Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 06/09/2025

Completed By: National TAB

PROJECT

06-02-25 NIKE #214 PEARL, MS

200 Bass Pro Drive

Pearl, MS 39208

Client

Comfort Systems USA Strategic Accounts

2655 Fortune Circle West, Suite E

Indianapolis, IN 46241

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

Table Of Contents

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

Each of the RTU's were measured at their terminal devices utilizing a flow hood. The sum of these readings is equal to the total flow for that particular unit. The total flow of each RTU was then adjusted within tolerance of the specified design. Each terminal diffuser was balanced to within tolerance of the engineer's design volume utilizing the provided hand damper located at the takeoff of the main & branch trunk line(s). Any equipment that fell outside of this tolerance is noted throughout the report.

Variable Air Volume (VAV) Terminals

The VAV's were calibrated in a call for max cooling and the correction factors are reported on the individual asset. While in a call for full cooling, the individual air devices were then balanced within design tolerance. The VAVs were then stroked to minimum cool and the airflow values reported. The VAV was then stroked to heating and the airflow values reported. It was verified that there was a sufficient temp rise on each VAV.

General Exhaust Fans

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.

Issue List

- High Building Pressure
- Return Grilles Dirty - All
- RTU 1 - Unterminated Wires
- RTU 5 - Construction Filters
- RTU 5 - High Static Pressures
- RTU-2 and RTU-3 Operating at FLA

06-02-25 NIKE #214 PEARL, MS

Project Issue Information

Issue Name : High Building Pressure

Description : The building pressure was found to be very high, in excess of +0.1". This is enough to hold the doors a few inches open. Under further investigation the majority of this pressure is coming from the adjacent suites in the strip mall, as even with the Niki RTU outside air dampers closed there was 0.08" of static pressure.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Priority : Urgent

Asset Tag :

Originated Date : 06/09/2025 - Stephen Tassinaro - National TAB

Project Issue Response Details

- **06/09/2025 National TAB - Stephen Tassinaro**
  - To minimize the negative effects of the high building pressure, the economizers were unplugged (except for RTU-4 as it brings in very little OA). The economizers were balanced and are setup within the System Vu controllers so that once the building pressure issue can be resolved, these can simply be plugged back in and will open to the design setpoints.

06-02-25 NIKE #214 PEARL, MS

Project Issue Information

Issue Name :	Return Grilles Dirty - All		
Description :	All return grilles were found to be dirty within the space. Cleaning recommended.		
Created By :	National TAB	**Assigned To :**	National TAB - Will Turnbough
Status :	Open		
Priority :	Medium	**Asset Tag :**	
Originated Date :	06/09/2025 - Stephen Tassinaro - National TAB		

06-02-25 NIKE #214 PEARL, MS

Project Issue Information

Issue Name :	RTU 1 - Unterminated Wires		
Description :	There are several unterminated low voltage wires inside of RTU-1. Recommend further inspection to make sure non are live or critical.		
Created By :	National TAB	**Assigned To :**	National TAB - Will Turnbough
Status :	Open		
Priority :	Medium	**Asset Tag :**	
Originated Date :	06/09/2025 - Stephen Tassinaro - National TAB		

Project Issue Information

Issue Name :	RTU 5 - Construction Filters		
Description :	Recommend replacing the factory provided construction filters with MERV 8 or greater filters in RTU-5.		
Created By :	National TAB	**Assigned To :**	National TAB - Will Turnbough
Status :	Open		
Priority :	Low	**Asset Tag :**	
Originated Date :	06/09/2025 - Stephen Tassinaro - National TAB		

Project Issue Information

Issue Name : RTU 5 - High Static Pressures

Description : The static pressures within RTU 5 are higher than expected. Airflow was validated twice to ensure fan speed is set accurately. Mixed air compartment does appear to be somewhat restrictive with only small gaps between the return air damper leading to the return drop.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Priority : High

Asset Tag :

Originated Date : 06/09/2025 - Stephen Tassinaro - National TAB

Project Issue Response Details

- **06/09/2025 National TAB - Stephen Tassinaro**
  - The supply drop did not appear to be restrictive. It is recommended to have the supply ductwork/diffusers inspected for restrictions. Due to time restrictions and the space being occupied, NTi was not able to identify the restriction.

06-02-25 NIKE #214 PEARL, MS

Project Issue Information

Issue Name :	RTU-2 and RTU-3 Operating at FLA		
Description :	RTU-2 and RTU-3 are at the limit of FLA. Fan would have to be slowed down below design to see a notable reduction in amperage draw. During NTi technician's testing the amperage draw did not go down until fan speeds were set below 75%. However design airflow required at least 85% fan speed for both of these units.		
Created By :	National TAB	**Assigned To :**	National TAB - Will Turnbough
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	
Originated Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList List

- STEP 1: INITIAL WALKTHROUGH
- STEP 2: UNIT DATA AND EVAL
- STEP 3: TEST, ADJUST AND BALANCE
- STEP 4: FINAL TESTS
- STEP 5: FINAL DOCUMENTATION

06-02-25 NIKE #214 PEARL, MS

CheckList Information

Name :	STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/27/2025 - Tara Metcalf - National TAB		
Completed Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

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

Comment:

N/A

All diffusers and grilles are installed and match design?

Comment:

N/A - RTU REPLACEMENT

Thermostats have power?

Comment:

COMFORT SYSTEMS TECHNICIAN ON SITE CONFIRMED THEY WERE CONNECTED AND COMPLETE

All HVAC units and fans and powered and operational?

Comment:

YES

VAV diffusers (if applicable) are powered and responding to adjustment at thermostat?

Comment:

N/A

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

Comment:

YES

06-02-25 NIKE #214 PEARL, MS

CheckList Information

Name :	STEP 2: UNIT DATA AND EVAL	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/27/2025 - Tara Metcalf - National TAB		
Completed Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?	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:	

RTU-2 AND RTU-3 AT FLA. AMPERAGE DRAW DID NOT REDUCE UNTIL FANS WERE SET AT 75% OR LOWER.

Are belts tight?

Comment:

N/A - DIRECT DRIVE

If direct drive unit is the speed controller working.

Comment:

YES

Is gas piping installed and valves turned on?	N/A

Comment:

N/A - ELECTRIC HEAT

Unit free of noticeable noise and vibration	Yes

Comment:

EF's

Rotation is correct?	N/A

Comment:

Belts are tight?

Comment:

N/A

Grease cup installed on hood fan?	N/A

Comment:

Hinge kit installed installed on hood fan?	N/A

Comment:

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

Comment:

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

Comment:

There is no major leakage around base of fan?	N/A

Comment:

Is the motor operating below the motor FLA rating?	N/A

Comment:	
For restroom fan(s) is the back draft damper installed and can it fully open?	N/A
Comment:	
Unit free of noticeable noise and vibration?	N/A
Comment:	
MUA	
Rotation is correct?	N/A
Comment:	
Gas piping is installed and valves are in on position?	N/A
Comment:	
Heater tested and is functional?	N/A
Comment:	
Internal motorized damper is fully opening?	N/A
Comment:	
Motor is operating below the FLA rating?	N/A
Comment:	
Unit free of noticeable noise and vibration?	N/A
Comment:	
HOODS	
Kitchen equipment installed in proper places?	N/A
Comment:	
Can kitchen equipment be turned on for final smoke test?	N/A
Comment:	

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

06-02-25 NIKE #214 PEARL, MS

CheckList Information

Name :	STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/27/2025 - Tara Metcalf - National TAB		
Completed Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	Yes
Comment:	
Is space comfortable in all areas?	Yes
Comment:	
Is the space free of ventilation noise?	Yes
Comment:	

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

Comment:

OUTSIDE AIR DAMPERS UNPLUGGED TO MITIGATE A BUILDING PRESSURE ISSUE. SEE ISSUES ABOVE.

06-02-25 NIKE #214 PEARL, MS

CheckList Information

Name :	STEP 4: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/27/2025 - Tara Metcalf - National TAB		
Completed Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

N/A

List smoke candle type used

Comment:

N/A

Smoke test capture - Perimeter of hood

Comment:

N/A

Smoke test capture - Top of cooking surface

Comment:

WITNESS

Date test was completed	N/A

Comment:

N/A

TAB tech name / Firm

Comment:

N/A

Site super name / Firm

Comment:

N/A

Owner representative name / Firm (if Applicable)

Comment:

N/A

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

Comment:

0.1" - SEE ISSUES ABOVE.

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

YES BUT BUILDING PRESSURE IS EXTREME. SUSPECTED THAT THE NIKE SPACE IS BEING PRESSURIZED BY THE ADJACENT SPACES IN THE STRIP MALL.

Thermostats are programmed?	Yes

Comment:

COMFORT SYSTEMS TECHNICIAN NOTED THEY WERE COMPLETED WHEN NTi BEGAN BALANCING.

06-02-25 NIKE #214 PEARL, MS

CheckList Information

Name :	STEP 5: FINAL DOCUMENTATION	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/27/2025 - Tara Metcalf - National TAB		
Completed Date :	06/09/2025 - Stephen Tassinaro - National TAB		

CheckList Item Details

FINAL DOCUMENTATION

Marked Data capture complete for all assets?	Yes
Comment:	
Picture file sent to processing team or uploaded?	Yes
Comment:	
Balance schedule complete and uploaded?	N/A
Comment:	
Prelim report generated and reviewed?	N/A
Comment:	

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

System/Unit: AHU/RTU

Asset: RTU1 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	0725P72286
Model Num	50FE-N12B3M6-3W4C0	50FE-N12A2M6A3W4A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	2.4
Motor Rpm	-	N/L
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	3.0

Drive Data	
	Actual
Motor Sheave SetPt	DIRECT DRIVE

Test Data		
	Design	**Actual**
SF CFM	3500	3501
SF RPM	-	1839
RA CFM	2700	2747
OA CFM	800	754
RL Voltage	-	481/483/480
RL Amperage	-	2.5/3.1/3.3
SF Rotation	-	CORRECT
SF System SetPt	-	89%
RA Damper Position	-	72%
Min OA Damper Position	-	28%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.67"
Fan Suction SP	-	-1.20"
Fan Discharge SP	-	0.98"
Total ESP	.90"	1.65"
Fan Total SP	-	2.18"

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

Completed By: Stephen Tassinaro on 06/09/2025

Notes:
LOW SPEED DAMPER 45%.

Written By: Stephen Tassinaro on 06/09/2025

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

System/Unit: AHU/RTU

Asset: RTU2 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	1225P73821
Model Num	50FE-N12B3M6-3W4C0	50FE-N14A2M6A3W4A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	3.0
Motor Rpm	-	N/L
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	3.5

Drive Data	
	Actual
Motor Sheave SetPt	DIRECT DRIVE

Test Data		
	Design	**Actual**
SF CFM	4000	4014
SF RPM	-	2132
RA CFM	3100	3113
OA CFM	900	901
RL Voltage	-	483/484/486
RL Amperage	-	3.3/3.5/3.7
SF Rotation	-	CORRECT
SF System SetPt	-	94%
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.82"
Fan Suction SP	-	-1.35"
Fan Discharge SP	-	1.04"
Total ESP	.90"	1.86"
Fan Total SP	-	2.39"

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

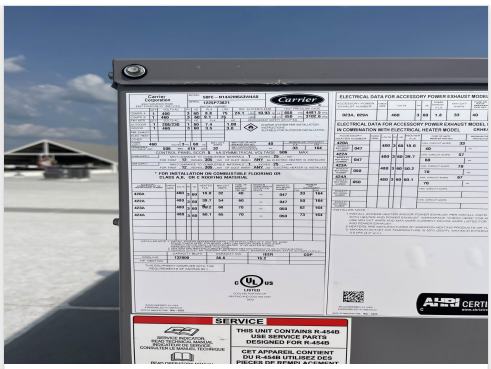
Completed By: Stephen Tassinaro on 06/04/2025

Notes:
LOW SPEED DAMPER 48%.

Written By: Stephen Tassinaro on 06/04/2025

Unit Data - PHOTO LOG

06/04/2025



06/04/2025

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

System/Unit: AHU/RTU

Asset: RTU3 AREA:FITTING ROOM/SALES

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	1225P73820
Model Num	50FE-N12B3M6-3W4C0	50FE-N14A2M6A3W4A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	3.0
Motor Rpm	-	N/L
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	3.5

Drive Data	
	Actual
Motor Sheave SetPt	DIRECT DRIVE

Test Data		
	Design	**Actual**
SF CFM	4000	3971
SF RPM	-	1931
RA CFM	3100	3104
OA CFM	900	867
RL Voltage	-	486/483/483
RL Amperage	-	3.2/3.4/3.7
SF Rotation	-	CORRECT
SF System SetPt	-	85%
RA Damper Position	-	67%
Min OA Damper Position	-	33%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.74"
Fan Suction SP	-	-1.37"
Fan Discharge SP	-	0.65"
Total ESP	.90"	1.39"
Fan Total SP	-	2.02"

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

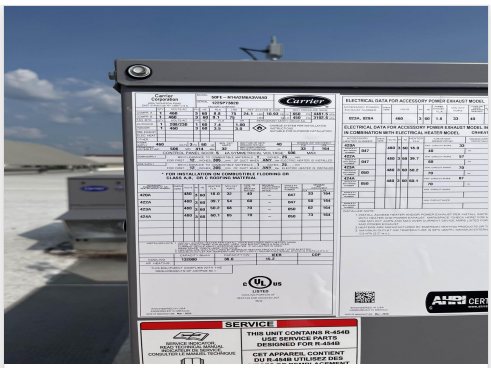
Completed By: Stephen Tassinaro on 06/04/2025

Notes:
LOW SPEED DAMPER 49%.

Written By: Stephen Tassinaro on 06/04/2025

Unit Data - PHOTO LOG

06/04/2025



06/04/2025

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

System/Unit: AHU/RTU

Asset: RTU4 AREA:JANITOR/MANAGER/AV ROOM

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	0425C08887
Model Num	50FE-B04B3M6-3W4C0	50FE-B04A2M6A3W4A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.5X14
Num Final Filter 1	-	2
Final Filter Size 1	-	16X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	0.70
Motor Rpm	-	N/L
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	1.2

Drive Data	
	Actual
Motor Sheave SetPt	DIRECT DRIVE

Test Data		
	Design	**Actual**
SF CFM	950	956
SF RPM	-	1578
RA CFM	825	842
OA CFM	125	114
RL Voltage	-	484/482/481
RL Amperage	-	0.7/0.7/0.7
SF Rotation	-	CORRECT
SF System SetPt	-	70%
RA Damper Position	-	90%
Min OA Damper Position	-	10%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.20"
Fan Suction SP	-	-0.34"
Fan Discharge SP	-	0.48"
Total ESP	.90"	0.68"
Fan Total SP	-	0.82"

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

Completed By: Stephen Tassinaro on 06/09/2025

National TAB

Project: 06-02-25 NIKE #214 PEARL, MS

System/Unit: AHU/RTU

Asset: RTU5 AREA:RESTROOMS/STOCKROOM

Unit Data		
	Design	**Actual**
MFG	CARRIER	CARRIER
Serial Num	-	0925C09486
Model Num	50FE-N07B3M6-3W4C0	50FE-N07A2M6A3W4A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.5X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X16X4

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	1.8
Motor Rpm	-	N/L
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	2.6

Drive Data	
	Actual
Motor Sheave SetPt	DIRECT DRIVE

Test Data		
	Design	**Actual**
SF CFM	1850	1685
SF RPM	-	2353
RA CFM	1525	1358
OA CFM	325	327
RL Voltage	-	484/485/483
RL Amperage	-	2.4/2.2/1.9
SF Rotation	-	CORRECT
SF System SetPt	-	93%
RA Damper Position	-	74%
Min OA Damper Position	-	26%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.96"
Fan Suction SP	-	-1.76"
Fan Discharge SP	-	1.03"
Total ESP	.90"	1.99"
Fan Total SP	-	2.79"

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

Completed By: Stephen Tassinaro on 06/09/2025

Notes:
LOW SPEED DAMPER 44%. / STATIC PRESSURES HIGH ON THIS UNIT DURING HIGH SPEED OPERATION. AIRFLOW VALIDATED TWICE TO ENSURE THIS WAS NOT AN ERROR. SEE ASSOCIATED ISSUE IN BEGINNING OF REPORT.

Written By: Stephen Tassinaro on 06/09/2025