
**NATIONAL ENVIRONMENTAL BALANCING BUREAU
CERTIFIED TEST, ADJUST AND BALANCE REPORT
CERTIFICATION NUMBER 2851**

date: August 26, 2013

project: Dickey's Barbecue
city: Lee's Summit, Missouri

architect: BRR Architecture
city: Merriam, Kansas

engineer: Not Given
city: Not Given

hvac contractor: Not Given
city: Not Given

p b pro balance

5411 Westbound 40 Highway
Blue Springs, Missouri 64015
816-228-7800

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NEBB Cert. 2851

816-228-7800

project: Dickey's Barbecue

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Project Sheet

Project Name: Dickey's Barbecue

Date Started: Monday, August 26, 2013

Date Finished: Monday, August 26, 2013

Field Tech (s): Stephen Gray

Project Supervisor: Rick C. West

NATIONAL ENVIRONMENTAL BALANCING BUREAU PROJECT CERTIFICATION

project: Dickey's Barbecue
city: Lee's Summit, Missouri

The data represented in this report is an exact record of system performance and was obtained in accordance with NEBB standards and procedures. Any variances from design quantities which exceed NEBB tolerances are noted within this report.

The air and / or hydronic distribution systems have been tested and balanced and final adjustments have been made in accordance with NEBB procedural standards for testing, adjusting and balancing of environmental systems and project specifications.

submitted by:

PRO BALANCE, INC.
NEBB CERTIFICATION NUMBER 2851
5411 West 40 Hwy
Blue Springs, Missouri 64015
816-228-7800

NEBB Supervisor:

Rick C. West

date:

August 26, 2013

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Equipment Calibration Report

project: Dickey's Barbecue

[illegible]

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project: Dickey's Barbecue

General Notes

Abbreviations that may be used in this report are:

amp= amperage	na= not applicable
cd= ceiling diffuser	ng= not given
cfm= cubic feet per minute	oa= outside air
d= differential	ph= phase
dia= diameter	ra= return air
db= dry bulb temperature	rpm= revolutions per minute
eat= entering air temperature	rtn= return
ef= exhaust fan	sp= static pressure
ent= entering air temperature	ta= throw away
faf= forced air furnace	temp=temperature
hp= horse power	tl= toilet
kw= kilowatt	tot= total
lv= leaving	wb= wet bulb
ma= mixed air	#= number

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FAN TEST REPORT

project: Dickey's Barbecue

FAN DATA	FAN NO.	MAU	FAN NO.	EF-1	FAN NO.	EF-2
location		roof		roof		roof
service		kitchen hood supply		kitchen hood 1 exhaust		kitchen hood 2 exhaust
manufacturer		Accurex		Accurex		Accurex
model number		XDGK-110-H15-DB		XRUB-141-5-6		XRUB-161-7-6
serial number		13363962		13363897		13363896
type		forward curve		backward incline		backward incline
motor make/frame		WEG/E143T-5T		Marathon/56Z		Marathon/56Z
motor hp/rpm		2/1730		0.5/1725		0.25/1725
volts/phase/hertz		208-230-460/3/60		208-230-460/3/60		208-230-460/3/60
FL amps/ S. F.		5.95-5.8-2.9/1.15		2.9-3.1-1.5/1.15		2.2-2.4-1.2/1.16
mtr sheave make		ng		ng		ng
mtr sheave dia/bore		1VP44/.875		VP34/.625		VP34/.625
fan sheave make		ng		ng		ng
fan sheave dia/bore		6.75"/.75		AK46/.75		AK51/.75
# belts/make/size		1/Carlisle/AP57		1/Carlisle/4L230R		1/Carlisle/AX21
center line/ba		22.5/+1-1.5		5.25/+4-0.5		5.25/+4-0.5
pitch diameter		-1.0		0		0
TEST DATA	design	actual	design	actual	design	actual
cfm	2400	2336	1800	1876	1200	1157
fan rpm	1167	864	1124	1209	1298	1158
S.P. in/out	ng	0/0.34	ng	-0.76/0	ng	-0.68/0
total S.P.	0.5	0.34	1.0	0.76	1.0	0.68
voltage	208	208/208/208	208	208/208/208	208	208/208/208
amperage	5.95	4.2/4.9/4.8	2.9	2.1/2.0/2.0	2.2	1.9/2.0/2.0

remarks:

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RECTANGULAR DUCT TRAVERSE REPORT

project: Dickey's Barbecue
system: EF-1

location of traverse:	velgrid of grease traps	sp:	na	air temp:	72
altitude: standard	density: standard	corr. factor:	none		

DUCT		REQUIRED		ACTUAL	
OD:	104.0 x 14.00		scfm: 1800		scfm: 1876
ID:	104.00 x 14.00 sqft: 10.11	fpm: 178	cfm: 1800	fpm: 186	cfm: 1876

traverse point	1	2	3	4	5	6	7	8	9	10
1	197	206	123	224	214	149				
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
vs-total	197	206	123	224	214	149				

$$\begin{array}{|c|} \hline \text{total velocity} \\ \hline 1113 \\ \hline \end{array} \quad / \quad \begin{array}{|c|} \hline \text{no. points} \\ \hline 6 \\ \hline \end{array} = \begin{array}{|c|} \hline \text{avg. velocity} \\ \hline 186 \\ \hline \end{array}$$

remarks:

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RECTANGULAR DUCT TRAVERSE REPORT

project: Dickey's Barbecue
system: EF-2

location of traverse:	velgrid of grease traps	sp: na	air temp: 72
altitude: standard	density: standard	corr. factor: none	

DUCT		REQUIRED		ACTUAL	
OD: 69.0 x 14.00		scfm: 1200		scfm: 1157	
ID: 69.00 x 14.00 sqft: 6.71		fpm: 179	cfm: 1200	fpm: 173	cfm: 1157

traverse point	1	2	3	4	5	6	7	8	9	10
1	160	145	171	214						
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
vs-total	160	145	171	214						

total velocity		no. points		avg. velocity
690	/	4	=	173

remarks: