

Report By:

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**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 08/23/2024**

**PROJECT**  
**Eglin AFB (Destin, FL)**

Eglin AFB

Destin, FL \_\_\_\_\_

Client

TEAM CONSTRUCTION  
825 GUM BRANCH RD  
STE 128  
JACKSONVILLE, NC 28540

# National TAB

Project: Eglin AFB (Destin, FL)

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# CERTIFICATION

**PROJECT:** Eglin AFB (Destin, FL)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

**NEBB TAB FIRM:** National TAB-Southeast

**REGISTRATION NO:** 3755

**CERTIFIED BY:** J. Scott Springer 23312

**DATE:** 8/23/2024

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

**NEBB TAB FIRM:** National TAB-Southeast

**REGISTRATION NO:** 3086

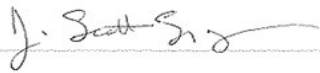
**CERTIFIED BY:** J. Scott Springer 23312

**DATE:** \_\_\_\_\_

## Submitted and Certified by:

**NEBB TAB FIRM:** National TAB-Southeast

**TAB PROFESSIONAL:** J. Scott Springer

**SIGNATURE:** 

**REGISTRATION NO:** 3755 (NTAB) / 23312

**CERTIFICATION EXP:** 12/31/2024





# National TAB

## Testing, Adjusting, and Balancing Equipment



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-860C S/N M19547	10/17/2023	10/16/2024
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-860C S/N M19548	10/17/2023	10/16/2024
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/17/2023	10/16/2024
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/20/2023	10/19/2024
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/20/2023	10/19/2024
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/20/2023	10/19/2024
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/20/2023	10/19/2024
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/16/2023	10/15/2024
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/16/2023	10/15/2024
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/16/2023	10/15/2024
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/3/2024	6/3/2025
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/3/2024	6/3/2025
DALT	DUCT LEAKAGE	-10" - +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	3/2024	3/1/2025

## Abbreviation List

A = Area (ft <sup>2</sup> )	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A <sub>k</sub> = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T <sub>ma</sub> = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T <sub>oa</sub> = Outside Air Temperature
CD = Ceiling Diffuser	T <sub>ra</sub> = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO <sub>2</sub> = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C <sub>v</sub> = Flow Constant	K <sub>v</sub> = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T <sub>ra</sub> = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% <sub>ra</sub> = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio





# National TAB

**Project:** EGLIN AFB (DESTIN, FL)  
**Address:** Eglin AFB, FL 32542

**Asset:** RTU-1

**Area:** BUILDING 525

Unit Data	
Manufacturer	Captive Aire
Model Num	CASRTU1-E.302-16-7.5T
Serial Num	5999708
Configuration	RTU - HORIZONTAL
Num OA Filters	2
OA Filter Size	16X20X2
Num PreFilter	4
PreFilter Size	16X16X2

Test Data		
	Design	Actual
SF CFM	2600	2530
SF RPM	1051	90%
RA CFM	2150	2059
OA CFM	450	471
RL VOLTAGE	208	211/210/212
RL AMPERAGE		2.4/2.4/2.5
OA Damper Position		5.0 V / 19%
Brake Horsepower		N/A

Motor Data	
Motor MFG	ZIEHL-ABEGG
Frame	N/L
Horsepower	2.5
Motor RPM	N/L
Phase	3
Rated Voltage	208
Rated Amperage	5.7
Service Factor	N/L

Performance Data		
	Design	Actual
Fan Suction SP		-1.25
Fan Discharge SP		1.01
Fan Total SP		2.26
DX Coil PD *		0.610
Pre Filter PD		0.196
Total ESP	0.75	1.45
DX Coil DB EAT		76.6F
DX Coil DB LAT		59.6F
DX Coil WB EAT		64.9F
DX Coil WB LAT		57.3F
DX Coil Capacity		7.5T

INDOOR TEMPS	
CURRENT TEMP.	75.3F
HUMIDITY	54.4% RH
WETBULB	64.0F
OUTDOOR TEMPS	
CURRENT TEMP.	97.3F
HUMIDITY	53.4% RH
WETBULB	82.2F
DEWPOINT	77.8F

# National TAB

**Project:** EGLIN AFB (DESTIN, FL)  
**Address:** Eglin AFB, FL 32542

**Asset:** RTU-2

**Area:** BUILDING 525

Unit Data	
Manufacturer	Captive Aire
Model Num	CASRTU1-E.152-13-5T
Serial Num	5999708
Configuration	RTU
Num OA Filters	2
OA Filter Size	16X20X2
Num PreFilter	4
PreFilter Size	16X16X2

Test Data		
	Design	Actual
SF CFM	1800	1744
SF RPM	1095	2146
RA CFM	1650	1600
OA CFM	150	144
RL VOLTAGE	208	208/209/210
RL AMPERAGE		5.0/5.0/4.9
OA Damper Position		4.0V / 13%
Brake Horsepower		1.81

Motor Data	
Motor MFG	TECO WESTINGHOUSE
Frame	145T
Horsepower	2
Motor RPM	1740
Phase	3
Rated Voltage	230/460
Rated Amperage	5.48/2.74
Service Factor	1.15

