**Report By:**

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

**Report: TAB REPORT**

**Function: Test, Adjust, & Balance**

**Date: 12/14/2023**

# PROJECT

## 12-11-23 CULVERS- PADDOCK LAKE, WI

7600 Antioch RD.

Paddock Lake, WI 53168

Client

McCon Building Corporation

1059 Circle Drive

PO Box 247

Highland, WI 53543

## 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.

## Issue List

- RTU-1: Return / Supply Diffuser Proximity

## 12-11-23 CULVERS- PADDOCK LAKE, WI

### Project Issue Information

**Issue Name :** RTU-1: Return / Supply Diffuser Proximity

**Description :** In the dining area, a return and supply serving RTU-1 are positioned directly next to each other. This will cause short cycling. Recommend return and/or supply are repositioned.

**Created By :** National TAB

**Assigned To :** National TAB - Michael McDonnell

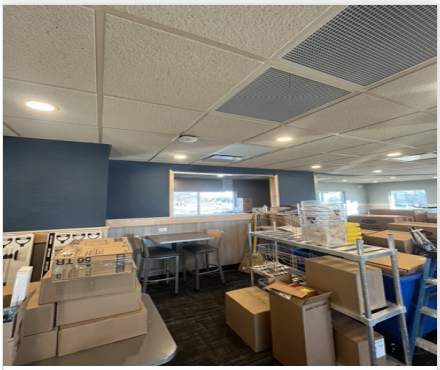
**Status :** Open

**Priority :** Low

**Asset Tag :**

**Originated Date :** 12/13/2023 - Michael McDonnell - National TAB

Project Issue File Details



**Dininglocation**
**12/13/2023**

**Proximity**
**12/13/2023**

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 | 6150 | 6073 | 4400 | 4261 | 1750 | 1812 | 28.5% | 29.8% | | | | | | |
| RTU-2 | KITCHEN | 6225 | 6246 | 4525 | 4460 | 1700 | 1786 | 27.3% | 28.6% | | | | | | |
| PRV-2 | HOOD 1 | | | | | | | | | | | 1500 | 1547 | | |
| PRV-3 | HOOD 2 | | | | | | | | | | | 1500 | 1502 | | |
| PRV-1 | RESTROOMS | | | | | | | | | | | | | 300 | 296 |
| EF-1A | EMPLOYEE RR | | | | | | | | | | | | | 75 | 82 |
| EF-1A | MOP ROOM | | | | | | | | | | | | | 75 | 81 |
| **TOTALS** | | 12375 | 12319 | 8925 | 8721 | 3450 | 3598 | | | 0 | 0 | 3000 | 3049 | 450 | 459 |

**NET BUILDING AIRFLOW CALCULATION**

| TOTALS | DESIGN | ACTUAL |
|---|---|---|
| TOTAL OA | 3450 | 3598 |
| TOTAL EXHAUST | 3450 | 3508 |
| **NET AIRFLOW** | 0 | 90 |

| DOOR TESTED | BUILDING PRESSURE MEASUREMENTS (IN. H20) |
|---|---|
| FRONT | 0.004 |
| SIDE | 0.004 |
| REAR | 0.005 |
| **AVERAGE** | **0.0043** |

**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:

[1] BUILDING NOT COMPLETELY SEALED AT TIME OF PRESSURE READING.

# CheckList List

- SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS

# 12-11-23 CULVERS- PADDOCK LAKE, WI

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | SITE PICTURES | **Status :** | Not Completed |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |
| **Created Date :** | 12/12/2023 - Wale Odofin - National TAB | | |

## CheckList Item Details

STORE FRONT

**Comment:**

**PaddockLake-WI**
**12/14/2023**

---

RTU-1

**Comment:**

**RTU-1-Dining**
**12/14/2023**


**Label**
**12/14/2023**

---

RTU-2

**Comment:**

**RTU-2-Kitchen**
**12/14/2023**


**Label**
**12/14/2023**

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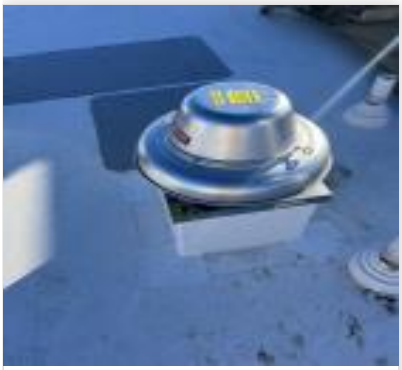
PRV-1

**Comment:**



**PRV-1-RR**
**12/14/2023**

**Label**
**12/14/2023**

**BackdraftDamper**
**12/14/2023**

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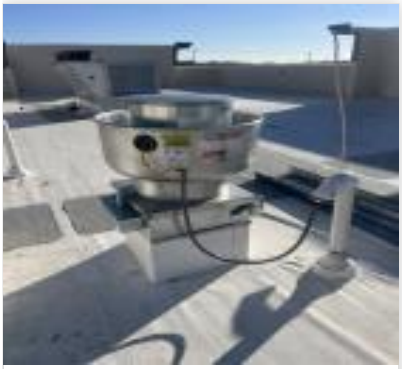
PRV-2

**Comment:**



**PRV-2-HD2-Fryer**
**12/14/2023**


**Label**
**12/14/2023**

**Duct**
**12/14/2023**

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HOOD 2

**Comment:**

**HD2-Griddle**
**12/14/2023**

**Label**
**12/14/2023**

---

PRV-3

**Comment:**

**PRV3-HD1-Fryer**
**12/14/2023**


**Label**
**12/14/2023**

**Duct**
**12/14/2023**

---

HOOD 1

**Comment:**

**HD1-Fryer**
**12/14/2023**

**Label**
**12/14/2023**

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EF-1A (MOP)

**Comment:**

**Mopfan**
**12/14/2023**

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EF-1A (RR)

**Comment:**

**EmployeeRR**
**12/14/2023**

# 12-11-23 CULVERS- PADDOCK LAKE, WI

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 1: INITIAL WALKTHROUGH | **Status :** | Not Completed |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |
| **Created Date :** | 12/12/2023 - Wale Odofin - National TAB | | |

## CheckList Item Details

**INITIAL SITE WALKTHROUGH**

| | |
|---|---|
| All diffusers and grilles are installed and match design? | Yes |
| **Comment:** | |
| Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture) | Yes |
| **Comment:** | |
| All hood filters installed and accounted for? | Yes |
| **Comment:** | |
| Hoods are wired and have power? | Yes |
| **Comment:** | |
| Thermostats have power? | Yes |
| **Comment:** | |
| Have trades/general contractor been notified about any issues and are they created on FaciliBuild? | |
| **Comment:** | |
| Yes | |

# 12-11-23 CULVERS- PADDOCK LAKE, WI

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 2: UNIT DATA AND EVAL | **Status :** | Not Completed |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |
| **Created Date :** | 12/12/2023 - Wale Odofin - 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? | Yes |

**Comment:**

| | |
|---|---|
| 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.) | N/A |

**Comment:**

NA, Captive Aire DOAS units installed. Interlocked with hood operation for occupancy.

| | |
|---|---|
| Motors are all operating below the FLA rating? | Yes |

**Comment:**

DOAS units operating below unit sticker rating of 27.0 amps based on line voltage.

Are belts tight?

**Comment:**

NA, Direct Drive Units.

If direct drive unit is the speed controller working.

**Comment:**

Yes

| | |
|---|---|
| Is gas piping installed and valves turned on? | Yes |

**Comment:**

| | |
|---|---|
| Unit free of noticeable noise and vibration | No |

**Comment:**

Both units need to operate on the high end to achieve design airflow and are creating the usual but substantial noise; vibrating entire building. In my experience this is typical with Captive Aire Units.

**EF's**

| | |
|---|---|
| Rotation is correct? | Yes |

**Comment:**

| | |
|---|---|
| Belts are tight? | |

**Comment:**

NA, Direct Drive

| | |
|---|---|
| Grease cup installed on hood fan? | Yes |

**Comment:**

| | |
|---|---|
| Hinge kit installed installed on hood fan? | Yes |

**Comment:**

| | |
|---|---|
| Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan? | Yes |

