

Report By:

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



Report: TAB Report
Function: Test, Adjust, & Balance
Date: 10/09/2025
Completed By: National TAB

PROJECT
10-06-25 CAVA NEWTOWN, PA

2938 EAGLE RD

NEWTOWN, PA 18940

Client

CAVA
702 H ST NW
2nd floor
Washington, DC 20001

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA

Table Of Contents

Section	Page #
Summary	3
Remarks	4
Balance Schedule	21
Checklist Data	22
AHU/RTU	47
FAN - Exhaust	53
FAN - Supply	56
Kitchen Hood Type I	58
GRD Layout	60

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

- All Assets and Thermostats: No ID Tags
- Diffusers 2-10 and 2-11: Drafting
- HD1, KEF1: Motor Overramping Unable to Decrease
- HD1: Caulking Degraded
- HD1: Grease Cups Not Installed
- HD1: Hood End Panel Not Installed
- HD1: MISSING TEMPT SENS #03
- HD1: Plastic Film Still Installed
- KEF1: Grease Cup Not Installed
- KEF1: Hinge Kit Not Installed
- MAU1: Gas Valve Closed
- RTU1, RTU2: No Hail Guards
- RTU1: Economizer Not Functional
- RTU2: Noise from Return Grille
- RTU2: Supply Flow is High
- Thermostats: Unable to Program



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : All Assets and Thermostats: No ID Tags
Description : No ID tags installed on any of the rooftop assets or on the thermostats.
Install ID tags.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10/08/2025



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : Diffusers 2-10 and 2-11: Drafting
Description : Can feel air draft when standing directly beneath these diffusers. Dampers have been fully closed, but are not able to fully block air.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1, KEF1: Motor Overramping Unable to Decrease
Description : Motor overramping in KEF1. Unable to control fan speed from HD1 HMI. Troubleshoot according to manufacturer instruction.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : High **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025



10/09/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1: Caulking Degraded
Description : Hood caulking to wall on back, side, and front has degraded. Gaps can accumulate grease. Recaulk.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1: Grease Cups Not Installed
Description : Grease cups not installed on hood. Find or order and install.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1: Hood End Panel Not Installed
Description : Install according to manufacturer directions.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1: MISSING TEMPT SENS #03
Description : Hood is showing a fault called Missing Temp Sens #03. Troubleshoot and repair according to manufacturer guidance.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : HD1: Plastic Film Still Installed
Description : Plastic protective film is still on hood. Remove film.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : KEF1: Grease Cup Not Installed
Description : Grease cup not installed on KEF1 curb. Install according to manufacturer instructions.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : KEF1: Hinge Kit Not Installed
Description : Hinge kit for KEF1 not installed. Unable to collect pressure data. Install according to manufacturer directions.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : High **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : MAU1: Gas Valve Closed
Description : Gas valve for MAU1 is closed. Open valve and perform burner startup.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : RTU1, RTU2: No Hail Guards
Description : Neither of the RTUs have hail guards on the condenser fins.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025



10/09/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : RTU1: Economizer Not Functional
Description : Economizer of RTU2 not functional. Unable to set OA. Service according to manufacturer guidance.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 10/08/2025 - Ryan Smith - National TAB

Project Issue File Details



10/08/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : RTU2: Noise from Return Grille
Description : Return grille in dining area makes whining sound.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : High **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025

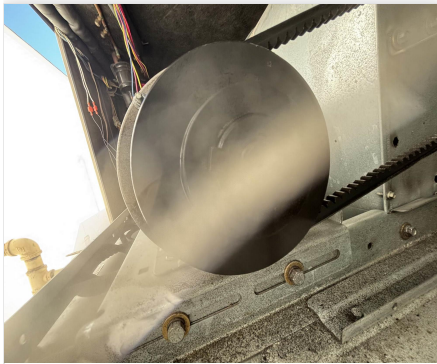


10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : RTU2: Supply Flow is High
Description : Supply flow for RTU2 is high. Motor pulley has been fully reduced. Unable to further reduce supply flow. Attempted proportional balancing. Install smaller motor pulley or larger fan pulley.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025



10-06-25 CAVA NEWTOWN, PA

Project Issue Information

Issue Name : Thermostats: Unable to Program
Description : Unable to program thermostats. They are home thermostats. They do not accommodate programming for occupied vs unoccupied. They cannot automatically switch between cooling and heating.
Created By : National TAB **Assigned To :** National TAB - Brianna Biggs
Status : Open
Priority : High **Asset Tag :**
Originated Date : 10/09/2025 - Ryan Smith - National TAB

Project Issue File Details



10/09/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA

- [Open](#) BALANCE_SCHEDULE_LARGE_JOBS.xlsx

CheckList List

- FIV - EF'S
- FIV - HOODS
- FIV - HVAC DUCTWORK
- FIV - MUA
- FIV - RTU'S
- FPT - BUILDING PRESSURE AND HOOD CONTAINMENT
- FPT - KEF'S
- FPT - MUA
- FPT - RTU's



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FIV - EF'S **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

Unit Tag matches the design and submittal MFG and Model Fail

Comment:

Bathroom exhaust fans do not match design and submittal.

Each exhaust fan is proper tagged for proper identification with tags sized and placed on the fan for visual ease Fail

Comment:

No ID tags on any units.

Fans are installed in the correct location and orientation Pass

Comment:

All packing, material and debris has been removed from the blower/wheel housing and the motor compartment Pass

Comment:

Fan wheels turn easily by hand (turn power off prior to testing) Pass

Comment:

Fans grease duct curb top plate is properly transitioned to the fan inlet and flush on top of the curb, sealed to the fan base to prevent leakage Pass

Comment:

Exhaust fans have external disconnects and are connected to allow full hinging of each exhaust fan

Fail

Comment:

No hinge kit installed. Unable to test wiring length.

Fan is properly hinged and supported when hinged fully back for grease duct access (for Halton fans, ensure the base mounted disconnect is not hitting the fan base/curb when fully hinged back)

Fail

Comment:

No hinge kit installed.

Grease cups are properly installed and connected to the fan base grease drain to prevent spilling outside of the grease cup

Fail

Comment:

No grease cup installed.

Exhaust fans are located 5ft from parapet wall and 10ft from any fresh air intake.

Pass

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FIV - HOODS **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/30/2025 - Natasha Louw - National TAB
Completed Date : 10/10/2025 - Ryan Smith - National TAB

CheckList Item Details

HOOD INSTALLATION DETAILS

Kitchen hoods tags match design and submitted information Pass

Comment:

Kitchen hoods are hung Level using 1/2" threaded rod Pass

Comment:

Kitchen hoods are supported using beam clamps and/or Unistrut per required structural and local AHJ requirements Pass

Comment:

Kitchen hoods are hung level front to back and side to side Pass

Comment:

Kitchen hoods are hung at 80" AFF Pass

Comment:

Kitchen Hoods are flush against the wall along the bottom and each of it's side walls. Pass

Comment:

Caulk is applied (less than 1/8" thick) from the hood against all wall surfaces or between connecting side to side hoods to prevent grease accumulation inside any crevice. Fail

Comment:

There are no penetrations into the hood canopy other than fire system nozzles Pass

Comment:

The hood is in "As New" condition with no visible damage, rust, pitting, or other blemishes Pass

Comment:

All protective film has been peeled away from the wall or other areas of impingement to assure it can be easily and fully removed prior to cleaning. Fail

Comment:

HOOD ACCESSORIES

End panels are installed Fail

Comment:

Hood filters are installed Pass

Comment:

Grease cups are installed Fail

Comment:

Ceiling Wrappers are installed and the ceiling grid is fixed to the top of the ceiling wrappers Pass

Comment:

Hood control panel has been identified and is located as per plan, is accessible, and contains all components and temperature sensors to meet local interlock (normal and abnormal conditions) and heat auto on/off functionality. Pass

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FIV - HVAC DUCTWORK **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/30/2025 - Natasha Louw - National TAB

CheckList Item Details

KVS - GREASE DUCT (HOOD SYSTEM)

Grease duct is sized and routed per plan

Comment:

Grease duct is properly supported

Comment:

Grease duct has code required negative pitch from fan inlet back to the hood riser connection

Comment:

Grease duct has required clean-out doors installed, labeled, and accessible for removal/cleaning. Doors are located as required by code

Comment:

Grease duct clean-out doors are secured using tool less fasteners and seal fully when hand tightened

Comment:

Grease duct is centered in the curb and transitions as required to ensure the fan inlet is fully covered by the grease duct opening. Duct top plate flanges to the edges of the curb and is secured and flat so that the fan sits flush and square.

Comment:

Grease duct is wrapped if welded duct, or is double wall round duct?

Comment:

KVS - MUA DUCT (HOOD SYSTEM)

MUA duct is routed and sized as per plan

Comment:

MUA duct is properly supported

Comment:

MUA duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems

Comment:

MUA duct is externally insulated and taped to prevent vapor barrier from being breached

Comment:

MUA duct drop box and transitions are done to encourage laminar flow and avoid restrictions

Comment:

Branch take-off's have accessible dampers exposed for the TAB team to adjust each line as necessary

Comment:

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length

Comment:

Connection to the hood MUA plenum is secured and foil taped to prevent air leakage

Comment:

RESTROOM DUCT

Restroom duct is routed and sized per plan

Comment:

Restroom duct is properly supported

Comment:

Duct seams are sealed

Comment:

Dampers are accessible to TAB team for balancing

Comment:

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length

Comment:

Duct is secured to exhaust register

Comment:

Gravity damper is installed, opens and closes freely, and is sealed to prevent air leakage

Comment:

Duct to curb transition is centered and sized to ensure it covers the entire fan inlet. Curb top plate is flush and secured to the ends of the curb.

Comment:

HVAC DUCT

Kitchen and Dining room duct is routed and sized as per plan

Comment:

Ducts are properly supported

Comment:

Ductwork is externally insulated

Comment:

Duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems

Comment:

Ducts are securely insulated as per specificatins and foil taped to prevent air barrier from being breached

Comment:

Takeoffs are installed to serve required terminal diffusers and are equipped with accessible dampers for TAB team access and can be opened or closed fully with no impingements

Comment:

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length

Comment:

Takeoff to diffuser is installed securely to prevent slippage and air leakage

Comment:

All diffuser neck or opening sizes are installed as planned

Comment:

Supply and Return duct transitions to top of RTU curb, sized to full width and length of opening and is flashed fully to the sides of the curb.

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FIV - MUA **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

MUA Tag information matches design and submittal criteria Pass

Comment:

MUA Fan has a permanent tag for identification located on the unit located and sized for visual ease Fail

Comment:

No ID tags on any units.

MUA is installed in the proper location and orientation Pass

Comment:

MUA intake is a minimum 10ft from any exhaust, roof vent or dirty air source Pass

Comment:

Blower compartment and internal heater area is free of packing material, debris, and dirt Pass

Comment:

Blower wheel turns freely by hand (turn power off prior to testing) Pass

Comment:

All MUA compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction	Pass
Comment:	
MUA Electrical disconnect is external to the unit and properly wired	Pass
Comment:	
Outdoor air awning is installed and fitted with proper OA mesh filters	N/A
Comment:	
DOAS style MAU. No awning required. Filters are all installed. 2 16X20X2 mesh filters 4 16X16X2 MERV8 filters 4 16X16X2 MERV13 filters	
Condensate drain is installed (for cooling MUA's) with proper traps, clean-outs, and drain away from the unit to an acceptable roof drain	Pass
Comment:	
Refrigeration line sets are installed and connected properly with adequate supports per specifications	N/A
Comment:	
Condenser is installed away from any grease producing exhaust fans and located as per roof plan	Pass
Comment:	
Condenser's electrical disconnect is external to the unit and properly wired (if applicable)	N/A
Comment:	
Condenser hail guards are installed (if applicable)	N/A
Comment:	
All Condenser compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction (if applicable)	Pass
Comment:	
Gas line is installed per specification and properly supported	Pass
Comment:	

Gas line is installed per specification and properly supported and contains maintenance shut-off valve, trap, and regulator (if line pressure requires it). MUA is equipped with inlet gas pressure gauge to validate incoming gas pressure is suitable

Pass

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FIV - RTU'S **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

RTU IDENTIFICATION, ORIENTATION & LOCATION

Each RTU is tagged for proper identification with tags sized and placed on the fan for visual ease	Fail
--	------

Comment:

No ID tags on any units.

