

**Report By:**

National TAB  
1329 E. KEMPER ROAD  
SUITE 4210  
CINCINNATI, OH 45246



**Report: TAB Report**  
**Function: Test, Adjust, & Balance**  
**Date: 10/01/2025**  
**Completed By: National TAB**

# PROJECT

## 09-22-25 Firebirds Chesterfield, VA

15700 Hull Street Rd

Chesterfield, VA 23832

### Client

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

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

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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.

### DOAS w/ Diffusers

Each of the DOAS were measured at their terminal devices or via traverse to establish a total flow for that unit. Each DOAS 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.

### 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.

## Issue List

- DOAS - 1 Temperature Sensor Malfunctioning
- EF-DISH Leakage
- MUA-1 Does not operate normally
- MUA-1 Gas Test
- RTU-1 Temperature Sensor



**09-22-25 Firebirds Chesterfield, VA**

**Project Issue Information**

**Issue Name :** DOAS - 1 Temperature Sensor Malfunctioning  
**Description :** DOAS - 1 temperature sensor not reading properly. It causes the unit to shutdown on an overheat fault.  
**Created By :** National TAB                      **Assigned To :** National TAB - Antonio Flores-De La Cruz  
**Status :** Open  
**Priority :** Urgent                                      **Asset Tag :**  
**Originated Date :** 09/24/2025 - Alex Bauer - National TAB

Project Issue File Details



09/24/2025

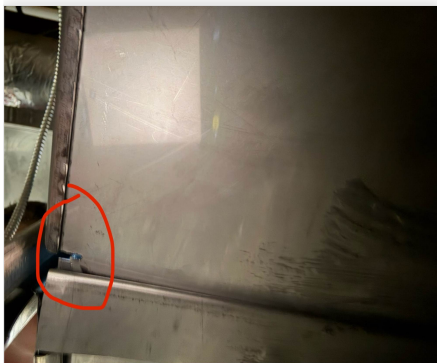


09-22-25 Firebirds Chesterfield, VA

Project Issue Information

**Issue Name :** EF-DISH Leakage  
**Description :** Dishwasher ductwork needs duct sealant at certain joints near the bends. Also, possible leakage at the curb. Rope Gasket is helping but may not be enough due to open corners at the curb.  
**Created By :** National TAB                      **Assigned To :** National TAB - Antonio Flores-De La Cruz  
**Status :** Open  
**Priority :** Urgent                                      **Asset Tag :**  
**Originated Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB

Project Issue File Details



09/25/2025



09/25/2025



09/25/2025



**09-22-25 Firebirds Chesterfield, VA**

**Project Issue Information**

**Issue Name :** MUA-1 Does not operate normally  
**Description :** MUA-1 does not turn on when turning on fans with the HMI on the hood. For the purposes of TAB, it was put into test mode. Recommended to review wiring and ensure proper operation.  
**Created By :** National TAB                      **Assigned To :** National TAB - Antonio Flores-De La Cruz  
**Status :** Open  
**Priority :** Urgent                                      **Asset Tag :**  
**Originated Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB



**09-22-25 Firebirds Chesterfield, VA**

**Project Issue Information**

**Issue Name :** MUA-1 Gas Test

**Description :** Permanent gas not installed yet, unable to test out the heater.

**Created By :** National TAB

**Assigned To :** National TAB - Antonio Flores-De La Cruz

**Status :** Open

**Priority :** [Medium](#)

**Asset Tag :**

**Originated Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB



09-22-25 Firebirds Chesterfield, VA

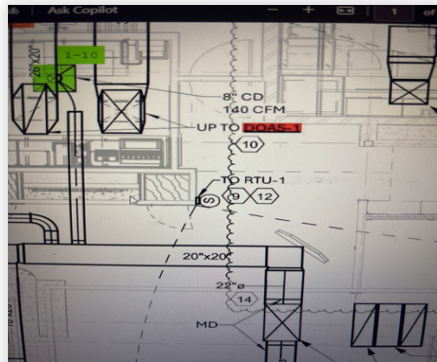
Project Issue Information

**Issue Name :** RTU-1 Temperature Sensor  
**Description :** Sensor near beverage zone is not communicating properly with RTU-1.  
**Created By :** National TAB **Assigned To :** National TAB - Antonio Flores-De La Cruz  
**Status :** Open  
**Priority :** High **Asset Tag :**  
**Originated Date :** 09/24/2025 - Antonio Flores-De La Cruz - National TAB