**Comment:**

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

**Comment:**

| | |
|---|---|
| There is no major leakage around base of fan? | Yes |

**Comment:**

| | |
|---|---|
| Is the motor operating below the motor FLA rating? | Yes |

**Comment:**

| | |
|---|---|
| For restroom fan(s) is the back draft damper installed and can it fully open? | Yes |
| **Comment:** | |
| Unit free of noticeable noise and vibration? | Yes |
| **Comment:** | |
| The hood exhaust fans are installed in correct positions and are not switched? | Yes |
| **Comment:** | |
| **HOODS** | |
| Kitchen equipment installed in proper places? | No |
| **Comment:** Kitchen equipment not yet started up. | |
| Can kitchen equipment be turned on for final smoke test? | No |
| **Comment:** Kitchen equipment not yet started up. | |
| Second stage Grease Grabber filters are installed on the griddle hood? | N/A |
| **Comment:** Captive Aire, not Accurex hoods installed. Do not utilize second stage filters. | |
| **DOCUMENTATION** | |
| Have trades/general contractor been notified about any issues and are they created on FaciliBuild? | Yes |
| **Comment:** | |

**Notes/Comments :**

[1] HOOD QUARTER END PANELS NOT INSTALLED. FOUND ON SITE. DO NOT HAVE SUBMITTALS TO VERIFY.

**Date :**12/14/2023

# 12-11-23 CULVERS- PADDOCK LAKE, WI

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 3: TEST, ADJUST AND BALANCE | **Status :** | Not Completed |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |
| **Created Date :** | 12/12/2023 - Wale Odofin - National TAB | | |

## CheckList Item Details

**TEST, ADJUST, AND BALANCE ALL EQUIPMENT:**

**DURING TESTING MAKE NOTE OF THE FOLLOWING:**

| | |
|---|---|
| Is space free of drafting? | Yes |
| **Comment:** | |
| Is space comfortable in all areas? | Yes |
| **Comment:** | |
| Is the space free of ventilation noise? | Yes |
| **Comment:** | |

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

**Comment:**

NA

# 12-11-23 CULVERS- PADDOCK LAKE, WI

## CheckList Information

| | | | |
|---|---|---|---|
| **Name :** | TECH - STEP 4: FINAL TESTS | **Status :** | Not Completed |
| **Assigned Organization :** | National TAB | **Asset :** | |
| **Requesting Organization :** | National TAB | | |
| **Created Date :** | 12/12/2023 - Wale Odofin - National TAB | | |

## CheckList Item Details

**FINAL TESTS**

**HOOD CAPTURE TEST**

List equipment turned on for testing

**Comment:**

None, equipment not yet started up.

List smoke candle type used

**Comment:**

45 sec smoke emitter.

Smoke test capture - Perimeter of hood

**Comment:**

100%

Smoke test capture - Top of cooking surface

**Comment:**

100%

**WITNESS**

| | |
|---|---|
| Date test was completed | 12/14/2023 |

**Comment:**

TAB tech name / Firm

**Comment:**

Michael McDonnell / National Tab

---

Site super name / Firm

**Comment:**

Adam Pick / McCon

---

Owner representative name / Firm (if Applicable)

**Comment:**

NA

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

**Comment:**

Front: 0.004" Rear: 0.005" Side: 0.004"

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**ADDITIONAL**

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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

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| | |
|---|---|
| Thermostats are programmed? | Yes |

**Comment:**

Yes, interlocked with hood operation for occupancy.

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# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: AHU/RTU

**Asset: RTU1** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Serial Num** | - | 6028200 |
| **Model Num** | CASRTU3-I.400-24-20TGT | CASRTU3-I.400-24-20T |
| **Type** | RTU | DOAS |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 4 |
| **OA Filter Size 1** | - | 16X25X2 |
| **Num Final Filter 1** | - | 8 |
| **Final Filter Size 1** | - | 20X25X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TECO WESTINGHOUSE |
| **Frame** | - | 215T |
| **Horsepower** | - | 10.0 |
| **Motor Rpm** | - | 1755 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208 | 208 |
| **Rated Amperage** | - | 27.0 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | 57.0 HZ |
| **Fan Sheave Size** | - | DD |
| **Fan Sheave Bore** | - | DD |
| **Belt CL Distance** | - | DD |
| **Num of Belts** | - | DD |
| **Belt Size** | - | DD |
| **Belt Alignment** | - | DD |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **SF CFM** | 6150 | 6073 |
| **SF RPM** | - | 1667 |
| **RA CFM** | 4400 | 4261 |
| **OA CFM** | 1750 | 1812 |
| **RL Voltage** | - | 189 @VFD |
| **RL Amperage** | - | 24.0 @VFD |
| **SF Rotation** | - | CCW, CORRECT |
| **Min OA Damper Position** | - | 4.9V |
| **Min OA Damper Type** | - | ECONOMIZER |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Fan Discharge SP** | - | 0.684" |

