**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: 8/25/2022**

# PROJECT

## 08-08 CULVERS - ROGERS, AR

4204 W NEW HOPE ST

ROGERS , AR 72758

Client

Accurex

PO Box 410

Schofield, WI 54476

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## 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.

RTU's (Roof Top Units)
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
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

General Exhaust Fans
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 of -0.02" wc to +0.02" wc 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.

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** Ceiling panels not all installed around hoods

**Description :** Responsibility- GC Ceiling tiles need to be placed around hood to ensure good smoke capture.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue File Details

**Ceiling.jpeg**

**Ceiling.jpeg**

Project Issue Response Details

- **08/10/2022 National TAB - Jacob Davidson**
  - Spoke to GC and the ceiling tiles will be installed by the time we are ready for hood capture.

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** D1-29 employee restroom damper inaccessible

**Description :** Damper is above hard ceiling and inaccessible. Diffuser is reading high and will need to be lowered. // MC was able to assist with damper.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Comfort. Under control.

## 08-08 CULVERS - ROGERS, AR

### Project Issue Information

**Issue Name :** EF1 Mop Room not running

**Description :** Responsibility - electrician Unit was not running and I was unable to find a wall switch for unit.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** HD1 and HD2 cannot be turned off via HMI

**Description :** Responsibility - MC/EC Hoods are turned on and HMI won't allow them to be turned off. Error screen says fans cannot be turned off.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/12/2022 - Jacob Davidson - National TAB

Project Issue File Details


**FuseIT5173c442bc8c44.jpeg**


**FuseIT29730f0da56148.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** Hoods not powered

**Description :** Responsibility- electrician Hoods are not powered yet. Spoke with electrician and he has units ready to be powered on, there are still some command wires that need landed. They will be ready to test and balance either later today or tomorrow 8/11.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue Response Details

- **08/11/2022 National TAB - Jacob Davidson**
  - Hoods are powered and can now be balanced.

Comfort. Under control.

## 08-08 CULVERS - ROGERS, AR

# Project Issue Information

**Issue Name :** PRV 3 fan cannot tilt back

**Description :** Responsibility - MC After MC swapped fans, PRV3 cannot lean back freely. Fan is stuck on curb.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/12/2022 - Jacob Davidson - National TAB

Project Issue File Details

**FuseITb5d3246eddac48.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** PRV-1 RR not running

**Description :** Responsibility - Electrician Restroom fan is not powered currently.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue Response Details

- **08/12/2022 National TAB - Jacob Davidson**
  - Electrician got fan running. Fan is functioning properly

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** PRV-3 and PRV-2 installed backwards on roof

**Description :** The fans are in the wrong position on roof and don't coincide with their hood positions in the restaurant. Fans need to be swapped.

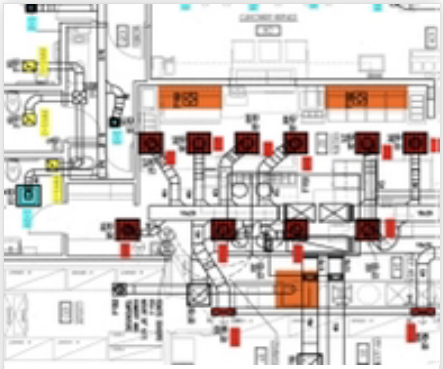
**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Project Issue File Details

**Onroof.jpeg**



**GRD.jpeg**

**Inrestaurant.jpeg**

Project Issue Response Details

- **08/11/2022 National TAB - Jacob Davidson**
  - MC came to site and swapped fans to their proper positions

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** PRV1 dampers inaccessible

**Description :** Responsibility - MC Dampers for PRV1 are above hard ceiling and cannot be reached. Restrooms are out of design and cannot be put in design until rectified.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/12/2022 - Jacob Davidson - National TAB

Project Issue File Details

**FuseITef67404ed50940.jpeg**

Project Issue Response Details

- **08/12/2022 National TAB - Jacob Davidson**
  - Electrician was able to get unit running with no issues.

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** PRV2 and PRV3 grease traps preventing fan from leaning back

**Description :** Fans cannot lean back all the way because the grease traps are installed too high. These need to be lowered in order to tilt fan back completely.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Project Issue File Details

**PRV2.jpeg**

**PRV3.jpeg**

Project Issue Response Details

- **08/11/2022 National TAB - Jacob Davidson**
  - MC has lowered the traps and fans can be tilted all the way back now.

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** PRV2 fan grinds in housing

**Description :** Fan wheel grinds against curb when attempting to spin. Fan needs to be adjusted

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Project Issue File Details

1. Open 68192577013__E5A98D2.MOV

Project Issue Response Details

- **08/11/2022 National TAB - Jacob Davidson**
  - MC has adjusted fan and it is now able to spin freely

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU1 "Smoke Alarm" status

**Description :** Responsibility - MC RTU1 is showing a "Smoke Alarm" status and is not running normally as a result. Resetting the unit has not resolved. The unit is still able to be put into test mode with cooling. Unit has already been balanced.