Project Issue File Details



09/24/2025



09/24/2025

### 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
RTU-1	DINING	4000	3947	2150	2066	1850	1881	46.3%	47.7%						
RTU-2	DINING/RR	3980	4145	2130	2272	1850	1873	46.5%	45.2%						
DOAS-1	KITCHEN	4000	4135	300	263	3700	3872	92.5%	93.6%						
MUA-1	COOKLINE/SF GRILL									3200	3294				
KEF-H1L	COOKLINE											1425	1327		
KEF-H1R	COOKLINE											1425	1327		
KEF-3	SF GRILL											3360	3217		
KEF-H4	PREP											2340	2209		
EF-DISH	DISH											800	673		
TEF-1	TOILETS													200	200
<b>TOTALS</b>		11980	12227	4580	4601	7400	7626			3200	3294	9350	8753	200	200

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	10600	10920
TOTAL EXHAUST	9550	8953
<b>NET AIRFLOW</b>	<b>1050</b>	<b>1967</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H <sub>2</sub> O)
FRONT	
SIDE	
REAR	
<b>AVERAGE</b>	<b>SEE NOTE</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:

UNABLE TO MEASURE BUILDING PRESSURE. DOAS-1 NOT OPERATING NORMALLY AT END OF TAB DUE TO AN OVERHEAT FAULT

## CheckList List

- 01: RTU's/AHU's
- 02: EF's
- 03: MUA
- 04: HOODS
- 05: FINAL TESTS



09-22-25 Firebirds Chesterfield, VA

CheckList Information

**Name :** 01: RTU's/AHU's **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/18/2025 - Trinity Dodds - National TAB

**Completed Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB

CheckList Item Details

RTU's/AHU's

<b>Thermostats installed and have power?</b>	Pass
--	------

**Comment:**

SEE ISSUES ABOUT DOAS-1 AND RTU-1 TSTAT

<b>All diffusers and grilles are installed and match design?</b>	Pass
--	------

**Comment:**

<b>Economizers are assembled and functional?</b>	Pass
--	------

**Comment:**

<b>Free cooling enthalpy set point set for lowest setting (Typically "D")</b>	N/A
---	-----

**Comment:**

<b>Motors are all operating below the FLA rating?</b>	Pass
---	------

**Comment:**

<b>Are belts tight?</b>	N/A
-------------------------	-----

**Comment:**

ALL UNITS ARE DIRECT DRIVE

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

Pass

**Comment:**

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

Fail

**Comment:**

NO PERMANENT GAS YET

**Unit free of noticeable noise and vibration**

Pass

**Comment:**

**Deflectors on spiral duct grilles so that the dining area is free of drafting?**

Pass

**Comment:**

**Final outside air damper position is marked with permanent marker?**

N/A

**Comment:**

NOT ABLE TO MARK BUT HAVE REQUIRED SETTINGS IN REPORT.



09-22-25 Firebirds Chesterfield, VA

**CheckList Information**

**Name :** 02: EF's **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/18/2025 - Trinity Dodds - National TAB

**Completed Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB

**CheckList Item Details**

EF's

<b>Rotation is correct?</b>	Pass
-----------------------------	------

**Comment:**

<b>Belts are tight?</b>	N/A
-------------------------	-----

**Comment:**

ALL UNITS ARE DIRECT DRIVE

<b>Hinge kit installed installed on hood fan?</b>	Pass
---	------

**Comment:**

<b>Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?</b>	Pass
--	------

**Comment:**

<b>Flex conduit is long enough so that fan can be completely tilted back?</b>	Pass
---	------

**Comment:**

<b>There is no major leakage around base of fan?</b>	Pass
--	------

**Comment:**

Is the motor operating below the motor FLA rating?

Pass

Comment:

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

Pass

Comment:

Unit free of noticeable noise and vibration?

Pass

Comment:

TEF-1 IS NOT WIRED AND OPERATIONAL



09-22-25 Firebirds Chesterfield, VA

**CheckList Information**

**Name :** 03: MUA **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/18/2025 - Trinity Dodds - National TAB

**Completed Date :** 09/25/2025 - Antonio Flores-De La Cruz - National TAB

**CheckList Item Details**

MUA

<b>Rotation is correct?</b>	Pass
-----------------------------	------

**Comment:**

<b>Gas piping is installed and valves are in on position?</b>	Fail
---	------

**Comment:**

NO PERMANENT GAS YET

<b>Internal motorized damper is fully opening?</b>	Pass
--	------

**Comment:**

<b>Motor is operating below the FLA rating?</b>	Pass
---	------

**Comment:**

<b>Unit free of noticeable noise and vibration?</b>	Pass
---	------

**Comment:**



**09-22-25 Firebirds Chesterfield, VA**

**CheckList Information**

**Name :** 04: HOODS **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 09/18/2025 - Trinity Dodds - National TAB  
**Completed Date :** 09/24/2025 - Antonio Flores-De La Cruz - National TAB

**CheckList Item Details**

**HOODS**

---

**All hood filters installed and accounted for?** Yes

**Comment:**

---

**Hoods are wired and have power?** Yes

**Comment:**

---

**Hood is free of alarms?** No

**Comment:**

CURRENTLY IN TEST MODE

---

**Hood is free of damage?** Yes

**Comment:**

---

**Quarter or full vertical end panels are installed if specified?** Yes

**Comment:**

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09-22-25 Firebirds Chesterfield, VA

CheckList Information

**Name :** 05: FINAL TESTS **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 09/18/2025 - Trinity Dodds - National TAB

**Completed Date :** 10/01/2025 - Antonio Flores-De La Cruz - National TAB

CheckList Item Details

FINAL CHECKS

Are sidewall grille deflector blades adjusted to eliminate drafting in the dining room? Pass

Comment:

Is space free of drafting in general? Pass

Comment:

Is space comfortable in all areas? Pass

Comment:

Is the space free of ventilation noise? Pass

Comment:

List kitchen equipment turned on for testing

Comment:

N/A

List smoke candle type used

Comment:

45 SEC SMOKE PELLETT

**HOOD CAPTURE TEST**

---

**Smoke test capture % - Perimeter of hood**

---

**Comment:**

100%

- [Open](#) IMG\_4017\_1461248906.MOV  
10/01/2025
  - [Open](#) IMG\_4015\_1083948117.MOV  
10/01/2025
  - [Open](#) IMG\_4014\_1977147922.MOV  
10/01/2025
- 

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

---

**Comment:**

100%

---

**WITNESS**

---

**Date test was completed**

09/25/2025

---

**Comment:**

---

**TAB tech name / Firm**

---

**Comment:**

ANTONIO FLORES-DE LA CRUZ / NATIONAL TAB

---

**Site super name / Firm**

---

**Comment:**

CHESTER CRAWFORD

---

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

---

**Comment:**

N/A

---

**BUILDING PRESSURE**

---

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

N/A

---

**Comment:**

UNABLE TO MEASURE BUILDING PRESSURE, DOAS-1 NOT OPERATING NORMALLY DUE TO AN OVERHEAT FAULT.

---

**PICTURES**

---

Equipment pictures are added to each asset?

