Report By:

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

Report: Report

Function: Test, Adjust, & Balance

Date: 12/29/2023

PROJECT

11-13-23 PENN STATION - OXFORD, OH

971 Farmington Ave

West Hartford, CT 06107

Client

C&T DESIGN

4025 PORT UNION RD.

FAIRFIELD, OH 45014

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

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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
AHU1		2000	1990	1500	1479	500	511	25.0%	25.7%						
AHU2		2000	1907	1500	1391	500	516	25.0%	27.1%						
AHU3		2000	1981	1500	1484	500	497	25.0%	25.1%						
MUA										1630	1659				
EF1												1250	1165		
EF2												600	572		
EF3												850	807		
EF4												150	154		
EF5												75	74		
TOTALS		6000	5878	4500	4354	1500	1524			1630	1659	2925	2772	0	0

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3130	3183
TOTAL EXHAUST	2925	2772
NET AIRFLOW	205	411

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.019
SIDE	
REAR	0.018
AVERAGE	**0.0185**

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:

CheckList List

- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS

11-13-23 PENN STATION - OXFORD, OH

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/04/2023 - Brianna Biggs - National TAB		
Completed Date :	12/29/2023 - Austin McFall - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

Review Plan Review Checklist, has it been signed off and meets our standards to start balancing? If not contact processor to ensure job is ready.

Comment:

YES

All diffusers and grilles are installed and match design?

Comment:

YES

All hood filters installed and accounted for?

Comment:

YES

Hoods are wired and have power?

Comment:

YES

Hood is free of alarms?

Comment:

YES

Thermostats have power?

Comment:

YES

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

Comment:

YES

11-13-23 PENN STATION - OXFORD, OH

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/04/2023 - Brianna Biggs - National TAB		
Completed Date :	12/29/2023 - 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?

Comment:

YES

DCV Max damper opening position is set to minimum?

Comment:

YES

Free cooling enthalpy set point set for lowest setting (Typically "D")

Comment:

YES

Motors are all operating below the FLA rating?

Comment:

YES

Are belts tight?

Comment:

YES

If direct drive unit is the speed controller working.

Comment:

YES

Is gas piping installed and valves turned on?

Comment:

YES

Unit free of noticeable noise and vibration

Comment:

YES

EF's

Rotation is correct?

Comment:

NA

Belts are tight?

Comment:

NA

Grease cup installed on hood fan?

Comment:

NA

Hinge kit installed installed on hood fan?

Comment:

NA

Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Comment:

NA

Flex conduit is long enough so that fan can be completely tilted back?

Comment:

NA

There is no major leakage around base of fan?

Comment:

NA

Is the motor operating below the motor FLA rating?

Comment:

NA

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

Comment:

YES

Unit free of noticeable noise and vibration?

Comment:

NA

MUA

Rotation is correct?

Comment:

NA

Gas piping is installed and valves are in on position?

Comment:

NA

Heater tested and is functional?

Comment:

NA

Internal motorized damper is fully opening?

Comment:

NA

Motor is operating below the FLA rating?

Comment:

NA

Unit free of noticeable noise and vibration?

Comment:

NA

HOODS

Kitchen equipment installed in proper places?

Comment:

NA

Can kitchen equipment be turned on for final smoke test?

Comment:

NA

DOCUMENTATION

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

Comment:

11-13-23 PENN STATION - OXFORD, OH

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/04/2023 - Brianna Biggs - National TAB		
Completed Date :	12/29/2023 - 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:

YES

Is space comfortable in all areas?

Comment:

YES

Is the space free of ventilation noise?

Comment:

YES

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

Comment:

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CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Completed
Assigned Organization :	MULTIPLE	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/04/2023 - Brianna Biggs - National TAB		
Completed Date :	12/29/2023 - Austin McFall - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

NA

List smoke candle type used

Comment:

NA

Smoke test capture - Perimeter of hood

Comment:

NA

Smoke test capture - Top of cooking surface

Comment:

NA

WITNESS

Date test was completed

Comment:

NA

TAB tech name / Firm

Comment:

NA

Site super name / Firm

Comment:

NA

Owner representative name / Firm (if Applicable)

Comment:

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

Comment:

Front:0.019"Back:0.018"

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:

YES

PROGRAM THERMOSTATS

Occupied 7:15AM-10:15PM: 68 Heat/72 Cool (NOTE: 3 degree MAX setback)

Comment:

YES

Unoccupied 10:16PM-7:14AM: 65 Heat/75 Cool

Comment:

YES

SDV Job #: 6340295 - SDV for Job 6113273

Service Region:	361 - Cincinnati OH Service		
Service Person:	Bailey Smith		
Customer Number:	971549	**Customer Name:**	C&T Design/OFF BRAND
Address:	PENN STATION Mike Vantel 3600 Southpointe Parkway SouthPointe Crossing Oxford, OH 45056		
Region Job #:	6113273		
Region Job Name:	Penn Station V2B-6L (Oxford, OH)		
Sales Region:	120 - Air Solutions		
Sales Person:	Joe Hertenstein		
Created By:	Bailey Smith	**Creation Date:**	11/16/2023 12:24 PM
Last Modified By:	Dave King	**Last Modified Date:**	11/30/2023 5:43 PM
Dining Room Pressure:	0.0	**Kitchen Pressure:**	0.0
Hours On Job:	0.0	**Extra Hours:**	0.0
Completed:	Yes	**Completed By:**	Dave King
Completion Date:	11/30/2023 5:43 PM		

Job Site Meeting

NONE

UDS

NONE

Hood Group 1

Exhaust CFM: Design = 1200 Initial = 1515 Final = 1165 (97.1% of design)

Hood 1 (HD1-Grill) (HD1-Grill)

Model: 3650ELPX-2 **Length:** 6' 0.00"
Exhaust CFM: Design = 1200 Initial = 1515 Final = 1165 (97.1% of design)

Other Notes:

N/A

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**Yes**
Smoke Test Performed on all Hoods? Upload Video	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

See attachment(s): [20231116132440.mp4]

Front Lower Edge of Hood is within 6'6" - 7' - 0" (78' - 84") Appliance From Floor (AFF)	Design:	**Yes**	Actual:	**Yes**

Filters

Type: Captrate Solo

Filter 1 Fan: #1 - EADU85H (KEF1)	Size: 16x16	Initial Velocity: 247 fpm	Final Velocity: 193 fpm	Initial CFM: 400	Final CFM: 313
Filter 2 Fan: #1 - EADU85H (KEF1)	Size: 16x16	Initial Velocity: 227 fpm	Final Velocity: 171 fpm	Initial CFM: 368	Final CFM: 277
Filter 3 Fan: #1 - EADU85H (KEF1)	Size: 16x16	Initial Velocity: 234 fpm	Final Velocity: 187 fpm	Initial CFM: 379	Final CFM: 303
Filter 4 Fan: #1 - EADU85H (KEF1)	Size: 16x16	Initial Velocity: 227 fpm	Final Velocity: 168 fpm	Initial CFM: 368	Final CFM: 272

Hood Group 2

Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0.0% of design)
Supply CFM:	Design = 1000	Initial = 1251	Final = 1084	(108.4% of design)
Supply AC CFM:	Design = 0	Initial = 2	Final = 2	(0.0% of design)

Hood 2 (HD1-PSP) (HD1-PSP)

Model:	246Misc ACPSP-ONLY	**Length:**	6' 0.00"	
Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0.0% of design)

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
Smoke Test Performed on all Hoods? Upload Video	Design:	**Yes**	Actual:	**Yes**
Front Lower Edge of Hood is within 6'6" - 7' - 0" (78' - 84") Appliance From Floor (AFF)	Design:	**Yes**	Actual:	**Yes**

Supply

Supply CFM: Fan: #4 - EA1-D.250-15D (HMUA1)	Design = 1000	Initial = 1251	Actual = 1084	(108.4% of design)
AC CFM:	Design = 0	Initial = 2	Actual = 2	(0.0% of design)

PSP 1

Orientation:	Front	**Length:**	6' 0.00"	**Width:**	14.00"	**Banks:**	1
Blanks:	1						
CFM:	Design = 998	Initial = 1251	Final = 1084	(108.6% of design)			
Velocity:	Design = 168	Initial = 210	Final = 182	(108.3% of design)			
AC CFM:	Design = 465	Initial = 2	Final = 2	(0.4% of design)			
AC Velocity:	Design = 0	Initial = 0	Final = 0	(0.0% of design)			

Readings:

1: Initial: 209 fpm, Final: 199 fpm 2: Initial: 210 fpm, Final: 168 fpm 3: Initial: 239 fpm, Final: 192 fpm
4: Initial: 223 fpm, Final: 189 fpm 5: Initial: 180 fpm, Final: 159 fpm 6: Initial: 201 fpm, Final: 186 fpm

AC Readings:

Installation Notes:

AC RTU not running at time of SDV

1: Initial: 1 fpm, Final: 1 fpm 2: Initial: 1 fpm, Final: 1 fpm 3: Initial: 1 fpm, Final: 1 fpm 4: Initial: 1 fpm, Final: 1 fpm
5: Initial: 1 fpm, Final: 1 fpm 6: Initial: 1 fpm, Final: 1 fpm

Hood Group 4

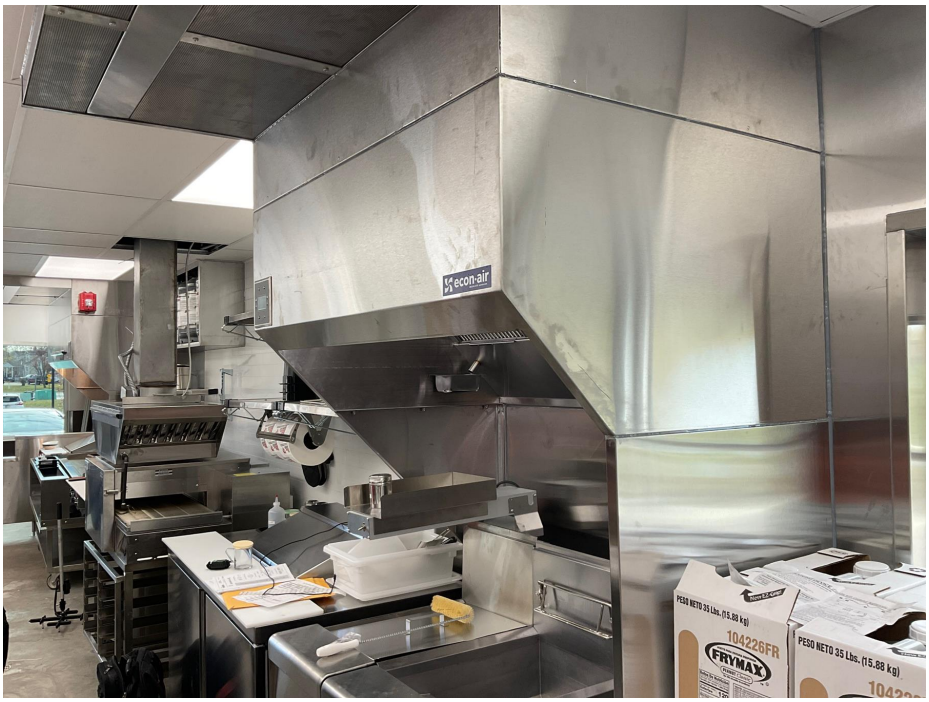
Exhaust CFM: Design = 833 Initial = 1150 Final = 807 (96.9% of design)

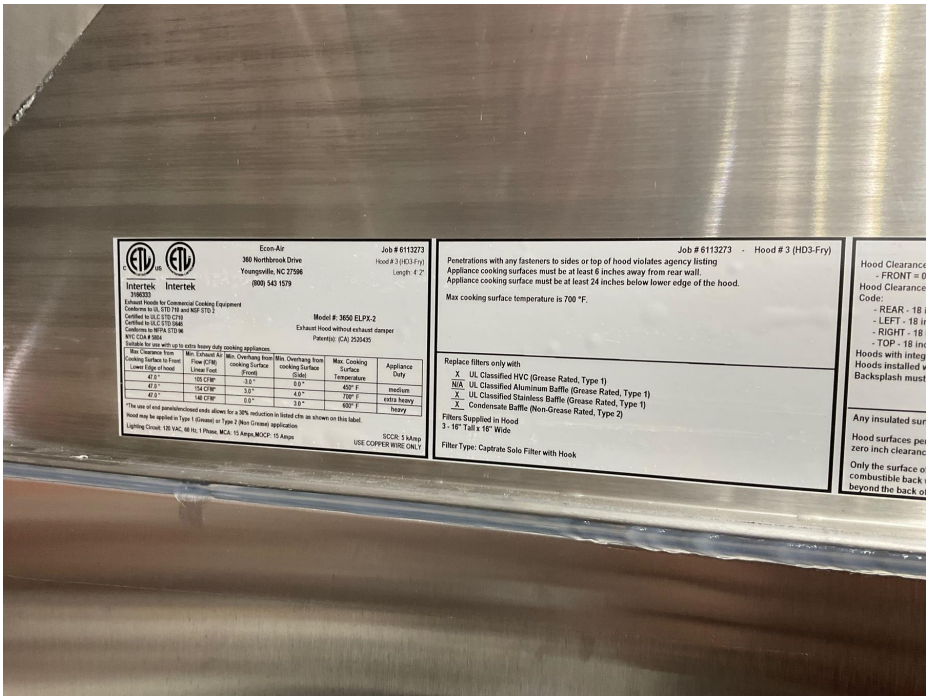
Hood 3 (HD3-Fry) (HD3-Fry)

Model:	3650ELPX-2	**Length:**	4' 2.00"		
Exhaust CFM:	Design = 833	Initial = 1150	Final = 807	(96.9% of design)	

Other Notes:

N/A





Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**Yes**
Smoke Test Performed on all Hoods? Upload Video	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

See attachment(s): [20231116132454.mp4]

Front Lower Edge of Hood is within 6'6' - 7' - 0" (78' - 84") Appliance From Floor (AFF)	Design:	**Yes**	Actual:	**Yes**

Filters

Type: Captrate Solo

Filter 1 Fan: #3 - EADU85H (KEF3-FRY)	Size: 16x16	Initial Velocity: 236 fpm	Final Velocity: 171 fpm	Initial CFM: 382	Final CFM: 277
Filter 2 Fan: #3 - EADU85H (KEF3-FRY)	Size: 16x16	Initial Velocity: 237 fpm	Final Velocity: 159 fpm	Initial CFM: 384	Final CFM: 258
Filter 3 Fan: #3 - EADU85H (KEF3-FRY)	Size: 16x16	Initial Velocity: 237 fpm	Final Velocity: 168 fpm	Initial CFM: 384	Final CFM: 272

Hood Group 5

Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0.0% of design)
Supply CFM:	Design = 630	Initial = 682	Final = 575	(91.3% of design)
Supply AC CFM:	Design = 0	Initial = 2	Final = 2	(0.0% of design)

Hood 4 (HD3-PSP) (HD3-PSP)

Model:	246Misc ACPSP-ONLY	**Length:**	4' 2.00"	
Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0.0% of design)

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
Smoke Test Performed on all Hoods? Upload Video	Design:	**Yes**	Actual:	**Yes**
Front Lower Edge of Hood is within 6'6' - 7' - 0" (78' - 84") Appliance From Floor (AFF)	Design:	**Yes**	Actual:	**Yes**

Supply

Supply CFM: Fan: #4 - EA1-D.250-15D (HMUA1)	Design = 630	Initial = 682	Actual = 575	(91.3% of design)
AC CFM:	Design = 0	Initial = 2	Actual = 2	(0.0% of design)

PSP 1

Orientation:	Front	**Length:**	4' 2.00"	**Width:**	14.00"	**Banks:**	1
Blanks:	1						
CFM:	Design = 630	Initial = 682	Final = 575	(91.3% of design)			
Velocity:	Design = 157	Initial = 169	Final = 142	(90.4% of design)			
AC CFM:	Design = 250	Initial = 2	Final = 2	(0.8% of design)			
AC Velocity:	Design = 0	Initial = 1	Final = 1	(0.0% of design)			

Readings:

1: Initial: 145 fpm, Final: 156 fpm 2: Initial: 171 fpm, Final: 147 fpm 3: Initial: 169 fpm, Final: 144 fpm
4: Initial: 168 fpm, Final: 125 fpm 5: Initial: 178 fpm, Final: 138 fpm 6: Initial: 185 fpm, Final: 147 fpm

AC Readings:

Installation Notes:

AC RTU not running at time of sdv

1: Initial: 1 fpm, Final: 1 fpm 2: Initial: 1 fpm, Final: 1 fpm 3: Initial: 1 fpm, Final: 1 fpm 4: Initial: 1 fpm, Final: 1 fpm
5: Initial: 1 fpm, Final: 1 fpm 6: Initial: 1 fpm, Final: 1 fpm

AQEs

NONE

Fans

Fan 1 - EADU85H (KEF1) (KEF1)

Model: EADU85H

Other Notes:

N/A

Exhaust

Exhaust CFM: Design = 1250 Actual = 1165 (93.2% of design)

Record the ECM Speed			Actual:	**56**
VOLTS	Design:	**115**	Actual:	**122**
HP	Design:	**0.75**	Actual:	**0.75**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1278**	Actual:	**1008**
RPM - MAX	Design:	**1900**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1600**	Actual:	**N/A**
FLA	Design:	**8.9**	Actual:	**3.5**
OVERLOAD SET POINT		**N/A**		
PHASE	Design:	**1**	Actual:	**1**
Unit within five miles from the coast?			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design:	**No**	Actual:	**No**
SPEED CONTROL VOLTAGE	Design:	**65**	Actual:	**N/A**

Fan 2 - EADU33H (KEF2-OVEN) (KEF2-OVEN)

Model: EADU33H

Other Notes:

N/A

Exhaust

Exhaust CFM: Design = 600 Actual = 572 (95.3% of design)

Record the ECM Speed			Actual:	**75**
VOLTS	Design:	**115**	Actual:	**122**
HP	Design:	**0.333**	Actual:	**0.333**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1357**	Actual:	**1350**
RPM - MAX	Design:	**2000**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1600**	Actual:	**N/A**
FLA	Design:	**4.3**	Actual:	**2.3**
OVERLOAD SET POINT		**N/A**		
PHASE	Design:	**1**	Actual:	**1**
Unit within five miles from the coast?			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design:	**No**	Actual:	**No**
SPEED CONTROL VOLTAGE	Design:	**65**	Actual:	**N/A**

Fan 3 - EADU85H (KEF3-FRY) (KEF3-FRY)

Model: EADU85H

Other Notes:

N/A

Exhaust

Exhaust CFM: Design = 850 Actual = 807 (94.9% of design)

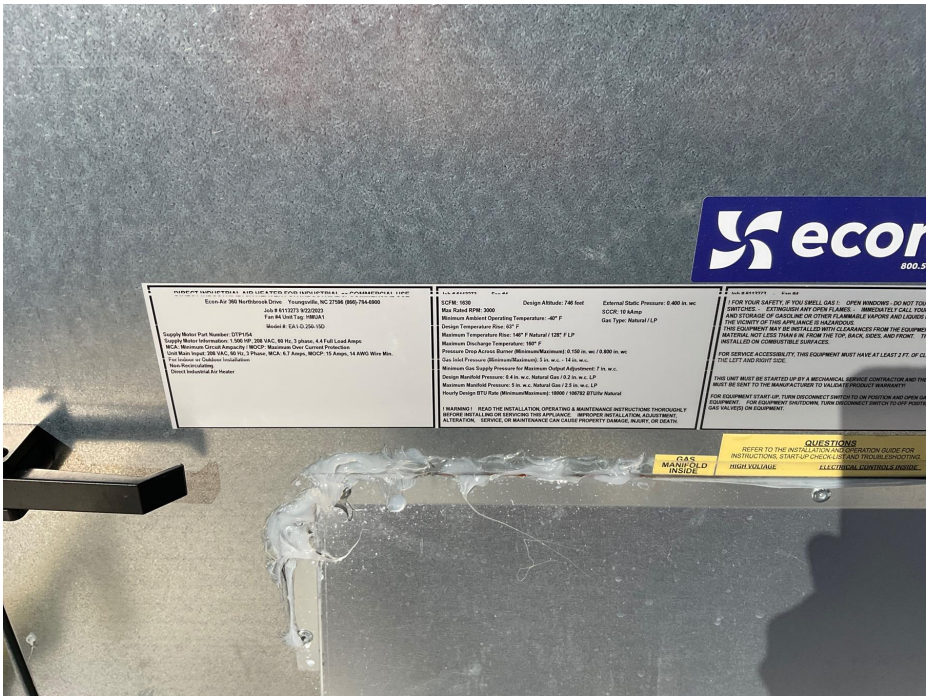
Record the ECM Speed			Actual:	**48**
VOLTS	Design:	**115**	Actual:	**122**
HP	Design:	**0.75**	Actual:	**0.75**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1189**	Actual:	**864**
RPM - MAX	Design:	**1900**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1600**	Actual:	**N/A**
FLA	Design:	**8.9**	Actual:	**2.1**
OVERLOAD SET POINT		**N/A**		
PHASE	Design:	**1**	Actual:	**1**
Unit within five miles from the coast?			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design:	**No**	Actual:	**No**
SPEED CONTROL VOLTAGE	Design:	**65**	Actual:	**N/A**

Fan 4 - EA1-D.250-15D (HMUA1) (HMUA1)

Model: EA1-D.250-15D

Other Notes:

N/A



Supply

Supply CFM: Design = 1630 Actual = 1659 (101.8% of design)

VOLTS	Design:	**208**	Actual:	**211**
Is the main transformer (TR-01) tapped for the correct voltage?			Actual:	**Yes**
HP	Design:	**1.5**	Actual:	**1.5**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1740**	Actual:	**1449**
RPM - MAX	Design:	**3000**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**2400**	Actual:	**N/A**
FLA	Design:	**4.4**	Actual:	**3**
OVERLOAD SET POINT		**N/A**		
PHASE	Design:	**3**	Actual:	**3**
DAMPER INSTALLED	Design:	**Yes**	Actual:	**Yes**
Unit within five miles from the coast?			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE			Actual:	**No**
Record the VFD HZ	Design:	**59.7 Hz**	Actual:	**49.7**
MCA	Design:	**5.5 Amps**	Actual:	**6.7**
MOCP	Design:	**15 Amps**	Actual:	**15**
Is Supply Fan bolted/secured to curb?	Design:	**Yes**	Actual:	**Yes**

Heater

Gas Heater

GAS TYPE	Design:	**Natural**	Actual:	**Natural**
INLET GAS PRESSURE	Design:	**7**	Actual:	**7.5**
FREEZE STAT TEMPERATURE	Design:	**35**	Actual:	**35**
FREEZE STAT TIMER	Design:	**10**	Actual:	**10**
SPACE SET POINT	Design:	**N/A**	Actual:	**N/A**
INTAKE SET POINT	Design:	**45**	Actual:	**50**
DISCHARGE SET POINT	Design:	**55**	Actual:	**60**
HIGH LIMIT SET POINT			Actual:	**170**

Direct Fired Heater

Housing Size: 1 **Burner Profile Pressure:** 0.0"

PILOT FLAME SIGNAL	Design:	**12**	Actual:	**14**
TEMP RISE	Design:	**63**	Actual:	**63**
HIGH FIRE MANIFOLD GAS PRESSURE	Design:	**0.4**	Actual:	**0.4**
HIGH FIRE INLET PRESSURE			Actual:	**7.5**
HIGH FIRE FLAME SIGNAL	Design:	**12**	Actual:	**14**
BURNER DIFFERENTIAL PRESSURE	Design:	**0.3**	Actual:	**0.32**
LOW MANIFOLD GAS PRESSURE			Actual:	**-0.3**
MODULATION TIME	Design:	**4**	Actual:	**1**
LOW FIRE FLAME SIGNAL	Design:	**12**	Actual:	**14**

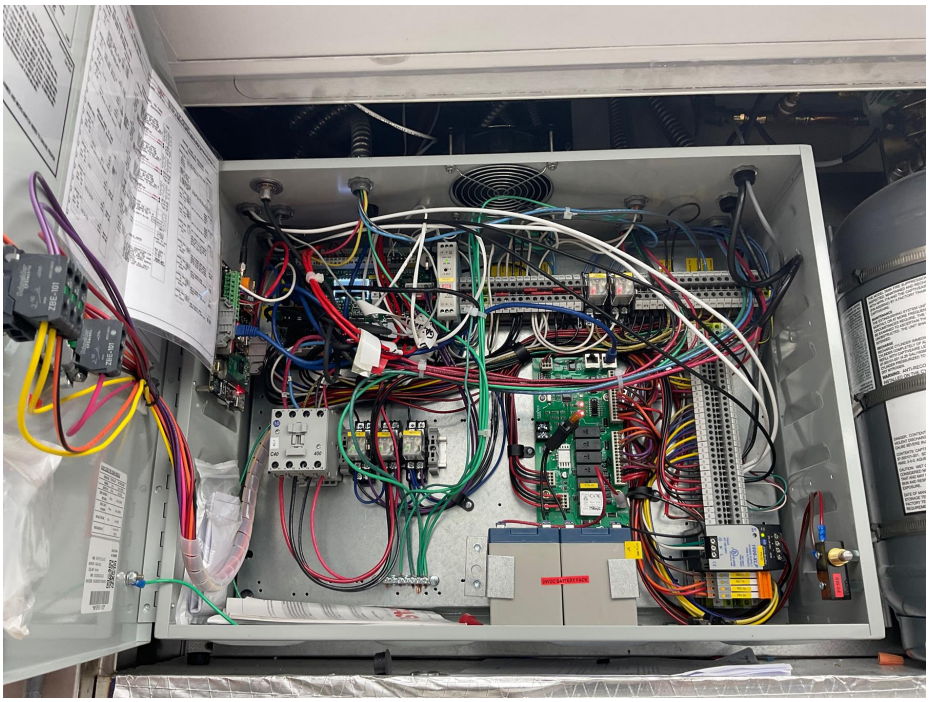
ECPs

ECP 1 - SC-E013022MA (ECP1) (ECP1)

Package #: SC-E013022MA

Other Notes:

N/A



Smart Control

GAS VALVE RESET WORKS	Design:	**Yes**	Actual:	**Yes**
ROOM TEMPERATURE OFFSET	Design:	**18**	Actual:	**18**
HOW MANY FAN ZONES ARE THERE	Design:	**2**	Actual:	**2**
HYSTERESIS TEMPERATURE			Actual:	**2**
Room Sensor Type			Actual:	**Preset**
What is Preset temperature set to?			Actual:	**75**

ALL TEMP SENSORS ARE WIRED IN	Design:	**Yes**	Actual:	**Yes**
Do any of the light circuits exceed 1400W?	Design:	**No**	Actual:	**No**
ALL LIGHTS WORK	Design:	**Yes**	Actual:	**Yes**
ALL FAULTS CLEARED	Design:	**Yes**	Actual:	**Yes**
ECPM03 HARDWARE REVISION	Design:	**04**	Actual:	**04**
ECPM03 PROGRAM VERSION	Design:	**2.16.01**	Actual:	**2.16**
CASHMI HARDWARE REVISION	Design:	**03**	Actual:	**03**
CASHMI PROGRAM VERSION	Design:	**2.16.01**	Actual:	**2.16**
ECPM03 DATE AND TIME ACCURATE	Design:	**Yes**	Actual:	**Yes**

BMS & Monitoring

BMS TYPE	Design:	**CASLink**	Actual:	**CASLink**
CASLINK COMMUNICATION TYPE	Design:	**Cellular**	Actual:	**Cellular**
Cellular status is Active Online?	Design:	**Yes**	Actual:	**Yes**
CASLink Registration Wizard was completed?	Design:	**Yes**	Actual:	**Yes**
CASLink Module has a current heartbeat?	Design:	**Yes**	Actual:	**Yes**
All devices connected to the SCADA are reporting live data?	Design:	**Yes**	Actual:	**Yes**
Devices were assigned to an area and named appropriately?	Design:	**Yes**	Actual:	**Yes**

Sensors

T2

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**H1CV1**	Actual:	**h1cv1**
FAN NUMBER	Design:	**1**	Actual:	**1**

T3

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**H3CV1**	Actual:	**h3cv1**
FAN NUMBER	Design:	**3**	Actual:	**3**

T4

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**N/A**	Actual:	**oven vent**
FAN NUMBER	Design:	**2**	Actual:	**2**

VFDs

VFD 1

DESIGN CFM	Design:	**1630**	Actual:	**N/A**
FAN DIRECTION	Design:	**Forward**	Actual:	**Forward**

DCV VFD

SUPPLY FAN # ASSIGNED	Design:	**4**	Actual:	**4**
OVERLOAD = P108	Design:	**73**	Actual:	**73**
MAX HZ	Design:	**59.7**	Actual:	**49.7**
ALL FAULTS CLEARED = P197	Design:	**Yes**	Actual:	**Yes**
P508			Actual:	**3**
LOAD IN SEPARATE CONDUIT.	Design:	**Yes**	Actual:	**Yes**

TANK

TANK ECP 1 (ECP1)

Location : Hood #1 3650ELPX-2: Fire Cabinet Wall Mounted [4.0/4.0/4.0]

Building Alarm Tied In	Design:	**Yes**	Actual:	**No**
Trouble Relay Tied In	Design:	**Yes**	Actual:	**No**
TANK Board Version	Design:	**2.3**	Actual:	**2.3**
TANK Board Updated to latest Software Version			Actual:	**Yes**
TANK Board Software Version	Design:	**1.69**	Actual:	**1.69**
Internet Connection Type		**N/A**		

TANK Fire Suppression 1 (fs1)

Location : Hood #1 - Utility Cabinet Wall Mount

Electrician

TANK Control Panel Wired	Design:	**Yes**	Actual:	**Yes**
UDS Appliance Kill Switch (if equipped) Wired		**N/A**		
Wall Mounted COPRE Wired to Control Panel	Design:	**Yes**	Actual:	**Yes**
Verify Power Supply is 27.5VDC			Actual:	**Yes**

Fire System Contractor w/CAS Supervision

Verify kitchen line up with drawings in NOLA?			Actual:	**Correct**
Actuator is in Shipped position with shipping plates mounted upon arrival? Upload Picture.	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

Gas Valve Wired (In Conduit)	Design:	**Yes**	Actual:	**Yes**
Are all overlapping nozzles within 35-50" of cooking surface?	Design:	**Yes**	Actual:	**Yes**
Nozzles Within 15" From Front/Back of Hazard Zone	Design:	**Yes**	Actual:	**Yes**
Verify overlapping nozzles are located at centerline of the 30" hazard zone (front to back) same height, aimed straight down?	Design:	**Yes**	Actual:	**Yes**
Is there a Salamander or Upright Broiler Present?	Design:	**Yes**	Actual:	**No**
Does the depth of any appliance cooking surface exceed the listed size in the Appliance Coverage Detail chart?	Design:	**No**	Actual:	**No**
All dedicated appliances, duct and plenum are utilizing TANK appliance nozzles (3070-3/8H-10-SS)?	Design:	**Yes**	Actual:	**Yes**
Is end plenum nozzle installed 0-6" into plenum (From end of hood/hazard to center of nozzle)?	Design:	**Yes**	Actual:	**Yes**
Are TANK appliance nozzles spaced no more than 12"(From end of Hazard zone to center of first nozzle and end of hazard zone to center of last nozzle)?	Design:	**Yes**	Actual:	**Yes**
Did the appliance lineup change from the original design?	Design:	**No**	Actual:	**No**
Did the fire system appliance drops change from the original design?	Design:	**No**	Actual:	**No**
Does Fire System cover a Wok?			Actual:	**No**

Does dedicated TANK appliance nozzle piping exceed maximum pipe length of 10 ft?	Design:	**No**	Actual:	**No**
Does plenum branch piping exceed maximum pipe length of 3ft?	Design:	**No**	Actual:	**No**
Does the Supply line piping to first overlapping nozzle exceed 42 ft?	Design:	**No**	Actual:	**No**
Is Back-shelf a minimum of 18" Vertically off Appliance		**N/A**		
Back-shelf Overhang less than 12"		**N/A**		
No appliance drop has more than 2 nozzles?	Design:	**True**	Actual:	**True**
Is all piping except appliance drops 3/8" Blackiron, Chrome plated, Stainless Steel or 1/2" Copper?	Design:	**Yes**	Actual:	**Yes**
Is all appliance drop piping 3/8" polished stainless steel or polished chrome-plated black iron?			Actual:	**Yes**
Are there any fryers?			Actual:	**Yes**
How many fryers are there?			Actual:	**2**
Enter Width of Fryer 1:			Actual:	**14**
Enter Width of Fryer 2:			Actual:	**14**
Are there any Tilt Skillets?			Actual:	**No**
Is Manual Activation Device Wired into a Fire Loop (Must be 4 wire, in conduit)? Upload a picture of wiring connection of manual activation device.	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

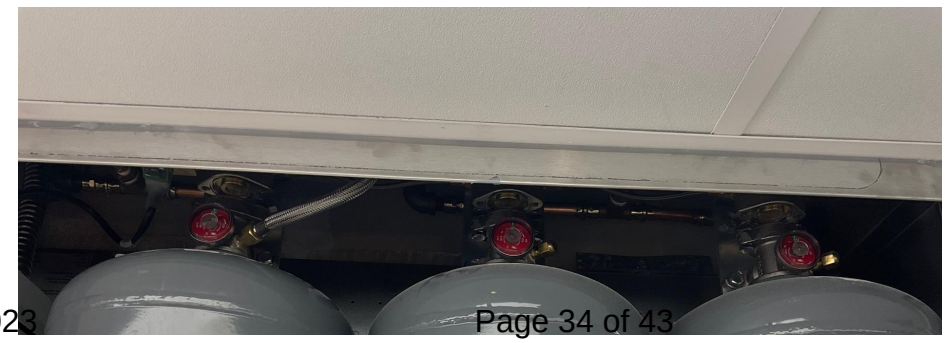
MAD Installed 10'-20' from Hood at a Point of Egress and 42"-48" AFF	Design:	**Yes**	Actual:	**Yes**
Extra Fire Stat Added		**N/A**		
Fire stats are wired in a fire loop with 842 degree high temp wire when ran on top of hoods		**N/A**		
CAS Service Supervised, Assisted or Wired All Supervised Loop Connections			Actual:	**Supervised**
Ensure each FS Nozzle match actual Fire system drawings?	Design:	**Yes**	Actual:	**Yes**

CAS Service

Verify the correct Fire Stat is installed?			Actual:	**360**
Have all shipping covers been removed from fire stats	Design:	**Yes**	Actual:	**Yes**
System Activates on 120V power only	Design:	**Yes**	Actual:	**Yes**
Test System. Ensure balloons are installed on all nozzles before activating system.			Actual:	**Ok**
Activate system by Manual Activation device. Did system activate and all balloons fill and/or hold pressure properly?	Design:	**Yes**	Actual:	**Yes**
Activate system by all Fire Stats. Did system activate and all balloons fill and/or hold pressure properly?	Design:	**Yes**	Actual:	**Yes**
Activate system on Battery Backup (Remove CORE board power and place system in Test Mode). Did system activate properly?	Design:	**Yes**	Actual:	**Yes**
Did the Audible Alarm Sound during each Test of the system?	Design:	**Yes**	Actual:	**Yes**
Gas Valve is Functioning Properly	Design:	**Yes**	Actual:	**Yes**
Battery Date Code (The actual date FST wrote on batteries with paint pen during SDV)			Actual:	**11/16/2023 5:00:00 AM**
Verify the correct amount of TANK appliance nozzles cover the cross-sectional Perimeter or Diameter of the Duct Riser? (If 0 - 75" perimeter equals 1 nozzles, 75 - 150" 2 nozzles, above 150" 3 nozzles)	Design:	**Yes**	Actual:	**Yes**
Is the system commissioned with the actuator bolted onto the TANK Fire Suppression system tank? Upload Picture.	Design:	**Yes**	Actual:	**No**

Other Notes:

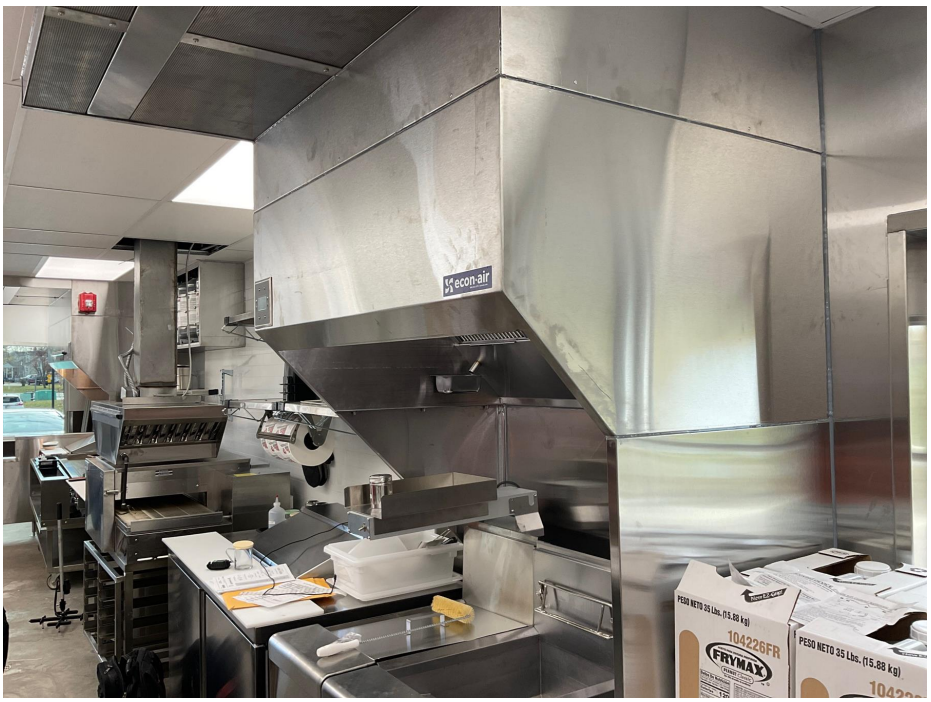
N/A



Is pressure switch installed and functioning properly?	Design:	**Yes**	Actual:	**Yes**
Monitor the presssure gauge on the PAK. The pressure must not read above 0.5 psi for a minimum of 15 minutes.	Design:	**N/A**	Actual:	**Complete**
CAUTION!: If pressure reads above 0.5 psi, immediately remove the primary actuator hose from the primary tank			Actual:	**Ok**
Is appliance specific protection piped with adequate protection? Upload picture.	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A



Use coil liquid leak detector around PAK and braided hose to check for leaks. Are there any leaks present?	Design:	**No**	Actual:	**No**
Do TANK bottles have 200 PSI with gauges functioning properly? Upload picture	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

Do all nozzles have metal caps?	Design:	**Yes**	Actual:	**Yes**
Verify Nozzle Flow Points/Tank Capabilities. Does Nozzles FP exceed Tank Capacity?	Design:	**No**	Actual:	**No**
Take a photo of Fire System Tag			Actual:	**Ok**

Other Notes:

System not yet finaled

Vent plug installed on wall mount FS distribution piping (in between tanks, aimed at door)?	Design:	**Yes**	Actual:	**Yes**
Tanks installed securely with straps and mounting hardware?	Design:	**Yes**	Actual:	**Yes**
After inspection of system, lubricate and change O-ring of primary actuator hose (p/n 19020).	Design:	**Replaced**	Actual:	**Not Replaced**

Other Notes:

New no lose fitting

All Faults Are Cleared	Design:	**Yes**	Actual:	**Yes**
Are DIP switches set correctly according to number of Fire Groups?	Design:	**Yes**	Actual:	**Yes**

Is TANK system located/mounted in a climate-controlled area?	Design:	**Yes**	Actual:	**Yes**

PCU Installations

NONE

PCU Installations

NONE

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

System/Unit: AHU/RTU

Asset: AHU1 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5620L01782
Model Num	NA	KGB074
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	16X16
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Test Data		
	Design	**Actual**
SF CFM	2000	1990
RA CFM	1500	1479
OA CFM	500	511
RL Voltage	-	211
RL Amperage	-	5.8
SF Rotation	-	CW
RA Damper Position	-	NA
Min OA Damper Position	-	0.50"
Min OA Damper Type	-	ECON

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	-	2.0
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	6.5
Rated Amperage	-	208

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.48"
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.34"
Total ESP	-	0.82"
Fan Total SP	-	0.90"

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT
Unit Filters Clean	-	CLEAN
Condensate Drain Installed	-	INSTALLED

Completed By: Austin McFall on 12/15/2023

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

System/Unit: AHU/RTU

Asset: AHU2 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623A04071
Model Num	NA	ZGB060
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14.5X29
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Test Data		
	Design	**Actual**
SF CFM	2000	1907
RA CFM	1500	1391
OA CFM	500	516
RL Voltage	-	211
RL Amperage	-	2.9
SF Rotation	-	CW
RA Damper Position	-	NA
Min OA Damper Position	-	0.50"
Min OA Damper Type	-	ECON

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	-	2.0
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	6.5
Rated Amperage	-	208

Performance Data		
	Design	**Actual**
MA Plenum SP	-	0.49"
Fan Suction SP	-	0.62"
Fan Discharge SP	-	0.37"
Total ESP	-	0.86"
Fan Total SP	-	0.99"

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT
Unit Filters Clean	-	CLEAN
Condensate Drain Installed	-	INSTALLED

Completed By: Austin McFall on 12/15/2023

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

System/Unit: AHU/RTU

Asset: AHU3 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623A04070
Model Num	NA	ZGB060
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14.5X29
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Test Data		
	Design	**Actual**
SF CFM	2000	1981
RA CFM	1500	1981
OA CFM	500	497
RL Voltage	-	211
RL Amperage	-	5.7
SF Rotation	-	CW
RA Damper Position	-	NA
Min OA Damper Position	-	0.50"
Min OA Damper Type	-	ECON

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	-	2.0
Motor Rpm	-	1755
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	6.5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	0.48"
Fan Suction SP	-	0.62"
Fan Discharge SP	-	0.34"
Total ESP	-	0.80"
Fan Total SP	-	0.96"

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT
Unit Filters Clean	-	CLEAN
Condensate Drain Installed	-	INSTALLED

Completed By: Austin McFall on 12/15/2023

National TAB

Project:11-13-23 PENN STATION - OXFORD, OH

Diffuser Supply (GRD)

AHU1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU1-SGRD1	DINING	4-WAY	10	250	1	225		241	96.4
AHU1-SGRD2	DINING	4-WAY	10	250	1	266		245	98.0
AHU1-SGRD3	DINING	4-WAY	10	250	1	244		247	98.8
AHU1-SGRD4	DINING	4-WAY	10	200	1	176		188	94.0
AHU1-SGRD5	DINING	4-WAY	10	200	1	188		202	101.0
AHU1-SGRD6	DINING	4-WAY	10	300	1	303		313	104.3
AHU1-SGRD7	DINING	LINEAR	10	300	1	285		299	99.7
AHU1-SGRD8	DINING	4-WAY	10	250	1	269		255	102.0
Total				2000		1956	0	1990	99.5%

AHU2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU2-SGRD1	SERVING	4-WAY	10	300	1	355	261	287	95.7
AHU2-SGRD2	HALLWAY	4-WAY	10	300	1	253	266	291	97.0
AHU2-SGRD3	STORAGE	4-WAY	10	400	1	281	345	387	96.8
AHU2-SGRD4	STORAGE	4-WAY	10	400	1	328	355	377	94.3
AHU2-SGRD5	MENS RR	ROUND	8	130	1	144	112	121	93.1
AHU2-SGRD6	WOMENS RR	ROUND	6	70	1	99	60	65	92.9
AHU2-SGRD7	DINING	4-WAY	10	400	1	308	351	379	94.8
Total				2000		1768	1750	1907	95.35%

AHU3/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU3-SGRD1	HOOD 3	ACPSP	10	350	1	281		344	98.3
AHU3-SGRD2	KITCHEN	LINEAR	10	350	1	422		351	100.3
AHU3-SGRD3	KITCHEN	LINEAR	10	350	1	446		359	102.6
AHU3-SGRD4	KITCHEN	LINEAR	10	350	1	480		346	98.9
AHU3-SGRD5	HOOD 1	LINEAR	12	600	1	405		581	96.8
Total				2000		2034	0	1981	99.05%

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	SP-B150	SP-B150
Serial Num	-	164545633

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Motor Rpm	1050	1050
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.8

Test Data		
	Design	**Actual**
CFM	150	154

Completed By: Austin McFall on 11/15/2023

National TAB

Project: 11-13-23 PENN STATION - OXFORD, OH

System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	GREENHECK	BROAN
Model Num	SP-B150	A80-B

Test Data		
	Design	**Actual**
CFM	75	74

Motor Data		
	Design	**Actual**
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.4

Completed By: Austin McFall on 11/15/2023