

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 10/06/2023

PROJECT

09-04-23 PENN STATION - BELLEVUE, NE

10531 S 15TH ST

BELLEVUE, NE 68123

Client

C&T DESIGN
4025 PORT UNION RD.
FAIRFIELD, OH 45014

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

Table Of Contents

Section	Page #
Summary	3
Remarks	4
Site Photos	15
Checklists	22
AHU/RTU	31
FAN - Exhaust	35
Kitchen Hood Type I	40

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail 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) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans

Each 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. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

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 of $-0.02''$ wc to $+0.02''$ wc 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

- DIFFUSER 2-9 covered in mastic
- EF1 and EF3 air leakage
- EF1-3 fans won't start up when breakers are on.
- EF1/EF3 no grease trap installed
- Hood HMI errors
- RTU-1 is not operational.
- RTU2 filters dirty
- RTU2 no OA intake or Economizer
- RTU2 smaller size than design

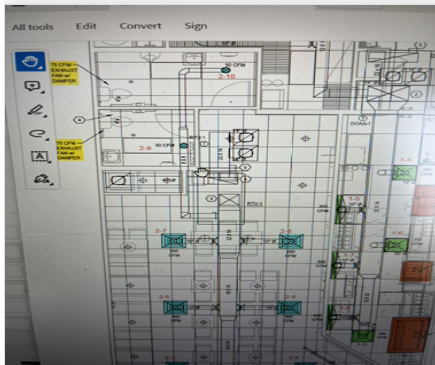


09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : DIFFUSER 2-9 covered in mastic
Description : Damper on diffuser 2-9 on the GRD is shut and covered with mastic and is allowing no airflow through. The damper needs to be free to be locked down at the proper airflow.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 09/11/2023 - Jacob Davidson - National TAB

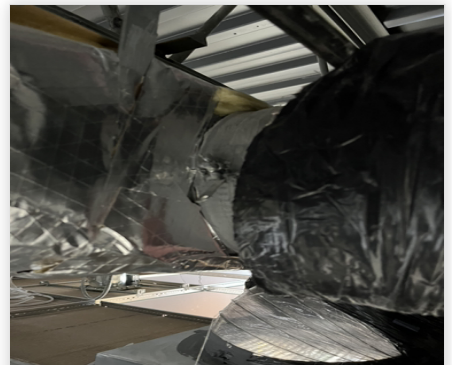
Project Issue File Details



GRD
09/11/2023



Diffuser
09/11/2023



Damper
09/11/2023

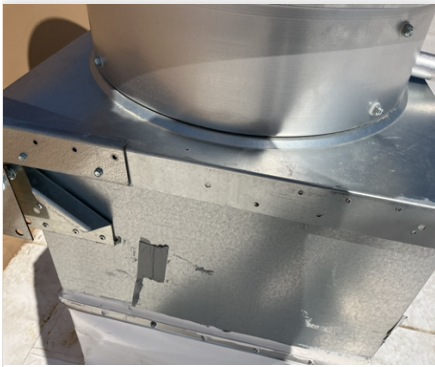


09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : EF1 and EF3 air leakage
Description : On the sides of EF1 and EF3 there is air leakage which will have grease escape onto the roof. Recommend sealing off the sides of these fans.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/12/2023 - Jacob Davidson - National TAB

Project Issue File Details



EF3(1)
09/12/2023



EF1
09/12/2023

09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : EF1-3 fans won't start up when breakers are on.
Description : With the breakers on for the fans, none of the fans or HMIs start up. The fire panel gives a pressure switch fault and there are 2 wires that are not connected to anything in the panel.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/12/2023 - Jacob Davidson - National TAB

Project Issue Response Details

- **09/12/2023 National TAB - Jacob Davidson**
 - Adding pic of temporary solution



**Temporary setup
09/12/2023**



**Hmi
09/12/2023**



**HMI
09/12/2023**



• **09/12/2023 National TAB - Jacob Davidson**

- After more investigating, we found that the cat 5 from the HMI were not connected to the board. After connecting them in series, the hoods started up. Recommend getting longer cat 5 cables to connect them in series to the J4 or J5 port on the control board for proper operation.



