

PROBLEM SUMMARY



Chiller

CARRIER 68 (--- GAL)

Sample Rating Trend WEAR

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

This unit should be monitored closely by a service engineer as these wear conditions tend to advance rapidly. We recommend an early resample to monitor this condition.

| PROBLEMATIC T | PROBLEMATIC TEST RESULTS | | | | | | |
|---------------|--------------------------|---------------|----|------------|--------|--------|--|
| Sample Status | | | | MARGINAL | NORMAL | NORMAL | |
| Iron | ppm | ASTM D5185(m) | >8 | <u>4</u> | <1 | 2 | |
| Tin | ppm | ASTM D5185(m) | >4 | <u>^</u> 2 | <1 | <1 | |

Customer Id: GTT0000224 Sample No.: GTT0000964 Lab Number: 02602078 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1 (289)291-4641 x4641

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To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

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

HISTORICAL DIAGNOSIS

11 Jan 2023 Diag: Wes Davis





The test results indicate normal wear patterns for this type of unit with the moisture and acidity also in the acceptable range.



15 Nov 2021 Diag: Wes Davis

NORMAL



The test results indicate normal wear patterns for this type of unit with moisture and acidity in the acceptable range. The elevated moisture is associated with synthetic oils.



01 Dec 2020 Diag: Wes Davis

NORMAL



The acid number is slightly high. All wear metals and moisture are in satisfactory ranges for this model unit and the running time reported. DO NOT change the oil. Resample in 3-4 months or 2500 hours.





OIL ANALYSIS REPORT

Sample Rating Trend

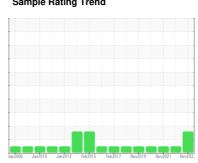




17 Barberry Pl **CARRIER 4104Q70017**

Chiller

CARRIER 68 (--- GAL)





DIAGNOSIS

Recommendation

This unit should be monitored closely by a service engineer as these wear conditions tend to advance rapidly. We recommend an early resample to monitor this condition.

Iron and tin ppm levels are marginal. Bearing wear is indicated.

Contamination

There is a moderate concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.

| SAMPLE INFORM | MATION | method | limit/base | current | history1 | history2 |
|------------------|----------|---------------|------------|-------------|-------------|-------------|
| Sample Number | | Client Info | | GTT0000964 | GTT13205 | GTT13206 |
| Sample Date | | Client Info | | 30 Nov 2023 | 11 Jan 2023 | 15 Nov 2021 |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | MARGINAL | NORMAL | NORMAL |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >8 | <u>4</u> | <1 | 2 |
| 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 | <1 | | |
| Aluminum | ppm | ASTM D5185(m) | >3 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >2 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >8 | 4 | 3 | 1 |
| Tin | ppm | ASTM D5185(m) | >4 | <u>^</u> 2 | <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 | 2 | | |
| Barium | ppm | ASTM D5185(m) | 0 | <1 | | |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | | |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | 0 | 0 | | |
| Calcium | ppm | ASTM D5185(m) | 0 | 0 | | |
| Phosphorus | ppm | ASTM D5185(m) | 1350 | 1205 | | |
| Zinc | ppm | ASTM D5185(m) | 10 | 28 | 7 | 7 |
| Sulfur | ppm | ASTM D5185(m) | 200 | 42 | | |
| Lithium | ppm | ASTM D5185(m) | | <1 | | |
| CONTAMINANTS | j | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | >15 | 7 | | |
| Sodium | ppm | ASTM D5185(m) | | 2 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | | |
| ppm Water | ppm | ASTM D6304* | >300 | 255 | 105 | 111 |
| FLUID DEGRADA | TION | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.07 | 0.11 | 0.078 | 0.073 |



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 PROPERTIES | | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 65.4 | 51.3 | | |
| SAMPLE IMAGES | 3 | method | limit/base | current | history1 | history2 |
| Color | | | | | no image | no image |
| Bottom | | | | | no image | no image |
| | | | | | | |



Sample No. : GTT0000964 Received : 08 Dec 2023 : 02602078 Lab Number Diagnosed : 11 Dec 2023 Unique Number : 5695163 Diagnostician : Bill Quesnel Test Package : IND 2 (Additional Tests: KV40)

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

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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