

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: AHU/RTU



Comfort. Under control.

Asset: DOAS1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVE AIRE
Serial Num	-	5470703
Model Num	CASRTU3-I.300-15-20T-DOAS	CASRTU3-I.300-15-20T-DOAS
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	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	2	2.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	5.48

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	59.8 HZ
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	2650	2746
SF RPM	-	1734
RA CFM	0	0
OA CFM	2650	2746
RL Voltage	-	'203 [1]
RL Amperage	-	5.4 [1]
SF Rotation	-	CCW, CORRECT
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
Fan Discharge SP	-	0.16"
Total ESP	0.50"	0.16"

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

Completed By: Michael McDonnell

Notes: [1] READING TAKEN FROM VFD HMI.

# National TAB

Project:02-20-23 FREDDY'S - BELLEVILLE, IL

## AHU/RTU



Comfort. Under control.

### Diffuser Supply (GRD)

#### DOAS1/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	SD2	10"	330	1.0	340	343	343	103.9
SGRD2	DRIVE THRU	SD2	10"	330	1.0	349	360	360	109.1
SGRD3	KITCHEN	SD3	10"	330	1.0	274	337	337	102.1
SGRD4	KITCHEN	SD3	10"	330	1.0	329	344	344	104.2
SGRD5	OFFICE	SD4	10X6	150	1.0	98	150	150	100.0
SGRD6	KITCHEN	SD2	10"	330	1.0	330	353	353	107.0
SGRD7	KITCHEN	SD2	10"	150	1.0	333	162	162	108.0
SGRD8	KITCHEN	SD2	10"	330	1.0	351	346	346	104.8
SGRD9	KITCHEN	SD2	10"	330	1.0	385	351	351	106.4

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# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

## System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	3422P09857
Model Num	LGH150H4M	48HCFE14K3M5A6U3J0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	22.5X25
Num Final Filter 1	-	6
Final Filter Size 1	-	18X24X2

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	184T
Horsepower	5	5.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	14.4

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP65
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	6 TURNS OPEN
Fan Sheave Size	-	BK120
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BX67
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5000	5247
SF RPM	-	761
RA CFM	4019	4950
OA CFM	981	297
RL Voltage	-	203/204/204
RL Amperage	-	8.1/8.0/8.1
SF Rotation	-	CCW, CORRECT
RA Damper Position	-	94% / 85% [1]
Min OA Damper Position	-	2.5V (6%) / 3.25V (15%) [1]
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	ES5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.73"
Fan Suction SP	-	-0.97"
Fan Discharge SP	-	0.63"
Total ESP	1.0"	1.36"
Fan Total SP	-	160

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES [2]
Condensate Drain Installed	-	YES

Completed By: Michael McDonnell

Notes: [1] HIGH SPEED / LOW SPEED [2] CONSTRUCTION FILTERS STILL INSTALLED. RECOMMEND CORRECT FINAL FILTERS ARE INSTALLED AT TURNOVER.

# National TAB

Project:02-20-23 FREDDY'S - BELLEVILLE, IL

## AHU/RTU



Comfort. Under control.

### Diffuser Supply (GRD)

#### RTU1/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	VESTIBUL E	SD5	8"	150	1.0	187	175	152	101.3
SGRD2	DINING	SD1	12"	520	1.0	296	279	492	94.6
SGRD3	DINING	SD1	12"	520	1.0	657	618	562	108.1
SGRD4	DINING	SD1	12"	520	1.0	676	636	558	107.3
SGRD5	DINING	SD1	12"	520	1.0	693	652	560	107.7
SGRD6	DINING	SD1	12"	520	1.0	736	693	566	108.8
SGRD7	DINING	SD1	12"	520	1.0	584	549	559	107.5
SGRD8	DINING	SD1	12"	520	1.0	435	409	542	104.2
SGRD9	DINING	SD1	12"	0	1.0		0	0	-
SGRD10	DINING	SD1	12"	520	1.0	546	514	536	103.1
SGRD11	DINING	SD1	12"	520	1.0	649	611	560	107.7
SGRD12	RESTROO M VEST	SD5	6"	50	1.0	106	100	55	110.0
SGRD13	RESTROO M	SD5	6"	50	1.0	97	91	52	104.0
SGRD14	RESTROO M	SD5	6"	50	1.0	133	125	53	106.0

Completed By: Brianna Biggs on

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF1

AREA:

Unit Data		
	Design	Actual
<b>MFG</b>	GREENHECK	LOREN COOK
<b>Model Num</b>	SP-A200-390	GEMINI VF 100
<b>Serial Num</b>	-	6237
<b>Type</b>	CEILING	CELING
<b>Configuration</b>	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	MCMILLAN
<b>Frame</b>	-	NL
<b>Horsepower</b>	0.08	NL
<b>Motor Rpm</b>	900	350-1100
<b>Phase</b>	1	1
<b>Voltage (rated)</b>	-	120
<b>Amperage (rated)</b>	-	0.26

Test Data		
	Design	Actual
<b>CFM</b>	75	78
<b>Fan RPM</b>	-	DD
<b>Fan Rotation</b>	-	CW, CORRECT
<b>Motor RPM</b>	-	DD
<b>System SetPt</b>	-	SPEED CONTROLLER MARKED
<b>RL Voltage</b>	-	NR [1]
<b>RL Amperage</b>	-	NR [1]
<b>Total ESP</b>	0.250"	NR [2]
<b>Fan Inlet SP</b>	-	NR [2]
<b>Fan Discharge SP</b>	-	NR [2]

Completed By: Michael McDonnell

Notes: [1] COULD NOT ACCESS SAFELY [2] COULD NOT ACCESS DUE TO HARD CEILING.

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	SP-A200-390	GEMINI VF 100
Serial Num	-	6155
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MCMILLAN
Frame	-	NL
Horsepower	0.08	NL
Motor Rpm	900	350-1100
Phase	1	1
Voltage (rated)	-	120
Amperage (rated)	-	0.26

Test Data		
	Design	Actual
CFM	75	76
Fan RPM	-	DD
Fan Rotation	-	CW, CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER MARKED
RL Voltage	-	NR [1]
RL Amperage	-	NR [1]
Total ESP	0.250"	NR [2]
Fan Inlet SP	-	NR [2]
Fan Discharge SP	-	NR [2]

Completed By: Michael McDonnell

Notes:

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: KEF1

AREA:HD1 GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE18DD	CASRE18DD
Serial Num	-	5470703
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	1	1.0
Motor Rpm	-	1150
Phase	3	3
Voltage (rated)	208	230
Amperage (rated)	-	3.44
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1600	1514
Fan RPM	1143	1142
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	1142
System SetPt	-	59.6 HZ
RL Voltage	-	20/204/205
RL Amperage	-	3.2 [1]
Total ESP	1.5"	0.71"
Fan Inlet SP	-	-0.71"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell

Notes: [1] TAKEN FROM HMI

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: KEF2

AREA:HD2 FRYER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU80HFA	DU50HFA
Serial Num	-	5470703
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.5	0.5
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	775	763
Fan RPM	1575	1188
Fan Rotation	-	CCW
Motor RPM	-	1188
System SetPt	-	66%
RL Voltage	-	204
RL Amperage	-	2.2
Total ESP	1.2"	0.69"
Fan Inlet SP	-	-0.69"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell

Notes:

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	5470703
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	96	96
Hood Width	54	54

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	170
Filter2 FPM	-	192
Filter3 FPM	-	218
Filter4 FPM	-	186
Filter5 FPM	-	171
Filter Ave FPM(corr)	-	187
CFM	1600	1514

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

Completed By: Michael McDonnell

Notes:

# National TAB

Project: 02-20-23 FREDDY'S - BELLEVILLE, IL

## System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD2

AREA:FRYER

### Unit Data

	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	5470703
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	60	60
Hood Width	54	54

### Test Data Exhaust

	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	4.86	4.86
Filter1 FPM	-	151
Filter2 FPM	-	157
Filter3 FPM	-	165
Filter Ave FPM(corr)	-	157
CFM	775	763

### Cooking Equipment

	Design	Actual
Item 1	-	FRYER

Completed By: Michael McDonnell

Notes:



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## 02-20-23 FREDDY'S - BELLEVILLE, IL

### CheckList Information

**Name :** TECH - SITE PICTURES **Status :** NotSubmitted  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB

### CheckList Item Details

#### STORE FRONT



Belleville-IL.jpeg

#### RTU-1



RTU-1.jpeg

DOAS-1



DOAS-1.jpeg

KEF-1

KEF-2

KEF-3

EF-1

EF-2

HD-1

HD-2

Notes/Comments :



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### 02-20-23 FREDDY'S - BELLEVILLE, IL

#### CheckList Information

**Name :** TECH - STEP 1: INITIAL WALKTHROUGH **Status :** NotSubmitted  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB

#### CheckList Item Details

##### INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	No, Diffuser 1-9 on RTU-1 was deleted due to ice machine location. Air scheduled for this diffuser was evenly distributed amongst dining room diffusers.
All hood filters installed and accounted for?	Yes
Hoods are wired and have power?	Yes
Hood is free of alarms?	Yes
Thermostats have power?	Yes
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	Yes

**Notes/Comments :**



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### 02-20-23 FREDDY'S - BELLEVILLE, IL

#### CheckList Information

**Name :** TECH - STEP 2: UNIT DATA AND EVAL **Status :** NotSubmitted  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** 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
DCV Max damper opening position is set to minimum?	Yes
Free cooling enthalpy set point set for lowest setting (Typically "D")	Yes
Motors are all operating below the FLA rating?	Yes
Are belts tight?	Yes
If direct drive unit is the speed controller working.	Yes
Is gas piping installed and valves turned on?	Yes
Unit free of noticeable noise and vibration	Yes

##### EF's

Rotation is correct?	Yes
Belts are tight?	NA, direct drive.
Grease cup installed on hood fan?	Yes
Hinge kit installed installed on hood fan?	Yes
Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes

Flex conduit is long enough so that fan can be completely tilted back?	Yes
There is no major leakage around base of fan?	Yes
Is the motor operating below the motor FLA rating?	Yes
For restroom fan(s) is the back draft damper installed and can it fully open?	NA, ceiling fans installed in restrooms.

**HOODS**

Kitchen equipment installed in proper places?	Yes
Can kitchen equipment be turned on for final smoke test?	No, equipment not yet started up.

**DOCUMENTATION**

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

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### 02-20-23 FREDDY'S - BELLEVILLE, IL

#### CheckList Information

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

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

**Requesting Organization :** National TAB

#### CheckList Item Details

**TEST, ADJUST, AND BALANCE ALL EQUIPMENT:**

**DURING TESTING MAKE NOTE OF THE FOLLOWING:**

Is space free of drafting?	Yes
Is space comfortable in all areas?	Yes
Is the space free of ventilation noise?	Yes
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	NA

**Notes/Comments :**



Comfort. Under control.

### 02-20-23 FREDDY'S - BELLEVILLE, IL

#### CheckList Information

<b>Name :</b>	TECH - STEP 4: FINAL TESTS	<b>Status :</b>	NotSubmitted
<b>Assigned Organization :</b>	National TAB	<b>Asset :</b>	
<b>Requesting Organization :</b>	National TAB		

#### CheckList Item Details

##### FINAL TESTS

##### HOOD CAPTURE TEST

List equipment turned on for testing	None
List smoke candle type used	45 sec smoke emitter
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%

##### WITNESS

Date test was completed	02/21/2023
TAB tech name / Firm	Michael McDonnell / National TAB
Site super name / Firm	Nick Yung / Hunter Construction
Owner representative name / Firm (if Applicable)	NA
Building pressure at front & back doors (All Systems On)	0.011"

##### ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	Yes
Thermostats are programmed?	Yes. DOAS occupancy is interlocked with hood operation. Dining RTU schedule set.

**Notes/Comments :**





Comfort. Under control.

### 02-20-23 FREDDY'S - BELLEVILLE, IL

#### CheckList Information

**Name :** TECH - STEP 5: FINAL DOCUMENTATION **Status :** NotSubmitted

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

**Requesting Organization :** National TAB

#### CheckList Item Details

##### FINAL DOCUMENTATION

Marked Data capture complete for all assets?	Yes
Picture file sent to processing team or uploaded?	Yes
Balance schedule complete and uploaded?	Yes
Prelim report generated and reviewed?	Yes

##### Notes/Comments :