Hmi
09/12/2023



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : EF1/EF3 no grease trap installed
Description : EF1 and EF3 for hood 1 and hood 3 do not have their grease traps installed. They are sitting next to the units.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/11/2023 - Jacob Davidson - National TAB



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : Hood HMI errors
Description : After powering the HMI to the hoods, HMI 1 reads “MISSING TEMP SENSOR #4” and HMI 2 reads “B2 De-Energized”. These error codes need to be investigated but don’t affect airflow values.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/12/2023 - Jacob Davidson - National TAB

Project Issue File Details



Hmi2
09/12/2023



Hmi1
09/12/2023



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : RTU-1 is not operational.
Description : RTU-1 is not operational. Unable to complete testing on the unit. Return trip recommended to complete TAB.
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 11/08/2023 - Will Turnbough - National TAB



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : RTU2 filters dirty
Description : Filters for RTU2 we're very dirty. Balancing will be done with filters removed. Unit needs 2 20x25x2 filters
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/11/2023 - Jacob Davidson - National TAB

Project Issue File Details



Filters
09/11/2023



Filtersinunit
09/11/2023



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : RTU2 no OA intake or Economizer
Description : RTU2 has no Outside air intake or Economizer to control OA flow. The unit will have to be balanced without any OA as a result unless these are added.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/11/2023 - Jacob Davidson - National TAB



09-04-23 PENN STATION - BELLEVUE, NE

Project Issue Information

Issue Name : RTU2 smaller size than design
Description : RTU2 for the dining room is a 5 ton unit instead of the 6 ton unit that is in the designs. As such, the unit was balanced proportionally low to the 5 ton unit which is a design of 2000CFM.
Created By : National TAB **Assigned To :** National TAB - Jacob Davidson
Status : Open
Priority : **Asset Tag :**
Originated Date : 09/11/2023 - Jacob Davidson - National TAB

CheckList List

- SITE PICTURES



IMG_4859
09/12/2023

RTU-2

Comment:



IMG_4860
09/12/2023

EF-1

Comment:



IMG_4861
09/12/2023

EF-2

Comment:



IMG_4862
09/12/2023

EF-3

Comment:



IMG_4863
09/12/2023

EF-4

Comment:



IMG_4864
09/12/2023

EF-5

Comment:



IMG_4865
09/12/2023

HOOD-1

Comment:



IMG_4868
09/12/2023

HOOD-2

Comment:



IMG_4869
09/12/2023

HOOD-3

Comment:



IMG_4870
09/12/2023

CheckList List

- 1-INITIAL SITE WALKTHROUGH
- 2-UNIT DATA AND EVALUATION
- 3-TEST, ADJUST, AND BALANCE
- 4-FINAL TESTS



09-04-23 PENN STATION - BELLEVUE, NE

CheckList Information

Name : 1-INITIAL SITE WALKTHROUGH **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 08/16/2023 - Austin McFall - National TAB

Completed Date : 09/19/2023 - Austin McFall - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design? Yes

Comment:

All hood filters installed and accounted for? Yes

Comment:

Hoods are wired and have power? No

Comment:

HVAC are still working on wiring and CAS is coming tomorrow, 9/12, to start up hoods and DOAS unit

Hood is free of alarms? No

Comment:

See Previous Note

Thermostats have power? No

Comment:

RTU YES, DOAS NO

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

GC is aware of hoods and DOAS not started up. They are still working on getting them up and running. Plan is to balance the RTU and exhaust fans today and hoods and DOAS if they get started up.



09-04-23 PENN STATION - BELLEVUE, NE

CheckList Information

Name : 2-UNIT DATA AND EVALUATION **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/16/2023 - Austin McFall - National TAB
Completed Date : 09/19/2023 - Austin McFall - National TAB

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional? No

Comment:

NO ECONOMIZER INSTALLED ON RTU2

DCV Max damper opening position is set to minimum? No

Comment:

NO ECONOMIZER INSTALLED ON RTU2

Free cooling enthalpy set point set for lowest setting (Typically "D") No

Comment:

NO ECONOMIZER INSTALLED ON RTU2

Motors are all operating below the FLA rating? Yes

Comment:

Are belts tight? N/A

Comment:

If direct drive unit is the speed controller working.	No
Comment: NO SPEED CONTROL	
Is gas piping installed and valves turned on?	No
Comment: GAS IS ON TO RTU2 BUT NOT RTU1	
Unit free of noticeable noise and vibration	Yes
Comment:	
EF's	
Rotation is correct?	Yes
Comment:	
Belts are tight?	N/A
Comment:	
Grease cup installed on hood fan?	No
Comment: STILL NEEDS TO BE INSTALLED ON EF1 AND EF3	
Hinge kit installed installed on hood fan?	Yes
Comment:	
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes
Comment:	
Flex conduit is long enough so that fan can be completely tilted back?	Yes
Comment:	
There is no major leakage around base of fan?	Yes
Comment:	

Is the motor operating below the motor FLA rating?

Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open?

N/A

Comment:

Unit free of noticeable noise and vibration?

Yes

Comment:

HOODS

Kitchen equipment installed in proper places?

Yes

Comment:

Can kitchen equipment be turned on for final smoke test?

