

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 08/22/2024

PROJECT

**08-12-24 ANDY'S BARTONVILLE/LANTANA,
TX**

3800 FM 407

Bartonville, TX 76226

Client

Elite Mechanical
231 Jacinth Ln

GRANBURY, TX 76049

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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 are further details about your building performance including recommendations and asset data. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices to establish a total flow for that unit. These readings and calculations were used to adjust each RTU to within tolerance of the engineer's total design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The restroom fan was 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. The final building pressure measures $-0.001''$ W.C. The building is designed for positive pressure but the actual building pressure measures slightly negative due to an issue with the RTU economizer. See issues list.

Issue List

- RTU ECONOMIZER
- RTU-1 GAS PIPING
- SUPPLY GRILLE 5



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Project Issue Information

Issue Name : RTU ECONOMIZER
Description : RTU ECONOMIZER WAS NOT FUNCTIONAL AT TIME OF BALANCE.
RECOMMEND TROUBLESHOOTING ECONOMIZER FUNCTIONALITY.
Created By : National TAB **Assigned To :** National TAB - Will
Turnbough
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 08/22/2024 - Wesley John - National TAB



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Project Issue Information

Issue Name : RTU-1 GAS PIPING
Description : GAS PIPING WAS NOT COMPLETED AT TIME OF TESTING.
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Priority : InfoOnly **Asset Tag :**
Originated Date : 08/13/2024 - Bayley Morvant - National TAB



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Project Issue Information

Issue Name : SUPPLY GRILLE 5
Description : SUPPLY GRILLE 5 SERVING THE WOMENS RESTROOM IS SET AT 33/40 CFM (82%). THIS IS NOT EXPECTED TO CREATE AN ISSUE.
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Priority : InfoOnly **Asset Tag :**
Originated Date : 08/22/2024 - Wesley John - National TAB

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Project: 08-12-24 ANDY'S BARTONVILLE/LANTANA, TX

System/Unit: AHU/RTU



Asset: RTU1

AREA:

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	240210205L
Model Num	YHC102	YSJ072A3S0L04
Type	RTU	RTU
Configuration	VERTICAL	HORIZONTAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36X16
Num Final Filter 1	-	3
Final Filter Size 1	-	16X24X2
Num Final Filter 2	-	2
Final Filter Size 2	-	18X24X2

Motor Data		
	Design	Actual
Motor MFG	-	ND
Frame	-	ND
Horsepower	-	3.0
Motor Rpm	-	ND
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.8

Test Data		
	Design	Actual
SF CFM	2480	2414
SF RPM	-	DIRECT DRIVE
RA CFM	2130	2414
OA CFM	350	*1
RL Voltage	-	208/204/207
RL Amperage	-	5.4/4.5/3.2
SF Rotation	-	CCW
SF System SetPt	-	61%
RA Damper Position	-	*1
Min OA Damper Position	-	*1
Min OA Damper Type	-	OPPOSED BLADE

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.29
Fan Suction SP	-	-0.52
Fan Discharge SP	-	0.22
Total ESP	1"	0.51
Fan Total SP	-	0.74

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

Completed By: Bayley Morvant on 08/13/2024

Notes:

DIFFUSER DESIGN EQUATES TO 2480 CFM. UNIT WAS BALANCED TO DIFFUSER DESIGN.

*1 UNIT ECONOMIZER WAS NOT OPERATIONAL AT TIME OF TESTING. UNIT WAS MISSING WIRING THAT WOULD MAKE ECONOMIZER FUNCTIONAL.

Written By: Wesley John on 08/22/2024

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Project:08-12-24 ANDY'S BARTONVILLE/LANTANA, TX

AHU/RTU



Diffuser Supply (GRD)

RTU1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
AHU1-SGRD1	BOH VESTIBULE	SA3	8X8	50	105	51	102.0
AHU1-SGRD2	WASHING	SA1	10"	240	604	236	98.3
AHU1-SGRD3	MENS RR	SA2	6"	40	157	42	105.0
AHU1-SGRD4	HALL	SA2	6"	30	125	33	110.0
AHU1-SGRD5	WOMENS RR	SA2	6"	40	115	33	82.5
AHU1-SGRD6	OFFICE	SA2	6"	100	55	98	98.0
AHU1-SGRD7	BAKING	SA1	8"	190	212	205	107.9
AHU1-SGRD8	MIDDLE OF BUILDING	SA1	8"	190	183	188	98.9
AHU1-SGRD9	FRONT OF HOUSE	SA3	12X12	265	245	241	90.9
AHU1-SGRD10	FRONT OF HOUSE	SA3	12X12	265	261	258	97.4
AHU1-SGRD11	FRONT OF HOUSE	SA3	12X12	270	221	271	100.4
AHU1-SGRD12	FRONT OF HOUSE	SA3	12X12	270	194	263	97.4
AHU1-SGRD13	FRONT OF HOUSE	SA3	12X12	265	283	251	94.7
AHU1-SGRD14	FRONT OF HOUSE	SA3	12X12	265	288	244	92.1
Total				2480	3048	2414	97.34%

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Project: 08-12-24 ANDY'S BARTONVILLE/LANTANA, TX

System/Unit: FAN - Exhaust



Asset: EF1

AREA:MENS RESTROOM

Unit Data		
	Design	Actual
MFG	COOK	COOK
Model Num	GC	GEMINI 120
Serial Num	-	615737
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Frame	-	ND
Horsepower	-	ND
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.20
Service Factor	-	ND

Test Data		
	Design	Actual
CFM	75	68
Fan RPM	1550	1405
Fan Rotation	-	CW
Motor RPM	-	1405
System SetPt	-	SINGLE SPEED
RL Voltage	-	118
RL Amperage	-	0.2
Total ESP	0.1"	0.05
Fan Inlet SP	-	-0.05
Fan Discharge SP	-	ATM

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Project: 08-12-24 ANDY'S BARTONVILLE/LANTANA, TX

System/Unit: FAN - Exhaust



Asset: EF2

AREA:WOMENS RESTROOM

Unit Data		
	Design	Actual
MFG	COOK	COOK
Model Num	GC	GEMINI 1204
Serial Num	-	615737
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Frame	-	ND
Horsepower	-	ND
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.20
Service Factor	-	ND

Test Data		
	Design	Actual
CFM	75	76
Fan RPM	1550	1570
Fan Rotation	-	CW
Motor RPM	-	1570
RL Voltage	-	119
RL Amperage	-	0.2
Total ESP	0.1"	0.04
Fan Inlet SP	-	-0.04
Fan Discharge SP	-	ATM

Completed By: Bayley Morvant on 08/13/2024

