

Report By:

National TAB
1329 E. KEMPER ROAD
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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 04/04/2025
Completed By: National TAB

PROJECT

Morton Gettys Law Office (Rock Hill, SC)

113 E. Main Street

Rock Hill, SC 29730

Client

Action Mechanical Inc.

PO Box 7325

CHARLOTTE, NC 28241

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Project: Morton Gettys Law Office (Rock Hill, SC)

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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-880C S/N M05066	10/15/2024	10/15/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/15/2024	10/15/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/15/2024	10/15/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/15/2024	10/15/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/15/2024	10/15/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/15/2024	10/15/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/15/2024	10/15/2025
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

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: AHU/RTU



Asset: RTHP-1

AREA:258

Unit Data		
	Design	Actual
MFG	NA	RHEEM
Serial Num	-	F462000993
Model Num	NA	RHPCZR036ACT000AA
Configuration	-	VERTICAL
Num OA Filters 1	-	NA
OA Filter Size 1	-	NA
Num PreFilter 1	-	4
PreFilter Size 1	-	16X16X2

Test Data		
	Design	Actual
SF CFM	1010	(1) 1144
SF RPM	-	Low Speed
RA CFM	925	1144
OA CFM	85	(2) 0
RL Voltage	208	214
RL Amperage	6.0	2.7
OA Damper Position	-	0%
Brake Horse Power	-	.34

Motor Data		
	Design	Actual
Motor MFG	-	Genteq
Frame	-	NL
Horsepower	-	0.75
Motor Rpm	-	1050
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	6.0
Service Factor	-	1

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.34"
Fan Suction SP	-	-0.55"
Fan Discharge SP	-	0.40"
Total ESP	-	0.74"
Fan Total SP	-	0.95"

Completed By: Chistian Moller on 03/25/2025

Notes:

- (1) Speed tap on lowest speed
- (2) OA intake hood not installed

Written By: Scott Springer on 04/01/2025

Unit Data - PHOTO LOG



03/25/2025

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Project: Morton Gettys Law Office (Rock Hill, SC)

AHU/RTU



Diffuser Supply (GRD)

RTHP-1/258

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	259	A	6	100	178	114	114.0
2-2	258	A	8	150	273	156	104.0
2-3	258	A	8	150	119	172	114.7
2-4	258	A	8	150	142	172	114.7
2-5	258	A	8	160	159	184	115.0
2-6	258	A	8	150	159	171	114.0
2-7	258	A	8	150	152	175	116.7
Total				1010	1182	1144	113.27%

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:257

Unit Data		
	Design	Actual
MFG	NA	DAIKIN
Serial Num	-	2409110244
Model Num	NA	DFC0603D000029CAA
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	16X27.75
Num PreFilter 1	-	2
PreFilter Size 1	-	25X20X2

Test Data		
	Design	Actual
SF CFM	2000	1862
SF RPM (Initial)	-	Speed Tap 4
RA CFM	1775	1625
OA CFM	225	237
RL Voltage	208	212
RL Amperage	6.9	5.7
OA Damper Position	-	3.4V/17%
Brake Horse Power	-	0.83

Motor Data		
	Design	Actual
Motor MFG	-	SELECTECH
Frame	-	48Y
Horsepower	-	1
Motor Rpm	-	1200
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	6.9
Service Factor	-	1

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.44"
Fan Suction SP	-	-0.69"
Fan Discharge SP	-	0.40"
Total ESP	0.5	1.53"
Fan Total SP	0.63	1.09"

Completed By: Antonio Flores-De La Cruz on 03/27/2025

Notes:
SPEED TAP 4

Written By: Scott Springer on 04/01/2025

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AHU/RTU



Diffuser Supply (GRD)

RTU-1/257

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	247	A	8	210	176	190	90.5
1-2	245	A	8	210	135	193	91.9
1-4	244	A	8	190	145	177	93.2
1-4	243	A	8	125	191	118	94.4
1-5	249	A	8	210	117	194	92.4
1-6	250	A	8	150	143	145	96.7
1-6	252	A	8	150	170	147	98.0
1-8	253	A	8	210	158	190	90.5
1-9	256	A	8	125	185	120	96.0
1-10	255	A	8	210	116	193	91.9
1-11	257	A	8	210	196	195	92.9
Total				2000	1732	1862	93.1%

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: AHU/RTU



Asset: (E) AC-5

AREA:

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	15111PXYBA
Model Num	NA	TWE0900300AA
Type	-	AHU
Configuration	-	VERTICAL
Num PreFilter 1	-	3
PreFilter Size 1	-	16X25X2

Test Data		
	Design	Actual
SF CFM	2000	1869
SF RPM	-	846
RA CFM	-	1556
OA CFM	331	313
RL Voltage	208	214/215/214
RL Amperage	5.3	4.1/4.0/4.1
OA Damper Position	-	50%
Brake Horse Power	-	2.7

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56H
Horsepower	-	1.5
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	5.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.96"
Fan Discharge SP	-	0.40"
Fan Total SP	-	1.36"

Drive Data	
	Actual
Motor Sheave Size	1VP34
Motor Bore Size	.625"
Fan Sheave Size	AK64
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1
Belt Size	A47

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AHU/RTU



Diffuser Supply (GRD)

(E) AC-5/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
(E) AHU-5-SGRD1	240	A	8	200	182	201	100.5
(E) AHU-5-SGRD2	238	C	6	60	42	58	96.7
(E) AHU-5-SGRD3	239	D	10	210	208	197	93.8
(E) AHU-5-SGRD4	239	D	10	210	202	196	93.3
(E) AHU-5-SGRD5	237	D	10	240	189	225	93.8
(E) AHU-5-SGRD6	237	D	10	240	160	225	93.8
(E) AHU-5-SGRD7	235	D	10	275	147	249	90.5
(E) AHU-5-SGRD8	235	D	10	275	169	248	90.2
(E) AHU-5-SGRD9	234	A	8	145	118	133	91.7
(E) AHU-5-SGRD10	234	A	8	145	125	137	94.5
Total				2000	1542	1869	93.45%

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System/Unit: AHU/RTU



Asset: (E) AC-6

AREA:

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	15083PCRBA
Model Num	NA	TWE090D300AA
Type	-	AHU
Configuration	-	VERTICAL
Num PreFilter 1	-	3
PreFilter Size 1	-	16X25X2

Test Data		
	Design	Actual
SF CFM	2700	1784
SF RPM	-	835
RA CFM	2374	1426
OA CFM	326	358
RL Voltage	208	214/215/214
RL Amperage	5.8	3.4/3.3/3.4
OA Damper Position	-	65%
Brake Horse Power	-	2.7

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56H
Horsepower	-	1.5
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	5.8
Service Factor	-	1.15

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.96"
Fan Discharge SP	-	0.31"
Total ESP	-	1.27"

Drive Data	
	Actual
Motor Sheave Size	1VP34
Motor Bore Size	0.625"
Fan Sheave Size	AK64
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1
Belt Size	A47

Completed By: Antonio Flores-De La Cruz on 03/27/2025

Notes:

(1) Diffusers are balanced proportionally low.

Written By: Scott Springer on 04/01/2025

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Project: Morton Gettys Law Office (Rock Hill, SC)

AHU/RTU



Diffuser Supply (GRD)

(E) AC-6/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
(E) AHU-6-SGRD1	218	A	8	150	126	99	66.0
(E) AHU-6-SGRD2	220	A	8	150	93	98	65.3
(E) AHU-6-SGRD3	210	A	8	150	100	100	66.7
(E) AHU-6-SGRD4	224	A	8	150	106	106	70.7
(E) AHU-6-SGRD5	206	A	8	150	89	99	66.0
(E) AHU-6-SGRD6	216	A	8	190	148	126	66.3
(E) AHU-6-SGRD7	215	A	8	190	85	127	66.8
(E) AHU-6-SGRD8	217	A	8	120	133	80	66.7
(E) AHU-6-SGRD9	217	A	8	120	112	79	65.8
(E) AHU-6-SGRD10	225	A	8	120	101	77	64.2
(E) AHU-6-SGRD11	225	A	8	150	89	99	66.0
(E) AHU-6-SGRD12	227	A	8	150	92	98	65.3
(E) AHU-6-SGRD13	221	A	8	120	81	81	67.5
(E) AHU-6-SGRD14	227	A	8	150	94	98	65.3
(E) AHU-6-SGRD15	229	A	8	150	92	99	66.0
(E) AHU-6-SGRD16	229	A	8	120	80	80	66.7
(E) AHU-6-SGRD17	232	A	8	120	54	80	66.7
(E) AHU-6-SGRD18	233	A	8	125	51	75	60.0
(E) AHU-6-SGRD19	235	A	8	125	57	83	66.4
Total				2700	1783	1784	66.07%