No

Comment:

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:



09-04-23 PENN STATION - BELLEVUE, NE

CheckList Information

Name : 3-TEST, ADJUST, AND BALANCE **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/16/2023 - Austin McFall - National TAB

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

Is space comfortable in all areas?

Comment:

Is the space free of ventilation noise?

Comment:

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:



09-04-23 PENN STATION - BELLEVUE, NE

CheckList Information

Name : 4-FINAL TESTS **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/16/2023 - Austin McFall - National TAB
Completed Date : 09/19/2023 - Austin McFall - National TAB

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

NONE

List smoke candle type used

Comment:

45 SECOND SMOKE EMITTER

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

100%

- [Open](#) IMG_4857.mp4
09/12/2023

WITNESS

- [Open](#) IMG_4858.mp4
09/12/2023

Date test was completed

09/12/2023

Comment:

TAB tech name / Firm

Comment:

JACOB DAVIDSON / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

BILLY ROLFE / CARLSON KENNEDY CONSTRUCTION

Owner representative name / Firm (if Applicable)

Comment:

N/A

Building pressure at front & back doors (All Systems On)

Comment:

WAS NOT ABLE TO TAKE BP WHILE ON SITE

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

Thermostats are programmed?

N/A

Comment:

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: AHU/RTU



Asset: RTU1

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6045158
Model Num	CASRTU3-I.300-18-15T	CASRTU3-I.300-18-15T
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	BIRD SCREEN
OA Filter Size 1	-	25.5X45.75
Num Final Filter 1	-	4 METAL MESH
Final Filter Size 1	-	16X25X2
Num Final Filter 2	-	4
Final Filter Size 2	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	182T
Horsepower	-	3
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	230/460
Rated Amperage	-	8.6/4.3

Test Data		
	Design	Actual
SF CFM	2350	
SF RPM	1083	
RA CFM	0	
OA CFM	2350	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	

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

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

Notes:

Unit was not running at the time of the TAB. Tech was unable to get data.
We do not need static pressures taken unless we run into airflow issues.

Written By: Jacob Davidson on 10/10/2023

National TAB

Project:09-04-23 PENN STATION - BELLEVUE, NE

AHU/RTU



Diffuser Supply (GRD)

RTU1/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU1-SGRD1	BACK OF HOUSE	4-WAY	10	250	1				-
RTU1-SGRD2	BACK OF HOUSE	4-WAY	10	250	1				-
RTU1-SGRD3	BACK OF HOUSE	4-WAY	10	250	1				-
RTU1-SGRD4	KITCHEN	PERFORATED	10	250	1				-
RTU1-SGRD5	KITCHEN	LINEAR	10	300	1				-
RTU1-SGRD6	KITCHEN	PERFORATED	10	250	1				-
RTU1-SGRD7	KITCHEN	LINEAR	10	300	1				-
RTU1-SGRD8	KITCHEN	LINEAR	10	300	1				-
RTU1-SGRD9	KITCHEN	PERFORATED	10	250	1				-
Total				2400		0	0	0	0%

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: AHU/RTU



Asset: RTU2

AREA: DINING

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	DAIKIN
Serial Num	-	2201214648
Model Num	CASRTU3-I.300-18-15T	DFG0603DH00001SAA
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num Final Filter 1	-	2
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	1.0
Motor Rpm	-	NA
Phase	3	1
Rated Voltage	208	208-230
Rated Amperage	-	6.9

Test Data		
	Design	Actual
SF CFM	2400	1938
SF RPM	-	
RA CFM	1870	1938
OA CFM	530	0
RL Voltage	-	209
RL Amperage	-	5.7
SF Rotation	-	CW

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

General		
	Design	Actual
Fan Rotation Correct	-	
Unit Filters Clean	-	NO, FILTERS REMOVED FOR BALANCE
Condensate Drain Installed	-	YES

Notes:

Unit does not have any OA intake or economizer. Unable to set any OA on the unit until this is resolved.
 Unit is a 5 ton unit instead of the designed 6 ton. 5 ton unit is scheduled for 2000 CFM.

Written By: Jacob Davidson on 10/10/2023

National TAB

Project:09-04-23 PENN STATION - BELLEVUE, NE

AHU/RTU



Diffuser Supply (GRD)

RTU2/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU2-SGRD1	DINING	LINEAR	10	300	1	211	234		-
RTU2-SGRD2	DINING	LINEAR	10	300	1	191	237		-
RTU2-SGRD3	DINING	4-WAY	10	300	1	225	257		-
RTU2-SGRD4	DINING	4-WAY	10	300	1	227	257		-
RTU2-SGRD5	DINING	4-WAY	10	300	1	217	233		-
RTU2-SGRD6	DINING	4-WAY	10	300	1	237	246		-
RTU2-SGRD7	DINING	4-WAY	10	250	1	223	198		-
RTU2-SGRD8	DINING	4-WAY	10	250	1	238	195		-
RTU2-SGRD9	RR	ROUND	8	50	1	31	40		-
RTU2-SGRD10	RR	ROUND	6	50	1	129	41		-
Total				2400		1929	1938	0	0%

