

**Report By:**

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**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 10/03/2024**  
**Completed By: National TAB**

**PROJECT**  
**09-23-24 FIREBIRDS SOUTHAVEN, MS**

6283 Getwell Rd

SOUTHAVEN, MS

**Client**

FIREBIRD RESTAURANTS  
8700 Red Oak Blvd, Unit J  
CHARLOTTE, NC 28217

# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

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## Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

### RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

### Kitchen Exhaust Hood & Associated Fans

Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow. . Any EF's that fell outside of this tolerance is noted throughout the report.

### MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

### General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

### Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of  $-0.02''$  wc to  $+0.02''$  wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

### AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
DOAS-1	KITCHEN	4000	4122	0	0	4000	4122	100.0%	100.0%						
RTU-1	DINING/BAR	3195	3252	1395	1382	1800	1870	56.3%	57.5%						
RTU-2	DINING	3210	3243	1410	1332	1800	1911	56.1%	58.9%						
RTU-3	PRIVATE DININ	1600	1590	1252	1233	348	357	21.8%	22.5%						
MUA-1	COOKLINE									4000	4076				
KEF-1												2300	2230		
KEF-2												2300	2364		
KEF-3												3200	2995		
KEF-4												2200	2180		
EF-DISH												800	849		
TEF-1														200	210
<b>TOTALS</b>		12005	12207	4057	3947	7948	8260			4000	4076	10800	10618	200	210

**NET BUILDING AIRFLOW CALCULATION**

TOTALS	DESIGN	ACTUAL
TOTAL OA	11948	12336
TOTAL EXHAUST	11000	10828
<b>NET AIRFLOW</b>	<b>948</b>	<b>1508</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.01
SIDE	0.005
REAR	0.009
<b>AVERAGE</b>	<b>0.008</b>

**FINAL CHECKS**

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓
- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓
- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

## CheckList List

- TECH - SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS



**09-23-24 FIREBIRDS SOUTHAVEN, MS**

**CheckList Information**

**Name :** TECH - SITE PICTURES **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/19/2024 - Brianna Biggs - National TAB

**Completed Date :**

**CheckList Item Details**

STOREFRONT

Comment:



09/25/2024

RTU-1

Yes

Comment:



09/25/2024

---

RTU-2

Yes

Comment:

---



09/25/2024

---

RTU-3

Yes

Comment:

---



09/25/2024

DOAS-1

Yes

Comment:



09/25/2024

KEF-1

Yes

Comment:



09/25/2024

---

KEF-2

Yes

Comment:



09/25/2024

---

KEF-3

Comment:



09/25/2024

---

KEF-4

Yes

Comment:

---



09/25/2024

---

EF-DISH

Yes

Comment:

---



09/25/2024

---

MUA-1

Yes

Comment:

---



09/25/2024

---

HD-33 MAIN L

Yes

Comment:

---



09/25/2024

HD-33 MAIN R

Yes

Comment:



09/25/2024

HD-38 GRILL

Yes

Comment:



09/25/2024

HD-70 PREP

Yes

Comment:



09/25/2024

TEF-1

Yes

Comment:



09/25/2024



### 09-23-24 FIREBIRDS SOUTHAVEN, MS

#### CheckList Information

**Name :** TECH - STEP 1: INITIAL WALKTHROUGH **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/19/2024 - Brianna Biggs - National TAB

**Completed Date :** 09/26/2024 - Antonio Flores-De La Cruz - National TAB

#### CheckList Item Details

##### INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design? Yes

Comment:

All hood filters installed and accounted for? Yes

Comment:

Hoods are wired and have power? Yes

Comment:

Hood is free of alarms? Yes

Comment:

Thermostats have power? Yes

Comment:

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

**Comment:**

YES



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### 09-23-24 FIREBIRDS SOUTHAVEN, MS

#### CheckList Information

**Name :** TECH - STEP 2: UNIT DATA AND EVAL **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/19/2024 - Brianna Biggs - National TAB

**Completed Date :** 09/26/2024 - Antonio Flores-De La Cruz - National TAB

#### CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional? Yes

Comment:

DCV Max damper opening position is set to minimum? Yes

Comment:

Free cooling enthalpy set point set for lowest setting (Typically "D") Yes

Comment:

Motors are all operating below the FLA rating? Yes

Comment:

Are belts tight?