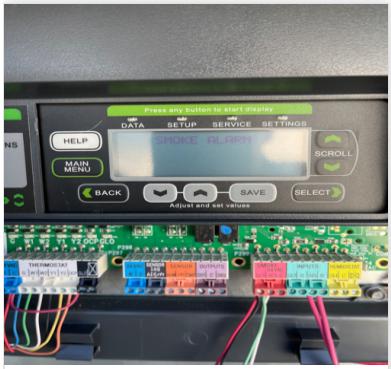
**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Project Issue Response Details

- **08/12/2022 National TAB - Jacob Davidson**
  - Attached photo of prodigy board screen.




**Board.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU1 and RTU2 gas piping not turned on

**Description :** Gas piping to units has not been turned on. GC is aware. Someone is already scheduled to come out and rectify.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Comfort. Under control.

## 08-08 CULVERS - ROGERS, AR

# Project Issue Information

**Issue Name :** RTU1 and RTU2 humidistat not wired

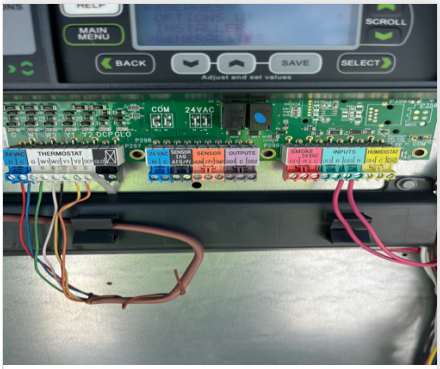
**Description :** Responsibility - MC Humidistat for each unit has not been landed to unit. I spoke to the MC and this is still on backorder currently.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue File Details




**Humidistatmissing.jpeg**



FaciliBuild make it easy

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU1 and RTU2 OCP wiring

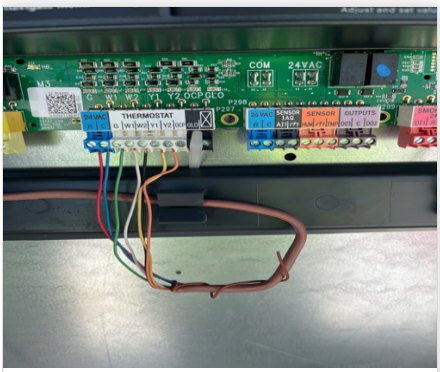
**Description :** Responsibility - MC Unit not wired for occupancy. This is needed in order for the Economizer to open and function. MC assisted and we have jumped R to OCP in order to open the economizer for our purposes.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue File Details




**Unitwiring.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU1 motor pulley stuck

**Description :** Motor pulley of unit needs to be loosened to slow unit down to prevent from overamping. // MC on site was able to get pulley loose.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU1 RTU2 won't run cooling

**Description :** Responsibility - MC Thermostats are calling for cooling and units say they are cooling but condensers are not running

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Project Issue File Details


**Thermostats.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU2 blower not running

**Description :** Responsibility - MC RTU2's blower stopped running and now will not run. The unit is still getting power and receiving a signal from the thermostat. A jumper from R to G was attempted to bypass the thermostat, but this also did not work. The prodigy board being bad prevents us from putting the unit into test to keep the blower running.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/11/2022 - Jacob Davidson - National TAB

Comfort. Under control.

## 08-08 CULVERS - ROGERS, AR

# Project Issue Information

**Issue Name :** RTU2 motor pulley stuck

**Description :** Pulley is stuck in place and needs to be loosened as the unit is overamping at the current speed it is at. // MC was able to loosen pulley.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Closed

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue File Details

**RTU2.jpeg**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## Project Issue Information

**Issue Name :** RTU2 prodigy board malfunctioning

**Description :** Board displays options in another language and has mostly question marks on display. Unable to adjust language or change settings.

**Created By :** National TAB **Assigned To :** National TAB - Will Turnbough

**Status :** Open

**Originated Date :** 08/10/2022 - Jacob Davidson - National TAB

Project Issue File Details


**Prodigy.jpeg**

Project Issue Response Details

- **08/10/2022 National TAB - Jacob Davidson**
  - After troubleshooting with LENNOX, we determined that the unit needs a new board, which will be covered under warranty. MC and GC have been made aware.

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 |
| RTU-1 | DINING | 6000 | 5840 | 4050 | 3996 | 1950 | 1844 | 32.5% | 31.6% | | | | | | |
| RTU-2 | KITCHEN | 6000 | NA | 4100 | NA | 1900 | NA | 31.7% | NA | | | | | | |
| PRV-1 | RESTROOMS | | | | | | | | | | | | | 375 | 373 |
| PRV-2 | HD1 GRIDDLE | | | | | | | | | | | 1500 | 1487 | | |
| PRV-3 | HD2 FRYERS | | | | | | | | | | | 1500 | 1522 | | |
| PRV-4 | HD3 DISHWASHER | | | | | | | | | | | 350 | NA | | |
| EF-1 | MOP ROOM | | | | | | | | | | | | | 75 | 73 |
| **TOTALS** | | 12000 | 5840 | 8150 | 3996 | 3850 | 1844 | | | 0 | 0 | 3350 | 3009 | 450 | 446 |

**NET BUILDING AIRFLOW CALCULATION**

| TOTALS | DESIGN | ACTUAL |
|---|---|---|
| TOTAL OA | 3850 | 1844 |
| TOTAL EXHAUST | 3800 | 3455 |
| **NET AIRFLOW** | 50 | -1611 |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H20) |
|---|---|
| FRONT | |
| SIDE | -0.0158 |
| REAR | |
| **AVERAGE** | **-0.0158** |

**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:

# 08-08 CULVERS - ROGERS, AR

## CheckList Information

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

### CheckList Item Details

STORE FRONT

**Front.jpeg**

RTU-1

**RTU1.jpeg**

RTU-2

**RTU2.jpeg**

PRV-1

**PRV1.jpeg**

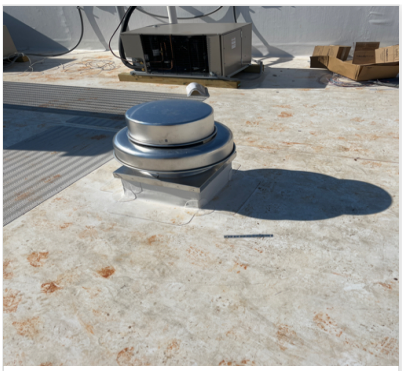
PRV-2

**PRV2.jpeg**

PRV-3

**PRV3.jpeg**

PRV-4



**PRV4.jpeg**

EF-1A

**Mopfan.jpeg**

HOOD 1

**HD1.jpeg**

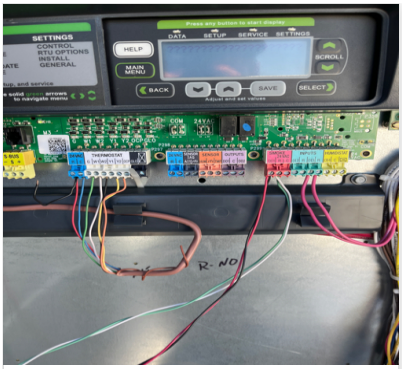
HOOD 2

**HD2.jpeg**

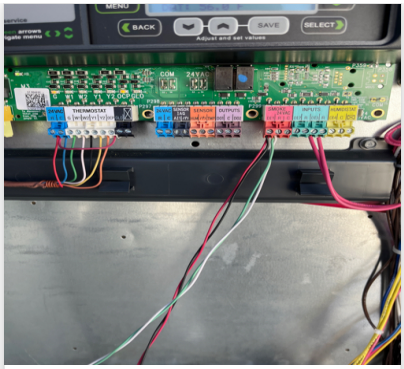
HOOD 3

**HD3.jpeg**

PRODIGY BOARD WIRING

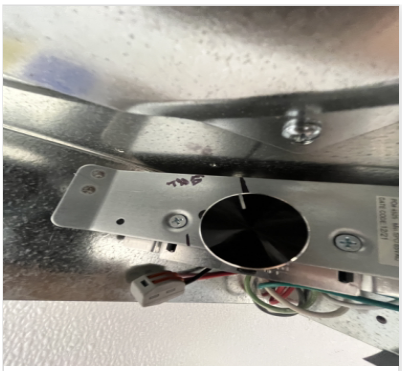


**RTU2.jpeg**



**RTU1.jpeg**

EF1A SETPOINT



**Set.jpeg**

**Notes/Comments :**

# 08-08 CULVERS - ROGERS, AR

## 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? | YES |
| Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture) | YES |

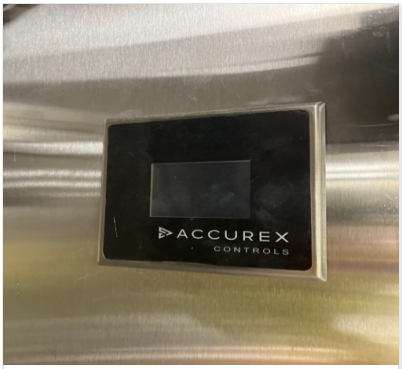
**Diffusers.jpeg**

| | |
|---|---|
| All hood filters installed and accounted for? | NO, FILTERS ACCOUNTED FOR BUT NOT INSTALLED |

