Report By:

National TAB - Kansas City
1126 Swift St
N Kansas City, MO 64116

Report: Certified Test, Adjust, and Balance Report

Function: Test, Adjust, & Balance

Date: 12/18/2023

PROJECT

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

3311 West Hillsboro Boulevard

DEERFIELD BEACH, FL 33442

Client

Chipotle Mexican Grill

610 Newport Center Drive, Suite 1100

Newport Beach, CA 92660

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

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CERTIFICATION

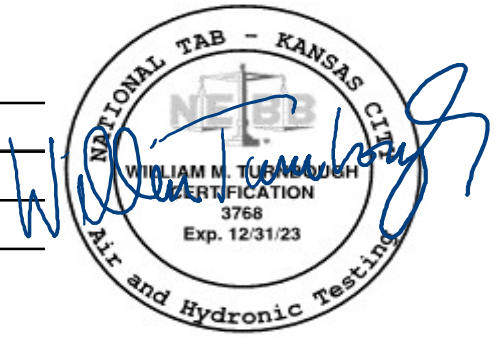
PROJECT: CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD (DEERFIELD BEACH, FL)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental Systems. The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. Any variances from design quantities, which exceed NEBB tolerances, are noted in the TAB report project summary.

NEBB TAB FIRM:	National TAB - Kansas City
REGISTRATION NO:	3768
CERTIFIED BY:	Will Turnbough
DATE:	12/22/2023

Submitted and Certified by:

NEBB TAB FIRM:	National TAB - Kansas City
TAB PROFESSIONAL:	Will Turnbough
REGISTRATION NO:	CP-24289
CERTIFICATION EXP:	12/31/2023



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

- Construction filters are installed in the units (Resolved)

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

Project Issue Information

Issue Name : Construction filters are installed in the units

Description : Recommended to replace construction filters with 4 20X20X2 MERV-8 final filters as shown on the rooftop unit schedule remarks.

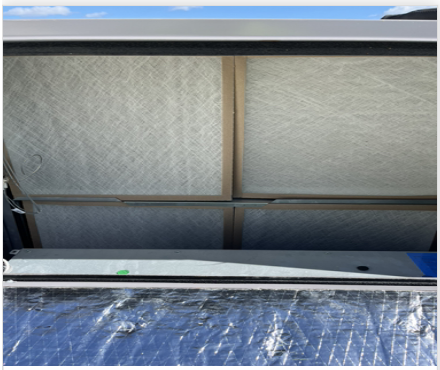
Created By : National TAB **Assigned To :** National TAB - Ian Fuller

Status : Closed

Priority : InfoOnly **Asset Tag :**

Originated Date : 12/18/2023 - Ian Fuller - National TAB

Project Issue File Details



ConstructionFilters.j..
12/18/2023

Project Issue Response Details

- **12/22/2023 National TAB - Will Turnbough**
  - Correct filters installed

filtersinstalled
12/22/2023

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	KITCHEN	4000	3922	3500	3407	500	515	12.5%	13.1%						
RTU-2	DINING	4000	3708	3000	2720	1000	988	25.0%	26.6%						
MUA-1	KITCHEN HOOD									1300	1202				
EF-1	KITCHEN HOOD											2550	2508		
EF-2	RESTROOM													150	148
TOTALS		8000	7630	6500	6127	1500	1503			1300	1202	2550	2508	150	148

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2800	2705
TOTAL EXHAUST	2700	2656
NET AIRFLOW	100	49

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0055
SIDE	
REAR	0.0107
AVERAGE	**0.0081**

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

- 00: SITE PICTURES
- 01: RTU's/AHU's
- 02: EF's
- 03: MUA
- 04: HOODS
- 05: FINAL TESTS

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	00: SITE PICTURES	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

STORE FRONT

Comment:

StoreFront
12/18/2023

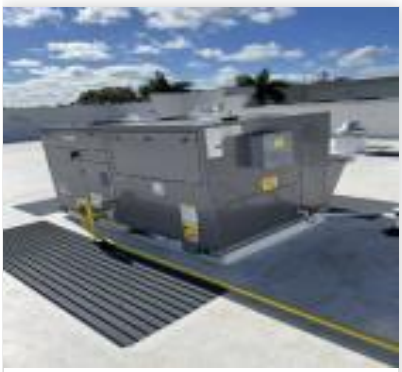
RTU-1

Comment:

RTU1
12/18/2023

RTU-2

Comment:



RTU2(1)
12/18/2023

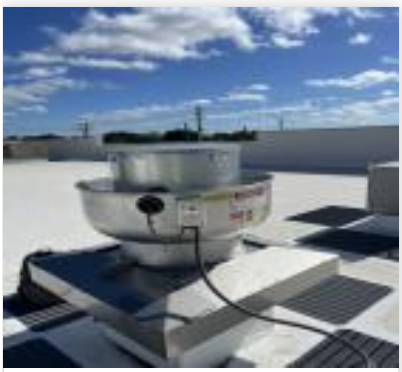
MUA

Comment:

MUA
12/18/2023

EF-1

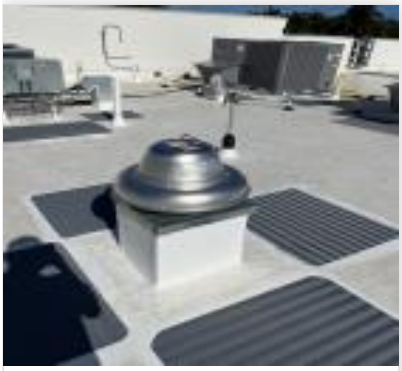
Comment:



EF1
12/18/2023

EF-2

Comment:



EF2(1)
12/18/2023

HOOD-1

Comment:

Hood1
12/18/2023

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	01: RTU's/AHU's	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

