

Report By:

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



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 10/23/2025
Completed By: National TAB

PROJECT
10-13-25 QT #0839 MABLETON, GA

695 VETERANS MEMORIAL HWY SW

MABLETON, GA

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

National TAB

Project: 10-13-25 QT #0839 MABLETON, GA

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Function: Test, Adjust, & Balance

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.

Issue List

- DIFFUSERS ARE THE WRONG TYPE
- EF-1: MISSING EXHAUST GRILLE
- HOOD SIDE PANELS



10-13-25 QT #0839 MABLETON, GA

Project Issue Information

Issue Name : DIFFUSERS ARE THE WRONG TYPE
Description : The installed diffusers in the kitchen are not the correct specified model
Created By : National TAB **Assigned To :** National TAB - Sagar Patel
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 10/16/2025 - Ben Searles - National TAB

Project Issue File Details

300FS
 Aluminum double deflection supply grille, 3/4" blade spacing, front blades parallel to short dimension
 These 300/350 Series supply grilles define the standard for the industry. With high quality and competitive pricing these grilles form the backbone of a standard offering that will meet any application requirements.

FEATURES AND BENEFITS

- Available with front louvers vertical or horizontal
- 8 1/2" x 11 1/2" Phillips flat head sheet metal screws painted white
- Front and rear louvers are individually adjustable
- Optional opposed blade damper has screwdriver adjustment accessible through face of register
- Insect and debris screens are not available when dampers are fitted.
- Material: Aluminum
- All dimensions are ± 1/16"

10/16/2025

GRILLE, REGISTER, & DIFFUSER SCHEDULE

MANUFACTURER	MODEL	SERVICE	FACE SIZE	BACK SIZE	DESCRIPTION	NOTES
TITUS	350L	STAND	14 1/2"	12 1/2"	34" 3/4" BLADE 300FS GRILLE AL W/PT	Q
TITUS	350S	STAND	12 1/2"	12 1/2"	300FS 300FS GRILLE AL W/PT	Q

10/16/2025

10/16/2025

Project Issue Response Details

- **11/12/2025 National TAB - Sagar Patel**
 - Diffusers are still incorrect. Titus diffusers are on back order.

11/12/2025



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Project Issue Information

Issue Name : EF-1: MISSING EXHAUST GRILLE
Description : Exhaust grille 1-4 is not installed. Unable to balance EF1 until the return is installed.
Created By : National TAB **Assigned To :** National TAB - Sagar Patel
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 10/16/2025 - Ben Searles - National TAB

Project Issue File Details



Project Issue Response Details

- **11/12/2025 National TAB - Sagar Patel**
 - Exhaust grill is not correct and ceiling is exposed.



11/12/2025



10-13-25 QT #0839 MABLETON, GA

Project Issue Information

Issue Name : HOOD SIDE PANELS
Description : The hood side panels are not installed along the wall.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/16/2025 - Ben Searles - National TAB

Project Issue File Details



10/16/2025

Project Issue Response Details

- **11/12/2025 National TAB - Sagar Patel**
 - Hood end panels are now being installed on right side of hood only. Panel needs to be installed.



11/12/2025

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	821	350	377				
RTU-2	SALES	800	782	350	361				
RTU-3	BOH/KITCHEN	800	864	350	366				
EF-1	RR/JANITOR					750		750	
EF-3	HOOD					1350	1285	0	0
TOTALS		2400	2467	1050	1104	2100	1285	750	0

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2467
TOTAL EXHAUST	2100	1285
NET AIRFLOW	300	1182

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0058
SIDE	0.0101
REAR	0.0055
AVERAGE	0.0071

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1104
TOTAL EXHAUST	750	0
NET AIRFLOW	300	1104

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

NOTES:

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 : 10/06/2025 - Trinity Dodds - National TAB
Completed Date : 11/12/2025 - 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 : 10/06/2025 - Trinity Dodds - National TAB
Completed Date : 11/12/2025 - 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:



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CheckList Information

Name : 03: Hoods **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 10/06/2025 - Trinity Dodds - National TAB
Completed Date : 11/12/2025 - 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? Fail

Comment:



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CheckList Information

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

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 10/06/2025 - Trinity Dodds - National TAB

Completed Date : 11/12/2025 - 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:

45 SECOND SMOKE EMITTER

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed

11/12/2025

Comment:

TAB tech name / Firm

Comment:

SAGAR PATEL / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

NOT ON SITE

Owner representative name / Firm (if Applicable)

Comment:

N/A

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: 10-13-25 QT #0839 MABLETON, GA

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201808-ANEL17345
Model Num	RN-013-8-0-EAOA-152
Num OA Filters 1	1
OA Filter Size 1	35X22.5
Num Final Filter 1	4
Final Filter Size 1	20X25X2
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4135
SF RPM	-	1368
OA CFM (Hoods On)	800	821
OA CFM (Hoods Off)	350	377
RL Voltage	-	217 / 216 / 216
RL Amperage	-	9.1 - VFD
VFD Max SetPt	-	45.6 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	30%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.82"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.67"
Total ESP	-	1.49"
Fan Total SP	-	1.72"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 10/16/2025

Unit Data - PHOTO LOG



10/16/2025



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Project: 10-13-25 QT #0839 MABLETON, GA

