SDV Job #: 5596726 - Shack Shack-1372 -Dublin,OH-RTU-2

Service Region:	312 - Ohio Service		
Service Person:	Tyler Paxton		
Customer Number:	875422	**Customer Name:**	Region 108 - Eastern PA Mechanical
Address:	Shake Shack 3730 West Dublin Granville Road Columbus, OH 43235		
Region Job #:	5592627		
Region Job Name:	Shack Shack-1372 -Dublin,OH-RTU-2		
Sales Region:	108 - Eastern PA Mechanical		
Sales Person:	Joe Shiiba		
Created By:	Tyler Paxton	**Creation Date:**	11/30/2022 2:32 PM
Last Modified By:	Tyler Paxton	**Last Modified Date:**	12/20/2022 9:22 AM
Dining Room Pressure:	0.0	**Kitchen Pressure:**	0.0
Hours On Job:	0.0	**Extra Hours:**	0.0
Completed:	Yes	**Completed By:**	Tyler Paxton
Completion Date:	12/20/2022 9:22 AM		

UDS

NONE

AQEs

NONE

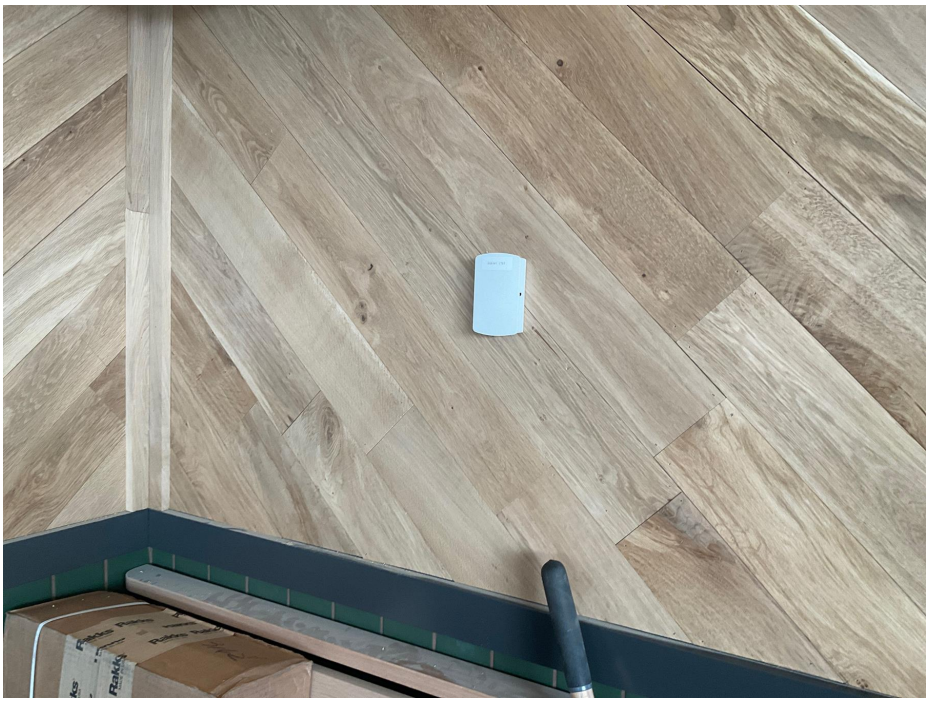
Fans

Fan 1 - CASRTU3-I.400-24-20T-DOAS (RTU-2) (RTU-2)

Model: CASRTU3-I.400-24-20T-DOAS

Other Notes:

N/A



Supply

Supply CFM: Design = 4900 Actual = 4612 (94.1% of design)

VOLTS	Design:	**208**	Actual:	**212**
HP	Design:	**7.5**	Actual:	**7.5**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1223**	Actual:	**1254**
RPM - MAX	Design:	**1400**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1150**	Actual:	**N/A**
Is blower door tamper switch	Design:	**Yes**	Actual:	**Yes**

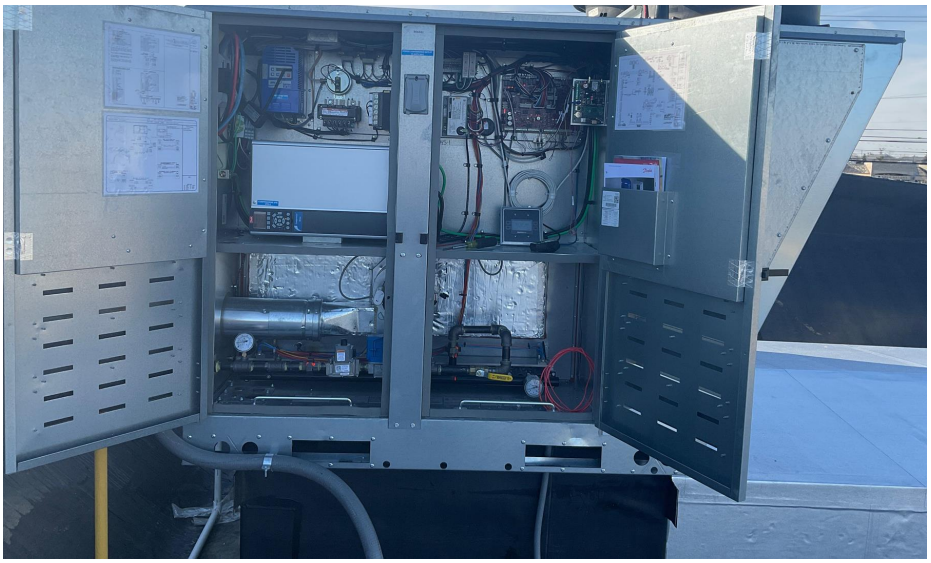
operational? Does blower shut down when the door is opened?				
Record the VFD HZ			Actual:	**43**
How was supply airflow measured for the T&B?			Actual:	**Flowhood**
Design OA %	Design:	**10%**	Actual:	**N/A**
Design OA CFM	Design:	**490**	Actual:	**2555**
Damper voltage at design outside air?			Actual:	**5.6**
How was outside air measured?			Actual:	**Flowhood**
Blower motor actual amperage at design airflow?	Design:	**Less than or equal to 21.1**	Actual:	**17.5**
Record pressure off the sampling tube of the air proving switch. For MUA Board: Note the differential pressure displayed on the HMI.			Actual:	**0.8922**
Modulate the blower to the minimum speed that will be required for the application. Modulate the damper to the minimum position required for the application. Calibrate the airflow proving.	Design:	**Complete**	Actual:	**Complete**
With the blower still at minimum speed and damper at minimum position, calibrate the clogged filter switch.	Design:	**Complete**	Actual:	**Complete**
Is the return duct installed and sealed to the unit?	Design:	**Yes**	Actual:	**Yes**
Design OA CFM at Interlock 1	Design:	**2500**	Actual:	**2555**
Damper voltage at design Interlock 1			Actual:	**0**
Design OA CFM at Interlock 2	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 2			Actual:	**0**
Design OA CFM at Interlock 3	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 3			Actual:	**0**
Design OA CFM at Interlock 4	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 4			Actual:	**0**
Design OA CFM at Interlock 5	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 5			Actual:	**0**
Design OA CFM at Interlock 6	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 6			Actual:	**0**
Design OA CFM at Interlock 7	Design:	**2500**	Actual:	**0**
Damper voltage at design Interlock 7			Actual:	**0**

DOAS

Take pictures of all four sides of the unit.	Design:	**Complete**	Actual:	**Complete**

Other Notes:

N/A




CAPTIVE-AIRE

Duct properly sealed to curb base and not bypassing through openings?	Design:	**Yes**	Actual:	**Yes**
Electrical input properly run through base or side?			Actual:	**Side, Gasketed**
Was a proper gasket used?	Design:	**Yes**	Actual:	**Yes**
Incoming gauge of wire	Design:	**3 AWG**	Actual:	**1**
Verify breaker size is appropriate for unit. Breaker size should be greater than or equal to MCA and less than or equal to MOCP. Must include picture.			Actual:	**110**

Other Notes:

N/A

Unit within five miles from the coast?			Actual:	**No**
Was the CAS supplied	Design:	**Yes**	Actual:	**Yes**

condensate drain used in the installation?				
Is condensate pan float switch free of debris and able to slide up and down?	Design:	**Yes**	Actual:	**Yes**
Is there any damage to refrigerant piping, distributor lines, or coils?	Design:	**No**	Actual:	**Yes**

Other Notes:

N/A

Confirm field wiring shown on wiring diagrams are complete and check for loose connections. Correct as needed.	Design:	**Complete**	Actual:	**Complete**
Program the list of setting changes through the HMI that were obtained from DOAS@captiveaire.com.			Actual:	**Complete**
Has SCADA been registered, activated and obtained a CASLink heartbeat?	Design:	**Yes**	Actual:	**Yes**

Temp Verification

Measure intake temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Measure return temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Measure evap coil temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Review intake humidity on HMI. Does it appear to be reporting correctly?	Design:	**Yes**	Actual:	**Yes**
Review discharge humidity on HMI. Does it appear to be reporting correctly?	Design:	**Yes**	Actual:	**Yes**
Are extra HMIs being used? Do not count the HMI in the unit. Upload picture of space HMI(s) and surrounding area.			Actual:	**Yes**
Record number of extra HMI's used.			Actual:	**1**
Is HMI address 56 being used for space temperature and humidity readings?			Actual:	**Yes**
Is HMI address 57 being used for space temperature and humidity readings?			Actual:	**No**
Is HMI address 58 being used for space temperature and humidity readings?			Actual:	**No**
Is HMI address 59 being used for space temperature and humidity readings?			Actual:	**No**
Is wired space wall temp/humidity sensor (not HMI) being used?			Actual:	**Yes**
Record the wired space temp reading from HMI. Make sure the wired space reading is recorded and not the average reading. (Service > Temperatures > Space Stat).			Actual:	**67**
Record the wired space RH reading from HMI. Make sure the wired space reading is recorded and not the average reading. (Service > RH > Values > Space).			Actual:	**18**
Measure space temp with meter and confirm it is within 10F of HMI readout.	Design:	**True**	Actual:	**True**
Record Humidity readout on HMI.			Actual:	**76**

Heater Gas

Gas Type	Design:	**Natural**	Actual:	**Natural**
Inlet Gas Pressure			Actual:	**8**
Set mod valve low fire setting using the IOM and STB20-1011. Record manifold gas pressure.	Design:	**0.15**	Actual:	**0.15**
Theoretical low fire temperature rise. Use STB20-1011 Calculator			Actual:	**11**
With unit maintaining steady state low fire, record intake temperature.			Actual:	**27**
With unit maintaining steady state low fire, record discharge temperature.			Actual:	**40**
Min Temp Rise. If the low fire temperature rise is not within 5 deg of the calculated theoretical, contact DOAS@captiveaire.com			Actual:	**13**
Set high fire pressure using test menu procedure in O&IM and record manifold gas pressure on pressure gauge.	Design:	**3.5" W.C.**	Actual:	**3.2**
Recorded Inlet Gas Pressure With Unit in high fire	Design:	**7" - 14" W.C.**	Actual:	**7**
Confirm the discharge air temp sensor is reading accurately in high fire. Reference STB20-1007 and modulate the burner to the highest capacity heat that can be achieved. Record the discharge air temp reading on the HMI.			Actual:	**87**
With unit still holding highest capacity heat, go into space and record discharge temp at the supply diffuser closest to unit using a handheld temp probe. Record Temperature.			Actual:	**85**
Difference between measured and actual temperature.			Actual:	**2**

Cooling

Check status of Oil Sensor Level in HMI. Is status open or closed? Open means oil level is low. Do not operate compressor if the OLS is open.	Design:	**Closed**	Actual:	**Closed**
Measure the outside air temp and record the value.			Actual:	**20**
For IBT, verify superheat controller settings. For MUA, verify EEV model in settings match the valve install on the unit.	Design:	**Yes**	Actual:	**Yes**
Verify compressor VFD settings. Do settings match schematic?	Design:	**Yes**	Actual:	**Yes**
Place the system in evacuation mode and record the pressure at the suction service port with a gauge set.			Actual:	**94**
With the unit still in evacuation mode, record the suction pressure reading from HMI.			Actual:	**91**
With the unit still in evacuation mode, record the discharge pressure reading from HMI.			Actual:	**94**
For MUA controls, record the liquid pressure reading from the HMI. If the unit has IBT controls, write N/A.			Actual:	**91**
Difference between measured and actual?			Actual:	**3**

Under 35F

WARNING!! Measured outside temperature too low to safely test cooling. Do not start cooling. Proceed to next section.			Actual:	**Ok**
Do condensing fans turn on?	Design:	**Yes**	Actual:	**Yes**
Does EEV modulate?	Design:	**Yes**	Actual:	**Yes**
Does the compressor ramp up?	Design:	**Yes**	Actual:	**Yes**

Final Checks

FINAL STEPS OF SDV. ONLY PERFORM FOLLOWING QUESTIONS IF REST OF SDV HAS BEEN COMPLETED!			Actual:	**Ok**
Is the smoke detector input wired and functional?			Actual:	**No**
Is the fire alarm input (terminal F) wired and functional?			Actual:	**No**
Is either the wired occupied override or unit interlock being utilized and operational?		**N/A**		
Once all SDV adjustments are complete, update the factory default settings through the service menu.	Design:	**Complete**	Actual:	**Complete**
Once all SDV adjustments are complete, download the CAAL file from the board, label it with the fan number, software revision and upload it to the NOLA job docs.			Actual:	**Complete**
Take picture of CASLink showing last heartbeat.			Actual:	**Complete**
DOAS data is visible on CASLink, tagged unique from other equipment and matches field labeling			Actual:	**Yes**
Take picture of CASLink showing DOAS data responding.			Actual:	**Complete**
All other equipment on job labeled and can see data on CASLink?			Actual:	**Yes**
Has someone from DOAS_support@captiveaire.com confirmed they are seeing data on this job?			Actual:	**Yes**

ECPs

NONE

CORE

NONE