

**Report By:**

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

**NATIONAL**

**TAB**

Comfort. Under control.

**Report: FINAL TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 8/5/2022**

**PROJECT**  
**07-11 TACO BELL - O'FALLON, MO**

4231 STATE HWY K

O'FALLON, MO

**Client**

Flynn Restaurant Group  
6200 Oak Tree Boulevard  
Suite 250  
Independence, OH 44131

# National TAB

Project: 07-11 TACO BELL - O'FALLON, MO

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## 07-11 TACO BELL - O'FALLON, MO

### Project Issue Information

**Issue Name :** Building relief plenum

**Description :** Unit has bara metric relief damper, this allows this to be open at all times. Recommend installing a bara metric damper so it only opens when building is under positive pressure to ensure no airflow from outside gets into the ceiling (especially winter).

**Created By :** National TAB

**Assigned To :** National TAB - Travis Halter

**Status :** Open

**Originated Date :** 07/11/2022 - Travis Halter - National TAB

#### Project Issue File Details



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## 07-11 TACO BELL - O'FALLON, MO

### Project Issue Information

**Issue Name :** RTU2 Evap coil is dirty

**Description :** Coil is dirty, static pressure taken back up this observation. Coil needs to be cleaned, currently the unit is within design parameters.

**Created By :** National TAB

**Assigned To :** National TAB - Wendy Biggs

**Status :** Open

**Originated Date :** 07/11/2022 - Travis Halter - National TAB

#### Project Issue File Details



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## 07-11 TACO BELL - O'FALLON, MO

### Project Issue Information

**Issue Name :** RTU2 OA damper not working

**Description :** The outside air damper does not function, damper was manually set.

**Created By :** National TAB

**Assigned To :** National TAB - Travis Halter

**Status :** Open

**Originated Date :** 07/11/2022 - Travis Halter - National TAB

## 07-11 TACO BELL - O'FALLON, MO

### Project Issue Information

**Issue Name :** RTUs Condenser coils are dirty

**Description :** Condenser coils on both units are slightly dirty.

**Created By :** National TAB

**Assigned To :** National TAB - Travis Halter

**Status :** Open

**Originated Date :** 07/11/2022 - Travis Halter - National TAB

#### Project Issue File Details



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### 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	4800	4602	3800	3563	1000	1039	20.8%	22.6%						
RTU-2	KITCHEN	4000	3868	3200	3117	800	751	20.0%	19.4%						
EF-1	HD1											1050	991		
EF-2	RESTROOMS													150	150
<b>TOTALS</b>		8800	8470	7000	6680	1800	1790			0	0	1050	991	150	150

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1800	1790
TOTAL EXHAUST	1200	1141
<b>NET AIRFLOW</b>	<b>600</b>	<b>649</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.012
SIDE	
REAR	0.01
<b>AVERAGE</b>	<b>0.011</b>

#### FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

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- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

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- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

# 07-11 TACO BELL - O'FALLON, MO

## CheckList Information

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

## CheckList Item Details

STORE FRONT



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RTU-1



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RTU-2



**thumbnail\_image1.jpg**

EF-1



**thumbnail\_image2.jpg**

EF-2



**thumbnail\_image3.jpg**

HOOD-1



thumbnail\_image4.jpg

Notes/Comments :

# 07-11 TACO BELL - O'FALLON, MO

## CheckList Information

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

## CheckList Item Details

### INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	YES
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 :

## 07-11 TACO BELL - O'FALLON, MO

### CheckList Information

<b>Name :</b>	TECH - STEP 2: UNIT DATA AND EVAL	<b>Status :</b>	Submitted
<b>Assigned Organization :</b>	National TAB	<b>Asset :</b>	
<b>Requesting Organization :</b>	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?	RTU2 DAMPERS DOES NOT FUNCTION
DCV Max damper opening position is set to minimum?	NA
Free cooling enthalpy set point set for lowest setting (Typically "D")	NA
Motors are all operating below the FLA rating?	YES
Are belts tight?	YES
If direct drive unit is the speed controller working.	NA
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?	DD
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?	YES
---	-----

Unit free of noticeable noise and vibration?	YES
--	-----

**MUA**

Rotation is correct?	NA
----------------------	----

Gas piping is installed and valves are in on position?	NA
--	----

Heater tested and is functional?	NA
----------------------------------	----

Internal motorized damper is fully opening?	NA
---	----

Motor is operating below the FLA rating?	NA
--	----

Unit free of noticeable noise and vibration?	NA
--	----

**HOODS**

Kitchen equipment installed in proper places?	YES
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Can kitchen equipment be turned on for final smoke test?	YES
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**DOCUMENTATION**

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

# 07-11 TACO BELL - O'FALLON, MO

## CheckList Information

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

# 07-11 TACO BELL - O'FALLON, MO

## CheckList Information

**Name :** TECH - STEP 4: FINAL TESTS **Status :** Submitted  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB

## CheckList Item Details

### FINAL TESTS

#### HOOD CAPTURE TEST

List equipment turned on for testing	ALL
List smoke candle type used	OBSERVED COOKING
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%

#### WITNESS

Date test was completed	07/11/2022
TAB tech name / Firm	TRAVIS HALTER / NATIONAL TAB
Site super name / Firm	NA
Owner representative name / Firm (if Applicable)	NA
Building pressure at front & back doors (All Systems On)	0.010" BACK / 0.012" FRONT

#### 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

#### Notes/Comments :

# National TAB

Project: 07-11 TACO BELL - O'FALLON, MO

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	AAON	AAON
Serial Num	-	200404-AMGL05827
Model Num	RK-15-2-FO-222	RM-015-8-0-AB02
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	39x19
Num Final Filter 1	-	6
Final Filter Size 1	-	16x20x2

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	14-13.2/6.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.375"
Motor Bore Size	-	1.125"
Motor Sheave SetPt	-	2
Fan Sheave Size	-	[1]
Fan Sheave Bore	-	[1]
Belt CL Distance	-	25"
Num of Belts	-	1
Belt Size	-	BX63
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM	4800	4602
SF RPM	-	[1]
RA CFM	3800	3563
OA CFM	1000	1039
RL Voltage	-	209/209/209
RL Amperage	-	10.1/10.1/10.1
SF Rotation	-	CCW, CORRECT
RA Damper Position	-	3.5" OPEN
Min OA Damper Position	-	0.5" OPEN
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.83"
Fan Suction SP	-	-1.31"
Fan Discharge SP	-	0.40"
Total ESP	-	1.23"
Fan Total SP	-	1.71"

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

Completed By: Travis Halter

Notes:DIFFUSER DESIGN TOTALS = 4640CFM. UNIT SCHEDULED AT 4800CFM. PORPOTIONALLY ADJUSTED. [1] Fan sheave is not accessible.

# National TAB

Project:07-11 TACO BELL - O'FALLON, MO

## AHU/RTU



Comfort. Under control.

### Diffuser Supply (GRD)

#### RTU1/DINING

Asset	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	ENTRY	S4	12X6	75	153	77	102.7
	ENTRY	S4	12X6	75	159	73	97.3
SGRD3	MENS RR	S2	8"	50	103	55	110.0
	WOMENS RR	S2	8"	50	74	55	110.0
SGRD5	DINING	S1	12"	440	471	469	106.6
	DINING	S1	12"	440	354	399	90.7
SGRD7	DINING	S1	12"	440	375	401	91.1
	DINING	S1	12"	440	383	405	92.0
SGRD9	DINING	S1	10"	342	293	344	100.6
	DINING	S1	10"	342	257	310	90.6
SGRD11	DINING	S1	10"	342	218	309	90.4
	DINING	S1	12"	440	506	419	95.2
SGRD13	DINING	S1	12"	440	443	456	103.6
	DINING	S1	12"	440	424	401	91.1
SGRD15	ORDER AREA	S1	12"	440	469	429	97.5

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Asset	Notes
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# National TAB

Project: 07-11 TACO BELL - O'FALLON, MO

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU2

AREA:DINING

Unit Data		
	Design	Actual
MFG	AAON	AAON
Serial Num	-	200404-AMGL05828
Model Num	RK-15-2-FO-222	RM-015-8-0-AB02
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	39x19
Num Final Filter 1	-	6
Final Filter Size 1	-	16x20x2

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208/230/460
Rated Amperage	-	13.3-12.4/6.2

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.375"
Motor Bore Size	-	1.125"
Motor Sheave SetPt	-	2
Fan Sheave Size	-	[1]
Fan Sheave Bore	-	[1]
Belt CL Distance	-	25"
Num of Belts	-	1
Belt Size	-	BX63
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM	4000	3868
SF RPM	-	[1]
RA CFM	3200	3117
OA CFM	800	751
RL Voltage	-	210/210/210
RL Amperage	-	8.2/8.2/8.2
SF Rotation	-	CCW, CORRECT
RA Damper Position	-	0.25" OPEN
Min OA Damper Position	-	3" OPEN
Min OA Damper Type	-	ECONOMIZER [3]

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.52"
Fan Suction SP	-	-2.33"
Fan Discharge SP	-	0.18"
Total ESP	-	0.70"
Fan Total SP	-	2.51"

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

Completed By: Travis Halter

Notes:[1] Unable to access fan sheave [2] Evap coil is dirty, unable to get it clean at time of balance [3] OA damper does not function, damper was manually set.

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Project:07-11 TACO BELL - O'FALLON, MO

## AHU/RTU



Comfort. Under control.