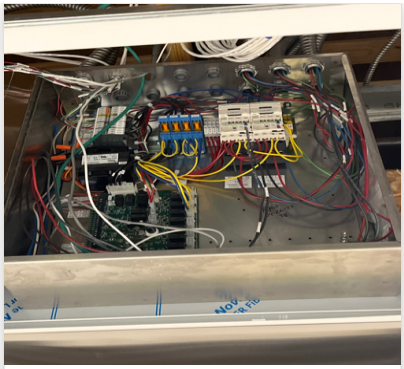
**Griddle.jpeg**

**Fryers.jpeg**

| | |
|---|---|
| Hoods are wired and have power? | NO, ELECTRICIAN IS WORKING ON AND WILL HAVE POWERED 8/11 or 8/12 |




**HMI.jpeg**



**Electricbox.jpeg**

| | |
|---|---|
| Thermostats have power? | YES |


**Thermostats.jpeg**

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

| | |
|---|---|
| On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached? | YES |

**Flexoverstraight.jpeg**

**Notes/Comments :**

# 08-08 CULVERS - ROGERS, AR

## CheckList Information

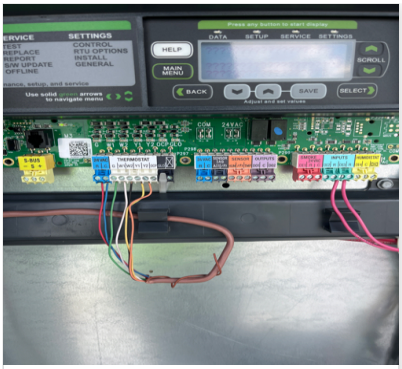
| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 2: UNIT DATA AND EVAL | **Status :** | NotSubmitted |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |

### CheckList Item Details

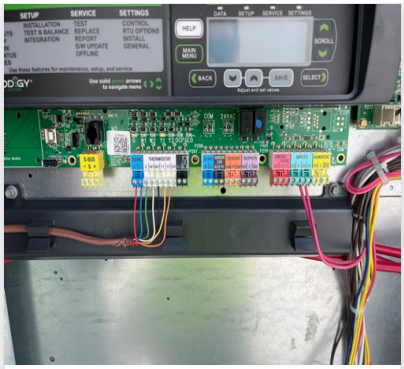
**UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:**

**RTU's/AHU's**

| | |
|---|---|
| Economizers are assembled and functional? | |
| Thermostat wire run from OCP on the RTU to the Ec terminal at the thermostat? If no, jumper can be installed from R to OCP temporarily. (The economizers will not open without OCP being energized.) | No. |



**RTU1.jpeg**



**RTU2.jpeg**

| | |
|---|---|
| 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? | INSTALLED. NOT ON |

**RTU1.jpeg**

**RTU2.jpeg**

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

**EF's**

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

**PRV2.jpeg**

**PRV3.jpeg**

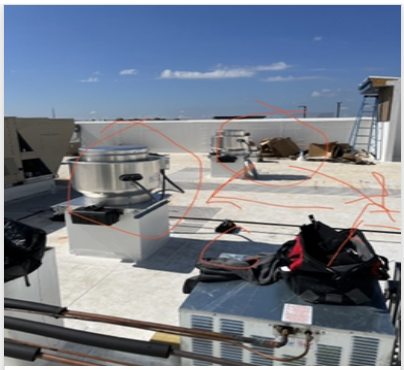
| | |
|---|---|
| Flex conduit is long enough so that fan can be completely tilted back? | YES |
| There is no major leakage around base of fan? | |
| Is the motor operating below the motor FLA rating? | |

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

**Bddamper.jpeg**

| |
|---|
| Unit free of noticeable noise and vibration? |
| The hood exhaust fans are installed in correct positions and are not switched? |
| NO. FANS ARE SWITCHED. NEED TO BE SWAPPED |

**FuseITb1644f443cf24cb...**



**FuseIT88872d75102a4fb...**

**File.jpeg**

**HOODS**

| | |
|---|---|
| Kitchen equipment installed in proper places? | YES |
| Can kitchen equipment be turned on for final smoke test? | NO, START UPS NOT DONE |

**Fryers.jpeg**

| | |
|---|---|
| Second stage Grease Grabber filters are installed on the griddle hood? | |

**DOCUMENTATION**

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

**Notes/Comments :**

Comfort. Under control.

