

Report By:

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



**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 09/22/2023**

# PROJECT

**09-18-23 WALGREENS #3909 - ARLINGTON,  
TX**

3400 MATLOCK RD

ARLINGTON, TX 76015

## Client

Walgreens

200 WILMOT RD

DEERFIELD, IL 60015

## 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.

### Commissioning Activities

Equipment was inspected to ensure that the installation meets Walgreens requirements. Control and equipment setpoints were checked and after balancing was completed performance of each unit was verified. The full list of items that were verified along with any that failed are contained in the checklists in this report.

### 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 per Walgreens standards. Each outlet was then adjusted to within tolerance. 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. 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.

## Issue List

- EH-1 Motor Fault
- RTU 4 - IAQ Fault



**09-18-23 WALGREENS #3909 - ARLINGTON, TX**

**Project Issue Information**

**Issue Name :** EH-1 Motor Fault  
**Description :** EH-1 Motor Fault. Unit not operational, verified no power is at disconnect on roof. Unit is not getting power.  
**Created By :** National TAB                      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :** Urgent                                      **Asset Tag :**  
**Originated Date :** 09/23/2023 - Darius Payne - National TAB

Project Issue File Details

- 1. [Open](#) IMG\_2340.mp4  
09/23/2023



553963D5\_AE3F\_4B61\_B5..  
09/23/2023



25E654CF\_CA04\_4E40\_A5..  
09/23/2023

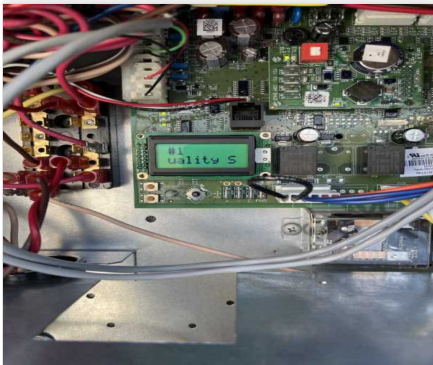


**09-18-23 WALGREENS #3909 - ARLINGTON, TX**

**Project Issue Information**

**Issue Name :** RTU 4 - IAQ Fault  
**Description :** RTU 4 - Control board displaying IAQ Fault during TAB inspection.  
**Created By :** National TAB                      **Assigned To :** National TAB - Will Turnbough  
**Status :** Open  
**Priority :**    **Asset Tag :**  
**Originated Date :** 09/23/2023 - Darius Payne - National TAB

Project Issue File Details



**A58BDF07\_7B8A\_47BF\_BD..**  
**09/23/2023**



**136BFECA\_5785\_4825\_9C..**  
**09/23/2023**



**F2B06BCE\_0DBE\_47F0\_9E..**  
**09/23/2023**

## CheckList List

- TECH - 01 RTU INSTALLATION CHECKLIST
- TECH - 02 EXHAUST FANS INSPECTIONS
- TECH - 03 START-UP CONTROLS PROGRAMMING
- TECH - 04 EMS/SENSOR VALIDATION
- TECH - 05 TAB CHECKLIST
- TECH - 06 FUNCTIONAL TESTS
- TECH - 07 TEMPERATURE SETPOINTS
- TECH - 08 ENTRANCE HEATERS



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 01 RTU INSTALLATION CHECKLIST **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB  
**Completed Date :** 09/21/2023 - Darius Payne - National TAB

### CheckList Item Details

#### General / Exterior Inspections

Verify all required equipment has been replaced per TA and BOM. Pass

**Comment:**

Verified all new equipment per Submittal report for each RTU & EH.

All units are installed in the proper locations Pass

**Comment:**

Units installed on rooftop as shown on design plan.

Units are labeled correctly Pass

**Comment:**

All RTU units properly labeled.

Asset tag installed Pass

**Comment:**

Asset tags installed on Units.

Roof is clear of debris. Pass

**Comment:**

Rooftop verified clear of debris.

Maintenance access for all unit access panels is acceptable and panels open freely. Pass

**Comment:**

Yes, access for maintenance per pan opens freely.