**Comment:**

YES

---

**If direct drive unit is the speed controller working.**

**Comment:**

YES

---

**Is gas piping installed and valves turned on?**

Yes

**Comment:**

---

**Unit free of noticeable noise and vibration**

Yes

**Comment:**

---

**EF's**

---

**Rotation is correct?**

Yes

**Comment:**

---

**Belts are tight?**

**Comment:**

YES

---

**Grease cup installed on hood fan?**

Yes

**Comment:**

---

**Hinge kit installed installed on hood fan?**

Yes

**Comment:**

---

**Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?**

Yes

**Comment:**

---

**Flex conduit is long enough so that fan can be completely tilted back?**

Yes

**Comment:**

---

**There is no major leakage around base of fan?**

Yes

Comment:

Is the motor operating below the motor FLA rating?

Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open?

Yes

Comment:

Unit free of noticeable noise and vibration?

Yes

Comment:

MUA

Rotation is correct?

Yes

Comment:

Gas piping is installed and valves are in on position?

Yes

Comment:

Heater tested and is functional?

Yes

Comment:

Internal motorized damper is fully opening?

Yes

Comment:

Motor is operating below the FLA rating?

Yes

Comment:

Unit free of noticeable noise and vibration?

Yes

Comment:

HOODS

Kitchen equipment installed in proper places?

Yes

**Comment:**

---

**Can kitchen equipment be turned on for final smoke test?**

No

---

**Comment:**

---

**DOCUMENTATION**

---

**Have trades/general contractor been notified about any issues and are they created on FaciliBuild?**

Yes

---

**Comment:**

---



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### 09-23-24 FIREBIRDS SOUTHAVEN, MS

#### CheckList Information

**Name :** TECH - STEP 3: TEST, ADJUST AND BALANCE      **Status :** Completed

**Assigned Organization :** National TAB      **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/19/2024 - Brianna Biggs - National TAB

**Completed Date :** 09/25/2024 - Antonio Flores-De La Cruz - National TAB

#### CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting? Yes

Comment:

Is space comfortable in all areas? Yes

Comment:

Is the space free of ventilation noise? Yes

Comment:

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

N/A



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### 09-23-24 FIREBIRDS SOUTHAVEN, MS

#### CheckList Information

**Name :** TECH - STEP 4: FINAL TESTS **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 09/19/2024 - Brianna Biggs - National TAB

**Completed Date :** 09/27/2024 - Antonio Flores-De La Cruz - National TAB

#### CheckList Item Details

##### FINAL TESTS

##### HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

N/A

List smoke candle type used

Comment:

45 SEC SMOKE PELLET

- [Open](#) HoodLR.mov  
09/27/2024
- [Open](#) Hood3.mov  
09/27/2024
- [Open](#) HOOD4.mov  
09/27/2024

Smoke test capture - Perimeter of hood

Comment:

100%

**Smoke test capture - Top of cooking surface**

**Comment:**

100%

**WITNESS**

**Date test was completed**

09/26/2024

**Comment:**

**TAB tech name / Firm**

**Comment:**

ANTONIO FLORES-DE LA CRUZ

**Site super name / Firm**

**Comment:**

JOHN RAPP

**Owner representative name / Firm (if Applicable)**

**Comment:**

N/A

**Building pressure at front & back doors (All Systems On)**

**Comment:**

Front: 0.009 Side: 0.005 Rear: 0.01

**ADDITIONAL**

**Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)**

**Comment:**

YES

**Thermostats are programmed?**

Yes

**Comment:**



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Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: AHU/RTU

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Asset: DOAS-1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6624947
Model Num	CASTU3-I.400-24-30T	CAS-HVAC3-I.400-24-30T
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	213T
Horsepower	5	5
Motor Rpm	1170	1170
Phase	3	3
Rated Voltage	208	208
Rated Amperage	15.1	15.1

Drive Data	
	Actual
Motor Sheave Size	DD

Test Data		
	Design	Actual
SF CFM	4000	4122
SF RPM	-	DD
RA CFM	0	0
OA CFM	4000	4122
RL Voltage	-	210/209/210
RL Amperage	-	12.5/12.6/12.5
SF Rotation	-	CCW
SF System SetPt	-	54 Hz
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	DOAS
OA Enthalpy Setpt	-	DOAS

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.21"
Fan Suction SP	-	-0.96"
Fan Discharge SP	-	0.30"
Total ESP	0.500"	0.51"
Fan Total SP	-	1.26"

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

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Project:09-23-24 FIREBIRDS SOUTHAVEN, MS

## AHU/RTU



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### Diffuser Supply (GRD)

#### DOAS-1/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DISH	CD-K	12"	285	1	56	293	293	102.8
SGRD2	DISH	CD-K	12"	285	1	240	301	301	105.6
SGRD3	DISH	CD-K	12"	285	1	324	301	301	105.6
SGRD4	DISH	CD-K	12"	285	1	370	298	298	104.6
SGRD5	COOKLINE	CD-K	12"	285	1	254	285	285	100.0
SGRD6	COOKLINE	CD-K	12"	285	1	195	292	292	102.5
SGRD7	COOKLINE	CD-K	12"	285	1	250	277	277	97.2
SGRD8	PREP	CD-K	12"	285	1	324	286	286	100.4
SGRD9	PREP	CD-K	12"	285	1	264	285	285	100.0
SGRD10	PREP	CD-K	12"	285	1	280	301	301	105.6
SGRD11	PREP	CD-K	12"	285	1	212	304	304	106.7
SGRD12	PREP	CD-K	12"	285	1	224	305	305	107.0
SGRD13	KITCHEN	CD-K	12"	285	1	336	298	298	104.6
SGRD14	STORAGE	CD-K	12"	285	1	315	296	296	103.9
Total				3990		3644	4122	4122	103.31%

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Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: AHU/RTU

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Asset: RTU-1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6624947
Model Num	CASRTU3-I.250-20-20T	CAS-HVAC3-I.250-20-20T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	213T
Horsepower	3	3
Motor Rpm	1175	1175
Phase	3	3
Rated Voltage	208	208
Rated Amperage	9.7	9.7

Drive Data	
	Actual
Motor Sheave Size	DD
Belt Alignment	

Test Data		
	Design	Actual
SF CFM	3200	3252
SF RPM	-	DD
RA CFM	1400	1382
OA CFM	1800	1870
RL Voltage	-	210/209/210
RL Amperage	-	6.7/6.8/6.7
SF Rotation	-	CCW
SF System SetPt	-	52 Hz
RA Damper Position	-	43%
Min OA Damper Position	-	58% / 5.8 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	S5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.11"
Fan Suction SP	-	-0.54"
Fan Discharge SP	-	0.20"
Total ESP	0.500"	0.31"
Fan Total SP	-	0.84"

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

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Project:09-23-24 FIREBIRDS SOUTHAVEN, MS

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU-1/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ENTRY VESTIBULE	LSD	8"	175	1	165	165	179	102.3
SGRD2	ENTRY VESTIBULE	LSD	8"	175	1	179	179	185	105.7
SGRD3	DINING	SR	18X6	380	0.59	420	420	387	101.8
SGRD4	DINING	SR	16X6	325	0.52	384	376	330	101.5
SGRD5	DINING	SR	18X6	380	0.59	403	330	352	92.6
SGRD6	DINING	SR	16X16	380	0.59	385	346	385	101.3
SGRD7	BEVERAGE	CD	8"	140	1	123	136	149	106.4
SGRD8	BEVERAGE	CD	8"	155	1	117	130	147	94.8
SGRD9	BAR	LSD	12"	280	1	317	260	300	107.1
SGRD10	BAR	LSD	12"	280	1	360	283	293	104.6
SGRD11	DINING	SR	12X6	175	0.53	296	296	186	106.3
SGRD12	DINING	SR	12X6	175	0.38	196	196	174	99.4
SGRD13	DINING	SR	12X6	175	0.38	192	176	185	105.7
Total				3195		3537	3293	3252	101.78%



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System/Unit: AHU/RTU

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Asset: RTU-2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6624947
Model Num	CASRTU3-I.250-20-20T	CAS-HVAC3-I.250-20-20T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	213T
Horsepower	3	3
Motor Rpm	1175	1175
Phase	3	3
Rated Voltage	208	208
Rated Amperage	9.7	9.7

Drive Data	
	Actual
Motor Sheave Size	DD

Test Data		
	Design	Actual
SF CFM	3200	3243
SF RPM	-	DD
RA CFM	1400	1332
OA CFM	1800	1911
RL Voltage	-	210/209/210
RL Amperage	-	6.8/6.9/6.8
SF Rotation	-	CCW
SF System SetPt	-	54 Hz
RA Damper Position	-	42%
Min OA Damper Position	-	57% / 5.7 V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	S5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.12"
Fan Suction SP	-	-0.57"
Fan Discharge SP	-	0.19
Total ESP	0.500"	0.31"
Fan Total SP	-	0.76"

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

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Project:09-23-24 FIREBIRDS SOUTHAVEN, MS

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU-2/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	EXPO	CD	12"	285	1	304	310	304	106.7
SGRD2	EXPO	CD	12"	285	1	300	317	300	105.3
SGRD3	DINING	SR	18X10	560	1.06	589	601	589	105.2
SGRD4	DINING	SR	18X10	560	1.06	572	540	551	98.4
SGRD5	DINING	SR	18X10	560	1.06	542	545	547	97.7
SGRD6	DINING	SR	18X10	560	1.06	529	534	542	96.8
SGRD7	WOMENS RR	CD	6"	90	1	106	113	96	106.7
SGRD8	MENS RR	CD	6"	90	1	106	113	97	107.8
SGRD9	OFFICE	CD	6"	100	1	106	113	106	106.0
SGRD10	LOCKED STORAGE	CD	6"	100	1	67	80	91	91.0
SGRD11				20	0.17	48	35	20	100.0
Total				3210		3269	3301	3243	101.03%

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System/Unit: AHU/RTU

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Asset: RTU-3

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6624947
Model Num	CASRTU1-I.100-13-5T	CAS-HVAC1-I.100-13-5T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	16X20X2
Num Final Filter 1	-	8
Final Filter Size 1	-	16X16X2

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	143T
Horsepower	1	1
Motor Rpm	1740	1740
Phase	3	3
Rated Voltage	208	208
Rated Amperage	3.1	3.1

Drive Data	
	Actual
Motor Sheave Size	DD

Test Data		
	Design	Actual
SF CFM	1600	1590
SF RPM	-	DD
RA CFM	1252	1233
OA CFM	348	357
RL Voltage	-	209/210/209
RL Amperage	-	2.2/2.3/2.2
SF Rotation	-	CCW
SF System SetPt	-	50 Hz
RA Damper Position	-	69%
Min OA Damper Position	-	31% / 3.1V
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	S5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.20"
Fan Suction SP	-	-0.47"
Fan Discharge SP	-	0.18"
Total ESP	0.500"	0.38"
Fan Total SP	-	0.65"

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

Completed By: Antonio Flores-De La Cruz on 09/25/2024



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Project:09-23-24 FIREBIRDS SOUTHAVEN, MS

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU-3/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	PRIVATE DINING	CD	8"	200	1	187	214	187	93.5
SGRD2	PRIVATE DINING	CD	8"	200	1	185	196	190	95.0
SGRD3	PRIVATE DINING	SD	8"	200	1	245	215	200	100.0
SGRD4	PRIVATE DINING	SD	8"	200	1	156	175	201	100.5
SGRD5	PRIVATE DINING	SD	8"	200	1	182	186	208	104.0
SGRD6	PRIVATE DINING	SD	8"	200	1	206	215	200	100.0
SGRD7	PRIVATE DINING	SD	8"	200	1	215	204	204	102.0
SGRD9	PRIVATE DINING	SD	8"	200	1	220	217	200	100.0
Total				1600		1596	1622	1590	99.38%



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust

NATIONAL TAB

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Asset: EF-DISH0

AREA:DISHWASHER

Unit Data		
	Design	Actual
<b>MFG</b>	CAPTIVEAIRE	CAPTIVEAIRE
<b>Model Num</b>	DU33HFA	DU33HFA
<b>Serial Num</b>	-	6624947
<b>Type</b>	UPBLAST	UPBLAST
<b>Configuration</b>	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	HSSA
<b>Frame</b>	-	48Y
<b>Horsepower</b>	0.33	0.33
<b>Motor Rpm</b>	1350	1350
<b>Phase</b>	1	1
<b>Voltage (rated)</b>	115	115
<b>Amperage (rated)</b>	-	5.7
<b>Service Factor</b>	-	1

Test Data		
	Design	Actual
<b>CFM</b>	800	849
<b>Fan RPM</b>	1386	DD
<b>Fan Rotation</b>	-	CCW
<b>Motor RPM</b>	-	DD
<b>System SetPt</b>	-	MARKED ON DIAL
<b>RL Voltage</b>	-	NA
<b>RL Amperage</b>	-	NA
<b>Total ESP</b>	0.500"	0.41"
<b>Fan Inlet SP</b>	-	-0.41"
<b>Fan Discharge SP</b>	-	ATM