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: AHU/RTU



Asset: (E) AC-7

AREA:

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	15104UNBBA
Model Num	NA	TWE090D300AA
Type	-	AHU
Configuration	-	VERTICAL
Num PreFilter 1	-	3
PreFilter Size 1	-	16X25X2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56H
Horsepower	-	1.5
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	5.3
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	1VP34
Motor Bore Size	0.625"
Fan Sheave Size	AK64
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1"
Belt Size	A47

Test Data		
	Design	Actual
SF CFM	1590	1620
SF RPM	1756	847
RA CFM	1421	1453
OA CFM	169	167
RL Voltage	208	214/215/214
RL Amperage	5.3	3.3/3.2/3.3
OA Damper Position	-	50%
Brake Horse Power	-	2.7

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.75"
Total ESP	-	1.33"

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Project: Morton Gettys Law Office (Rock Hill, SC)

AHU/RTU



Diffuser Supply (GRD)

(E) AC-7/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
AHU-7-SGRD1	200	D	10	260	432	259	99.6
AHU-7-SGRD2	211	A	10	260	248	258	99.2
AHU-7-SGRD3	207	A	10	260	320	268	103.1
AHU-7-SGRD4	203	A	10	260	328	273	105.0
AHU-7-SGRD5	202	A	8	170	158	169	99.4
AHU-7-SGRD6	200	D	8	140	127	148	105.7
AHU-7-SGRD7	001	F	6	100	50	97	97.0
AHU-7-SGRD8	200	D	8	140	156	148	105.7
Total				1590	1819	1620	101.89%

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

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: Split Sys Furnace



Asset: (E) AC-8

AREA:

Unit Data		
	Design	Actual
MFG	NA	TRANE
Model Num	NA	4TEC3F42C1000AA
Serial Num	-	8325PFK1V
Configuration	-	HORIZONTAL
Filter Size Size 1	-	20X20X1

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NL
Horsepower	-	0.5
Motor Rpm	-	1725
Phase	-	1
Voltage	-	208
Amperage	-	3.3

Test Data		
	Design	Actual
SF CFM	1200	1278
Motor Speed SetPt	-	C / MED-HI
RL Voltage	208	214
RL Amperage	3.3	2.7
RA CFM	1136	1211
OA CFM	64	67

Performance Data		
	Design	Actual
Suction ESP	-	-0.35"
Discharge ESP	-	0.21"
Total ESP	-	0.56"

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 Project: Morton Gettys Law Office (Rock Hill, SC)
Split Sys Furnace



Diffuser Supply (GRD)

(E) AC-8/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
(E) AC-8-SGRD1	214	A	8	200	185	211	105.5
(E) AC-8-SGRD2	214	A	8	200	213	213	106.5
(E) AC-8-SGRD3	213	A	8	200	239	212	106.0
(E) AC-8-SGRD4	213	A	8	200	191	214	107.0
(E) AC-8-SGRD5	212	A	8	200	157	213	106.5
(E) AC-8-SGRD6	212	A	8	200	168	215	107.5
Total				1200	1153	1278	106.5%

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: FAN - Exhaust



Asset: EF-1

AREA:215

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A390-VG
Serial Num	-	25035916
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	210	213
Fan RPM	-	5.5 speed dial
RL Voltage	115	120
RL Amperage	1.5	0.83
Total ESP	0.5	0.21"

Motor Data		
	Design	Actual
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	-	0.10
Motor Rpm	1266	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.5
Service Factor	-	1

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: FAN - Exhaust



Asset: EF-2

AREA:MENS RR

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A390-VG
Serial Num	-	25035890
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	210	215
Fan RPM	-	5.5 speed dial
RL Voltage	115	120
RL Amperage	1.5	0.83
Total ESP	0.5	0.24"

Motor Data		
	Design	Actual
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	-	0.10
Motor Rpm	1266	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.5
Service Factor	-	1

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Project: Morton Gettys Law Office (Rock Hill, SC)

System/Unit: FAN - Exhaust



Asset: EF-3

AREA:240

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A90-130-VG
Serial Num	-	25035930
Type	CEILING	Ceiling

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Frame	-	CCW
Horsepower	-	0.10
Motor Rpm	1041	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.5
Service Factor	-	1

Test Data		
	Design	Actual
CFM	120	122
Fan RPM	-	3.5 speed dial
RL Voltage	115	120
RL Amperage	1.5	0.55
Total ESP	0.5	0.16"

Completed By: Chistian Moller on 03/25/2025