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

Completed By: Michael McDonnell on 12/18/2023

# National TAB

**Project:12-11-23 CULVERS- PADDOCK LAKE, WI**

## AHU/RTU

**Diffuser Supply (GRD)**

**RTU1/**

| Asset | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Asset Name** | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** | **FINAL CFM** | **% to design** |
| SGRD1 | ENTRY | SD-4 | 8" | 150 | 1.0 | 158 | 183 | 144 | 96.0 |
| SGRD2 | DINING | SD-1 | 8" | 150 | 1.0 | 126 | 147 | 156 | 104.0 |
| SGRD3 | DINING | SD-1 | 8" | 150 | 1.0 | 95 | 118 | 138 | 92.0 |
| SGRD4 | DINING | SD-1 | 8" | 150 | 1.0 | 120 | 139 | 143 | 95.3 |
| SGRD5 | DINING | SD-1 | 8" | 150 | 1.0 | 133 | 135 | 146 | 97.3 |
| SGRD6 | DINING | SD-1 | 8" | 150 | 1.0 | 153 | 173 | 140 | 93.3 |
| SGRD7 | DINING | SD-1 | 8" | 150 | 1.0 | 128 | 168 | 161 | 107.3 |
| SGRD8 | DINING | SD-1 | 8" | 150 | 1.0 | 172 | 196 | 156 | 104.0 |
| SGRD9 | DINING | SD-1 | 8" | 150 | 1.0 | 143 | 147 | 162 | 108.0 |
| SGRD10 | DINING | SD-1 | 8" | 150 | 1.0 | 223 | 263 | 164 | 109.3 |
| SGRD11 | DINING | SD-1 | 8" | 150 | 1.0 | 122 | 133 | 143 | 95.3 |
| SGRD12 | DINING | SD-1 | 8" | 150 | 1.0 | 124 | 131 | 147 | 98.0 |
| SGRD13 | DINING | SD-1 | 8" | 150 | 1.0 | 136 | 164 | 145 | 96.7 |
| SGRD14 | DINING | SD-1 | 8" | 150 | 1.0 | 120 | 141 | 154 | 102.7 |
| SGRD15 | DINING | SD-1 | 8" | 150 | 1.0 | 131 | 164 | 159 | 106.0 |
| SGRD16 | DRINKS | SD-1 | 10" | 300 | 1.0 | 325 | 366 | 325 | 108.3 |
| SGRD17 | ENTRY | SD-1 | 8" | 150 | 1.0 | 183 | 218 | 150 | 100.0 |
| SGRD18 | SUNDAE | SD-1 | 10" | 500 | 1.0 | 267 | 282 | 455 | 91.0 |
| SGRD19 | OFFICE | SD-1 | 8" | 200 | 1.0 | 169 | 200 | 184 | 92.0 |
| SGRD20 | CUST. SERV | SD-1 | 12" | 450 | 1.0 | 416 | 497 | 435 | 96.7 |
| SGRD21 | CUST. SERV | SD-1 | 10" | 350 | 1.0 | 272 | 315 | 341 | 97.4 |
| SGRD22 | CUST. SERV | SD-1 | 10" | 350 | 1.0 | 278 | 340 | 331 | 94.6 |
| SGRD23 | CUST. SERV | SD-1 | 10" | 350 | 1.0 | 279 | 322 | 343 | 98.0 |
| SGRD24 | CUST. SERV | SD-1 | 10" | 350 | 1.0 | 246 | 277 | 315 | 90.0 |
| SGRD25 | DINING | SD-1 | 8" | 150 | 1.0 | 170 | 200 | 149 | 99.3 |
| SGRD26 | HALL | SD-1 | 12" | 450 | 1.0 | 391 | 461 | 475 | 105.6 |
| SGRD27 | RESTROOM | SD-4 | 8" | 150 | 1.0 | 206 | 258 | 165 | 110.0 |
| SGRD28 | RESTROOM | SD-4 | 8" | 150 | 1.0 | 130 | 145 | 147 | 98.0 |
| Total | | | | 6150 | | 5416 | 6283 | 6073 | 98.75% |

