

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 10/10/2025
Completed By: National TAB

PROJECT
09-15-25 QT #1727 EMERSON, GA

105 OLD ALLATOONA ROAD

EMERSON, GA 30121

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

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Project: 09-15-25 QT #1727 EMERSON, GA

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Project Summary

The Summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report are further details about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units)

Each of the RTU's was measured with a flow hood to establish total flow. The total flow was then adjusted via the VFD so that airflow fell within design tolerances. All diffusers on the kitchen RTU were balanced to the engineer's design flow. The diffusers on the sales floor were only adjusted when there were noticeable issues present like drafting or dampers that were found completely closed. The Hoods On outside air rate was set by first establishing the Nominal Hoods ON setpoint of 46% at the Emerson controller and then making manual adjustments on the roof to achieve design. The hoods off airflow setpoint was found by adjusting the damper position at the Emerson controller until the design airflow was achieved. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. After completion of TAB all overrides were released.

Kitchen Exhaust Hood & Associated Fans

The kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

Restroom Exhaust Fans

The restroom exhaust fans were measured with a flow hood. Except for the new exhaust grille over the combi-oven, total flow was balanced for the fans. The newly installed grille over the oven was individually balanced to design.

Final Building Tests

After completing the test and balance, the final building pressure was measured in both Hoods On and Hoods Off conditions. It was confirmed that the building pressure fell within acceptable tolerances and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report. The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

CheckList List

- 01: RTU's/AHU's
- 02: Exhaust Fans
- 03: Hoods
- 04: Final Tests



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CheckList Information

Name : 01: RTU's/AHU's **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 09/08/2025 - Trinity Dodds - National TAB
Completed Date : 09/19/2025 - Sagar Patel - National TAB

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean? Pass

Comment:

Condenser coils are clean? Pass

Comment:

Gas piping is installed and valves are turned on? N/A

Comment:

Unit free of noticeable noise and vibration Pass

Comment:



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CheckList Information

Name : 02: Exhaust Fans **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 09/08/2025 - Trinity Dodds - National TAB
Completed Date : 09/19/2025 - Sagar Patel - National TAB

CheckList Item Details

EF's

Hinge kit installed installed on hood fan? Pass

Comment:

Flex conduit is long enough so that fan can be completely tilted back? Pass

Comment:

No major leakage around the fan base Pass

Comment:

Unit is free of noise and vibration Pass

Comment:



09-15-25 QT #1727 EMERSON, GA

CheckList Information

Name : 03: Hoods **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 09/08/2025 - Trinity Dodds - National TAB
Completed Date : 09/19/2025 - Sagar Patel - National TAB

CheckList Item Details

HOODS

Hood is free of alarms? Pass

Comment:

Hood is free of damage? Pass

Comment:

End panels are installed per prototype? Pass

Comment:



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CheckList Information

Name : 04: Final Tests **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 09/08/2025 - Trinity Dodds - National TAB

Completed Date : 09/19/2025 - Sagar Patel - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

FRYER AND OVEN

List smoke candle type used

Comment:

SMOKE EMITTER 45 SECOND

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed

09/19/2025

Comment:

TAB tech name / Firm

Comment:

SAGAR PATEL / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

LESLIE HUNTER / LESLIE HUNTER CONTRACTING

Owner representative name / Firm (if Applicable)

Comment:

BUILDING PRESSURE

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Pass

Comment:



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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: AHU/RTU

Asset: RT-1

AREA: SALES FLOOR

| Unit Data | | |
|------------------|--------|---------------------|
| | Design | Actual |
| MFG | NA | AAON |
| Serial Num | - | 202009-ANEK21078 |
| Model Num | NA | RN-013-8-0-EA0A-152 |
| Type | - | RTU |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 45X22" |

| Motor Data | | |
|----------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | N/L |
| Frame | - | N/L |
| Horsepower | - | 3 |
| Motor Rpm | - | 1760 |
| Phase | - | 3 |
| Rated Voltage | - | 208 |
| Rated Amperage | - | 10.6 |

| Test Data | | |
|------------------------|--------|------------|
| | Design | Actual |
| SF CFM | 4200 | 4128 |
| SF RPM | - | 1238 |
| RA CFM | 3400 | 3316 |
| OA CFM | 800 | 812 |
| RL Voltage | - | 131 VFD |
| RL Amperage | - | 6.19 VFD |
| SF Rotation | - | CCW |
| SF System SetPt | - | 42.2 Hz |
| RA Damper Position | - | 90% |
| Min OA Damper Position | - | 10% |
| Min OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.54" |
| Fan Suction SP | - | -0.81" |
| Fan Discharge SP | - | 0.19" |
| Total ESP | - | 0.73" |
| Fan Total SP | - | 1.00" |

| General | |
|----------------------------|--------|
| | Actual |
| Fan Rotation Correct | YES |
| Unit Filters Clean | YES |
| Condensate Drain Installed | YES |

Completed By: Sagar Patel on 09/19/2025

Notes:
RTU balanced for total flow and diffusers balanced for comfort

Written By: on

Unit Data - PHOTO LOG



10/14/2025



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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

| Unit Data | | |
|------------------|--------|---------------------|
| | Design | Actual |
| MFG | NA | AAON |
| Serial Num | - | 202009-ANEK2180 |
| Model Num | NA | RN-013-8-0-EA0A-152 |
| Type | - | RTU |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 45X22" |

| Motor Data | | |
|----------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | N/L |
| Frame | - | N/L |
| Horsepower | - | 3 |
| Motor Rpm | - | 1760 |
| Phase | - | 3 |
| Rated Voltage | - | 208 |
| Rated Amperage | - | 10.6 |

| Test Data | | |
|------------------------|--------|------------|
| | Design | Actual |
| SF CFM | 4200 | 4197 |
| SF RPM | - | 1270 |
| RA CFM | 3400 | 3461 |
| OA CFM | 800 | 736 |
| RL Voltage | - | 141 VFD |
| RL Amperage | - | 7.24 VFD |
| SF Rotation | - | CCW |
| SF System SetPt | - | 43.3 Hz |
| RA Damper Position | - | 90% |
| Min OA Damper Position | - | 10% |
| Min OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.46" |
| Fan Suction SP | - | -0.72" |
| Fan Discharge SP | - | 0.23" |
| Total ESP | - | 0.69" |
| Fan Total SP | - | 0.95" |

| General | |
|----------------------------|--------|
| | Actual |
| Fan Rotation Correct | YES |
| Unit Filters Clean | YES |
| Condensate Drain Installed | YES |

Completed By: Sagar Patel on 09/19/2025

Notes:
RTU balanced for total flow and diffusers balanced for comfort

Written By: on

Unit Data - PHOTO LOG



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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

| Unit Data | | |
|------------------|--------|---------------------|
| | Design | Actual |
| MFG | NA | AAON |
| Serial Num | - | 202009-ANEK21079 |
| Model Num | NA | RN-013-8-0-EA0A-152 |
| Type | - | RTU |
| Num OA Filters 1 | - | 1 |
| OA Filter Size 1 | - | 45X22" |

| Motor Data | | |
|----------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | N/L |
| Frame | - | N/L |
| Horsepower | - | 3 |
| Motor Rpm | - | 1760 |
| Phase | - | 3 |
| Rated Voltage | - | 208 |
| Rated Amperage | - | 10.6 |

| Test Data | | |
|------------------------|--------|------------|
| | Design | Actual |
| SF CFM | 4200 | 4039 |
| SF RPM | - | 1291 |
| RA CFM | 3400 | 3296 |
| OA CFM | 800 | 743 |
| RL Voltage | - | 145 VFD |
| RL Amperage | - | 7.45 VFD |
| SF Rotation | - | CCW |
| SF System SetPt | - | 44.0 Hz |
| RA Damper Position | - | 90% |
| Min OA Damper Position | - | 10% |
| Min OA Damper Type | - | ECONOMIZER |

| Performance Data | | |
|------------------|--------|--------|
| | Design | Actual |
| MA Plenum SP | - | -0.62" |
| Fan Suction SP | - | -0.83" |
| Fan Discharge SP | - | 0.45" |
| Total ESP | - | 1.07" |
| Fan Total SP | - | 1.28" |

| General | |
|----------------------------|--------|
| | Actual |
| Fan Rotation Correct | YES |
| Unit Filters Clean | YES |
| Condensate Drain Installed | YES |

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Unit Data - PHOTO LOG



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Project:09-15-25 QT #1727 EMERSON, GA

AHU/RTU

Diffuser Supply (GRD)

RT-3/BOH/KITCHEN

| Asset | | | | | | | | | |
|------------|-----------------|------|------|------------|----|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| SGRD1 | SUPPORT SERVICE | SI | 12" | 800 | 1 | 236 | 530 | 726 | 90.8 |
| SGRD2 | SUPPORT SERVICE | SI | 12" | 800 | 1 | 349 | 827 | 794 | 99.3 |
| SGRD3 | SUPPORT SERVICE | SI | 12" | 800 | 1 | 370 | 831 | 762 | 95.3 |
| SGRD4 | SUPPORT SERVICE | SI | 12" | 800 | 1 | 300 | 687 | 741 | 92.6 |
| SGRD5 | WORKROOM | ES | 10" | 500 | 1 | 245 | 567 | 508 | 101.6 |
| SGRD6 | WORKROOM | ES | 10" | 250 | 1 | 124 | 292 | 259 | 103.6 |
| SGRD7 | WORKROOM | ER | 8" | 250 | 1 | 108 | 241 | 249 | 99.6 |
| Total | | | | 4200 | | 1732 | 3975 | 4039 | 96.17% |

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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: FAN - Exhaust

Asset: EF1

AREA:RR/JANITOR'S CLOSET

| Unit Data | | |
|---------------|--------|-------------|
| | Design | Actual |
| MFG | NA | CAPTIVEAIRE |
| Model Num | NA | DR50HFA |
| Serial Num | - | 4639275 |
| Type | - | DOWNBLAST |
| Configuration | - | VERTICAL |

| Motor Data | | |
|------------------|--------|--------|
| | Design | Actual |
| Motor MFG | - | HSSA |
| Frame | - | N/L |
| Horsepower | - | 0.5 |
| Motor Rpm | - | 1625 |
| Phase | - | 1 |
| Voltage (rated) | - | 115 |
| Amperage (rated) | - | 7.6 |
| Service Factor | - | N/L |

| Test Data | | |
|------------------|--------|--------|
| | Design | Actual |
| CFM | 750 | 803 |
| Fan Rotation | - | CCW |
| System SetPt | - | LOW |
| RL Voltage | - | [1] |
| RL Amperage | - | [1] |
| Total ESP | - | -0.16" |
| Fan Inlet SP | - | -0.16" |
| Fan Discharge SP | - | 1 ATM |

Completed By: Sagar Patel on 09/19/2025

Notes:

[1] UNABLE TO READ VOLTS AND AMPS SAFELY

Written By: Sagar Patel on 09/19/2025

Unit Data - PHOTO LOG



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Project:09-15-25 QT #1727 EMERSON, GA

Diffuser Ret/Exh (GRD)

EF1/RR/JANITOR'S CLOSET

| Asset | | | | | | | | | |
|------------|-----------------|------|------|------------|----|--------|--------|-----------|-------------|
| Asset Name | Location | Type | Size | DESIGN CFM | AK | CFM(1) | CFM(2) | FINAL CFM | % to design |
| EGRD4 | SUPPORT SERVICE | RI | 8" | 150 | 1 | 138 | 138 | 140 | 93.3 |
| Total | | | | 150 | | 138 | 138 | 140 | 93.33% |



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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: FAN - Exhaust

Asset: EF3

AREA: KITCHEN HOOD

| Unit Data | | |
|---------------|----------|-------------|
| | Design | Actual |
| MFG | NA | CAPTIVEAIRE |
| Model Num | NA | DU50HFA |
| Serial Num | - | 7632101 |
| Type | UPBLAST | UPBLAST |
| Configuration | VERTICAL | VERTICAL |

| Motor Data | | |
|------------------|--------|------------|
| | Design | Actual |
| Motor MFG | - | TELCOGREEN |
| Frame | - | N/L |
| Horsepower | 1/2 | 0.5 |
| Motor Rpm | - | 1800 |
| Phase | - | 1 |
| Voltage (rated) | - | 208 |
| Amperage (rated) | - | 3.8 |
| Service Factor | - | N/L |

| Test Data | | |
|------------------|--------|----------------------|
| | Design | Actual |
| CFM | 1350 | 1263 |
| Fan RPM | - | 1235 |
| Fan Rotation | - | CCW |
| Motor RPM | - | 1235 |
| System SetPt | - | 65.8 HZ (65% at MSC) |
| RL Voltage | - | 209 |
| RL Amperage | - | 1.8 |
| Total ESP | - | -0.58" |
| Fan Inlet SP | - | -0.58" |
| Fan Discharge SP | - | 1 ATM |

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Unit Data - PHOTO LOG



10/14/2025

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Project: 09-15-25 QT #1727 EMERSON, GA

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:GRIDDLE

| Unit Data | | |
|------------------|------------------|------------------|
| | Design | Actual |
| MFG | CAPTIVEAIRE | CAPTIVEAIRE |
| Model Num | 6030 ND-2-F | 6030 ND-2-F |
| Job / Serial Num | - | 7632101 |
| Type | TYPE I CANOPY | TYPE I CANOPY |
| Hood length | - | 109" |
| Hood Width | - | 60" |

| Test Data Exhaust | | |
|-------------------------|--------|----------|
| | Design | Actual |
| Filter Type | - | CAPTRATE |
| Filter Size 1 | - | 16X20 |
| Filter Qty 1 | - | 6 |
| Filter AK factor size 1 | - | 2.08 |
| Filter Total AK Area | - | 12.48 |
| Filter1 FPM | - | 107 |
| Filter2 FPM | - | 104 |
| Filter3 FPM | - | 103 |
| Filter4 FPM | - | 106 |
| Filter5 FPM | - | 97 |
| Filter6 FPM | - | 90 |
| Filter Ave FPM(corr) | - | 101.16 |
| CFM | 1350 | 1263 |

| Cooking Equipment | |
|-------------------|--------|
| | Actual |
| Item 1 | FRYER |
| Item 2 | OVEN |

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Unit Data - PHOTO LOG



10/14/2025

