

from

RAMSEY AIR CONDITIONING CO.
Commerce Street P. O. Box 1333
JACKSONVILLE, NORTH CAROLINA 28540

to

AIR BALANCE REPORT

UEPH JOB
Camp Johnson, Camp Lejeune, N.
Contract # N62470-82-C-2244

Ramsey Air Conditioning, Inc.

P. O. BOX 1333 · JACKSONVILLE, NORTH CAROLINA 28540 · PHONE 455-0414

2-~~14~~-86

AIR BALANCE REPORT

JOB: UEPH Job
Camp Johnson, Camp Lejeune, N.C.
Contract # N62470-82-C-2244

Building No. - 430

Rainbow Air Conditioning Inc.
P.O. BOX 1332, JACKSONVILLE, NORTH CAROLINA PHONE 432-1111

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130

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DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Beds
430

Instrument: Alnor CompuFlow Therna Anemometer
No. 8500D-11 W/Microprinter. Calibration Date 2-14-86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name or No.: 430

Equipment Room or System No.: GR F1 Ground Floor

Air Handling Unit No.: 7 CFM Design 2100

Make McQuay Model LSL-106 H.P. 1

R.P.M. 850 Volts 207 Amps 3.9

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq. ft.

No. of Readings 20 Average 958 FPM.

Supply Volume 2337 CFMS.

Mixed Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq. ft.

No. of Readings 20 Average 910 FPM.

Return Air Volume 2220 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq. ft.

No. of Readings 6 Average 196 FPM.

Fresh Air Volume 162 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 110 %.

NOTES: _____

Freddy Kauske - Asst Manager

Balancing Performed by: Kenneth H. Ramsey Title President

Company Ramsey Air Conditioning Inc Date 2-14-86

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AIR BALANCING WORK SHEET FOR ROOMS

Date 2-14-86

Project Name: VEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, N.C.

Building Name Or NO. 430

System Number or Air Hand. NO. 7 GROUND FLOOR

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Journey H. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calib. date 2/14/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs Full open	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
101	260	270	270	104	We could
102	"		275	102	not see it
103	"		260	100	Appreciable
104	"	260	260	100	difference
105	"		260	100	in air flow
106	"		260	100	in rooms
107	"	260	260	104	with Air
108	"		260	100	Hand. Unit
109	"		260	106	in by-pass
110	"	260	260	100	and half th
111	"		260	100	rooms cut-off
112	"		260	106	or with syst
113	"	260	260	106	full open.
114	"		260	100	The air
115	"		260	100	flow at th
116	"	260	260	106	Blender Box
					+ S.A. Regist
					stay about 4
					SAME.
TOTAL					

Project Name: ...
 Address: ...
 Building Name or No.: ...
 System Number or Air Hand. No.: ...
 Equipment Being Replaced: ...
 Contractor: ...
 Balanced by: ...
 Signed: ...
 Date: ...



Room No.	Area	Volume	Flow	Temp	Humidity	Notes
101
102
103
104
105
106
107
108
109
110



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2-14-86

Project Name: UEPH Job Contract No. 2244

Address : Camp Johnson, Camp Lejeune, NC.

Building Name or No.: 430

Equipment Room or System No.: Gr. Fl. Ground Floor

Air Handling Unit No.: 8 CFM Design 2100

Make M-Quay Model LSL-106 H.P. 1

R.P.M. 870 Volts 207 Amps 3.5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 972 FPM.

Supply Volume 2371 CFMS.

Mixed
Return Duct Size 22 x 16 = 352 sq. in. = 2.4 sq.ft.

No. of Readings 20 Average 968 FPM.

Return Air Volume 2361 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 192 FPM.

Fresh Air Volume 159 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 113 %.

NOTES: _____

Freddy Kuske & Crest Manager

Balancing performed by: Kenneth A Ramsey Title President

Company Ramsey Air Conditioning Inc Date 2-14-86

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10/10/88

10/10/88

10/10/88

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10/10/88

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2-11-82

Address: 11001 1st St
San Diego, CA 92131

Equipment being balanced: Room Blower Boxes and Registers
System Number or Air Hand. No. 3

Contractor: James Air Conditioning, Inc.
Balancing by: James Air Inc.

Instrument: Flow Technician Model 100
Blower box data: design flow = 200



Room No.	Design Flow (CFM)	Actual Flow (CFM)	% Error
101	200	180	-10%
102	200	220	+10%
103	200	190	-5%
104	200	210	+5%
105	200	195	-2.5%
106	200	205	+2.5%
107	200	198	-1%
108	200	202	+1%
109	200	199	-0.5%
110	200	201	+0.5%



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therna Anemometer
Mo. 8500D-11 W/Microprinter. Calibration Date. 2-14-86
Project Name: UEPH JOB Contract No. 2244
Address: Camp Johnson, Camp Lejeune, NC.
Building Name or No.: 430
Equipment Room or System No.: 2nd Floor AHU #10
Air Handling Unit No.: 10 CFM Design 2300
Make M-S Quincy Model LSL-106 H.P. 1
R.P.M. 850 Volts 207 Amps 4.0
Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 945 FPM.
Supply Volume 2306 CFMS.
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 920 FPM.
Return Air Volume 2245 CFMS.
Fresh Air Duct Size 12 x 10 = 120 sq. in. = 1.83 sq.ft.
No. of Readings 6 Average 196 FPM.
Fresh Air Volume 163 CFMS.
Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 100 %.

NOTES: _____

Freddy Krauskopf Asst Manager
Balancing Performed by: Larry W. Ramsey Title President
Company Ramsey Air Conditioning Inc Date 2-14-86



Partnership:

Project Name:

Address:

Building Name or No.:

Apartment Room or System No.:

Air Handling Unit No.:

Make:

Model:

Supply Volume:

Return Volume:

Return Air Volume:



Partnership:

Project Name:

Address:

Building Name or No.:

Apartment Room or System No.:

Air Handling Unit No.:

Make:

Model:

Supply Volume:

Date: _____

Contract Name: _____

Contract No. _____

System or Air Hand. No. _____

Room Identifier, Boxes and Registers _____

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, Fla.

Balance By: Ramsey A/C, Inc. _____

Instrument: _____

Reading Box No. _____



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calibration Date. 2/14/86
Project Name: UEPH Job Contract No. 2244
Address : Camp Johnson, Camp Lejeune, NC
Building Name or No.: 430
Equipment Room or System No.: 2nd Floor HHU #9
Air Handling Unit No.: 9 CFM Design 2000
Make McQuay Model LSL-106 H.P. 3/4
R.P.M. 820 Volts 207 Amps 3.1
Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 860 FPM
Supply Volume 2098 CFMS.
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 840 FPM.
Return Air Volume 2049 CFMS.
Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 205 FPM.
Fresh Air Volume 170 CFMS.
Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 105 %.

NOTES: _____

_____ Freddie Kruske & Asst Manager
Balancing Performed by Kurney W. Ramsey Title President
Company Ramsey Air Conditioning Inc Date 2-14-86



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
 Mo. 8500D-11 W/Microprinter. Calabration Date. 2-14-86
 Project Name: UEPH Job Contract No. 2244
 Address: Camp Lejeune, N.C. (@ Camp Johnson)
 Building Name or No.: 430
 Equipment Room or System No.: 3rd FLOOR AHU # 11
 Air Handling Unit No.: 11 CFM Design 2400
 Make McQuay Model LSL 106 H.P. 1
 R.P.M. 925 Volts 207 Amps 4.0
 Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
 No. of Readings 20 Average 995 FPM.
 Supply Volume 2428 CFMS.
Mixed Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
 No. of Readings 20 Average 970 FPM..
 Return Air Volume 2366 CFMS.
 Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
 No. of Readings 6 Average 213 FPM.
 Fresh Air Volume 176 CFMS.
 Return & Fresh Air Volume Total _____ CFMS.
 Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Jeddy Kruske & Asst Manager

Balancing Performed by: Kennedy W Ramsey Title President
 Company Ramsey Air Conditioning, Inc Date 2-14-86



Faint header text, possibly "FEDERAL BUREAU OF INVESTIGATION".

Instrument: Alnor Comoditow Thermal Anemometer

Model: WMT-1000

Serial No: 1000

Contract No: 1000

Building Name: 1000

Equipment Room or System No: 1000

Air Handling Unit No: 1000

Make: 1000

Model: 1000

Serial No: 1000

Contract No: 1000

Building Name: 1000

Equipment Room or System No: 1000

Air Handling Unit No: 1000

Make: 1000

Model: 1000

Serial No: 1000

Contract No: 1000

Building Name: 1000

Equipment Room or System No: 1000

Air Handling Unit No: 1000

Make: 1000

Model: 1000

Serial No: 1000

Contract No: 1000

Building Name: 1000

Equipment Room or System No: 1000

Air Handling Unit No: 1000

Make: 1000

Model: 1000

Serial No: 1000

Contract No: 1000



AIR BALANCING WORK SHEET FOR ROOMS

Date 2/14/86

Project Name: UEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, CAMP Lejeune NC

Building Name Or NO. 430

System Number or Air Hand. NO. 11 - 3rd FLOOR

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kurney W. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calib. date 2/14/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
301	260	280	280	106	See Note for A.H. UNIT #7.
302	"		270	100	
303	"		260	104	
304	"	260	260	100	
305	"		260	100	
306	"		260	108	
307	"	260	260	108	
308	"		260	108	
309	"		260	108	
310	"	260	260	100	
311	"		260	106	
312	"		260	104	
313	"	260	260	102	
314	"		260	104	
315	"		260	108	
316	"	260	260	100	
TOTALS					

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2-14-86
Project Name: UEPH Job Contract No. 2244
Address: Camp Johnson, Camp Lejeune, NC
Building Name or No.: 430
Equipment Room or System No.: 3rd Floor #HU#12
Air Handling Unit No.: 12 CFM Design 2200
Make MIS Gummy Model LSL-106 H.P. 1
R.P.M. 860 Volts 207 Amps 3.8
Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 922 FPM
Supply Volume 2249 CFMS.
Return Duct Size 16 x 22 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 910 FPM.
Return Air Volume 2220 CFMS.
Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 214 FPM.
Fresh Air Volume 177 CFMS.
Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 102 %

NOTES: _____

Balancing performed by: Freddy Kuske & Ramsey W. Ramsey Title Asst. Manager
Company Ramsey Air Conditioning Inc Date 2-14-86
President



Installation of low voltage terminal set

Contract No. 100-100-100-100

Project Name:

Address:

Building Name or No.:

Equipment Room or System No.:

Air Handling Unit No.:

Make:

Model:

Volts:

Phase:

Supply and Return Air Volume



Address: _____
 Building or Room No. _____
 System No. or Air Hand. No. _____
 Equipment Being Balanced: Room Number, Boxes and Registers _____
 Contractor: Ramsey Air Conditioning, Inc., Jacksonville, Fla. _____
 Balancing by: Ramsey A/C Inc. _____
 Instrument: _____
 Standard for Pressure: _____



Room No.	Pressure	Flow	Temp	Humidity	Notes
101	0.0	100	72	50	
102	0.0	100	72	50	
103	0.0	100	72	50	
104	0.0	100	72	50	
105	0.0	100	72	50	
106	0.0	100	72	50	
107	0.0	100	72	50	
108	0.0	100	72	50	
109	0.0	100	72	50	
110	0.0	100	72	50	
111	0.0	100	72	50	
112	0.0	100	72	50	
113	0.0	100	72	50	
114	0.0	100	72	50	
115	0.0	100	72	50	
116	0.0	100	72	50	
117	0.0	100	72	50	
118	0.0	100	72	50	
119	0.0	100	72	50	
120	0.0	100	72	50	

MOD LSL-106

Cap. 2500 CFM

Duo Temp Sys.

86

30000316-05

THE FIRST PART

THE SECOND PART

THE THIRD PART

86

THE FOURTH PART

THE FIFTH PART

Ramsey Air Conditioning, Inc.

P. O. BOX 1333 · JACKSONVILLE, NORTH CAROLINA 28540 · PHONE 455-0414

2-18-86

AIR BALANCE REPORT

JOB: UEPH Job
Camp Johnson, Camp Lejeune, N.C.
Contract # N62470-82-C-2244

Building No. - 435

Techno-Net Communications Inc.



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-II W/Microprinter. Calibration Date. 2/18/86

Project Name: UEPH Job Contract No. 2244

Address : Camp Johnson, Camp Lejeune, NC

Building Name or No.: 435

Equipment Room or System No.: Ground Floor

Air Handling Unit No.: 87 CFM Design 2100

Make McQuay Model LSL-106 H.P. 1

R.P.M. 830 Volts 207 Amps 4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 870 FPM

Supply Volume 2122 CFMS

Mixed Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 885 FPM

Return Air Volume 2159 CFMS

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 194 FPM

Fresh Air Volume 161 CFMS

Return & Fresh Air Volume Total _____ CFMS

Percentage of Design CFMS Delivered 101 %

NOTES: _____

_____ Freddy Kruske Asst. Manager

Balancing Performed by: Lurney W. Ramsey Title President

Company RAMSEY Air Conditioning, Inc. Date 2/18/86



U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Project Name: 11274 Job
 Address: CAMP JOHNSTON CAMP
 Building Name or No.: 103
 Location Room or Section No.: Ground Floor
 Air Handling Unit No.: 2100
 Date of Inspection: 10/10/88
 Inspector: 3. PM



Supply Volume: 3120
 Air Change Rate: 3.2
 No. of Readings: 20
 Test Volume: 2120
 Test Air Flow: 10-10-100
 Test Date: 10/10/88



Test No.: 101
 Test Location: 10-10-100
 Test Date: 10/10/88

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-18-86

Project Name: UEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, CAMP LEJEUNE NC

Building Name Or NO. 435

System Number or Air Hand. NO. 7

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Jarney W. Ramsey

Instrument: Alnor Balometer w/24" x 24" hood Calib. date 2-18-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
101	260	25	25	102	We could
102	"		20	100	not see
103	"		22	108	an appreciable
104	"	25	20	104	difference
105	"		26	102	in air flow
106	"		2	106	in rooms
107	"	20	20	108	with Air Hand
108	"		22	108	Unit in by-
109	"		2	106	pass and half
110	"	2	2	106	the rooms
111	"		20	108	cut-off or
112	"		26	102	with system
113	"	25	20	108	full open. The
114	"		260	100	air flow at
115	"		25	104	the Blender
116	"	25	20	104	boxes & SA
					Registers stay
					about the same
TOTALS					



Project Name: _____
 Address: _____
 Building Name: _____
 System Number: _____
 Equipment Being Replaced: _____
 Contractor: _____
 Balancing By: _____
 Instrumentation: _____
 Member No: _____



Room Number	Room Name	Flow Rate	Flow Direction	Flow Unit	Flow Type
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
					TOTAL



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-II W/Microprinter. Calibration Date. 2/18/86

Project Name: UEPH Job Contract No. 2244

Address : Camp Johnson, Camp Lejeune, NC

Building Name or No.: 435

Equipment Room or System No.: Ground Floor

Air Handling Unit No.: 8 CFM Design 2100

Make McQuay Model LSL-106 H.P. 1

R.P.M. 830 Volts 207 Amps 4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 873 FPM

Supply Volume 2130 CFMS

Mixed
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 868 FPM

Return Air Volume 2117 CFMS

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 191 FPM

Fresh Air Volume 158 CFMS

Return & Fresh Air Volume Total _____ CFMS

Percentage of Design CFMS Delivered 101 %

NOTES: _____

Freddy Kruske Asst. Manager

Balancing Performed by: Kuener W. Ramsey Title President

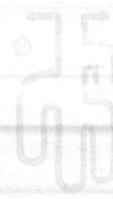
Company RAMSEY AIR CONDITIONING, INC. Date 2-18-86



Project Name: W. B. H. Taylor
 Address: 1111 1/2 St. N. W.
 Building: 1111 1/2 St. N. W.
 Equipment: 1111 1/2 St. N. W.
 All items: 1111 1/2 St. N. W.
 Date: 11/11/11
 Votes: 1111



Item: 1111
 Description: 1111
 Quantity: 1111
 Price: 1111
 Total: 1111



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-18-86

Project Name: WEPIH JOB Cont. NO. 2244

Address: CAMP JOHNSON, CAMP Lejeune, NC

Building Name Or NO. 435

System Number or Air Hand. NO. 8

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kearney W. Ramsey

Instrument: Alnor Balometer w/24" x 24" hood calib. date 2-18-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
117	260	270	270	104	See Note for A.H. Unit # 7
118	"		270	106	
119	"		270	106	
120	"	270	270	104	
121	"		260	102	
122	"		275	104	
123	"	260	260	100	
124	"		270	108	
125	"		260	102	
126	"	260	260	100	
127	"		270	106	
128	"		270	106	
129	"	260	260	102	
130	"		270	106	
131	280		270	100	
B2	280	270	270	100	
TOTALS					



Address: Chas. Johnson, Camp Johnson, Va.
 Billing Name: Chas. Johnson
 System Number or File Number: 8
 Equipment Being Returned: None
 Contractor Name: None
 Balance Due: None
 Instrument: None
 Member: None

Item	Description	Quantity	Unit	Value
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
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48
49
50



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calibration Date. 2-18-86

Project Name: UEPH Job Contract No. 2244

Address : CAMP JOHNSON, CAMP Lejeune, NC

Building Name or No.: 435

Equipment Room or System No.: 2nd FLOOR

Air Handling Unit No.: 9 CFM Design 2000

Make M^cQUAY Model LSL-106 H.P. 3/4

R.P.M. 815 Volts 207 Amps 2.4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 850 FPM

Supply Volume 2074 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 835 FPM

Return Air Volume 2037 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 200 FPM

Fresh Air Volume 166 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 104 %.

NOTES: _____

Freddy Kruske Asst. Manager.
Balancing Performed by: Kurney W. Ramsey Title President
Company RAMSEY AIR CONDITIONING, INC. Date 2-18-86

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-18-86

Project Name: VEPH JOB Cont. NO. 2244

Address: CAMP JOHNSON, CAMP Lejeune NC

Building Name Or NO. 435

System Number or Air Hand. NO. 9

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kenneth W. Ramsey

Instrument: Anor Balometer w/24" x 24" hood Calb. date 2-18-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
201	260	260	260	100	See Note for A.H. Unit # 7.
202	"	"	260	104	
203	"	"	260	104	
204	"	260	260	100	
205	"	"	260	108	
206	"	"	260	104	
207	"	260	260	104	
208	"	"	260	100	
209	"	"	260	102	
210	"	260	260	100	
211	"	"	260	108	
212	"	"	260	100	
213	"	260	260	108	
214	"	"	260	100	
215	"	"	260	100	
216	"	260	260	102	
217	"	"	"	"	
TOTALS					



Project: [Faint text]
 Address: [Faint text]
 Building: [Faint text]
 System Number: [Faint text]
 Equipment being installed: [Faint text]
 Contractor: [Faint text]
 Estimated by: [Faint text]
 Installation: [Faint text]
 Binder box used: [Faint text]



Room Number	Level	Area	Notes
100	1st	...	...
200	2nd	...	...
300	3rd	...	...
400	4th	...	...
500	5th	...	...
600	6th	...	...
700	7th	...	...
800	8th	...	...
900	9th	...	...
1000	10th	...	...

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date 2-18-86.

Project Name: UEPH Job Contract No. 2244.

Address : CAMP JOHNSON, Camp Lejeune NC.

Building Name or No.: 435.

Equipment Room or System No.: 2nd FLOOR.

Air Handling Unit No.: 10 CFM Design 2300.

Make Mc Quay Model LSL-106 H.P. 1.

R.P.M. 845 Volts 207 Amps 4.

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 950 FPM.

Supply Volume 2318 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 945 FPM..

Return Air Volume 2305 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 201 FPM.

Fresh Air Volume 166 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Freddy Kuske, Asst. Manager

Balancing Performed by: Kurney W. Ramsey Title President.

Company RAMSEY Air Conditioning, Inc. Date 2-18-86.

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-18-86

Project Name: VEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune NC

Building Name Or NO. 435

System Number or Air Hand. NO. 10

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kurney W. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calb. date 2-18-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
217	260	20	20	108	See Note
218	"		260	100	for A.H.
219	"		270	104	Unit # 1
220	"	260	260	100	
221	"		26	102	
222	"		270	108	
223	"	260	260	100	
224	"		260	100	
225	"		26	102	
226	"	20	270	104	
227	"		260	100	
228	"		2	106	
229	"	26	26	102	
230	"		260	100	
231	"		270	100	
232	"	280	20	108	
TOTALS					

Address: 1234 Johnson Street
City: Springfield, MA 01103
Phone: (417) 555-1234



Payment: Please check enclosed for \$100.00.
Contract: This contract is subject to the terms and conditions of the contract.
Reference: See page 10 of the contract.
Treatment: The treatment is for a period of 12 weeks.
Delivery: Delivery is scheduled for the first week of the next month.

Item	Quantity	Unit Price	Total Price
Item 1	100	\$1.00	\$100.00
Item 2	50	\$2.00	\$100.00
Item 3	25	\$4.00	\$100.00
Item 4	10	\$10.00	\$100.00
Item 5	5	\$20.00	\$100.00
Item 6	2	\$50.00	\$100.00
Item 7	1	\$100.00	\$100.00
Item 8	1	\$100.00	\$100.00
Item 9	1	\$100.00	\$100.00
Item 10	1	\$100.00	\$100.00



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AIR BALANCING WORK SHEET FOR ROOMS

Date 2-18-86

Project Name: UEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, Camp Lejeune NC

Building Name Or NO. 435

System Number or Air Hand. NO. 12

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Ramsey W. Ramsey

Instrument: Anor Balometer w/24" x 24" hood Calib. date 2-18-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMS	Measured CFMS	Measured CFMS w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
301	260	280	280	108	See Note
302	"		200	100	For A.H.
303	"		200	104	Unit # 7
304	"	200	200	108	
305	"		200	106	
306	"		200	106	
307	"	260	200	106	
308	"		200	104	
309	"		200	106	
310	"	200	200	104	
311	"		200	104	
312	"		260	102	
313	"	260	260	102	
314	"		200	108	
315	"		200	104	
316	"	260	260	102	
TOTALS					

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2-18-86.

Project Name: UE PH Job Contract No. 2244.

Address : CAMP JOHNSON, CAMP LEJEWIE NC.

Building Name or No.: 435

Equipment Room or System No.: 3rd FLOOR

Air Handling Unit No.: 11 CFM Design 2400

Make Mc QUAY Model LSL-106 H.P. 1

R.P.M. 915 Volts 207 Amps 4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 990 FPM.

Supply Volume 2415 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 978 FPM..

Return Air Volume 2386 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 185 FPM.

Fresh Air Volume 157 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

_____ Freddy Krauske Ast. Manager.

Balancing Performed by: Kenny W. Ramsey Title President.

Company RAMSEY Air Conditioning, Inc. Date 2-18-86.

Ramsey Air Conditioning, Inc.

P. O. BOX 1333 · JACKSONVILLE, NORTH CAROLINA 28540 · PHONE 455-0414

2-13-86

AIR BALANCE REPORT

JOB: UEPH Job
Camp Johnson, Camp Lejeune, N.C.
Contract # N62470-82-C-2244

Building No. - 440



Ramsey Air Conditioning Inc.

P. O. BOX 1332, JACOBSONVILLE, NORTH CAROLINA 28540, PHONE 432-0414

THE NATIONAL LEADERSHIP



THE NATIONAL LEADERSHIP
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IS NOW A REGISTERED SERVICE MARK

CALLING 1-800-440-4400



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calibration Date. 2-13-86

Project Name: UEPH Job Contract No. 2244

Address : Camp Johnson, Camp Lejeune, NC

Building Name or No.: 440

Equipment Room or System No.: Ground Floor Left end

Air Handling Unit No.: AH # 1 CFM Design: 2700

Make McQuay Model _____ H.P. 1.5

R.P.M. 980 Volts 207 Amps 5.1

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1172 FPM.

Supply Volume 2895 CFMS.

Mixed
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 15 Average 1170 FPM.

Return Air Volume 2854 CFMS.

Fresh Air Duct Size 14 x 10 = 140 sq. in. = .97 sq.ft.

No. of Readings 8 Average 171 FPM.

Fresh Air Volume 165 CFMS.

Return & Fresh Air Volume Total 2854 CFMS.

Percentage of Design CFMS Delivered 107% %.

NOTES: The above balancing was done with a dry coil & The rated CFMs are with a wet coil.

Balancing Performed by: Sheddy Kresch Title Asst. Manager

Company Ramsay Air Conditioning Inc Title President

Date 2-13-86

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-13-86

Project Name: VEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name Or NO. 440

System Number or Air Hand. NO. 1

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Jimmy A. Ramsey

Instrument: Alnor, Balometer w/24x24 hood Calb. date 2/13/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs, Full open	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
101	260	270	270	103%	We could
102	"	280	280	107%	Not see an
103	"	260	265	102%	appreciable
104	"	270	275	105%	difference
105	"	260	260	100%	in air flow
106	"	270	270	103%	in rooms
107	"	260	260	100	with Air
108	"	260	260	100	Hand. Unit
109	"	270	270	103	in bypass
110	"	270	270	103	and half
111	"	270	270	103	the rooms
112	"	270	280	107	cut off, or
113	"	270	270	103	with system
114	"	270	280	107	full open.
115	"	270	280	107	The air
116	"	270	280	107	flow at
					the blender
					Boxes & s.a.
					Registers sta
TOTALS		Appx 4160			about the same

Address: 1200 Johnson, James Avenue, N.C.

Building Name or No. 110

System Number or Air Hand. No. 1

Equipment Joint: Room Filter, Box and Register

Contractor: Ramsay Air Conditioning, Inc., Jacksonville, Fla.

Blowing By: Ramsay A.C. Inc.

Instrument: Wiley, Model 100, Serial 100

Blower for Test: design 100 - 200, 100, 100, 100, 100

Room Number	Design	Pressure	Temperature	Humidity	Notes
101	100	0.00	70.0	50.0	
102	100	0.00	70.0	50.0	
103	100	0.00	70.0	50.0	
104	100	0.00	70.0	50.0	
105	100	0.00	70.0	50.0	
106	100	0.00	70.0	50.0	
107	100	0.00	70.0	50.0	
108	100	0.00	70.0	50.0	
109	100	0.00	70.0	50.0	
110	100	0.00	70.0	50.0	
111	100	0.00	70.0	50.0	
112	100	0.00	70.0	50.0	
113	100	0.00	70.0	50.0	
114	100	0.00	70.0	50.0	
115	100	0.00	70.0	50.0	
116	100	0.00	70.0	50.0	
117	100	0.00	70.0	50.0	
118	100	0.00	70.0	50.0	
119	100	0.00	70.0	50.0	
120	100	0.00	70.0	50.0	

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calibration Date. 2-13-86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name or No.: 440

Equipment Room or System No.: Ground Floor Right End

Air Handling Unit No.: AHU # 2 CFM Design 2500

Make McQuay Model _____ H.P. 1.5

R.P.M. 950 Volts 207 Amps 4.0

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1078 FPM

Supply Volume 2632 CFMS

Mixed Return Duct Size 22" x 16" = 352 sq. in. = 2.44 sq.ft.

No. of Readings 15 Average 996 FPM

Return Air Volume 2430 CFMS

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 191 FPM

Fresh Air Volume 159 CFMS

Return & Fresh Air Volume Total 2430 CFMS

Percentage of Design CFMS Delivered 105% %

NOTES: The above balancing was done with the coils dry & The rated CFMs are with Wet Coil.

Balancing Performed by: Jerry H. Ramsey Title President

Company Ramsey Air Conditioning Inc Date 2-13-86

24x18 1" INSUL



THE AIR HANDLING UNIT IN THE...

Instrument: Alnor Corporation Thermometer
No. 5500-11 W. Microtherm

Project Name: 440
Address: 440

Building Name: 440

Equipment No.: 440

Make: 440
Model: 440
Volts: 207

Supply Unit Size: 440

Supply Volume: 440

Mixed: 440

Return Air Volume: 440

Temp. at Inlet: 440

Temp. at Outlet: 440

Percentage of Design Load Delivered: 440



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-13-86

Project Name: VEPH - Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, NC.

Building Name Or NO. 440

System Number or Air Hand. NO. 2

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed James H. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Cal'd. date 2/13/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs, Full open	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
117	260		280	107%	See Note
118	"	270	270	103%	for AH
119	"		270	103	UNIT #1
120	"		270	103	
121	"	260	260	100	
122	"		260	100	
123	"		270	103	
124	"	260	260	100	
125	"		260	100	
126	"	275	275	105	
127	"		260	100	
128	"		260	100	
129	"	265	265	102	
130	"		260	100	
131	"	270	270	103	
132	"		270	103	
TOTALS					

Address: _____
 Building Name or No.: _____
 System Number or Air Hand. No.: _____
 Equipment Serial Number: Room Number _____
 Contractor: _____
 Relining By: _____
 Instrument: _____
 Blower Box Label: _____



Room Number	Location	Measured	Notes
111
110
109
108
107
106
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102
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DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2/13/86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson, Camp Lejeune, NC.

