

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: 8/15/2022

PROJECT

07-25 CULVERS - BARABOO, WI (REVIVE)

N/A

BARABOO, WI

Client

Culvers

540 Water St

Prairie Du Sac, WI 53578

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

Table Of Contents

Section	Page #
Site Pictures	3
Checklist Data	4
AHU/RTU	6
FAN - Exhaust	8
Kitchen Hood Type I	13
Kitchen Hood Type II	15



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

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

CheckList Item Details

STORE FRONT

RTU-1

RTU-2

PRV-1

PRV-2

PRV-3

PRV-4

EF-1

HOOD 1

HOOD 2

HOOD 3

PRODIGY BOARD WIRING

Notes/Comments :



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

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

CheckList Item Details

INITIAL BUILDING REVIEW:

What is the initial building pressure before making any changes?

Are thermostats programmed?

Are building pressure relief working properly?

INITIAL AIRFLOWS:

SUPPLY RTU-1

OA RTU-1

SUPPLY RTU-2

OA RTU-2

SUPPLY RTU-3

OA RTU-3

EF-1

EF-2

EF-3

EF-4

MAU-1

Notes/Comments :



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

Name :	TECH - STEP 2: 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?

All hood filters installed and accounted for?

Hoods are wired and have power?

Hood is free of alarms?

Thermostats have power?

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

Notes/Comments :



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

Name :	TECH - STEP 3: 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?
- DCV Max damper opening position is set to minimum?
- Free cooling enthalpy set point set for lowest setting (Typically "D")
- Motors are all operating below the FLA rating?
- Are belts tight?
- If direct drive unit is the speed controller working.
- Is gas piping installed and valves turned on?
- Unit free of noticeable noise and vibration

EF's

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

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

There is no major leakage around base of fan?

Is the motor operating below the motor FLA rating?

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

Unit free of noticeable noise and vibration?

MUA

Rotation is correct?

Gas piping is installed and valves are in on position?

Heater tested and is functional?

Internal motorized damper is fully opening?

Motor is operating below the FLA rating?

Unit free of noticeable noise and vibration?

HOODS

Kitchen equipment installed in proper places?

Can kitchen equipment be turned on for final smoke test?

DOCUMENTATION

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

Notes/Comments :



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

Name : TECH - STEP 4: 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?

Is space comfortable in all areas?

Is the space free of ventilation noise?

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

Notes/Comments :



Comfort. Under control.

07-25 CULVERS - BARABOO, WI (REVIVE)

CheckList Information

Name :	TECH - STEP 5: FINAL TESTS	Status :	NotSubmitted
Assigned Organization :	National TAB	Asset :	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

List smoke candle type used

Smoke test capture - Perimeter of hood

Smoke test capture - Top of cooking surface

WITNESS

Date test was completed

TAB tech name / Firm

Site super name / Firm

Owner representative name / Firm (if Applicable)

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

ADDITIONAL

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

Thermostats are programmed?

Notes/Comments :

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5611G01635
Model Num	NA	LGH210H4BM1Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24X13
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	5	5.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	200-230
Rated Amperage	-	14.6-13.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP65
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	2.5 TURNS OPEN
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1-7/16"
Belt CL Distance	-	21.25"
Num of Belts	-	1
Belt Size	-	
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5925	6851
SF RPM	-	
RA CFM	4025	
OA CFM	1900	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	
Brake Horse Power	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	1.3"	
Fan Total SP	-	

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

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU2

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	NA	LENNOX
Serial Num	-	5611G01636
Model Num	NA	LGH240H4BM2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	NA [1]
OA Filter Size 1	-	
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	5	5.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	200-230
Rated Amperage	-	14.6-13.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP65B
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1-7/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX66
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5600	4371
SF RPM	-	
RA CFM	3700	
OA CFM	1900	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	
Brake Horse Power	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	1.5"	
Fan Total SP	-	

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

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF1

AREA:MOP ROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	
Type	CEILING	
Configuration	VERTICAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	0.0509	
Motor Rpm	625	
Phase	1	
Voltage (rated)	115	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	75	
Fan RPM	871	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.125"	
Fan Inlet SP	-	
Fan Discharge SP	-	

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV-1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XREB-090-D	XRED-090-D-X
Serial Num	-	12471697 1106
Type	DOWNBLAST	DOWNBLAST
Configuration	HORIZONTAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1/15	
Motor Rpm	1550	
Phase	1	
Voltage (rated)	115	
Amperage (rated)	-	
Service Factor	-	

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

Test Data		
	Design	Actual
CFM	375	
Fan RPM	1550	
Fan Rotation	-	
Motor RPM	-	
RL Voltage	-	
RL Amperage	-	
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.5"	

Completed By: Brianna Biggs

Notes: [1] FAN NOT OPERATING

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV-2

AREA:HOOD 1

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-161XP-15	XRUB-161XP-15-G
Serial Num	-	12471698 1106
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	D56
Horsepower	1.5	1.0
Motor Rpm	1725	1740
Phase	3	3
Voltage (rated)	208	208-230
Amperage (rated)	-	3.76
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP50
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	2.5 TURNS OPEN
Fan Sheave Size	-	3.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	5.5"
Num of Belts	-	1
Belt Size	-	4L270

Test Data		
	Design	Actual
CFM	1500	1561
Fan RPM	2337	2170
Fan Rotation	-	
Motor RPM	-	1726
RL Voltage	-	
RL Amperage	-	
Suction ESP	-	-1.44"
Discharge ESP	-	ATM
Total ESP	2.4"	1.44"

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV-3

AREA:HOOD 2

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-141-7	XRUB-141-7-G
Serial Num	-	124716991106
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	B56
Horsepower	3/4	3/4
Motor Rpm	1725	1740
Phase	3	3
Voltage (rated)	208	208-230
Amperage (rated)	-	2.65-2.40
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.25"
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	
Fan Sheave Size	-	4"
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	AX23

Test Data		
	Design	Actual
CFM	1500	1561
Fan RPM	1348	1067
Fan Rotation	-	
Motor RPM	-	1767
RL Voltage	-	
RL Amperage	-	
Suction ESP	-	-1.1"
Discharge ESP	-	ATM
Total ESP	1.0"	1.1"

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV-4

AREA:HOOD 3

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-090-D	XRED-090-D
Serial Num	-	
Type	DONWBLAST	
Configuration	HORIZONTAL	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1/15	
Motor Rpm	1550	
Phase	1	
Voltage (rated)	115	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	Actual
CFM	350	
Fan RPM	1530	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.6"	
Fan Inlet SP	-	
Fan Discharge SP	-	

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	HALTON	ACCUREX
Model Num	XGEP-FB-5.33S	XGEP-FB-5.33S
Job / Serial Num	-	
Type	TYPE I LOW PROXIMITY	
Hood length	64"	
Hood Width	26"	

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

Test Data Exhaust		
	Design	Actual
Filter Type	-	
Filter Size 1	16X16	
Filter Qty 1	4	
Filter AK factor size 1	1.53	
Filter Total AK Area	6.12	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter Ave FPM(corr)	-	
CFM	-	

General		
	Design	Actual
Third Party Witness	-	
Third Party Company	-	
Tech Witness	-	

Cooking Equipment		
	Design	Actual
Item 1	-	
Item 2	-	

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD2

AREA:FRYERS

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XXEP	XXEP
Job / Serial Num	-	
Type	TYPE I LOW PROXIMITY	
Hood length	83"	
Hood Width	26"	

Test Data Exhaust		
	Design	Actual
Filter Type	-	
Filter Size 1	16X16	
Filter Qty 1	4	
Filter AK factor size 1	1.53	
Filter Total AK Area	6.12	
Filter1 FPM	-	
Filter2 FPM	-	
Filter3 FPM	-	
Filter4 FPM	-	
Filter Ave FPM(corr)	-	
CFM	-	

Cooking Equipment		
	Design	Actual
Item 1	-	
Item 2	-	

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

General		
	Design	Actual
Third Party Witness	-	
Third Party Company	-	
Tech Witness	-	

Completed By: Brianna Biggs

Notes:

National TAB

Project: 07-25 CULVERS - BARABOO, WI (REVIVE)

System/Unit: Kitchen Hood Type II



Comfort. Under control.

Asset: HD3

AREA:DISHWASHING

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XD3	XD3
Serial Num	-	
Type	TYPE II CANOPY	
Hood length	42"	
Hood Width	42"	

Test Data		
	Design	Actual
Exhaust CFM	350	

Completed By: Brianna Biggs

Notes: