

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 08/21/2023

PROJECT
08-21-23 FREDDYS - TOLLESON, AZ

1400 US-181

PORTLAND, TX 78374

Client

Tolleson Custard Operations LLC

National TAB

Project: 08-21-23 FREDDYS - TOLLESON, AZ

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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	4850		3850	0	1000		20.6%	#DIV/0!						
DOAS-1	KITCHEN	2900		0	0	2900		100.0%	#DIV/0!						
KEF-1	GRIDDLE											1700			
KEF-2	FRYER											775			
KEF-3	DISHWASHER											525			
EF-1	RR													75	
EF-2	RR													150	
TOTALS		7750	0	3850	0	3900	0			0	0	3000	0	225	0

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3900	0
TOTAL EXHAUST	3225	0
NET AIRFLOW	675	0

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	
SIDE	
REAR	
AVERAGE	#DIV/0!

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 SITE WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS
- TECH - STEP 5: FINAL DOCUMENTATION

RTU-7

Comment:

RTU-8

Comment:

RTU-9

Comment:

RTU-10

Comment:

RTU-11

Comment:

RTU-12

Comment:

RTU-13

Comment:

RTU-14

Comment:

RTU-15

Comment:

RTU-16

Comment:

RTU-17

Comment:

RTU-18

Comment:

RTU-19

Comment:

RTU-20

Comment:

MAU-1

Comment:

MAU-2

Comment:

EF-1

Comment:

EF-2

Comment:

EF-3

Comment:

EF-4

Comment:

EF-5

Comment:

EF-6

Comment:

EF-7

Comment:

EF-8

Comment:

EF-9

Comment:

EF-10

Comment:

HOOD-1

Comment:

HOOD-2

Comment:

HOOD-3

Comment:

HOOD-4

Comment:

HOOD-5

Comment:



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CheckList Information

Name : TECH - STEP 1: INITIAL SITE WALKTHROUGH **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/21/2023 - Brian Turnbough - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?

Comment:

All hood filters installed and accounted for?

Comment:

Hoods are wired and have power?

Comment:

Hood is free of alarms?

Comment:

Thermostats have power?

Comment:

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

Comment:



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CheckList Information

Name : TECH - STEP 2: UNIT DATA AND EVAL **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/21/2023 - Brian Turnbough - 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?

Comment:

DCV Max damper opening position is set to minimum?

Comment:

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

Comment:

Motors are all operating below the FLA rating?

Comment:

Are belts tight?

Comment:

If direct drive unit is the speed controller working.

Comment:

Is gas piping installed and valves turned on?

Comment:

Unit free of noticeable noise and vibration

Comment:

EF's

Rotation is correct?

Comment:

Belts are tight?

Comment:

Grease cup installed on hood fan?

Comment:

Hinge kit installed installed on hood fan?

Comment:

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

Comment:

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

Comment:

There is no major leakage around base of fan?

Comment:

Is the motor operating below the motor FLA rating?

Comment:

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

Comment:

Unit free of noticeable noise and vibration?

Comment:

MUA

Rotation is correct?

Comment:

Gas piping is installed and valves are in on position?

Comment:

Heater tested and is functional?

Comment:

Internal motorized damper is fully opening?

Comment:

Motor is operating below the FLA rating?

Comment:

Unit free of noticeable noise and vibration?

Comment:

HOODS

Kitchen equipment installed in proper places?

Comment:

Can kitchen equipment be turned on for final smoke test?

Comment:

DOCUMENTATION

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

Comment:



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CheckList Information

Name : TECH - STEP 3: TEST, ADJUST AND BALANCE **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/21/2023 - Brian Turnbough - National TAB

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

Is space comfortable in all areas?

Comment:

Is the space free of ventilation noise?

Comment:

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

Comment:

Comment:

Site super name / Firm

Comment:

Owner representative name / Firm (if Applicable)

Comment:

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

Comment:

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:

Thermostats are programmed?

Comment:



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CheckList Information

Name : TECH - STEP 5: FINAL DOCUMENTATION **Status :** Not Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 08/21/2023 - Brian Turnbough - National TAB

CheckList Item Details

FINAL DOCUMENTATION

Marked Data capture complete for all assets?

Comment:

Picture file sent to processing team or uploaded?

Comment:

Balance schedule complete and uploaded?

Comment:

Prelim report generated and reviewed?

Comment:

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: AHU/RTU



Asset: DOAS1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	
Model Num	CASRTU3-1.150-18-20T-DOAS	CASRTU3-L200-18-20T-DOAS
Type	DOAS	
Configuration	VERTICAL	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	3.000	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	-	

Drive Data		
	Design	Actual
Motor Sheave Size	-	
Motor Bore Size	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt Size	-	

Electrical		
	Design	Actual
VFD Min Setpt	-	
VFD Max Setpt	-	

Test Data		
	Design	Actual
SF CFM	2900	
SF RPM	-	
RA CFM	0	
OA CFM	2900	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.500	
OA Temp (db/wb)	-	
RA Temp (db/wb)	-	
SA Temp (db/wb)	-	

General		
	Design	Actual
Fan Rotation Correct	-	
Unit Filters Clean	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: AHU/RTU



Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	LENNOX
Serial Num	-	
Model Num	CASRTU3-1.150-18-20T-DOAS	LGH150
Type	RTU	
Configuration	VERTICAL	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	5	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	60	

Drive Data		
	Design	Actual
Motor Sheave Size	-	
Motor Bore Size	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt Size	-	

Test Data		
	Design	Actual
SF CFM	4850	
SF RPM	-	
RA CFM	3850	
OA CFM	1000	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	1.0"	

General		
	Design	Actual
Fan Rotation Correct	-	
Unit Filters Clean	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: FAN - Exhaust



Asset: EF1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	COOK
Model Num	DU33HFA	GC-146
Serial Num	-	
Type	CEILING	
Configuration	VERTICAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	30.5	
Motor Rpm	-	
Phase	1	
Voltage (rated)	120	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	75	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.25"	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: FAN - Exhaust



Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	COOK
Model Num	DU33HFA	GC-186
Serial Num	-	
Type	CEILING	
Configuration	VERTICAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	63.3	
Motor Rpm	-	
Phase	1	
Voltage (rated)	120	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	150	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	1/4"	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: FAN - Exhaust



Asset: KEF1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	CASRE18DD
Serial Num	-	
Type	UTILITY	
Configuration	VERTICAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1.000	
Motor Rpm	-	
Phase	3	
Voltage (rated)	208	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	1700	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	1.400	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: FAN - Exhaust



Asset: KEF2

AREA:FRYERS

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU50HFA
Serial Num	-	
Type	UPBLAST/CEILING	
Configuration	VERTICAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	0.500	
Motor Rpm	-	
Phase	1	
Voltage (rated)	115	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	775	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	1.250	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: FAN - Exhaust



Asset: KEF3

AREA:DISHWASHER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU33HFA
Serial Num	-	
Type	UTILITY/CEILING	
Configuration	VERTICAL	

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

Test Data		
	Design	Actual
CFM	525	
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.800	
Fan Inlet SP	-	
Fan Discharge SP	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424ND-2	5424ND-2
Job / Serial Num	-	
Type	TYPE 1 CANOPY	
Hood length	96"	
Hood Width	54"	

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	
Filter Size 1	16X16	
Filter Qty 1	6	
Filter AK factor size 1	1.62	
Filter Total AK Area	9.72	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter5 FPM	-	
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter Ave FPM(corr)	-	
CFM	1700	

Cooking Equipment		
	Design	Actual
Item 1	-	
Item 2	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA:FRYER

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424ND-2	5424ND-2
Job / Serial Num	-	
Type	TYPE 1 CANOPY	
Hood length	60"	
Hood Width	54"	

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO TRIP	
Filter Size 1	16X16	
Filter Qty 1	3	
Filter AK factor size 1	1.62	
Filter Total AK Area	4.86	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter5 FPM	-	
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter Ave FPM(corr)	-	
CFM	775	

Cooking Equipment		
	Design	Actual
Item 1	-	
Item 2	-	

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Project: 08-21-23 FREDDYS - TOLLESON, AZ

System/Unit: Kitchen Hood Type II



Asset: HD(Type2)3

AREA:DISHES

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4224 VHB-G	4224 VHB-G
Serial Num	-	
Type	TYPE 2 CANOPY	
Hood length	42"	
Hood Width	42"	

Test Data		
	Design	Actual
Exhaust CFM	525	

