

## **PROBLEM SUMMARY**

Sample Rating Trend

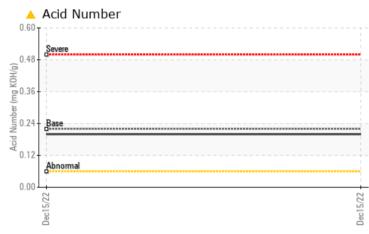
COMBUSTION

#### Area [45665] Machine Id PROLEC GE TN11605-T3C22 (S/N M16E15908) Component

Main Transformer Oil

### ENVIROTEMP FR3 FLUID (1808 GAL)

### COMPONENT CONDITION SUMMARY



#### RECOMMENDATION

We recommend an early resample to monitor this condition.

| PROBLEMATIC TEST RESULTS    |          |                |      |              |  |  |  |  |
|-----------------------------|----------|----------------|------|--------------|--|--|--|--|
| Sample Status               |          |                |      | SEVERE       |  |  |  |  |
| DGA - CO2                   | ppm      | ASTM D3612(e)* |      | <u> </u>     |  |  |  |  |
| DGA - Ethane                | ppm      | ASTM D3612(e)* |      | <b>9</b> 798 |  |  |  |  |
| DGA - Total Combustible Gas | ppm      | ASTM D3612(e)* |      | <u> </u>     |  |  |  |  |
| Acid Number (AN)            | mg KOH/g | ASTM D974*     | 0.22 | <b>6.20</b>  |  |  |  |  |

Customer Id: ENE271OTT Sample No.: WC0592377 Lab Number: 02531373 Test Package: TRF 2



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| RECOMMENDED AC | RECOMMENDED ACTIONS |      |         |   |  |  |  |
|----------------|---------------------|------|---------|---|--|--|--|
| Action         | Status              | Date | Done By | Description   |  |  |  |
| Resample       |                     |      | ?       | We recommend an early resample to monitor this condition. |  |  |  |

HISTORICAL DIAGNOSIS



## **OIL ANALYSIS REPORT**

Sample Rating Trend

### COMBUSTION

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#### Area [45665] Machine Id PROLEC GE TN11605-T3C22 (S/N M16E15908) Component

Main Transformer Oil

Fluid ENVIROTEMP FR3 FLUID (1808 GAL)

#### DIAGNOSIS

#### Recommendation

We recommend an early resample to monitor this condition.

#### Wear

{not applicable}

#### Contamination

Ethane level exceeded (>65, 0.0065%) indicating low energy arcing in a confined space. Carbon Dioxide levels exceeded (>2500, 0.25%). General conductor overheating indicated.

#### Fluid Condition

The AN level is at the top-end of the recommended limit.

| SAMPLE INFORM               | 1ATION     | method         | limit/base | current         | history1         | history2      |
|-----------------------------|------------|----------------|------------|-----------------|------------------|---------------|
| Sample Number               |            | Client Info    |            | WC0592377       |                  |               |
| Sample Date                 |            | Client Info    |            | 15 Dec 2022     |                  |               |
| Machine Age                 | hrs        | Client Info    |            | 0               |                  |               |
| Oil Age                     | hrs        | Client Info    |            | 0               |                  |               |
| Oil Changed                 |            | Client Info    |            | N/A             |                  |               |
| Sample Status               |            |                |            | SEVERE          |                  |               |
| CONTAMINANTS                |            | method         | limit/base | current         | history1         | history2      |
| Water                       | %          | ASTM D6304*    | >0.02      | 0.011           |                  |               |
| ppm Water                   | ppm        | ASTM D6304*    | >200       | 119.1           |                  |               |
| FLUID CLEANLIN              | ESS        | method         | limit/base | current         | history1         | history2      |
| Particles >4µm              |            | ASTM D7647     | >5000      | 1520            |                  |               |
| Particles >6µm              |            | ASTM D7647     | >1300      | 378             |                  |               |
| Particles >14µm             |            | ASTM D7647     | >160       | 25              |                  |               |
| Particles >21µm             |            | ASTM D7647     | >40        | 7               |                  |               |
| Particles >38µm             |            | ASTM D7647     | >10        | 2               |                  |               |
| Particles >71µm             |            | ASTM D7647     | >3         | 2               |                  |               |
| Oil Cleanliness             |            | ISO 4406 (c)   | >19/17/14  | 18/16/12        |                  |               |
| DISSOLVED GAS ANAL          | YSIS (DGA) | method         | limit/base | current         | history1         | history2      |
| DGA - H2                    | ppm        | ASTM D3612(e)* |            | 12              |                  |               |
| DGA - 02                    | ppm        | ASTM D3612(e)* |            | 1387            |                  |               |
| DGA - N2                    | ppm        | ASTM D3612(e)* |            | 49183           |                  |               |
| DGA - CO                    | ppm        | ASTM D3612(e)* |            | 61              |                  |               |
| DGA - CO2                   | ppm        | ASTM D3612(e)* |            | <u> </u>        |                  |               |
| DGA - Methane               | ppm        | ASTM D3612(e)* |            | 4               |                  |               |
| DGA - Acetylene             | ppm        | ASTM D3612(e)* |            | 0               |                  |               |
| DGA - Ethylene              | ppm        | ASTM D3612(e)* |            | 5               |                  |               |
| DGA - Ethane                | ppm        | ASTM D3612(e)* |            | <b>9</b> 798    |                  |               |
| DGA - Total Gas Content     | %          | ASTM D3612(e)* |            | 58389           |                  |               |
| DGA - Total Combustible Gas | ppm        | ASTM D3612(e)* |            | <b>A</b> 880    |                  |               |
| FLUID DEGRADA               | TION       | method         | limit/base | current         | history1         | history2      |
| Acid Number (AN)            | mg KOH/g   | ASTM D974*     | 0.22       | <b>A</b> 0.20   |                  |               |
| 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           |                  |               |
| FLUID PROPERT               | IES        | method         | limit/base | current         | history1         | history2      |
| Specific Gravity            |            | ASTM D4052(e)  | 0.92       | 0.920           |                  |               |
| Dielectric Breakdown        | kV         | ASTM D3612(e)* |            | 56              |                  |               |
| ASTM Color                  | scalar     | ASTM D1500(e)  |            | <1.5            |                  |               |
| 0:19:06) Rev: 1             |            | . ,            |            | Contact/Locatio | on: Chervl Ghari | b - ENE271OTT |

Contact/Location: Cheryl Gharib - ENE271OTT



# **OIL ANALYSIS REPORT**

