

Report By:

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NATIONAL

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Report: TAB Report
Function: Test, Adjust, & Balance
Date: 11/13/2022

PROJECT

11-07 WALGREENS #3848 - DEER PARK, TX

3300 CENTER ST

DEER PARK, TX 77536

Client

Walgreens

200 WILMOT RD

DEERFIELD, IL 60015

National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

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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.

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	SALES	6125	5825	5437	5122	688	703	11.2%	12.1%						
RTU-2	SALES	3500	3602	2850	2964	650	638	18.6%	17.7%						
RTU-3	PHARMACY	1750	1788	1750	1788	0	0	0.0%	0.0%						
RTU-4	STOCKROOM	1050	1038	950	932	100	106	9.5%	10.2%						
EF-1	LOUNGE													300	286
EF-2	MENS RR													240	258
EF-3	WOMENS RR													240	251
EF-4	OFFICE/PHOTO													300	318
TOTALS		12425	12253	10987	10806	1438	1447			0	0	0	0	1080	1113

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1438	1447
TOTAL EXHAUST	1080	1113
NET AIRFLOW	358	334

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.009
SIDE	-
REAR	0.011
AVERAGE	0.010

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:



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11-07 WALGREENS #3848 - DEER PARK, TX

CheckList Information

Name : TECH - SITE PICTURES **Status :** Submitted
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB

CheckList Item Details

STORE FRONT



Image_2022_11_13T1307...

RTU-1



Image_2022_11_13T1307...

RTU-2



Image_2022_11_13T1307...

RTU-3



Image_2022_11_13T1307...

RTU-4



Image_2022_11_13T1307...

EF-4



Image_2022_11_13T1307...

Notes/Comments :



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CheckList Information

Name :	TECH - 01 RTU INSTALLATION CHECKLIST	Status :	Submitted
Assigned Organization :	National TAB	Asset :	
Requesting Organization :	National TAB		

CheckList Item Details

General / Exterior Inspections

Verify all required equipment has been replaced per TA and BOM.	Pass
All units are installed in the proper locations	Pass
Units are labeled correctly	Pass
Asset tag installed	Pass
Roof is clear of debris.	Pass
Maintenance access for all unit access panels is acceptable and panels open freely.	Pass
Cabinet and general installation is complete.	Pass
Unit is secure to curb and level horizontally and vertically.	Pass
Access doors close tightly with no leaks	Pass
Condensate and gas piping is properly supported.	Pass
Costgaurd is installed per scope of work and piping unions are cemented.	Pass
Additional Comments	COSTGARD CONDENSATE DRAINS ARE NOT SUPPORTED PROPERLY PER SCOPE. (ITEMS RELATING TO COSTGARD INSTALLATION HAVE BEEN ADDRESSED AS OF RETURN TRIP ON 2/3/2023.)

Interior Inspections

Fan rotation is correct	Pass
-------------------------	------

Pulleys are correctly aligned and both motor and fan sheave pins are tightened in place.	Pass
Return air and outside air dampers close tightly with no gaps	Pass
Cabinet and coils are not damaged and in like new condition.	Pass
Inside of unit is clean and clear of debris.	Pass
Validate condensate is piped to splash block, draing, or roof drain per code requirements	Pass
Verify filters are installed, clean and of proper size. Verify there is no air by-pass around filters.	Pass
Curb is sealed with no air leakage.	Pass
Additional Comments:	

Fire/Smoke Alarm Systems

In duct smoke detectors are installed	Pass
Fire alarm panel status (visual inspection where possible)	UNABLE TO VISUALLY INSPECT.
Additional Comments:	

Electrical

Electrical wiring is complete with no visible damage	Pass
Electrical connections are tight with sealtight around any unit penetrations.	Pass
Disconnect switch is installed in accessible location near or on unit.	Pass
Verify overcurrent protection is HACR type, installed and sized correctly and labeled in panel.	Pass
Maintenance electrical outlet is installed and functional.	Pass
Main distribution panel is labeled correctly.	Pass
Unit ground wire is secured.	Pass
Additional Comments:	

Notes/Comments :



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11-07 WALGREENS #3848 - DEER PARK, TX

CheckList Information

Name : TECH - 02 EXHAUST FANS INSPECTIONS **Status :** Submitted

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

CheckList Item Details

Fan rotation is correct	Pass
Pulleys are aligned and belts are tensioned properly	ALL EFS ARE DIRECT DRIVE.
Speed controller installed and functional (direct drive)	EF 1-3 ARE SINGLE SPEED. EF-4 HAS SPEED CONTROLLER INSTALLED BUT FAN DID NOT POWER ON. (EF-4 HAS BEEN BALANCED AS OF RETURN TRIP ON 2/3/2023.)
Fan is secured to the curb	Pass
Back draft damper is installed and functional	Pass
No exterior damage to the fan	Pass
No unusual noise or vibration	Pass
Controls are functional	Pass
Additional Comments:	EF-4 SERVING THE OFFICE AND PHOTO LAB WILL NOT POWER ON. UNIT HAS MOTORIZED BACKDRAFT DAMPER BUT IS NOT POWERED. (EF-4 BALANCED AS OF RETURN TRIP ON 2/3/2023.)

Notes/Comments :



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CheckList Information

Name : TECH - 03 START-UP CONTROLS PROGRAMMING **Status :** Submitted

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

CheckList Item Details

Programming: SE 3.3, 3.4, 4.0

Controller-Network-Address: RTU number + 3	Pass
Controller-Network-FCBusMode = Wired Field Bus	Pass
Controller-Network-BaudRate = Auto	Pass
Controller-Network-Device ID = RTU number + 3	Pass
Details-Occ-OffDurUnocc = No	Pass
Details-Clg-Setup-Clg-En = Yes	Pass
Details-Clg-Setup-ClgAdapTunEn = Yes	Pass
Details-Htg-Setup-Htg-En = Yes	Pass
Details-Htg-Setup-#HtgStgs = 2 Stages	Pass
Details-Htg-Setup-HtgAdapTunEn = Yes	Pass
Details-Htg-Setup-#GasVlvs = 1 (Set to 0 for Hp and Elect Heat)	Pass
Details-Fan-Setup-Fan Ctl-Type = No VFD select "Single Speed", W/VFD select "Fixed Variable"	Pass
Details-Fan-Setup-FanOnOcc = Yes	Pass
Details-Fan-Setup-FanOnDlyHeat = 30s (Set to 0 for HP or Electric Heat)	Pass
Details-Fan-Setup-FanOnly-%Cmd = 50%	Pass

Details-Fan-Setup-1ClgStg-%Cmd = 70%	Pass
Details-Fan-Setup-2ClgStg-%Cmd = 100% (2stage Unit) or 80% (3 and 4 stage)	Pass
Details-Fan-Setup-3ClStg-%Cmd = 100% (3 stage unit) or 90% (4 stage)	Pass
Details-Fan-Setup-4ClStg-%Cmd = 100% (4 Stage unit)	Pass
Details-Fan-Setup-1HtgStg-%Cmd = 100%	Pass
Details-Fan-Setup-2HtgStg-%Cmd = 100%	Pass
Details-Econ-Setup-Econ-En = Yes	Pass
Details-Econ-Setup-Econ-MinPos = Set to minimum outside air requirements.	Pass
Details-Econ-Setup-LowSpdFan-MinPos = Set minimum 1% above EconMinPos	Pass
Details-Econ-Setup-FreeClg-Sel = Single Enthalpy	Pass
Details-Econ-Setup-EconOAEth-Sp 4= 24 Btu/lb	Pass
Details-Econ-Setup-Dvent-Mode = Enable	Pass
Details-Econ-Setup-DventMaxEconPos = 50%	Pass
Details-Econ-Setup-DventIAP-Sp = 1000	Pass
Details-Econ-Setup-EconFltDetectEn = Enable	Pass

Additional Comments:

Non ZR Units only:

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

Additional Comments:

Notes/Comments :



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CheckList Information

Name : TECH - 04 EMS/SENSOR VALIDATION **Status :** Submitted

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

CheckList Item Details

RTU supply air temp sensor location located per start-up binder.	Pass
RTU return air temp sensor location located per start-up binder.	Pass
RTU return air smoke detector (when applicable) is located per start-up binder.	Pass
Space temperature sensor has been replaced and location meets requirements.	Pass
Space humidity sensor has been replaced and location meets requirements.	Pass
Unit is being controlled by a space temperature sensor or thermostat	Pass
EMS has been connected and validated with TOC or Gridpoint. Screen shot is available.	Pass
No splicing of EMS/Sensor/Thermostat wiring is visible	Pass
(If Applicable) 2 Stage Thermostat to SE Board Control Wiring meets detail in start-up binder.	N/A
(If Applicable) 2 Stage Thermostat to 4 Stage Unit meets detail in start-up binder.	N/A
(If Applicable) 4 Stage Thermostat to 4 Stage Unit meets detail in start-up binder.	N/S
(If Applicable) 3 Stage Thermostat wiring meets detail in start-up binder.	N/A
(If Applicable) 3 Stage Thermostat with Humidity sensor wiring meets detail in start-up binder.	N/A

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

N/A

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

Pass

Additional Comments:

Notes/Comments :



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11-07 WALGREENS #3848 - DEER PARK, TX

CheckList Information

Name :	TECH - 05 TAB CHECKLIST	Status :	Submitted
Assigned Organization :	National TAB	Asset :	
Requesting Organization :	National TAB		

CheckList Item Details

Outside air damper set to minimum air flow requirement and damper position marked.	Pass
Total Supply, return, and outside air volumes meet design tolerances (+/-10%)	Pass
Enclosed area diffusers (Pharmacies, manager office, employee room, restrooms, electrical rooms) balanced within +/-10%?	Pass
Open area diffusers (Sales floor and stock room) balanced within +/-25% of design?	Pass
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
Outside air and return air dampers modulate freely.	Pass
Start-up report from the installing contractor is reviewed and all information if filled out. All required measurements are within typical ranges.	Pass
(If Applicable) VFD is set-up and operational. (N/A = not applicable)	YES
Verify amp draw of motor is within unit specification, not operating in overamped condition.	Pass
Sales floor temperature and humidity measurement	72.1 F / 51.9% RH
Pharmacy temperature and humidity measurement	71.8 F / 52.0% RH
Stock Room temperature and humidity measurement	70.2 F / 51.8 % RH
Outdoor air temperature and humidity measurement	53.7 F / 56.8% RH

Additional Comments:

TAB WAS UNABLE TO BE COMPLETED DUE TO THE FOLLOWING: 1) RTU-2 FUSE SERVING SUPPLY FAN MOTOR HAD BLOWN. MOTOR WAS RUNNING ON 2 OF 3 PHASES. OTHER 2 PHASES WERE DRAWING 7.7 AMPS OUT OF 4.1 FLA. UNIT TURNED OFF TO AVOID DAMAGING MOTOR. 2) RTU-3 NEEDS PULLEY CHANGE. FAN SPEED IS MINIMIZED BUT UNIT IS OPERATING AT 159% OF DESIGN AIR FLOW. 3) EF-4 WOULD NOT OPERATE. UNABLE TO DETERMINE HOW FAN TURNS ON. FAN HAS MOTORIZED BACKDRAFT DAMPER, BUT DAMPER IS NOT HOOKED UP TO POWER. (ITEMS MENTIONED ABOVE HAVE BEEN ADDRESSED. ALL EQUIPMENT BALANCED AS OF RETURN TRIP ON 2/3/2023. ALL TEMPERATURES RE-TAKEN ON SAME DAY.)

Notes/Comments :



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11-07 WALGREENS #3848 - DEER PARK, TX

CheckList Information

Name : TECH - 06 FUNCTIONAL TESTS **Status :** Submitted

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

CheckList Item Details

Cooling Functional Test

Overwrite the thermostat or sensor to put the unit into cooling mode.	Pass
Compressors enable.	Pass
If fan has VFD, the fan increases speed.	Pass
Document the discharge air temperature.	RTU-1 54.6 F RTU-2 55.8 F RTU-3 59.1 F RTU-4 54.7 F
After 10 minutes, Discharge air temperature is below 55 degrees.	Pass
Cooling mode is operational	Pass
Additional Comments:	RTU-2 IS KEPT OFF TO AVOID DAMAGE TO SUPPLY FAN MOTOR. RTU-3 IS OPERATING AT 159% OF DESIGN AIR FLOW. (ADDRESSED AND BALANCED AS OF 2/3/2023 RETURN TRIP.)

Heating Functional Test

Overwrite the thermostat or sensor to put the unit into heating mode.	Pass
Heat exchanger enables.	Pass
If fan has VFD, the fan increases speed.	Pass
Document the discharge air temperature.	RTU-1 91.7 F RTU-2 94.2 F RTU-3 85.6 F RTU-4 92.4 F
After 10 minutes, Discharge air temperature is above 85 degrees.	Pass
Heating mode is operational	Pass

Additional Comments

RTU-2 IS KEPT OFF TO AVOID DAMAGE TO SUPPLY FAN MOTOR. (RTU-2 BALANCED AT RETURN TRIP ON 2/3/2023.)

Dehumidification Functional Test

Overwrite the humidistat to put the unit into dehumidification mode.

Pass

Compressors enable.

Pass

Hot Gas Reheat Valve opens

Pass

If fan has VFD, the fan increases speed.

Pass

Document the discharge air temperature.

RTU-1 72.1 F RTU-2 73.7 F RTU-3 74.2 F RTU-4 71.5 F

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

PASS RTU-2 IS KEPT OFF TO AVOID DAMAGE TO SUPPLY FAN MOTOR. (RTU-2 ISSUE ADDRESSED AND CHECKED FOR FUNCTIONALITY AT RETURN TRIP ON 2/3/2023.)

Additional Comments:

Economizer Functional Test

Overwrite the humidistat to put the unit into economizer mode.

Pass

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

PASS

Additional Comments:

Notes/Comments :



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11-07 WALGREENS #3848 - DEER PARK, TX

CheckList Information

Name :	TECH - 07 TEMPERATURE SETPOINTS	Status :	Submitted
Assigned Organization :	National TAB	Asset :	
Requesting Organization :	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

Notes/Comments :



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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: AHU/RTU

Asset: RTU1

AREA:SALES

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	6125	5825
Serial Num	-	N2G2764907	SF RPM	-	1020
Model Num	ZT210N30R4B5GCB2C1	ZT210N30R4B5GCB2C1	RA CFM	-	5122
Type	RTU	RTU	OA CFM	688	703
Configuration	VERTICAL	VERTICAL DISCHARGE	RL Voltage	-	481/480/483
Num OA Filters 1	-	6	RL Amperage	-	10.2/10.0/10.2
OA Filter Size 1	-	16x28x2	SF Rotation	-	CCW
Num Final Filter 1	-	4	RA Damper Position	-	77%
Final Filter Size 1	-	16x20x2	Min OA Damper Position	-	23%
Num Final Filter 2	-	4	Min OA Damper Type	-	PARALLEL BLADE
Final Filter Size 2	-	16x25x2	OA Enthalpy Setpt	-	24 BTU/LB

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	215T
Horsepower	11.50	10
Motor Rpm	-	1770
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	12.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.78"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.58"
Total ESP	2.0"	1.36"
Fan Total SP	-	1.63"

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP60
Motor Bore Size	-	1 3/8"
Motor Sheave SetPt	-	5.0 TURNS OPEN
Fan Sheave Size	-	BK90
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	28"
Num of Belts	-	1
Belt Size	-	B75
Belt Alignment	-	CORRECT

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

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Notes:



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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

AHU/RTU

Diffuser Supply (GRD)

RTU1/SALES

Asset							
Asset Name	Location	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SALES	170	1.0	353	335	181	106.5
SGRD2	SALES	170	1.0	175	161	190	111.8
SGRD3	SALES	170	1.0	197	189	192	112.9
SGRD4	SALES	170	1.0	325	305	194	114.1
SGRD5	SALES	170	1.0	143	133	159	93.5
SGRD6	SALES	170	1.0	196	183	190	111.8
SGRD7	SALES	734	1.0	763	720	734	100.0
SGRD8	SALES	734	1.0	741	708	724	98.6
SGRD9	SALES	734	1.0	736	694	754	102.7
SGRD10	SALES	734	1.0	506	482	729	99.3
SGRD11	PHOTO	184	1.0	383	360	197	107.1
SGRD12	ELECTRICAL	307	1.0	370	353	324	105.5
SGRD13	HALLWAY	302	1.0	652	623	327	108.3
SGRD14	PHOTO	594	1.0	453	434	558	93.9
SGRD15	OFFICE	345	1.0	252	237	372	107.8

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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: AHU/RTU

Asset: RTU2

AREA:SALES

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	3500	3602
Serial Num	-	N2H2891799	SF RPM	1018	969
Model Num	ZT120N18R4B5GCL2R1	ZT120N18R4B5GCL2R1	RA CFM	2850	2964
Type	RTU	RTU	OA CFM	650	638
Configuration	VERTICAL	VERTICAL DISCHARGE	RL Voltage	-	490/490/489
Num OA Filters 1	-	1	RL Amperage	-	4.1/4.0/4.1
OA Filter Size 1	-	22x30x1	SF Rotation	-	CCW
Num Final Filter 1	-	4	RA Damper Position	-	78%
Final Filter Size 1	-	20x24x2	Min OA Damper Position	-	22%
			Min OA Damper Type	-	PARALLEL BLADE
			OA Enthalpy Setpt	-	24 BTU/LB

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	3	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.1

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	3.0 TURNS OPEN
Fan Sheave Size	-	AK69
Fan Sheave Bore	-	1"
Belt CL Distance	-	19"
Num of Belts	-	1
Belt Size	-	A54
Belt Alignment	-	CORRECT

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.55"
Fan Suction SP	-	-0.76"
Fan Discharge SP	-	0.48"
Total ESP	0.6"	1.03"
Fan Total SP	-	1.24"

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

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Notes:



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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

AHU/RTU

Diffuser Supply (GRD)

RTU2/SALES

Asset							
Asset Name	Location	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SALES	512	1.0	379	404	482	94.1
SGRD2	SALES	512	1.0	369	400	498	97.3
SGRD3	SALES	512	1.0	355	380	468	91.4
SGRD4	SALES	512	1.0	472	511	578	112.9
SGRD5	SALES	512	1.0	458	487	539	105.3
SGRD6	SALES	512	1.0	495	531	607	118.6
SGRD7	LOUNGE	162	1.0	151	159	154	95.1
SGRD8	RR HALLWAY	215	1.0	192	205	221	102.8
SGRD9	VALUABLES	51	1.0	89	92	55	107.8

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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: AHU/RTU

Asset: RTU3

AREA:PHARMACY

Unit Data			Test Data		
	Design	Actual		Design	Actual
MFG	YORK	YORK	SF CFM	1750	1788
Serial Num	-	N2K2935594	SF RPM	1051	689
Model Num	ZJ061N08D4B5GCB2R3	ZJ061N08D4B5GCB2R3	RA CFM	1750	1788
Type	RTU	RTU	OA CFM	0	0
Configuration	VERTICAL	VERTICAL DISCHARGE	RL Voltage	-	489/490/490
Num OA Filters 1	-	1	RL Amperage	-	3.0/2.9/2.9
OA Filter Size 1	-	22x30x1	SF Rotation	-	CCW
Num Final Filter 1	-	4	RA Damper Position	-	100%
Final Filter Size 1	-	16x24x2	Min OA Damper Position	-	CLOSED
			Min OA Damper Type	-	PARALLEL BLADE
			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	460	460
Rated Amperage	-	3.4

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP40
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	5.0 TURNS OPEN
Fan Sheave Size	-	AK69
Fan Sheave Bore	-	1"
Belt CL Distance	-	17 1/4"
Num of Belts	-	1
Belt Size	-	A49
Belt Alignment	-	CORRECT

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.53"
Fan Suction SP	-	-0.79"
Fan Discharge SP	-	0.52"
Total ESP	1.3"	1.05"
Fan Total SP	-	1.31"

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

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Notes:



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Project: 11-07 WALGREENS #3848 - DEER PARK, TX

AHU/RTU

Diffuser Supply (GRD)

RTU3/PHARMACY

Asset							
Asset Name	Location	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	WAITING	165	1.0	432	-	167	101.2
SGRD2	PHARMACY	257	1.0	404	-	274	106.6
SGRD3	PHARMACY	257	1.0	427	-	260	101.2
SGRD4	PHARMACY	257	1.0	629	-	265	103.1
SGRD5	PHARMACY	257	1.0	285	-	266	103.5
SGRD6	TECH	557	1.0	404	-	556	99.8

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National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: AHU/RTU

Asset: RTU4

AREA:STOCKROOM

Unit Data		
	Design	Actual
MFG	YORK	YORK
Serial Num	-	N2F2554983
Model Num	ZJ037N08D4B5BCB2R3	ZJ037N08D4B5BCB2R3
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	22x30x1
Num Final Filter 1	-	4
Final Filter Size 1	-	16x24x2

Test Data		
	Design	Actual
SF CFM	1050	1038
SF RPM	960	804
RA CFM	950	932
OA CFM	100	106
RL Voltage	-	481/484/482
RL Amperage	-	2.2/2.0/2.2
SF Rotation	-	CCW
RA Damper Position	-	86%
Min OA Damper Position	-	14%
Min OA Damper Type	-	PARALLEL BLADE
OA Enthalpy Setpt	-	24 BTU/LB

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56H
Horsepower	1.50	1.5
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	2.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.34"
Fan Suction SP	-	-0.55"
Fan Discharge SP	-	0.42"
Total ESP	1.2"	0.76"
Fan Total SP	-	0.97"

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VL44
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	5.0 TURNS OPEN
Fan Sheave Size	-	AK69
Fan Sheave Bore	-	1"
Belt CL Distance	-	16 1/2"
Num of Belts	-	1
Belt Size	-	A47
Belt Alignment	-	CORRECT

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

Completed By: Wesley John

Notes:



Comfort. Under control.

National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: FAN - Exhaust

Asset: EF1

AREA: LOUNGE

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	SP-150	SP-150
Serial Num	-	NA
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	CEILING

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	120W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	NL
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	300	286
Fan RPM	1000	DIRECT DRIVE
Fan Rotation	-	CW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	SINGLE SPEED
RL Voltage	-	121
RL Amperage	-	0.42
Total ESP	0.375"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Wesley John

Notes:



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National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: FAN - Exhaust

Asset: EF2

AREA:MENS RR

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	SP-150	SP-150
Serial Num	-	NA
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	CEILING

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	120W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	NL
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	240	258
Fan RPM	1000	DIRECT DRIVE
Fan Rotation	-	CW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	SINGLE SPEED
RL Voltage	-	121
RL Amperage	-	0.42
Total ESP	0.375"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Wesley John

Notes:



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National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: FAN - Exhaust

Asset: EF3

AREA:WOMENS RR

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	SP-150	SP-150
Serial Num	-	NA
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	CEILING

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	120W	NA
Motor Rpm	-	NA
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	NA
Service Factor	-	NA

Test Data		
	Design	Actual
CFM	240	251
Fan RPM	1000	DIRECT DRIVE
Fan Rotation	-	CW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	SINGLE SPEED
RL Voltage	-	121
RL Amperage	-	0.43
Total ESP	0.375'	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Wesley John

Notes:



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National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

System/Unit: FAN - Exhaust

Asset: EF4

AREA:OFFICE/PHOTO

Unit Data		
	Design	Actual
MFG	GREENHECK	PENN BARRY
Model Num	SP-150	L253864
Serial Num	-	B21AX83124
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	DOWNBLAST

Motor Data		
	Design	Actual
Motor MFG	-	GENTEQ
Frame	-	NL
Horsepower	120W	0.2
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.0
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	300	318
Fan RPM	1000	DIRECT DRIVE
Fan Rotation	-	CCW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	MEDIUM
RL Voltage	-	122
RL Amperage	-	2.1
Total ESP	0.375"	0.24"
Fan Inlet SP	-	-0.24"
Fan Discharge SP	-	ATM

Completed By: Wesley John

Notes:



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National TAB

Project: 11-07 WALGREENS #3848 - DEER PARK, TX

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF4/OFFICE/PHOTO

Asset							
Asset Name	Location	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	OFFICE	86	1.0	167	142	93	108.1
EGRD2	PHOTO	214	1.0	205	184	225	105.1

Completed By: Wesley John on

