

Report By:

National TAB
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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 07/16/2024

PROJECT

The Learning Experience (Fitchburg, WI)

2605 Research Park Rd

Fitchburg, WI 53711

Client

Air Temperature Services

5301 VOGES RD

MADISON, WI 53718

National TAB

Project: The Learning Experience (Fitchburg, WI)

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CERTIFICATION

PROJECT: The Learning Experience (Fitchburg, WI)

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: 7/16/2024

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

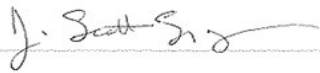
CERTIFIED BY: J. Scott Springer 23312

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 ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = 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 _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = 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 _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % 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: The Learning Experience (Fitchburg, WI)

System/Unit: AHU/RTU

Asset: RTU-1

AREA:107

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5624A01913
Model Num	NA	KGB060S4B
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.25
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Test Data		
	Design	Actual
SF CFM	1800	1829
SF RPM	1118	1045
RA CFM	1500	1512
OA CFM	300	317
RL Voltage	208	203/203/204
RL Amperage	2.8	1.9/1.8/1.9
OA Damper Position	-	4.4V (27%)
Brake Horse Power	-	0.654

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	1.00	1.0
Motor Rpm	-	1760
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	2.8
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.29"
Fan Suction SP	-	-0.43"
Fan Discharge SP	-	0.45"
Total ESP	0.70	0.74"
Fan Total SP	0.87	0.88"

Drive Data	
	Actual
Motor Sheave Size	3.25"
Motor Bore Size	7/8"
Motor Sheave SetPt	2 TURNS OPEN
Fan Sheave Size	4.25"
Fan Sheave Bore	1"
Belt CL Distance	15.75"
Num of Belts	1
Belt Size	A40

Completed By: Michael McDonnell on 07/10/2024

Notes:

[1] UNIT NOT WIRED INTO FIRE SYSTEM, NOT FULLY OPERATIONAL AT TIME OF TAB. BYPASSED SYSTEM WITH JUMPER TO TAB UNIT.

Written By: Michael McDonnell on 07/12/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

AHU/RTU

Diffuser Supply (GRD)

RTU-1/107

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	110	A2	8	230	210	228	99.1
1-2	110	A3	10	330	402	334	101.2
1-3	108	A3	10	300	390	318	106.0
1-4	108	A3	10	250	368	259	103.6
1-5	107	A2	8	230	182	235	102.2
1-6	107	A3	10	230	207	221	96.1
1-7	107	A3	10	230	240	234	101.7
Total				1800	1999	1829	101.61%

Diffuser Ret/Exh (GRD)

RTU-1/107

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R1-1	B5	14"	460	1.0	692	467	467	101.5
R1-2	B5	14"	450	1.0	461	471	471	104.7
R1-3	B5	14"	590	1.0	394	574	574	97.3
Total			1500		1547	1512	1512	100.8%

Completed By: Michael McDonnell on 07/10/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

System/Unit: AHU/RTU

Asset: RTU-2

AREA:112

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5623M01250
Model Num	NA	KGB074S4T
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.25
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Test Data		
	Design	Actual
SF CFM	2100	2263
SF RPM	1299	1256
RA CFM	1800	1972
OA CFM	300	291
RL Voltage	208	203/205/205
RL Amperage	6.0	3.8/3.9/3.9
OA Damper Position	-	2.3V (5%)
Brake Horse Power	-	1.28

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Frame	-	56HZ
Horsepower	2.00	2.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	6.0
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.30"
Fan Suction SP	-	-0.60"
Fan Discharge SP	-	0.57"
Total ESP	0.70	0.87"
Fan Total SP	0.96	1.17"

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	7/8"
Motor Sheave SetPt	1.5 TURNS OPEN
Fan Sheave Size	MA48
Fan Sheave Bore	1"
Belt CL Distance	15.75"
Num of Belts	1
Belt Size	A42

Completed By: Michael McDonnell on 07/10/2024

Notes:

[1] PLANS INDICATE A 5-TON UNIT SCHEDULED FOR 1800 CFM. 6-TON UNIT INSTALLED AND APPROVED. PROPORTIONALLY INCREASED AIRFLOW TO WITHIN APPROVED SUBMITTAL DESIGN (2450 CFM) TO BRING UNIT OVER 350CFM/TON FOR PERFORMANCE AND EFFICIENCY. DESIGNED PRESSURIZATION OF INDIVIDUAL ROOMS MAINTAINED.

Written By: Michael McDonnell on 07/12/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

AHU/RTU

Diffuser Supply (GRD)

RTU-2/112

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	136	A2	8	200	246	193	96.5
2-2	112	A2	8	240	167	251	104.6
2-3	112	A2	8	240	251	254	105.8
2-4	112	A2	8	250	253	259	103.6
2-5	114	A1	6	110	129	124	112.7
2-6	114	A2	8	230	261	236	102.6
2-7	114	A1	6	110	120	131	119.1
2-8	114	A2	8	230	204	250	108.7
2-9	114	A2	8	230	199	126	54.8
2-10	114	A1	6	110	129	249	226.4
2-11	137	A2	8	150	224	190	126.7
Total				2100	2183	2263	107.76%

Diffuser Ret/Exh (GRD)

RTU-2/112

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R2-1	B2	8"	260	1.0	394	200	189	72.7
R2-2	B4	12"	440	1.0	374	552	522	118.6
R2-3	B4	12"	440	1.0	383	561	531	120.7
R2-4	B5	14"	660	1.0	774	772	730	110.6
Total			1800		1925	2085	1972	109.56%

National TAB

Project: The Learning Experience (Fitchburg, WI)

System/Unit: AHU/RTU

Asset: RTU-3

AREA:129

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5624B06464
Model Num	NA	KGC092S4M
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num PreFilter 1	-	4
PreFilter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Frame	-	56HZ
Horsepower	2.00	2.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	200-230
Rated Amperage	7.5	6.0
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	7/8"
Motor Sheave SetPt	1.5 TURNS OPEN
Fan Sheave Size	6"
Fan Sheave Bore	1"
Belt CL Distance	21.5"
Num of Belts	1
Belt Size	AX54

Test Data		
	Design	Actual
SF CFM	3050	3127
SF RPM	841	853
RA CFM	2600	2658
OA CFM	450	469
RL Voltage	208	204/204/205
RL Amperage	6.0	4.1/4.3/4.1
OA Damper Position	-	HIGH: 3.9V (21%) LOW: 4.3V (28%)
Brake Horse Power	-	1.39

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.38"
Fan Suction SP	-	-0.52"
Fan Discharge SP	-	0.67"
Total ESP	0.70	1.05"
Fan Total SP	1.10	1.19"

Completed By: Michael McDonnell on 07/11/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

AHU/RTU

Diffuser Supply (GRD)

RTU-3/129

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
3-1	127	A2	8	150	174	161	107.3
3-2	127	A3	10	260	319	283	108.8
3-3	124	A3	10	260	310	267	102.7
3-4	124	A2	10	200	188	194	97.0
3-5	124	A3	10	260	174	273	105.0
3-6	124	A3	10	260	268	259	99.6
3-7	127	A3	10	260	313	284	109.2
3-8	127	A3	8	260	292	276	106.2
3-9	123	A1	6	40	62	41	102.5
3-10	123	A2	10	230	141	228	99.1
3-11	127	A1	6	90	93	87	96.7
3-12	129	A1	6	90	66	90	100.0
3-13	129	A2	8	230	150	229	99.6
3-14	129	A2	8	230	150	225	97.8
3-15	129	A2	8	230	163	230	100.0
Total				3050	2863	3127	102.52%

Diffuser Ret/Exh (GRD)

RTU-3/129

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R3-1	B5	14"	460	1.0	375	482	482	104.8
R3-2	B5	14"	460	1.0	414	470	470	102.2
R3-3	B4	14"	410	1.0	489	423	423	103.2
R3-4	B4	14"	410	1.0	470	421	421	102.7
R3-5	B4	14"	430	1.0	449	428	428	99.5
R3-6	B4	14"	430	1.0	499	434	434	100.9
Total			2600		2696	2658	2658	102.23%

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Project: The Learning Experience (Fitchburg, WI)

System/Unit: AHU/RTU

Asset: RTU-4

AREA:132

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5623M01252
Model Num	NA	KGB074S4T
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.25
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Test Data		
	Design	Actual
SF CFM	2450	2512
SF RPM	1299	1323
RA CFM	2150	2192
OA CFM	300	320
RL Voltage	208	205/205/204
RL Amperage	6.0	3.6/3.6/3.8
OA Damper Position	-	2.4V (9%)
Brake Horse Power	-	1.22

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Frame	-	56HZ
Horsepower	2.00	2.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	4.6	6.0
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.64"
Fan Discharge SP	-	0.62"
Total ESP	0.70	1.07"
Fan Total SP	0.96	1.26"

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	7/8"
Motor Sheave SetPt	0.5 TURNS OPEN
Fan Sheave Size	MA48
Fan Sheave Bore	1"
Belt CL Distance	15.75"
Num of Belts	1
Belt Size	A42

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Project: The Learning Experience (Fitchburg, WI)

AHU/RTU

Diffuser Supply (GRD)

RTU-4/132

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
4-1	101	A2	8	180	190	188	104.4
4-2	100	A2	8	150	196	161	107.3
4-3	132	A3	10	320	339	330	103.1
4-4	132	A3	10	320	259	318	99.4
4-5	132	A3	10	320	274	324	101.3
4-6	101	A2	8	180	185	163	90.6
4-7	102	A3	10	260	335	268	103.1
4-8	105	A2	8	220	210	239	108.6
4-9	105	A2	8	170	205	174	102.4
4-10	105	A1	6	110	169	112	101.8
4-11	105	A3	8	220	215	235	106.8
Total				2450	2577	2512	102.53%

Diffuser Ret/Exh (GRD)

RTU-4/132

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R4-1	B6	10"	260	1.0	254	254	254	97.7
R4-2	B6	16"	680	1.0	723	723	723	106.3
R4-3	B3	10"	360	1.0	373	373	373	103.6
R4-4	B4	12"	425	1.0	411	411	411	96.7
R4-5	B4	12"	425	1.0	431	431	431	101.4
Total			2150		2192	2192	2192	101.95%

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Project: The Learning Experience (Fitchburg, WI)

System/Unit: AHU/RTU

Asset: RTU-5

AREA:121

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5623M01251
Model Num	NA	KGB074S4T
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.25
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Test Data		
	Design	Actual
SF CFM	2100	2240
SF RPM	1299	1396
RA CFM	1800	1934
OA CFM	300	306
RL Voltage	208	205/206/206
RL Amperage	6.0	3.5/3.7/3.7
OA Damper Position	-	2.2V (5%)
Brake Horse Power	-	1.21

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Frame	-	56HZ
Horsepower	2.00	2.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	4.6	6.0
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.75"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.83"
Total ESP	0.70	1.58"
Fan Total SP	0.96	1.78"

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	7/8"
Motor Sheave SetPt	1.5 TURNS OPEN
Fan Sheave Size	MA48
Fan Sheave Bore	1"
Belt CL Distance	16"
Num of Belts	1
Belt Size	A42

Completed By: Michael McDonnell on 07/10/2024

Notes:

[1] PLANS INDICATE A 5-TON UNIT SCHEDULED FOR 1800 CFM. 6-TON UNIT INSTALLED AND APPROVED. PROPORTIONALLY INCREASED AIRFLOW TO WITHIN APPROVED SUBMITTAL DESIGN (2450 CFM) TO BRING UNIT OVER 350CFM/TON FOR PERFORMANCE AND EFFICIENCY. DESIGNED PRESSURIZATION OF INDIVIDUAL ROOMS MAINTAINED.

Written By: Michael McDonnell on 07/12/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

AHU/RTU

Diffuser Supply (GRD)

RTU-5/121

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
5-1	135	A1	6	100	166	111	111.0
5-2	120	A2	8	290	150	300	103.4
5-3	121	A2	8	240	184	239	99.6
5-4	122	A1	6	30	76	37	123.3
5-5	137	A1	6	100	74	113	113.0
5-6	135	A1	6	100	80	112	112.0
5-7	117	A2	8	260	234	276	106.2
5-8	117	A2	8	260	261	274	105.4
5-9	117	A2	8	260	229	275	105.8
5-10	117	A2	8	260	325	274	105.4
5-11	136	A1	6	100	209	109	109.0
5-12	135	A1	6	100	159	120	120.0
Total				2100	2147	2240	106.67%

Diffuser Ret/Exh (GRD)

RTU-5/121

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R5-1	B2	8"	290	1.0	552	325	309	106.6
R5-2	B2	8"	300	1.0	496	296	282	94.0
R5-3	B4	12"	485	1.0	396	570	543	112.0
R5-4	B4	12"	485	1.0	341	584	556	114.6
R5-5	B2	8"	240	1.0	294	256	244	101.7
Total			1800		2079	2031	1934	107.44%

Completed By: Michael McDonnell on 07/10/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

System/Unit: FAN - Exhaust

Asset: EF-1

AREA:113

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	100C3B
Serial Num	-	012SK90101-00
Type	CRE DNBLAST	CRE DNB

Test Data		
	Design	Actual
CFM	770	766
Fan RPM	1716	1681
RL Voltage	-	NA [1]
RL Amperage	5.8	NA [1]
Suction ESP	-	-0.26"
Discharge ESP	-	ATM
Total ESP	0.500	0.26"

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Horsepower	0.25	0.25
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.9
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	3.25"
Motor Bore Size	0.5"
Motor Sheave SetPt	2.5 TURNS OPEN
Fan Sheave Size	AK27
Fan Sheave Bore	3/4"
Belt CL Distance	4.75"
Num of Belts	1
Belt Size	4L180

Completed By: Michael McDonnell on 07/11/2024

Notes:

[1] NOT ACCESSIBLE LIGHTSWITCH STYLE DISCONNECT, COULD NOT READ SAFELY.