Performance Data		
	Design	Actual
Fan Suction SP		-0.91
Fan Discharge SP		0.63
Fan Total SP		1.54
DX Coil PD *		0.478
Pre Filter PD		0.148
Total ESP	0.5	0.88
DX Coil DB EAT		76.6F
DX Coil DB LAT		61.3F
DX Coil WB EAT		64.4F
DX Coil WB LAT		57.2F
DX Coil Capacity		5T

INDOOR TEMPS	
CURRENT TEMP.	75.9F
HUMIDITY	63.2% RH
WETBULB	67.8F
OUTDOOR TEMPS	
CURRENT TEMP.	97.3F
HUMIDITY	53.4% RH
WETBULB	82.2F
DEWPOINT	77.8F

# National TAB

**Project:** EGLIN AFB (DESTIN, FL)

**Address:** Eglin AFB, FL 32542

**Asset:** EF-1

**Area:** BUILDING 525

Unit Data	
MFG	AIR KING
Model Num	AK280LS
Serial Num	3213221a
Type	CEILING

Motor Data	
Motor MFG	N/L
Frame	N/L
Horsepower	N/L
Motor Rpm	N/L
Phase	1
Voltage (rated)	120
Amperage (rated)	0.9
Service Factor	N/L

Test Data		
	Design	Actual
CFM	250	229
Fan RPM	2050	MAXIMIZED
RL Voltage	120	121
RL Amperage	1.5	0.25
Suction ESP		-0.016
Total ESP	0.01	0.376"
Discharge ESP		0.36"

# National TAB

**Project:** EGLIN AFB (DESTIN, FL)

**Address:** Eglin AFB, FL 32542

**Asset:** EF-2

**Area:** BUILDING 525

Unit Data	
MFG	AIR KING
Model Num	AK280LS
Serial Num	3213221a
Type	CEILING

Motor Data	
Motor MFG	N/L
Frame	N/L
Horsepower	N/L
Motor Rpm	N/L
Phase	1
Voltage (rated)	120
Amperage (rated)	0.9
Service Factor	N/L

Test Data		
	Design	Actual
CFM	250	228
Fan RPM	2050	MAXIMIZED
RL Voltage	120	121
RL Amperage	1.5	0.21
Suction ESP		-0.01
Total ESP	0.01	0.32"
Discharge ESP		0.31"

# National TAB

**Project:** EGLIN AFB (DESTIN, FL)

**Address:** Eglin AFB, FL 32542

**Asset:** EF-A

**Area:** BUILDING 535

Unit Data	
MFG	PENNBARRY
Model Num	D10
Serial Num	H23TZ87101
Type	CENTRIFUGAL - UPBLAST

Motor Data	
Motor MFG	WEG
Frame	W56
Horsepower	0.25
Motor Rpm	1735
Phase	1
Voltage (rated)	115/208-230
Amperage (rated)	4.60/2.54-2.30
Service Factor	1.15

Drive Data	
Motor Sheave Size	MVL40B
Motor Bore Size	5/8"
Fan Sheave Size	AL74
Fan Bore Size	3/4"
Belt CL Distance	8 3/8"
No of Belts	1
Belt Size	4L330

Test Data		
	Design	Actual
CFM	350	362
Fan RPM		819
RL Voltage	120	119.8
RL Amperage		4.58
Suction ESP		-0.22
Total ESP	0.25	0.22
Brake Horse Power		0.25

Asset	Area Served	Type	Size	DESIGN	CFM(1)	FINAL CFM	% to design
Duct1	H1	Duct	4	115	119	131	1.14
Duct2	H2	Duct	4	115	100	110	0.96
Duct3	H3	Duct	4	120	110	121	1.01
				<b>350</b>	<b>329</b>	<b>362</b>	<b>1.03</b>

# National TAB

**Project:** EGLIN AFB (DESTIN, FL)

**Address:** Eglin AFB, FL 32542

**Asset:** EF-B

**Area:** BUILDING 535

Unit Data	
MFG	PENNBARRY
Model Num	D10
Serial Num	H23TZ87100
Type	CENTRIFUGAL - UPBLAST

Motor Data	
Motor MFG	WEG
Frame	W56
Horsepower	0.25
Motor Rpm	1735
Phase	1
Voltage (rated)	115/208-230
Amperage (rated)	4.60/2.54-2.30
Service Factor	1.15

Drive Data	
Motor Sheave Size	MVL40B
Motor Bore Size	5/8"
Fan Sheave Size	AL74
Fan Bore Size	3/4"
Belt CL Distance	8 1/8"
No of Belts	1
Belt Size	4L330

Test Data		
	Design	Actual
CFM	350	366
Fan RPM		848
RL Voltage	120	119
RL Amperage		4.46
Suction ESP		0.27"
Total ESP	0.25	0.27"
Brake Horse Power		0.24

Asset	Area Served	Type	Size	DESIGN	CFM(1)	FINAL CFM	% to design
Duct1	H4	Duct	4	115	120	120	1.04
Duct2	H5	Duct	4	115	116	116	1.01
Duct3	H6	Duct	4	120	130	130	1.08
				<b>350</b>	<b>366</b>	<b>366</b>	<b>1.05</b>