Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 05/31/2024

PROJECT

06-03-24 WAWA #8443 HAZLET, NJ

3052 Rt 35

Hazlet, NJ 07730

Client

Wawa

260 West Baltimore Pike

Wawa, PA 19063

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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.

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 of the engineer's 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 general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

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System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	PENNBARRY	PENNBARRY
Model Num	DX10R	DX10R
Serial Num	-	L23AG85369
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Frame	-	NL
Horsepower	1/12	1/6
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	300	303
Fan RPM	1550	1550
Fan Rotation	-	CCW
Motor RPM	-	1550
System SetPt	-	WIRED DIRECT
RL Amperage	-	1.43
Total ESP	-	0.45"
Fan Inlet SP	-	-0.45”
Fan Discharge SP	-	ATM

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FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	WOMENS RR	G3	6"	100		94		94	94.0
EGRD2	JANITOR	G3	6"	50		48		48	96.0
EGRD3	MENS RR	G3	6"	150		161		161	107.3
Total				300		303	0	303	101%

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System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	PENNBARRY	PENNBARRY
Model Num	DX13Q	DX13Q
Serial Num	-	NL
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GENTEQ
Frame	-	NL
Horsepower	1/4	1/4
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	900	868
Fan RPM	1725	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	~30% ON DIAL
RL Amperage	-	4.43
Total ESP	-	1.06”
Fan Inlet SP	-	-1.06”
Fan Discharge SP	-	ATM

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Project:06-03-24 WAWA #8443 HAZLET, NJ

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	BACKROOM	G1	10"	300	1	334	295	310	103.3
EGRD2	BACKROOM	G1	10"	500	1	501	462	466	93.2
EGRD3	STAGING RM	G1	6"	100	1	142	142	92	92.0
Total				900		977	899	868	96.44%

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Project: 06-03-24 WAWA #8443 HAZLET, NJ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:

Unit Data		
	Design	**Actual**
MFG	PENNBARRY	PENNBARRY
Model Num	Z3H	Z3H
Type	INLINE	INLINE

Test Data		
	Design	**Actual**
CFM	60	64

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Project: 06-03-24 WAWA #8443 HAZLET, NJ

System/Unit: AHU/RTU

Asset: RTU1 AREA:RETAIL

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623L01676
Model Num	LGT102H4E	LGT102H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23”x14”
Num Final Filter 1	-	4
Final Filter Size 1	-	20”x25”x2”

Motor Data		
	Design	**Actual**
Motor MFG	-	EBMPAPST
Frame	-	NL
Horsepower	3.75	3.8
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	200/240
Rated Amperage	-	8.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
SF CFM	3400	3535
SF RPM	-	NA
MOTOR RPM	-	NA
RA CFM	2875	3006
OA CFM	525	529
RL Voltage	-	206/207/209
RL Amperage	-	4.75/4.76/4.78
SF System SetPt	-	77%
RA Damper Position	-	75%
OA Damper Position	-	25%
OA Damper Type	-	OPPOSED BLADE

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.77”
Fan Suction SP	-	-1.07
Fan Discharge SP	-	0.88”
Total ESP	0.5"	1.65
Fan Total SP	-	1.95

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System/Unit: AHU/RTU

Asset: RTU2 AREA:FOOD SERVICE

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623K05300
Model Num	LCT120H4E	LCT120H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23”x14”
Num Final Filter 1	-	4
Final Filter Size 1	-	20”x25”x2”

Motor Data		
	Design	**Actual**
Motor MFG	-	EBMPAPST
Horsepower	3.75	3.8
Phase	3	3
Rated Voltage	208	300/240
Rated Amperage	-	8.8

Test Data		
	Design	**Actual**
SF CFM	4000	3950
RA CFM	3325	3253
OA CFM	675	697
RL Voltage	-	207/209/208
RL Amperage	-	4.79/4.79/4.88
SF System SetPt	-	78%
RA Damper Position	-	71%
OA Damper Position	-	29%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-.54”
Fan Suction SP	-	-.93”
Fan Discharge SP	-	.68”
Total ESP	0.5"	1.22"
Fan Total SP	-	1.61"

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Project: 06-03-24 WAWA #8443 HAZLET, NJ

System/Unit: AHU/RTU

Asset: RTU3 AREA:RETAIL

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623J01791
Model Num	LGT060H4E	LGT060H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29x14
Num Final Filter 1	-	4
Final Filter Size 1	-	20”x20”x2”

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1	1.0
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	208	208
Rated Amperage	-	7.4
Service Factor	-	NL

Test Data		
	Design	**Actual**
SF CFM	2000	1959
RA CFM	1700	1646
OA CFM	300	313
RL Voltage	-	206
RL Amperage	-	6.9
SF System SetPt	-	72%
RA Damper Position	-	76%
OA Damper Position	-	24%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.60”
Fan Suction SP	-	0-.80”
Fan Discharge SP	-	-0.39”
Total ESP	0.5"	0.99"
Fan Total SP	-	1.19

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Notes:
Return duct damper lever closest to front entrance held in place with tape as the mechanical contractor did not actually fix it and damper swings freely and wingnut will not attach.

UNIT DESIGN 2000CFM
DIFFUSER DESIGN 1980CFM

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