Written By: Michael McDonnell on 07/12/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/113

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E1-1	C1	6	70	1.0	87	92	68	97.1
E1-2	C1	6	70	1.0	66	70	71	101.4
E1-3	C1	6	70	1.0	74	78	70	100.0
E1-4	C1	6	70	1.0	72	76	65	92.9
E1-5	C1	6	70	1.0	59	63	77	110.0
E1-6	C1	6	70	1.0	77	82	72	102.9
E1-7	C1	6	70	1.0	68	72	72	102.9
E1-8	C1	6	70	1.0	51	54	70	100.0
E1-9	C1	6	70	1.0	89	94	64	91.4
E1-10	C1	6	70	1.0	45	47	66	94.3
E1-11	C1	6	70	1.0	68	72	71	101.4
Total			770		756	800	766	99.48%

Completed By: Michael McDonnell on 07/11/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

System/Unit: FAN - Exhaust

Asset: EF-2

AREA:129

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	80C2B
Serial Num	-	012SK90101-00
Type	CRE DNBLAST	CRE DNB

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Horsepower	0.25	0.167
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	3.4
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	3.25"
Motor Bore Size	1/2"
Motor Sheave SetPt	4.5 TURNS OPEN
Fan Sheave Size	MA43
Fan Sheave Bore	3/4"
Belt CL Distance	5.25"
Num of Belts	1
Belt Size	4L210

Test Data		
	Design	Actual
CFM	280	272
Fan RPM	1597	906
RL Voltage	-	NA [1]
RL Amperage	-	NA [1]
Suction ESP	-	-0.21"
Discharge ESP	-	ATM
Total ESP	0.300	0.21"

Completed By: Michael McDonnell on 07/11/2024

Notes:

[1] NOT ACCESSIBLE LIGHTSWITCH STYLE DISCONNECT, COULD NOT READ SAFELY.

[2] EF-3 INSTALLED IN THIS LOCATION. INTENDED TO BE

COOK 70C3B, COOK 80C2B INSTALLED. FAN ACHEIVING DESIGN, NOT ANTICIPATED TO CAUSE ANY ISSUE.

Written By: Michael McDonnell on 07/12/2024

National TAB

Project: The Learning Experience (Fitchburg, WI)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-2/129

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E2-1	C1	6	70	1.0	92	72	72	102.9
E2-2	C1	6	70	1.0	61	69	69	98.6
E2-3	C1	6	70	1.0	58	67	67	95.7
E2-4	C1	6	70	1.0	54	64	64	91.4
Total			280		265	272	272	97.14%

National TAB

Project: The Learning Experience (Fitchburg, WI)

System/Unit: FAN - Exhaust

Asset: EF-3

AREA:120

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	70C3B
Serial Num	-	012SK90101-00
Type	CRE DNBLAST	CRE DWNBLAST

Test Data		
	Design	Actual
CFM	300	307
Fan RPM	1087	1795
RL Voltage	-	115
RL Amperage	4.4	NA [1]
Suction ESP	-	-0.41"
Discharge ESP	-	ATM
Total ESP	0.300	0.41"

Motor Data		
	Design	Actual
Motor MFG	-	U.S. MOTORS
Horsepower	0.167	0.250
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.9
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	3/4"
Motor Sheave SetPt	0 TURNS OPEN
Fan Sheave Size	3"
Fan Sheave Bore	1/2"
Belt CL Distance	4.75"
Num of Belts	1
Belt Size	4L190

Completed By: Michael McDonnell on 07/12/2024

Notes:

[1] NOT ACCESSIBLE LIGHTSWITCH STYLE DISCONNECT, COULD NOT READ SAFELY.

[2] EF-2 INSTALLED IN THIS LOCATION. INTENDED TO BE

COOK 80C2B, COOK 70C3B INSTALLED. FAN ACHEIVING DESIGN, NOT ANTICIPATED TO CAUSE ANY ISSUE.

Written By: Michael McDonnell on 07/12/2024



National TAB

Project: The Learning Experience (Fitchburg, WI)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-3/120

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E3-1	C2	8	150	1.0	183	157	157	104.7
E3-2	C2	8	150	1.0	129	150	150	100.0
Total			300		312	307	307	102.33%

Completed By: Michael McDonnell on 07/11/2024