Report By:

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

Report: TAB Report for CFA 1143

Function: Test, Adjust, & Balance

Date: 01/18/2025

Completed By: National TAB

PROJECT

01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

5886 TRUSSVILLE CROSSINGS PARKWAY

BIRMINGHAM, AL 35235

Client

Chick-fil-A (CFA)

5200 BUFFINGTON ROAD

ATLANTA, GA 30349-2998

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

Table Of Contents

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.

Inspections and Commissioning Light
The HVAC equipment, ductwork, and other building assets were inspected per Chick Fil A requirements. The results of this inspection is included in checklists within the report. Operational tests were also performed on the HVAC controls to ensure occupied and unoccupied sequence of operation.

RTU's (Roof Top Units) w/ Diffusers
Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU 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 (Halton)
Each kitchen exhaust fan was measured by taking static pressure at the exhaust plenum and comparing to OEM performance data. The total flow of the exhaust was then adjusted to tolerance of the engineer's design flow.

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 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.

TAB Punch List for CFA 1143

Prepared by Ben Searles

Jan 23, 2025

Description

5 tasks in this report.

Contents

#264 [EXHA 999] [EXIST] Restroom diffuser is dirty

Status
Open

Start Date
Jan 18, 2025

Type
Planned Work

Created
Jan 23, 2025 6:53 PM
bens@nationaltab.com

Description
Women's restroom diffuser is dirty and recommended to be cleaned

Last Updated
Jan 23, 2025 6:54 PM

#263 [HOOD 512] [NEW] Grease cup and fry chute.

Status
Open

Start Date
Jan 18, 2025

Type
Planned Work

Created
Jan 23, 2025 6:53 PM
bens@nationaltab.com

Description
Hood 3 is missing its grease cup.

Last Updated
Jan 23, 2025 6:58 PM

Photos

IMG_0027
Ben Searles
Jan 23, 2025 6:58 PM

#262 [HOOD 999] [EXIST] Capture jet intake is dirty

Status
Open

Start Date
Jan 18, 2025

Type
Planned Work

Created
Jan 23, 2025 6:53 PM
bens@nationaltab.com

Description
Capture jet intake is dirty and recommended to be cleaned.

Last Updated
Jan 23, 2025 6:58 PM

Photos

IMG_0028
Ben Searles
Jan 23, 2025 6:58 PM

#261 [UNIT 512] [EXIST] Equipment hail guards.

Status
Open

Start Date
Jan 18, 2025

Type
Planned Work

Created
Jan 23, 2025 6:53 PM
bens@nationaltab.com

Description
Equipment hail guards are missing or installed incorrectly. No severe damage can be seen.

Last Updated
Jan 23, 2025 6:59 PM

Photos

IMG_0025
Ben Searles
Jan 23, 2025 6:59 PM

#260 [UNIT 522] [EXIST] AC air filters.

Status
Open

Start Date
Jan 18, 2025

Type
Planned Work

Created
Jan 23, 2025 6:53 PM
bens@nationaltab.com

Description
Filters are dirty and recommended to be replaced.

Last Updated
Jan 23, 2025 6:53 PM

NATIONAL TAB

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
AC-1	DINING A	2520	2674	1840	2016	680	658	27.0%	24.6%						
AC-2	KITCHEN	3750	3498	2850	2615	900	883	24.0%	25.2%						
AC-3	N. DINING	3300	3148	2620	2454	680	694	20.6%	22.0%						
AC-4		3050	3036	2450	2390	600	646	19.7%	21.3%						
AC-5	PLAY AREA	1800	1743	1400	1375	400	368	22.2%	21.1%						
AC-6	KITCHEN	4500	4230	3600	3268	900	962	20.0%	22.7%						
AC-7	MULTI-PURPOSE	1350	1245	1150	1034	200	211	14.8%	16.9%						
EF-1	HD 1											1700	1823		
EF-2	HD 3											701	663		
EF-3	RESTROOMS													530	495
EF4	HD 2											701	753		
TOTALS		20270	19574	15910	15152	4360	4422			0	0	3102	3239	530	495

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	4360	4422
TOTAL EXHAUST	3632	3734
NET AIRFLOW	728	688

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.016
SIDE	0.009
REAR	0.011
AVERAGE	**0.012**

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 - 04: INSPECTION: HOOD/GREASE DUCT
- TECH - 05: INSPECTION: HVAC DUCTWORK
- TECH - 06: INSPECTION: OTHER
- TECH - 10: SMOKE CAPTURE AND PRESSURIZATION TESTS

01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

CheckList Information

Name :	TECH - 04: INSPECTION: HOOD/GREASE DUCT	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/13/2025 - Laura Robinson - National TAB		
Completed Date :	01/16/2025 - Ben Searles - National TAB		

CheckList Item Details

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

HOODS

-Are hoods hung at the correct height? (check Halton spec for exact dimension - typically 64". Halton spec supercedes mechanical drawings)

Comment:

YES / HD3

-Make sure pin and sleeve electrical box is assembled correctly on all hoods

Comment:

YES / HD3

-Take filters out of bank. Are there any parts laying in the grease trough and if so do they need to be installed?

Comment:

N/A

-Adjust the slider on filter bank so that the filters have tight fit? Ensure no pieces are missing from the slider

Comment:

YES / HD3

-Side brackets installed in between hoods and counters?

Comment:

YES / HD3

-Any threaded holes underneath hood canopy are filled?

Comment:

YES / HD3

-All hoods supported at factory support points with threaded rod (3/8” typ.)?

Comment:

YES / HD3

-If threaded rod is exposed below ceiling, is it inside stainless steel tubing and is the escutcheon installed?

Comment:

YES / HD3

-ANSUL pull stations are labeled with red bakelite label with 1/4" high white letters indicating the hoods served?

Comment:

N/A

Is the ANSUL system installation complete?

Comment:

N/A

-Curb caps secured to the curb where roof top grease duct penetrates into space? (if no roof top grease duct put N/A)

Comment:

N/A

-Capture jet fans are hard piped?

Comment:

YES / HD3

-Capture jet speed controllers are wired and functional.

Comment:

YES / HD3

-Capture jet fans are installed the correct direction (so they supply air to hood canopy and do NOT exhaust)

Comment:

YES / HD3

-Side Capture jet (if applicable) is installed with fan guard and stand?

Comment:

N/A

-Hoods are secured to the wall at all pre-punch hole locations?

Comment:

YES / HD3

-Is the fry chute installed?

Comment:

NO / HD3

-Are the grease cups installed?

Comment:

NO / HD3

-Are gusset bracket bolts installed (typically on Hood 2)?

Comment:

YES / HD3

-Ensure there is no damage to the hoods?

Comment:

N/A

Additional comments:

Comment:

N/A

GREASE DUCTWORK

-EF-1 main drop is equal distance between both risers unless specified otherwise on drawings

Comment:

N/A

-Unifrax Fyrewrap brand is used on all grease ductwork

Comment:

N/A

-All turns in grease duct are long radius type elbows and follow equation Radius = (3 * W) / 2. (Measured to the duct centerline). No mitered fitting allowed. (Both in space and on roof)

Comment:

N/A

-Each grease cleanout doors meets specifications, is assembled correctly, and is the correct size? (Outer plate is not required for rooftop ductwork - indoors only)

Comment:

N/A

-Each grease cleanout doors are installed in the location shown on drawing?

Comment:

N/A

-Balancing dampers are installed if specified?

Comment:

N/A

-Roof top grease duct is painted white in a professional manner? If grease duct is not painted, recommend that all rust be removed prior to painting.

Comment:

N/A

-Rooftop grease duct is supported at 6' intervals maximum with supports shown in specification?

Comment:

N/A

-Rooftop grease duct is supported at each duct drop into the space?

Comment:

N/A

Additional comments:

Comment:

N/A

Notes/Comments :

N/A

Date :01/16/2025

CheckList Information

Name :	TECH - 05: INSPECTION: HVAC DUCTWORK	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/13/2025 - Laura Robinson - National TAB		
Completed Date :	01/22/2025 - Ben Searles - National TAB		

CheckList Item Details

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

MAIN TRUNKS (SPOT CHECK)

-All ductwork (w/ exception of RR fan) is externally insulated. No liners are allowed and must be removed.

Comment:

YES / AC5

-Ductwork insulation has minimum 6 R-Value installed?

Comment:

YES / AC5

-Canvas connector installed between the main supply & return drops and RTU's.

Comment:

N/A

-Check that base-pan connections are seated and aligned correctly (i.e., duct connections at the RTU)?

Comment:

N/A

-Turning vanes on main supply drop should be single thickness and not double thickness? (not necessary in returns)

Comment:

N/A

-Ducts 24” or wider have stick pins and stick pins are covered with duct tape or mastic?

Comment:

N/A

-All seams in insulation are taped?

Comment:

YES / AC5

-Is the insulation wet?

Comment:

NO

-Does the return air drop span-out with a transition per specification where applicable (i.e., is it a tapered transition from opening at unit to full size on plans and NOT hard mitred transition)

Comment:

N/A

-Check that sealant used on ductwork connections (spot check 1)

Comment:

YES / AC5

Additional comments:

Comment:

N/A

GRILLE TAKEOFFS (SPOT CHECK)

-Damper handles are located on the left or right of the duct?

-Do all start collars and Rusking In-Line dampers match specification and appear to be purchased thru Tom Barrow Co

Comment:

YES / AC5

-Fluorescent ribbon is attached to each damper handle?

Comment:

YES / AC5

-Minimum 1’ rigid duct after start collar?

Comment:

YES / AC5

-Flex duct is installed on each duct run after rigid duct and is less than 48” in length?

Comment:

YES / AC5

-Rigid hard pipe with 90 degree fitting and riser connecting to the grille?

Comment:

YES / AC5

-Drawband and tape are used to secure inner core of the flex duct? (Spot check)

Comment:

YES / AC5

-Drawband or tape is used on outer jacket?

Comment:

YES / AC5

-Tops of diffusers are insulated?

Comment:

YES / AC5

-Mastic at rigid connections to diffuser?

Comment:

YES / AC5

Additional comments:

Comment:

N/A

OVERALL

-Any leaky ductwork observed?

Comment:

N/A

-Ductwork supported properly?

Comment:

YES / AC5

Additional comments:

Comment:

N/A

GRD'S

-Do all diffusers match specified models and appear to be purchased thru Tom Barrow Co.?

Comment:

YES

-Do all diffusers appear to be clean of dust and debris?

Comment:

YES

-Any damage to diffusers?

Comment:

N/A

-All diffusers installed at the correct locations?

Comment:

YES

-Ensure that deflectors for diffusers in entires, Drive thru cockpit, office, adjacent to soffits, restrooms, RR vesibule are closed as shown on the mechanical plan.

Comment:

YES

-Look at plans and adjust pattern deflectors to throw straight down for diffusers near hood where noted.

Comment:

YES

-Adjust pattern deflectors for any other diffusers where noted on plans (Either included as a note in plans or as blacked out triangle sections of diffuser.)

Comment:

YES

-Air diffuser air pattern blades adjusted uniformly?

Comment:

YES

-Is space free of drafting?

Comment:

YES

-Notice any squeaking damper noise? If so, tighten wing-nut on opposite side of stand-off.

Comment:

N/A

Additional comments:

Comment:

N/A

Notes/Comments :

N/A

Date :01/22/2025

01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

CheckList Information

Name :	TECH - 06: INSPECTION: OTHER	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/13/2025 - Laura Robinson - National TAB		
Completed Date :	01/16/2025 - Ben Searles - National TAB		

CheckList Item Details

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

AIR DOORS

Does the hanging height of the air doors match design?

Comment:

YES / AD1, AD3

-Installed in proper location?

Comment:

YES / AD1, AD3

-Correct model/manufacturer?

Comment:

YES / AD1, AD3

-Is the Drive-thru air curtain diverter box installed and allows enough room for servicing the air filter?

Comment:

YES / AD1

-Timer is set to minimum position (0)?

Comment:

YES / AD1, AD3

-They are operating correctly?

Comment:

YES / AD1, AD3

-Are switches installed?

Comment:

YES / AD1, AD3

-For drive thru air door, if MP-1-30 type or similar, door is adjusted so it is not noisey and directed at the center of the drive thru window?

Comment:

N/A

-For drive thru air door, if Chameleon type, fan speed is set as high as possible without creating disruptive noise, and air is directed to center of walkway?

Comment:

YES / AD1

Additional comments:

Comment:

N/A

CANOPY

Are canopy fans and heaters installed and controls complete?

Comment:

N/A

Additional comments:

Comment:

N/A

Notes/Comments :

N/A

Date :01/16/2025

01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

CheckList Information

Name :	TECH - 10: SMOKE CAPTURE AND PRESSURIZATION TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/13/2025 - Laura Robinson - National TAB		
Completed Date :	01/23/2025 - Ben Searles - National TAB		

CheckList Item Details

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite	Yes

Comment:

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

OPEN FRYER

List smoke candle type used

Comment:

CANDLE WAS NOT USED - THE TECHNICIAN INSTEAD OBSERVED SMOKE CAPTURE DURING NORMAL OPERATIONS

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed

Comment:

1/16/2025

TAB tech name / Firm

Comment:

BEN S / NTAB

Site super name / Firm

Comment:

N/A

Owner representative name / Firm (if Applicable)

Comment:

N/A

Video taken of smoke tests?

Comment:

NO

BUILDING PRESSURE TEST

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

Comment:

FRONT: 0.016" BACK: 0.011" SIDE: 0.009"

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

Comment:

YES

VELOCITY OF SERVING WINDOW

Transfer velocity for Serving Window (window between kitchen and serving) is 50-80FPM Yes

Comment:

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 1 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	3121P311063
Model Num	LGH102H4BH3Y	48CEM08A2A5A0A0A0
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	34X7
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/L
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	8.8

Drive Data	
	Actual
Motor Sheave Size	4.75”
Motor Bore Size	7/8”
Motor Sheave SetPt	4 TURNS
Fan Sheave Size	8.25”
Fan Sheave Bore	1”
Belt CL Distance	17.25”
Num of Belts	1
Belt Size	A52
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	2520	2674
SF RPM	-	814
RA CFM	1840	2016
OA CFM	680	658
RL Voltage	-	209 / 209/ 210
RL Amperage	-	5.8 / 5.6 / 6.2
SF Rotation	-	CCW
SF System SetPt	-	60HZ
Min OA Damper Position	-	1 5/8”
Min OA Damper Type	-	MANUAL SLIDE

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.51”
Fan Suction SP	-	-0.91”
Fan Discharge SP	-	0.36”
Total ESP	-	0.87"
Fan Total SP	-	1.27"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 2 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	4221P89169
Model Num	LGH150S4BH5Y	48CEM12A2A5A0A0A0
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	34X7
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/L
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	230
Rated Amperage	-	10.6

Drive Data	
	Actual
Motor Sheave Size	4.75”
Motor Bore Size	7/8”
Motor Sheave SetPt	3 TURNS
Fan Sheave Size	7.25”
Fan Sheave Bore	1”
Belt CL Distance	16.75”
Num of Belts	1
Belt Size	A49
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	3750	3498
SF RPM	-	938
RA CFM	2850	2615
OA CFM	900	883
RL Voltage	-	231 / 230 / 231
RL Amperage	-	10.0 / 10.1 / 10.1
SF Rotation	-	CCW
SF System SetPt	-	60HZ
Min OA Damper Position	-	1.75”
Min OA Damper Type	-	MANUAL SLIDE

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.39”
Fan Suction SP	-	-1.02”
Fan Discharge SP	-	0.48”
Total ESP	-	0.87"
Fan Total SP	-	1.50"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 3 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	3121P31176
Model Num	LGH102H4BH2Y	48CEM08A2A5A0A0A0
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	34X7
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/L
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	8.8

Drive Data	
	Actual
Motor Sheave Size	4.75"
Motor Bore Size	7/8"
Motor Sheave SetPt	3.5 TURNS
Fan Sheave Size	8.25"
Fan Sheave Bore	1"
Belt CL Distance	17.25"
Num of Belts	1
Belt Size	A52
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	3300	3148
SF RPM	-	830
RA CFM	2620	2454
OA CFM	680	694
RL Voltage	-	212 / 212 / 211
RL Amperage	-	6.1 / 6.3 / 6.3
SF Rotation	-	CCW
SF System SetPt	-	60 HZ
Min OA Damper Position	-	1 7/8”
Min OA Damper Type	-	MANUAL SLIDE

Performance Data		
	Design	**Actual**
MA Plenum SP	-	0.25
Fan Suction SP	-	-0.71”
Fan Discharge SP	-	0.33”
Total ESP	-	0.58"
Fan Total SP	-	1.04"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 4 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	3421P85501
Model Num	LGH092H4BH3Y	48CEM08A2A5A0A0A0
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	34X7
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	N/L
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	8.8

Drive Data	
	Actual
Motor Sheave Size	4.75"
Motor Bore Size	7/8"
Motor Sheave SetPt	4 TURNS
Fan Sheave Size	8.25"
Fan Sheave Bore	1"
Belt CL Distance	17.25"
Num of Belts	1
Belt Size	A52
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	3050	3036
SF RPM	-	825
RA CFM	2450	2390
OA CFM	600	646
RL Voltage	-	209 / 210 / 210
RL Amperage	-	6.6 / 6.7 / 7.1
SF Rotation	-	CCW
SF System SetPt	-	60 HZ
RA Damper Position	-	
Min OA Damper Position	-	1 5/8”
Min OA Damper Type	-	MANUAL SLIDE
OA Enthalpy Setpt	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.42”
Fan Suction SP	-	-0.79”
Fan Discharge SP	-	0.55”
Total ESP	-	0.97"
Fan Total SP	-	1.34"

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 5 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	3421C60694
Model Num	LGH060H4EH4Y	48FCEA06A2A5A0A0A0
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	23X7
Num Final Filter 1	-	1
Final Filter Size 1	-	216X25X2

Test Data		
	Design	**Actual**
SF CFM	1800	1743
RA CFM	1400	1375
OA CFM	400	368
RL Voltage	-	119
RL Amperage	-	2.1
SF Rotation	-	CCW
SF System SetPt	-	C 25
Min OA Damper Position	-	2.5”
Min OA Damper Type	-	MANUAL SLIDE

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	N/L
Motor Rpm	-	N/L
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	8.6

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.42”
Fan Suction SP	-	0.82”
Fan Discharge SP	-	0.50”
Total ESP	-	0.92"
Fan Total SP	-	1.32"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING
GRILLES ARE UNREACHABLE - HAD TO TRAVERSE DUCT

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 6 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5619C10906
Model Num	LGH150H	LGH150H
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14.25X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NIDEC
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	13.8

Drive Data	
	Actual
Motor Sheave Size	4.75”
Motor Bore Size	1”
Motor Sheave SetPt	2 TURNS
Fan Sheave Size	8”
Fan Sheave Bore	1”
Belt CL Distance	25.5”
Num of Belts	1
Belt Size	B68
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	4500	4230
SF RPM	-	934
RA CFM	3600	3268
OA CFM	900	962
RL Voltage	-	210 / 210 / 209
RL Amperage	-	10.7 / 10.8 / 11.5
SF Rotation	-	CCW
SF System SetPt	-	60 HZ
RA Damper Position	-	67%
Min OA Damper Position	-	33%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.55”
Fan Suction SP	-	-1.04”
Fan Discharge SP	-	0.56”
Total ESP	0.85"	1.11"
Fan Total SP	-	1.60"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: AHU/RTU

Asset: RTU 7 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5619C07630
Model Num	LGH036H4E	LGH036H4E
Type	-	AC
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	32X13.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	N/L
Frame	-	N/L
Horsepower	-	0.5
Motor Rpm	-	N/L
Phase	-	1
Rated Voltage	-	115
Rated Amperage	-	4.3

Test Data		
	Design	**Actual**
SF CFM	1350	1245
SF RPM	-	DD / 61%
RA CFM	1150	1034
OA CFM	200	211
RL Voltage	-	120
RL Amperage	-	1.4
SF Rotation	-	CCW
SF System SetPt	-	DD / 61%
RA Damper Position	-	87%
Min OA Damper Position	-	13%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5.0

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.36”
Fan Suction SP	-	-0.47”
Fan Discharge SP	-	0.25”
Total ESP	0.65"	0.61"
Fan Total SP	-	0.72"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Ben Searles on 01/16/2025

Notes:
FILTERS ARE DIRTY - REMOVED FOR TESTING

Written By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	165V5B	165V5B
Serial Num	-	050SL15328-00/0000701
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	1/2	1/2
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4.6
Service Factor	-	1.25

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	5/8"
Motor Sheave SetPt	2.5 TURNS
Fan Sheave Size	4"
Fan Sheave Bore	3/4"
Belt CL Distance	5.75"
Num of Belts	1
Belt Size	A26

Test Data		
	Design	**Actual**
CFM	1700	1823
Fan RPM	-	948
Fan Rotation	-	CCW
Motor RPM	-	1726
Suction ESP	-	-0.69"
Discharge ESP	-	ATM
Total ESP	0.65"	0.69”

Completed By: Ben Searles on 01/16/2025

Notes:
WIRE IS NOT LANDED TO CORRECT LOCATION ON THE PANEL - UNABLE TO TAKE VOLTS AND AMPS

Written By: Ben Searles on 01/16/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	150VH4B	150VH4B
Serial Num	-	050SL15238-00/0002701
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	1/3	1/3
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	6.0
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	5/8"
Motor Sheave SetPt	3.5 TURNS
Fan Sheave Size	4"
Fan Sheave Bore	3/4"
Belt CL Distance	5.75"
Num of Belts	1
Belt Size	A26

Test Data		
	Design	**Actual**
CFM	701	663
Fan RPM	-	1042
Fan Rotation	-	CCW
Motor RPM	-	1725
Suction ESP	-	-0.38"
Discharge ESP	-	ATM
Total ESP	0.75"	0.38”

Completed By: Ben Searles on 01/16/2025

Notes:
WIRE IS NOT LANDED TO CORRECT LOCATION ON THE PANEL - UNABLE TO TAKE VOLTS AND AMPS

Written By: Ben Searles on 01/16/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: FAN - Exhaust

Asset: EF3 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	ACED-90C15DH	ACED-90C15DH
Serial Num	-	050FL10510-00/0000701
Type	DD	DD
Configuration	DOWNBLAST	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	1/8
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	N/L

Test Data		
	Design	**Actual**
CFM	530	495
Fan RPM	-	1600
Fan Rotation	-	CCW
Motor RPM	-	1600
System SetPt	-	HIGH
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	[2]
Fan Inlet SP	-	[2]
Fan Discharge SP	-	ATM

Completed By: Ben Searles on 01/16/2025

Notes:
THE WOMEN'S RR GRILLE IS EXTREMELY DIRTY AND RECOMMENDED TO BE CLEANED - IT WAS REMOVED FOR TESTING
[1] LIGHTSWITCH STYLE CONTROLS - UNABLE TO TAKE VOLTS AND AMPS
[2] FAN IS SECURED TO THE CURB WITH SCREWS AND SILICONE - UNABLE TO READ PRESSURE

Written By: Ben Searles on 01/16/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: FAN - Exhaust

Asset: EF4 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	150VH4B	150VH4B
Serial Num	-	050SL15328-00/0004701
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	1/3	1/3
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	6.0
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	3"
Motor Bore Size	5/8"
Motor Sheave SetPt	1 TURN
Fan Sheave Size	4"
Fan Sheave Bore	3/4"
Belt CL Distance	5.75"
Num of Belts	1
Belt Size	A26

Test Data		
	Design	**Actual**
CFM	701	753
Fan RPM	-	968
Fan Rotation	-	CCW
Motor RPM	-	1730
Suction ESP	-	-0.62"
Discharge ESP	-	ATM
Total ESP	0.75"	0.62”

Completed By: Ben Searles on 01/16/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Model Num	KVL-2-IC	KVL-2-IC
Type	-	TYPE I CANOPY
Hood length	151"	151”
Hood Width	37"	37”

Test Data Exhaust		
	Design	**Actual**
Filter Size 1	S. S. KSA	S. S. KSA
Filter Size 2	1/2 S. S. KSA	1/2 S. S. KSA
Filter Qty 1	7	7
Filter Qty 2	1	1
TAB SP	0.11"	0.127”
CFM	1700	1823

Cooking Equipment	
	Actual
Item 1	PRESSURE FRYER
Item 2	GRILL

Test Data Supply		
	Design	**Actual**
TAB SP	0.30"	0.067”

Completed By: Ben Searles on 01/14/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: Kitchen Hood Type I

Asset: HD 2 AREA:

Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Model Num	KVL-C-IC	KVL-C-IC
Job / Serial Num	-	95372-572
Type	-	TYPE I CANOPY
Hood length	42"	42"
Hood Width	34"	34”

Test Data Exhaust		
	Design	**Actual**
Filter Size 1	-	S. S. KSA
Filter Qty 1	-	2
TAB SP	0.26"	0.30”
CFM	701	753

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	FRYER

Test Data Supply		
	Design	**Actual**
TAB SP	0.29"	0.178”

Completed By: Ben Searles on 01/13/2025

National TAB

Project: 01-13-25 CHICK-FIL-A #01143 BIRMINGHAM, AL (TRUSSVILLE FSU) CUSTOM

System/Unit: Kitchen Hood Type I

Asset: HD 3 AREA:

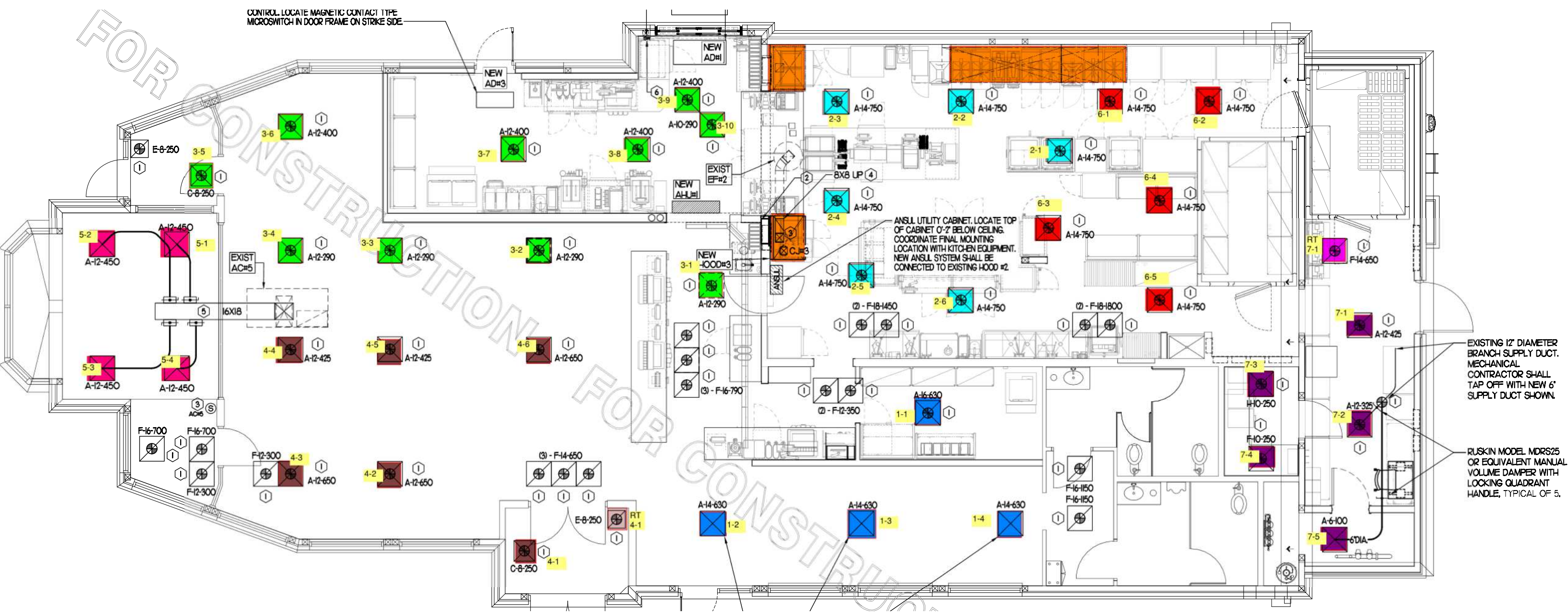
Unit Data		
	Design	**Actual**
MFG	HALTON	HALTON
Model Num	KVL-C-IC	KVL-C-IC
Job / Serial Num	-	123099-865
Type	-	TYPE I CANOPY
Hood length	42"	42”
Hood Width	34"	34”

Test Data Exhaust		
	Design	**Actual**
Filter Size 1	S. S. KSA	S. S. KSA
Filter Qty 1	2	2
TAB SP	0.30"	0.268”
CFM	701	663

Cooking Equipment	
	Actual
Item 1	OPEN FRYER
Item 2	OPEN FRYER

Test Data Supply		
	Design	**Actual**
TAB SP	0.29"	0.279”

Completed By: Ben Searles on 01/13/2025


CONTROL. LOCATE MAGNETIC CONTACT TYPE MICROSWITCH IN DOOR FRAME ON STRIKE SIDE.
FOR CONSTRUCTION
NEW AD#3
NEW AD#1
NEW AHU#1
EXIST EF#2
8X8 UP
NEW HOOD#3
EXIST AC#5
16X18
ANSUL UTILITY CABINET. LOCATE TOP OF CABINET 0'-2" BELOW CEILING. COORDINATE FINAL MOUNTING LOCATION WITH KITCHEN EQUIPMENT. NEW ANSUL SYSTEM SHALL BE CONNECTED TO EXISTING HOOD #2.
EXISTING 12" DIAMETER BRANCH SUPPLY DUCT. MECHANICAL CONTRACTOR SHALL TAP OFF WITH NEW 6" SUPPLY DUCT SHOWN.
RUSKIN MODEL MDRS25 OR EQUIVALENT MANUAL VOLUME DAMPER WITH LOCKING QUADRANT HANDLE, TYPICAL OF 5.
A-12-400
A-10-290
A-12-290
A-12-450
A-12-425
A-12-650
A-14-750
A-16-630
A-14-630
A-12-325
A-6-100
E-8-250
C-8-250
F-16-700
F-12-300
(3) - F-14-650
(3) - F-16-790
(2) - F-12-350
(2) - F-18-1450
(2) - F-18-1800
F-16-1150
F-14-650
H-10-250
F-10-250