

Report By:

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



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 10/22/2025
Completed By: National TAB

PROJECT
10-20-25 QT #0783 MCDONOUGH, GA

1148 HAMPTON RD

MCDONOUGH, GA

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

National TAB

Project: 10-20-25 QT #0783 MCDONOUGH, 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.

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	839	350	378				
RTU-2	SALES	800	805	350	372				
RTU-3	BOH/KITCHEN	800	812	350	372				
EF-1	RR/JANITOR					750	738	750	738
EF-3	HOOD					1350	1398	0	0
TOTALS		2400	2456	1050	1122	2100	2136	750	738

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2456
TOTAL EXHAUST	2100	2136
NET AIRFLOW	300	320

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0072
SIDE	0.0083
REAR	0.0112
AVERAGE	0.0089

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1122
TOTAL EXHAUST	750	738
NET AIRFLOW	300	384

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0071
SIDE	0.0103
REAR	0.0124
AVERAGE	0.0099

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 : 10/14/2025 - Trinity Dodds - National TAB
Completed Date : 10/22/2025 - 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 : 10/14/2025 - Trinity Dodds - National TAB
Completed Date : 11/05/2025 - Ben Searles - 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 : 10/14/2025 - Trinity Dodds - National TAB
Completed Date : 10/24/2025 - 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? N/A

Comment:



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CheckList Information

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

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 10/14/2025 - Trinity Dodds - National TAB

Completed Date : 11/05/2025 - Ben Searles - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

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

10/24/2025

Comment:

TAB tech name / Firm

Comment:

SAGAR PATEL / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

LEE BROWN

Owner representative name / Firm (if Applicable)

Comment:

QUICKTRIP

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: 10-20-25 QT #0783 MCDONOUGH, GA

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data		
	Design	Actual
MFG	NA	AAON
Serial Num	-	202303-ANEK26001
Model Num	NA	RN-013-8-HA0A-152
Num OA Filters 1	-	1
OA Filter Size 1	-	45X22
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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	4156
SF RPM	-	1437
OA CFM (Hoods On)	800	839
OA CFM (Hoods Off)	350	378
RL Voltage	-	176 VFD
RL Amperage	-	8.31 VFD
VFD Max SetPt	-	49 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	-	-0.46"
Fan Suction SP	-	-0.94"
Fan Discharge SP	-	0.33"
Total ESP	-	0.79"
Fan Total SP	-	1.27"

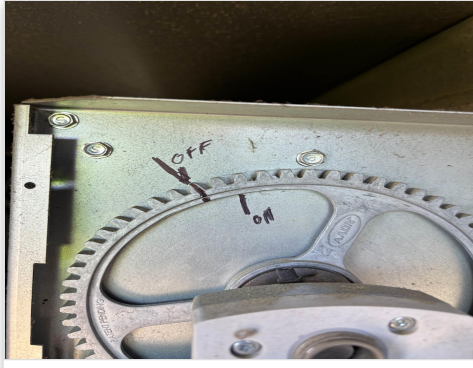
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Sagar Patel on 10/22/2025

Unit Data - PHOTO LOG



10/22/2025



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Project: 10-20-25 QT #0783 MCDONOUGH, GA

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data		
	Design	Actual
MFG	NA	AAON
Serial Num	-	202303-ANEK26002
Model Num	NA	RN-013-8-HA0A-152
Num OA Filters 1	-	1
OA Filter Size 1	-	45X22
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

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

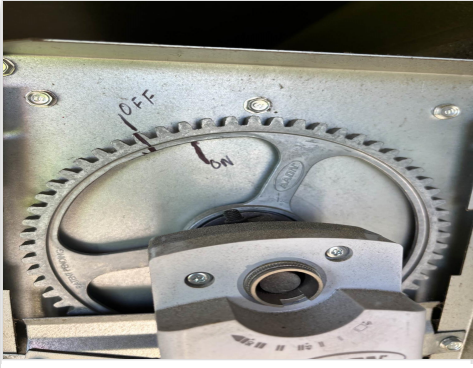
Test Data		
	Design	Actual
SF CFM	4200	4149
SF RPM	-	1437
OA CFM (Hoods On)	800	805
OA CFM (Hoods Off)	350	372
RL Voltage	-	177 VFD
RL Amperage	-	8.62 VFD
VFD Max SetPt	-	49 HZ
VFD Min SetPt	-	24 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.39"
Fan Suction SP	-	-0.98"
Fan Discharge SP	-	0.32"
Total ESP	-	0.71"
Fan Total SP	-	1.30"

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

Completed By: Sagar Patel on 10/22/2025

Unit Data - PHOTO LOG





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Project: 10-20-25 QT #0783 MCDONOUGH, GA

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data		
	Design	Actual
MFG	NA	AAON
Serial Num	-	202303-ANEK26003
Model Num	NA	RN-013-8-HA0A-152
Num OA Filters 1	-	1
OA Filter Size 1	-	45X22
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

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	4013
SF RPM	-	1437
OA CFM (Hoods On)	800	812
OA CFM (Hoods Off)	350	372
RL Voltage	-	178 VFD
RL Amperage	-	9.03 VFD
VFD Max SetPt	-	49 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	-	-0.51"
Fan Suction SP	-	-0.94"
Fan Discharge SP	-	0.50"
Total ESP	-	1.01"
Fan Total SP	-	1.44"

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

Completed By: Sagar Patel on 10/22/2025

Unit Data - PHOTO LOG



10/22/2025



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Project:10-20-25 QT #0783 MCDONOUGH, 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	732	739	739	92.4
SGRD2	SUPPORT SERVICE	SI	12"	800	1	864	796	796	99.5
SGRD3	SUPPORT SERVICE	SI	12"	800	1	752	757	757	94.6
SGRD4	SUPPORT SERVICE	SI	12"	800	1	711	738	738	92.3
SGRD5	WORKROOM	ES	10"	500	1	443	462	462	92.4
SGRD6	WORKROOM	ES	8"	250	1	239	248	248	99.2
SGRD7	WORKROOM 2	ES	8"	250	1	267	273	273	109.2
Total				4200		4008	4013	4013	95.55%

Completed By: Sagar Patel on 10/22/2025



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Project: 10-20-25 QT #0783 MCDONOUGH, GA

System/Unit: FAN - Exhaust

Asset: EF1

AREA:RR/JANITOR

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DR50HFA
Serial Num	-	5780624
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Test Data		
	Design	Actual
CFM	750	738
Fan Rotation	-	CCW
System SetPt	-	LOW
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	0.24"
Fan Inlet SP	-	-0.24
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	N/L
Horsepower	-	0.5
Motor Rpm	-	1625
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	8.4
Service Factor	-	N/L

Completed By: Ben Searles on 11/05/2025

Notes:

[1] LIGHTSWITCH STYLE CONTROLLER. UNABLE TO READ VOLTS AND AMPS.

Written By: Ben Searles on 11/05/2025

Unit Data - PHOTO LOG



10/22/2025



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Project:10-20-25 QT #0783 MCDONOUGH, 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	1	39	139	139	92.7
Total				150		39	139	139	92.67%

Completed By: Ben Searles on 11/05/2025



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Project: 10-20-25 QT #0783 MCDONOUGH, GA

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

Unit Data

	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	7644844
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data

	Design	Actual
Motor MFG	-	HSSA
Frame	-	48
Horsepower	1/2	0.50
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.6
Service Factor	-	N/L

Test Data

	Design	Actual
CFM	1350	1398
Fan RPM	-	1194
Fan Rotation	-	CCW
Motor RPM	-	1194
System SetPt	-	52.8 HZ
RL Voltage	-	209
RL Amperage	-	1.8
Total ESP	-	0.23"
Fan Inlet SP	-	-0.23"
Fan Discharge SP	-	1 ATM

Completed By: Sagar Patel on 10/24/2025

Unit Data - PHOTO LOG



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Project: 10-20-25 QT #0783 MCDONOUGH, 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	-	7644844
Type	-	TYPE 1 CANOPY
Hood length	-	108"
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	-	108
Filter2 FPM	-	121
Filter3 FPM	-	112
Filter4 FPM	-	113
Filter5 FPM	-	114
Filter6 FPM	-	104
Filter Ave FPM(corr)	-	112
CFM	1350	1398

Cooking Equipment

	Actual
Item 1	FRYER
Item 2	OVEN

Completed By: Sagar Patel on 10/24/2025

Unit Data - PHOTO LOG



10/22/2025

