Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 02/09/2023

PROJECT

01-30-23 PENN STATION - CLINTON, TN

2218 N CHARLES G SEIVERS BLVD

CLINTON, TN 37716

Client

C&T DESIGN

4025 PORT UNION RD.

FAIRFIELD, OH 45014

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

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CheckList List

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01-30-23 PENN STATION - CLINTON, TN

Project Issue Information

Issue Name :	EFs - GREASE DRAINS		
Description :	GREASE DRAINS NEED TO BE INSTALLED FOR ALL EXHAUST FANS.		
Created By :	National TAB	**Assigned To :**	National TAB - Brianna Biggs
Status :	Open		
Originated Date :	02/02/2023 - Austin McFall - National TAB		

Comfort. Under control.

01-30-23 PENN STATION - CLINTON, TN

Project Issue Information

Issue Name : HINGE KITS - EFs 1/2/3

Description : HINGE KITS NEED TO BE INSTALLED. VERIFY CONDUIT IS LONG ENOUGH TO TILT FANS ALL THE WAY BACK

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Originated Date : 02/02/2023 - Austin McFall - National TAB

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01-30-23 PENN STATION - CLINTON, TN

Project Issue Information

Issue Name : MUA INTAKE

Description : MAKE UP AIR INTAKE WAS NOT YET INSTALLED. WENT AHEAD AND INSTALLED FOR TAB SINCE HVAC WAS NOT ON SITE TO ASSIST.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Originated Date : 02/02/2023 - Austin McFall - National TAB

Comfort. Under control.

01-30-23 PENN STATION - CLINTON, TN

Project Issue Information

Issue Name : RTU 1 - OA CANOPY

Description : NEEDS TO BE INSTALLED, NOT ON SITE. WILL NOT BE INSTALLED WHILE ON SITE. WILL NEED RETURN TRIP TO BALANCE OUTSIDE AIR.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Originated Date : 02/02/2023 - Austin McFall - National TAB

Comfort. Under control.

01-30-23 PENN STATION - CLINTON, TN

Project Issue Information

Issue Name : RTUs - CONDENSATE DRAINS

Description : CONDENSATE DRAINS NEED TO BE INSTALLED.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Originated Date : 02/02/2023 - Austin McFall - National TAB

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.

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	3000	3047	2250	2286	750	761	25.0%	25.0%						
RTU-2	KITCHEN	3000	3007	2250	2238	750	769	25.0%	25.6%						
EF-1	HOOD 1											1120	1228		
EF-2	HOOD 2											700	740		
EF-3	HOOD 3											660	705		
MUA-1	KITCHEN									1580	1542				
TOTALS		6000	6054	4500	4524	1500	1530			1580	1542	2480	2673	0	0

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3080	3072
TOTAL EXHAUST	2480	2673
NET AIRFLOW	600	399

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0023
SIDE	-
REAR	0.004
AVERAGE	**0.0032**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	3000	3047	2250	2286	750	761	25.0%	25.0%						
RTU-2	KITCHEN	3000	3007	2250	2238	750	769	25.0%	25.6%						
EF-1	HOOD 1											1120	1228		
EF-2	HOOD 2											700	740		
EF-3	HOOD 3											660	705		
MUA-1	KITCHEN									1580	1542				
TOTALS		6000	6054	4500	4524	1500	1530			1580	1542	2480	2673	0	0

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3080	3072
TOTAL EXHAUST	2480	2673
NET AIRFLOW	600	399

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0023
SIDE	-
REAR	0.004
AVERAGE	**0.0032**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

Comfort. Under control.

01-30-23 PENN STATION - CLINTON, TN

CheckList Information

Name :	SITE PICTURES	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

RTU-1	YES

RTU1
02/21/2023

RTU-2	YES

RTU2
02/21/2023

EF-1	YES

KEF1
02/21/2023

EF-2	YES

KEF2
02/21/2023

EF-3	YES

KEF3
02/21/2023

MUA-1	YES

KMUA
02/21/2023

HOOD-1	YES

HOOD1
02/21/2023

HOO-2	YES

HOOD2
02/21/2023

HOOD-3	YES

HOOD3
02/21/2023

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01-30-23 PENN STATION - CLINTON, TN

