

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
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Report: TAB Report
Function: Test, Adjust, & Balance
Date: 11/06/2025
Completed By: National TAB

PROJECT
12-29-25 QT #1115 GREENVILLE, SC

7840 WHITEHORSE RD

GREENVILLE, SC

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

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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 :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 11/06/2025 - Trinity Dodds - National TAB

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean?

Comment:

Condenser coils are clean?

Comment:

Gas piping is installed and valves are turned on?

Comment:

Unit free of noticeable noise and vibration

Comment:



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CheckList Information

Name : 02: Exhaust Fans **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 11/06/2025 - Trinity Dodds - National TAB

CheckList Item Details

EF's

Hinge kit installed installed on hood fan?

Comment:

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

Comment:

No major leakage around the fan base

Comment:

Unit is free of noise and vibration

Comment:



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CheckList Information

Name : 03: Hoods **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 11/06/2025 - Trinity Dodds - National TAB

CheckList Item Details

HOODS

Hood is free of alarms?

Comment:

Hood is free of damage?

Comment:

End panels are installed per prototype?

Comment:



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CheckList Information

Name : 04: Final Tests **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 11/06/2025 - Trinity Dodds - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

List smoke candle type used

Comment:

Smoke test capture % - Perimeter of hood

Comment:

Smoke test capture % - Top of cooking surface

Comment:

WITNESS

Date test was completed

Comment:

TAB tech name / Firm

Comment:

Site super name / Firm

Comment:

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)

Comment:



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Project: 12-29-25 QT #1115 GREENVILLE, SC

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	NA
Serial Num	
Model Num	NA
Num OA Filters 1	
OA Filter Size 1	
Num Final Filter 1	
Final Filter Size 1	
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	
Frame	
Horsepower	
Motor Rpm	
Phase	
Rated Voltage	
Rated Amperage	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
OA CFM (Hoods On)	800	
OA CFM (Hoods Off)	350	
RL Voltage	-	
RL Amperage	-	
VFD Max SetPt	-	
VFD Min SetPt	-	
OA Damper Position (Hoods On)	-	
OA Damper Position (Hoods Off)	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	



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Project: 12-29-25 QT #1115 GREENVILLE, SC

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	NA
Serial Num	
Model Num	NA
Num OA Filters 1	
OA Filter Size 1	
Num Final Filter 1	
Final Filter Size 1	
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	
Frame	
Horsepower	
Motor Rpm	
Phase	
Rated Voltage	
Rated Amperage	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
OA CFM (Hoods On)	800	
OA CFM (Hoods Off)	350	
RL Voltage	-	
RL Amperage	-	
VFD Max SetPt	-	
VFD Min SetPt	-	
OA Damper Position (Hoods On)	-	
OA Damper Position (Hoods Off)	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	



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Project: 12-29-25 QT #1115 GREENVILLE, SC

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	NA
Serial Num	
Model Num	NA
Num OA Filters 1	
OA Filter Size 1	
Num Final Filter 1	
Final Filter Size 1	
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	
Frame	
Horsepower	
Motor Rpm	
Phase	
Rated Voltage	
Rated Amperage	

Test Data		
	Design	Actual
SF CFM	4200	
SF RPM	-	
OA CFM (Hoods On)	800	
OA CFM (Hoods Off)	350	
RL Voltage	-	
RL Amperage	-	
VFD Max SetPt	-	
VFD Min SetPt	-	
OA Damper Position (Hoods On)	-	
OA Damper Position (Hoods Off)	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	



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Project: 12-29-25 QT #1115 GREENVILLE, SC

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					-
SGRD2	SUPPORT SERVICE	SI	12"	800					-
SGRD3	SUPPORT SERVICE	SI	12"	800					-
SGRD4	SUPPORT SERVICE	SI	12"	800					-
SGRD5	DOCK	ES	12"	750					-
SGRD6	WORKROOM	ES	8"	250					-
Total				4200		0	0	0	0%



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System/Unit: FAN - Exhaust

Asset: EF1

AREA:WOMEN'S RR

Unit Data		
	Design	Actual
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	
Type	-	
Configuration	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	225	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	



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System/Unit: FAN - Exhaust

Asset: EF2

AREA: MEN'S RR/COMBI

Unit Data		
	Design	Actual
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	
Type	-	
Configuration	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	525	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	



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Project: 12-29-25 QT #1115 GREENVILLE, SC

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	COMBI-OVEN	RI	8"	150					-
Total				150		0	0	0	0%



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Project: 12-29-25 QT #1115 GREENVILLE, SC

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

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

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1/2	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	1350	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	



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Project: 12-29-25 QT #1115 GREENVILLE, SC

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	-	
Type	-	
Hood length	-	
Hood Width	-	

Test Data Exhaust

	Design	Actual
Filter Type	-	
Filter Size 1	-	
Filter Size 2	-	
Filter Qty 1	-	
Filter Qty 2	-	
Filter AK factor size 1	-	
Filters AK factor size 2	-	
Filter Total AK Area	-	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter5 FPM	-	
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter Ave FPM(corr)	-	
CFM	1350	

Cooking Equipment

	Actual
Item 1	
Item 2	