Identify and ensure the RTU label information and size is correct	Pass
---	------

Comment:

Ensure proper location of unit	Pass
--------------------------------	------

Comment:

Ensure orientation of curb & RTU is per plan	Pass
--	------

Comment:

Ensure Packing in the blower compartment has been removed	Pass
---	------

Comment:

RTU - INSTALLATION DETAILS

With disconnect switch "off" spin the indoor and outdoor fan wheel's by hand and ensure they spin freely	Pass
--	------

Comment:

Ensure Roof Curb is fully flashed by roofing material and secured and curb is level

Pass

Comment:

Inspect the interior of the supply heat exchange compartment and return air compartment - validate that the duct is flashed and sealed to the top of the curb to prevent leakage or short cycling

Pass

Comment:

Hail guards installed on outdoor condenser coils

Fail

Comment:

RTU - ACCESSORIES

Power connected & disconnect installed

Pass

Comment:

Gas line connected per specification (size, painting, supports, shut-off valves, traps)

Pass

Comment:

OA hood & filters installed

Pass

Comment:

Economizer wired to control board

Fail

Comment:

RTU control board does not communicate with economizer.

Evaporator coil filters are properly installed with specified MERV rating

Comment:

Economizer damper is installed properly

Pass

Comment:

Economizer OA temperature / enthalpy sensors installed and wired

Pass

Comment:

Thermostat and humidity (if applicable) control wires wired to RTU terminals

N/A

Comment:

Condensate drain installed per specification

Pass

Comment:

Condensate line drains away from unit to a approved roof drain

Pass

Comment:

Belts are tight?

Pass

Comment:

Pulleys aligned?

Pass

Comment:

MERV rated filters are installed and are clean?

Pass

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FPT - BUILDING PRESSURE AND HOOD CONTAINMENT **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

None. Kitchen equipment is not yet operational.

List smoke candle type used

Comment:

45 SEC SMOKE BOMB.

Smoke test capture - Perimeter of hood (%)

Comment:

100%

Smoke test capture - Top of cooking surface (%)

Comment:

100%

WITNESS

Date test was completed

10/09/2025

Comment:

TAB tech name / Firm

Comment:

Ryan Smith / National TAB

Site super name / Firm

Comment:

Greg Brandismarte / Gia Construction

Owner representative name / Firm (if Applicable)

Comment:

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)

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FPT - KEF'S **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

Exhaust fans wheel rotation is correct Pass

Comment:

TAB firm has balanced the exhaust fans to proper design levels Pass

Comment:

All motor and electrical readings are below the full load rating of each fan Fail

Comment:

KEF runs above FLA. Also unable to decrease fan speed from HMI.

Exhaust Fans do not have any unusual noise or vibration while operating Pass

Comment:

Smoke and Grease from exhaust fans appear to properly elevate above the parapet wall and off the roof.

Comment:

Hoods have been started up by the manufacturers rep? Pass

Comment:

Hoods free of alarms? Fail

Comment:

Show fault related to thermal sensors.

Exhaust fans modulate to high speed when kitchen equipment is on and at cooking temperatures? If not, adjust modulation/offset down.

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FPT - MUA **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 07/30/2025 - Natasha Louw - National TAB

Completed Date : 10/09/2025 - Ryan Smith - National TAB

CheckList Item Details

TAB firm has balanced the MUA to within proper design limits Pass

Comment:

Blower wheel rotation is correct Pass

Comment:

MUA does not have any unusual noise or vibration while operating Pass

Comment:

Motor and electrical measurements are below the full load rating Pass

Comment:

Startup has been completed by the manufacturers rep? Pass

Comment:

Heater tested and is functional? Fail

Comment:

Gas valve is closed. Unable to test heater.

Cooling is tested and is functional? Yes

Comment:



10-06-25 CAVA NEWTOWN, PA

CheckList Information

Name : FPT - RTU's **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 07/30/2025 - Natasha Louw - National TAB

CheckList Item Details

THERMOSTAT PROGRAMMING AND CALIBRATION

Time is correct on the thermostats Pass

Comment:

Occupied Time = 7:30 AM

Comment:

Occupied Heat setpoint = 68

Comment:

Occupied Cooling setpoint = 72

Comment:

Dehumidification Setpoint = 55%

Comment:

Occupied Fan = On

Comment:

Unoccupied Time = 12:00AM

Comment:

Unoccupied Heat setpoint = 60

Comment:

Occupied Cooling setpoint = 80

Comment:

Unoccupied Fan = Auto

Comment:

Actual measured temperature is within +/-1 degree of temperature displayed on thermostat. If not calibrate the sensor

Comment:

Actual measured RH is within +/-3 % of displayed RH at RTU or thermostat. If not calibrate the sensor

Comment:

CONTROL WIRING VALIDATION

Economizer Dry Bulb sensor wired

Comment:

Economizer Dry Bulb sensor operational

Comment:

OCP/OCC terminal wired correctly

Comment:

Thermostat Wired correctly (R,C,Y1,Y2,W1,W2)

Comment:

Humidity Sensor Wired correctly

Comment:

CALIBRATION & PROGRAMMING

RTU OA DB StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

Comment:

RTU MAT StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

Comment:

RTU MAT Low StPt

Comment:

RTU Low T Lockout

Comment:

Economizer set to 28 BTU/lb enthalpy setpoint.

Comment:

Temperature tests

Outside air temperature / humidity

Comment:

Full cooling LAT/H

Comment:

Full heating LAT/H

Comment:

OUTDOOR AIR / RELIEF DAMPER

If power exhaust installed, set point is higher than the OA damper setpoint

Comment:

If power exhaust installed, open the OA damper above the power exhaust setpoint and ensure that the power exhaust turns on

Comment:

If relief damper is installed, ensure that it is installed properly and can open freely.

Comment:

OCCUPANCY VALIDATION

Place the thermostat in "unoccupied" - Does the OA damper close fully

Comment:

Stage cooling and Heating in "unoccupied" - Does the unit properly stage and does the OA damper remain closed

Comment:

Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in High speed

Comment:

Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in Low speed (if applicable)

Comment:

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA
System/Unit: AHU/RTU



Asset: RTU1

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5619C04210
Model Num	KGB120S4	KGB120S4BM2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	16X25X1
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	-	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	8.0

Drive Data	
	Actual
Motor Sheave Size	1VP50BB
Motor Bore Size	0.75"
Motor Sheave SetPt	4 TURNS OUT
Fan Sheave Size	7"
Fan Sheave Bore	1"
Belt CL Distance	21.75"
Num of Belts	1
Belt Size	AX58
Belt Alignment	GOOD

Test Data		
	Design	Actual
SF CFM	3500	3422
SF RPM	-	966
RA CFM	3150	3422
OA CFM	350	0
RL Voltage	-	210.7/210.6/212 V
RL Amperage	-	7.16/7.37/7.59 A
SF Rotation	-	CW
SF System SetPt	-	4 TURNS OUT
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	0%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.52
Fan Suction SP	-	-0.88"
Fan Discharge SP	-	1.00"
Total ESP	1.00"	1.52"
Fan Total SP	-	1.88"

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

Completed By: Ryan Smith on 10/09/2025

Notes:

[1] ECONOMIZER IS NOT OPERATIONAL. UNABLE TO ADJUST OA.

Written By: Ryan Smith on 10/08/2025

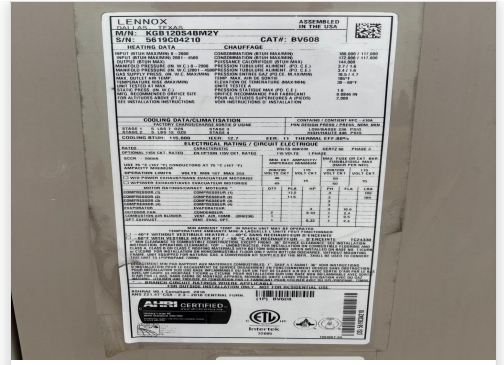
Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025

National TAB
 Project:10-06-25 CAVA NEWTOWN, PA
AHU/RTU



Diffuser Supply (GRD)

RTU1/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	D	10"	325	1	270	338	338	104.0
SGRD2	KITCHEN	D	10"	375	1	308	323	345	92.0
SGRD3	KITCHEN	D	10"	375	1	358	403	409	109.1
SGRD4	KITCHEN	D	10"	375	1	285	294	338	90.1
SGRD5	KITCHEN	D	10"	375	1	281	308	341	90.9
SGRD6	KITCHEN	D	10"	375	1	298	355	340	90.7
SGRD7	BACK KITCHEN	A	12"	600	1	869	615	620	103.3
SGRD8	BACK KITCHEN	A	12"	600	1	738	689	588	98.0
SGRD9	BACK KITCHEN	A	6"	100	1	228	97	103	103.0
Total				3500		3635	3422	3422	97.77%

Completed By: Ryan Smith on 10/08/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA
System/Unit: AHU/RTU



Asset: RTU2

AREA: DINING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5619F02611
Model Num	KGB150S4	KGB150S4BM2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	16X25X1
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	13.80

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	1"
Motor Sheave SetPt	5 TURNS OUT
Fan Sheave Size	6.5"
Fan Sheave Bore	1"
Belt CL Distance	22.5"
Num of Belts	1
Belt Size	AX58
Belt Alignment	GOOD

Test Data		
	Design	Actual
SF CFM	4500	5466
SF RPM	-	1049
RA CFM	3600	4551
OA CFM	900	915
RL Voltage	-	210.8/211.2/212.2 V
RL Amperage	-	11.06/10.73/10.68 A
SF Rotation	-	CW
SF System SetPt	-	5 TURNS OUT
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	0.5"
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	NL

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.56"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.92"
Total ESP	1.00"	1.48"
Fan Total SP	-	1.97"

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

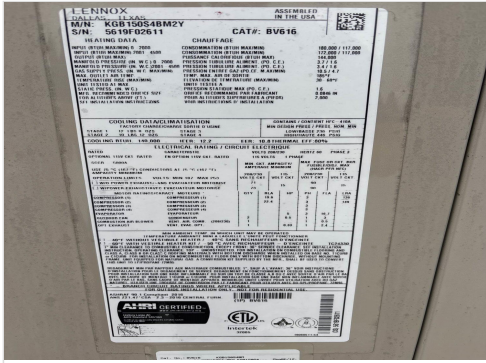
Completed By: Ryan Smith on 10/09/2025

Notes:

- [1] MOTOR PULLEY HAS BEEN FULLY REDUCED. FURTHER REDUCTION IN AIRFLOW WOULD REQUIRE INSTALLING A DIFFERENT PULLEY. DIFFUSERS HAVE BEEN ADJUSTED PROPORTIONALLY.
- [2] AIR DAMPERS IN DINING AREA SIDEWALL DIFFUSERS DO NOT SIGNIFICANLTLY CHANGE AIRFLOW. UNABLE TO SHIFT AIRFLOW TO DIFFUSERS IN BACK HALLWAY. CONFIRMED THERE IS SUFFICIENT AIRFLOW IN ENCLOSED AREAS. WILL NOT CAUSE COMFROT, NOISE, OR VIBRATION ISSUES.

Written By: Ryan Smith on 10/09/2025

Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025

National TAB
 Project:10-06-25 CAVA NEWTOWN, PA
AHU/RTU



Diffuser Supply (GRD)

RTU2/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	E		300	1	462	448	448	149.3
SGRD2	DINING	E		300	1	427	404	404	134.7
SGRD3	DINING	E		300	1	398	377	377	125.7
SGRD4	DINING	E		375	1	413	413	413	110.1
SGRD5	DINING	E		375	1	421	410	410	109.3
SGRD6	DINING	E		300	1	395	375	375	125.0
SGRD7	DINING	E		375	1	440	429	429	114.4
SGRD8	DINING	E		300	1	339	343	343	114.3
SGRD9	DINING	E		375	1	400	412	412	109.9
SGRD10	DINING	E		300	1	500	479	479	159.7
SGRD11	DINING	E		300	1	540	532	532	177.3
SGRD12	HALLWAY	B	8"	200	1	88	90	90	45.0
SGRD13	HALLWAY	B	8"	200	1	96	96	96	48.0
SGRD14	MENS RR	B	6"	50	1	64	71	71	142.0
SGRD15	WOMENS RR	B	6"	50	1	62	67	67	134.0
SGRD16	ELECTRICAL ROOM	B	6"	50	1	65	66	66	132.0
SGRD17	HALLWAY	B	8"	200	1	77	79	79	39.5
SGRD18	STORAGE	F	8"	150	1	179	165	165	110.0
Total				4500		5366	5256	5256	116.8%

Completed By: Ryan Smith on 10/09/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA
System/Unit: FAN - Exhaust



Asset: CEF1

AREA:WOMENS RR

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	SP-A250	ZT
Serial Num	-	H19ZZ44714
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	125	73
RL Voltage	-	NA
RL Amperage	-	0.69

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Motor Rpm	-	1400
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.74