**Completed By: Michael McDonnell on 12/13/2023**

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: AHU/RTU

**Asset: RTU2** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Serial Num** | - | 6028200 |
| **Model Num** | CASRTU3-I.250-24-20T | CASRTU3-I.250-24-20T |
| **Type** | RTU | DOAS |
| **Configuration** | VERTICAL | VERTICAL |
| **Num OA Filters 1** | - | 4 |
| **OA Filter Size 1** | - | 16X25X2 |
| **Num Final Filter 1** | - | 8 |
| **Final Filter Size 1** | - | 20X25X2 |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TECO WESTINGHOUSE |
| **Frame** | - | 215T |
| **Horsepower** | - | 10.0 |
| **Motor Rpm** | - | 1755 |
| **Phase** | 3 | 3 |
| **Rated Voltage** | 208 | 230 |
| **Rated Amperage** | - | 27.0 |

| Drive Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor Sheave Size** | - | DD |
| **Motor Bore Size** | - | DD |
| **Motor Sheave SetPt** | - | 58.0 HZ |
| **Fan Sheave Size** | - | DD |
| **Fan Sheave Bore** | - | DD |
| **Belt CL Distance** | - | DD |
| **Num of Belts** | - | DD |
| **Belt Size** | - | DD |
| **Belt Alignment** | - | DD |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **SF CFM** | 6225 | 6246 |
| **SF RPM** | - | 1697 |
| **RA CFM** | 4525 | 4460 |
| **OA CFM** | 1700 | 1786 |
| **RL Voltage** | - | 193 @VFD |
| **RL Amperage** | - | 25.2B@VFD |
| **SF Rotation** | - | CCW, CORRECT |
| **Min OA Damper Position** | - | 6.0V |
| **Min OA Damper Type** | - | ECONOMIZER |

| Performance Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Fan Discharge SP** | - | 0.785" |

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

Completed By: Michael McDonnell on 12/18/2023

# National TAB

**Project:12-11-23 CULVERS- PADDOCK LAKE, WI**

## AHU/RTU

**Diffuser Supply (GRD)**

**RTU2/**

| Asset | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Asset Name** | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** | **FINAL CFM** | **% to design** |
| SGRD1 | KITCHEN | SD-1 | 12" | 600 | 1.0 | 361 | 423 | 570 | 95.0 |
| SGRD2 | KITCHEN | SD-1 | 12" | 600 | 1.0 | 193 | 213 | 585 | 97.5 |
| SGRD3 | KITCHEN | SD-5 | 10" | 275 | 1.0 | 294 | 325 | 269 | 97.8 |
| SGRD4 | KITCHEN | SD-5 | 10" | 250 | 1.0 | 319 | 345 | 251 | 100.4 |
| SGRD5 | KITCHEN | SD-5 | 12" | 400 | 1.0 | 515 | 574 | 388 | 97.0 |
| SGRD6 | KITCHEN | SD-5 | 12" | 400 | 1.0 | 424 | 485 | 429 | 107.3 |
| SGRD7 | KITCHEN | SD-5 | 12" | 375 | 1.0 | 481 | 532 | 376 | 100.3 |
| SGRD8 | KITCHEN | SD-5 | 10" | 200 | 1.0 | 220 | 258 | 196 | 98.0 |
| SGRD9 | KITCHEN | SD-5 | 12" | 350 | 1.0 | 520 | 575 | 351 | 100.3 |
| SGRD10 | KITCHEN | SD-5 | 12" | 350 | 1.0 | 384 | 435 | 371 | 106.0 |
| SGRD11 | KITCHEN | SD-5 | 12" | 350 | 1.0 | 401 | 459 | 349 | 99.7 |
| SGRD12 | UTILITY RM | SD-1 | 12" | 600 | 1.0 | 402 | 460 | 593 | 98.8 |
| SGRD13 | UTILITY RM | SD-1 | 12" | 600 | 1.0 | 400 | 447 | 602 | 100.3 |
| SGRD14 | TOILET | SD-4 | 6" | 75 | 1.0 | 53 | 45 | 76 | 101.3 |
| SGRD15 | DRY GOODS | SD-1 | 12" | 600 | 1.0 | 422 | 452 | 639 | 106.5 |
| SGRD16 | DRY GOODS | SD-1 | 10" | 200 | 1.0 | 234 | 279 | 201 | 100.5 |
| Total | | | | 6225 | | 5623 | 6307 | 6246 | 100.34% |

**Completed By: Michael McDonnell on 12/13/2023**

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: FAN - Exhaust

**Asset: EFA1** AREA:EMPLOYEE RR

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | CFA 100CA | CFA 100CA |
| **Serial Num** | - | 6028200 |
| **Type** | CEILING | CEILING |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NL |
| **Horsepower** | - | 0.116 |
| **Motor Rpm** | - | 640 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 1.1 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 75 | 82 |
| **Fan RPM** | 493 | DD |
| **Fan Rotation** | - | CCW, CORRECT |
| **Motor RPM** | - | DD |
| **System SetPt** | - | SINGLE SPEED |
| **RL Voltage** | - | 121 |
| **RL Amperage** | - | 1.0 |

Completed By: Michael McDonnell on 12/14/2023

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: FAN - Exhaust

**Asset: EFA1** AREA:MOP ROOM

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVE AIRE | CAPTIVE AIRE |
| **Model Num** | NA | CFA 100CA |
| **Serial Num** | - | 6028200 |
| **Type** | - | CEILING |
| **Configuration** | - | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | NL |
| **Horsepower** | - | 0.116 |
| **Motor Rpm** | - | 640 |
| **Phase** | - | 1 |
| **Voltage (rated)** | - | 115 |
| **Amperage (rated)** | - | 1.1 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | - | 81 |
| **Fan RPM** | - | DD |
| **Fan Rotation** | - | CCW, CORRECT |
| **Motor RPM** | - | DD |
| **System SetPt** | - | SINGLE SPEED |
| **RL Voltage** | - | 121 |
| **RL Amperage** | - | 1.0 |

Completed By: Michael McDonnell on 12/14/2023

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: FAN - Exhaust

**Asset: PRV1** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | DR12HFA | DR12HFA |
| **Serial Num** | - | 6028200 |
| **Type** | DOWNBLAST | DOWNBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TELCO GREEN |
| **Horsepower** | - | 0.25 |
| **Motor Rpm** | - | 1800 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 2.9 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 300 | 296 |
| **Fan RPM** | 1288 | 1448 |
| **Fan Rotation** | - | CCW, CORRECT |
| **Motor RPM** | - | 1448 |
| **System SetPt** | - | 75% |
| **RL Voltage** | - | 121 |
| **RL Amperage** | - | 1.1 |
| **Total ESP** | 0.5" | 0.34" |
| **Fan Inlet SP** | - | -0.34" |
| **Fan Discharge SP** | - | |

Completed By: Michael McDonnell on 12/13/2023

# National TAB

**Project:12-11-23 CULVERS- PADDOCK LAKE, WI**

## FAN - Exhaust

**Diffuser Ret/Exh (GRD)**

**PRV1/**

| Asset | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Asset Name** | **Location** | **Type** | **Size** | **DESIGN CFM** | **AK** | **CFM(1)** | **CFM(2)** | **FINAL CFM** | **% to design** |
| EGRD1 | M RR | EG1 | 10X10 | 150 | 1.0 | 132 | 158 | 158 | 105.3 |
| EGRD2 | W RR | EG1 | 10X10 | 150 | 1.0 | 115 | 138 | 138 | 92.0 |
| Total | | | | 300 | | 247 | 296 | 296 | 98.67% |

**Completed By: Michael McDonnell on 12/13/2023**

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: FAN - Exhaust

**Asset: PRV2** AREA:GRIDDLE

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | DU85HFA | DU85HFA |
| **Serial Num** | - | 6028200 |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TELCO GREEN |
| **Horsepower** | - | 1.0 |
| **Motor Rpm** | - | 1800 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 11.6 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1510 |
| **Fan RPM** | 1348 | 1221 |
| **Fan Rotation** | - | CCW, CORRECT |
| **Motor RPM** | - | 1221 |
| **System SetPt** | - | 61% |
| **RL Voltage** | - | 122.3 |
| **RL Amperage** | - | 3.4 |
| **Total ESP** | 1.412 | 0.956" |
| **Fan Inlet SP** | - | -0.956" |
| **Fan Discharge SP** | - | ATM |

Completed By: Michael McDonnell on 12/13/2023

Notes:
[1] FAN SPEED CONTROLLED BY SPEED CONTROLLER IN FAN HOUSING.

