------|----------------|------------|-----------|----------|----------|
| Chlorine | ppm ASTM D6130 |            | <b>44</b> | 102      | ---      |

## CARRIER SALTS

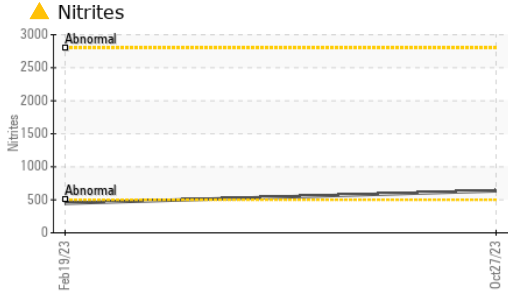
|           | method         | limit/base | current     | history1 | history2 |
|-----------|----------------|------------|-------------|----------|----------|
| Sodium    | ppm ASTM D6130 |            | <b>1480</b> | 2640     | ---      |
| Potassium | ppm ASTM D6130 |            | <b>855</b>  | 1646     | ---      |





## SCALE POTENTIAL

|           | method         | limit/base | current   | history1 | history2 |
|-----------|----------------|------------|-----------|----------|----------|
| Calcium   | ppm ASTM D6130 |            | <b>10</b> | 24       | ---      |
| Magnesium | ppm ASTM D6130 |            | <b>6</b>  | 16       | ---      |

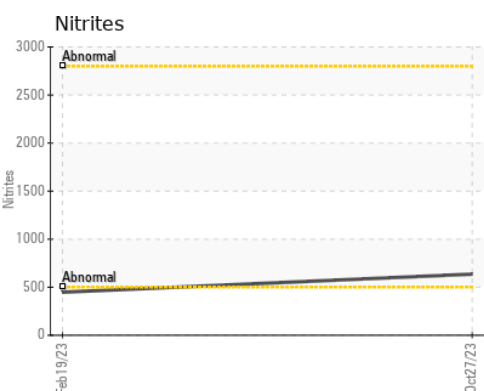
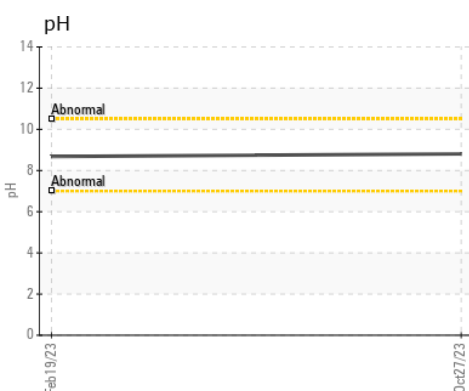
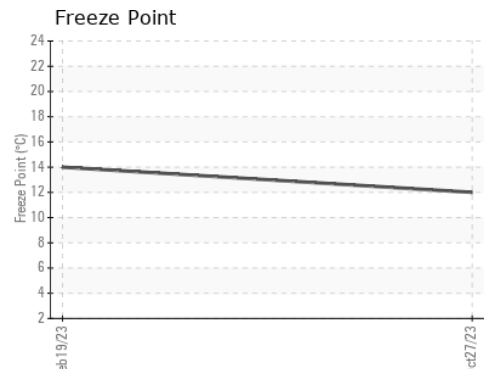
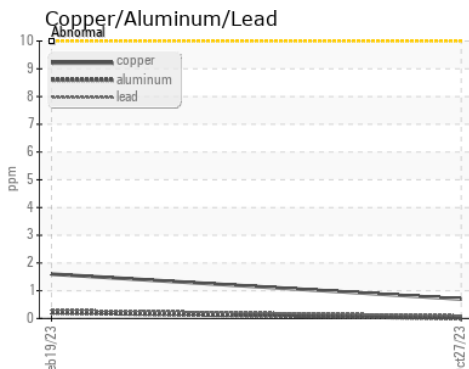
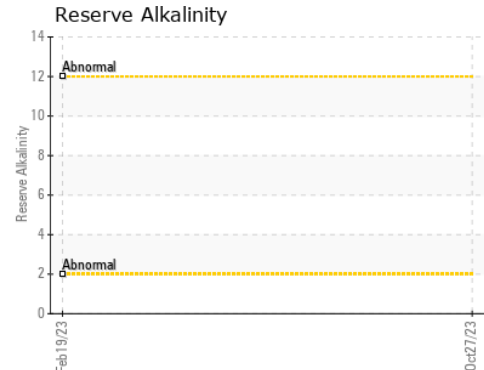
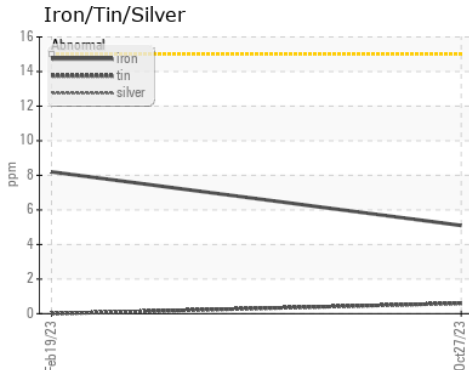


# COOLANT REPORT



| VISUAL             | method  | limit/base | current   | history1  | history2 |
|--------------------|---------|------------|---|---|----------|
| Coolant Color      | *Visual |            | <b>Red</b>  | Red   | ---      |
| Coolant Appearance | *Visual | Clear      | <b>normal</b>   | normal  | ---      |
| Color              |         |            |  |  | no image |
| Bottom             |         |            |  |  | no image |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0804886      **Received** : 01 Nov 2023  
**Lab Number** : 05996136      **Diagnosed** : 06 Nov 2023  
**Unique Number** : 10724496      **Diagnostician** : Jonathan Hester  
**Test Package** : COOL- ( Additional Tests: COOL, ICP, KF )

**MARATHON PETROLEUM CO.**  
 101 12TH ST  
 CATLETTSBURG, KY  
 US 41169  
 Contact: CORY GUMBERT  
 cagumbert@marathonpetroleum.com  
 T: (606)585-3950  
 F: x:

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)