

Report By:

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



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 01/06/2026
Completed By: National TAB

PROJECT
03-16-26 QT #0825 FAIRBURN, GA

7975 SENOIA RD

FAIRBURN, GA

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

National TAB

Project: 03-16-26 QT #0825 FAIRBURN, GA

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Project Summary

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 typical QT set point at the Emerson controller and then making manually adjustments on the roof. 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. The total flow was balanced for the fan with the exception of the new grille over the combi-oven, which was balanced to the listed design.

Final Building Tests

After completing the test and balance the final building pressure was measured. 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 : 01/06/2026 - Trinity Dodds - National TAB

Completed Date : 03/16/2026 - Anthony Taylor - National TAB

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean?	Pass
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Comment:

Condenser coils are clean?	Pass
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Comment:

Gas piping is installed and valves are turned on?	Pass
---	------

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 : 01/06/2026 - Trinity Dodds - National TAB
Completed Date : 03/16/2026 - Anthony Taylor - 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:



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CheckList Information

Name : 03: Hoods **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 01/06/2026 - Trinity Dodds - National TAB
Completed Date : 03/16/2026 - Anthony Taylor - 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 : 01/06/2026 - Trinity Dodds - National TAB
Completed Date : 03/16/2026 - Anthony Taylor - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

List smoke candle type used

Comment:

NTAB

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

WITNESS

Date test was completed

03/16/2026

Comment:

TAB tech name / Firm

Comment:

Anthony Taylor

Site super name / Firm

Comment:

Joshua Hodge

Owner representative name / Firm (if Applicable)

Comment:

QT

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: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201112-ANEK06080
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	23X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	AAON
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4274
SF RPM	-	1760
OA CFM (Hoods On)	800	768
OA CFM (Hoods Off)	350	360
RL Voltage	-	141 - VFD
RL Amperage	-	10.1 - VFD
VFD Max SetPt	-	45 hz
VFD Min SetPt	-	24 hz
OA Damper Position (Hoods On)	-	46%- MANUAL ADJUSTMENT
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.89"
Fan Suction SP	-	-0.48"
Fan Discharge SP	-	0.45"
Total ESP	-	1.34"
Fan Total SP	-	0.93"

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

Completed By: Anthony Taylor on 03/18/2026

Unit Data - PHOTO LOG



03/16/2026



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	20112-ANEK06081
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	23X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	AAON
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4088
SF RPM	-	1760
OA CFM (Hoods On)	800	800
OA CFM (Hoods Off)	350	380
RL Voltage	-	155 - VFD
RL Amperage	-	9.6 - VFD
VFD Max SetPt	-	45 hz
VFD Min SetPt	-	24 hz
OA Damper Position (Hoods On)	-	46%- MANUAL ADJUSTMENT
OA Damper Position (Hoods Off)	-	30%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.75"
Fan Suction SP	-	-0.38"
Fan Discharge SP	-	0.46"
Total ESP	-	1.21"
Fan Total SP	-	0.84"

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

Completed By: Anthony Taylor on 03/18/2026



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	RN-013-8-0-EA0A-152
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	23X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	AAON
Frame	
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4098
SF RPM	-	1760
OA CFM (Hoods On)	800	804
OA CFM (Hoods Off)	350	344
RL Voltage	-	120
RL Amperage	-	8.48
VFD Max SetPt	-	39.48 hz
VFD Min SetPt	-	24 hz
OA Damper Position (Hoods On)	-	46%- MANUAL ADJUSTMENT
OA Damper Position (Hoods Off)	-	26%- MANUAL ADJUSTMENT

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.69"
Fan Suction SP	-	-0.32"
Fan Discharge SP	-	0.61"
Total ESP	-	1.30"
Fan Total SP	-	0.93"

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

Completed By: Anthony Taylor on 03/18/2026

Notes:
Emerson needed to be manually adjusted for both hood on and off positions.

Written By: Anthony Taylor on 03/18/2026



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Project:03-16-26 QT #0825 FAIRBURN, 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	1048	1005	862	107.8
SGRD2	SUPPORT SERVICE	SI	12"	800	1	867	800	802	100.3
SGRD3	SUPPORT SERVICE	SI	12"	800	1	691	656	732	91.5
SGRD4	SUPPORT SERVICE	SI	12"	800	1	791	707	758	94.8
SGRD5	DOCK	ES	12"	750	1	1052	958	677	90.3
SGRD6	WORKROOM	ES	8"	250	1	372	350	267	106.8
Total				4200		4821	4476	4098	97.57%



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: FAN - Exhaust

Asset: EF1

AREA:WOMEN'S RR

Unit Data		
	Design	Actual
MFG	NA	LOREN COOK
Model Num	NA	90 ACEH 90C15DH
Serial Num	-	050SD88575
Type	-	DOWNBLAST
Configuration	-	ATM

Test Data		
	Design	Actual
CFM	225	256
Fan RPM	-	1550
Fan Rotation	-	CCW
Motor RPM	-	1550
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	
Service Factor	-	

Completed By: Anthony Taylor on 03/16/2026

Unit Data - PHOTO LOG



03/16/2026



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: FAN - Exhaust

Asset: EF2

AREA: MEN'S RR/COMBI

Unit Data		
	Design	Actual
MFG	NA	LOREN COOK
Model Num	NA	120 ACE 120C1 3D 33
Serial Num	-	050SD88575
Type	-	DOWNBLAST
Configuration	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	COOK
Horsepower	-	1
Motor Rpm	-	1300
Phase	-	1
Voltage (rated)	-	115

Test Data		
	Design	Actual
CFM	525	529
Fan RPM	-	1300
Fan Rotation	-	CCW
Motor RPM	-	1300
RL Voltage	-	115
Total ESP	-	0.28"
Fan Inlet SP	-	-0.28"
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG



03/16/2026



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Project:03-16-26 QT #0825 FAIRBURN, GA

Diffuser Ret/Exh (GRD)

EF2/MEN'S RR/COMBI

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	SUPPORT SERVICE	RI	8"	150	1	140	140	140	93.3
Total				150		140	140	140	93.33%



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8225652
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	CAPTIVEAIRE
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.8

Test Data		
	Design	Actual
CFM	1350	1372
Fan RPM	-	1288
Fan Rotation	-	CCW
Motor RPM	-	1288
System SetPt	-	56.8 hz
RL Voltage	-	199
RL Amperage	-	2.28
Total ESP	-	0.43"
Fan Inlet SP	-	-0.43"
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG



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Project: 03-16-26 QT #0825 FAIRBURN, GA

System/Unit: Kitchen Hood Type I

Asset: HD1

AREA:GRIDDLE

Unit Data

	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	8225652
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	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	-	103
Filter2 FPM	-	110
Filter3 FPM	-	118
Filter4 FPM	-	128
Filter5 FPM	-	100
Filter6 FPM	-	103
Filter Ave FPM(corr)	-	110
CFM	1350	1372

Cooking Equipment

	Actual
Item 1	FRYER
Item 2	OVEN

Completed By: Anthony Taylor on 03/16/2026

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HOOD ON OA		HOOD OFF OA		HOOD ON EXHAUST		HOOD OFF EXHAUST	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU 1	SALES	800	768	350	360				
RTU-2	SALES	800	800	350	380				
RTU-3	BOH/KITCHEN	800	804	350	344				
EF-1	WOMEN'S RR					225	256	225	256
EF-2	MEN'S RR					525	529	525	529
EF-3	HOOD					1350	1372	0	0
TOTALS		2400	2372	1050	1084	2100	2157	750	785

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2372
TOTAL EXHAUST	2100	2157
NET AIRFLOW	300	215

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0044
SIDE	0.0066
REAR	0.008
AVERAGE	0.0063

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1084
TOTAL EXHAUST	750	785
NET AIRFLOW	300	299

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0042
SIDE	0.0028
REAR	0.011
AVERAGE	0.006

NOTES:

