RTU-1 Report

Info

Tag:	RTU-1	Title:	1st Rooftop Unit
Type:	Rooftop Unit	System:	Mechanical
Status:	Not Started	Space:	STEM Building

Description

Example equipment created via upload

Attributes

Manufacturer: Trane
Make: Climate Changers
Serial #:
Size: 20 ton
Airflow: 20,000 cfm
Age: 10 years
Condition: Good

Components

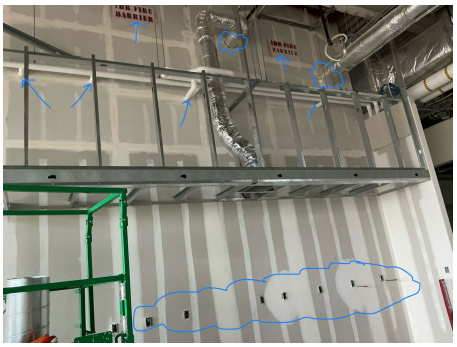
SAF — Supply Fan
Type: Centrifugal Fan • Status: Operational
Manufacturer: Baldor
Model: BD-100
Serial: 10019767
Type: Inline
Condition: Good
Age: 10 years
Notes: This fan is original with the unit. It is showing signs of wear.

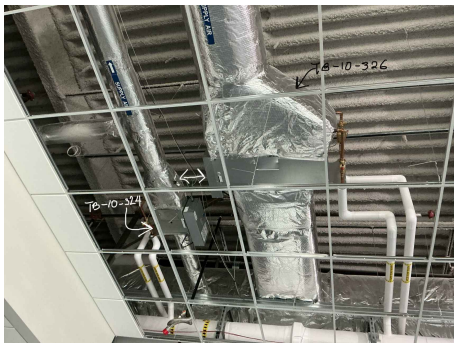
RAF — Return Air Fan
Type: Centrifugal Fan • Status: Operational
Manufacturer: Baldor
Model: BD109
Serial #: 90993265

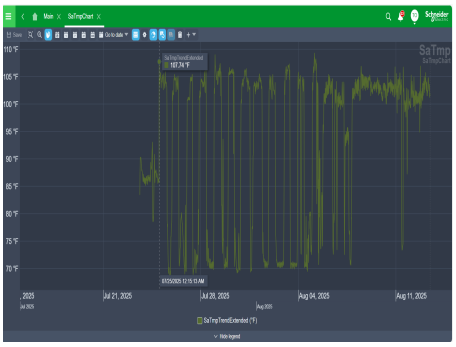
OAD — Outside Air Damper
Type: Damper Actuator • Status: Not Working
Manufacturer: Belimo
Model: RF650W
Type: Typical with end switch
Age: 10 years
Condition: Poor
Notes: Outside air damper was not being closed during occupied modes.

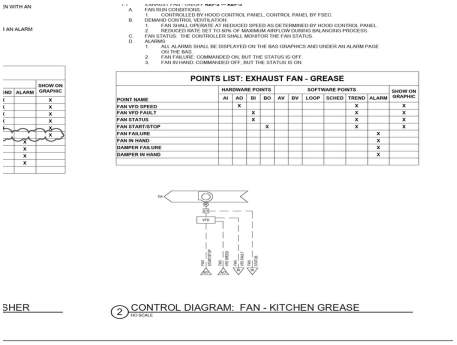
RAD — Outside Air Damper
Type: Damper Actuator • Status: Not Working
Manufacturer: Belimo
Model: RF650W
Type: Typical with end switch
Age: 10 years
Condition: Poor
Notes: Outside air damper was not being closed during occupied modes.

Photos









Attachments

project-issues (1).pdf

Checklists

Phsyical Checks

Installation

Functional Tests

#1 System Points

Point	Name	Type	Reading	Pass	Notes
DAT	Discharge Air Temp	Analog Input		—	
RAT	Return Air Temp	Analog Input		—	
MAT	Mixed Air Temp	Analog Input		—	
OAD	Outside Air Temp	Analog Input		—	
DAP	Discharge Static Press	Analog Input		—	
OAD	Outside Air Damper	Analog Output		—	
EAD	Exhaust Air Damper	Analog Output		—	
Fan SS	Supply Fan Start/Stop	Digital Output		—	
Fan Status	Supply Fan Status	Digital Input		—	
CLG_O	Cooling Output	Analog Output		—	
HTG_O	Heating Output	Analog Output		—	
OA_F	Outside Airflow	Analog Input		—	

#2 System Start / Stop

Description: This test is to verify that it is possible to programmatically start and stop the unit from the BAS.

Test Simulation	Expected Result	Actual Result	Pass
From the BAS adjust the time-of-day schedule so the the AHU is unoccupied.	1. Fan should stop 2. OAD Should close 3. Htg/Clg should be off	1. Fan status = 2. OAD = 3. Htg/Clg =	—
From the BAS adjust the time-of-day schedule so the the AHU is occupied.	1. Fan should start 2. OAD Should open 3. Htg/Clg should be active	1. Fan status = 2. OAD = 3. Htg/Clg =	—

#3 Occupied Cooling

Description: Verify that the unit can cool to meet the space demand

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Test	Expected	Actual	Pas
From the BAS change the cooling setpoint from 72 degF to 65 degF.	1. Fan should run 2. OAD should open 3. Cooling should increase	1. Fan status = 2. OAD = 3. Cooling =	—
From the BAS change the cooling setpoint from 65 degF to 60 degF.	1. Fan should start 2. OAD should open 3. Htg/Clg should be 100%	1. Fan status = 2. OAD = 3. Htg/Clg =	—
Release overrides	Unit should return to normal operation	1. Fan status = 2. OAD = 3. Htg/Clg =	—

#3 Occupied Heating

Description: Verify that the unit can heat to meet the space demand

Test	Expected	Actual	Pas
From the BAS change the heating setpoint from 72 degF to 78 degF.	1. Fan should run 2. OAD should open 3. Heating should increase	1. Fan status = 2. OAD = 3. Heating =	—
From the BAS change the cooling setpoint from 78 degF to 85 degF.	1. Fan should start 2. OAD should open 3. Heating should be 100%	1. Fan status = 2. OAD = 3. Heating =	—
Release overrides	Unit should return to normal operation	1. Fan status = 2. OAD = 3. Heating =	—

Issues

#1016 FPT: RTU-1 • #3 – Occupied Heating
Status: Open • Type: FPT • Priority: Medium