

**Report By:**

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



**Report: TAB Report**  
**Function: Test, Adjust, & Balance**  
**Date: 02/24/2026**  
**Completed By: National TAB**

**PROJECT**

**02-23-26 QT #0460 TEMPE, AZ**

2195 SOUTHERN AVE

TEMPE, AZ

**Client**

QUIKTRIP  
4705 SOUTH 129TH EAST AVENUE  
TULSA, OK 74134

# National TAB

Project: 02-23-26 QT #0460 TEMPE, 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.

## **Issue List**

- EF3 HINGE/GREASE CUP NOT PROPERLY INSTALLED
- INACCESSIBLE DAMPER
- RTU1 & 2 NONFUNCTIONAL ECON DAMPERS



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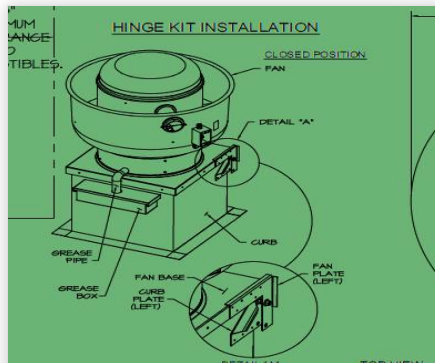
**Project Issue Information**

**Issue Name :** EF3 HINGE/GREASE CUP NOT PROPERLY INSTALLED  
**Description :** HINGE SHOULD BE INSTALLED OPPOSITE THE GREASE CONDUIT/CUP.  
**Created By :** National TAB **Assigned To :** National TAB - Dan Hertenstein  
**Status :** Open  
**Priority :** Low **Asset Tag :** EF3  
**Originated Date :** 02/24/2026 - Christine Weale - National TAB

Project Issue File Details



02/24/2026



02/24/2026



**02-23-26 QT #0460 TEMPE, AZ**

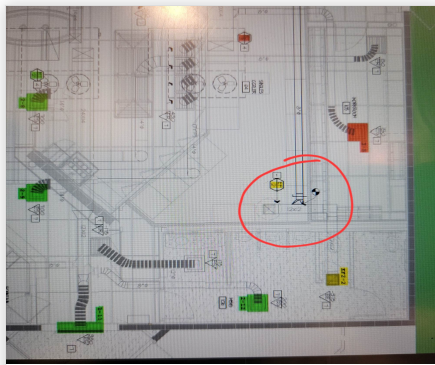
**Project Issue Information**

**Issue Name :** INACCESSIBLE DAMPER  
**Description :** Damper not installed in MSET location. Tried to trace, dampers inaccessible. Pic shows where Dampers should be located. Most of these QTs have OBDs installed in grille, those are recommended to guarantee accessibility.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dan Hertenstein  
**Status :** Open  
**Priority :** High                                      **Asset Tag :** EF2  
**Originated Date :** 02/24/2026 - Christine Weale - National TAB

Project Issue File Details



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**02-23-26 QT #0460 TEMPE, AZ**

**Project Issue Information**

**Issue Name :** RTU1 & 2 NONFUNCTIONAL ECON DAMPERS  
**Description :** Dampers do not respond to store PC, upon further investigation, realized the Belimo actuator is not functioning on either unit.  
**Created By :** National TAB                      **Assigned To :** National TAB - Dan Hertenstein  
**Status :** Open  
**Priority :** Medium                                      **Asset Tag :**  
**Originated Date :** 02/24/2026 - Christine Weale - National TAB

### 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	344				
RTU-2	SALES	800	832	350	378				
RTU-3	BOH/KITCHEN	800	866	350	385				
EF-1	WOMEN'S RR					225	229	225	229
EF-2	MEN'S RR					525	563	525	563
EF-3	HOOD					1350	1348	0	0
<b>TOTALS</b>		<b>2400</b>	<b>2537</b>	<b>1050</b>	<b>1107</b>	<b>2100</b>	<b>2140</b>	<b>750</b>	<b>792</b>

#### HOODS ON

##### NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2537
TOTAL EXHAUST	2100	2140
<b>NET AIRFLOW</b>	<b>300</b>	<b>397</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.001
SIDE	0.001
REAR	0.001
<b>AVERAGE</b>	<b>0.001</b>

#### HOODS OFF

##### NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1107
TOTAL EXHAUST	750	792
<b>NET AIRFLOW</b>	<b>300</b>	<b>315</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.002
SIDE	0.002
REAR	0.002
<b>AVERAGE</b>	<b>0.002</b>

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 :** 02/04/2026 - Trinity Dodds - National TAB

**Completed Date :** 02/24/2026 - 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 :** 02/04/2026 - Trinity Dodds - National TAB  
**Completed Date :** 02/24/2026 - Christine Weale - 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 :** 02/04/2026 - Trinity Dodds - National TAB  
**Completed Date :** 02/24/2026 - 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 :** 02/04/2026 - Trinity Dodds - National TAB  
**Completed Date :** 02/24/2026 - 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**

02/23/2026

**Comment:**

---

**TAB tech name / Firm**

**Comment:**

Christine Weale, NTI

---

**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)**

Pass

---

**Comment:**

---



# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

System/Unit: AHU/RTU

Asset: RT-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201111-ANEL060068
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	1
Final Filter Size 1	46X19.5

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	4608
SF RPM	-	32 HZ
OA CFM (Hoods On)	800	839
OA CFM (Hoods Off)	350	344
RL Voltage	-	66.2
RL Amperage	-	7.65
VFD Max SetPt	-	53.3
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	0 - SMALL OPENING AT BOTTOM OF DAMPER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.4"
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.15"
Total ESP	-	0.55"
Fan Total SP	-	0.71"

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

Completed By: Christine Weale on 02/23/2026

**Unit Data - PHOTO LOG**



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# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

System/Unit: AHU/RTU

Asset: RT-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201111-ANEL06067
Model Num	RN-015-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5

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	4604
SF RPM	-	32 HZ
OA CFM (Hoods On)	800	832
OA CFM (Hoods Off)	350	378
RL Voltage	-	66.6
RL Amperage	-	7.7
VFD Max SetPt	-	53.3
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	0 - SMALL CRACK AT BOTTOM OF DAMPER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.4"
Fan Suction SP	-	-0.57"
Fan Discharge SP	-	0.19"
Total ESP	-	0.59"
Fan Total SP	-	0.76"

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

Completed By: Christine Weale on 02/23/2026

## Unit Data - PHOTO LOG



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# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

System/Unit: AHU/RTU

Asset: RT-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201111-ANEK06069
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	46X19.5

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	4327
SF RPM	-	42 HZ
OA CFM (Hoods On)	800	866
OA CFM (Hoods Off)	350	385
RL Voltage	-	136.0
RL Amperage	-	8.7
VFD Max SetPt	-	70.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	3/8"
OA Damper Position (Hoods Off)	-	0 - SMALL CRACK AT BOTTOM OF DAMPER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.5"
Fan Suction SP	-	-0.7"
Fan Discharge SP	-	0.67"
Total ESP	-	1.17"
Fan Total SP	-	1.37"

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

Completed By: Christine Weale on 02/23/2026

**Unit Data - PHOTO LOG**



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# National TAB

Project:02-23-26 QT #0460 TEMPE, 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
SGRD3	SUPPORT SERVICE	SI	12"	800	1	569	808	808	101.0
SGRD4	SUPPORT SERVICE	SI	12"	800	1	660	811	811	101.4
SGRD5	SUPPORT SERVICE	SI	12"	800	1	644	872	872	109.0
SGRD6	SUPPORT SERVICE	SI	12"	800	1	1166	793	793	99.1
SGRD7	DOCK	ES	12"	650	1	1090	661	661	101.7
SGRD8	WORKROOM	ES	8"	350	1	432	382	382	109.1
Total				4200		4561	4327	4327	103.02%



# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

## System/Unit: FAN - Exhaust

Asset: EF1

AREA:WOMEN'S RR

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	G-090-D-X
Serial Num	-	12644854
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MCMILLAN ELEC
Frame	-	NL
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	1.2
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	225	229
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	MED-LOW
RL Voltage	-	N/A
RL Amperage	-	1.23
Total ESP	-	0.16"
Fan Inlet SP	-	-0.16"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 02/23/2026

**Unit Data - PHOTO LOG**



02/24/2026



02/24/2026



# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

## System/Unit: FAN - Exhaust

Asset: EF2

AREA: MEN'S RR/COMBI

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	G-123-B-X
Serial Num	-	12644855
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON ELEC
Frame	-	48
Horsepower	-	0.25
Motor Rpm	-	1140
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.2
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	525	563
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	LOW
RL Voltage	-	N/A
RL Amperage	-	N/A
Total ESP	-	0.11"
Fan Inlet SP	-	0.11"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 02/23/2026

Notes:

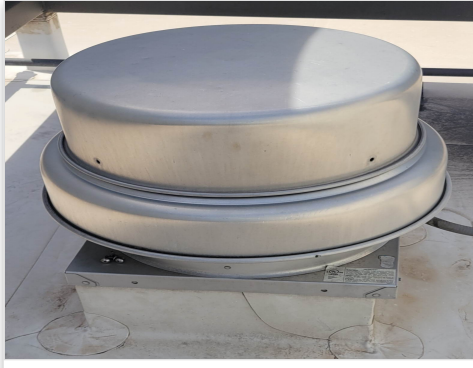
TOTAL FLOW BALANCED, SEE 'REMARKS'. ONCE DAMPER IS LOCATED AND ADJUSTED TO ALLOW FLOW FROM COMBI-OVEN, NO FURTHER CHANGES SHOULD BE NECESSARY.

Written By: Christine Weale on 02/24/2026

**Unit Data - PHOTO LOG**



**02/24/2026**



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# National TAB

Project:02-23-26 QT #0460 TEMPE, 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	SUPPORT SERVICE	RI	8"	150	1	22	60	60	40.0
Total				150		22	60	60	40%



# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

## System/Unit: FAN - Exhaust

Asset: EF3

AREA: KITCHEN HD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8196378
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	NEMA
Frame	-	48
Horsepower	0.5	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	1348
Fan RPM	-	1225
Fan Rotation	-	CCW
Motor RPM	-	1225
System SetPt	-	53.8 HZ
RL Voltage	-	215.0
RL Amperage	-	2.0
Total ESP	0.75"	0.55"
Fan Inlet SP	-	-0.55"
Fan Discharge SP	-	

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## Unit Data - PHOTO LOG



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# National TAB

Project: 02-23-26 QT #0460 TEMPE, AZ

## System/Unit: Kitchen Hood Type I

Asset: HD1

AREA:GRIDDLE

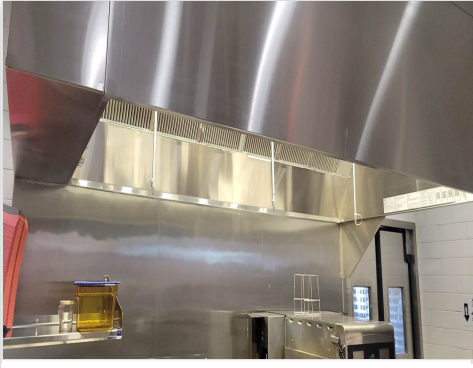
Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	8196378
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

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	-	102
Filter2 FPM	-	117
Filter3 FPM	-	110
Filter4 FPM	-	104
Filter5 FPM	-	110
Filter6 FPM	-	105
Filter Ave FPM(corr)	-	108
CFM	1350	1348

Cooking Equipment	
	Actual
Item 1	FRYERS
Item 2	DUAL-OVEN

Completed By: Christine Weale on 02/23/2026

**Unit Data - PHOTO LOG**



**02/24/2026**

