

Report By:

National TAB  
1329 E. KEMPER ROAD  
SUITE 4210  
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Report: test 2

Function: Test, Adjust, & Balance

Date: 08/30/2024

# PROJECT

## Starbucks - Sperry and Rogers (Patterson, CA)

2952 Speno Drive

Patterson, CA 95363

### Client

B&M Builders, Inc.

11330 Sunrise Park Drive

Suite C

Rancho Cordova, CA 95742

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# National TAB

Project: Starbucks - Sperry and Rogers (Patterson, CA)

System/Unit: AHU/RTU



Asset: RTU1

AREA:

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	0415C84511
Model Num	50FCQM08A2	48TCDA07A2A5
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X16
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HY
Horsepower	-	NL
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	208/230	208/230
Rated Amperage	-	8.4/8.3

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	7/8"
Motor Sheave SetPt	1 TURN OPEN
Fan Sheave Size	AK54
Fan Sheave Bore	5/8"
Belt CL Distance	15"
Num of Belts	1
Belt Size	A43
Belt Alignment	VERIFIED

Test Data		
	Design	Actual
SF CFM	2400	2419
SF RPM	-	1495
RA CFM	2000	2008
OA CFM	400	411
RL Voltage	-	211/210/210
RL Amperage	-	7.5/7.6/7.5
SF Rotation	-	CCW
SF System SetPt	-	1 TURN OPEN
RA Damper Position	-	85%
Min OA Damper Position	-	15%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.64"
Fan Discharge SP	-	0.47"
Total ESP	0.50"	0.88"
Fan Total SP	-	1.11"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

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## AHU/RTU



### Diffuser Supply (GRD)

#### RTU1/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	NA	11108	NA	600	1	427	591	591	98.5
SGRD2	NA	11108	NA	500	1	535	501	501	100.2
SGRD3	NA	ADL-3	NA	300	1	592	327	327	109.0
SGRD4	NA	11108	NA	400	1	360	389	389	97.3
SGRD5	NA	11108	NA	600	1	590	611	611	101.8
Total				2400		2504	2419	2419	100.79%

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## System/Unit: AHU/RTU



Asset: RTU2

AREA:

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	0415C84512
Model Num	50FCQM08A2	48TCDA07A2A5
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	28X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X16

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HY
Horsepower	-	NL
Motor Rpm	-	1725
Phase	3	3
Rated Voltage	208/230	208/230
Rated Amperage	-	8.4/8.3

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	7/8"
Motor Sheave SetPt	1 TURN OPEN
Fan Sheave Size	AK54
Fan Sheave Bore	5/8"
Belt CL Distance	15"
Num of Belts	1
Belt Size	A43
Belt Alignment	VERIFIED

Test Data		
	Design	Actual
SF CFM	2400	2248
SF RPM	-	1395
RA CFM	2000	1856
OA CFM	400	392
RL Voltage	-	211/211/210
RL Amperage	-	7.3"/7.2/7.4
SF Rotation	-	CCW
SF System SetPt	-	1 TURN OPEN
RA Damper Position	-	85%
Min OA Damper Position	-	15%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.52"
Fan Suction SP	-	-0.71"
Fan Discharge SP	-	0.43"
Total ESP	0.50"	0.95"
Fan Total SP	-	1.14"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	No
Condensate Drain Installed	YES

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## AHU/RTU



### Diffuser Supply (GRD)

#### RTU2/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	NA	ADL-1	10"	400	1	250	371	371	92.8
SGRD2	NA	ADL-1	10"	400	1	310	391	391	97.8
SGRD3	NA	ADL-1	10"	400	1	342	382	382	95.5
SGRD4	NA	ADL-1	10"	400	1	233	377	377	94.3
SGRD5	NA	ADL-1	10"	400	1	294	365	365	91.3
SGRD6	NA	ADL-1	10"	400	1	266	362	362	90.5
Total				2400		1695	2248	2248	93.67%

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Project: Starbucks - Sperry and Rogers (Patterson, CA)

## System/Unit: AHU/RTU



Asset: RTU3

AREA:

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	1124P67816
Model Num	50FCQM08A2	50FCQM08A5A5
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208/230	208/230
Rated Amperage	-	6.4

Drive Data	
	Actual
Motor Sheave Size	N/A
Motor Bore Size	N/A
Motor Sheave SetPt	N/A
Fan Sheave Size	N/A
Fan Sheave Bore	N/A
Belt CL Distance	N/A
Num of Belts	N/A
Belt Size	N/A
Belt Alignment	N/A

Test Data		
	Design	Actual
SF CFM	3000	3014
SF RPM	-	1209
RA CFM	2400	2393
OA CFM	600	621
RL Voltage	-	210/211/210
RL Amperage	-	3.1/3.2/3.1
SF Rotation	-	CCW
SF System SetPt	-	4.8VDC
RA Damper Position	-	80%
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	ES5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-0.68"
Fan Discharge SP	-	0.47"
Total ESP	0.50"	0.98"
Fan Total SP	-	1.15"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES, CONSTRUCTION FILTERS
Condensate Drain Installed	YES

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## AHU/RTU



### Diffuser Supply (GRD)

#### RTU3/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	NA	11108	12"	600	1	412	552	552	92.0
SGRD2	NA	11108	12"	600	1	705	631	631	105.2
SGRD3	NA	11108	12"	500	1	664	547	547	109.4
SGRD4	NA	ADL3	18"	125	1	300	121	121	96.8
SGRD5	NA	ADL3	8"	125	1	475	127	127	101.6
SGRD6	NA	ADL2	12"	300	1	363	311	311	103.7
SGRD7	NA	ADL2	10"	300	1	252	273	273	91.0
SGRD8	NA	ADL2	8"	200	1	253	192	192	96.0
SGRD9	NA	ADL3	8"	50	1	366	47	47	94.0
SGRD10	NA	ADL2	8"	200	1	270	213	213	106.5
Total				3000		4060	3014	3014	100.47%

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Project: Starbucks - Sperry and Rogers (Patterson, CA)

## System/Unit: FAN - Exhaust



Asset: EF1

AREA:

Unit Data		
	Design	Actual
MFG	GREEN	GREEN
Model Num	G-090-VG	G-090-VG
Serial Num	-	25234228
Type	ROOF	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	-	1/10
Motor Rpm	-	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	375	400
Fan RPM	1150	1400
Fan Rotation	-	CCW
Motor RPM	-	1400
System SetPt	-	80%
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.25"	0.37"
Fan Inlet SP	-	-0.37"
Fan Discharge SP	-	ATM

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## FAN - Exhaust



### Diffuser Ret/Exh (GRD)

EF1/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1		11165	8"	75	1	223	82	82	109.3
EGRD2		11165	8"	150	1	238	161	161	107.3
EGRD3		11165	8"	150	1	158	157	157	104.7
Total				375		619	400	400	106.67%