### Diffuser Supply (GRD)

#### RTU2/DINING

Asset	Location	Type	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	UTILITY	S1	331	344	344	103.9
	UTILITY	S1	331	356	356	107.6
SGRD2	UTILITY	S1	331	356	356	107.6
	UTILITY	S1	331	356	356	107.6
SGRD3	DRY STORAGE	S1	207	211	211	101.9
	DRY STORAGE	S1	207	211	211	101.9
SGRD4	KITCHEN	S1	331	317	317	95.8
	KITCHEN	S1	331	317	317	95.8
SGRD5	OFFICE	S1	150	138	138	92.0
	OFFICE	S1	150	138	138	92.0
SGRD6	FOOD PREP	S3	373	368	368	98.7
	FOOD PREP	S3	373	368	368	98.7
SGRD7	FOOD PREP	S3	373	349	349	93.6
	FOOD PREP	S3	373	349	349	93.6
SGRD8	COOKLINE	S3	373	338	338	90.6
	COOKLINE	S3	373	338	338	90.6
SGRD9	COOKLINE	S1	373	366	366	98.1
	COOKLINE	S1	373	366	366	98.1
SGRD10	FOOD PREP	S3	454	410	410	90.3
	FOOD PREP	S3	454	410	410	90.3
SGRD11	FOOD PREP	S3	373	362	362	97.1
	FOOD PREP	S3	373	362	362	97.1
SGRD12	DRIVE THRU	S1	331	309	309	93.4
	DRIVE THRU	S1	331	309	309	93.4

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Asset	Notes

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Project: 07-11 TACO BELL - O'FALLON, MO

System/Unit: FAN - Exhaust



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Asset: EF1

AREA:HD1

Unit Data		
	Design	Actual
<b>MFG</b>	STRATOVENT	STRATOVENT
<b>Model Num</b>	SV-DU50HFA	SV-DU50HFA
<b>Serial Num</b>	-	5134613
<b>Type</b>	UPBLAST	UPBLAST
<b>Configuration</b>	VERTICAL	VERTICAL

Test Data		
	Design	Actual
<b>CFM</b>	1050	991
<b>Fan RPM</b>	1344	DD
<b>Fan Rotation</b>	-	CCW, CORRECT
<b>Motor RPM</b>	-	DD
<b>System SetPt</b>	-	LOW
<b>RL Voltage</b>	-	71
<b>RL Amperage</b>	-	4.1
<b>Total ESP</b>	0.9"	0.24"
<b>Fan Inlet SP</b>	-	-0.24"
<b>Fan Discharge SP</b>	-	ATM

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	HSSA
<b>Frame</b>	-	48Y
<b>Horsepower</b>	0.5	0.5
<b>Motor Rpm</b>	-	1380
<b>Phase</b>	1	1
<b>Voltage (rated)</b>	120	115
<b>Amperage (rated)</b>	-	7.6
<b>Service Factor</b>	-	1.0

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Notes:

Asset	Notes
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# National TAB

Project: 07-11 TACO BELL - O'FALLON, MO

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF2

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	STRATOVENT	STRATOVENT
Model Num	SV-DR10HFA	SV-DR10HFA
Serial Num	-	5134613
Type	DOWNBLAST	DOWNBLAST
Configuration	HORIZONTAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.166	1/6
Motor Rpm	1095	1800
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	2.4
Service Factor	-	1.0

Test Data		
	Design	Actual
CFM	150	150
Fan RPM	1095	706
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	706
System SetPt	-	41%
RL Voltage	-	120
RL Amperage	-	0.25
Total ESP	0.25"	0.19"
Fan Inlet SP	-	-0.19"
Fan Discharge SP	-	ATM

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Notes:

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Project:07-11 TACO BELL - O'FALLON, MO

## FAN - Exhaust



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**Diffuser Ret/Exh (GRD)**

**EF2/RESTROOMS**

Asset	Location	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
EGRD1	RESTROOM	8X8	75	122	68	90.7
	RESTROOM	8X8	75	148	82	109.3

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Asset	Notes

# National TAB

Project: 07-11 TACO BELL - O'FALLON, MO

## System/Unit: Kitchen Hood Type I



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Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	STRATOVENT	STRATOVENT
Model Num	SVBD2	3650 SV-BD-2
Job / Serial Num	-	5134613
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROX
Hood length	75"	75"
Hood Width	36"	36"

Performance Data		
	Design	Actual
Smoke Generation Type	-	SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	YES

Test Data Exhaust		
	Design	Actual
Filter Type	STAINLESS BAFFLE	BAFFLE
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	6.48	6.48
Filter1 FPM	-	150
Filter2 FPM	-	159
Filter3 FPM	-	153
Filter4 FPM	-	152
Filter Ave FPM(corr)	-	153
CFM	-	991

General		
	Design	Actual
Third Party Witness	-	NA
Third Party Company	-	NA
Tech Witness	-	TRAVIS HALTER

Cooking Equipment		
	Design	Actual
Item 1	-	FRYER
Item 2	-	BOILER

Completed By: Travis Halter

Notes:

Asset	Notes