RTU's/AHU's

Thermostats installed and have power?	Yes
Comment:	
All diffusers and grilles are installed and match design?	Yes
Comment:	
Deflector plates are removed from 1x1 diffusers on the serve line (double check that this is specified on the diffuser schedule first)	Yes
Comment:	
Economizer blank plate is installed below the ouside air intake (Trane only) (N/A = not applicable)	N/A
Comment:	
Economizers are assembled and functional?	Yes
Comment:	
DCV Max damper opening position is set to minimum?	Yes

Comment:	
Free cooling enthalpy set point set for lowest setting (Typically "D")	Yes
Comment:	
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?	Yes
Comment:	
Is gas piping installed and valves turned on?	Yes
Comment:	
Unit free of noticeable noise and vibration	Yes
Comment:	
Final outside air damper position is marked with permanent marker?	Yes
Comment:	

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	02: EF's	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

EF's

Rotation is correct?	Yes
Comment:	
Belts are tight?	N/A
Comment:	
Viroguard installed on hood fan(s)?	Yes
Comment:	
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?	Yes
Comment:	
Unit free of noticeable noise and vibration?	Yes
Comment:	

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	03: MUA	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

MUA

Rotation is correct?	Yes
Comment:	
Gas piping is installed and valves are in on position?	N/A
Comment: NO HEATING ON UNIT	
Internal motorized damper is fully opening?	N/A
Comment: DAMPER NOT MOTORIZED	
Motor is operating below the FLA rating?	Yes
Comment:	
Unit free of noticeable noise and vibration?	Yes
Comment:	

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	04: HOODS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

HOODS

All hood filters installed and accounted for?	Yes
Comment:	
Hoods are wired and have power?	Yes
Comment:	
Hood is free of alarms?	Yes
Comment:	
Hood is free of damage?	Yes
Comment:	
Quarter or full vertical end panels are installed if specified?	Yes
Comment:	

12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

CheckList Information

Name :	05: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/05/2023 - Damian Binkowski - National TAB		
Completed Date :	12/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

FINAL CHECKS	
Is space free of drafting?	Yes
Comment:	
Is space comfortable in all areas?	Yes
Comment:	
Is the space free of ventilation noise?	Yes
Comment:	
List kitchen equipment turned on for testing	N/A
Comment: EQUIPMENT HAS NOT YET HAD STARTUPS	
List smoke candle type used	
Comment: 45 SECOND SMOKE CANDLE	
HOOD CAPTURE TEST	

Smoke test capture % - Perimeter of hood	
Comment:	
100%	
Smoke test capture % - Top of cooking surface	
Comment:	
100%	
WITNESS	
Date test was completed	12/18/2023
Comment:	
TAB tech name / Firm	
Comment:	
IAN F / NTAB	
Site super name / Firm	
Comment:	
DAVE / PEMBERTON CONSTRUCTION	
Owner representative name / Firm (if Applicable)	
Comment:	
NA	
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:	
FRONT: 0.0055" BACK: 0.0107"	

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: AHU/RTU

Asset: RTU-1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	3823P71612
Model Num	48LC_D012A2P5-0RC0	48FCN12C2M5A6W4F0P5-0RC0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	NA
Phase	3	3
Rated Voltage	208	208/230
Rated Amperage	-	6.4

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	-
Motor Sheave SetPt	-	-
Fan Sheave Size	-	-
Fan Sheave Bore	-	-
Belt CL Distance	-	-
Num of Belts	-	-
Belt Size	-	-
Belt Alignment	-	-

Test Data		
	Design	**Actual**
SF CFM	4000	3922
SF RPM	-	C:50%
RA CFM	3500	3407
OA CFM	500	515
RL Voltage	-	213/211/213
RL Amperage	-	5.2/5.1/5.2
SF Rotation	-	CCW
RA Damper Position	-	6.5 V
Min OA Damper Position	-	3.5 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES3

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.41”
Fan Suction SP	-	-1.21”
Fan Discharge SP	-	0.13”
Total ESP	0.8"	0.54"
Fan Total SP	-	1.34"

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

Completed By: Ian Fuller on 12/18/2023

National TAB

Project:12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

AHU/RTU

Diffuser Supply (GRD)

RTU-1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	OFFICE	CD1	8"	150	1	158	159	159	106.0
SGRD2	BOH	CD1	12"	450	1	442	471	471	104.7
SGRD3	BOH	CD1	12"	450	1	460	479	479	106.4
SGRD4	BOH	CD1	10"	350	1	347	371	371	106.0
SGRD5	FOOD PREP	CD3	12"	400	1	542	391	391	97.8
SGRD6	FOOD PREP	CD3	12"	400	1	495	401	401	100.3
SGRD7	SERVICE LINE	CD2	8"	250	1	212	239	239	95.6
SGRD8	SERVICE LINE	CD2	8"	250	1	182	226	226	90.4
SGRD9	SERVICE LINE	CD2	8"	250	1	183	233	233	93.2
SGRD10	SERVICE LINE	CD2	8"	250	1	210	243	243	97.2
SGRD11	HOOD1	ACPSP	165"X6"	700	5.36	755	709	709	101.3
Total				3900		3986	3922	3922	100.56%

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: AHU/RTU

Asset: RTU-2 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	3823P71614
Model Num	48LC_D012A2P5-0RC0	48FCN12C2M5A6W4F0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	NA
Phase	3	3
Rated Voltage	208	208/230
Rated Amperage	-	6.4

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	-
Motor Sheave SetPt	-	-
Fan Sheave Size	-	-
Fan Sheave Bore	-	-
Belt CL Distance	-	-
Num of Belts	-	-
Belt Size	-	-
Belt Alignment	-	-

Test Data		
	Design	**Actual**
SF CFM	4000	3708
SF RPM	-	C:100%
RA CFM	3000	2720
OA CFM	1000	988
RL Voltage	-	211/212/212
RL Amperage	-	6.1/6.1/6.1
SF Rotation	-	CCW
RA Damper Position	-	5.6 V
Min OA Damper Position	-	4.4 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES3

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.51”
Fan Suction SP	-	-1.27”
Fan Discharge SP	-	0.28”
Total ESP	0.8"	0.79"
Fan Total SP	-	1.55"

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

Completed By: Ian Fuller on 12/18/2023

Diffuser Supply (GRD)

RTU-2/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	DINING	SR2	18"X6"	400	1	339	379	362	90.5
SGRD2	DINING	SR2	18"X6"	500	1	323	368	459	91.8
SGRD3	DINING	SR1	14"	800	1	511	580	726	90.8
SGRD4	DINING	SR1	14"	700	1	644	723	654	93.4
SGRD5	DINING	SR1	14"	600	1	545	603	582	97.0
SGRD6	DINING	SR1	14"	500	1	556	620	457	91.4
SGRD7	DINING	SR1	14"	500	1	449	497	468	93.6
Total				4000		3367	3770	3708	92.7%

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:HD-1 - COOKLINE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	5950436
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	184T
Horsepower	2.000	2.0
Motor Rpm	-	1165
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	7.51
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	2550	2508
Fan RPM	1220	887
Fan Rotation	-	CCW
Motor RPM	-	887
System SetPt	-	45.7 HZ
RL Voltage	-	208/207/208
RL Amperage	-	4.2/4.2/4.3
Total ESP	1.450"	0.44”
Fan Inlet SP	-	-0.44”
Fan Discharge SP	-	ATM

Completed By: Ian Fuller on 12/18/2023

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:RR

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	5950436
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NA
Horsepower	0.250	0.25
Motor Rpm	-	NA
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.9
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	150	148
Fan RPM	1282	1072
Fan Rotation	-	CCW
Motor RPM	-	1072
System SetPt	-	55%
RL Voltage	-	122
RL Amperage	-	1.3
Total ESP	0.600"	0.19"
Fan Inlet SP	-	0.19"
Fan Discharge SP	-	ATM

Completed By: Ian Fuller on 12/18/2023

National TAB

Project:12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-2/RR

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	RR	ER1	6"X6"	75	1	137	76	76	101.3
EGRD2	RR	ER1	6"X6"	75	1	125	72	72	96.0
Total				150		262	148	148	98.67%

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: FAN - Supply

Asset: MUA-1 AREA:HD-1 - COOKLINE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	A1-15D	A1-15D
Serial Num	-	5950436
Type	MUA	MUA
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	143T
Horsepower	1.000	1.0
Motor Rpm	-	1750
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	2.9
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	-
Fan Sheave Size	-	-
Fan Sheave Bore	-	-
Belt CL Distance	-	-
Num of Belts	-	-
Belt Size	-	-
Belt Alignment Verified	-	-

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

Test Data		
	Design	**Actual**
CFM	1300	1202
SF RPM	1408	1750
Motor RPM	-	60.3 HZ
RL Voltage	-	211/209/211
RL Amperage	-	2.5/2.6/2.6
Total ESP	-	0.59”
Fan Discharge SP	-	0.59”

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

Completed By: Ian Fuller on 12/18/2023

Notes:
NO GAS HEATING ON UNIT

Written By: Ian Fuller on 12/18/2023

National TAB

Project: 12-18-23 CHIPOTLE #09-4437 WEST HILLSBORO BOULEVARD, FL (DEERFIELD BEACH)

System/Unit: Kitchen Hood Type I

Asset: HD-1 AREA:COOK LINE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2-ACPSP-F	5424 ND-2-ACPSP-F
Job / Serial Num	-	5950436
Type	TYPE I CANOPY	TYPE 1 LOW PROXIMITY
Hood length	153”	153"
Hood Width	54”	54"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	9”	9"
Supply Plenum Length	165”	165"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16”X16”	16”X16”
Filter Qty 1	9	9
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	14.58	14.58
Filter1 FPM	-	159
Filter2 FPM	-	162
Filter3 FPM	-	171
Filter4 FPM	-	176
Filter5 FPM	-	194
Filter6 FPM	-	187
Filter7 FPM	-	177
Filter8 FPM	-	165
Filter9 FPM	-	158
Filter Ave FPM(corr)	-	172
CFM	2550	2508

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	GRILL
Item 3	-	GRIDDLE
Item 4	-	RICE COOKER

Test Data Supply		
	Design	**Actual**
Total AK Area	10.31	10.31
Kv factor (Vel)	0.81	0.81
Num of Readings	-	12
Reading1 FPM	-	195
Reading2 FPM	-	152
Reading3 FPM	-	122
Reading4 FPM	-	186
Reading5 FPM	-	183
Reading6 FPM	-	127
Reading7 FPM	-	105
Reading8 FPM	-	111
Reading9 FPM	-	184
Reading10 FPM	-	103
Reading11 FPM	-	108
Reading12 FPM	-	152
Ave FPM(corr)	-	116
CFM	1300	1202

Completed By: Ian Fuller on 12/18/2023

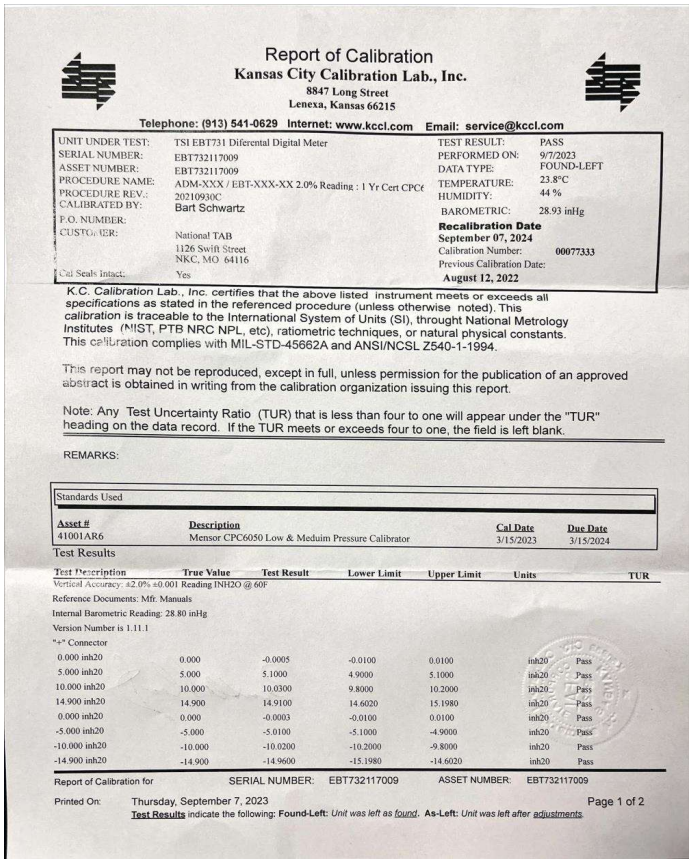
Abbreviation List

A = Area (ft^2)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A_k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T_{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T_{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T_{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO2 = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C_v = Flow Constant	K_v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T_{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
$\%_{ra}$ = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio

National TAB

Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/29/2023	9/29/2024
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/29/2023	9/29/2024
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	9/29/2023	9/29/2024



Report of Calibration
Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	TSI EBT731 Diferental Digital Meter	TEST RESULT:	PASS
SERIAL NUMBER:	EBT732117009	PERFORMED ON:	9/7/2023
ASSET NUMBER:	EBT732117009	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	ADM-XXX / EBT-XXX-XX 2.0% Reading : 1 Yr Cert CPC(	TEMPERATURE:	23.8°C
PROCEDURE REV.:	20210930C	HUMIDITY:	44 %
CALIBRATED BY:	Bart Schwartz	BAROMETRIC:	28.93 inHg
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 07, 2024**	
		Calibration Number:	00077333
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 12, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
41001AR6	Mensor CPC6050 Low & Meduim Pressure Calibrator	3/15/2023	3/15/2024

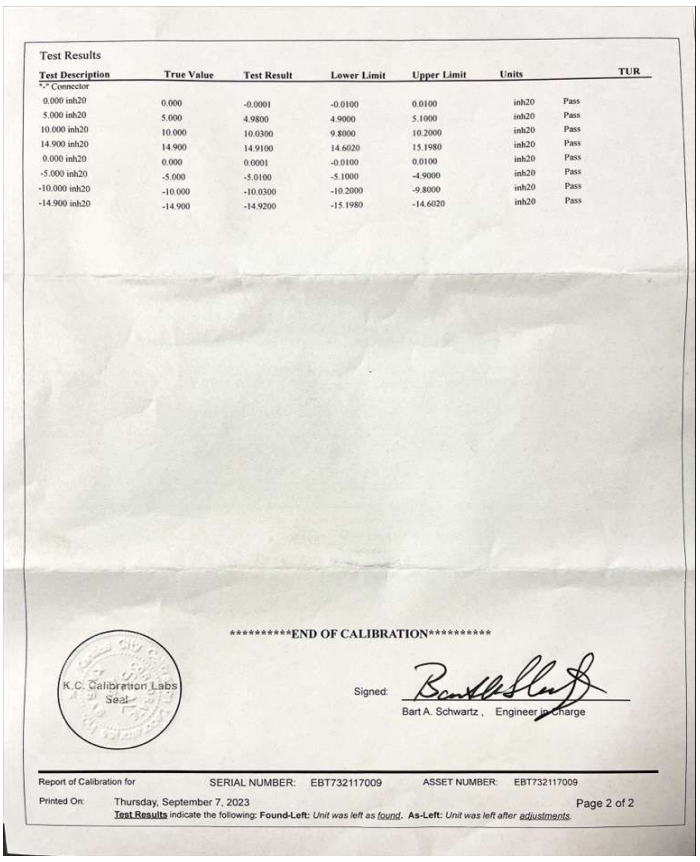
Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
Vertical Accuracy: ±2.0% ±0.001 Reading INH2O @ 60F						
Reference Documents: Mfr. Manuals						
Internal Barometric Reading: 28.80 inHg						
Version Number is 1.11.1						
"+" Connector						
0.000 inh20	0.000	-0.0005	-0.0100	0.0100	inh20	Pass
5.000 inh20	5.000	5.1000	4.9000	5.1000	inh20	Pass
10.000 inh20	10.000	10.0300	9.8000	10.2000	inh20	Pass
14.900 inh20	14.900	14.9100	14.6020	15.1980	inh20	Pass
0.000 inh20	0.000	-0.0003	-0.0100	0.0100	inh20	Pass
-5.000 inh20	-5.000	-5.0100	-5.1000	-4.9000	inh20	Pass
-10.000 inh20	-10.000	-10.0200	-10.2000	-9.8000	inh20	Pass
-14.900 inh20	-14.900	-14.9600	-15.1980	-14.6020	inh20	Pass

Report of Calibration for SERIAL NUMBER: EBT732117009 ASSET NUMBER: EBT732117009

Printed On: Thursday, September 7, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
"+" Connector						
0.000 inh20	0.000	-0.0001	-0.0100	0.0100	inh20	Pass
5.000 inh20	5.000	4.9800	4.9000	5.1000	inh20	Pass
10.000 inh20	10.000	10.0300	9.8000	10.2000	inh20	Pass
14.900 inh20	14.900	14.9100	14.6020	15.1980	inh20	Pass
0.000 inh20	0.000	0.0001	-0.0100	0.0100	inh20	Pass
-5.000 inh20	-5.000	-5.0100	-5.1000	-4.9000	inh20	Pass
-10.000 inh20	-10.000	-10.0300	-10.2000	-9.8000	inh20	Pass
-14.900 inh20	-14.900	-14.9200	-15.1980	-14.6020	inh20	Pass

**********END OF CALIBRATION**********

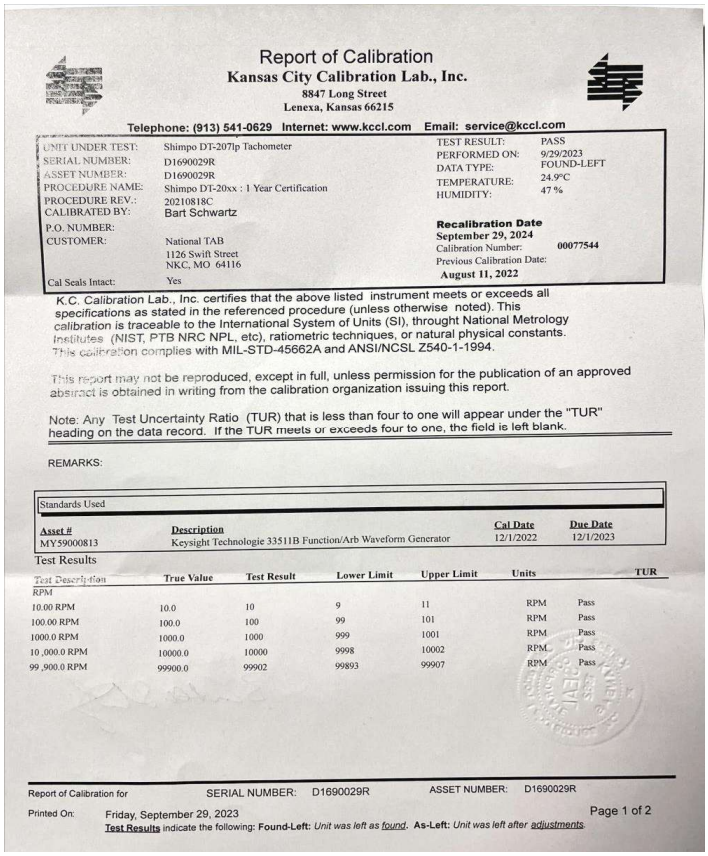
K.C. Calibration Labs Seal

Signed: Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: EBT732117009 ASSET NUMBER: EBT732117009

Printed On: Thursday, September 7, 2023 Page 2 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Report of Calibration
Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Shimpo DT-207lp Tachometer	TEST RESULT:	PASS
SERIAL NUMBER:	D1690029R	PERFORMED ON:	9/29/2023
ASSET NUMBER:	D1690029R	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Shimpo DT-20xx : 1 Year Certification	TEMPERATURE:	24.9°C
PROCEDURE REV.:	20210818C	HUMIDITY:	47 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 29, 2024**	
		Calibration Number:	00077544
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 11, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
MY59000813	Keysight Technologie 33511B Function/Arb Waveform Generator	12/1/2022	12/1/2023

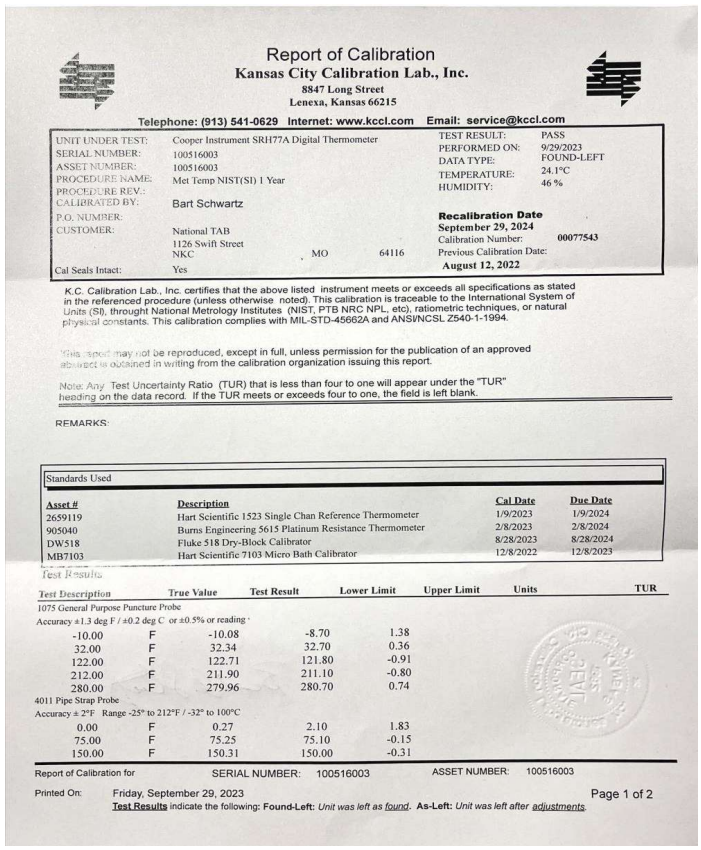
Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
RPM						
10.00 RPM	10.0	10	9	11	RPM	Pass
100.00 RPM	100.0	100	99	101	RPM	Pass
1000.0 RPM	1000.0	1000	999	1001	RPM	Pass
10 ,000.0 RPM	10000.0	10000	9998	10002	RPM	Pass
99 ,900.0 RPM	99900.0	99902	99893	99907	RPM	Pass

Report of Calibration for SERIAL NUMBER: D1690029R ASSET NUMBER: D1690029R

Printed On: Friday, September 29, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Report of Calibration
Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Cooper Instrument SRH77A Digital Thermometer	TEST RESULT:	PASS
SERIAL NUMBER:	100516003	PERFORMED ON:	9/29/2023
ASSET NUMBER:	100516003	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Met Temp NIST(SI) 1 Year	TEMPERATURE:	24.1°C
PROCEDURE REV.:		HUMIDITY:	46 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 29, 2024**	
		Calibration Number:	00077543
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 12, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
2659119	Hart Scientific 1523 Single Chan Reference Thermometer	1/9/2023	1/9/2024
905040	Burns Engineering 5615 Platinum Resistance Thermometer	2/8/2023	2/8/2024
DW518	Fluke 518 Dry-Block Calibrator	8/28/2023	8/28/2024
MB7103	Hart Scientific 7103 Micro Bath Calibrator	12/8/2022	12/8/2023

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
1075 General Purpose Puncture Probe						
Accuracy ±1.3 deg F / ±0.2 deg C or ±0.5% or reading '						
-10.00	F	-10.08	-8.70	1.38		
32.00	F	32.34	32.70	0.36		
122.00	F	122.71	121.80	-0.91		
212.00	F	211.90	211.10	-0.80		
280.00	F	279.96	280.70	0.74		
4011 Pipe Strap Probe						
Accuracy ± 2°F Range -25° to 212°F / -32° to 100°C						
0.00	F	0.27	2.10	1.83		
75.00	F	75.25	75.10	-0.15		
150.00	F	150.31	150.00	-0.31		

Report of Calibration for SERIAL NUMBER: 100516003 ASSET NUMBER: 100516003

Printed On: Friday, September 29, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
5028 Slim Humidity Probe						
Accuracy ±2% from 20 to 80%RH, ±3% below 20 and a						
10.0 %RH @ 23.0°C	%RH	10.0	16	6.0		
25.0 %RH @23.0°C	%RH	25.0	30	5.0		
50.0 %RH @ 23.0°C	%RH	50.0	53	3.0		
75.0 %RH @ 23.0°C	%RH	75.0	77	2.0		
23.0°C @ 10.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 25.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 50.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 75.0 %RH	C	23.0	23.1	0.1		

**********END OF CALIBRATION**********

K.C. Calibration Labs Seal

Signed: Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: 100516003 ASSET NUMBER: 100516003

Printed On: Friday, September 29, 2023 Page 2 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Report of Calibration

Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215

Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Klein Tools CL800 True RMS Digital Clampmeter	TEST RESULT:	PASS
SERIAL NUMBER:	1220C-C1	PERFORMED ON:	9/29/2023
ASSET NUMBER:	1220C-C1	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Klein Tools CL800 : (1 year) CAL VER / 5520	TEMPERATURE:	24.9°C
PROCEDURE REV.:	20230928	HUMIDITY:	46 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 29, 2024**	
		Calibration Number:	00077542
		Previous Calibration Date:	
Cal Seals Intact:	Unknown		

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
3277903	Fluke 5522A Multi-Product Calibrator	11/30/2022	11/30/2023

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
Root Difference Square guardbanding method used						
AC VOLTS TESTS						
6 V Range						
5.900 V @ 60 Hz	5.9000	5.897	5.807	5.994	V	Pass
60 V Range						
59.00 V @ 60 Hz	59.000	58.97	58.24	59.76	V	Pass
600 V Range						
590.0 V @ 60 Hz	590.00	589.7	582.4	597.6	V	Pass
1000 V Range						
990.0 V @ 60 Hz	990.00	991.0	970.1	1009.9	V	Pass
DC VOLTS TESTS						
600 mV Range						
600.0 mV	600.00	599.8	593.2	606.8	m V	Pass

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 1 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
-600.0 mV	-600.00	-599.9	-606.8	-593.2	m V	Pass
6 V Range						
6.000 V	6.0000	5.997	5.937	6.063	V	Pass
-6.000 V	-6.0000	-5.995	-6.063	-5.937	V	Pass
60 V Range						
60.00 V	60.000	59.96	59.37	60.63	V	Pass
600 V Range						
600.0 V	600.00	599.6	593.7	606.3	V	Pass
1000 V Range						
1000 V	1000.0	1001	985	1015	V	Pass
-1000 V	-1000.0	-1001	-1015	-985	V	Pass
CONTINUITY TESTS						
Audible Indicator ON @ 10 ohms						Pass
Audible Indicator OFF @ 51 ohms						Pass
RESISTANCE TESTS						
600 Ohm Range						
600.0 Ohm	600.00	601.2	590.5	609.5	Ω	Pass
6 kOhm Range						
6.000 kOhm	6.0000	6.000	5.905	6.095	k Ω	Pass
60 kOhm Range						
60.00 kOhm	60.000	59.99	59.05	60.95	k Ω	Pass
600 kOhm Range						
600.0 kOhm	600.00	599.9	590.5	609.5	k Ω	Pass
6 MOhm Range						
6.000 MOhm	6.0000	5.993	5.905	6.095	M Ω	Pass
60 MOhm Range						
60.00 MOhm	60.000	59.47	58.70	61.30	M Ω	Pass
DIODE CHECK TESTS						
Diode Voltage						Pass
FREQUENCY TESTS						
9.000 Hz @ 8 V	9.0000	8.999	8.905	9.095	Hz	Pass
90.00 Hz @ 8 V	90.000	90.00	89.05	90.95	Hz	Pass
900.0 Hz @ 8 V	900.00	900.0	890.5	909.5	Hz	Pass
9.000 kHz @ 8 V	9.0000	9.000	8.905	9.095	k Hz	Pass
90.00 kHz @ 8 V	90.000	90.00	89.05	90.95	k Hz	Pass
100.0 kHz @ 8 V	100.00	100.0	98.5	101.5	k Hz	Pass
DUTY CYCLE						
50.0 % @ 1 kHz	50.00	50.3	49.3	50.8	%	Pass
CAPACITANCE TESTS						
60 nF Range						
59.00 nF	59.000	59.96	55.70	62.30	n F	Pass
600 nF Range						
590.0 nF	590.00	597.1	571.8	608.2	n F	Pass
6 uF Range						
5.900 µF	5.9000	5.854	5.718	6.082	µ F	Pass
60 uF Range						
59.00 µF	59.000	58.87	57.18	60.82	µ F	Pass

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 2 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
600 uF Range						
590.0 µF	590.00	590.6	560.0	620.0	µ F	Pass
6000 uF Range						
5900 µF	5900.0	5957	5600	6200	µ F	Pass
TEMPATURE F TESTS						
-14 °F	-14.0	-10	-23	-5	°F	Pass
100 °F	100.0	102	94	106	°F	Pass
500 °F	500.0	502	490	510	°F	Pass
900 °F	900.0	902	873	927	°F	Pass
TEMPATURE C TESTS						
-25 °C	-25.0	-23	-31	-20	°C	Pass
100 °C	100.0	102	96	104	°C	Pass
350 °C	350.0	351	344	357	°C	Pass
500 °C	500.0	501	485	515	°C	Pass
AC CURRENT TESTS						
60 A Range						
50.00 A @ 60 Hz	50.000	49.60	48.92	51.08	A	Pass
50.00 A @ 400 Hz	50.000	50.00	48.92	51.08	A	Pass
400 A Range						
500.0 A @ 60 Hz	500.00	494.2	489.5	510.5	A	Pass
500.0 A @ 100 Hz	500.00	494.4	489.5	510.5	A	Pass
60 A Range						
50.00 A	50.000	49.20	48.92	51.08	A	Pass
600 A Range						
300.0 A	300.00	296.5	293.5	306.5	A	Pass
590.0 A	590.00	582.7	577.7	602.3	A	Pass

