Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 08/09/2023

PROJECT

07-17-23 WALGREENS #9075 - MCALLEN, TX

701 E NOLANA AVE

MCALLEN, TX

Client

Walgreens

200 WILMOT RD

DEERFIELD, IL 60015

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

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.

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.

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	GEN. SALES	3500	3507	3200	3195	300	312	8.6%	8.9%						
RTU-2	FRONT SALES	2625	2816	2425	2598	200	218	7.6%	7.7%						
RTU-3	REAR SALES	3500	3461	3200	3143	300	318	8.6%	9.2%						
RTU-4	PHARMACY	1750	1841	1750	1841	0	0	0.0%	0.0%						
RTU-5	STOCKROOM	1050	1060	1000	1005	50	55	4.8%	5.2%						
RTU-6	PHOTO	1400	1534	1290	1422	110	112	7.9%	7.3%						
EF-1	OFFICE													850	872
TOTALS		13825	14219	12865	13204	960	1015			0	0	0	0	850	872

TOTALS	DESIGN	ACTUAL
TOTAL OA	960	1015
TOTAL EXHAUST	850	872
NET AIRFLOW	110	143

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0071"
SIDE	
REAR	
AVERAGE	**0.0071**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

CheckList List

- 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
- TECH - SITE PICTURES

07-17-23 WALGREENS #9075 - MCALLEN, TX

CheckList Information

Name :	TECH - 01 RTU INSTALLATION CHECKLIST	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

General / Exterior Inspections

Verify all required equipment has been replaced per TA and BOM.	Pass
Comment:	
All units are installed in the proper locations	Pass
Comment:	
Units are labeled correctly	Pass
Comment:	
Asset tag installed	Pass
Comment:	
Roof is clear of debris.	Pass
Comment:	
Maintenance access for all unit access panels is acceptable and panels open freely.	Pass
Comment:	

Cabinet and general installation is complete.	Pass
Comment:	
Unit is secure to curb and level horizontally and vertically.	Pass
Comment:	
Access doors close tightly with no leaks	Pass
Comment:	
Condensate and gas piping is properly supported.	Pass
Comment:	
Costgaurd is installed per scope of work and piping unions are cemented.	Pass
Comment:	
Additional Comments	
Comment:	
Interior Inspections	
Fan rotation is correct	Pass
Comment:	
Pulleys are correctly aligned and both motor and fan sheave pins are tightened in place.	Pass
Comment:	
Return air and outside air dampers close tightly with no gaps	Pass
Comment:	
Cabinet and coils are not damaged and in like new condition.	Pass
Comment:	
Inside of unit is clean and clear of debris.	Pass

Comment:

Validate condesate is piped to splash block, draing, or roof drain per code requirements	Pass

Comment:

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

Comment:

Curb is sealed with no air leakage.	Pass

Comment:

Additional Comments:

Comment:

Fire/Smoke Alarm Systems

In duct smoke detectors are installed	Pass

Comment:

Fire alarm panel status (visual inspection where possible)

Comment:

Additional Comments:

Comment:

Electrical

Electrical wiring is complete with no visible damage	Pass

Comment:

Electrical connections are tight with sealtight around any unit penetrations.	Pass

Comment:

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

Comment:

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

Comment:

Maintenance electrical outlet is installed and functional.	Pass

Comment:

Main distribution panel is labeled correctly.	Pass

Comment:

Unit ground wire is secured.	Pass

Comment:

Additional Comments:

Comment:

07-17-23 WALGREENS #9075 - MCALLEN, TX

CheckList Information

Name :	TECH - 02 EXHAUST FANS INSPECTIONS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

Fan rotation is correct	Pass

Comment:

Pulleys are aligned and belts are tensioned properly

Comment:

NA - DD UNIT

Speed controller installed and functional (direct drive)

Comment:

YES

Fan is secured to the curb	Pass

Comment:

Back draft damper is installed and functional	N/A

Comment:

No exterior damage to the fan	Pass

Comment:

No unusual noise or vibration	Pass
Comment:	

Controls are functional	Pass
Comment:	

Additional Comments:
Comment:

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CheckList Information

Name :	TECH - 03 START-UP CONTROLS PROGRAMMING	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - 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:	
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:

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

Comment:

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

Comment:

Details-Econ-Setup-EconOAEnth-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	Pass

Comment:

Details-Econ-Setup-EconFltDetectEn = Enable	Pass

Comment:

Additional Comments:

Comment:

Non ZR Units only:

Details-HGR-Setup-HGR-En = No	Pass

Comment:

Details-HGR-Setup-HGRAlt-En = No	Pass

Comment:

Details - HGR-Setup-HGRUnocc-En = No	Pass

Comment:

Details-HGR-Setup-Mode = No	Pass

Comment:

Additional Comments:

Comment:

ZR Units - Reheat Units only:

Details-HGR-Setup-HGR-En = Yes	N/A

Comment:

Details-HGR-Setup-HGRAlt-En = Yes	N/A

Comment:

Details - HGR-Setup-HGRUnocc-En = Yes	N/A

Comment:

Details-HGR-Setup-Mode = No	N/A

Comment:

Additional Comments:

Comment:

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CheckList Information

Name :	TECH - 04 EMS/SENSOR VALIDATION	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

RTU supply air temp sensor location located per start-up binder.	Pass
Comment:	
RTU return air temp sensor location located per start-up binder.	Pass
Comment:	
RTU return air smoke detector (when applicable) is located per start-up binder.	Pass
Comment:	
Space temperature sensor has been replaced and location meets requirements.	Pass
Comment:	
Space humidity sensor has been replaced and location meets requirements.	Pass
Comment:	
Unit is being controlled by a space temperature sensor or thermostat	Pass
Comment:	
EMS has been connected and validated with TOC or Gridpoint. Screen shot is available.	Pass

Comment:

No splicing of EMS/Sensor/Thermostat wiring is visible	Pass

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)	Pass

Comment:

Additional Comments:

Comment:

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CheckList Information

Name :	TECH - 05 TAB CHECKLIST	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

Outside air damper set to minimum air flow requirement and damper position marked.	Pass
Comment:	
Total Supply, return, and outside air volumes meet design tolerances (+/-10%)	Pass
Comment:	
Enclosed area diffusers (Pharmacies, manager office, employee room, restrooms, electrical rooms) balanced within +/-10%?	Pass
Comment:	
Open area diffusers (Sales floor and stock room) balanced within +/-25% of design?	Pass
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.	Pass
Comment:	
Outside air and return air dampers modulate freely.	Pass
Comment:	

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

Comment:

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

Comment:

YES

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

Comment:

Sales floor temperature and humidity measurement

Comment:

74.2 F / 53.9%RH

Pharmacy temperature and humidity measurement

Comment:

72.2 F / 48.8%RH

Stock Room temperature and humidity measurement

Comment:

75.0 F / 60.2%RH

Outdoor air temperature and humidity measurement

Comment:

101 F / 37.3%RH

Additional Comments:

Comment:

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CheckList Information

Name :	TECH - 06 FUNCTIONAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/20/2023 - Ian Fuller - 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.	Pass
Comment:	
Document the discharge air temperature.	
Comment:	
After 10 minutes, Discharge air temperature is below 55 degrees.	Pass
Comment: RTU1: 54.1 / RTU2: 53.1 F / RTU3: 54.8 / RTU4: 54.0 / RTU5: 53.7 / RTU6: 55.0	
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.	Pass

Comment:

Document the discharge air temperature.

Comment:

RTU1: 85.2 F / RTU2: 86.3 F / RTU3: 85.0 F / RTU4: 85.1 F / RTU5: 85.0 F / RTU6: 86.1 F

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

Comment:

HEATING MODE WAS STOPPED AS SOON AS UNITS HIT 85 DEGREES F IN ORDER TO PREVENT COMFORT ISSUES WITHIN THE STORE.

Heating mode is operational	Pass

Comment:

Additional Comments

Comment:

Dehumidification Functional Test

Overwrite the humidistat to put the unit into dehumidification mode.	Pass

Comment:

Compressors enable.	Pass

Comment:

Hot Gas Reheat Valve opens	Pass

Comment:

If fan has VFD, the fan increases speed.	Pass

Comment:

Document the discharge air temperature.

Comment:

RTU3: 63.1 F

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

Comment:

PASS

Additional Comments:

Comment:

Economizer Functional Test

Overwrite the humidistat to put the unit into economizer mode.	Pass

Comment:

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

Comment:

PASS

Additional Comments:

Comment:

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CheckList Information

Name :	TECH - 07 TEMPERATURE SETPOINTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - 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	Pass

Comment:

07-17-23 WALGREENS #9075 - MCALLEN, TX

CheckList Information

Name :	TECH - 08 ENTRANCE HEATERS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

Sensor is located within 15' of entrance area	N/A
Comment: THERE ARE NO ENTRANCE HEATERS INSTALLED IN THIS LOCATION	
Confirm proper operation of entrance heater and associated controls	N/A
Comment:	
Balance supply air quantity to manufacturer recommended supply airflow.	N/A
Comment:	
Confirm listed temperature rise and discharge air temperature based on approved BOM/submittal	N/A
Comment:	

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CheckList Information

Name :	TECH - SITE PICTURES	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/11/2023 - Brianna Biggs - National TAB		
Completed Date :	07/18/2023 - Ian Fuller - National TAB		

CheckList Item Details

STORE FRONT

Comment:

StoreFront
07/18/2023

RTU-1

Comment:

RTU1
07/18/2023

RTU-2

Comment:

RTU2(1)
07/18/2023

RTU-3

Comment:

RTU3(1)
07/18/2023

RTU-4

Comment:

RTU4
07/18/2023

RTU-5

Comment:

RTU5(1)
07/18/2023

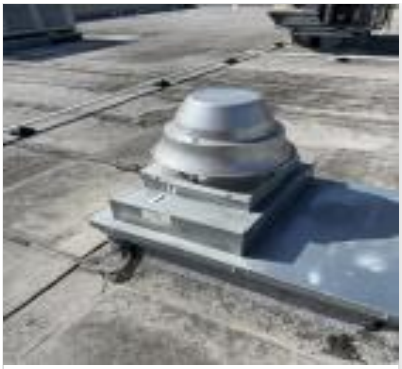
RTU-6

Comment:

RTU6
07/18/2023

ERV-2

Comment:



ERV2
07/18/2023

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU1 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2F3699314
Model Num	ZT120N18R2B5HAA2A2	ZT120N18R2B5GCA2R
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.75X20.25
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Test Data		
	Design	**Actual**
SF CFM	3500	3507
SF RPM	1028	NA
RA CFM	3200	3195
OA CFM	300	312
RL Voltage	-	209/210/210
RL Amperage	-	7.6/7.5/7.4
SF Rotation	-	CCW
RA Damper Position	-	95%
Min OA Damper Position	-	5%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LBS

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	3	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	230	208-230
Rated Amperage	-	8.3-8.2

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.75”
Fan Suction SP	-	-1.03”
Fan Discharge SP	-	0.38”
Total ESP	0.6"	1.13"
Fan Total SP	-	1.41"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VM50
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	2.5 TURNS OUT
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	19.25”
Num of Belts	-	1
Belt Size	-	A54
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

Notes:
UNABLE TO GET ACCURATE READING OF SF RPM.

Written By: Ian Fuller on 07/18/2023

Diffuser Supply (GRD)

RTU1/SALES

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	B	22X6	328	1	381	381	381	116.2
SGRD2	SALES	B	22X6	328	1	334	334	334	101.8
SGRD3	SALES	B	22X6	328	1	343	343	343	104.6
SGRD4	SALES	B	22X6	219	1	186	186	186	84.9
SGRD5	SALES	B	22X6	328	1	315	315	315	96.0
SGRD6	SALES	B	22X6	328	1	274	274	274	83.5
SGRD7	SALES	B	22X6	219	1	248	248	248	113.2
SGRD8	SALES	A	12"	492	1	464	464	464	94.3
SGRD9	SALES	A	12"	492	1	531	531	531	107.9
SGRD10	SALES	A	8"	110	1	117117	117	117	106.4
SGRD11	SALES	A	12"	328	1	314	314	314	95.7
Total				3500		120507	3507	3507	100.2%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU2 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2D3585506
Model Num	ZT090N18R2B5HAA2A2	ZT090N18R2B5GCA2R
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.75X20.25
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Test Data		
	Design	**Actual**
SF CFM	2625	2816
SF RPM	-	NA
RA CFM	2425	2598
OA CFM	200	218
RL Voltage	-	210/209/209
RL Amperage	-	5.4/5.0/5.1
SF Rotation	-	CCW
RA Damper Position	-	97%
Min OA Damper Position	-	3%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LBS

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	-	3
Motor Rpm	-	1750
Phase	-	3
Rated Voltage	-	208-230
Rated Amperage	-	8.3-8.2

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.40”
Fan Suction SP	-	-0.96”
Fan Discharge SP	-	0.28”
Total ESP	-	0.68"
Fan Total SP	-	1.24"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VM50
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	5 TURNS OUT
Fan Sheave Size	-	AK69
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	19.25”
Num of Belts	-	1
Belt Size	-	A54
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

Notes:
UNABLE TO GET ACCURATE READING OF SF RPM.

Written By: Ian Fuller on 07/18/2023

Diffuser Supply (GRD)

RTU2/SALES

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	A	12"	304	1	346	346	346	113.8
SGRD2	SALES	A	12"	304	1	303	303	303	99.7
SGRD3	SALES	A	12"	304	1	273	273	273	89.8
SGRD4	BOH	A	6"	76	1	82	82	82	107.9
SGRD5	BOH	A	6"	76	1	80	80	80	105.3
SGRD6	SALES	A	12"	304	1	343	343	343	112.8
SGRD7	SALES	A	12"	304	1	362	362	362	119.1
SGRD8	SALES	A	12"	304	1	358	358	358	117.8
SGRD9	RR VESTIBULE	A	6"	76	1	78	78	78	102.6
SGRD10	RESTROOMS	A	8"	76	1	83	83	83	109.2
SGRD11	RESTROOMS	A	8"	76	1	80	80	80	105.3
SGRD12		A	10"	190	1	188	188	188	98.9
SGRD13		A	12"	230	1	240	240	240	104.3
Total				2624		2816	2816	2816	107.32%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU3 AREA:SALES

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2D3585516
Model Num	ZT120N18R2B5HAE2A2	ZT120N18R2B5GCE2R
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.75X20.25
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Test Data		
	Design	**Actual**
SF CFM	3500	3461
SF RPM	1184	NA
RA CFM	3200	3143
OA CFM	300	318
RL Voltage	-	210/208/208
RL Amperage	-	7.0/7.3/7.5
SF Rotation	-	CCW
RA Damper Position	-	96%
Min OA Damper Position	-	4%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LBS

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	3	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	230	208-230
Rated Amperage	-	8.3-8.2

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.68"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.33"
Total ESP	1.0"	1.01"
Fan Total SP	-	1.38"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VM50
Motor Bore Size	-	0.875"
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	AK74
Fan Sheave Bore	-	1.0"
Belt CL Distance	-	19.25"
Num of Belts	-	1
Belt Size	-	A54
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

Notes:
UNABLE TO GET ACCURATE READING OF SF RPM.

Written By: Ian Fuller on 07/18/2023

National TAB

Project:07-17-23 WALGREENS #9075 - MCALLEN, TX

AHU/RTU

Diffuser Supply (GRD)

RTU3/SALES

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	B	22X6	395	1	405	405	405	102.5
SGRD2	SALES	B	22X6	396	1	431	431	431	108.8
SGRD3	SALES	B	22X6	396	1	348	348	348	87.9
SGRD4	SALES	B	22X6	396	1	352	352	352	88.9
SGRD5	SALES	A	14"	639	1	570	570	570	89.2
SGRD6	SALES	A	14"	639	1	617	617	617	96.6
SGRD7	SALES	A	14"	639	1	738	738	738	115.5
Total				3500		3461	3461	3461	98.89%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU4 AREA:PHARMACY

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2E3653918
Model Num	ZJ061N08D2B5HAA2A4	ZJ061N08D2B5GCA2R2
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X20.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2

Test Data		
	Design	**Actual**
SF CFM	1750	1841
SF RPM	1045	NA
RA CFM	1750	1841
OA CFM	0	0
RL Voltage	-	208/209/208
RL Amperage	-	5.1/5.3/5.3
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	0%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LB

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	2	2
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	230	208-230
Rated Amperage	-	6.6-6.8

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.56”
Fan Suction SP	-	-1.03”
Fan Discharge SP	-	0.37”
Total ESP	1.2"	0.93"
Fan Total SP	-	1.4"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	2.5 TURNS OUT
Fan Sheave Size	-	AK71
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	17.5”
Num of Belts	-	1
Belt Size	-	A51
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

Notes:
UNABLE TO GET ACCURATE READING OF SF RPM.

Written By: Ian Fuller on 07/18/2023

National TAB

Project:07-17-23 WALGREENS #9075 - MCALLEN, TX

AHU/RTU

Diffuser Supply (GRD)

RTU4/PHARMACY

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	PHARMACY WAITING	A	12"	365	1	341	341	341	93.4
SGRD2	PHARMACY	A	12"	365	1	396	396	396	108.5
SGRD3	PHARMACY	A	12"	365	1	397	397	397	108.8
SGRD4	PHARMACY	A	12"	328	1	353	353	353	107.6
SGRD5	PHARMACY	A	12"	328	1	354	354	354	107.9
Total				1751		1841	1841	1841	105.14%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU5 AREA:STOCKROOM

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2E3676886
Model Num	ZJ037N06D2B5HAA2A4	ZJ037N06D2B5GCA2R2
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X20.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2

Test Data		
	Design	**Actual**
SF CFM	1050	1060
SF RPM	875	NA
RA CFM	1000	1055
OA CFM	50	55
RL Voltage	-	208/209/208
RL Amperage	-	3.6/3.4/3.3
SF Rotation	-	CCW
RA Damper Position	-	1%
Min OA Damper Position	-	99%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LBS

Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	56HZ
Horsepower	1.50	1.5
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	230	208-230
Rated Amperage	-	5.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.26”
Fan Suction SP	-	-0.45”
Fan Discharge SP	-	0.22”
Total ESP	1.0"	0.48"
Fan Total SP	-	0.67"

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VL44
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	7.5”
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	16.5”
Num of Belts	-	1
Belt Size	-	A47
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

National TAB

Project:07-17-23 WALGREENS #9075 - MCALLEN, TX

AHU/RTU

Diffuser Supply (GRD)

RTU5/STOCKROOM

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	STOCKROOM	B	13X3	263	0.58	235	235	235	89.4
SGRD2	STOCKROOM	B	13X3	263	0.58	282	282	282	107.2
SGRD3	STOCKROOM	B	13X3	263	0.58	296	296	296	112.5
SGRD4	STOCKROOM	B	13X3	263	0.58	247	247	247	93.9
Total				1052		1060	1060	1060	100.76%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: AHU/RTU

Asset: RTU6 AREA:

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2E3676895
Model Num	ZJ049N06D2B5HAA2A3	ZJ049N06D2B5GCA2R3
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28.75X20.25
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2

Test Data		
	Design	**Actual**
SF CFM	1400	1534
SF RPM	-	NA
RA CFM	1290	1422
OA CFM	110	112
RL Voltage	-	210/209/210
RL Amperage	-	4.6/4.5/4.7
SF Rotation	-	CCW
RA Damper Position	-	99%
Min OA Damper Position	-	1%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	24 BTU/LBS

Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	56HZ
Horsepower	1.50	1.5
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	230	208-230
Rated Amperage	-	5.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	1.2"	
Fan Total SP	-	

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VL44
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	6.0”
Fan Sheave Bore	-	1.0”
Belt CL Distance	-	17.0”
Num of Belts	-	1
Belt Size	-	A46
Belt Alignment	-	GOOD

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

Completed By: Ian Fuller on 07/18/2023

National TAB

Project:07-17-23 WALGREENS #9075 - MCALLEN, TX

AHU/RTU

Diffuser Supply (GRD)

RTU6/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	FRONT DESK	A	24X24	467	1	527	527	527	112.8
SGRD2	PHOTO ROOM	A	24X24	467	1	506	506	506	108.4
SGRD3	PHOTO ROOM	A	24X24	467	1	501	501	501	107.3
Total				1401		1534	1534	1534	109.49%

National TAB

Project: 07-17-23 WALGREENS #9075 - MCALLEN, TX

System/Unit: FAN - Exhaust

Asset: EF1 AREA:RESTROOMS

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	NA
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GENTEQ
Frame	-	N/L
Horsepower	-	0.25
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.5-1.9
Service Factor	-	N/L

Test Data		
	Design	**Actual**
CFM	850	872
Fan RPM	-	50%
Fan Rotation	-	CCW
Motor RPM	-	50%
System SetPt	-	50%
RL Voltage	-	122
RL Amperage	-	2.2
Total ESP	-	0.56"
Fan Inlet SP	-	-0.56"
Fan Discharge SP	-	ATM

Completed By: Ian Fuller on 07/18/2023

Notes:
NO STICKER ON OUTSIDE OF FAN TO GET UNIT DATA

Written By: Ian Fuller on 07/18/2023