Written By: Michael McDonnell on 12/14/2023

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: FAN - Exhaust

**Asset: PRV3** AREA:FRYER

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | DU85HFA | DU85HFA |
| **Serial Num** | - | 6028200 |
| **Type** | UPBLAST | UPBLAST |
| **Configuration** | VERTICAL | VERTICAL |

| Motor Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **Motor MFG** | - | TELCO GREEN |
| **Horsepower** | - | 1.0 |
| **Motor Rpm** | - | 1800 |
| **Phase** | 1 | 1 |
| **Voltage (rated)** | 115 | 115 |
| **Amperage (rated)** | - | 11.6 |

| Test Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **CFM** | 1500 | 1547 |
| **Fan RPM** | 1348 | 1104 |
| **Fan Rotation** | - | CCW, CORRECT |
| **Motor RPM** | - | 1104 |
| **System SetPt** | - | 56% |
| **RL Voltage** | - | 122.5 |
| **RL Amperage** | - | 2.5 |
| **Total ESP** | 1.250" | 0.871" |
| **Fan Inlet SP** | - | -0.871" |
| **Fan Discharge SP** | - | ATM |

Completed By: Michael McDonnell on 12/13/2023

Notes:
[1] FAN SPEED CONTROLLED BY SPEED CONTROLLER IN FAN HOUSING.

Written By: Michael McDonnell on 12/14/2023

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: Kitchen Hood Type I

**Asset: HD1** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | 3347BD-2 | 3347BD-2 |
| **Job / Serial Num** | - | 6028200 |
| **Type** | TYPE I | TYPE I |
| **Hood length** | 84" | 84" |
| **Hood Width** | 33" | 33" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | SOLO FILTER | SOLO FILTER |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 5 | 5 |
| **Filter AK factor size 1** | 1.62 | 1.62 |
| **Filter Total AK Area** | 8.10 | 8.10 |
| **Filter1 FPM** | - | 195 |
| **Filter2 FPM** | - | 197 |
| **Filter3 FPM** | - | 197 |
| **Filter4 FPM** | - | 206 |
| **Filter5 FPM** | - | 164 |
| **Filter Ave FPM(corr)** | - | 191 |
| **CFM** | 1500 | 1547 |

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

Completed By: Michael McDonnell on 12/13/2023

Notes:
[1] QUARTER END PANELS NOT INSTALLED.
[2] FAN SPEED NOT CONTROLLED THROUGH HMI, SPEED CONTROLLER MOUNTED IN FAN HOUSING.

Written By: Michael McDonnell on 12/14/2023

# National TAB

**Project: 12-11-23 CULVERS- PADDOCK LAKE, WI**

## System/Unit: Kitchen Hood Type I

**Asset: HD2** AREA:

| Unit Data | | |
|---|---|---|
| | **Design** | **Actual** |
| **MFG** | CAPTIVEAIRE | CAPTIVEAIRE |
| **Model Num** | 3347BD-2 | 3347BD-2 |
| **Job / Serial Num** | - | 6028200 |
| **Type** | TYPE I | TYPE I |
| **Hood length** | 66" | 66" |
| **Hood Width** | 33" | 33" |

| Test Data Exhaust | | |
|---|---|---|
| | **Design** | **Actual** |
| **Filter Type** | SOLO FILTER | SOLO FILTER |
| **Filter Size 1** | 16X16 | 16X16 |
| **Filter Qty 1** | 4 | 4 |
| **Filter AK factor size 1** | 1.62 | 1.62 |
| **Filter Total AK Area** | 6.48 | 6.48 |
| **Filter1 FPM** | - | 245 |
| **Filter2 FPM** | - | 236 |
| **Filter3 FPM** | - | 232 |
| **Filter4 FPM** | - | 220 |
| **Filter Ave FPM(corr)** | - | 233 |
| **CFM** | 1500 | 1510 |

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

Completed By: Michael McDonnell on 12/13/2023

Notes:
[1] QUARTER END PANELS NOT INSTALLED.
[2] FAN SPEED NOT CONTROLLED THROUGH HMI, SPEED CONTROLLER MOUNTED IN FAN HOUSING.

Written By: Michael McDonnell on 12/14/2023