Cabinet and general installation is complete. Pass

**Comment:**

Yes, both cabinet & general installation is completed.

Unit is secure to curb and level horizontally and vertically. Pass

**Comment:**

Yes, units are secure to curb & level.

Access doors close tightly with no leaks Pass

**Comment:**

All access doors sealed without leakage.

Condensate and gas piping is properly supported. Pass

**Comment:**

Piping property supported.

Costguard is installed per scope of work and piping unions are cemented.

**Comment:**

Yes, Costguard is installed per scope of work with cemented piping unions.

Additional Comments

**Comment:**

RTU 3 condensation drain clogged.

**Interior Inspections**

Fan rotation is correct Pass

**Comment:**

Fan rotations are correct on each RTU. Rotation id clockwise facing blower motor at each unit.

Pulleys are correctly aligned and both motor and fan sheave pins are tightened in place. Pass

**Comment:**

RTU 3 for pharmacy required pulled adjustment to center belt adjust RPM's. All other units aligned with pins in place.

Return air and outside air dampers close tightly with no gaps Pass

**Comment:**

Yes, all RTU dampers close tightly with no additional gaps in place.

Cabinet and coils are not damaged and in like new condition. Pass

**Comment:**

Yes, cabinet & coils undamaged in new condition(s).

Inside of unit is clean and clear of debris. Pass

**Comment:**

Yes, internals of all RTU's are clear of debris.

Validate condensate is piped to splash block, draing, or roof drain per code requirements Fail

**Comment:**

RTU 3 condensation drain clogged.

Verify filters are installed, clean and of proper size. Verify there is no air by-pass around filters. Pass

**Comment:**

Yes, all RTU filters are properly sized without air by-pass.

Curb is sealed with no air leakage. Pass

**Comment:**

Yes, all RTU curbs are clear of air leaks.

Additional Comments:

**Comment:**

RTU 3 Condensate drain line to roof runoff is clogged. Creating water build up around Pharmacy.

**Fire/Smoke Alarm Systems**

In duct smoke detectors are installed Pass

**Comment:**

Yes, in duct smoke detectors installed in each RTU.

Fire alarm panel status (visual inspection where possible)

**Comment:**

Fire alarm panel status operational during inspection.

Additional Comments:

**Comment:**

---

**Electrical**

---

Electrical wiring is complete with no visible damage

Pass

**Comment:**

Yes, all electrical wiring secured and complete during inspection.

---

Electrical connections are tight with sealtight around any unit penetrations.

Pass

**Comment:**

Yes, all electrical connections tight with seal tight parameters.

---

Disconnect switch is installed in accessible location near or on unit.

Pass

**Comment:**

Yes, disconnect switch installed and accessible at each RTU.

---

Verify overcurrent protection is HACR type, installed and sized correctly and labeled in panel.

**Comment:**

Yes, overcurrent protection installed correctly & labeled within panel.

---

Maintenance electrical outlet is installed and functional.

Pass

**Comment:**

Yes, maintenance electrical outlet installed & tested at each unit.

---

Main distribution panel is labeled correctly.

Pass

**Comment:**

Yes, main distribution panel per RTU's labeled accurately.

---

Unit ground wire is secured.

Pass

**Comment:**

Yes, unit ground properly secured.

---

Additional Comments:

**Comment:**

None.



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 02 EXHAUST FANS INSPECTIONS **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB  
**Completed Date :** 09/21/2023 - Darius Payne - National TAB

### CheckList Item Details

Fan rotation is correct Pass

**Comment:**

Yes, all exhaust fan rotations verified as correct.

Pulleys are aligned and belts are tensioned properly

**Comment:**

N/A, All units are Direct Driven.

Speed controller installed and functional (direct drive)

**Comment:**

Yes, speed controllers installed & functional.

Fan is secured to the curb Pass

**Comment:**

All fans secured to curb during inspection.

Back draft damper is installed and functional Pass

**Comment:**

Back Draft damp installed & operational during inspection.

No exterior damage to the fan Pass

**Comment:**

No exterior fan damage found during inspection.

No unusual noise or vibration

Pass

**Comment:**

No abnormalities notes during inspection.

Controls are functional

Pass

**Comment:**

All controls functional during TAB Inspection.

Additional Comments:

**Comment:**

4 Total Exhaust Fans & 1 EH located during TAB Inspection. Versus 5 shown on plan.

**Notes/Comments :**

EF-4 shut off by mechanical contractor per management request. Unit now serves the Management Office.

**Date :**09/21/2023



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 03 START-UP CONTROLS PROGRAMMING **Status :** Not Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

### CheckList Item Details

**Programming: SE 3.3, 3.4, 4.0**

---

Controller-Network-Address: RTU number + 3 Pass

**Comment:**

---

Controller-Network-FCBusMode = Wired Field Bus Pass

**Comment:**

---

Controller-Network-BaudRate = Auto Pass

**Comment:**

---

Controller-Network-Device ID = RTU number + 3 Pass

**Comment:**

---

Details-Occ-OffDurUnocc = No Pass

**Comment:**

---

Details-Clg-Setup-Clg-En = Yes Pass

**Comment:**

---

Details-Clg-Setup-ClgAdapTunEn = Yes

Pass

**Comment:**

Details-Htg-Setup-Htg-En = Yes

Pass

**Comment:**

Details-Htg-Setup-#HtgStgs = 2 Stages

Pass

**Comment:**

Details-Htg-Setup-HtgAdapTunEn = Yes

Pass

**Comment:**

Details-Htg-Setup-#GasVlvs = 1 (Set to 0 for Hp and Elect Heat)

Pass

**Comment:**

Details-Fan-Setup-Fan Ctl-Type = No VFD select "Single Speed", W/VFD select "Fixed Variable"

Pass

**Comment:**

RTU 1 & 2 are at "Fixed Variable, RTU 3 & 4 set at "Single Speed."

Details-Fan-Setup-FanOnOcc = Yes

Pass

**Comment:**

Details-Fan-Setup-FanOnDlyHeat = 30s (Set to 0 for HP or Electric Heat)

Pass

**Comment:**

Details-Fan-Setup-FanOnly-%Cmd = 50%

Pass

**Comment:**

Details-Fan-Setup-1ClgStg-%Cmd = 70%

Pass

**Comment:**

Details-Fan-Setup-2Clgstg-%Cmd = 100% (2stage Unit) or 80% (3 and 4 stage)

Pass

**Comment:**

Details-Fan-Setup-3ClStg-%Cmd = 100% (3 stage unit) or 90% (4 stage)

Pass

**Comment:**

Details-Fan-Setup-4ClStg-%Cmd = 100% (4 Stage unit)

Pass

**Comment:**

Details-Fan-Setup-1HtgStg-%Cmd = 100%

Pass

**Comment:**

Details-Fan-Setup-2HtgStg-%Cmd = 100%

Pass

**Comment:**

Details-Econ-Setup-Econ-En = Yes

Pass

**Comment:**

Details-Econ-Setup-Econ-MinPos = Set to minimum outside air requirements.

Pass

**Comment:**

Min Pos set at 10%.

Details-Econ-Setup-LowSpdFan-MinPos = Set minimum 1% above EconMinPos

Pass

**Comment:**

Details-Econ-Setup-FreeClg-Sel = Single Enthalpy

Pass

**Comment:**

Details-Econ-Setup-EconOAEth-Sp 4= 24 Btu/lb

Pass

**Comment:**

Details-Econ-Setup-Dvent-Mode = Enable

Pass

**Comment:**

Details-Econ-Setup-DventMaxEconPos = 50%

Pass

**Comment:**

---

Details-Econ-Setup-DventIAP-Sp = 1000

**Comment:**

---

Details-Econ-Setup-EconFltDetectEn = Enable

**Comment:**

---

Additional Comments:

**Comment:**

---

**Non ZR Units only:**

---

Details-HGR-Setup-HGR-En = No

**Comment:**

---

Details-HGR-Setup-HGRAlt-En = No

**Comment:**

---

Details - HGR-Setup-HGRUnocc-En = No

**Comment:**

---

Details-HGR-Setup-Mode = No

**Comment:**

---

Additional Comments:

**Comment:**

---

**ZR Units - Reheat Units only:**

---

Details-HGR-Setup-HGR-En = Yes

**Comment:**

---

Details-HGR-Setup-HGRAlt-En = Yes

**Comment:**

---

Details - HGR-Setup-HGRUnocc-En = Yes

**Comment:**

---

Details-HGR-Setup-Mode = No

**Comment:**

---

Additional Comments:

**Comment:**

---



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 04 EMS/SENSOR VALIDATION      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

### CheckList Item Details

RTU supply air temp sensor location located per start-up binder.

**Comment:**

RTU return air temp sensor location located per start-up binder.

**Comment:**

RTU return air smoke detector (when applicable) is located per start-up binder.

**Comment:**

Space temperature sensor has been replaced and location meets requirements.

**Comment:**

Space humidity sensor has been replaced and location meets requirements.

**Comment:**

Unit is being controlled by a space temperature sensor or thermostat

**Comment:**

EMS has been connected and validated with TOC or Gridpoint. Screen shot is available.

**Comment:**

No splicing of EMS/Sensor/Thermostat wiring is visible

**Comment:**

(If Applicable) 2 Stage Thermostat to SE Board Control Wiring meets detail in start-up binder.

**Comment:**

(If Applicable) 2 Stage Thermostat to 4 Stage Unit meets detail in start-up binder.

**Comment:**

(If Applicable) 4 Stage Thermostat to 4 Stage Unit meets detail in start-up binder.

**Comment:**

(If Applicable) 3 Stage Thermostat wiring meets detail in start-up binder.

**Comment:**

(If Applicable) 3 Stage Thermostat with Humidity sensor wiring meets detail in start-up binder.

**Comment:**

(If Applicable) EH Thermostat with SCR control wiring meets detail in start-up binder.

**Comment:**

Temperature setpoints are set for correction region and space (see ASHRAE / temperature setpoint chart in procedure)

**Comment:**

Additional Comments:

**Comment:**



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 05 TAB CHECKLIST **Status :** Not Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

### CheckList Item Details

Outside air damper set to minimum air flow requirement and damper position marked.

**Comment:**

Total Supply, return, and outside air volumes meet design tolerances (+/-10%)

**Comment:**

Enclosed area diffusers (Pharmacies, manager office, employee room, restrooms, electrical rooms) balanced within +/-10%?

**Comment:**

Open area diffusers (Sales floor and stock room) balanced within +/-25% of design?

**Comment:**

Store pressure meets tolerances (see formula in balance schedule). Make sure to account for existing exhaust fans airflows as shown on original drawings that are non-functioning.

**Comment:**

Outside air and return air dampers modulate freely.

**Comment:**

Start-up report from the installing contractor is reviewed and all information if filled out. All required measurements are within typical ranges.

**Comment:**

---

(If Applicable) VFD is set-up and operational. (N/A = not applicable)

**Comment:**

---

Verify amp draw of motor is within unit specification, not operating in overramped condition.

**Comment:**

---

Sales floor temperature and humidity measurement

**Comment:**

---

Pharmacy temperature and humidity measurement

**Comment:**

---

Stock Room temperature and humidity measurement

**Comment:**

---

Outdoor air temperature and humidity measurement

**Comment:**

---

Additional Comments:

**Comment:**

---



## 09-18-23 WALGREENS #3909 - ARLINGTON, TX

### CheckList Information

**Name :** TECH - 06 FUNCTIONAL TESTS      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

### CheckList Item Details

#### Cooling Functional Test

Overwrite the thermostat or sensor to put the unit into cooling mode.      Pass

**Comment:**

Compressors enable.      Pass

**Comment:**

If fan has VFD, the fan increases speed.      N/A

**Comment:**

Document the discharge air temperature.

**Comment:**

After 10 minutes, Discharge air temperature is below 55 degrees.

**Comment:**

Cooling mode is operational      Pass

**Comment:**

Additional Comments:

**Comment:**

---

**Heating Functional Test**

---

Overwrite the thermostat or sensor to put the unit into heating mode.

Pass

**Comment:**

---

Heat exchanger enables.

Pass

**Comment:**

---

If fan has VFD, the fan increases speed.

N/A

**Comment:**

---

Document the discharge air temperature.

**Comment:**

---

After 10 minutes, Discharge air temperature is above 85 degrees.

**Comment:**

---

Heating mode is operational

Pass

**Comment:**

---

Additional Comments

**Comment:**

---

**Dehumidification Functional Test**

---

Overwrite the humidistat to put the unit into dehumidification mode.

**Comment:**

---

Compressors enable.

**Comment:**

---

Hot Gas Reheat Valve opens

**Comment:**

---

If fan has VFD, the fan increases speed.

**Comment:**

---

Document the discharge air temperature.

**Comment:**

---

Dehumidification Mode is operational. (Pass/Fail/NA)

**Comment:**

---

Additional Comments:

**Comment:**

---

**Economizer Functional Test**

---

Override the humidistat to put the unit into economizer mode.

Pass

**Comment:**

---

Humidistat override for economizer mode functional.

---

Economizer modulates from minimum position to 100% open. (Pass/Fail/NA)

**Comment:**

---

Yes, economizer modulates from 0-100%open.

---

Additional Comments:

**Comment:**

---



**09-18-23 WALGREENS #3909 - ARLINGTON, TX**

**CheckList Information**

**Name :** TECH - 07 TEMPERATURE SETPOINTS      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

**CheckList Item Details**

Temperature setpoints must be set using provided charts are based on state and space that each RTU serves. Confirm with controls company that these are set correctly

**Comment:**



### 09-18-23 WALGREENS #3909 - ARLINGTON, TX

#### CheckList Information

**Name :** TECH - 08 ENTRANCE HEATERS **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/14/2023 - Brianna Biggs - National TAB

**Completed Date :** 09/21/2023 - Darius Payne - National TAB

#### CheckList Item Details

Sensor is located within 15' of entrance area Pass

**Comment:**

Yes, right of main entrance on wall.

Confirm proper operation of entrance heater and associated controls Fail

**Comment:**

Entrance heater non-responsive to calls for heat. Contactors close & motor buzzes without operation.

Balance supply air quantity to manufacturer recommended supply airflow. Fail

**Comment:**

Unable to test due to non-responsive fan motor.

Confirm listed temperature rise and discharge air temperature based on approved BOM/submittal Fail

**Comment:**

Unable to test due to non-responsive fan motor.

**Notes/Comments :**

EH-1 serving main entrance non-responsive during TAB. Due to fan motor fault.

**Date :**09/21/2023



# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: AHU/RTU



Asset: EH1

AREA:

Unit Data		
	Design	Actual
MFG	REZNOR	REZNOR
Serial Num	-	
Model Num	RGB175	RGB175
Type	-	
Configuration	-	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Test Data		
	Design	Actual
SF CFM	1500	
SF RPM	760	
RA CFM	-	
OA CFM	-	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1/2	
Motor Rpm	-	
Phase	1	
Rated Voltage	120	
Rated Amperage	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

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

General		
	Design	Actual
Fan Rotation Correct	-	
Unit Filters Clean	-	
Condensate Drain Installed	-	

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: AHU/RTU



Asset: RTU1

AREA:

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	6300	6220
Serial Num	-	N2G3760769	SF RPM	1017	1437
Model Num	AW18N3DQ4S1ARS32A2	AW18N3DQ4S1CQS32A2	RA CFM	5500	5415
Type	RTU	RTU	OA CFM	800	805
Configuration	VERTICAL	VERTICAL	RL Voltage	-	481/485/486
Num OA Filters 1	-	2	RL Amperage	-	5.4/5.2/5.1
OA Filter Size 1	-	33X22	SF Rotation	-	CW
Num Final Filter 1	-	9	RA Damper Position	-	90%
Final Filter Size 1	-	16X25	Min OA Damper Position	-	10%
			Min OA Damper Type	-	MOTORIZED
			OA Enthalpy Setpt	-	55

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184TZ
Horsepower	7.5	5
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	6.7

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45
Fan Suction SP	-	-0.71
Fan Discharge SP	-	0.57
Total ESP	1.2"	1.02
Fan Total SP	-	1.28

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP71
Motor Bore Size	-	1 3/8"
Motor Sheave SetPt	-	2 TURNS OUT
Fan Sheave Size	-	1B5V94
Fan Sheave Bore	-	1 7/16"
Belt CL Distance	-	12 1/4"
Num of Belts	-	1
Belt Size	-	BX47
Belt Alignment	-	CENTER

General		
	Design	Actual
Fan Rotation Correct	-	Y
Unit Filters Clean	-	Y
Condensate Drain Installed	-	Y

Completed By: Bayley Morvant on 05/20/2024

Notes:  
 ORIGINAL DESIGN OF 8,080 CFM WAS ADJUSTED TO 6,300 CFM.  
 DIFFUSER DESIGNS WERE ADJUSTED TO ACHIEVE NEW TOTAL DESIGN CFM.  
 DESIGN CFM OBTAINED WHILE UNIT WAS OPERATING AT 48 HZ.  
 CONTROL ERROR: INDOOR AIR QUALITY SENSOR FAILURE.

Written By: Bayley Morvant on 05/20/2024

# National TAB

Project:09-18-23 WALGREENS #3909 - ARLINGTON, TX

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	SALES	NA	24X6	171	95	169	98.8
SGRD2	SALES	NA	24X6	171	145	184	107.6
SGRD3	SALES	NA	24X6	171	56	156	91.2
SGRD4	SALES	NA	24X6	171	11	161	94.2
SGRD5	CUSTOMER SERVICE	NA	9X9	225	225	247	109.8
SGRD6	PASSAGE 2	NA	12X12	347	210	314	90.5
SGRD7	PASSAGE 2	NA	12X12	343	244	353	102.9
SGRD8	FFICE	NA	15X15	390	253	366	93.8
SGRD9	PHOTO	NA	18X18	631	433	627	99.4
SGRD10	SALES	NA	1X818	920	565	831	90.3
SGRD11	SALES	NA	18X18	920	532	845	91.8
SGRD12	SALES	NA	18X18	920	665	964	104.8
SGRD13	SALES	NA	18X18	920	858	1003	109.0
Total				6300	4292	6220	98.73%

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: AHU/RTU



Asset: RTU2

AREA:

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	5250	5209
Serial Num	-	N2G3760771	SF RPM	996	1009
Model Num	AW15N3DQ4S1AES62A2	AW15N3DQ4S1CDS62A2	RA CFM	4200	4083
Type	RTU	RTU	OA CFM	1050	1126
Configuration	VERTICAL	VERTICAL	RL Voltage	-	462/464/461
Num OA Filters 1	-	2	RL Amperage	-	5.1/5.4/5.7
OA Filter Size 1	-	32X22	SF Rotation	-	CW
Num Final Filter 1	-	9	RA Damper Position	-	95%
Final Filter Size 1	-	16X25	Min OA Damper Position	-	5%
			Min OA Damper Type	-	MOTORIZED
			OA Enthalpy Setpt	-	55

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	6.7

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.43
Fan Suction SP	-	-0.69
Fan Discharge SP	-	0.92
Total ESP	1.0"	1.35
Fan Total SP	-	1.61

Drive Data		
	Design	Actual
Motor Sheave Size	-	4 3/4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	1/2 TURN OUT
Fan Sheave Size	-	1B5V74
Fan Sheave Bore	-	1 7/16"
Belt CL Distance	-	11 3/4"
Num of Belts	-	1
Belt Size	-	BX40
Belt Alignment	-	CENTER

General		
	Design	Actual
Fan Rotation Correct	-	Y
Unit Filters Clean	-	Y
Condensate Drain Installed	-	Y

Completed By: Bayley Morvant on 05/20/2024

Notes:

ORIGINAL DESIGN OF 4,895 CFM WAS ADJUSTED TO 5,250 CFM.

DIFFUSER DESIGNS WERE ADJUSTED TO ACHIEVE NEW TOTAL DESIGN CFM.

DESIGN CFM OBTAINED WHILE UNIT WAS OPERATING AT 60Hz.

DIFFUSERS #3 AND #5 ARE NOT EQUIPTED WITH A DAMPER TO LOWER CFM TO AREA SERVED.

CONTROL ERROR: C1 SHUTDOWN EXCEEDED OP ENV LIMITS. UNIT STILL OPERATING IN COOLING MODE.

Written By: Bayley Morvant on 05/20/2024

# National TAB

Project:09-18-23 WALGREENS #3909 - ARLINGTON, TX

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	SALES		18X18	1150	397	1039	90.3
SGRD2	SALES		18X18	1150	414	1100	95.7
SGRD3	VALUABLE RM		6X6	80	123	281	351.3
SGRD4	PASSAGE 1		12X12	390	108	243	62.3
SGRD5	EMPLOYEE RM		9X9	180	103	288	160.0
SGRD6	SALES		18X18	1150	474	1156	100.5
SGRD7	SALES		18X18	1150	440	1102	95.8
Total				5250	2059	5209	99.22%

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: AHU/RTU



Asset: RTU3

AREA:PRIVATE HEALTH ROOM

Unit Data		
	Design	Actual
MFG	YORK	YORK
Serial Num	-	N2E3656499
Model Num	ZJ037N08D4B5HAA2A4	ZJ061N08D4B5DCA2R4
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	22X30
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24

Test Data		
	Design	Actual
SF CFM	1900	1924
SF RPM	-	853
RA CFM	1750	1924
OA CFM	0	0
RL Voltage	-	485/485/483
RL Amperage	-	3.1/3.1/3.1
SF Rotation	-	CW
RA Damper Position	-	100%
Min OA Damper Position	-	0%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	55

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	1.50	2
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	460	208-230/460
Rated Amperage	-	8.2-8.4/4.2

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.27
Fan Suction SP	-	-0.40
Fan Discharge SP	-	0.50
Total ESP	1.2"	0.77
Fan Total SP	-	0.90

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP44
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	2 TURMS OUT
Fan Sheave Size	-	7 3/4"
Fan Sheave Bore	-	1"
Belt CL Distance	-	17.5"
Num of Belts	-	1
Belt Size	-	A50
Belt Alignment	-	VERIFIED

General		
	Design	Actual
Fan Rotation Correct	-	Y
Unit Filters Clean	-	Y
Condensate Drain Installed	-	Y

Completed By: Bayley Morvant on 05/20/2024

# National TAB

Project:09-18-23 WALGREENS #3909 - ARLINGTON, TX

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU3/PRIVATE HEALTH ROOM

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	PHARMACY LOBBY	1924	9X9	165	301	164	99.4
SGRD2	PHARMACY	0.82	12X12	270	310	271	100.4
SGRD3	PHARMACY		12X12	270	291	282	104.4
SGRD4	PHARMACY		12X12	270	343	264	97.8
SGRD5	PHARMACY		12X12	270	293	286	105.9
SGRD6	PHARMACY		18X18	505	348	503	99.6
SGRD7	PRIVATE HEALTH ROOM		8	150	157	154	102.7
Total				1900	2043	1924	101.26%

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: AHU/RTU



Asset: RTU4

AREA:

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	1050	1061
Serial Num	-	N2C3531922	SF RPM	-	551
Model Num	ZJ061N08D4B5HAA2A4	ZJ037N08D4B5GCA2R4	RA CFM	1050	844
Type	RTU	RTU	OA CFM	200	217
Configuration	VERTICAL	VERTICAL	RL Voltage	-	484/484/479
Num OA Filters 1	-	1	RL Amperage	-	1.9/1.8/1.7
OA Filter Size 1	-	30x22	SF Rotation	-	CW
Num Final Filter 1	-	4	RA Damper Position	-	85%
Final Filter Size 1	-	16x25	Min OA Damper Position	-	15%
			Min OA Damper Type	-	MOTORIZED
			OA Enthalpy Setpt	-	55

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56HZ
Horsepower	2	1.5
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	2.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.06
Fan Suction SP	-	-0.15
Fan Discharge SP	-	0.18
Total ESP	1.2"	.024
Fan Total SP	-	0.33

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VL44
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	2.5 TURNS OUT
Fan Sheave Size	-	BK130
Fan Sheave Bore	-	1"
Belt CL Distance	-	15.5"
Num of Belts	-	1
Belt Size	-	A56
Belt Alignment	-	VERIFIED

General		
	Design	Actual
Fan Rotation Correct	-	Y
Unit Filters Clean	-	Y
Condensate Drain Installed	-	Y

Completed By: Bayley Morvant on 05/20/2024

Notes:

CONTROL ERROR: SPACE TEMP SENSOR FAILURE, UNIT IS USING RETURN TEMP SENSOR TO CONTROL.

Written By: Bayley Morvant on 05/20/2024

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: FAN - Exhaust



Asset: EF1

AREA:WOMENS RR

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	SP-127	NL
Serial Num	-	NL
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	60HZ
Horsepower	190W	1/5
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.0
Service Factor	-	NL

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

Test Data		
	Design	Actual
CFM	300	242
Fan RPM	1580	LOW
Fan Rotation	-	CCW
Motor RPM	-	LOW
RL Voltage	-	120,120
RL Amperage	-	1.5,1.7
Suction ESP	-	ATM
Discharge ESP	-	ATM
Total ESP	0.375"	ATM

Completed By: Darius Payne on 09/19/2023

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: FAN - Exhaust



Asset: EF2

AREA:MENS RR

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	SP-127	DX11Q
Serial Num	-	G23PZ33840
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	60HZ
Horsepower	120W	1/5
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.0
Service Factor	-	NL

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD

Test Data		
	Design	Actual
CFM	240	244
Fan RPM	1000	LOW
Fan Rotation	-	CCW
Motor RPM	-	LOW
RL Voltage	-	120,119
RL Amperage	-	1.4,1.6
Suction ESP	-	ATM
Discharge ESP	-	ATM
Total ESP	0.375"	ATM

Completed By: Darius Payne on 09/19/2023

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: FAN - Exhaust



Asset: EF3

AREA: BREAK ROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	SP-150	DX11Q
Serial Num	-	Q23PZ33837
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	60HZ
Horsepower	120W	1/5
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.0
Service Factor	-	NL

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

Test Data		
	Design	Actual
CFM	240	344
Fan RPM	1000	MEDIUM
Fan Rotation	-	CCW
Motor RPM	-	LO
RL Voltage	-	1.8,2.0
RL Amperage	-	119,120
Suction ESP	-	ATM
Discharge ESP	-	ATM
Total ESP	0.375"	ATM

Completed By: Darius Payne on 09/19/2023

# National TAB

Project: 09-18-23 WALGREENS #3909 - ARLINGTON, TX

## System/Unit: FAN - Exhaust



Asset: EF4

AREA:OFFICE

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	G-85-G	DX11Q
Serial Num	-	G23PZ33839
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	60HZ
Horsepower	1/30	1/5
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.0
Service Factor	-	NL

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

Test Data		
	Design	Actual
CFM	300	324
Fan RPM	1300	LO
Fan Rotation	-	CCW
Motor RPM	-	MEDIUM
RL Voltage	-	121,120,
RL Amperage	-	2.1,2.2
Suction ESP	-	ATM
Discharge ESP	-	ATM
Total ESP	0.125"	ATM

Completed By: Darius Payne on 09/19/2023