

Report By:

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



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 12/31/2025
Completed By: National TAB

PROJECT
02-02-26 QT #0436 PEORIA, AZ

6739 W HAPPY VALLEY RD

PEORIA, AZ

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

National TAB

Project: 02-02-26 QT #0436 PEORIA, AZ

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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 : 12/31/2025 - Trinity Dodds - National TAB
Completed Date : 02/03/2026 - Christine Weale - 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? 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 : 12/31/2025 - Trinity Dodds - National TAB
Completed Date : 02/03/2026 - Christine Weale - National TAB

CheckList Item Details

EF's

Hinge kit 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 : 12/31/2025 - Trinity Dodds - National TAB
Completed Date : 02/03/2026 - Christine Weale - 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 : 12/31/2025 - Trinity Dodds - National TAB

Completed Date : 02/03/2026 - Christine Weale - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

None

List smoke candle type used

Comment:

45s, S102

Smoke test capture % - Perimeter of hood

Comment:

100

Smoke test capture % - Top of cooking surface

Comment:

100

WITNESS

Date test was completed

02/02/2026

Comment:

TAB tech name / Firm

Comment:

Christine Weale, NTI

Site super name / Firm

Comment:

T-Built

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: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201412-ANEL11442
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22.5
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

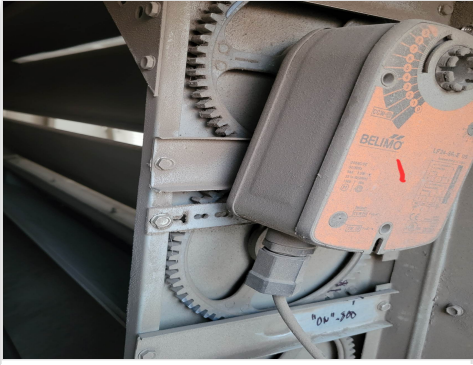
Test Data		
	Design	Actual
SF CFM	4200	4454
SF RPM	-	30 HZ
OA CFM (Hoods On)	800	866
OA CFM (Hoods Off)	350	351
RL Voltage	-	54.8
RL Amperage	-	7.7
VFD Max SetPt	-	50.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	40.0
OA Damper Position (Hoods Off)	-	10.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.28"
Fan Suction SP	-	-0.43"
Fan Discharge SP	-	0.25"
Total ESP	-	0.53"
Fan Total SP	-	0.68"

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

Completed By: Christine Weale on 02/03/2026

Unit Data - PHOTO LOG



02/03/2026



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201412ANEL11441
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22.5
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	Actual
SF CFM	4200	4519
SF RPM	-	30 HZ
OA CFM (Hoods On)	800	880
OA CFM (Hoods Off)	350	358
RL Voltage	-	54.9
RL Amperage	-	7.85
VFD Max SetPt	-	50.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	40.0
OA Damper Position (Hoods Off)	-	10.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.29"
Fan Suction SP	-	-0.43"
Fan Discharge SP	-	0.21"
Total ESP	-	0.50"
Fan Total SP	-	0.64"

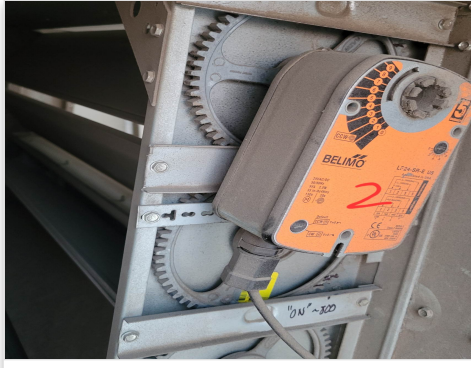
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

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Unit Data - PHOTO LOG



02/03/2026



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201412-ANEK11443
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

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

Test Data		
	Design	Actual
SF CFM	4200	4245
SF RPM	-	39 HZ
OA CFM (Hoods On)	800	846
OA CFM (Hoods Off)	350	358
RL Voltage	-	108.8
RL Amperage	-	7.55
VFD Max SetPt	-	65.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	30.0
OA Damper Position (Hoods Off)	-	8.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.63"
Fan Discharge SP	-	0.50"
Total ESP	-	0.95"
Fan Total SP	-	1.13"

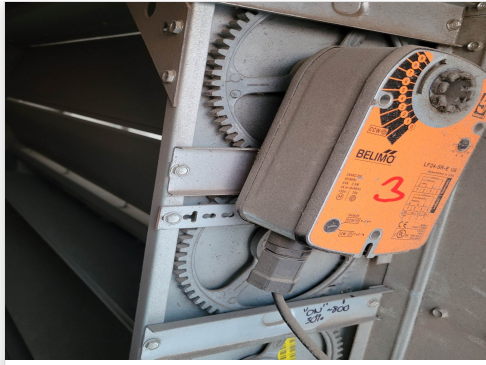
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

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Unit Data - PHOTO LOG



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Project:02-02-26 QT #0436 PEORIA, AZ

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		948	829	829	103.6
SGRD2	SUPPORT SERVICE	SI	12"	800		1043	990	990	123.8
SGRD3	SUPPORT SERVICE	SI	12"	800		848	685	685	85.6
SGRD4	SUPPORT SERVICE	SI	12"	800		810	723	723	90.4
SGRD5	DOCK	ES	12"	650		1043	813	813	125.1
SGRD6	WORKROOM	ES	8"	150		229	205	205	136.7
Total				4000		4921	4245	4245	106.12%



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF1

AREA:WOMEN'S RR

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	90-ACEH-90C15DH
Serial Num	-	100SF55001
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	0.125
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

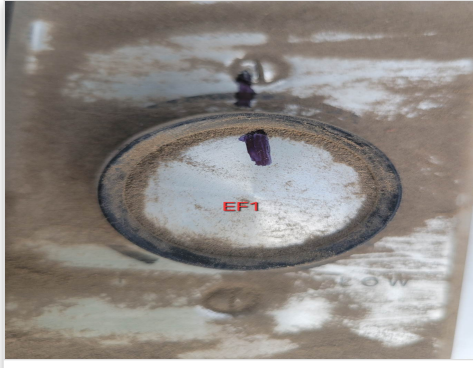
Test Data		
	Design	Actual
CFM	225	216
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	MED
RL Voltage	-	N/A
RL Amperage	-	0.43
Total ESP	-	0.55"
Fan Inlet SP	-	-0.55"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 02/02/2026

Unit Data - PHOTO LOG



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF2

AREA: MEN'S RR/COMBI

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	101ACE-101C15D
Serial Num	-	100SF55001
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	0.125
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	525	537
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	MED
RL Voltage	-	N/A
RL Amperage	-	0.3
Total ESP	-	0.26"
Fan Inlet SP	-	-0.26"
Fan Discharge SP	-	ATMS

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Unit Data - PHOTO LOG



02/03/2026



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Project:02-02-26 QT #0436 PEORIA, AZ

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	1	381	158	158	105.3
Total				150		381	158	158	105.33%



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF3

AREA:KITCHEN HD

Unit Data

	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8257611
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data

	Design	Actual
Motor MFG	-	NEMA
Frame	-	48
Horsepower	0.50	0.5
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data

	Design	Actual
CFM	1350	1373
Fan RPM	-	1252
Fan Rotation	-	CCW
Motor RPM	-	1252
System SetPt	-	52.8 HZ - 66%
RL Voltage	-	211.5
RL Amperage	-	2.43
Total ESP	0.75"	0.67"
Fan Inlet SP	-	-0.67"
Fan Discharge SP	-	ATMS

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Unit Data - PHOTO LOG



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Project: 02-02-26 QT #0436 PEORIA, AZ

System/Unit: Kitchen Hood Type I

Asset: HD1

AREA:GRIDDLE

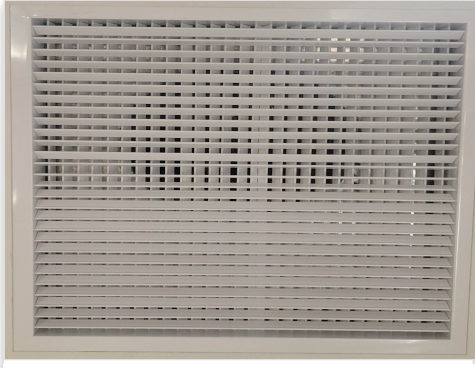
Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	8257611
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO
Filter Size 1	20X16	16X20
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	110
Filter2 FPM	-	112
Filter3 FPM	-	109
Filter4 FPM	-	118
Filter5 FPM	-	110
Filter6 FPM	-	103
Filter Ave FPM(corr)	-	110
CFM	1350	1373

Cooking Equipment	
	Actual
Item 1	FRYERS
Item 2	DUAL-OVEN

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Unit Data - PHOTO LOG



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- 1 INSTALL NEW OWNER-FINISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM FREE SUPPLY DUCT AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM INSTALL HOOD CONTROLS TO INSTALLATION REQUIREMENTS.
- 2 INSTALL NEW OWNER-FINISHED SCOFF-MOUNTED EXHAUST FAN INSTALL SUPPLY DUCT AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM INSTALL HOOD CONTROLS TO INSTALLATION REQUIREMENTS.