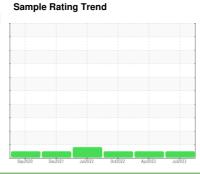


# **COOLANT REPORT**

# Findlay [Findlay] Coolant - Starboard Genset

Component Coolant

**CATERPILLAR ELC (--- GAL)** 





## Recommendation

No corrective action is recommended at this time. The fluid is suitable for further service.

#### Corrosion

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

## **Contaminants**

There is no indication of any contamination in the coolant.

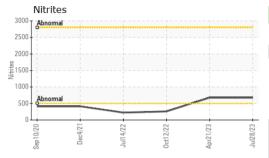
## **Coolant Condition**

Carboxylate test failed. Glycol and nitrite levels are acceptable. The pH level of this fluid is within the acceptable limits.

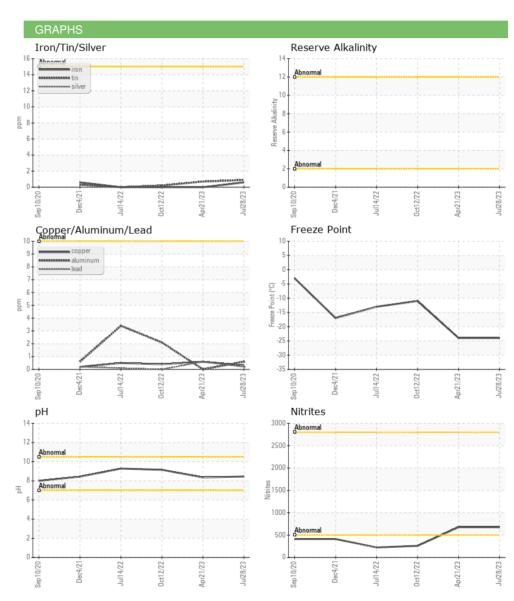
|                        |            | Sep 2020     | Dec2021 Jul2022 | Oct2022 Apr2023 | Jul2023     |             |
|------------------------|------------|--------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFORM          | MATION     | method       | limit/base      | current         | history1    | history2    |
| Sample Number          |            | Client Info  |                 | WC0769091       | WC0735490   | WC0683417   |
| Sample Date            |            | Client Info  |                 | 28 Jul 2023     | 21 Apr 2023 | 12 Oct 2022 |
| Machine Age            | hrs        | Client Info  |                 | 6832            | 5634        | 4009        |
| Oil Age                | hrs        | Client Info  |                 | 0               | 0           | 0           |
| Oil Changed            |            | Client Info  |                 | N/A             | N/A         | N/A         |
| Sample Status          |            |              |                 | NORMAL          | NORMAL      | NORMAL      |
| PHYSICAL TEST R        | ESULTS     | method       | limit/base      | current         | history1    | history2    |
| Specific Gravity       |            | *ASTM D1298  |                 | 1.062           | 1.062       | 1.054       |
| рН                     | Scale 0-14 | ASTM D1287   |                 | 8.45            | 8.35        | 9.15        |
| Nitrites               | ppm        | AP-053:2009  |                 | 676             | 676         | 260         |
| Reserve Alkalinity     | Scale 0-20 | *ASTM D1121  |                 |                 |             |             |
| Percentage Glycol      | %          | ASTM D3321   |                 | 45.8            | 45.5        | 39.8        |
| Freezing Point         | °F         | ASTM D3321   |                 | -24             | -24         | -11         |
| Total Dissolved Solids |            |              |                 | 294.5           | 314.5       | 310.0       |
| Carboxylate            |            |              |                 | fail            | pass        | pass        |
| CORROSION INH          | IBITORS    | method       | limit/base      | current         | history1    | history2    |
| Silicon                | ppm        | ASTM D6130   | 0               | 11              | 12          | 20          |
| Phosphorus             | ppm        | ASTM D6130   | 0               | 0               | 0           | 0           |
| Boron                  | ppm        | ASTM D6130   | 0               | 5               | 9           | 4           |
| Molybdenum             | ppm        | ASTM D6130   | 950             | 998             | 955         | 962         |
| CORROSION              |            | method       | limit/base      | current         | history1    | history2    |
| Iron                   | ppm        | ASTM D6130   | >15             | <1              | 0           | 0           |
| Aluminum               | ppm        | ASTM D6130   | >10             | <1              | 0           | 2           |
| Copper                 | ppm        | ASTM D6130   | >10             | <1              | <1          | <1          |
| Lead                   | ppm        | ASTM D6130   | >10             | <1              | <1          | 0           |
| Tin                    | ppm        | ASTM D6130   | >10             | <1              | <1          | <1          |
| Zinc                   | ppm        | ASTM D6130   |                 | 0               | <1          | 0           |
| CONTAMINANTS           |            | method       | limit/base      | current         | history1    | history2    |
| Chlorine               | ppm        | ASTM D6130   |                 | 19              | 27          | 10          |
| CARRIER SALTS          |            | method       | limit/base      | current         | history1    | history2    |
| Sodium                 | ppm        | ASTM D6130   |                 | 5653            | 5449        | 4605        |
| Potassium              | ppm        | ASTM D6130   |                 | 0               | 15          | 233         |
| SCALE POTENTI          | AL         | method       | limit/base      | current         | history1    | history2    |
| Calcium                | ppm        | ASTM D6130   |                 | 2               | 2           | 2           |
| Magnesium              | ppm        | ASTM D6130   |                 | 4               | 4           | 1           |
| Magnesiani             | ppiii      | ACTIVI DOTOU |                 | -               | Т           |             |



# **COOLANT REPORT**



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





Laboratory Sample No. Lab Number **Unique Number** 

: WC0769091 : 05921900 : 10601847

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 10 Aug 2023 : 15 Aug 2023 Diagnostician : Doug Bogart

Test Package : COOL- ( Additional Tests: COOL, ICP ) 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.

MARATHON PETROLEUM CO.

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: x: Submitted By: M/V FINDLAY