Completed By: Ryan Smith on 10/08/2025

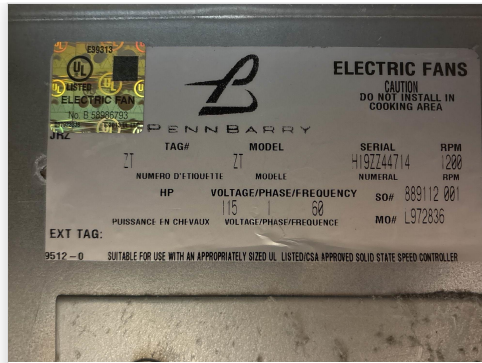
Notes:
[1] NO SPEED CONTROLLER FOR FAN. NOT ABLE TO ADJUST FLOW.

Written By: Ryan Smith on 10/08/2025

Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA
System/Unit: FAN - Exhaust



Asset: CEF2

AREA:MENS RR

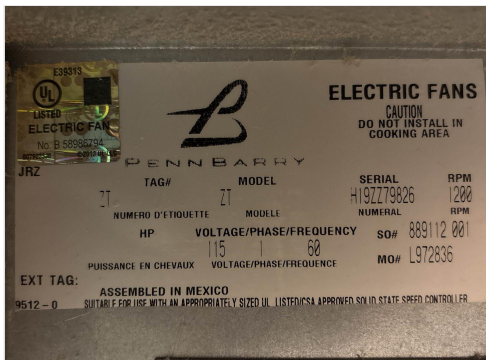
Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	SP-A250	ZT
Serial Num	-	H19ZZ79826
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	125	69
RL Voltage	-	NA
RL Amperage	-	0.68

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Motor Rpm	-	1400
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.74

Completed By: Ryan Smith on 10/08/2025

Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025



National TAB

Project: 10-06-25 CAVA NEWTOWN, PA

System/Unit: FAN - Exhaust

Asset: KEF1

AREA: KITCHEN HD

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	7263867
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	2317	2147
Fan RPM	1551	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	86%
RL Voltage	-	121.8 V
RL Amperage	-	12.84 A
Total ESP	1.000"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	1.000	1
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6
Service Factor	-	NL

Completed By: Ryan Smith on 10/09/2025

Notes:

[1] HINGE KIT NOT INSTALLED. NOT ABLE TO COLLECT PRESSURE DATA.

[2] UNABLE TO CONTROL FAN SPEED FROM HOOD HMI. MOTOR OVERRAMPING. UNABLE TO DECREASE FAN SPEED.

Written By: Ryan Smith on 10/09/2025

Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA
System/Unit: FAN - Supply



Asset: MAU1

AREA: KITCHEN HD

Unit Data		
	Design	Actual
MFG	ECON-AIR	CAPTIVEAIRE
Model Num	EARTU1-I.200-15-5T-MPU	CAS-HVAC1-I.150-15-5T-MPU
Serial Num	-	7263867
Type	MAU	MAU
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	1854	1752
SF RPM	-	1328
Motor RPM	-	1328
SF System SetPt	-	45.8 Hz
RL Voltage	-	151 V
RL Amperage	-	3.2 A
Total ESP	-	0.36"
Fan Discharge SP	-	0.36"

Motor Data		
	Design	Actual
Motor MFG	-	TECO Westinghouse
Frame	-	145T
Horsepower	1.50	1.5
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	4.02
Service Factor	-	1.15

General	
	Actual
Fan Rotation Correct	YES

Gas Heat		
	Design	Actual
Heater Operates (y/n)	-	N
Flame Status (pass/fail)	-	N
Inlet Air Temp SetPt	55	55
Discharge Air Temp SetPt	60	60

Completed By: Ryan Smith on 10/09/2025

- Notes:
Filters
2 16X20X2 mesh filters
4 16X16X2 MERV8 filters
4 16X16X2 MERV13 filters

[1] GAS VALVE IS OFF. UNABLE TO CONFIRM THAT HEAT OPERATES OR THE FLAME STATUS.

