Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 03/11/2026

Completed By: National TAB

PROJECT

03-09-26 QT #0484 PEORIA, AZ

9541 W OLIVE RD

PEORIA, AZ

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

Table Of Contents

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

- BB ALARM RTU3
- CAN'T TILT EF3 FAN BACK
- DIRTY FINAL FILTERS
- EF1 DAMPER
- INCORRECT DUCT INSTALLATION
- ROOF HATCH WON'T LATCH
- RTU2 ECON DAMPER/EMERSON MALFUNCTION

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Project Issue Information

Issue Name :	BB ALARM RTU3		
Description :	FS hard-wired the unit to run while balancing. But issue was not fixed. Not a unit smoke detector issue.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	RT-3
Originated Date :	03/11/2026 - Christine Weale - National TAB		

03-09-26 QT #0484 PEORIA, AZ

Project Issue Information

Issue Name : CAN'T TILT EF3 FAN BACK

Description : EF3 was installed incorrectly. Not sure why 2 hinges were installed... but neither of them work. The top, the only one necessary, won't open due to back edge of base hitting the hinges and curb top as shown below. Recommend checking equipment function after installation.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Low	**Asset Tag :**	EF3
Originated Date :	03/11/2026 - Christine Weale - National TAB		

Project Issue File Details

03/11/2026

03-09-26 QT #0484 PEORIA, AZ

Project Issue Information

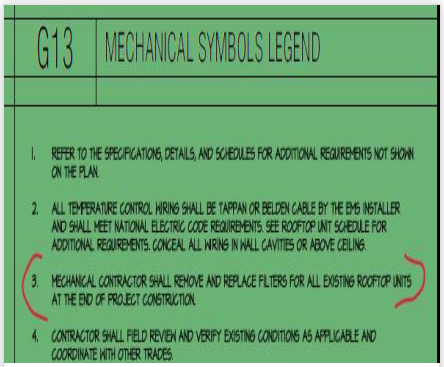
Issue Name : DIRTY FINAL FILTERS
Description : See pics. All Units.

Created By : National TAB
Assigned To : National TAB - Dan Hertenstein

Status : Open
Priority : Low
Asset Tag :
Originated Date : 03/11/2026 - Christine Weale - National TAB

Project Issue File Details

03/11/2026



03/11/2026

03-09-26 QT #0484 PEORIA, AZ

Project Issue Information

Issue Name : EF1 DAMPER
Description : Damper has fallen into the duct.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	EF1
Originated Date :	03/11/2026 - Christine Weale - National TAB		

Project Issue File Details

03/11/2026

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Project Issue Information

Issue Name : INCORRECT DUCT INSTALLATION

Description : Flex is way too long, bent over, and restricting air flow. Flow reading ranges from -40 to 65 which means more air is probably flowing from it, but is too turbulent to function as an exhaust or get a proper measurement of. EF2 is probably balanced (impossible to be sure), once duct is installed correctly no problems anticipated.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	High	**Asset Tag :**	EGRD1
Originated Date :	03/10/2026 - Christine Weale - National TAB		

Project Issue File Details

03/11/2026

03-09-26 QT #0484 PEORIA, AZ

Project Issue Information

Issue Name :	ROOF HATCH WON'T LATCH		
Description :	Roof hatch is off-square and will not properly seal shut.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	
Originated Date :	03/11/2026 - Christine Weale - National TAB		

03-09-26 QT #0484 PEORIA, AZ

Project Issue Information

Issue Name :	RTU2 ECON DAMPER/EMERSON MALFUNCTION		
Description :	RTU2 was set manually with Emerson econ damper ctrl set to 46.0... econ damper was adjusted for "Hood OFF" and when set back to 46.0 it didn't open properly. Had to be manually set to "Hood ON" position.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	RT-2
Originated Date :	03/11/2026 - Christine Weale - National TAB		

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	859	350	358				
RTU-2	SALES	800	873	350	364				
RTU-3	BOH/KITCHEN	800	880	350	358				
EF-1	WOMEN'S RR					225	235	225	235
EF-2	MEN'S RR					525	419	525	419
EF-3	HOOD					1350	1394	0	0
TOTALS		2400	2612	1050	1080	2100	2048	750	654

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2612
TOTAL EXHAUST	2100	2048
NET AIRFLOW	300	564

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.003
SIDE	0.003
REAR	0.003
AVERAGE	**0.003**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1080
TOTAL EXHAUST	750	654
NET AIRFLOW	300	426

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.003
SIDE	0.005
REAR	0.008
AVERAGE	**0.0053**

NOTES:

CheckList List

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

03-09-26 QT #0484 PEORIA, AZ

CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/03/2026 - Trinity Dodds - National TAB		
Completed Date :	03/11/2026 - 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 :	03/03/2026 - Trinity Dodds - National TAB		
Completed Date :	03/11/2026 - 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: Yes, but still won't tilt back, see 'Remarks'.	
No major leakage around the fan base	Pass
Comment:	
Unit is free of noise and vibration	Pass
Comment:	

03-09-26 QT #0484 PEORIA, AZ

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	03/03/2026 - Trinity Dodds - National TAB		
Completed Date :	03/11/2026 - Christine Weale - National TAB		

CheckList Item Details

HOODS

Hood is free of alarms?	Pass
Comment:	

Hood is free of damage?	Fail

Comment:

One small dent makes the panel door hard to put in place.

03/11/2026

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 :	03/03/2026 - Trinity Dodds - National TAB		
Completed Date :	03/11/2026 - Christine Weale - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

All equipment was in use during testing.

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	03/10/2026

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: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201801-ANEL16755
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	46X19.5X2

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

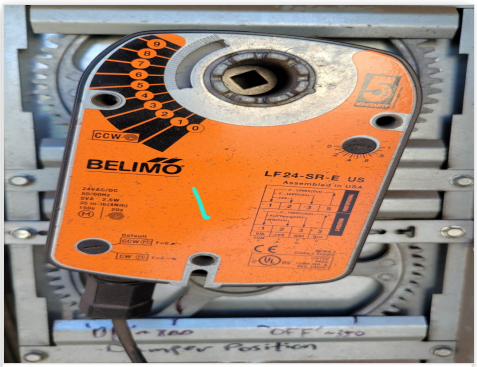
Test Data		
	Design	**Actual**
SF CFM	4200	4388
SF RPM	-	30.0 HZ
OA CFM (Hoods On)	800	859
OA CFM (Hoods Off)	350	358
RL Voltage	-	54.5
RL Amperage	-	7.47
VFD Max SetPt	-	50.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	15.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.26"
Fan Suction SP	-	-0.41"
Fan Discharge SP	-	0.19"
Total ESP	-	0.45"
Fan Total SP	-	0.60"

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

Completed By: Christine Weale on 03/11/2026

Unit Data - PHOTO LOG



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National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201801-ANEL16756
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	46X19.5X2

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	4473
SF RPM	-	31.8 HZ
OA CFM (Hoods On)	800	873
OA CFM (Hoods Off)	350	364
RL Voltage	-	65.4
RL Amperage	-	7.57
VFD Max SetPt	-	53.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	15.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.39"
Fan Suction SP	-	-0.54"
Fan Discharge SP	-	0.18"
Total ESP	-	0.57"
Fan Total SP	-	0.72"

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

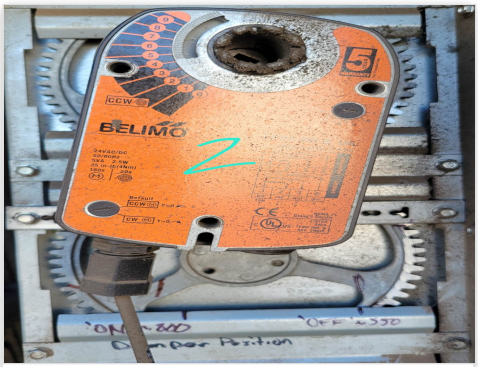
Completed By: Christine Weale on 03/11/2026

Notes:
RTU2 INCREASED DUE TO LOW BP.

Written By: Christine Weale on 03/11/2026

Unit Data - PHOTO LOG

03/10/2026



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National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201801-ANEL16757
Model Num	RN-013-8-0-EA0A-142
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	4250
SF RPM	-	37.5 HZ
OA CFM (Hoods On)	800	880
OA CFM (Hoods Off)	350	358
RL Voltage	-	107.7
RL Amperage	-	7.47
VFD Max SetPt	-	
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	15.0

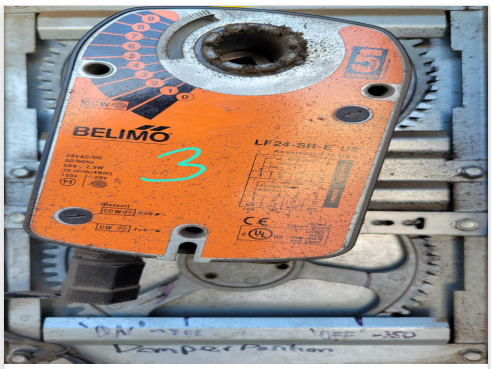
Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.52"
Fan Suction SP	-	-0.71"
Fan Discharge SP	-	0.27"
Total ESP	-	0.79"
Fan Total SP	-	0.98"

