

Report By:

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



Report: tab report
Function: Test, Adjust, & Balance
Date: 12/04/2023

PROJECT
11-20-23 PENN STATION - AVON, IN

8738-8948 E US HWY 36

AVON , IN 46213

Client

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

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Project: 11-20-23 PENN STATION - AVON, IN

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: AHU/RTU



Asset: RTU1

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	5882916
Model Num	CASRTU1-I.200-15-7.5T	CASRTU1-I.200-15-7.5T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29"X24"
Num Final Filter 1	-	8
Final Filter Size 1	-	16X16X2

Motor Data		
	Design	Actual
Motor MFG	-	ODP
Frame	-	145T
Horsepower	2.0	2.0
Motor Rpm	1740	1740
Phase	3	3
Rated Voltage	208	208
Rated Amperage	6.1	5.48

Test Data		
	Design	Actual
SF CFM	2000	1958
SF RPM	1502	1693
RA CFM	525	505
OA CFM	1475	1453
RL Voltage	-	210.2
RL Amperage	-	5.2
SF Rotation	-	CCW
RA Damper Position	-	NA
Min OA Damper Position	-	7.2 VDC
Min OA Damper Type	-	MOTORIZED

Performance Data		
	Design	Actual
MA Plenum SP	-	NA
Fan Suction SP	-	NA
Fan Discharge SP	-	NA
Total ESP	1.33"	NA
Fan Total SP	-	NA

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

Completed By: Jordan Best on 11/21/2023

Notes:

.Fan Speed Set Pt. 58 HZ.

.No balancing damper installed for diffuser 7, causing it to be higher than design CFM along with causing diffusers 4, 5, and 6 to fall below design.

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Project:11-20-23 PENN STATION - AVON, IN

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	KITCHEN	4-WAY	10	300	1	337	306	306	102.0
RTU1-SGRD2	KITCHEN	4-WAY	10	300	1	341	297	297	99.0
RTU1-SGRD3	KITCHEN	PERFORATED	10	250	1	240	247	247	98.8
RTU1-SGRD4	KITCHEN	LINEAR	10	300	1	181	215	215	71.7
RTU1-SGRD5	KITCHEN	LINEAR	10	300	1	252	242	242	80.7
RTU1-SGRD6	KITCHEN	LINEAR	10	300	1	191	235	235	78.3
RTU1-SGRD7	KITCHEN	PERFORATED	10	250	1	377	416	416	166.4
Total				2000		1919	1958	1958	97.9%

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: AHU/RTU



Asset: RTU2

AREA:DINING

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	5882916
Model Num	CASRTU1-I.200-15-7.5T	CASRTU1-I.200-15-7.5T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29"X24"
Num Final Filter 1	-	8
Final Filter Size 1	-	16X16X2

Motor Data		
	Design	Actual
Motor MFG	-	ODP
Frame	-	145T
Horsepower	2.0	2.0
Motor Rpm	1740	1740
Phase	3	3
Rated Voltage	208	208
Rated Amperage	6.1	5.4

Test Data		
	Design	Actual
SF CFM	2200	2279
SF RPM	1504	1722
RA CFM	650	557
OA CFM	1350	1408
RL Voltage	-	209.9
RL Amperage	-	5.2
SF Rotation	-	CCW
RA Damper Position	-	NA
Min OA Damper Position	-	7 VDC
Min OA Damper Type	-	MOTORIZED

Performance Data		
	Design	Actual
MA Plenum SP	-	NA
Fan Suction SP	-	NA
Fan Discharge SP	-	NA
Total ESP	1.33"	NA
Fan Total SP	-	NA

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

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Notes:
Fan Speed Set Pt. 59 HZ

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Project:11-20-23 PENN STATION - AVON, IN

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	4-WAY	10	300	1	535	327	327	109.0
RTU2-SGRD2	DINING	LINEAR	10	250	1	207	235	235	94.0
RTU2-SGRD3	DINING	LINEAR	10	300	1	416	322	322	107.3
RTU2-SGRD4	DINING	4-WAY	10	250	1	221	246	246	98.4
RTU2-SGRD5	DINING	4-WAY	10	250	1	220	260	260	104.0
RTU2-SGRD6	DINING	4-WAY	10	250	1	181	271	271	108.4
RTU2-SGRD7	DINING	4-WAY	10	250	1	174	241	241	96.4
RTU2-SGRD8	WOMEN'S RR	ROUND	6	70	1	87	76	76	108.6
RTU2-SGRD9	MEN'S RR	ROUND	8	130	1	130	142	142	109.2
RTU2-SGRD10	HALL	4-WAY	8	150	1	137	159	159	106.0
Total				2200		2308	2279	2279	103.59%