**********END OF CALIBRATION**********

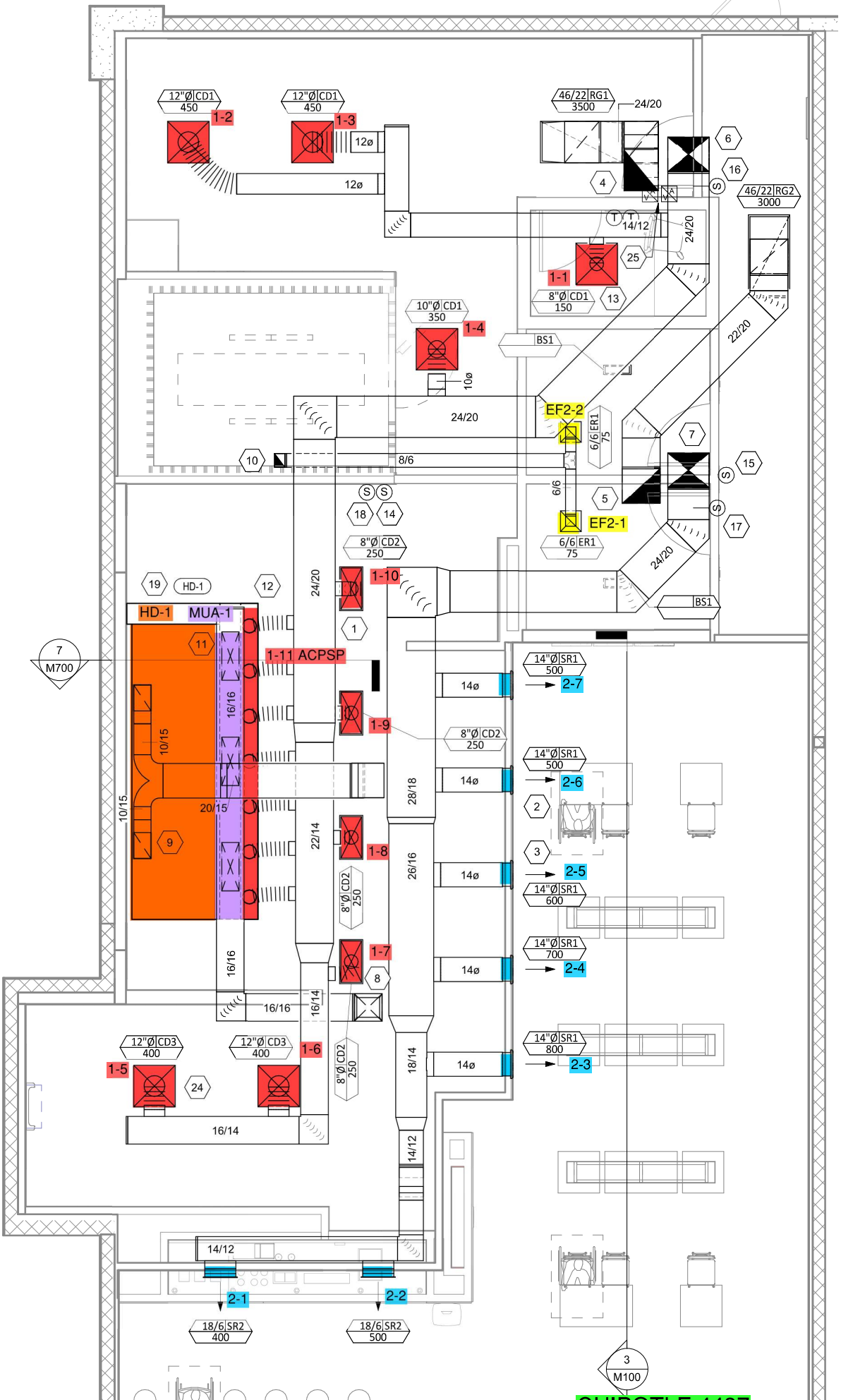
K.C. Calibration Labs Seal

Signed: Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 3 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*



1126 Swift St
North Kansas City, MO 64116
[855] 682 6822

Addendum to TAB report – Smoke Detector Testing

The following document is provided from a testing agency hired by the general contractor to meet smoke detector testing requirements from Broward County. The document was reviewed by National TAB to confirm that the measured pressure falls within the manufacturer's required tolerance. The testing equipment used as reported on the equipment calibration sheet is a satisfactory manufacturer and model and has a valid calibration date. Manufacturer specifications were reviewed to confirm the reported range on the contractor's report. Based on the report and manufacturer information, the measured pressure at the smoke detectors falls within the acceptable range.

William Turnbough
NEBB Certified Professional
Vice President of National Markets
will@nationaltab.com
314-954-6244

Certified Test; Adjust; Balance Report.

PO Box 7606
Naples, FL 34101
Phone: (239) 822-3640
Website: www.pes-tab.com

Premier Energy Solutions, Inc.

Project: Chipotle Store # 4437 Smoke Detector Testing

Location: 3311 W Hillsboro Blvd, Deerfield Beach, FL 33442

Architect: N/P

Engineer: N/P

Contractor: Air American Service, Inc

Project Number – PE-1694

This is to certify that Premier Energy Solutions, Inc has tested and balanced the systems in accordance with the project plans and specifications and to the optimum performance capabilities of the equipment. Testing and balancing were performed in accordance with the standards published by the Associated Air Balance Council. The results of these tests are recorded herein.

Submitted & certified by: Premier Energy Solutions, Inc
Certification Number: 19-09-59
Report Date: 12/22/23

AABC TBE Signature:

Premier Energy Solutions, Inc. ASSOCIATED AIR BALANCE COUNCIL AABC TBE • 19-09-59 • Alexander Gendon

AABC

Associated Air Balance Council

Annual Membership Certificate

Awarded to

Premier Energy Solutions, Inc.

as a member in good standing of the Associated Air Balance Council for the year

2023

This member has met all requirements for membership and is entitled to all rights and privileges of AABC certification. This certificate is renewable on an annual basis and expires December 31, 2023.

Gaylon Richardson, *President*

ASSOCIATED AIR BALANCE COUNCIL AABC 2022

Raymond R. Bert, *Executive Director*

AABC

Associated Air Balance Council

Annual Certificate

Awarded to

Alexander J. Rendon, TBE

Premier Energy Solutions, Inc.

In recognition of his qualifications as a

Certified Test and Balance Engineer

under the rules, regulations, and requirements of the Associated Air Balance Council. The above named is fully authorized to perform total system balance in accordance with the standards as established by the AABC and as a member of the Associated Air Balance Council for the year

2023

This registration number **19-09-59** *is fully recognized by the bylaws and charter of this professional association. Certification is renewable on an annual basis after examination of the agency's record for the preceding year. This certificate expires December 31, 2023.*

ASSOCIATED AIR BALANCE COUNCIL ★ AABC ★ 2022 ★

Gaylon Richardson, *President*

Raymond R. Bert, *Executive Director*

CODE DESCRIPTION SHEET

CODE	DESCRIPTION
#	Number
DP	Differential Pressure
DT	Differential Temperature
%	Percent
°F	Degree Fahrenheit
@	At
ACT	Actual
ADJ	Adjustment
AHU	Air handling unit
AMPS	Amperage
AR	Anemometer Reading
BHP	Brake Horsepower
BTU	British thermal unit
CD	Ceiling Diffuser
CFM	Cubic feet per minute
CG	Ceiling grille
COND	Condenser
CR	Ceiling register
DB	Dry bulb temperature
DDC	Direct digital control
DES	Design
DHR	Direct Hood Reading
DIFF	Differential
DL	Drum louver
EAT	Entering air temperature
EF	Exhaust fan
EG	Exhaust grille
ER	Exhaust register
EWT	Entering water temperature
FPM	Feet per minute
FPVAV	Fan powered Variable air volume
Ft	Feet
GPM	Gallons per minute
Hz	Hertz
IN	Inches
KW	Kilowatts
LAT	Leaving air temperature
LD	Linear slot diffuser

CODE	DESCRIPTION
LT	Light troffer
LWT	Leaving water temperature
MAX	Maximum
MBH	Thousand British thermal unit hour
MIN	Minimum
N/A	Not Applicable
N/D	Not Determined
N/P	Not Provided
N/S	Not Specified
OED	Opened end duct
OA	Outside air
PCD	Perforated ceiling diffuser
PD	Pressure differential
PEG	Perforated exhaust grille
PRG	Perforated return grille
PSI	Pounds per square inch
RA	Return air
RG	Return air grille
RR	Return air register
REQ'D	Required
RPM	Revolutions per minute
SG	Supply air grille
SR	Supply air register
SOED	Screened open end duct
SP	Static pressure
SQ	Square
TDH	Total dynamic head
TD	Temperature differential
TE	Traverse exhaust
TEMP	Temperature
TOA	Traverse outside air
TR	Traverse return air
TS	Traverse supply air
VAV	Variable air volume
VOLTS	Voltages
VSC	Variable speed controller
WB	Wet bulb
ZD	Zone damper

INSTRUMENT CALIBRATIONS

FUNCTION	MANUFACTURER	MODEL	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUEDATE
Air Data Multimeter	Evergreen	S-PVF-1	1700340	2023-12-02	02 Dec 24
Clamp Multimeter	FLUKE	323	28430158WS	2023-12-01	01 Dec 24
Flow hood	Evergreen	CH-8D	1700288	2023-11-09	09 Nov 24
Hydro Data Multimeter	Evergreen	S-DP-125	1700170	2023-12-02	02 Dec 24
Hydro Data Multimeter	Shortridge	HDM-250	W13002	2023-12-01	01 Dec 24
Psychrometer	Evergreen	PR-T-1	1700382	2023-12-02	02 Dec 24
Rotating Vane Anemometer	EXTECH	AN300	1002010	2023-12-01	01 Dec 24
Tachometer	Extech	461891	Q058326	2023-12-03	03 Dec 24

This is the listing of the instruments used to obtain the reported data. All instruments comply with minimum function, range, accuracy, resolution, and calibration interval requirements as per AABC Standards.

SUMMARY

The scope of our work consists of testing, adjusting, and balancing of air and water systems per plans and specifications.
All systems and their associated terminals have been tested, adjusted, and balanced to their specified tolerances and/or optimum performance. Specific notations pertinent to the TAB of individual units, terminals, inlets, and outlets are included in the attached report, along with all final measurements and settings.

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PROJECT: Chipotle Store # 4437 Smoke Detector Testing
LOCATION: Deerfield Beach, FL
PROJECT #: 1694

DATE: 12/22/2023
CONTACT: Alexander Rendon
AUTHOR:

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Premier Energy Solutions Inc

Duct Smoke Detector

PROJECT: Chipotle Store # 4437 Smoke Detector Testing
LOCATION: Deerfield Beach, FL
PROJECT #: 1694

DATE: 12/22/2023
CONTACT: Alexander Rendon
AUTHOR:

System/Unit	Manufacturer	Model #	Location	Design P.D.	Actual P.D.
RTU-1	Telaire	RJ45	Supply Duct	0.005 to 1.0”	0.007
RTU-2	Telaire	RJ45	Supply Duct	0.005 to 1.0”	0.008
Totals:	-	-	-	-	-