Building Name or No.: 440

Equipment Room or System No.: 2nd Fl AHU#3

Air Handling Unit No.: 3 CFM Design: 2500

Make McQuay Model _____ H.P. 1.5

R.P.M. 950 Volts 207 Amps 3.9

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1055 FPM.

Supply Volume 2574 CFMS.

Mixed Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1030 FPM.

Return Air Volume 2513 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = 1.83 sq.ft.

No. of Readings 6 Average 192 FPM.

Fresh Air Volume 159 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 103% %.

NOTES: The above balancing was done with a dry coil & The rated CFMs are with wet coil

Balancing Performed by: Freddy Kruske - Asst Manager

Company Ramsey Air Conditioning Inc Title President

Date 2-13-86

1984-85

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OF THE UNITED STATES
OF AMERICA



3

THE FIRST NATIONAL BANK OF THE UNITED STATES OF AMERICA
MEMPHIS, TENNESSEE 38103



DATE	DESCRIPTION	DEBIT	CREDIT	BALANCE
1/1/85	OPENING BALANCE		100.00	100.00
1/15/85	DEPOSIT		50.00	150.00
1/30/85	WITHDRAWAL	20.00		130.00
2/15/85	DEPOSIT		75.00	205.00
2/28/85	WITHDRAWAL	10.00		195.00
3/15/85	DEPOSIT		30.00	225.00
3/31/85	WITHDRAWAL	15.00		210.00
4/15/85	DEPOSIT		40.00	250.00
4/30/85	WITHDRAWAL	25.00		225.00
5/15/85	DEPOSIT		60.00	285.00
5/31/85	WITHDRAWAL	30.00		255.00
6/15/85	DEPOSIT		50.00	305.00
6/30/85	WITHDRAWAL	40.00		265.00
7/15/85	DEPOSIT		70.00	335.00
7/31/85	WITHDRAWAL	50.00		285.00
8/15/85	DEPOSIT		80.00	365.00
8/31/85	WITHDRAWAL	60.00		305.00
9/15/85	DEPOSIT		90.00	395.00
9/30/85	WITHDRAWAL	70.00		325.00
10/15/85	DEPOSIT		100.00	425.00
10/31/85	WITHDRAWAL	80.00		345.00
11/15/85	DEPOSIT		110.00	455.00
11/30/85	WITHDRAWAL	90.00		365.00
12/15/85	DEPOSIT		120.00	485.00
12/31/85	WITHDRAWAL	100.00		385.00
TOTAL		1000.00	1000.00	385.00



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calibration Date. 2/13/86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name or No.: 440

Equipment Room or System No.: 2nd Fl. AHU #6 (4)

Air Handling Unit No.: #6 CFM Design: 2700

Make MS Quincy Model _____ H.P. 1.5

R.P.M. 1000 Volts 207 Amps 5.2

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1134 FPM.

Supply Volume 2767 CFMS.

Mixed
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1110 FPM.

Return Air Volume 2708 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 223 FPM.

Fresh Air Volume 185 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered ~~100~~ 102 %.

NOTES: The above balancing was done with a dry coil & The rated CFMs are with wet coil.

Jreddy Kuske - Asst Manager.

Balancing Performed by: Kurney H. Ramsey Title President

Company Ramsay Air Conditioning Inc Date 2-13-86

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2/13/86.

Project Name: VEPH JOB Contract No. 2244

Address : Camp Johnson, Camp Lejeune, N.C.

Building Name or No.: 440

Equipment Room or System No.: 3rd Fl AHU #5

Air Handling Unit No.: 5 CFM Design 2700

Make M⁵ Quincy Model _____ H.P. 1.5

R.P.M. 990 Volts 207 Amps 5.3

Supply Duct Size 20 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1150 FPM

Supply Volume 2806 CFMS.

Return Duct Size 20 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1110 FPM.

Return Air Volume 2708 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 196 FPM.

Fresh Air Volume 163 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 104 %.

NOTES: The above balancing was done with dry coil.
* The rated CFMs is with a wet coil.

Sheddy Kreske Asst. manager.

Balancing performed by: Larry W Ramsey Title President

Company Ramsey Air Conditioning, Inc Date 2-13-86



Instrument: @ Computer Thermo Anemometer
 Project Name: WSPR
 Address: 1000 W. ...
 Building Name or No.: 410
 Equipment Room or System No.: ...
 Air Handling Unit No.: ...
 Make: ... Model: ...
 R.P.M.: ... Volts: ...



Return Duct Size: ... x ...
 No. of Return: ...
 Return Air Volume: ...
 Fresh Air Duct Size: ... x ...
 No. of Return: ...
 Return Air Volume: ...



Percentage of Return: ...
 Notes: ...
 Instrument: ...

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-13-86

Project Name: UEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, N.C.

Building Name Or NO. 440 3rd Floor

System Number or Air Hand. NO. 5

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kenneth H. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calib. date 2/13/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMS	Measured CFMS, Full Open	Measured CFMS w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
301	260		270	103	See Note
302	"	275	275	105	for A.H.# 1
303	"		260	100	
304	"		270	103	
305	"	260	260	100	
306	"		260	100	
307	"		250	97	
308	"	280	280	107	
309	"		260	100	
310	"		275	105	
311	"	280	280	107	
312	"		260	100	
313	"		270	103	
314	"	270	270	103	
315	"		270	103	
316	"	270	270	103	
TOTALS					



Date

Project Name: USM, Inc.

Address: George Johnson, 200 West 10th St, Dallas, TX 75201

Building Name or No. 410

System Number or Air Hand. No. 1

Equipment being balanced: Room Blower Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, FL

Balancing by: Ramsey A/C Inc.

Instrument: Anemometer

Blower Box Design - 250, 250, 250, 250, 250, 250, 250, 250, 250, 250



Room Number	Design	Actual	Notes
201	250	250	
202	250	250	
203	250	250	
204	250	250	
205	250	250	
206	250	250	
207	250	250	
208	250	250	
209	250	250	
210	250	250	
211	250	250	
212	250	250	
213	250	250	
214	250	250	
215	250	250	
216	250	250	
217	250	250	
218	250	250	
219	250	250	
220	250	250	
221	250	250	
222	250	250	
223	250	250	
224	250	250	
225	250	250	
226	250	250	
227	250	250	
228	250	250	
229	250	250	
230	250	250	
231	250	250	
232	250	250	
233	250	250	
234	250	250	
235	250	250	
236	250	250	
237	250	250	
238	250	250	
239	250	250	
240	250	250	
241	250	250	
242	250	250	
243	250	250	
244	250	250	
245	250	250	
246	250	250	
247	250	250	
248	250	250	
249	250	250	
250	250	250	



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2/13/86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson Camp Lejeune, NC

Building Name or No.: 440

Equipment Room or System No.: 3rd Fl. AHU #6

Air Handling Unit No.: 6 CFM Design: 2700

Make M^cQuay Model _____ H.P. 1.5

R.P.M. 1000 Volts 207 Amps 5.2

Supply Duct Size 20 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1120 FPM.

Supply Volume 2732 CFMS.

Mixed Return Duct Size 20 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1090 FPM.

Return Air Volume 2659 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 215 FPM.

Fresh Air Volume 178 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101% %.

NOTES: The above balancing was done with a dry coil & Therated CFMS are with a wet coil

Freddy Kruste - Asst Manager

Balancing Performed by: Terney A Ramer Title President

Company Ramsey Air Conditioning, Inc Date 2-13-86

Instrument: ALTOX POSITIONING TABLE ASSEMBLY

Project Name: 123456789

Address: 123456789

Building Name or No.:

Equipment Room or System No.:

Air Handling Unit No.:

Make:

Model:

Supply Unit:

Supply Volume:

Rated Capacity:

No. of Rooms:

Room No.:

Fresh Air Inlet:

Room No.:

Room Name:

Percentage of Total CFM Delivered:

Remarks:

Date:

Time:

Operator:





Project Name: _____
 Address: _____
 Building Name or No.: _____
 System number or air hand. No.: _____
 Equipment being replaced - room heater, fan and controls
 Contractor: Rasey Air Conditioning, Inc., Jacksonville, Fla.
 Estimating by: Rasey Air Conditioning, Inc.
 Instrument: _____
 Header Box Data: Design class - 250, Volume 150, set on low speed



Room Number	Design	Volume	Speed	Notes
217	250	150	Low	
218	"	"	"	
219	"	"	"	
220	"	"	"	
221	"	"	"	
222	"	"	"	
223	"	"	"	
224	"	"	"	
225	"	"	"	
226	"	"	"	
227	"	"	"	
228	"	"	"	
229	"	"	"	
230	"	"	"	
231	"	"	"	
232	"	"	"	
233	"	"	"	
234	"	"	"	
235	"	"	"	
236	"	"	"	
237	"	"	"	
238	"	"	"	
239	"	"	"	
240	"	"	"	
241	"	"	"	
242	"	"	"	
243	"	"	"	
244	"	"	"	
245	"	"	"	
246	"	"	"	
247	"	"	"	
248	"	"	"	
249	"	"	"	
250	"	"	"	



Ramsey Air Conditioning, Inc.

P. O. BOX 1333 · JACKSONVILLE, NORTH CAROLINA 28540 · PHONE 455-0414

2-19-86

AIR BALANCE REPORT

JOB: UEPH Job
Camp Johnson, Camp Lejeune, N.C.
Contract # N62470-82-C-2244

Building No. - 445

Barney's Air Conditioning
P.O. Box 124, Pasadena, California 91106



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date. 2-19-86

Project Name: UEPH Job Contract No. 2244
Address : CAMP JOHNSON, CAMP LEJEUNE NC
Building Name or No.: 445
Equipment Room or System No.: Ground Floor
Air Handling Unit No.: 1 CFM Design 2700
Make McQuay Model LSL-106 H.P. 1 1/2
R.P.M. 990 Volts 207 Amps 5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1125 FPM.
Supply Volume 2745 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1115 FPM.
Return Air Volume 2720 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 201 FPM.
Fresh Air Volume 1166 CFMS.

Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 102 %.

NOTES: _____

Freddy Kruske, Asst. Manager
Balancing Performed by: Kenneth W Ramsey Title President
Company RAMSEY Air Conditioning, Inc Date 2-19-86

DATE RECEIVED: _____
BY: _____



Project Name: _____
Address: _____
Room or System No.: _____
Air Handling Unit No.: _____
Model: _____
Voltage: _____
Supply Unit Size: _____



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: VEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, Camp Lejeune, NC

Building Name Or NO. 445

System Number or Air Hand. NO. 1

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kenneth W. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calb. date 2-19-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
101	260	280	270	104	We could
102	"		280	108	NOT see
103	"		270	104	an appreciable
104	"	25	270	106	difference
105	"		270	104	in air flow
106	"		270	104	in rooms.
107	"	26	26	100	with Air Hand
108	"		260	100	Unit in by-
109	"		270	104	pass and half
110	"	270	270	104	the rooms cut
111	"		270	104	off or with
112	"		270	104	system full
113	"	26	26	100	open. The
114	"		270	104	air flow at
115	"		270	104	the Blender
116	"	270	270	104	Boxes & S.A.
					Registers stay
					about the same
TOTALS					

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-II W/Microprinter. Calabration Date. 2-19-86

Project Name: VEPH Job Contract No. 2244
Address : CAMP JOHNSON, CAMP LEJEUNE NC.

Building Name or No.: 445
Equipment Room or System No.: Ground Floor
Air Handling Unit No.: 2 CFM Design 2500
Make McQuay Model LSL-106 H.P. 1
R.P.M. 940 Volts 207 Amps 4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1050 FPM.
Supply Volume 2562 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1030 FPM.
Return Air Volume 2513 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 187 FPM.
Fresh Air Volume 155 CFMS.

Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 102 %.

NOTES: _____

Freddy Kuske, Asst. Manager

Balancing Performed by: Kenneth W. Ransley Title President
Company Ransley Air Conditioning, Inc. Date 2-19-86



AT ANY HANDLING UNIT IN THE WORK

NO. 8000-11 W/Microfiche

Project Name: ...

Address: ...

Building Name or No.:

Equipment Item or System No.:

File Handling Unit No.:

Make: ... Model: ...

Serial No.:

Supply Unit No.:

No. of Reel(s):

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AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: VEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name Or NO. 445

System Number or Air Hand. NO. 2

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Ramsey

Instrument: Alnor Balometer w/24" x 24" hood Calb. date 2-19-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ % s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
117	260	20	20	104	See Note
118	"		20	104	for A.H.
119	"		20	108	Unit #1.
120	"	20	20	104	
121	"		20	106	
122	"		20	104	
123	"	2	20	106	
124	"		26	102	
125	"		20	108	
126	"	260	260	100	
127	"		20	104	
128	"		20	104	
129	"	260	260	100	
130	"		20	100	
131	"		280	104	
132	"	280	280		
TOTALS					



Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Invention: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Relating to: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Contract: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Equipment: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 System Number or Air Hand: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Existing Name or No.: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet
 Address: Blender Box Patent - design class - 240 - volume - 10 - not on law sheet



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calabration Date. 2-19-86

Project Name: VEPH Job Contract No. 2244

Address : Camp Johnson, Camp Lejeune NC

Building Name or No.: 445

Equipment Room or System No.: B 2nd Floor

Air Handling Unit No.: 3 CFM Design 2500

Make McQuay Model LSL-106 H.P. 1

R.P.M. 940 Volts 207 Amps 4

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1037 FPM

Supply Volume 2530 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1015 FPM.

Return Air Volume 2476 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 194 FPM.

Fresh Air Volume 161 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Balancing Performed by: Fredrick Kausky Title Asst. Manager

Company Ramsey Air Conditioning, Inc. Date 2-19-86

PROJECT NAME: [Faint text]

ADDRESS: [Faint text]

PROJECT NO.: [Faint text]

CONTRACT NO.: [Faint text]



DATE: [Faint text]

BY: [Faint text]

FOR: [Faint text]

NO. OF [Faint text]



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: VEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, Camp Lejeune NC

Building Name Or NO. 445

System Number or Air Hand. NO. 3

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed James W. Ramsey

Instrument: ANOR Balometer w/24"x24" hood Calib. date 2/19/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
201	260	270	270	100	See Note for A.H. Unit # 1
202	"		270	100	
203	"		265	102	
204	"	270	270	100	
205	"		270	100	
206	"		270	100	
207	"	260	260	100	
208	"		260	100	
209	"		270	100	
210	"	270	270	100	
211	"		260	100	
212	"		270	100	
213	"	260	260	100	
214	"		260	100	
215	"		260	100	
216	"	270	270	100	
TOTALS					

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calibration Date. 2-19-86

Project Name: VEPH Job Contract No. 2244

Address : CAMP JOHNSON, CAMP LEJEUNE NC.

Building Name or No.: 445

Equipment Room or System No.: 2ND FLOOR

Air Handling Unit No.: 4 CFM Design 2700

Make McQuay Model LSK-106 H.P. 1 1/2

R.P.M. 990 Volts 207 Amps 5.1

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1120 FPM.

Supply Volume 2732 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1100 FPM.

Return Air Volume 2684 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 196 FPM.

Fresh Air Volume 162 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Treddy Krusker, Asst. Manager

Balancing Performed by: Ramsey W. Ramsey Title President

Company Ramsey Air Conditioning, Inc. Date 2-19-86

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: VEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name Or NO. 445

System Number or Air Hand. NO. 4

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kenneth W. Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calib. date 2/19/86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
217	260	260	260	100	See Note for A.H. Unit #1.
218	"		20	108	
219	"		20	108	
220	"	260	260	100	
221	"		20	106	
222	"		260	108	
223	"	20	20	108	
224	"		20	108	
225	"		20	104	
226	"	20	20	108	
227	"		20	106	
228	"		260	102	
229	"	20	22	108	
230	"		20	106	
231	"		280	104	
232	"	20	20	108	
TOTALS					

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CombuFlow Therna Anemometer
No. 8500D-11 W/Microprinter. Calibration Date. 2-19-86

Project Name: UEPH Job Contract No. 2244

Address : CAMP JOHNSON, Camp Lejeune NC

Building Name or No.: 445

Equipment Room or System No.: 3rd FLOOR

Air Handling Unit No.: 5 CFM Design 2700

Make McQuay Model LSL-106 H.P. 1 1/2

R.P.M. 980 Volts 207 Amps 5.1

Supply Duct Size 22x16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1127 FPM

Supply Volume 2749 CFMS.

Return Duct Size 22x16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1120 FPM.

Return Air Volume 2732 CFMS.

Fresh Air Duct Size 12x10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 200 FPM.

Fresh Air Volume 1166 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 102 %.

NOTES: _____

Freddy Kuske, Asst. Manager.

Balancing Performed by: Lumen W. Ramsey Title President

Company Ramsey Air Conditioning, Inc. Date 2-19-86



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: VEPH Job Cont. NO. 2244

Address: CAMP JOHNSON, CAMP Lejeune NC

Building Name Or NO. 2415

System Number or Air Hand. NO. 5

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kumey W. Ramsey

Instrument: Alnor Balometer w/24" x 24" hood Calb. date 2-19-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
301	260	210	210	100	See Notes for A.H.
302	"		280	108	
303	"		260	100	Unit #1
304	"	260	260	100	
305	"		210	106	
306	"		210	108	
307	"	26	26	108	
308	"		260	100	
309	"		210	106	
310	"	210	210	108	
311	"		210	106	
312	"		210	108	
313	"	260	260	100	
314	"		210	106	
315	"		210	104	
316	"	210	210	104	
TOTALS					



Equipment Being Replaced; Room Number, Box and Register

Contractor; Name of Contractor, Inc., Address, City, State

Estimated Date of Installation; Estimated Cost

Remarks; Other Information

Approved by: _____ Date: _____

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therna Anemometer
Mo. 8500D-11 W/Microprinter. Calibration Date. 2-19-86

Project Name: UEPH Job Contract No. 2244

Address: Camp Johnson, Camp Lejeune NC

Building Name or No.: 445

Equipment Room or System No.: 3rd Floor

Air Handling Unit No.: 6 CFM Design 2700

Make McQuay Model LSL-106 H.P. 1 1/2

R.P.M. 970 Volts 207 Amps 5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1120 FPM

Supply Volume 2732 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1100 FPM

Return Air Volume 2684 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 203 FPM

Fresh Air Volume 168 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Balancing performed by: Freddy Kuske, Asst. Manager

Company Ramsey Air Conditioning, Inc. Title President

Date 2-19-86



AIR BALANCING WORK SHEET FOR ROOMS

Date 2-19-86

Project Name: UEPH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune, NC

Building Name Or NO. 445

System Number or Air Hand. NO. 6

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Ramsey W Ramsey

Instrument: Alnor Balometer w/24"x24" hood Calb. date 2-19-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
317	260	260	260	100	See Note for A.H. Unit #1
318	"		2	106	
319	"		260	100	
320	"	250	250	104	
321	"		2	106	
322	"		250	104	
323	"	250	250	108	
324	"		250	106	
325	"		260	102	
326	"	260	260	102	
327	"		250	104	
328	"		250	108	
329	"	250	250	108	
330	"		250	108	
331	"		250	100	
332	"	270	270	104	
TOTALS					

Ramsey Air Conditioning, Inc.

P. O. BOX 1333 · JACKSONVILLE, NORTH CAROLINA 28540 · PHONE 455-0414

2-20-86

AIR BALANCE REPORT

JOB: UEPH Job
Camp Johnson, Camp Lejeune, N.C.
Contract # N62470-82-C-2244

Building No. - 450

Raymond Air Conditioning, Inc.
P.O. BOX 1227 JACKSONVILLE, NORTH CAROLINA 28540 PHONE 455-0211



5-30-58

THE SOLUTION IS...

TO BE: 11:41 AM
GIVE: 11:41 AM
CONTACT: 11:41 AM

11:41 AM



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therna Anemometer
Mo. 8500D-11 W/Microprinter. Calabration Date 2-20-86
Project Name: UEPH Job Contract No. 2244
Address : CAMP JOHNSON, CAMP LEJENNE NC
Building Name or No.: 450
Equipment Room or System No.: Ground Floor
Air Handling Unit No.: 1 CFM Design: 2700
Make M^c QUAY Model LSK-106 H.P. 1 1/2
R.P.M. 974 Volts _____ Amps 4.2
Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1120 FPM.
Supply Volume 2732 CFMS.
Mixed
Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1109 FPM..
Return Air Volume 2705 CFMS.
Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 195 FPM.
Fresh Air Volume 162 CFMS.
Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 101 %.

NOTES: _____

Balancing Performed by: Freddy Kruske, Asst. Manager.
Jurney W. Ramsey Title President
Company RAMSEY Air Conditioning Inc. Date 2/20/86



Information for the following items is provided:

Project Name: 112-111-101
 Address: 112-111-101
 Building Name or No.: 112-111-101
 Apartment Room or System No.: 112-111-101
 Air Handling Unit No.: 112-111-101
 Make: 112-111-101
 Model: 112-111-101
 Size: 112-111-101
 Volume: 112-111-101
 Contract No. 112-111-101



Supply Volume: 112-111-101
 Air Handling Unit No.: 112-111-101
 Make: 112-111-101
 Model: 112-111-101
 Size: 112-111-101
 Volume: 112-111-101
 Contract No. 112-111-101



Contract No. 112-111-101
 Project Name: 112-111-101
 Address: 112-111-101
 Building Name or No.: 112-111-101
 Apartment Room or System No.: 112-111-101
 Air Handling Unit No.: 112-111-101
 Make: 112-111-101
 Model: 112-111-101
 Size: 112-111-101
 Volume: 112-111-101

DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calibration Date 2-20-86

Project Name: UEPH Job Contract No. 2244

Address: CAMP JOHNSON, CAMP LEJUNE NC

Building Name or No.: 450

Equipment Room or System No.: GROUND FLOOR

Air Handling Unit No.: 2 CFM Design 2500

Make M^C QUAY Model LSL-106 H.P. 1

R.P.M. 950 Volts 207 Amps 3.9

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1080 FPM.

Supply Volume 2635 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1040 FPM.

Return Air Volume 2537 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 194 FPM.

Fresh Air Volume 161 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 105 %

NOTES: _____

Freddy Kruske, Asst. Manager.

Balancing Performed by Kurney W. Ramsey Title President

Company RAMSEY Air Conditioning Inc. Date 2/20/86



1000

1000

1000

1000

1000

1000

1000

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1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000





Address: Camp Johnson Camp Johnson NC
Postage paid to No. 150

Postage paid to No. 150

Postage paid to No. 150



Postage paid to No. 150

Postage paid to No. 150

Postage paid to No. 150



Postage paid to No. 150

Postage paid to No. 150



DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
No. 8500D-11 W/Microprinter. Calabration Date. 2-20-86

Project Name: UEPH Job Contract No. 2244

Address: CAMP JOHNSON, CAMP LEJEUNE NC

Building Name or No.: 450

Equipment Room or System No.: 2nd FLOOR

Air Handling Unit No.: 3 CFM Design 2500

Make McQUAY Model LSL-106 H.P. 1

R.P.M. 925 Volts 207 Amps 3.9

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1037 FPM.

Supply Volume 2530 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1028 FPM.

Return Air Volume 2508 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 200 FPM.

Fresh Air Volume 165 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 101 %.

NOTES: _____

_____ Freddy Kuske, Asst. Manager.

Balancing Performed by: James W. Ramsey Title President.

Company Ramsey Air Conditioning Inc. Date 2-20-86



DATA RECEIVING BOX 508
THE BUREAU OF AERONAUTICS & OTHER DATA

Instrument: and composition thereof and amount

Contract No. 7744

Project Name: US TM 307

Address

Building Name or No.

Equipment room or System No.

Air Handling Unit No.



Make

Model

Serial No.

Supply Volume

Part No.

Qty

Unit Price

Total Price

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DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer

Mo. 8500D-11 W/Microprinter. Calabration Date. 2-20-86

Project Name: UEPH Job Contract No. 2244

Address : CAMP JOHNSON, Camp Lejeune NC.

Building Name or No.: 450

Equipment Room or System No.: 2nd FLOOR

Air Handling Unit No.: 4 CFM Design: 2700

Make McQUAY Model LSL-106 H.P. 1 1/2

R.P.M. 980 Volts 207 Amps 5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1125 FPM

Supply Volume 2745 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.

No. of Readings 20 Average 1115 FPM

Return Air Volume 2720 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.

No. of Readings 6 Average 202 FPM

Fresh Air Volume 107 CFMS.

Return & Fresh Air Volume Total _____ CFMS.

Percentage of Design CFMS Delivered 102 %.

NOTES: _____

Freddy Kuske, Asst. Manager

Balancing Performed by: Jurgen W. Ramsey Title President

Company RAMSEY Air Conditioning, Inc. Date 2-20-86

DATA RECORDING FOR...
MEASUREMENTS & OTHER DATA



Contract No.
Building Name or No.
Room or System No.
Air Handling Unit No.
Date Time



sp. ft.
cm.
sp. ft.
cm.



Relationship between and

AIR BALANCING WORK SHEET FOR ROOMS

Date 2-20-86

Project Name: UEPH Job Cont. NO. 2244
 Address: CAMP JOHNSON, CAMP LEJEUNE NC

Building Name Or NO. 450

System Number or Air Hand. NO. 4

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Journey W. Ramsey

Instrument: Anor Balometer w/24"x24" hood Calb. date 2-20-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
217	260	210	210	108	See Note for A.H. Unit #1
218	"		210	108	
219	"		260	102	
220	"	210	210	104	
221	"		210	108	
222	"		210	108	
223	"	210	210	104	
224	"		210	104	
225	"		260	100	
226	"	210	210	106	
227	"		210	108	
228	"		210	108	
229	"	260	260	100	
230	"		210	104	
231	"		270	104	
232	"	280	280	108	
TOTALS					

2-22-50

W. H. H. H. H.
CAMP HANSON
1100



W. H. H. H. H.
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DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-II W/Microprinter. Calibration Date. 2-20-86

Project Name: E UEPH Job Contract No. 2244
Address : Camp Johnson, Camp Lejeune, NC
Building Name or No.: 450
Equipment Room or System No.: 3rd FLOOR
Air Handling Unit No.: 5 CFM Design 2700
Make McQuay Model LSL-106 H.P. 1 1/2
R.P.M. 980 Volts 207 Amps 5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1140 FPM.
Supply Volume 2781 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1100 FPM..
Return Air Volume 2684 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 192 FPM.
Fresh Air Volume 159 CFMS.

Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 103 %.

NOTES: _____

Freddy Kruska, Asst. Manager
Balancing Performed by: Durney W. Ramsey Title President
Company Ramsey Air Conditioning, Inc. Date 2-20-86



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DEPT. Job

Group Technical Group Training

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DATA RECORDING FORM FOR
CFM MEASUREMENTS & OTHER DATA
AT AIR HANDLING UNITS IN DUCTWORK

Instrument: Alnor CompuFlow Therma Anemometer
Mo. 8500D-II W/Microprinter. Calabration Date. 2-20-86

Project Name: UEPH Job Contract No. 2244
Address : CAMP JOHNSON, CAMP LEJEUNE NC.
Building Name or No.: 450
Equipment Room or System No.: 3rd FLOOR
Air Handling Unit No.: 6 CFM Design 2700
Make Mc QUAY Model LSL-106 H.P. 1 1/2
R.P.M. 975 Volts 207 Amps 5

Supply Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1170 FPM
Supply Volume 2854 CFMS.

Return Duct Size 22 x 16 = 352 sq. in. = 2.44 sq.ft.
No. of Readings 20 Average 1150 FPM
Return Air Volume 2806 CFMS.

Fresh Air Duct Size 12 x 10 = 120 sq. in. = .83 sq.ft.
No. of Readings 6 Average 200 FPM
Fresh Air Volume 166 CFMS.

Return & Fresh Air Volume Total _____ CFMS.
Percentage of Design CFMS Delivered 106 %.

NOTES: _____

Freddy Kauske Asst. Manager.

Balancing Performed by: Kenneth W. Ramsey Title President
Company Ramsay Air Conditioning, Inc. Date 2-20-86

2008

DEPT. TOP

CAMP JOHNSON



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AIR BALANCING WORK SHEET FOR ROOMS

Date 2-20-86

Project Name: VE PH Job Cont. NO. 2244

Address: Camp Johnson, Camp Lejeune NC

Building Name Or NO. 450

System Number or Air Hand. NO. 6

Equipment Being Balanced; Room Blender Boxes and Registers

Contractor: Ramsey Air Conditioning, Inc., Jacksonville, N.C.

Balancing By: Ramsey A/C Inc. Signed Kurney W. Ramsey

Instrument: Alnor Balometer w/24" x 24" hood Calb. date 2-20-86

Blender Box Data: design cfms - 260, voltage 120, set on low speed

Room Number	Design CFMs	Measured CFMs	Measured CFMs w/ 1/2 s.a. from AH off and damper in bypass. per specs.	% of Design	Notes
317	260	260	260	100	See Note
318	"		20	104	for A.H.
319	"		260	100	Unit #1
320	"	26	26	102	
321	"		260	100	
322	"		210	104	
323	"	26	26	102	
324	"		210	104	
325	"		21	106	
326	"	260	260	100	
327	"		26	102	
328	"		20	108	
329	"	260	260	100	
330	"		20	104	
331	"		280	108	
332	"	25	215	102	
TOTALS					