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201807-ANEK17344
Model Num	RN-013-8-0-EAOA-152
Num OA Filters 1	1
OA Filter Size 1	35X22.5
Num Final Filter 1	4
Final Filter Size 1	20X25X2
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4097
SF RPM	-	1368
OA CFM (Hoods On)	800	782
OA CFM (Hoods Off)	350	361
RL Voltage	-	215 / 216 / 216
RL Amperage	-	9.5 - VFD
VFD Max SetPt	-	45.6 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.96"
Fan Suction SP	-	-1.22"
Fan Discharge SP	-	0.52"
Total ESP	-	1.48"
Fan Total SP	-	1.74"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 10/16/2025

Unit Data - PHOTO LOG



10/16/2025



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Project: 10-13-25 QT #0839 MABLETON, GA

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201808-ANEK17346
Model Num	RN-013-8-0-EAOA-152
Num OA Filters 1	1
OA Filter Size 1	35X22.5
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4141
SF RPM	-	1349
OA CFM (Hoods On)	800	864
OA CFM (Hoods Off)	350	366
RL Voltage	-	161 VFD
RL Amperage	-	9.58 VFD
VFD Max SetPt	-	46 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.83"
Fan Suction SP	-	-1.03"
Fan Discharge SP	-	0.76"
Total ESP	-	1.59"
Fan Total SP	-	1.79"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Sagar Patel on 11/12/2025

Unit Data - PHOTO LOG



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Project:10-13-25 QT #0839 MABLETON, 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	979	874	874	109.3
SGRD2	SUPPORT SERVICE	SI	12"	800	1	802	791	791	98.9
SGRD3	SUPPORT SERVICE	SI	12"	800	1	783	804	804	100.5
SGRD4	SUPPORT SERVICE	SI	12"	800	1	834	758	758	94.8
SGRD5	WORKROOM	ES	10"	500	1	397	453	453	90.6
SGRD6	WORKROOM	ES	10"	500	1	352	461	461	92.2
Total				4200		4147	4141	4141	98.6%

Completed By: Sagar Patel on 11/12/2025



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Project: 10-13-25 QT #0839 MABLETON, GA

System/Unit: FAN - Exhaust

Asset: EF1

AREA:RR/JANITOR

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DR50HFA
Serial Num	-	3470314
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Test Data		
	Design	Actual
CFM	750	[1] 0

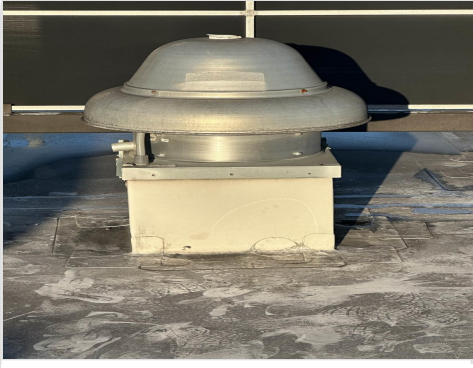
Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	N/L
Horsepower	-	0.5
Motor Rpm	-	N/L
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	5.6
Service Factor	-	N/L

Notes:

[1] INCORRECT COMBI-OVEN GRILLE INSTALLED. UNABLE TO BALANCE FAN WITH INSTALLED GRILLE. SEE ISSUE.

Written By: Michael McDonnell on 02/06/2026

Unit Data - PHOTO LOG



10/16/2025



National TAB

Project:10-13-25 QT #0839 MABLETON, GA

Diffuser Ret/Exh (GRD)

EF1/RR/JANITOR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD4	SUPPORT SERVICE	RI	8"	150					-
Total				150		0	0	0	0%



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Project: 10-13-25 QT #0839 MABLETON, GA

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	7644850
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	48
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.6
Service Factor	-	N/L

Test Data		
	Design	Actual
CFM	1350	1285
Fan RPM	-	1214
Fan Rotation	-	CCW
Motor RPM	-	1214
System SetPt	-	53 HZ
RL Voltage	-	217
RL Amperage	-	1.8
Total ESP	-	0.19"
Fan Inlet SP	-	-0.19"
Fan Discharge SP	-	1 ATM

Completed By: Sagar Patel on 11/12/2025

Notes:
FAN IS RUNNING BACKWARDS

Written By: Ben Searles on 10/16/2025

Unit Data - PHOTO LOG



10/16/2025



National TAB

Project: 10-13-25 QT #0839 MABLETON, 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	-	7644850
Type	-	TYPE I - CANOPY
Hood length	-	108"
Hood Width	-	60"

Test Data Exhaust		
	Design	Actual
Filter Type	-	BAFFLE
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	86
Filter2 FPM	-	103
Filter3 FPM	-	118
Filter4 FPM	-	109
Filter5 FPM	-	105
Filter6 FPM	-	101
Filter Ave FPM(corr)	-	103
CFM	1350	1285

Cooking Equipment	
	Actual
Item 1	OPEN FRYER
Item 2	TOASTER OVEN

Completed By: Sagar Patel on 11/12/2025

Notes:
HOOD NOT IN EMERSON CONTROLLER.

Written By: Ben Searles on 10/16/2025

Unit Data - PHOTO LOG



10/16/2025