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: FAN - Exhaust



Asset: EF1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	5882916
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TEAO-ECM
Horsepower	0.75	0.75
Motor Rpm	1800	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	8.9
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	1225	1231
Fan RPM	1240	1018
Fan Rotation	-	CCW
Motor RPM	-	1018
System SetPt	-	55%
RL Voltage	-	121.2
RL Amperage	-	3.19/3.15
Total ESP	1.15"	0.61"
Fan Inlet SP	-	-0.61"
Fan Discharge SP	-	ATM

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: FAN - Exhaust



Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU33HFA
Serial Num	-	5882916
Type	VERTICAL	VERTICAL
Configuration	UPBLAST	UPBLAST

Motor Data		
	Design	Actual
Motor MFG	-	TEAO-ECM
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	550	542
Fan RPM	1259	1122
Fan Rotation	-	CCW
Motor RPM	-	1122
System SetPt	-	60%
RL Voltage	-	122.4
RL Amperage	-	1.29/1.28
Total ESP	0.60"	0.31"
Fan Inlet SP	-	-0.31"
Fan Discharge SP	-	ATM

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: FAN - Exhaust



Asset: EF3

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	5882916
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TEAO-ECM
Horsepower	0.75	0.75
Motor Rpm	1800	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	8.9
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	800	800
Fan RPM	1210	1128
Fan Rotation	-	CCW
Motor RPM	-	1128
System SetPt	-	60%
RL Voltage	-	121.7
RL Amperage	-	4.03/4.05
Total ESP	1.2"	0.83"
Fan Inlet SP	-	-0.83"
Fan Discharge SP	-	ATM

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: FAN - Exhaust



Asset: EF4

AREA:

Unit Data		
	Design	Actual
MFG	NA	BROAN
Model Num	NA	HD80L-D
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	70	74

Motor Data		
	Design	Actual
Motor MFG	-	BROAD OCEAN MOTOR COMPANY
Horsepower	-	NL
Motor Rpm	-	1400
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	1.5

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Notes:

Women's RR

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: FAN - Exhaust



Asset: EF5

AREA:

Unit Data		
	Design	Actual
MFG	NA	BROAN
Model Num	NA	HB80L-D
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	130	83

Motor Data		
	Design	Actual
Motor MFG	-	BROAD OCEAN MOTOR COMPANY
Horsepower	-	NL
Motor Rpm	-	1400
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	1.5

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Notes:

- .Men's RR
- .Fan does not reach design CFM, not equipped with speed controller.
- .Designed for 80 CFM according to tag on fan.

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4412-PS-OVN	3650BD-2
Job / Serial Num	-	5882916
Type	TYPE I	TYPE I
Hood length	84"	84"
Hood Width	36"	36"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	165
Filter2 FPM	-	150
Filter3 FPM	-	158
Filter4 FPM	-	152
Filter5 FPM	-	137
Filter Ave FPM(corr)	-	152
CFM	1225	1231

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4412-PS-OVN	4412-PS-OVN
Job / Serial Num	-	5882916
Type	TYPE I	TYPE I
Hood length	44"	44"
Hood Width	21"	21"

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	-	225
Filter2 FPM	-	227
Filter Ave FPM(corr)	-	226
CFM	550	542

Cooking Equipment		
	Design	Actual
Item 1	-	CONVEYOR OVEN

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Project: 11-20-23 PENN STATION - AVON, IN

System/Unit: Kitchen Hood Type I



Asset: HD3

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4412-PS-OVN	3650BD-2
Job / Serial Num	-	5882916
Type	TYPE I	TYPE I
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	4.86	4.86
Filter1 FPM	-	167
Filter2 FPM	-	167
Filter3 FPM	-	160
Filter Ave FPM(corr)	-	164
CFM	800	800

Cooking Equipment		
	Design	Actual
Item 1	-	FRYER

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