# 08-08 CULVERS - ROGERS, AR

## 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? | |
| 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.

# 08-08 CULVERS - ROGERS, AR

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 4: 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? | |
| **PRODIGY SETTINGS FOR RTU'S** | |

| | | |
|---|---|---|
| | Parameter 65 set to 0 | |
| | Parameter 78 set to 0 | |
| | Parameter 105 set to 6 | |
| | Parameter 156 set to 70 (Dining unit only) | |
| | Parameter 156 set to 65 (Kitchen Unit Only) | |
| | Parameter 170 set to 75 (Dining Unit Only) | |
| | Parameter 170 set to 70 (Kitchen Unit Only) | |
| | Parameter 131 set to the same % as OA minimum position? | |
| | Parameter 117 set to the same % as OA minimum position? | |

**Notes/Comments :**

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: AHU/RTU

Comfort. Under control.

**Asset: RTU1** AREA:DINING

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | LENNOX | LENNOX |
| **Serial Num** | - | 5622F07312 |
| **Model Num** | NA | LGH180H4BS4Y |
| **Type** | RTU | RTU |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 3 |
| **OA Filter Size 1** | - | 13X23 |
| **Num Final Filter 1** | - | 6 |
| **Final Filter Size 1** | - | 24X24X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | INTERLINK |
| **Frame** | - | 56HZ |
| **Horsepower** | - | 3 |
| **Motor Rpm** | - | 1750 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208 | 200-230 |
| **Rated Amperage** | - | 8.0-7.8 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | 3.75" |
| **Motor Bore Size** | - | 7/8" |
| **Motor Sheave SetPt** | - | 5 TURNS OUT |
| **Fan Sheave Size** | - | BK72 |
| **Fan Sheave Bore** | - | 1 3/16" |
| **Belt CL Distance** | - | 20.5" |
| **Num of Belts** | - | 1 |
| **Belt Size** | - | BX55 |
| **Belt Alignment** | - | VERIFIED |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **SF CFM** | 6000 | 5840 |
| **SF RPM** | - | 733 |
| **RA CFM** | 4050 | 3996 |
| **OA CFM** | 1950 | 1844 |
| **RL Voltage** | - | 211/210/212 |
| **RL Amperage** | - | 5.8/5.9/6.1 |
| **SF Rotation** | - | CCW |
| **RA Damper Position** | - | 49% |
| **Min OA Damper Position** | - | 49% |
| **Min OA Damper Type** | - | ECONOMIZER |
| **OA Enthalpy Setpt** | - | 19 mA |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MA Plenum SP** | - | 0.47" |
| **Fan Suction SP** | - | -0.67" |
| **Fan Discharge SP** | - | 0.23" |
| **Total ESP** | - | 0.70" |
| **Fan Total SP** | - | 0.90" |

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

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Notes:

# National TAB

**Project:08-08 CULVERS - ROGERS, AR**

## 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 | ENTRY | CD13 | 8" | 150 | 1 | 188 | 182 | 140 | 93.3 |
| SGRD2 | MENS RR | CD15 | 8" | 125 | 1 | 118 | 94 | 124 | 99.2 |
| SGRD3 | WOMENS RR | CD15 | 8" | 125 | 1 | 158 | 147 | 125 | 100.0 |
| SGRD4 | HALL | CD16 | 12" | 450 | 1 | 355 | 323 | 453 | 100.7 |
| SGRD5 | DINING | CD10 | 8" | 125 | 1 | 3 | 190 | 123 | 98.4 |
| SGRD6 | DINING | CD10 | 8" | 150 | 1 | 197 | 205 | 148 | 98.7 |
| SGRD7 | DINING | CD10 | 8" | 150 | 1 | 239 | 223 | 165 | 110.0 |
| SGRD8 | DINING | CD10 | 8" | 150 | 1 | 227 | 199 | 162 | 108.0 |
| SGRD9 | DINING | CD10 | 8" | 150 | 1 | 149 | 126 | 146 | 97.3 |
| SGRD10 | DINING | CD10 | 8" | 125 | 1 | 6 | 134 | 118 | 94.4 |
| SGRD11 | DINING | CD10 | 8" | 150 | 1 | 245 | 227 | 178 | 118.7 |
| SGRD12 | DINING | CD10 | 8" | 150 | 1 | 171 | 155 | 143 | 95.3 |
| SGRD13 | DINING | CD10 | 8" | 150 | 1 | 247 | 214 | 164 | 109.3 |
| SGRD14 | DINING | CD10 | 8" | 125 | 1 | 223 | 170 | 143 | 114.4 |
| SGRD15 | DINING | CD10 | 8" | 125 | 1 | 303 | 259 | 128 | 102.4 |
| SGRD16 | DINING | CD10 | 8" | 150 | 1 | 184 | 154 | 148 | 98.7 |
| SGRD17 | DINING | CD10 | 8" | 150 | 1 | 223 | 200 | 149 | 99.3 |
| SGRD18 | DINING | CD10 | 8" | 150 | 1 | 224 | 192 | 145 | 96.7 |
| SGRD19 | DINING | CD10 | 8" | 150 | 1 | 181 | 160 | 137 | 91.3 |
| SGRD20 | DRINKS & CONDIMENTS | CD18 | 10" | 300 | 1 | 20 | 349 | 288 | 96.0 |
| SGRD21 | ENTRY | CD10 | 8" | 150 | 1 | 144 | 141 | 182 | 121.3 |
| SGRD22 | CUSTOMER ORDER AREA | CD16 | 12" | 450 | 1 | 386 | 340 | 437 | 97.1 |
| SGRD23 | CUSTOMER SERVICE | WD10 | 10" | 350 | 1 | 414 | 370 | 356 | 101.7 |
| SGRD24 | CUSTOMER SERVICE | WD10 | 10" | 350 | 1 | 325 | 288 | 362 | 103.4 |
| SGRD25 | CUSTOMER SERVICE | WD10 | 10" | 350 | 1 | 333 | 234 | 317 | 90.6 |
| SGRD26 | CUSTOMER SERVICE | WD10 | 10" | 350 | 1 | 49 | 226 | 296 | 84.6 |
| SGRD27 | DRIVE THRU | CD11 | 12" | 500 | 1 | 336 | 289 | 376 | 75.2 |
| SGRD28 | OFFICE | CD12 | 8" | 125 | 1 | 94 | 83 | 113 | 90.4 |
| SGRD29 | EMPLOYEE RR | CD14 | 6" | 75 | 1 | 104 | 95 | 74 | 98.7 |

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# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: AHU/RTU

Comfort. Under control.

**Asset: RTU2** AREA:KITCHEN

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | LENNOX | LENNOX |
| **Serial Num** | - | 5622F07316 |
| **Model Num** | NA | LGH180H4BS4Y |
| **Type** | RTU | RTU |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 3 |
| **OA Filter Size 1** | - | 13X23 |
| **Num Final Filter 1** | - | 6 |
| **Final Filter Size 1** | - | 24X24X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | INTERLINK |
| **Frame** | - | 56HZ |
| **Horsepower** | - | 3 |
| **Motor Rpm** | - | 1750 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208 | 200-230 |
| **Rated Amperage** | - | 8.0-7.8 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | 3.75" |
| **Motor Bore Size** | - | 7/8" |
| **Motor Sheave SetPt** | - | 6 TURNS OUT |
| **Fan Sheave Size** | - | BK72 |
| **Fan Sheave Bore** | - | 1 3/16" |
| **Belt CL Distance** | - | 20.5" |
| **Num of Belts** | - | 1 |
| **Belt Size** | - | BX55 |
| **Belt Alignment** | - | VERIFIED |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **SF CFM** | 6000 | |
| **SF RPM** | - | 704 |
| **RA CFM** | 4100 | |
| **OA CFM** | 1900 | |
| **RL Voltage** | - | 211/212/212 |
| **RL Amperage** | - | 6.1/6.2/5.9 |
| **SF Rotation** | - | CCW |
| **RA Damper Position** | - | [1] |
| **Min OA Damper Position** | - | [1] |
| **Min OA Damper Type** | - | ECONOMIZER |
| **OA Enthalpy Setpt** | - | [1] |
| **Brake Horse Power** | - | |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MA Plenum SP** | - | |
| **Fan Suction SP** | - | |
| **Fan Discharge SP** | - | |
| **Total ESP** | - | |
| **Fan Total SP** | - | |

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

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Notes: [1] PRODIGY BOARD IS DEFECTIVE AND NEEDS TO BE REPLACED. UNABLE TO SET ENTHALPY AND OA POSITION. DAMPER POSITION WILL BE MARKED FOR WHEN NEW BOARD COMES IN.

### Diffuser Supply (GRD)

**RTU2/KITCHEN**

| Asset | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Asset Name** | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** | **FINAL CFM** | **% to design** |
| SGRD1 | SUNDAE SERVICE | CD20 | 12" | 550 | | | | | - |
| SGRD2 | SUNDAE SERVICE | CD22 | 12" | 600 | | | | | - |
| SGRD3 | FRYERS | CD23 | 8" | 200 | | | | | - |
| SGRD4 | FRYERS | CD24 | 12" | 375 | | | | | - |
| SGRD5 | FOOD PREP | CD25 | 12" | 400 | | | | | - |
| SGRD6 | FOOD PREP | CD25 | 12" | 400 | | | | | - |
| SGRD7 | GRIDDLE | CD26 | 10" | 250 | | | | | - |
| SGRD8 | GRIDDLE | CD27 | 10" | 275 | | | | | - |
| SGRD9 | ALCOVE | CD28 | 6" | 100 | | | | | - |
| SGRD10 | DISHWASHING | CD21 | 10" | 350 | | | | | - |
| SGRD11 | DISHWASHING | CD21 | 10" | 350 | | | | | - |
| SGRD12 | DISHWASHING | CD21 | 12" | 350 | | | | | - |
| SGRD13 | UTILITY | CD29 | 12" | 600 | | | | | - |
| SGRD14 | DRY GOODS | WD20 | 12" | 600 | | | | | - |
| SGRD15 | DRY GOODS | WD20 | 12" | 600 | | | | | - |