Completed By: Antonio Flores-De La Cruz on 09/24/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust

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Asset: KEF-1

AREA:33 LEFT

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	6624947
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	182T
Horsepower	2	2
Motor Rpm	1170	1170
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	7.13
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	2300	2230
Fan RPM	1212	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	50.2 Hz
RL Voltage	-	210/209/210
RL Amperage	-	4.6/4.7/4.6
Total ESP	1.500"	1.31"
Fan Inlet SP	-	-1.31"
Fan Discharge SP	-	ATM"

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust

NATIONAL TAB

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Asset: KEF-2

AREA:33 RIGHT

### Unit Data

	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	6624947
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

### Motor Data

	Design	Actual
Motor MFG	-	WEG
Frame	-	182T
Horsepower	2	2
Motor Rpm	1170	1170
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	7.13
Service Factor	-	1.15

### Test Data

	Design	Actual
CFM	2300	2364
Fan RPM	1212	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	49.9 Hz
RL Voltage	-	210/209/210
RL Amperage	-	4.6/4.7/4.6
Total ESP	1.500"	1.42"
Fan Inlet SP	-	-1.42"
Fan Discharge SP	-	ATM

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust

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Asset: KEF-3

AREA:GRILL

Unit Data		
	Design	Actual
MFG	CANARM	CANARM
Model Num	HRE-20	HRE-20
Serial Num	-	6624947
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	CANARM
Frame	-	56
Horsepower	2	2
Motor Rpm	1750	1750
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	6.3
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	1VL44
Motor Bore Size	0.625
Motor Sheave SetPt	2 TO
Fan Sheave Size	BK60
Fan Sheave Bore	1.1875"
Belt CL Distance	12"
Num of Belts	1
Belt Size	B36

Test Data		
	Design	Actual
CFM	3200	2995
Fan RPM	-	1430
Fan Rotation	-	CW
Motor RPM	-	1782
RL Voltage	-	210/211/210
RL Amperage	-	7.0/7.1/7.0
Suction ESP	-	-1.43"
Discharge ESP	-	ATM
Total ESP	1.6"	1.43"

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust

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Asset: KEF-4

AREA:PREP

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	6624947
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	182T
Horsepower	2	2
Motor Rpm	1170	1170
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	7.13
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	2200	2180
Fan RPM	1129	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	45 Hz
RL Voltage	-	210/209/210
RL Amperage	-	3.7/3.9/3.7
Total ESP	1.400"	1.15"
Fan Inlet SP	-	-1.15"
Fan Discharge SP	-	ATM

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Exhaust



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Asset: TEF-1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	GREENHECK	COOK
Model Num	G-080	70C2B 70 AC3
Serial Num	-	286SL15568
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	NL
Horsepower	0.17	0.17
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	3.4
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	3.125"
Motor Bore Size	0.5"
Motor Sheave SetPt	2 TO
Fan Sheave Size	AK44
Fan Sheave Bore	0.75"
Belt CL Distance	4.5"
Num of Belts	1
Belt Size	A19

Test Data		
	Design	Actual
CFM	200	210
Fan RPM	-	1224
Fan Rotation	-	CCW
Motor RPM	-	1752
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.11"
Discharge ESP	-	ATM
Total ESP	0.5"	0.11"

Completed By: Antonio Flores-De La Cruz on 09/25/2024



# National TAB

Project:09-23-24 FIREBIRDS SOUTHAVEN, MS

## FAN - Exhaust



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### Diffuser Ret/Exh (GRD)

#### TEF-1/RESTROOMS

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
TEF-1-EGRD1	WOMENS RR	EG	8	100	1	135	99	106	106.0
TEF-1-EGRD2	MENS RR	EG	8	100	1	140	96	104	104.0
Total				200		275	195	210	105%



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: FAN - Supply

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Asset: MUA-1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	A2-D.500-20D-MPU	A2-D.500-20D-MPU
Serial Num	-	6624947
Type	MUA	MUA
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	184T
Horsepower	5	5
Motor Rpm	1750	1750
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	13.6
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	DD

Gas Heat		
	Design	Actual
Heater Operates (y/n)	-	Y
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	55	55
Discharge Air Temp SetPt	60	60
Air Flow Switch SP Actual	-	0.42"

Test Data		
	Design	Actual
CFM	4000	4076
SF RPM	1723	DD
Motor RPM	-	DD
SF System SetPt	-	60 Hz
RL Voltage	-	210/209/210
RL Amperage	-	10.8/10.9/10.8
Total ESP	-	NA
Fan Discharge SP	-	NA

General	
	Actual
Fan Rotation Correct	YES

Completed By: Antonio Flores-De La Cruz on 09/25/2024

Notes:  
Unable to perform Heat Test due to a defective Motherboard for the hoods as of 9/25/2024

Written By: Antonio Flores-De La Cruz on 09/25/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

System/Unit: Kitchen Hood Type I

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Asset: HD MAIN L-1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2-PSP-F	5424 ND-2-PSP-F
Job / Serial Num	-	6624947
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	138"	138"
Hood Width	54"	54"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	16"	16"
Supply Plenum Length	138"	138"

Test Data Supply		
	Design	Actual
Total AK Area	15.33	15.33
Kv factor (Vel)	0.92	0.92
Num of Readings	-	8
Reading1 FPM	-	154
Reading2 FPM	-	152
Reading3 FPM	-	127
Reading4 FPM	-	129
Reading5 FPM	-	166
Reading6 FPM	-	156
Reading7 FPM	-	174
Ave FPM(corr)	-	151
CFM	2000	2129

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	8	8
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	16.64	16.64
Filter1 FPM	-	122
Filter2 FPM	-	124
Filter3 FPM	-	134
Filter4 FPM	-	156
Filter5 FPM	-	160
Filter6 FPM	-	128
Filter7 FPM	-	131
Filter8 FPM	-	118
Filter Ave FPM(corr)	-	134
CFM	2300	2230

Cooking Equipment	
	Actual
Item 1	OVEN
Item 2	STOVE

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS  
System/Unit: Kitchen Hood Type I



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Asset: HD MAIN R-2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2-PSP-F	5424 ND-2-PSP-F
Job / Serial Num	-	6624947
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	138"	138"
Hood Width	54"	54"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	16"	16"
Supply Plenum Length	150"	150"

Test Data Supply		
	Design	Actual
Total AK Area	16.67	16.67
Kv factor (Vel)	0.92	0.92
Num of Readings	-	7
Reading1 FPM	-	137
Reading2 FPM	-	142
Reading3 FPM	-	139
Reading4 FPM	-	120
Reading5 FPM	-	121
Reading6 FPM	-	101
Ave FPM(corr)	-	127
CFM	2000	1947

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	8	8
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	16.64	16.64
Filter1 FPM	-	126
Filter2 FPM	-	127
Filter3 FPM	-	151
Filter4 FPM	-	162
Filter5 FPM	-	164
Filter6 FPM	-	146
Filter7 FPM	-	134
Filter8 FPM	-	128
Filter Ave FPM(corr)	-	142
CFM	2300	2364

Cooking Equipment	
	Actual
Item 1	GRILL
Item 2	FRYER

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

## System/Unit: Kitchen Hood Type I



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Asset: HD PREP-4

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2	6030 ND-2
Job / Serial Num	-	6624947
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	121"	132"
Hood Width	60"	60"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	8	8
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	16.64	16.64
Filter1 FPM	-	138
Filter2 FPM	-	125
Filter3 FPM	-	125
Filter4 FPM	-	146
Filter5 FPM	-	148
Filter6 FPM	-	125
Filter7 FPM	-	122
Filter8 FPM	-	116
Filter Ave FPM(corr)	-	131
CFM	2200	2180

Cooking Equipment	
	Actual
Item 1	STOVE
Item 2	OVEN

Completed By: Antonio Flores-De La Cruz on 09/23/2024



# National TAB

Project: 09-23-24 FIREBIRDS SOUTHAVEN, MS

## System/Unit: Kitchen Hood Type I

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Asset: HD-3

AREA:GRILL

### Unit Data

	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2	6030 ND-2
Job / Serial Num	-	6624947
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	98"	98"
Hood Width	60"	60"

### Test Data Exhaust

	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	230
Filter2 FPM	-	239
Filter3 FPM	-	246
Filter4 FPM	-	256
Filter5 FPM	-	244
Filter6 FPM	-	226
Filter Ave FPM(corr)	-	240
CFM	3200	2995

### Cooking Equipment

	Actual
Item 1	GRILL

Completed By: Antonio Flores-De La Cruz on 09/23/2024