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

Completed By: Christine Weale on 03/11/2026

Unit Data - PHOTO LOG

03/10/2026



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National TAB

Project:03-09-26 QT #0484 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	1	1092	965	878	109.8
SGRD2	SUPPORT SERVICE	SI	12"	800	1	1028	875	808	101.0
SGRD3	SUPPORT SERVICE	SI	12"	800	1	927	796	740	92.5
SGRD4	SUPPORT SERVICE	SI	12"	800	1	1007	877	810	101.3
SGRD5	DOCK	ES	12"	650	1	791	730	691	106.3
SGRD6	WORKROOM	ES	8"	350	1	348	321	323	92.3
Total				4200		5193	4564	4250	101.19%

National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DR12HFA
Serial Num	-	3368884
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	-	1/6
Motor Rpm	-	1400
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.9
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	225	235
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	LOW@MSC
RL Voltage	-	50.6
RL Amperage	-	1.7
Total ESP	-	0.03"
Fan Inlet SP	-	-0.03"
Fan Discharge SP	-	ATMS

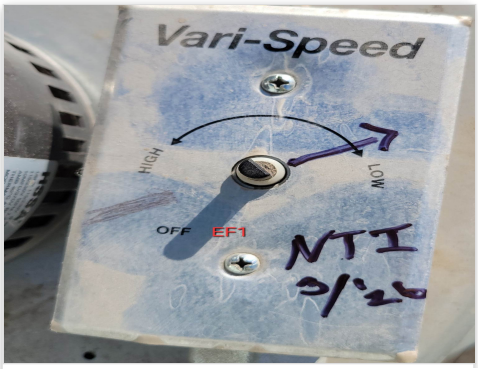
Completed By: Christine Weale on 03/10/2026

Notes:
LOW SP DUE TO BROKEN BACKDRAFT DAMPER, SEE 'REMARKS'.

Written By: Christine Weale on 03/10/2026

Unit Data - PHOTO LOG

03/10/2026



03/10/2026

National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR/COMBI

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DR30HFA
Serial Num	-	3368884
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	48Y
Horsepower	-	0.25\\0.75
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4.0
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	525	419
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	LOW@MSC
RL Voltage	-	77.7
RL Amperage	-	3.84
Total ESP	-	0.18"
Fan Inlet SP	-	-0.18"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/10/2026

Notes:
FAN IS BALANCED, FLOW BEFORE AIR DIVERTED FROM MEN'S RR DUCT WAS ~500-545CFM. DUCT ISSUE - SEE 'REMARKS'.

Written By: Christine Weale on 03/10/2026

Unit Data - PHOTO LOG

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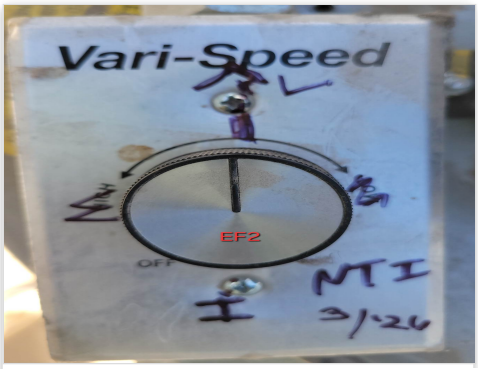

03/10/2026

National TAB

Project:03-09-26 QT #0484 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	90	65	65	43.3
Total				150		90	65	65	43.33%

Asset	Notes	Date	Written By
EGRD1	INCORRECT DUCT INSTALLATION, SEE 'REMARKS'.	03/10/2026	Christine Weale

National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8385027
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA (TELCO)
Frame	-	48
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1350	1394
Fan RPM	-	1225
Fan Rotation	-	CCW
Motor RPM	-	1225
System SetPt	-	52.8 HZ
RL Voltage	-	213.5
RL Amperage	-	2.26
Total ESP	-	0.68"
Fan Inlet SP	-	-0.68"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/10/2026

Unit Data - PHOTO LOG

03/10/2026

National TAB

Project: 03-09-26 QT #0484 PEORIA, AZ

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	8385027
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	-	115
Filter2 FPM	-	113
Filter3 FPM	-	114
Filter4 FPM	-	112
Filter5 FPM	-	104
Filter6 FPM	-	112
Filter Ave FPM(corr)	-	111.67
CFM	1350	1394

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	DUAL-OVEN

Completed By: Christine Weale on 03/10/2026