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	DIFFUSERS AND GRILLES INSTALLED AND MATACH DESIGN
All hood filters installed and accounted for?	HOOD FILTERS INSTALLED AND ACCOUNTED FOR
Hoods are wired and have power?	HOODS ARE WIRED AND HAVE POWER
Hood is free of alarms?	HOODS ARE FREE OF ALARMS
Thermostats have power?	STATS HAVE POWER
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	NA

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01-30-23 PENN STATION - CLINTON, TN

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	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?	ECONOMIZERS ARE ASSEMEBLED AND FUNCTIONAL
DCV Max damper opening position is set to minimum?	NA
Free cooling enthalpy set point set for lowest setting (Typically "D")	D
Motors are all operating below the FLA rating?	MOTORS BELOW FLA
Are belts tight?	BELTS ARE TIGHT
If direct drive unit is the speed controller working.	NA
Is gas piping installed and valves turned on?	GAS PIPING INSTALLED AND VALVES TURNED ON
Unit free of noticeable noise and vibration	UNIT FREE OF NOISE AND VIBRATION
EF's	
Rotation is correct?	ROTATION IS CORRECT
Belts are tight?	BELTS ARE TIGHT
Grease cup installed on hood fan?	GREASE CUPS INSTALLED
Hinge kit installed installed on hood fan?	HINGE KITS WERE NOT INSTALLED
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	COULD NOT LEAN BACK FANS

Flex conduit is long enough so that fan can be completely tilted back?	FLEX CONDUIT APPEARS LONG ENOUGH, COULD NOT VALIDATE
There is no major leakage around base of fan?	NO MAJOR LEAKAGE
Is the motor operating below the motor FLA rating?	MOTROS BELOW FLA
For restroom fan(s) is the back draft damper installed and can it fully open?	DAMPER INSTALLED AND FULLY OPEN
Unit free of noticeable noise and vibration?	NO NOISE OR VIBRATION
MUA	
Rotation is correct?	ROTATION IS CORRECT
Gas piping is installed and valves are in on position?	GAS PIPING INSTALLED AND VALVE OPEN
Heater tested and is functional?	HEATER TEST AND FUNTIONAL
Internal motorized damper is fully opening?	MOTORIZED DAMPER FULLY OPEN
Motor is operating below the FLA rating?	MOTOR BELOW FLA
Unit free of noticeable noise and vibration?	NO NOISE OR VIBRATION
HOODS	
Kitchen equipment installed in proper places?	EQUIPMENT UNDER HOOD
Can kitchen equipment be turned on for final smoke test?	NO
DOCUMENTATION	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES

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01-30-23 PENN STATION - CLINTON, TN

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	SPACE IS FREE OF DRAFINT
Is space comfortable in all areas?	SPACE IS COMFORTABLE IN ALL AREA
Is the space free of ventilation noise?	FREE OF VENTILATION NOISE
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	NA

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01-30-23 PENN STATION - CLINTON, TN

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	NONE
List smoke candle type used	45 SEC SMOKE EMITTER
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	02/02/2023
TAB tech name / Firm	AUSTIN MCFALL
Site super name / Firm	GC
Owner representative name / Firm (if Applicable)	NA
Building pressure at front & back doors (All Systems On)	FRONT:0.002"//BACK:0.004"
ADDITIONAL	
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	YES
Thermostats are programmed?	YES

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621G04749
Model Num	LGH092H	KGB090
Configuration	VERTICAL	VERTICAL
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2
Num Final Filter 1	-	[1]
Final Filter Size 1	-	[1]

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	NA	2.0
Motor Rpm	NA	1755
Phase	3	3
Rated Voltage	208	208
Rated Amperage	NA	6.0
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	3000	3047
RA CFM	2250	2286
OA CFM	750	761
RL Voltage	-	217/215/216
RL Amperage	-	4.1/4.5/4.0
OA Damper Position	-	0.625"

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.46"
Fan Suction SP	-	-0.65"
Fan Discharge SP	-	0.51"
Total ESP	-	0.97"
Fan Total SP	-	1.16"

Completed By: Austin McFall on 02/02/2023

National TAB

Project:01-30-23 PENN STATION - CLINTON, TN

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU1-SGRD1	DINING	2X2	10	300	1	421	400	400	133.3
AHU1-SGRD2	DINING	4X48	10	400	1	475	361	361	90.3
AHU1-SGRD3	DINING	4X48	10	400	1	469	366	366	91.5
AHU1-SGRD4	DINING	2X2	10	350	1	385	332	332	94.9
AHU1-SGRD5	DINING	2X2	10	350	1	272	341	341	97.4
AHU1-SGRD6	DINING	2X2	10	350	1	289	320	320	91.4
AHU1-SGRD7	DINING	2X2	10	350	1	148	330	330	94.3
AHU1-SGRD8	WOMENS RR	CEILING	6	70	1	92	72	72	102.9
AHU1-SGRD9	MENS RR	CEILING	8	130	1	195	135	135	103.8
AHU1-SGRD10	PREP AREA	2X2	10	300	1	370	390	390	130.0

Completed By: Dan Hertenstein on

Asset	Notes	Date
AHU1-SGRD1	DIFFUSER DOES NOT HAVE A DAMPER INSTALLED ON EITHER TAKEOFF OR FACE	02/02/2023
AHU1-SGRD10	COULD NOT IDENTIFY DAMPER AT EITHER TAKEOFF OR FACE, 8' LADDER ONLY ON SITE. DIFFICULT TO RE ACH DUCTWORK SAFELY.	02/02/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621G10396
Model Num	LGH092H	KGB090
Configuration	-	VERTICAL
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2
Num Final Filter 1	-	1
Final Filter Size 1	-	14.5”X29”

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	-	2.0
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	6.0
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	3000	3007
RA CFM	2250	2238
OA CFM	750	769
RL Voltage	-	217/215/216
RL Amperage	-	4.1/4.5/4.0
OA Damper Position	-	0.625"
Brake Horse Power	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.41”
Fan Suction SP	-	-0.59”
Fan Discharge SP	-	0.55”
Total ESP	-	0.96”
Fan Total SP	-	1.14”

Completed By: Austin McFall on 02/02/2023

National TAB

Project:01-30-23 PENN STATION - CLINTON, TN

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU2-SGRD1	KITCHEN	4X48	10	350	1	605	528	361	103.1
AHU2-SGRD2	KITCHEN	4X48	10	350	1	600	499	366	104.6
AHU2-SGRD3	KITCHEN	4X48	10	350	1	532	485	371	106.0
AHU2-SGRD4	KITCHEN	2X2	10	300	1	275	236	311	103.7
AHU2-SGRD5	KITCHEN	2X2	10	300	1	469	392	321	107.0
AHU2-SGRD6	KITCHEN	2X2	10	400	1		307	388	97.0
AHU2-SGRD7	KITCHEN	ACPSP	6X84	600	1	455	256	556	92.7
AHU2-SGRD8	KITCHEN	ACPSP	6X50	350	1	429	310	333	95.1

Completed By: Dan Hertenstein on

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	DU85HFA
Serial Num	-	5464050
Type	-	UPBLAST
Configuration	-	VERTICAL

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

Test Data		
	Design	**Actual**
CFM	1120	1228
Fan RPM	-	1800
Fan Rotation	-	CCW
Motor RPM	-	1800
System SetPt	-	53%
RL Voltage	-	116
RL Amperage	-	5.1
Total ESP	-	0.66"
Fan Inlet SP	-	-0.66"
Fan Discharge SP	-	ATM

Completed By: Austin McFall on 02/01/2023

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Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF2 AREA:QUIZNO

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	DU33HFA
Serial Num	-	5464050
Type	-	UPBLAST
Configuration	-	VERTICAL

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

Test Data		
	Design	**Actual**
CFM	700	740
Fan RPM	-	1800
Fan Rotation	-	CCW
Motor RPM	-	1800
System SetPt	-	75%
RL Voltage	-	116
RL Amperage	-	3.4
Total ESP	-	0.45"
Fan Inlet SP	-	-0.45"
Fan Discharge SP	-	ATM

Completed By: Austin McFall on 02/01/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF3 AREA:FRYER

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	DU85HFA
Serial Num	-	5464050
Type	-	UPBLAST
Configuration	-	VERTICAL

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

Test Data		
	Design	**Actual**
CFM	660	705
Fan RPM	-	1800
Fan Rotation	-	CCW
Motor RPM	-	1800
System SetPt	-	45%
RL Voltage	-	116
RL Amperage	-	4.8
Total ESP	-	0.51"
Fan Inlet SP	-	-0.51"
Fan Discharge SP	-	ATM

Completed By: Austin McFall on 02/01/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: FAN - Supply

Comfort. Under control.

Asset: MUA - KITCHEN 1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	ECON AIR
Model Num	NA	EA1-D.250-15D
Serial Num	-	5464050
Type	-	MUA
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	145T
Horsepower	-	1.5
Motor Rpm	-	1740
Phase	-	3
Voltage (rated)	-	230
Amperage (rated)	-	4.03
Service Factor	-	1.15

Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	YES
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	-	55
Discharge Air Temp SetPt	-	60
Air Flow Switch SP Actual	-	0.28"

Test Data		
	Design	**Actual**
CFM	1580	1542
SF RPM	-	1740
Motor RPM	-	1740
SF System SetPt	-	47.7
RL Voltage	-	216/17/215
RL Amperage	-	2.3 AVG

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT

Completed By: Austin McFall on 02/02/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD-FRYER 3 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	3650 BD-2
Job / Serial Num	-	5464050
Type	-	TYPE I CANOPY
Hood length	-	50"
Hood Width	-	36"
Supply Plenum Type	-	PSP
Supply Plenum Width	-	14"
Supply Plenum Length	-	50"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X16
Filter Qty 1	-	3
Filter AK factor size 1	-	1.62
Filter Total AK Area	-	4.86
Filter1 FPM	-	140
Filter2 FPM	-	144
Filter3 FPM	-	150
Filter Ave FPM(corr)	-	145
CFM	660	705

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	FRYER
Item 3	-	WARMER

Test Data Supply		
	Design	**Actual**
Total AK Area	-	0.87
Kv factor (Vel)	-	4.86
Num of Readings	-	4
Reading1 FPM	-	127
Reading2 FPM	-	113
Reading3 FPM	-	110
Reading4 FPM	-	132
Ave FPM(corr)	-	121
CFM	580	511

Completed By: Austin McFall on 02/01/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD-GRIDDLE 1 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	3650 BD-2
Job / Serial Num	-	5464050
Type	-	TYPE I CANOPY
Hood length	-	84"
Hood Width	-	36"
Supply Plenum Type	-	PSP
Supply Plenum Width	-	14"
Supply Plenum Length	-	84"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X16
Filter Qty 1	-	5
Filter AK factor size 1	-	1.62
Filter Total AK Area	-	8.1
Filter1 FPM	-	149
Filter2 FPM	-	151
Filter3 FPM	-	156
Filter4 FPM	-	152
Filter5 FPM	-	150
Filter Ave FPM(corr)	-	152
CFM	1120	1228

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE

Test Data Supply		
	Design	**Actual**
Total AK Area	-	8.17
Kv factor (Vel)	-	0.87
Num of Readings	-	6
Reading1 FPM	-	129
Reading2 FPM	-	116
Reading3 FPM	-	125
Reading4 FPM	-	149
Reading5 FPM	-	186
Reading6 FPM	-	167
Ave FPM(corr)	-	155
CFM	1000	1031

Completed By: Austin McFall on 02/01/2023

National TAB

Project: 01-30-23 PENN STATION - CLINTON, TN

System/Unit: Kitchen Hood Type I

Comfort. Under control.

Asset: HD-QUIZNO 2 AREA:

Unit Data		
	Design	**Actual**
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	NA	4412 QUIZNO
Job / Serial Num	-	5464050
Type	-	QUIZNO
Hood length	-	21.25"
Hood Width	-	44"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	BAFFLE
Filter Size 1	-	10X20
Filter Qty 1	-	2
Filter AK factor size 1	-	1.4
Filter Total AK Area	-	2.8
Filter1 FPM	-	272
Filter2 FPM	-	259
Filter Ave FPM(corr)	-	266
CFM	700	743

Cooking Equipment		
	Design	**Actual**
Item 1	-	TOASTER OVEN

Test Data Supply		
	Design	**Actual**

Completed By: Austin McFall on 02/01/2023