**WEAR CONTAMINATION FLUID CONDITION**  **ABNORMAL NORMAL NORMAL** 

## **CARRIER CITY COUNTY CHILLER 2 (S/N 2450)**

Component

| RECOMMENDATION  | Test             | UOM    | Method      | Limit/Abn | Current     | History1 | History2 |
|---|------------------|--------|-------------|-----------|-------------|----------|----------|
| No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. | Sample Number    |        | Client Info |           | WC0507805   |          |          |
|   | Sample Date      |        | Client Info |           | 15 Sep 2022 |          |          |
|   | Machine Age      | hrs    | Client Info |           | 12288       |          |          |
|   | Oil Age          | hrs    | Client Info |           | 12288       |          |          |
|   | Filter Age       | hrs    | Client Info |           | 12288       |          |          |
|   | Oil Changed      |        | Client Info |           | Changed     |          |          |
|   | Filter Changed   |        | Client Info |           | Changed     |          |          |
|   | Sample Status    |        |             |           | ABNORMAL    |          |          |
| WEAR  | Iron             | ppm    | ASTM D5185m | >50       | 26          |          |          |
| The copper level is abnormal. All other component wear rates are normal.  | Chromium         | ppm    | ASTM D5185m | >10       | 0           |          |          |
|   | Nickel           | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Titanium         | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Silver           | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Aluminum         | ppm    | ASTM D5185m | >10       | 0           |          |          |
|   | Lead             | ppm    | ASTM D5185m | >10       | <1          |          |          |
|   | Copper           | ppm    | ASTM D5185m | >50       | <u> </u>    |          |          |
|   | Tin              | ppm    | ASTM D5185m | >10       | 3           |          |          |
|   | Vanadium         | ppm    | ASTM D5185m |           | 0           |          |          |
|   | White Metal      | scalar | *Visual     | NONE      | NONE        |          |          |
|   | Yellow Metal     | scalar | *Visual     | NONE      | NONE        |          |          |
| CONTAMINATION   | Silicon          | ppm    | ASTM D5185m | >15       | 2           |          |          |
| There is no indication of any contamination in the oil.   | Potassium        | ppm    | ASTM D5185m | >20       | 0           |          |          |
|   | Water            | %      | ASTM D6304  | >0.01     | 0.002       |          |          |
|   | ppm Water        | ppm    | ASTM D6304  | >100      | 16.7        |          |          |
|   | Silt             | scalar | *Visual     | NONE      | NONE        |          |          |
|   | Debris           | scalar | *Visual     | NONE      | VLITE       |          |          |
|   | Sand/Dirt        | scalar | *Visual     | NONE      | NONE        |          |          |
|   | Appearance       | scalar | *Visual     | NORML     | NORML       |          |          |
|   | Odor             | scalar | *Visual     | NORML     | NORML       |          |          |
|   | Emulsified Water | scalar | *Visual     | >0.01     | NEG         |          |          |
| FLUID CONDITION   | Sodium           | ppm    | ASTM D5185m |           | 1           |          |          |
| The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.  | Boron            | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Barium           | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Molybdenum       | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Manganese        | ppm    | ASTM D5185m |           | <1          |          |          |
|   | Magnesium        | ppm    | ASTM D5185m |           | 0           |          |          |
|   | Calcium          | ppm    | ASTM D5185m |           | <1          |          |          |
|   | Phosphorus       | ppm    | ASTM D5185m |           | 48          |          |          |
|   | Zinc             | ppm    | ASTM D5185m |           | 18          |          |          |
|   | Sulfur           | ppm    | ASTM D5185m |           | 746         |          |          |

Acid Number (AN) mg KOH/g ASTM D974

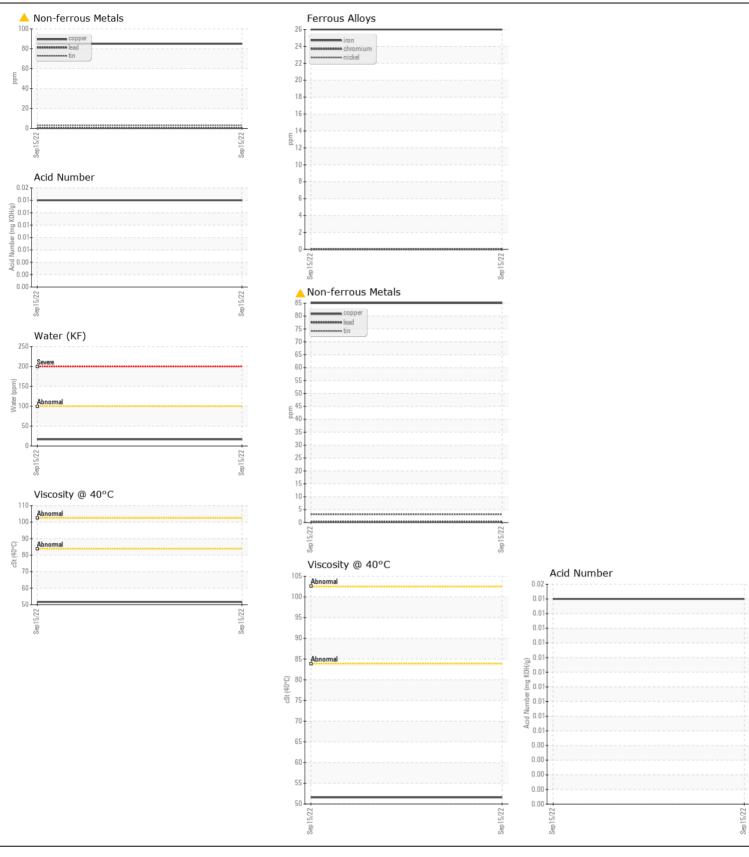
Visc @ 40°C cSt ASTM D445

Report Id: MCQLIV [WUSCAR] 05646076 (Generated: 03/14/2024 11:25:29) Rev: 1

Contact/Location: MICHELLE MANN - MCQLIV

0.014

51.6







Certificate L2367

Laboratory

Sample No. Lab Number : 05646076 Unique Number: 10140615

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0507805

Received **Tested** Diagnosed

: 20 Sep 2022 : 21 Sep 2022

: 21 Sep 2022 - Doug Bogart

**DAIKIN APPLIED - AUBURN HILLS** 3955 PINNACLE COURT SUITE 300

AUBURN HILLS, MI US 48326

Contact: MICHELLE MANN

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Test Package : IND 2 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)