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: FAN - Exhaust



Asset: EF1

AREA:GRIDDLE HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6045158
Type	-	UPBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	-	0.75
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	8.9
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	1050	1049
Fan RPM	1199	DD ECM
Fan Rotation	-	CCW
Motor RPM	-	DD ECM
System SetPt	-	57% ECM
RL Voltage	-	119V
RL Amperage	-	3.84A
Total ESP	1.15"	0.63"
Fan Inlet SP	-	-0.63"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: FAN - Exhaust



Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU33HFA
Serial Num	-	6045158
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.33	0.33
Motor Rpm	1800	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.3
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	600	610
Fan RPM	1296	DD ECM
Fan Rotation	-	CCW
Motor RPM	-	DD ECM
System SetPt	-	76% ECM
RL Voltage	-	119V
RL Amperage	-	2.61A
Total ESP	0.60"	0.73
Fan Inlet SP	-	-0.73
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: FAN - Exhaust



Asset: EF3

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6045158
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	-	0.75
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	8.9
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	800	821
Fan RPM	1210	DD ECM
Fan Rotation	-	CCW
Motor RPM	-	DD ECM
System SetPt	-	59% ECM
RL Voltage	-	
RL Amperage	-	4.12A
Total ESP	1.2"	0.45"
Fan Inlet SP	-	-0.45
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: FAN - Exhaust



Asset: EF4

AREA:

Unit Data		
	Design	Actual
MFG	NA	ACME
Model Num	NA	VQ80ESBVa
Serial Num	-	NONE

Test Data		
	Design	Actual
CFM	75	71

Motor Data		
	Design	Actual
Motor MFG	-	ACME
Horsepower	-	NL
Motor Rpm	-	NL
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	0.4

Completed By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: FAN - Exhaust



Asset: EF5

AREA:

Unit Data		
	Design	Actual
MFG	NA	ACME
Model Num	NA	VQ80ESBVa
Serial Num	-	NONE

Test Data		
	Design	Actual
CFM	75	80

Motor Data		
	Design	Actual
Motor MFG	-	ACME
Horsepower	-	NL
Motor Rpm	-	NL
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	0.4

Completed By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3650BD-2	3650 BD-2
Job / Serial Num	-	5883032
Type	-	TYPE I LOW PROXIMITY
Hood length	72"	72"
Hood Width	36"	36"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	6.48	6.48
Filter1 FPM	-	153
Filter2 FPM	-	166
Filter3 FPM	-	172
Filter4 FPM	-	160
Filter Ave FPM(corr)	-	162
CFM	1050	1049

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

Completed By: Jacob Davidson on 09/12/2023

Notes:
SPEED SETPOINT: 57% ECM

Written By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:OVEN

Unit Data

	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4412 PS-OVN	4412 PS-OVN
Job / Serial Num	-	5883032
Type	TYPE I	TYPE I
Hood length	21.25"	21.25"
Hood Width	44"	44"

Test Data Exhaust

	Design	Actual
Filter Type	BAFFLE	BAFFLE
Filter Size 1	10X20	10X20
Filter Qty 1	2	2
Filter AK factor size 1	1.2	1.2
Filter Total AK Area	2.4	2.4
Filter1 FPM	-	262
Filter2 FPM	-	241
Filter Ave FPM(corr)	-	251
CFM	600	610

Cooking Equipment

	Design	Actual
Item 1	-	TOASTER OVEN

Completed By: Jacob Davidson on 09/12/2023

Notes:
SPEED SETPOINT: 76% ECM

Written By: Jacob Davidson on 09/12/2023

National TAB

Project: 09-04-23 PENN STATION - BELLEVUE, NE

System/Unit: Kitchen Hood Type I



Asset: HD3

AREA:FRYER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3650BD-2	3650 BD-2
Job / Serial Num	-	5883032
Type	TYPE 1	TYPE I LOW PROXIMITY
Hood length	50"	50"
Hood Width	36"	36"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	6.48	4.86
Filter1 FPM	-	146
Filter2 FPM	-	187
Filter3 FPM	-	174
Filter Ave FPM(corr)	-	169
CFM	800	821

Cooking Equipment		
	Design	Actual
Item 1	-	FRYERS

Completed By: Jacob Davidson on 09/12/2023

Notes:
SPEED SETPOINT: 59% ECM

Written By: Jacob Davidson on 09/12/2023