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# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: EF-1** AREA:MOP ROOM

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XRED-090-D | XRED-090-D |
| **Serial Num** | - | |
| **Type** | CEILING | CEILING |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | |
| **Frame** | - | |
| **Horsepower** | - | |
| **Motor Rpm** | 900 | |
| **Phase** | 1 | |
| **Voltage (rated)** | 115 | |
| **Amperage (rated)** | - | |
| **Service Factor** | - | |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 75 | 73 |
| **Fan RPM** | 885 | DD |
| **Fan Rotation** | - | CCW |
| **Motor RPM** | - | DD |
| **System SetPt** | - | SEE PIC |
| **RL Voltage** | - | NOT SAFE |
| **RL Amperage** | - | 0.14 |
| **Total ESP** | 0.125" | UTO |
| **Fan Inlet SP** | - | UTO |
| **Fan Discharge SP** | - | UTO |

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Notes:

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV-1** AREA:RESTROOMS

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XRED-090-D | XRED-090-V6-1-17-X |
| **Serial Num** | - | 2012647722F |
| **Type** | DOWNBLAST | DOWNBLAST |
| **Configuration** | HORIZONTAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | BROAD-OCEAN |
| **Frame** | - | NL |
| **Horsepower** | 0.0667 | 1/10 |
| **Motor Rpm** | 150 | 300-1750 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115/208-230 |
| **Amperage (rated)** | - | 1.38/0.84 |
| **Service Factor** | - | NL |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 375 | |
| **Fan RPM** | 1479 | DD |
| **Fan Rotation** | - | CW |
| **Motor RPM** | - | DD |
| **System SetPt** | - | 6 OF 10 |
| **RL Voltage** | - | NOT SAFE |
| **RL Amperage** | - | 0.74 |
| **Total ESP** | 0.5" | -0.31" |
| **Fan Inlet SP** | - | 0.31" |
| **Fan Discharge SP** | - | ATM |

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Notes:

# National TAB

**Project:08-08 CULVERS - ROGERS, AR**

## FAN - Exhaust

Comfort. Under control.

**Diffuser Ret/Exh (GRD)**

**PRV-1/RESTROOMS**

| Asset | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Asset Name** | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** | **FINAL CFM** | **% to design** |
| EGRD1 | MENS RR | EG2 | 8" | 150 | 1 | 118 | 94 | | - |
| EGRD2 | WOMENS RR | EG2 | 8" | 150 | 1 | 192 | 161 | | - |
| EGRD3 | EMPLOYEE RR | EG1 | 8" | 75 | 1 | 148 | 118 | | - |

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# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV-2** AREA:HD1 GRIDDLE

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XRUB-161XP-15 | XRUB-160XP-15-1-26-6 |
| **Serial Num** | - | 2012661122F |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NEMA |
| **Frame** | - | 56 |
| **Horsepower** | 1.5 | 1.5 |
| **Motor Rpm** | 1725 | 1760 |
| **Phase** | 3 | 3 |
| **Voltage (rated)** | 208 | 230/460 |
| **Amperage (rated)** | - | 4.2/2.1 |
| **Service Factor** | - | 1.15 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | VP44 |
| **Motor Bore Size** | - | 5/8" |
| **Motor Sheave SetPt** | - | 2 TURNS OUT |
| **Fan Sheave Size** | - | 3" |
| **Fan Sheave Bore** | - | 1" |
| **Belt CL Distance** | - | TENSIONER IN PLACE |
| **Num of Belts** | - | 1 |
| **Belt Size** | - | AX24 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1487 |
| **Fan RPM** | 2411 | 2049 |
| **Fan Rotation** | - | CW |
| **Motor RPM** | - | 1771 |
| **RL Voltage** | - | 209/211/210 |
| **RL Amperage** | - | 3.2/3.1/2.9 |
| **Suction ESP** | - | -0.69" |
| **Discharge ESP** | - | ATM |
| **Total ESP** | 2.337" | 0.69" |

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Notes:

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV-3** AREA:HD2 FRYER

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XRUB-141-7 | XRUB-140-7-1-26-G |
| **Serial Num** | - | 2012676522F |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NEMA |
| **Frame** | - | 56 |
| **Horsepower** | 0.75 | 0.75" |
| **Motor Rpm** | 1725 | 1760 |
| **Phase** | 3 | 3 |
| **Voltage (rated)** | 208 | 230/460 |
| **Amperage (rated)** | - | 2.3/1.15 |
| **Service Factor** | - | 1.25 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | VP34S |
| **Motor Bore Size** | - | 5/8" |
| **Motor Sheave SetPt** | - | 5 TURNS OUT |
| **Fan Sheave Size** | - | AK41 |
| **Fan Sheave Bore** | - | 3/4" |
| **Belt CL Distance** | - | TENSIONER IN PLACE |
| **Num of Belts** | - | 1 |
| **Belt Size** | - | AP23 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1522 |
| **Fan RPM** | 1377 | 980 |
| **Fan Rotation** | - | CW |
| **Motor RPM** | - | 1765 |
| **RL Voltage** | - | 212/210/211 |
| **RL Amperage** | - | 1.5/1.5/1.6 |
| **Suction ESP** | - | UTO |
| **Discharge ESP** | - | UTO |
| **Total ESP** | 1.0" | UTO |

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Notes: FAN IS CAUGHT ON CURB AND CANNOT BE LEANED BACK TO TAKE PRESSURE READING.

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: FAN - Exhaust

Comfort. Under control.

**Asset: PRV-4** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | NA | ACCUREX |
| **Model Num** | NA | XRED-095-6-V6-1-17-X |
| **Serial Num** | - | 2012684622F |
| **Type** | - | DOWNBLAST |
| **Configuration** | - | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | BROAD-OCEAN |
| **Frame** | - | NL |
| **Horsepower** | - | 1/6 |
| **Motor Rpm** | - | 300-1750 |
| **Phase** | - | 1 |
| **Voltage (rated)** | - | 115/208-230 |
| **Amperage (rated)** | - | 2.2/1.3 |
| **Service Factor** | - | NL |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 350 | 373 |
| **Fan RPM** | - | DD |
| **Fan Rotation** | - | CW |
| **Motor RPM** | - | DD |
| **System SetPt** | - | |
| **RL Voltage** | - | |
| **RL Amperage** | - | |
| **Total ESP** | - | |
| **Fan Inlet SP** | - | |
| **Fan Discharge SP** | - | ATM |

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Notes:

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: Kitchen Hood Type I

Comfort. Under control.

**Asset: HD1** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XGEP-64-S | XGEP-64.00-S |
| **Job / Serial Num** | - | 20114420 |
| **Type** | TYPE I LOW PROXIMITY | TYPE I LOW PROXIMITY |
| **Hood length** | 64" | 64" |
| **Hood Width** | 23" | 23" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | GREASE GRABBER | GREASE GRABBER |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 4 | 4 |
| **Filter AK factor size 1** | 1.53 | 1.53 |
| **Filter Total AK Area** | 6.12 | 6.12 |
| **Filter1 FPM** | - | 256 |
| **Filter2 FPM** | - | 237 |
| **Filter3 FPM** | - | 231 |
| **Filter4 FPM** | - | 250 |
| **Filter Ave FPM(corr)** | - | 243 |
| **CFM** | - | 1487 |

| Cooking Equipment | | |
|---|---|---|
| | **Design** | **Actual** |
| **Item 1** | - | GRIDDLE |

| 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** | - | |

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Notes:

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: Kitchen Hood Type I

Comfort. Under control.

**Asset: HD2** AREA:FRYER

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | XXEP-83-S | XXEP-83.00-S |
| **Job / Serial Num** | - | 20114419 |
| **Type** | TYPE I LOW PROXIMITY | TYPE I LOW PROXIMITY |
| **Hood length** | 83" | 83" |
| **Hood Width** | 23" | 23" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | X-TRACTOR | X-TRACTOR |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 5 | 5 |
| **Filter AK factor size 1** | 1.53 | 1.53 |
| **Filter Total AK Area** | 7.65 | 7.65 |
| **Filter1 FPM** | - | 207 |
| **Filter2 FPM** | - | 201 |
| **Filter3 FPM** | - | 195 |
| **Filter4 FPM** | - | 194 |
| **Filter5 FPM** | - | 201 |
| **Filter Ave FPM(corr)** | - | 199 |
| **CFM** | - | 1522 |

| Cooking Equipment | | |
|---|---|---|
| | **Design** | **Actual** |
| **Item 1** | - | FRYERS |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Smoke Generation Type** | - | |
| **Hood Capture %** | - | |

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

Completed By: Dan Hertenstein

Notes:

# National TAB

**Project: 08-08 CULVERS - ROGERS, AR**

## System/Unit: Kitchen Hood Type II

Comfort. Under control.

**Asset: HD3** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | ACCUREX | ACCUREX |
| **Model Num** | NA | XD3-42.00-S |
| **Serial Num** | - | 20114421 |
| **Type** | - | TYPE II CANOPY |
| **Hood length** | - | 42" |
| **Hood Width** | - | 42" |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Exhaust CFM** | 350 | |

Completed By: Dan Hertenstein

Notes: