

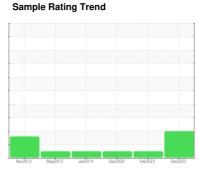
## **OIL ANALYSIS REPORT**



# 90 Bloor St E A2 [4500059382] **CARRIER 3002Q01824(A2)**

Chiller

REFRIGERATION OIL (POE) (--- GAL)





### Recommendation

We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Lead, zinc and iron ppm levels are noted. The high metal levels indicate corrosion in the system.

### Contamination

There is no indication of any contamination in the

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| (1 OL) ( GAL)    |          | Nov2012       | May2013 Jan2014 | Dec2020 Feb2023 | Dec2023     |             |
|------------------|----------|---------------|-----------------|-----------------|-------------|-------------|
| SAMPLE INFORM    | MATION   | method        | limit/base      | current         | history1    | history2    |
| Sample Number    |          | Client Info   |                 | GTT0001576      | GTT10689    | GTT10690    |
| Sample Date      |          | Client Info   |                 | 22 Dec 2023     | 15 Feb 2023 | 01 Dec 2020 |
| Machine Age      | hrs      | Client Info   |                 | 0               |             |             |
| Oil Age          | hrs      | Client Info   |                 | 0               |             |             |
| Oil Changed      |          | Client Info   |                 | N/A             | N/A         | N/A         |
| Sample Status    |          |               |                 | ATTENTION       | NORMAL      | NORMAL      |
| WEAR METALS      |          | method        | limit/base      | current         | history1    | history2    |
| Iron             | ppm      | ASTM D5185(m) | >8              | <b>5</b>        | <1          | <1          |
| Chromium         | ppm      | ASTM D5185(m) | >2              | 0               | <1          | <1          |
| Nickel           | ppm      | ASTM D5185(m) |                 | <1              |             |             |
| Titanium         | ppm      | ASTM D5185(m) |                 | 0               |             |             |
| Silver           | ppm      | ASTM D5185(m) | >2              | 0               |             |             |
| Aluminum         | ppm      | ASTM D5185(m) | >3              | <1              | <1          | <1          |
| Lead             | ppm      | ASTM D5185(m) | >2              | <b>5</b>        | <1          | <1          |
| Copper           | ppm      | ASTM D5185(m) | >8              | 3               | <1          | 2           |
| Tin              | ppm      | ASTM D5185(m) | >4              | 0               | <1          | <1          |
| Antimony         | ppm      | ASTM D5185(m) |                 | 0               |             |             |
| Vanadium         | ppm      | ASTM D5185(m) |                 | 0               |             |             |
| Beryllium        | ppm      | ASTM D5185(m) |                 | 0               |             |             |
| Cadmium          | ppm      | ASTM D5185(m) |                 | 0               |             |             |
| ADDITIVES        |          | method        | limit/base      | current         | history1    | history2    |
| Boron            | ppm      | ASTM D5185(m) | 0               | 1               |             |             |
| Barium           | ppm      | ASTM D5185(m) | 0               | 0               |             |             |
| Molybdenum       | ppm      | ASTM D5185(m) | 0               | 0               |             |             |
| Manganese        | ppm      | ASTM D5185(m) | 0               | 0               |             |             |
| Magnesium        | ppm      | ASTM D5185(m) | 0               | <1              |             |             |
| Calcium          | ppm      | ASTM D5185(m) | 10              | <1              |             |             |
| Phosphorus       | ppm      | ASTM D5185(m) | 250             | 2               |             |             |
| Zinc             | ppm      | ASTM D5185(m) | 0               | <b>23</b>       | 7           | 8           |
| Sulfur           | ppm      | ASTM D5185(m) | 400             | 2               |             |             |
| Lithium          | ppm      | ASTM D5185(m) |                 | <1              |             |             |
| CONTAMINANTS     | ;        | method        | limit/base      | current         | history1    | history2    |
| Silicon          | ppm      | ASTM D5185(m) | >15             | 19              |             |             |
| Sodium           | ppm      | ASTM D5185(m) |                 | 1               |             |             |
| Potassium        | ppm      | ASTM D5185(m) | >20             | 3               |             |             |
| ppm Water        | ppm      | ASTM D6304*   | >200            | <10             | 216         | 123         |
| FLUID DEGRADA    | ATION    | method        | limit/base      | current         | history1    | history2    |
| Acid Number (AN) | mg KOH/g | ASTM D974*    | 0.07            | 0.12            | 0.106       | 0.110       |



## **OIL ANALYSIS REPORT**

| 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 | TES    | method        | limit/base | current | history1 | history2 |
| Visc @ 40°C   | cSt    | ASTM D7279(m) |            | 148     |          |          |
| SAMPLE IMAGES |        | method        | limit/base | current | history1 | history2 |
| Color         |        |               |            |         | no image | no image |
|               |        |               |            |         |          |          |
| Bottom        |        |               |            |         | no image | no image |



Sample No.: GTT0001576Recieved: 09 Jan 2024Lab Number: 02607653Diagnosed: 16 Jan 2024Unique Number: 5708739Diagnostician: Bill Quesnel

Test Package : IND 2 (Additional Tests: KV40)

To discuss this sample report, contact: Customer Service at 1-905-847-9300 Ext 26.

Contact: Brian Raymundo@carrier.com

Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

Damages: Seller shall in no event be liable for special, incidental, or consequential damages, of a commercial nature, resulting from any cause.

**Carrier Commerical Service** 

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