

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
10-27-25 QT #0586 BELLEVUE, NE

1311 FORT CROOK RD

BELLEVUE, NE

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

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Project: 10-27-25 QT #0586 BELLEVUE, NE

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Project: 10-27-25 QT #0586 BELLEVUE, NE
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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.

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Project: 10-27-25 QT #0586 BELLEVUE, NE

- [Open QT_Balance_Schedule.xlsx](#)

CheckList List

- 01: RTU's/AHU's
- 02: Exhaust Fans
- 03: Hoods
- 04: Final Tests



10-27-25 QT #0586 BELLEVUE, NE

CheckList Information

Name : 01: RTU's/AHU's **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 10/01/2025 - 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 : 10/01/2025 - 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:



10-27-25 QT #0586 BELLEVUE, NE

CheckList Information

Name : 03: Hoods **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 10/01/2025 - 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:



10-27-25 QT #0586 BELLEVUE, NE

CheckList Information

Name : 04: Final Tests **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 10/01/2025 - 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: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: AHU/RTU

Asset: RT-1

AREA:WORKROOM/RESTROOMS

Unit Data	
	Actual
MFG	AAON
Serial Num	99FKGE246
Model Num	RK-06-2-E0- 221:00000AG0H0000B
Num OA Filters 1	1
OA Filter Size 1	28.5X6"
Num Final Filter 1	4
Final Filter Size 1	16X20X2"

Motor Data	
	Actual
Motor MFG	MARATHON
Frame	56HZ-70
Horsepower	1.00
Motor Rpm	1725
Phase	3
Rated Voltage	208-230/460
Rated Amperage	3.5-3.6/1.8

Drive Data	
	Actual
Motor Sheave Size	4.125"
Motor Bore Size	0.875"
Motor Sheave SetPt	1 TURN OUT
Fan Sheave Size	4.25"
Fan Sheave Bore	1"
Belt CL Distance	16.875"
Num of Belts	1
Belt Size	B-44

Test Data		
	Design	Actual
SF CFM	2000	2095
SF RPM	-	NA
OA CFM (Hoods On)	400	412
OA CFM (Hoods Off)	400	412
RL Voltage	-	208
RL Amperage	-	3.00
VFD Max SetPt	-	N/A
VFD Min SetPt	-	N/A
OA Damper Position (Hoods On)	-	6" OPEN
OA Damper Position (Hoods Off)	-	6" OPEN

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.17"
Fan Suction SP	-	-0.42"
Fan Discharge SP	-	0.19
Total ESP	-	0.36"
Fan Total SP	-	0.61"

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

Completed By: Kalen Kemp on 10/30/2025

Notes:

- COULD NOT SAFELY ACCESS RPM READINGS.
- UNIT IS BELT DRIVEN. NO VFD.

Written By: Kalen Kemp on 10/30/2025

Unit Data - PHOTO LOG



10/30/2025



10/30/2025



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Project: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	99FKG318
Model Num	RK-13-2-E0- 222:00000AG0H0000B
Num OA Filters 1	1
OA Filter Size 1	28.5X5"
Num Final Filter 1	6
Final Filter Size 1	16X20X2"

Motor Data	
	Actual
Motor MFG	MARATHON
Frame	56HZ-95
Horsepower	3.00
Motor Rpm	1725
Phase	3
Rated Voltage	200-230/460
Rated Amperage	9.5-9.2/4.6

Drive Data	
	Actual
Motor Sheave Size	4.125"
Motor Bore Size	0.875"
Motor Sheave SetPt	3 TURNS OUT
Fan Sheave Size	4.25"
Fan Sheave Bore	1"
Belt CL Distance	24"
Num of Belts	1
Belt Size	BX-58

Test Data		
	Design	Actual
SF CFM	4000	3810
SF RPM	-	NA
OA CFM (Hoods On)	700	733
OA CFM (Hoods Off)	700	733
RL Voltage	-	208
RL Amperage	-	6.94
VFD Max SetPt	-	N/A
VFD Min SetPt	-	N/A
OA Damper Position (Hoods On)	-	5" OPEN
OA Damper Position (Hoods Off)	-	5" OPEN

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.59"
Fan Suction SP	-	-1.26"
Fan Discharge SP	-	0.22"
Total ESP	-	0.81
Fan Total SP	-	1.48"

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

Completed By: Kalen Kemp on 10/30/2025

Notes:

- 2 DIFFUSERS WERE DISCONNECTED FROM THE MAIN TRUNK. CLOSED DAMPERS TO GET TOTAL AIRFLOW READINGS FOR REMAINING DIFFUSERS.
- COULD NOT SAFELY ACCESS RPM READINGS.
- UNIT IS BELT DRIVEN. NO VFD.

Written By: Kalen Kemp on 10/30/2025

Unit Data - PHOTO LOG



10/30/2025



10/30/2025



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Project: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201403-ANGJ35494
Model Num	RN-010-8-0-FB09-3L9
Num OA Filters 1	1
OA Filter Size 1	16.5X27"
Num Final Filter 1	4
Final Filter Size 1	16X20X2"
Num Final Filter 2	
Final Filter Size 2	

Motor Data	
	Actual
Motor MFG	NA
Frame	NA
Horsepower	1.00
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	4.6

Drive Data	
	Actual
Motor Sheave Size	DD
Motor Bore Size	DD
Motor Sheave SetPt	DD
Fan Sheave Size	DD
Fan Sheave Bore	DD
Belt CL Distance	DD
Num of Belts	DD
Belt Size	DD

Test Data		
	Design	Actual
SF CFM	1350	
SF RPM	-	NA
OA CFM (Hoods On)	1350	
OA CFM (Hoods Off)	0	
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	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES



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Project: 10-27-25 QT #0586 BELLEVUE, NE

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	BOH/KITCHEN	RS	16"	675					-
SGRD2	BOH/KITCHEN	RS	16"	675					-
Total				1350		0	0	0	0%



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Project: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: FAN - Exhaust

Asset: EF1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	120C2B
Serial Num	-	282S559388000007010699
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Test Data		
	Design	Actual
CFM	-	508
Fan RPM	-	1313
Fan Rotation	-	CLOCKWISE
Motor RPM	-	1636
RL Voltage	-	NA
RL Amperage	-	5.31
Suction ESP	-	-0.12"
Discharge ESP	-	ATM
Total ESP	-	0.12"

Motor Data		
	Design	Actual
Motor MFG	-	DAYTON
Frame	-	48Z
Horsepower	-	NA
Motor Rpm	-	NA
Phase	-	1
Voltage (rated)	-	NA
Amperage (rated)	-	NA
Service Factor	-	NA

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	0.5"
Motor Sheave SetPt	N/A (FIXED)
Fan Sheave Size	3.75"
Fan Sheave Bore	0.75"
Belt CL Distance	5.75"
Num of Belts	1
Belt Size	4L220T

Completed By: Kalen Kemp on 10/31/2025

Notes:

- MOTOR LABEL COVERED WITH TAPE
- MOTOR HAS FIXED SHEAVE. UNABLE TO ADJUST FAN SPEED.

Written By: Kalen Kemp on 10/31/2025

Unit Data - PHOTO LOG



10/30/2025



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Project: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: FAN - Exhaust

Asset: EF2

AREA: KITCHEN HOOD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8189630
Type	-	UPBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	-	0.50
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Drive Data	
	Actual
Motor Sheave Size	DD
Motor Bore Size	DD
Motor Sheave SetPt	DD
Fan Sheave Size	DD
Fan Sheave Bore	DD
Belt CL Distance	DD
Num of Belts	DD
Belt Size	DD

Test Data		
	Design	Actual
CFM	-	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
RL Voltage	-	
RL Amperage	-	
Suction ESP	-	
Discharge ESP	-	
Total ESP	-	



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Project: 10-27-25 QT #0586 BELLEVUE, NE

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	



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Project: 10-27-25 QT #0586 BELLEVUE, NE

System/Unit: FAN - Exhaust

Asset: EF3

AREA:COMBI OVEN

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

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

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	

Test Data		
	Design	Actual
CFM	-	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
RL Voltage	-	
RL Amperage	-	
Suction ESP	-	
Discharge ESP	-	
Total ESP	-	