Yes

Comment:

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: AHU/RTU



Asset: DOAS1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	7078080
Model Num	CAS-HVAC3-I.400-24-30-T	CAS-HVAC3-I.400-24-30-T
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	15.6X24.6
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	184T
Horsepower	5.00	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	13.6

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE

Test Data		
	Design	Actual
SF CFM	4000	4135
SF RPM	-	1108
RA CFM	300	263
OA CFM	3700	3872
RL Voltage	-	210/211/210
RL Amperage	-	10.5
SF Rotation	-	CCW
SF System SetPt	-	38 Hz
RA Damper Position	-	2%
Min OA Damper Position	-	98%
Min OA Damper Type	-	DOAS

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.19"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	0.46"
Total ESP	0.50"	0.65"
Fan Total SP	-	1.37"

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

Completed By: Antonio Flores-De La Cruz on 09/23/2025

## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project:09-22-25 Firebirds Chesterfield, VA

## AHU/RTU



**Diffuser Supply (GRD)**

**DOAS1/KITCHEN**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	CD-K	12"	285	1	348	369	299	104.9
SGRD2	KITCHEN	CD-K	12"	285	1	376	398	290	101.8
SGRD3	KITCHEN	CD-K	12"	285	1	331	351	293	102.8
SGRD4	KITCHEN	CD-K	12"	285	1	202	214	295	103.5
SGRD5	KITCHEN	CD-K	12"	285	1	274	290	298	104.6
SGRD6	KITCHEN	CD-K	12"	285	1	264	280	305	107.0
SGRD7	KITCHEN	CD-K	12"	285	1	310	329	286	100.4
SGRD8	KITCHEN	CD-K	12"	285	1	279	296	291	102.1
SGRD9	KITCHEN	CD-K	12"	285	1	318	337	281	98.6
SGRD10	KITCHEN	CD-K	12"	285	1	221	234	300	105.3
SGRD11	KITCHEN	CD-K	8"	150	1	129	137	152	101.3
SGRD12	KITCHEN	CD-K	8"	145	1	124	131	145	100.0
SGRD13	KITCHEN	CD-K	12"	285	1	207	219	300	105.3
SGRD14	KITCHEN	CD-K	12"	285	1	195	206	301	105.6
SGRD15	KITCHEN	CD-K	12"	285	1	252	267	299	104.9
<b>Total</b>				<b>4000</b>		<b>3830</b>	<b>4058</b>	<b>4135</b>	<b>103.38%</b>

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: AHU/RTU



Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	7078080
Model Num	CAS-HVAC3-1.400-24-20T	CAS-HVAC3-1.400-24-20T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	15.6X24.6
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	215T
Horsepower	5.0	5
Motor Rpm	-	1165
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	14.3

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE

Test Data		
	Design	Actual
SF CFM	4000	3947
SF RPM	-	913
RA CFM	2050	2066
OA CFM	1850	1881
RL Voltage	-	210/211/210
RL Amperage	-	10.3/10.2/10.3
SF Rotation	-	CCW
SF System SetPt	-	47 Hz
RA Damper Position	-	5.2 V / 52%
Min OA Damper Position	-	4.8 V / 48%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.20"
Fan Suction SP	-	-0.90"
Fan Discharge SP	-	0.36"
Total ESP	0.50"	0.56"
Fan Total SP	-	1.26"

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

Completed By: Antonio Flores-De La Cruz on 09/23/2025

Notes:

TOTAL FLOW WAS SET DUE TO SGRD 1-9 AND 1-10 DAMPERS BEING ABOVE HARD CEILING. MANUAL DAMPERS FOR BRANCHES WAS NOT INSTALLED PER THE DRAWINGS AND UNABLE TO LIMIT FLOW IN BRANCH SERVING SGRD 1-4 TO 1-8

Written By: Antonio Flores-De La Cruz on 09/29/2025

## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project:09-22-25 Firebirds Chesterfield, VA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU1/DINING**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ENTRY	LSD	8"	175	0.35	266	132	144	82.3
SGRD2	ENTRY	LSD	8"	175	0.35	136	134	147	84.0
SGRD3	DINING	SR	18X8	450	0.86	604	604	604	134.2
SGRD4	DINING	SR	16X8	400	0.76	499	474	374	93.5
SGRD5	DINING	SR	12X8	290	0.56	296	296	296	102.1
SGRD6	DINING	SR	12X8	290	0.56	380	380	380	131.0
SGRD7	DINING	SR	12X8	290	0.56	458	458	458	157.9
SGRD8	DINING	SR	12X8	290	0.56	373	373	373	128.6
SGRD9	SIDE ROOM	CD	8"	150	1	193	193	181	120.7
SGRD10	DINING	CD	8"	140	1	155	155	150	107.1
SGRD11	BAR	CD	12"	450	1	165	165	283	62.9
SGRD12	BAR	CD	12"	450	1	266	266	267	59.3
SGRD13	BAR	CD	12"	450	1	285	285	290	64.4
Total				4000		4076	3915	3947	98.68%

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: AHU/RTU



Asset: RTU2

AREA:DINING/RESTROOMS

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	7078080
Model Num	CAS-HVAC3-1.400-24-20T	CAS-HVAC3-1.400-24-20T
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	15.6X24.6
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	215T
Horsepower	5.00	5
Motor Rpm	-	1165
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	14.3

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE

Test Data		
	Design	Actual
SF CFM	3900	4145
SF RPM	-	913
RA CFM	2050	2267
OA CFM	1850	1878
RL Voltage	-	210/211/210
RL Amperage	-	10.2/10.1/10.2
SF Rotation	-	CCW
SF System SetPt	-	47 Hz
RA Damper Position	-	4.5 V / 45%
Min OA Damper Position	-	5.5 V / 50%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.20"
Fan Suction SP	-	-0.94"
Fan Discharge SP	-	0.36"
Total ESP	0.50"	0.56"
Fan Total SP	-	1.30"

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

Completed By: Antonio Flores-De La Cruz on 09/22/2025

## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project:09-22-25 Firebirds Chesterfield, VA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU2/DINING/RESTROOMS**

<b>Asset</b>									
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>AK</b>	<b>CFM(1)</b>	<b>CFM(2)</b>	<b>FINAL CFM</b>	<b>% to design</b>
SGRD1	DINING	SR	18X10	600	1.11	540	540	653	108.8
SGRD2	DINING	SR	18X10	600	1.11	633	684	633	105.5
SGRD3	RESTROOM	CD	6"	90	1	70	71	82	91.1
SGRD4	RESTROOM	CD	6"	90	1	67	73	81	90.0
SGRD5	DINING	SR	18X10	600	1.11	708	656	635	105.8
SGRD6	DINING	SR	18X10	600	1.11	691	647	651	108.5
SGRD7	DINING	SR	18X10	600	1.11	640	668	640	106.7
SGRD8	HALL	CD	12"	335	1	378	360	320	95.5
SGRD9	HALL	CD	12"	335	1	330	306	324	96.7
SGRD10	SIDE ROOM	CD	8"	130	1	123	137	126	96.9
<b>Total</b>				<b>3980</b>		<b>4180</b>	<b>4142</b>	<b>4145</b>	<b>104.15%</b>

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: EF-DISH0

AREA:DISH

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU33HFA
Serial Num	-	7078080
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	48Y
Horsepower	0.333	0.333
Motor Rpm	-	1350
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	5.7
Service Factor	-	1

Test Data		
	Design	Actual
CFM	800	673
Fan RPM	-	DIRECT DRIVE
Fan Rotation	-	CCW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	DIAL
RL Voltage	-	120
RL Amperage	-	4.3
Total ESP	0.50"	0.93"
Fan Inlet SP	-	0.93"
Fan Discharge SP	-	ATM

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# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: KEF3

AREA:SF GRILL

Unit Data		
	Design	Actual
MFG	CANARM	CAPTIVEAIRE
Model Num	HRE-20	CASRE24D
Serial Num	-	7078080
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	215T
Horsepower	2.0	5
Motor Rpm	-	1165
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	14.3
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	DIRECT DRIVE

Test Data		
	Design	Actual
CFM	3360	3217
Fan RPM	-	1045
Fan Rotation	-	CCW
Motor RPM	-	1045
RL Voltage	-	210/211/210
RL Amperage	-	11.3/11.2/11.3
Suction ESP	-	-1.35"
Discharge ESP	-	ATM
Total ESP	1.60"	1.35"

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: KEF-H4

AREA:PREP

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU180HFA	DU180HFA
Serial Num	-	7078080
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WESTINGHOUSE
Frame	-	184T
Horsepower	2.00	2
Motor Rpm	-	1170
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	6
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	2340	2209
Fan RPM	-	911
Fan Rotation	-	CCW
Motor RPM	-	911
System SetPt	-	46.7 Hz
RL Voltage	-	210/211/210
RL Amperage	-	4.5/4.4/4.5
Total ESP	1.60"	1.36"
Fan Inlet SP	-	-1.36"
Fan Discharge SP	-	ATM

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: KEF-HL1

AREA:COOKLINE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	7078080
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	NL
Horsepower	0.75	0.75
Motor Rpm	-	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.6
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1425	1327
Fan RPM	-	957
Fan Rotation	-	CCW
Motor RPM	-	957
System SetPt	-	33.3 Hz
RL Voltage	-	210/211/210
RL Amperage	-	1.7
Total ESP	1.40"	0.79"
Fan Inlet SP	-	-0.79"
Fan Discharge SP	-	ATM

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: KEF-HR1

AREA:COOKLINE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	7078080
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	NL
Horsepower	0.75	0.75
Motor Rpm	-	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.6
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1425	1327
Fan RPM	-	957
Fan Rotation	-	CCW
Motor RPM	-	957
System SetPt	-	33.3 Hz
RL Voltage	-	210/211/210
RL Amperage	-	1.7
Total ESP	1.40"	0.68"
Fan Inlet SP	-	-0.68"
Fan Discharge SP	-	ATM

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

System/Unit: FAN - Exhaust



Asset: TEF1

AREA:TOILETS

Unit Data		
	Design	Actual
MFG	GREENHECK	PENNBARRY
Model Num	G-080	DX11QGP
Serial Num	-	C25AM42068
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MCMILLAN
Frame	-	NL
Horsepower	-	283 W
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	5.2
Service Factor	-	1

Test Data		
	Design	Actual
CFM	200	200
Fan RPM	-	DIRECT DRIVE
Fan Rotation	-	CCW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	DIAL
RL Voltage	-	120
RL Amperage	-	N/A
Total ESP	0.5"	0.33"
Fan Inlet SP	-	-0.33"
Fan Discharge SP	-	ATM

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## Unit Data - PHOTO LOG



09/25/2025

**National TAB**  
 Project:09-22-25 Firebirds Chesterfield, VA  
**FAN - Exhaust**



**Diffuser Ret/Exh (GRD)**

**TEF1/TOILETS**

<b>Asset</b>									
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>AK</b>	<b>CFM(1)</b>	<b>CFM(2)</b>	<b>FINAL CFM</b>	<b>% to design</b>
EGRD1	RESTROOM	EG	6"	100	1	265	291	100	100.0
EGRD2	RESTROOM	EG	6"	100	1	398	291	100	100.0
<b>Total</b>				200		663	582	200	100%

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# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

## System/Unit: FAN - Supply



Asset: MUA1

AREA:COOKLINE/SF GRILL

Unit Data		
	Design	Actual
<b>MFG</b>	ECON-AIR	ECON-AIR
<b>Model Num</b>	EARTU-I.300-18-10T-MPU	EARTU2-I.300-18-10T-MPU
<b>Serial Num</b>	-	7078080
<b>Type</b>	MUA	MUA
<b>Configuration</b>	VERTICAL	VERTICAL

Test Data		
	Design	Actual
<b>CFM</b>	3200	3294
<b>SF RPM</b>	-	1369
<b>Motor RPM</b>	-	1369
<b>SF System SetPt</b>	-	46.8 Hz
<b>RL Voltage</b>	-	210/211/210
<b>RL Amperage</b>	-	5.5/5.4/5.5

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	WESTINGHOUSE
<b>Frame</b>	-	182T
<b>Horsepower</b>	3.00	3
<b>Motor Rpm</b>	-	1755
<b>Phase</b>	3	3
<b>Voltage (rated)</b>	208	208
<b>Amperage (rated)</b>	-	8.60
<b>Service Factor</b>	-	1.15

General	
	Actual
<b>Fan Rotation Correct</b>	YES

Gas Heat		
	Design	Actual
<b>Heater Operates (y/n)</b>	-	N
<b>Flame Status (pass/fail)</b>	-	FAIL
<b>Inlet Air Temp SetPt</b>	55	55
<b>Discharge Air Temp SetPt</b>	60	60
<b>Air Flow Switch SP Actual</b>	-	N/A

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

## System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:COOKLINE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-PSP-F	6030ND-2-PSP-F
Job / Serial Num	-	7078080
Type	TYPE 1 CANOPY	TYPE 1 CANOPY
Hood length	180"	180"
Hood Width	60"	60"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	12"	12"
Supply Plenum Length	192"	192"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	20X16	20X16
Filter Qty 1	11	11
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	22.88	22.88
Filter1 FPM	-	108
Filter2 FPM	-	124
Filter3 FPM	-	123
Filter4 FPM	-	135
Filter5 FPM	-	119
Filter6 FPM	-	114
Filter7 FPM	-	104
Filter8 FPM	-	115
Filter9 FPM	-	116
Filter10 FPM	-	107
Filter11 FPM	-	111
Filter Ave FPM(corr)	-	116
CFM	2850	2654

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	SKILLET
Item 3	STOVE

Test Data Supply		
	Design	Actual
Total Area	16	16
Kv factor (Vel)	0.87"	0.87"
Num of Readings	-	12
Reading1 FPM	-	151
Reading2 FPM	-	99
Reading3 FPM	-	119
Reading4 FPM	-	149
Reading5 FPM	-	137
Reading6 FPM	-	109
Reading7 FPM	-	128
Reading8 FPM	-	165
Reading9 FPM	-	189
Reading10 FPM	-	134
Reading11 FPM	-	175
Reading12 FPM	-	187
Ave FPM(corr)	-	145
CFM	2000	2018

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## Unit Data - PHOTO LOG



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# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

## System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:SF GRILL

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-PSP-F	6030ND-2-PSP-F
Job / Serial Num	-	7078080
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	112"	112"
Hood Width	60"	60"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	12"	12"
Supply Plenum Length	124"	124"

Test Data Supply		
	Design	Actual
Total Area	10.33	10.33
Kv factor (Vel)	0.87	0.87
Num of Readings	-	8
Reading1 FPM	-	165
Reading2 FPM	-	100
Reading3 FPM	-	121
Reading4 FPM	-	128
Reading5 FPM	-	170
Reading6 FPM	-	123
Reading7 FPM	-	146
Reading8 FPM	-	182
Ave FPM(corr)	-	142
CFM	1200	1276

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	20X16	20X16
Filter Qty 1	7	7
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	14.56	14.56
Filter1 FPM	-	234
Filter2 FPM	-	225
Filter3 FPM	-	214
Filter4 FPM	-	229
Filter5 FPM	-	227
Filter6 FPM	-	218
Filter7 FPM	-	203
Filter Ave FPM(corr)	-	221
CFM	3360	3596

Cooking Equipment	
	Actual
Item 1	GRILL
Item 2	OVEN

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## Unit Data - PHOTO LOG



09/25/2025

# National TAB

Project: 09-22-25 Firebirds Chesterfield, VA

## System/Unit: Kitchen Hood Type I



Asset: HD3

AREA:PREP

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2	6030ND-2
Job / Serial Num	-	7078080
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	156"	156"
Hood Width	60"	60"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	20X16	20X16
Filter Qty 1	9	9
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	18.72	18.72
Filter1 FPM	-	111
Filter2 FPM	-	115
Filter3 FPM	-	117
Filter4 FPM	-	116
Filter5 FPM	-	113
Filter6 FPM	-	120
Filter7 FPM	-	125
Filter8 FPM	-	124
Filter9 FPM	-	124
Filter Ave FPM(corr)	-	118
CFM	2340	2209

Cooking Equipment	
	Actual
Item 1	OVEN
Item 2	GRILL

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## Unit Data - PHOTO LOG



09/25/2025