Written By: Ryan Smith on 10/09/2025

Unit Data - PHOTO LOG



10/08/2025

WWW.CAPTIVEAIR.COM

Heating and Cooling Equipment
 CaptiveAir Systems 380 Northbrook Drive Youngsville, NC 27598
 Job # 726387 7/26/2025
 Fan #2 Unit Tag: MAU

Model #: CAS-HVAC14.150-15-ST-MPU

Supply Motor Part Number: DTP154
 Supply Motor Information: 1.500 HP, 208 VAC, 3 phase-60 Hz, 4.4 Maximum Operating Current
 Compressor Part Number: V2H282CA, Design Frequency: 200 Hz
 Compressor Information: 5.50 Ton, 190-240 VAC, 3 phase-60 Hz, 15.40 Rated Current, 2470 LRA
 Outdoor Fan Motor Part Number: 95048
 Outdoor Fan Motor Information: 1.21 HP, 200-240 VAC, 3 phase-60 Hz, 2.8 Maximum Operating Current
 MCA: Minimum Circuit Ampacity / MOCP: Maximum Over Current Protection
 Unit Main Input: 208 VAC, 3 Phase-60 Hz, MCA: 28.8 Amps, MOCP: 30 Amps, 10 AWG Wire Min.
 For Outdoor Installation Only
 Appliances Not Accessible to the General Public
 Minimum Insulation Rating: 10,000V
CATEGORY III APPLIANCE
See UL File #1409

Patents: US 8771119, ICAI 2776289

GAS TYPE CHANGE INSTRUCTIONS:
 This unit is configured for the gas type listed on the nameplate. To convert gases, you must replace the following parts. The non-specific parts include the critical conversion parts and the combination gas valve springs. These parts are available by contacting the phone number on this label.

Gas Type	Modulating Valve	150 MBH
Natural	ES0	NAT-4860150
LP		

Job # 726387
 SCFM: 1854
 Max. Rated RPM
 Minimum Amble
 Design Tempera
 Maximum Tempera
 Maximum Discha
 Gas Inlet Pressure
 Minimum Gas Supp
 Design Manifold Pri
 Maximum Manifold I
 Hourly Design BTU F
 Input BTU (Minimum)
! WARNING! READ BEFORE INSTALLING ALTERATION SERV.

Y
 ARTS
 PING

10/08/2025



10/08/2025

National TAB

Project: 10-06-25 CAVA NEWTOWN, PA

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2-PSP-F	6030 ND-2-PSP-F
Job / Serial Num	-	7263867
Type	TYPE 1 CANOPY	TYPE I CANOPY
Hood length	139"	139"
Hood Width	60"	60"
Supply Plenum Type	-	PSP
Supply Plenum Width	6"	12"
Supply Plenum Length	152"	151"

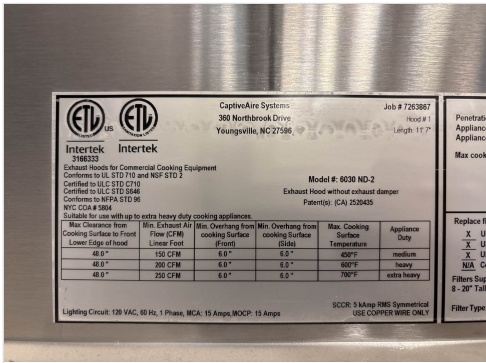
Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	16X20	16X20
Filter Qty 1	8	8
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	16.64	16.64
Filter1 FPM	-	120
Filter2 FPM	-	130
Filter3 FPM	-	139
Filter4 FPM	-	137
Filter5 FPM	-	138
Filter6 FPM	-	138
Filter7 FPM	-	116
Filter8 FPM	-	112
Filter Ave FPM(corr)	-	129
CFM	2317	2147

Cooking Equipment	
	Actual
Item 1	TURBOCHEF
Item 2	4 BURNER STOVE
Item 3	GRIDDLE
Item 4	DEEP FRYER

Test Data Supply		
	Design	Actual
Total Area	6.33	12.58
Kv factor (Vel)	0.78	0.87
Num of Readings	-	12
Reading1 FPM	-	133
Reading2 FPM	-	155
Reading3 FPM	-	132
Reading4 FPM	-	154
Reading5 FPM	-	134
Reading6 FPM	-	184
Reading7 FPM	-	175
Reading8 FPM	-	205
Reading9 FPM	-	147
Reading10 FPM	-	169
Reading11 FPM	-	174
Reading12 FPM	-	158
Ave FPM(corr)	-	160
CFM	1854	1752

Completed By: Ryan Smith on 10/08/2025

Unit Data - PHOTO LOG



10/08/2025



10/08/2025



10/08/2025

