Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 05/31/2024

PROJECT

06-03-24 WAWA #8443 HAZLET, NJ

3052 Rt 35

Hazlet, NJ 07730

Client

Wawa

260 West Baltimore Pike

Wawa, PA 19063

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.

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.

Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. 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 and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

CheckList List

- TECH - SITE PICTURES
- TECH - STEP 1: RTU's/AHU's
- TECH - STEP 2: LENNOX SETUP PARAMETERS
- TECH - STEP 3: SENSOR WIRING (LENNOX)
- TECH - STEP 4: EF'S
- TECH - STEP 5: CLOSEOUT CHECKS

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - SITE PICTURES	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

STORE FRONT

Comment:

RTU-1

Comment:

RTU-2

Comment:

RTU-3

Comment:

EF-1

Comment:

EF-2

Comment:

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - STEP 1: RTU's/AHU's	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

RTU's/AHU's

All diffusers and grilles are installed and match design?

Comment:

Clean filters installed?

Comment:

Economizers are assembled and functional?

Comment:

Motors are all operating below the FLA rating?

Comment:

Are belts tight?

Comment:

If direct drive unit is the speed controller working?

Comment:

Is gas piping installed and valves turned on?

Comment:

Condensate drains are installed?

Comment:

Unit free of noticeable noise and vibration

Comment:

Final outside air damper position is marked with permanent marker?

Comment:

No alarms present?

Comment:

Any noticeable duct leakage?

Comment:

Total supply and OA flows are balanced within +/-5% and supply & return diffusers within +/-10%?

Comment:

IN TEST MODE, TEST THE FOLLOWING:

Cooling mode is operational? Record EAT/LAT for each unit:

Comment:

Heating mode is operational? Record EAT/LAT for each unit:

Comment:

Dehumidification mode is operational? (Feel dehumidification coil with your hand. Is it hot?) Record EAT/LAT for each unit:

Comment:

TRAVERSE READINGS (AFTER DIFFUSER BALANCING COMPLETE)

RTU-1 Supply / Return

Comment:

RTU-2 Supply / Return

Comment:

RTU-3 Supply / Return

Comment:

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - STEP 2: LENNOX SETUP PARAMETERS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

UNIT ID CONFIGURATIONS

BACNET CONFIGURATION: GO TO SETTINGS>GENERAL>CONFIGURATION ID1 POSITION 5 SET TO "B".

Comment:

NETWORK CONFIGURATION: GO TO SETUP>NETWORK INTEGRATION, SET TO BACNET

Comment:

CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR: CO2, TEMP & HUMIDITY (PER UNIT, AS NEEDED).

Comment:

INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):

PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS

Comment:

PARAMETER 106 DEHUMID SETPOINT: 50, THIS IS A CENTERED SET POINT (+/-)

Comment:

PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE

Comment:

PARAMETER 117 CO2 START OPEN PPM: 1200

Comment:

PARAMETER 118 CO2 START OPEN PPM: 1500

Comment:

PARAMETER 137 OCCHET SET POINT: 68 (BACK UP)

Comment:

PARAMETER 139 OCC COOLING SET POINT: 72 (BACK UP)

Comment:

PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1

Comment:

PARAMETER 131 SET TO THE SAME % AS THE MINMIUM OA DAMPER SETPOINT

Comment:

CFM VALUES / MSAV FAN SPEEDS (AIR BALANCER TO DEFINE / IF APPLICABLE):

OA DAMPER SET TO SAME POSITION IN ALL FAN SPEEDS?

Comment:

ALL FAN SPEEDS SET TO THE SAME CFM VALUE (ENTER SETPOINTS BELOW)

Comment:

HEAT CFM VALUE: PER THE HVAC SCHEDULE

Comment:

HIGH COOL CFM VALUE: THE HIGH COOL CFM VALUE

Comment:

LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE

Comment:

VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE

Comment:

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - STEP 3: SENSOR WIRING (LENNOX)	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

COMBINATION TEMPERATURE/HUMIDITY SENSOR

Sensors are installed where shown on the drawing?

Comment:

2 conductor shielded cable has one wire landed to Vin, one to GND, and the shield wire is not connected.

Comment:

For second shielded cable, one wire is landed to Vout and the shield wire is not connected.

Comment:

Verify that the CORE or Prodigy controller is sensing a relative humidity (record the reading)

Comment:

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - STEP 4: EF'S	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

EF's

Rotation is correct?

Comment:

Belts are tight (if applicable)?

Comment:

Speed controller installed and functional (if applicable)?

Comment:

There is no major leakage around base of fan?

Comment:

Is the motor operating below the motor FLA rating?

Comment:

Back draft damper installed and can it fully open?

Comment:

Unit free of noticeable noise and vibration?

Comment:

Total exhaust flow balanced within +/-5% and grilles are within +/-10%?

Comment:

06-03-24 WAWA #8443 HAZLET, NJ

CheckList Information

Name :	TECH - STEP 5: CLOSEOUT CHECKS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/31/2024 - Brianna Biggs - National TAB		

CheckList Item Details

SPACE COMFORT

Is space free of drafting?

Comment:

Is space comfortable in all areas?

Comment:

Is the space free of ventilation noise?

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: