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# STRATH HAVEN MIDDLE SCHOOL

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## Retro-Commissioning Report

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Inspection Period: 4/1/2023 – 7/1/2023

Report completed: 7/7/2023



### **Systems Inspected:**

Page 2: Building Automation System

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Page 11: Makeup Air Handling Units



## Strath Haven Middle School Building Summary

Strath Haven Middle School was constructed in 1924 with later building additions. It was formerly known as Nether Providence High School and more recently as Nether Providence Junior High School. The building serves over 850 students. Major new construction, demolition and complete renovation of an existing building began around 2010 and was completed around 2011. Primary systems include a geothermal plant, rooftop air handling units, rooftop energy recovery units, water source heat pumps and kitchen makeup air units.

## Building Automation System Summary

The building automation system is Honeywell Excel 5000 installed during the 2010 construction. HVAC equipment utilizes an individualized electronic controller managing the overall functionality. This includes the geothermal plant, rooftop air handling units, rooftop energy recovery units, and water source heat pumps. An assortment of Honeywell electronic controller replacements is ongoing as the control system is approaching the end of its useful life. New and existing controls are integrated to the district wide Niagara server that provides graphics, alarming, trending, and restricted remote access.

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# GEOHERMAL PLANT

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## Application

Variable Volume Geothermal Condenser Water, Geothermal Vault, Electronic Controls

## Approximate Equipment Age

15 years

## Approximate Quantity

2 geothermal condenser water pumps

## Areas Served

Entire Building

## Equipment and Controls Expectations

The geothermal plant provides and distributes condenser water to energy recovery units and water source heat pumps located throughout the building. The plant is enabled continuously, with pump speed modulating to meet a differential pressure setpoint. The system maintains a condenser water supply temperature setpoint, utilizing a control valve that directs water flow through the vault or bypassing the vault. Equipment is staged such that the minimum number of pumps are running to satisfy the overall building condenser water demand. Pumps are rotated (lead and lag) to equalize runtimes. Alarms are generated upon a pump failure, or equipment inability to maintain setpoints. The lag pump assumes operation upon failure of the lead pump.

## Observations

The geothermal plant was operational as installed but was not installed per design. A boiler to condition the water during heating season was not provided or installed due to budgetary reasons.

Refer to BlueRithm Issues log for a complete list of observations.

## Recommendations

Upon repair of heat pump isolation valves an additional study collecting trend data and physical inspection of the field should be performed.

Refer to BlueRithm Issues log for a complete list of recommendations.

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# ROOFTOP AIR HANDLING UNITS

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## Application

Constant Volume Supply Air Fan, Constant Volume Return Air Fan, DX Cooling, Hot Gas Reheat, Modulating Gas Heat, Economizer, Electronic Controls

## Approximate Equipment Age

15 years

## Approximate Quantity

4

## Areas Served

Gymnasium, Auditorium, Cafeteria, Shops

## Equipment and Controls Expectations

The rooftop air handling unit provides heating, cooling, dehumidification, and outside air ventilation for the space it serves. The DX cooling compressors cycle on a call for cooling, as determined by the space temperature sensor or supply air temperature sensor. The gas burners cycle and modulate on a call for heating, as determined by the space temperature sensor or supply air temperature sensor. The DX cooling compressors cycle on and the hot gas bypass valve opens to reheat on a call for dehumidification. The minimum outside air is set from 0 to 100 percent. Outside air increases and modulates upon a call for cooling and if outside air conditions are favorable (economizer cooling), maintaining a low limit temperature. Outside air also increases in similar sequence upon high CO<sub>2</sub>. Outside air damper, exhaust damper, DX cooling, gas heating, supply fan and return fan close or shut down when the space is unoccupied. The unit cycles in heating, cooling, or dehumidification to maintain a minimum and a maximum space temperature and a maximum space humidity when the space is unoccupied. Alarms are generated upon equipment failure or the inability to maintain a desired setpoint. Unit shuts down upon active fire alarm or smoke detection.

## Observations

Rooftop air handling units are operational with each needing miscellaneous repairs or maintenance, particularly failed damper actuators. There is no evidence of a preventative maintenance schedule or prior repair work performed. Air filter replacement neglected. Refer to BlueRithm Issues log for a complete list of observations.

## Recommendations

Complete repairs as needed. Properly maintain and clean units with regular filter changes. Verify fire alarm and smoke detection systems are fully functional. Refer to BlueRithm Issues log for a complete list of recommendations.

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# ENERGY RECOVERY UNITS

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## Application

Variable Volume Exhaust Air Fan, Variable Volume Outside Supply Air Fan,  
Geothermal Heat Pump (cooling, heating), Electric Heat Backup, Electronic Controls

## Approximate Equipment Age

15 years

## Approximate Quantity

5

## Areas Served

Lavatory Exhaust and Water Source Heat Pump Outside Air

## Equipment and Controls Expectations

The energy recovery unit provides exhaust to primarily lavatory spaces. Heat or cool energy from the exhaust is transferred to fresh outside air concurrently supplied to the building (exhaust makeup). The fresh tempered air is delivered to operating water source heat pumps throughout the building. This supply air is controlled to maintain a supply air temperature setpoint, utilizing a geothermal heat pump. The compressors depend on water circulation from the geothermal plant. Heating is supplemented in cold weather by an electric heating coil. The exhaust air fan and outside air supply fan are variable volume and maintain their individual duct static pressure setpoint. The unit is equipped with exhaust air and outside air isolation dampers that close when the unit is disabled or unoccupied. Units are scheduled to run only when the building is occupied. Alarms are generated upon equipment failure or the inability to maintain a desired setpoint. The unit shuts down upon active fire alarm or smoke detection.

## Observations

Most energy recovery units are not operational or not running per design. There is no evidence of a preventative maintenance schedule with minimal prior repair work performed. Air filter replacement neglected, critical components removed or failed, parameters and sensors not reporting correct data. Refer to BlueRithm Issues log for a complete list of observations.

## Recommendations

The energy recovery unit provides a critical function and it's prudent to keep them fully operational and maintained. Upon completion of the controls upgrade a point-to-point checkout should be performed. Complete repairs as noted in the issues log. Properly lubricate and clean units with regular filter changes. Verify fire alarm and smoke detection systems are fully functional. Refer to BlueRithm Issues log for a complete list of recommendations.

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# WATER SOURCE HEAT PUMPS

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## Application

Constant Volume Supply Air, Motor Operated Outside Air Intake Damper,  
Geothermal Heat Pump (heating and cooling), Geothermal Isolation Valve,  
Electronic Controls

## Approximate Equipment Age

15 years

## Approximate Quantity

141 (56 inspected)

## Areas Served

Classrooms and Administration Areas

## Equipment and Controls Expectations

The water source heat pump provides heating and cooling by cycling a compressor and reversing valve to maintain a space temperature setpoint. The compressor depends on water circulation from the geothermal plant. Each unit is outfitted with an isolation valve to stop flow from the geothermal plant when not needed, thereby reducing unnecessary pump energy the plant consumes. Tempered outside air is ducted to each heat pump from an energy recovery unit. The heat pump supply fan runs continuously when the space is occupied to assist in this ventilation. An outside air isolation damper is provided, which closes when the heat pump is disabled or unoccupied. Units cycle during unoccupied periods to maintain a minimum heating and a maximum cooling setpoint. Alarms are generated upon equipment failure or the inability to maintain a desired setpoint. The unit shuts down upon active fire alarm or smoke detection.

## Observations

Heat pumps generally found operational with a wide array needing miscellaneous repairs, maintenance, or programming modifications. In particular geothermal loop isolation valves were found to be non-functional in a large percentage of the sample size of units tested. There is no evidence of a preventative maintenance schedule or prior repair work performed. Air filter replacement neglected. Refer to BlueRithm Issues log for a complete list of observations.

## Recommendations

Complete repairs as recommended. Ensure setpoint dials are disabled in common areas and limited in all other areas. Verify energy saving unoccupied setpoints and schedules are in place. Properly maintain and clean units with regular filter changes and coil cleaning. Verify fire alarm and smoke detection systems are fully functional. Refer to BlueRithm Issues log for a complete list of recommendations.

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# MAKEUP AIR UNITS

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## Application

Constant Volume Exhaust Air, Constant Volume Outside Supply Air, Gas Heat,  
Electronic Controls

## Approximate Equipment Age

15 years

## Approximate Quantity

2

## Areas Served

Kitchen



### Equipment and Controls Expectations

The makeup air unit supplies outside air to the kitchen to make up or replace cooking hood exhaust air. The outside supply air is heated in cold weather to maintain a supply air temperature setpoint. The unit is interlocked to run whenever the kitchen exhaust hood is enabled. Alarms are generated upon equipment failure or the inability to maintain a desired temperature setpoint. Units are disabled when the kitchen is unoccupied. Shut down occurs upon active fire alarm or smoke detection.

### Observations

Both units were found to be out of service. There is no evidence of a preventative maintenance schedule or prior repair work performed.

### Recommendations

The makeup air unit provides a critical function in preventing the building envelope from going negative, and it's prudent to keep them fully operational. Complete repairs as needed including controller replacement. Properly maintain and clean units with regular filter changes. Verify fire alarm and smoke detection systems are fully functional.



## Functional Checklist And Issues Log

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# SHMS-ERU-1

Project / Strath Haven Middle School / Energy Recovery Units

ERU

In Progress

|               |              |                      | Design | Proposed | Final            | Units |
|---------------|--------------|----------------------|--------|----------|------------------|-------|
| Location      | Roof         | Manufacturer         |        |          | Annexair         | -     |
| Serial Number | 1222-01-0808 | Model                |        |          | ERP-E-16-HW-D-WS | -     |
|               |              | EF Motor Amps        |        |          | 9.7              |       |
|               |              | EF RPM               |        |          | 1770             |       |
|               |              | EF VFD/Motor Voltage |        |          | 460              |       |
|               |              | SF Motor Amps        |        |          | 12.5             |       |
|               |              | SF RPM               |        |          | 1770             |       |
|               |              | SF VFD/Motor Voltage |        |          | 460              |       |

**SHMS-ERU-1 WORK**

### Functional Checklist

ERU Functional Checklist

| Controller | Object Name              | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|--------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Return Air Temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72                 | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Temp         | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 69.8               | 69.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Filter DP                | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 1.1                | .99            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Heat Wheel leaving Temp  | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72                 | 72.4           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | DX leaving temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72.4               | 71             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA duct Static           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 0                  | .09            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | SA Temperature           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72.                | 71.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Building Static Pressure | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | .03            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Zone Humidity            | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 45.2               | 40%            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | EA Fan VFD spd           | AO    | ---- | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |

**Functional Checklist And Issues Log**



| Controller | Object Name            | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments |
|------------|------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| ----       | SA Fan VFD Spd         | AO    | ---- | ---- | p     | p      | p       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Reheat Valve           | AO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| ----       | Heat Wheel cmd         | AO    | ---- | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Exhaust air damper sts | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Freezestat             | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | GEO thermal flow sts   | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | SA fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | EA Fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Exhaust Air Damper cmd | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | GeoValve cmd           | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Bypass Dmpr Cmd        | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Reversing Valve Mode   | Bo    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Compressor 1 cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Compressor 2 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Compressor 3 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Compressor 4 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | OA Damper Cmd          | BO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | OA Damper Status       | BI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |

**Complete**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:39 AM

Marked complete by dmychaluk@cm3inc.com on 7/5/2023 11:18:22 AM

SHMS-ERU-1 ISSUES

**ISSUE-593**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Exhaust fan signal is not tracking with supply fan. Controller will be replaced. :recommend re-configuring wiring for exhaust fan.

**Status** Open  
**Entered** 5/19/2023 11:09:06 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



13196028\_PXL\_20230519\_150741049.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com



13633533\_PXL\_20230519\_150745361.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com



**ISSUE-594**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Exhaust fan damper doesn't close when commanded. :Recommend replacing actuator and verify signal with new controller.

**Status** Open  
**Entered** 5/19/2023 11:13:00 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM

**ISSUE-595**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Geothermal isolation valve is no longer mounted to the valve body. Nor is it wired. :  
Recommend replacement of actuators and pulling new wire which runs approximately 8'  
through the unit

**Status** Open  
**Entered** 5/19/2023 11:14:59 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



16845092901365674161686298205265.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com



28716214\_16845093228411731502559835386318.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com

**ISSUE-596**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Heat wheel motor has a significant amount of oil around the base. : Recommend replacement of motor

**Status** Open  
**Entered** 5/19/2023 11:35:12 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



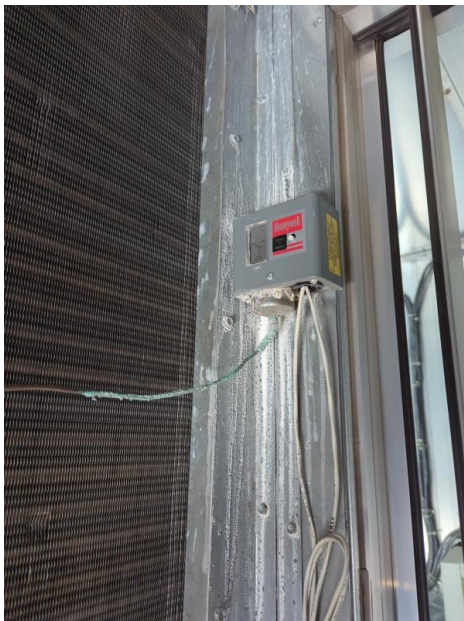
16845104727237155505814258638201.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com

**ISSUE-597**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Freezestat capillary is corroded and should be replaced

**Status** Open  
**Entered** 5/19/2023 11:37:21 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



16845106331835405102061401858775.v2.jpg; Added on 5/22/2023 8:54:38 AM by dmychaluk@cm3inc.com



**ISSUE-598**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Duct Static sensor is not reading correctly and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.

**Status** Open  
**Entered** 5/19/2023 3:57:39 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-599**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-1

Unit is not responding correctly to control overrides or automation. Controller is slated for replacement unit does not run automatically or when overridden safety circuit appears to be holding the unit out. : Recommend correction of wiring during controller replacement.

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



# SHMS-ERU-2

Project / Strath Haven Middle School / Energy Recovery Units

ERU

In Progress

|          |      | Design | Proposed | Final | Units                |
|----------|------|--------|----------|-------|----------------------|
| Location | Roof |        |          |       |                      |
|          |      |        |          |       | EF Motor Amps        |
|          |      |        |          |       | 10                   |
|          |      |        |          |       | EF Recorded Amps     |
|          |      |        |          |       | 3.9                  |
|          |      |        |          |       | EF VFD/Motor Voltage |
|          |      |        |          |       | 460                  |
|          |      |        |          |       | SF Motor Amps        |
|          |      |        |          |       | 11.5                 |
|          |      |        |          |       | SF VFD/Motor Voltage |
|          |      |        |          |       | 460                  |

SHMS-ERU-2 WORK

### Functional Checklist

ERU Functional Checklist

| Controller | Object Name              | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|--------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Return Air Temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.8               | 73.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Temp         | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.6               | 70.9           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Filter DP                | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.33           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Heat Wheel leaving Temp  | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.1               | 71.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | DX leaving temperature   | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 74.2               | 74.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA duct Static           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.09           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | SA Temperature           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.2               | 71.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Building Static Pressure | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.04           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Zone Humidity            | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 57.6               | 55%            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | EA Fan VFD spd           | AO    | ---- | ---- | p     | p      | p       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA Fan VFD Spd           | AO    | ---- | ---- | P     | p      | p       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Heat Wheel cmd           | AO    | ---- | ---- | p     | p      | p       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust air damper sts   | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |

**Functional Checklist And Issues Log**



| Controller | Object Name            | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Freezestat             | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | GEO thermal flow sts   | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | EA Fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Damper cmd | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | GeoValve cmd           | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Bypass Dmpr Cmd        | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Reversing Valve Mode   | Bo    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Compressor 1 cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Compressor 2 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | OA Damper Cmd          | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | OA Damper Status       | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |

**Complete**  
 Assigned to dmychaluk@cm3inc.com  
 Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:40 AM  
 Marked complete by dmychaluk@cm3inc.com on 7/5/2023 11:14:11 AM



SHMS-ERU-2 ISSUES

**ISSUE-600**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

Heat wheel air temp sensor is reading wrong. :recommend replacement or calibration, if possible.

**Status** Open  
**Entered** 5/19/2023 2:01:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-601**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

Exhaust air temp sensor is reading wrong. :recommend replacement or calibration, if possible.

**Status** Open  
**Entered** 5/19/2023 2:02:07 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-602**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

Filters must be changed. Very impacted.

**Status** Open  
**Entered** 5/19/2023 2:20:05 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-603**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

Duct Static sensor is not reading correctly and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.

**Status** Open  
**Entered** 5/19/2023 3:57:39 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-604**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-623**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-2

When overriding the zone humidity set point the zone humidity changes to the set point value. It is possible this sensor does not exist. : Recommend replacement of sensor and running new wire if needed.

**Status** Open  
**Entered** 5/22/2023 9:39:38 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/29/2023 12:00:00 AM



# SHMS-ERU-3

Project / Strath Haven Middle School / Energy Recovery Units

ERU

In Progress

|          |      | Design | Proposed | Final | Units                |
|----------|------|--------|----------|-------|----------------------|
| Location | Roof |        |          |       |                      |
|          |      |        |          |       | EF Motor Amps        |
|          |      |        |          |       | 10                   |
|          |      |        |          |       | EF VFD/Motor Voltage |
|          |      |        |          |       | 460                  |
|          |      |        |          |       | SF Motor Amps        |
|          |      |        |          |       | 11.5                 |
|          |      |        |          |       | SF VFD/Motor Voltage |
|          |      |        |          |       | 460                  |

**SHMS-ERU-3 WORK**

### Functional Checklist

ERU Functional Checklist

| Controller | Object Name              | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments |
|------------|--------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| ----       | Return Air Temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 74.3               | 73             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Exhaust Air Temp         | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.7               | 70.8           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Filter DP                | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.02           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Heat Wheel leaving Temp  | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72.7               | 201            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | DX leaving temperature   | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.5               | 72.7           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | SA duct Static           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.11           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | SA Temperature           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.5               | 74.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Building Static Pressure | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 0.04           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Zone Humidity            | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | EA Fan VFD spd           | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | SA Fan VFD Spd           | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Reheat Valve             | AO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| ----       | Heat Wheel cmd           | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Exhaust air damper sts   | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |

**Functional Checklist And Issues Log**



| Controller | Object Name            | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Freezestat             | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | GEO thermal flow sts   | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | SA fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | EA Fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Damper cmd | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | GeoValve cmd           | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Bypass Dmpr Cmd        | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Reversing Valve Mode   | Bo    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Compressor 1 cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Compressor 2 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | OA Damper Cmd          | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | OA Damper Status       | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |

**Complete**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:41 AM

Marked complete by dmychaluk@cm3inc.com on 7/5/2023 11:12:45 AM



SHMS-ERU-3 ISSUES

**ISSUE-605**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-3

Heat wheel air temp sensor is off by over 100 degrees. Must calibrate or replace.

**Status** Open  
**Entered** 5/19/2023 2:50:42 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-606**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-3

Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-607**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-3

Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times

|                          |                       |
|--------------------------|-----------------------|
| <b>Status</b>            | Open                  |
| <b>Entered</b>           | 5/19/2023 3:57:40 PM  |
| <b>Entered By</b>        | dmychaluk@cm3inc.com  |
| <b>Priority</b>          | Automation            |
| <b>Category</b>          | Automation            |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com  |
| <b>Respondent Status</b> | Open                  |
| <b>Due Date</b>          | 5/26/2023 12:00:00 AM |



# SHMS-ERU-4

Project / Strath Haven Middle School / Energy Recovery Units

ERU

In Progress

|                      |   | Design | Proposed | Final    | Units |
|----------------------|---|--------|----------|----------|-------|
| Area Served          | Area C                                    |        |          | Annexair | -     |
| Location             | Roof                                      |        |          | ERP      | -     |
| Location Description | Sub roof next to Gym, next to RTU 9 and 8 |        |          |          |       |
| Serial Number        | 1222-04-0808                              |        |          |          |       |
|                      |   |        |          | 13.4     |       |
|                      |   |        |          | 1765     |       |
|                      |   |        |          | 460      |       |
|                      |   |        |          | 13.4     |       |
|                      |   |        |          | 1765     |       |
|                      |   |        |          | 460      |       |

SHMS-ERU-4 WORK

### Functional Checklist

ERU Functional Checklist

| Controller | Object Name              | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|--------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Return Air Temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 67.9               | 66.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Temp         | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 67.7               | 66.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Filter DP                | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 0.01               | 0.02           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Heat Wheel leaving Temp  | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 58.1               | 58.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | DX leaving temperature   | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 59.3               | 57.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA duct Static           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | -1.14          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA Temperature           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 59.3               | 60.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Building Static Pressure | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 0.04               | 0.04           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Zone Humidity            | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | -7%            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | EA Fan VFD spd           | AO    | ---- | ---- | Ok    | Ok     | Ok      | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |

Functional Checklist And Issues Log



| Controller | Object Name            | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | Bl   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                                       |
|------------|------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| ----       | SA Fan VFD Spd         | AO    | ---- | ---- | Ok    | Ok     | OK      | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Reheat Valve           | AO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----   |
| ----       | Heat Wheel cmd         | AO    | ---- | ---- | Bad   | Bad    | Bad     | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | Exhaust air damper sts | Bl    | ---- | ---- | ----  | ----   | ----    | Bad  | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | Freezestat             | Bl    | ---- | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | GEO thermal flow sts   | Bl    | ---- | ---- | ----  | ----   | ----    | Bad  | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | SA fan Status          | Bl    | ---- | ---- | ----  | ----   | ----    | Bad  | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | EA Fan Status          | Bl    | ---- | ---- | ----  | ----   | ----    | Bad  | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | Exhaust Air Damper cmd | BO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | GeoValve cmd           | BO    | OK   | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Bypass Dmpr Cmd        | BO    | OK   | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Reversing Valve Mode   | Bo    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----   |
| ----       | Compressor 1 cmd       | BO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Unable to confirm command due to unit failures |
| ----       | Compressor 2 Cmd       | BO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Unable to confirm command due to unit failures |
| ----       | OA Damper Cmd          | BO    | OK   | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | OA Damper Status       | Bl    | ---- | ---- | ----  | ----   | ----    | Bad  | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |

**Complete**  
 Assigned to dmychaluk@cm3inc.com  
 Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:44 AM  
 Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:54:44 AM



SHMS-ERU-4 ISSUES

**ISSUE-608**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Exhaust damper status will not change state it shows closed even though the damper is open. Cycling the damper did not change the state of the status. Recommend installation of a new damper actuator with built in end switch, or installation of an external end switch mounted to the damper assembly. It appears ERU 4 is not running due to this issue.

**Status** Open  
**Entered** 4/25/2023 1:07:32 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



**ISSUE-609**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Zone humidity Sensor reading -7% . : Recommend replacing the sensor and verifying readings within the BAS.

**Status** Open  
**Entered** 4/25/2023 1:50:26 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

**ISSUE-610**  
 Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Outside air damper reporting incorrect status (damper is open and the status is closed).  
 : Replace controller or check programming.

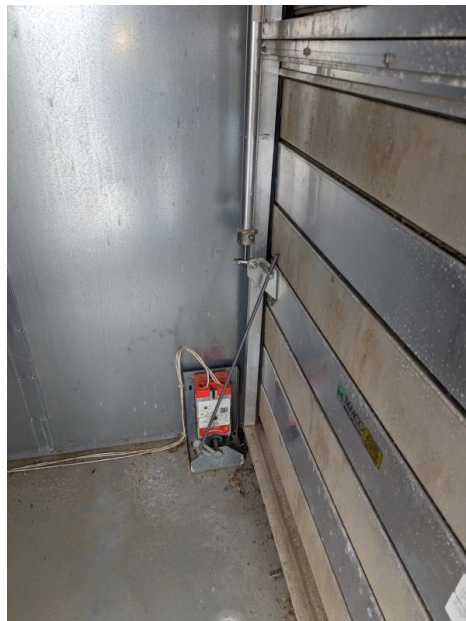
**Status** Open  
**Entered** 4/25/2023 2:17:48 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

## Honeywell

**OA Damper Parameters**

| OA Damper Parameters |        |     |
|----------------------|--------|-----|
| OA Dmpr Off Dly      | 4      | Sec |
| OA Dmpr Hand Alm     | Normal |     |
| OA Dmpr Alm          | Normal |     |
| OA Dmpr Sts          | Close  |     |
| OA Dmpr En           | Enable | ▼   |
| OA Dmpr              | Open   | ▼   |

Capture.PNG; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com



55815795\_PXL\_20230425\_181222914.v2.jpg; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com

**ISSUE-611**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Heat wheel VFD not responding to BAS commands. Unable to confirm if failure lies in the VFD, controller, or wiring. : A new controller is being installed as part of this project. : Recommend the VFD be verified again and replaced if required.

**Status** Open  
**Entered** 4/25/2023 2:19:50 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Electrical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



04758714\_PXL\_20230425\_182425974.v2.jpg; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com

**ISSUE-612**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Geothermal flow status showing flow regardless of geothermal valve position. :  
Recommend replacing/installing a new flow meter, a meter was not able to be located.

**Status** Open  
**Entered** 4/25/2023 2:21:39 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



07509989\_PXL\_20230425\_182713073.v2.jpg; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com

**ISSUE-613**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Geothermal loop valve has two actuators the lower actuator does not move when a signal is sent. The upper actuator moves the valve stem as expected. : Confirm requirement for two actuators on the valve stem. : Replace/secure actuator properly and confirm operation of components.

**Status** Open  
**Entered** 4/25/2023 2:23:23 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



06348039\_PXL\_20230425\_182713073.v2.jpg; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com



07316838\_PXL\_20230425\_181008412.v2.jpg; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com



**ISSUE-614**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Supply air fan operating at 70% VFD speed and not making status. : Check fan proving device, controller and programming. Replace components as required.

**Status** Open  
**Entered** 4/25/2023 2:28:02 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



**SA Fan Parameters**

| SA Fan Parameters    |        |   |
|----------------------|--------|---|
| SA Fan VFD Min Spd   | 30     | % |
| SA Fan Spd           | 0      | % |
| SA Fan Hand Mode Alm | Normal |   |
| SA Fan Sts           | Off    |   |
| SA Fan Alm           | Normal |   |
| SA Fan En            | Disab  | ▼ |

Capture.PNG; Added on 5/22/2023 8:54:43 AM by dmychaluk@cm3inc.com



**ISSUE-615**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Unit not turning on when commanded, it appears this is due to issue within the existing Excel controller. Additional issues may exist in wiring or hardware. Outputs are relatively functional but will not work automatically. : Recommend full commissioning upon controller replacement and correction of issues.

**Status** Open  
**Entered** 4/25/2023 3:09:52 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



**ISSUE-616**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Duct Static sensor is not reading correctly and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-617**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-4

Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fan does not appear to be running normally and does not respond to commands.

|                          |                       |
|--------------------------|-----------------------|
| <b>Status</b>            | <b>Open</b>           |
| <b>Entered</b>           | 5/19/2023 3:57:40 PM  |
| <b>Entered By</b>        | dmychaluk@cm3inc.com  |
| <b>Priority</b>          | Automation            |
| <b>Category</b>          | Automation            |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com  |
| <b>Respondent Status</b> | <b>Open</b>           |
| <b>Due Date</b>          | 5/26/2023 12:00:00 AM |



# SHMS-ERU-5

Project / Strath Haven Middle School / Energy Recovery Units

ERU

In Progress

|               |               |                      | Design | Proposed | Final            | Units |
|---------------|---------------|----------------------|--------|----------|------------------|-------|
| Location      | Roof          | Model                |        |          | ERP-E-04-HW-D-WS | -     |
| Serial Number | 1222-05 -0808 | EF Motor Amps        |        |          | 6.6              |       |
|               |               | EF RPM               |        |          | 1750             |       |
|               |               | EF VFD/Motor Voltage |        |          | 460              |       |
|               |               | SF Motor Amps        |        |          | 6.6              |       |
|               |               | SF RPM               |        |          | 1750             |       |
|               |               | SF VFD/Motor Voltage |        |          | 460              |       |

**SHMS-ERU-5 WORK**

### Functional Checklist

ERU Functional Checklist

| Controller | Object Name              | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|------------|--------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| ----       | Return Air Temp          | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 72.5               | 68.3           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Exhaust Air Temp         | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.1               | 70.3           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Filter DP                | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | .03            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Heat Wheel leaving Temp  | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.2               | 70.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | DX leaving temperature   | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.3               | 71.9           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA duct Static           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | .21            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | SA Temperature           | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 73.5               | 73             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | Building Static Pressure | AI    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | .04            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Zone Humidity            | AI    | ---- | ---- | ----  | ----   | ----    | ---- | 53.2               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| ----       | EA Fan VFD spd           | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |

**Functional Checklist And Issues Log**



| Controller | Object Name            | Units | I/O# | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments |
|------------|------------------------|-------|------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| ----       | SA Fan VFD Spd         | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Reheat Valve           | AO    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| ----       | Heat Wheel cmd         | AO    | ---- | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Exhaust air damper sts | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Freezestat             | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | GEO thermal flow sts   | BI    | ---- | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | SA fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | EA Fan Status          | BI    | ---- | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Exhaust Air Damper cmd | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | GeoValve cmd           | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Bypass Dmpr Cmd        | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | Reversing Valve Mode   | Bo    | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| ----       | Compressor 1 cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | Compressor 2 Cmd       | BO    | ---- | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| ----       | OA Damper Cmd          | BO    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | OA Damper Status       | BI    | ---- | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| ----       | ----                   | ----  | ---- | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |

**Complete**  
 Assigned to dmychaluk@cm3inc.com  
 Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:46 AM  
 Marked complete by mikeyoung@cm3inc.com on 5/22/2023 8:54:46 AM

SHMS-ERU-5 ISSUES

**ISSUE-618**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Disconnect switch is bent and damaged unit cannot be turned off to access the cabinet. :  
Recommend installation of a new disconnect switch.

**Status** Open  
**Entered** 5/5/2023 1:41:41 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



07207300\_eru5disco.jpg; Added on 7/7/2023 9:01:07 AM by dmychaluk@cm3inc.com

**ISSUE-619**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Appears to be a slow glycol leak on the geothermal loop that needs correction. :  
recommend removal of all pipe insulation, repair of any leaks, cleaning/disinfecting the  
cabinet and insulation of piping.

**Status** Open  
**Entered** 5/5/2023 1:43:06 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



05871674\_ERU5Leak2.jpg; Added on 7/7/2023 9:00:05 AM by dmychaluk@cm3inc.com



05949779\_ERU5leak5.jpg; Added on 7/7/2023 9:00:05 AM by dmychaluk@cm3inc.com

**ISSUE-620**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

OA filters are dirty and clogged. : Recommend replacement of the OA filters for the ERU

**Status** Open  
**Entered** 5/5/2023 1:44:04 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



22598561\_ERU5 Filters.jpg; Added on 7/7/2023 9:01:22 AM by dmychaluk@cm3inc.com



**ISSUE-621**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-622**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times

**Status** Open  
**Entered** 5/19/2023 3:57:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/26/2023 12:00:00 AM



**ISSUE-967**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Building static does not appear to be updating and holds a constant reading through the day. : Recommend verification of sensor installation and installing a new sensor if detemrined to be failed.

**Status** Open  
**Entered** 7/7/2023 8:51:33 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 7/14/2023 12:00:00 AM



**ISSUE-968**  
Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

EX and RA temperature sensors are not reading accurately between 3 and 4 deg F cooler than actual. : Recommend verification of offsets within the controller and replacement of sensors if required.

**Status** Open  
**Entered** 7/7/2023 8:53:26 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 7/14/2023 12:00:00 AM

**ISSUE-969**

Project / Strath Haven Middle School / Energy Recovery Units / SHMS-ERU-5

Geothermal flow status is not changing state based on valve position. : Recommend replacement/installation of a flow switch in the geothermal loop piping

**Status** Open  
**Entered** 7/7/2023 8:54:36 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 7/14/2023 12:00:00 AM



06900609\_floweru5.jpg; Added on 7/7/2023 9:02:06 AM by dmychaluk@cm3inc.com

# Geothermal Loop Controller

Project / Strath Haven Middle School / Geothermal System

WSHP

Complete

| Design       | Proposed | Final | Units |
|--------------|----------|-------|-------|
| Manufacturer |          | Trane | -     |

GEOTHERMAL LOOP CONTROLLER WORK

## Functional Checklist

Geothermal Loop Functional Checklist

| Controller | Point Name           | Units | I/O # | BO   | AO   |      |      | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments  |
|------------|----------------------|-------|-------|------|------|------|------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|---|
|            |                      |       |       |      | 0%   | 50%  | 100% |      |                    |                |                          |                          |                          |   |
| ----       | Field Return Temp    | AI    | ----  | ---- | ---- | ---- | ---- | ---- | 67                 | 66.7           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | Field Supply Temp    | AI    | ----  | ---- | ---- | ---- | ---- | ---- | 67                 | 66.4           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | Field Bypass Valve   | AO    | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | Unable to locate, recommend further review      |
| ----       | Building DP          | AI    | ----  | ---- | ---- | ---- | ---- | ---- | ----               | 14.11          | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | Balanced at 12 PSI, setpoints raised to 14 PSI. |
| ----       | Building Return Temp | AI    | ----  | ---- | ---- | ---- | ---- | ---- | 67                 | 66.7           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | Pump Lead Lag Select | BO    | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | Plant Enable         | BO    | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | Occupancy Cmd        | BO    | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | Programmed for 24/7 occupancy                   |
| ----       | ----                 | ----  | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | ----                 | ----  | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----  |
| ----       | ----                 | ----  | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----  |

Complete

Assigned to dmychaluk@cm3inc.com  
 Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:13 AM  
 Marked complete by dmychaluk@cm3inc.com on 7/5/2023 1:13:42 PM





# GP-1

Project / Strath Haven Middle School / Geothermal System

Pump(1)

**Complete**

|             |                     | Design         | Proposed | Final   | Units |
|-------------|---------------------|----------------|----------|---------|-------|
| Description | Geothermal Pump     | Manufacturer   |          | Emerson | -     |
| Area Served | Building Heat Pumps | Model          |          | R360B   | -     |
| Location    | Level 1 Area B      | HP             |          | 50      | HP    |
|             |                     | Motor Amps     |          | 58      | A     |
|             |                     | Recorded Amps  |          | 31.3    | A     |
|             |                     | Recorded Power |          | 34 %    |       |
|             |                     | Voltage        |          | 460     | V     |

**GP-1 WORK**

## Functional Checklist

AHU Functional Checklist

| Controller | Point Name     | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                       | Comments |
|------------|----------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|--------------------------|----------|
| ----       | Pump Enable    | BO    | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Pump Status    | BI    | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Pump VFD Speed | AO    | ----  | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | ----           | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | ----           | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | ----     |

**Complete**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:12 AM

Marked complete by dmychaluk@cm3inc.com on 7/5/2023 11:11:00 AM



# GP-2

Project / Strath Haven Middle School / Geothermal System

Pump(2)

Complete

|             |                     | Design | Proposed | Final   | Units |
|-------------|---------------------|--------|----------|---------|-------|
| Description | Geothermal Pump     |        |          | Emerson | -     |
| Area Served | Building Heat Pumps |        |          | R360B   | -     |
| Location    | Level 1 Area B      |        |          | 50      | HP    |
|             |                     |        |          | 58      | A     |
|             |                     |        |          | 36      | A     |
|             |                     |        |          | 51.6 %  |       |
|             |                     |        |          | 460     | V     |

GP-2 WORK

### Functional Checklist

AHU Functional Checklist

| Controller | Point Name     | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                       | Comments |
|------------|----------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|--------------------------|----------|
| ----       | Pump Enable    | BO    | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Pump Status    | BI    | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | Pump VFD Speed | AO    | ----  | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | ----           | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | ----           | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | ----     |

Complete

**Assigned to** dmychaluk@cm3inc.com  
**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:13 AM  
**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:10:28 AM



# MAU-1

Project / Strath Haven Middle School / Makeup Air Units

MAU

In Progress

|             |               | Design | Proposed | Final | Units |
|-------------|---------------|--------|----------|-------|-------|
| Area Served | Kitchen Hoods |        |          |       |       |
| Location    | Roof          |        |          |       |       |

MAU-1 ISSUES

## ISSUE-966

Project / Strath Haven Middle School / Makeup Air Units / MAU-1

Unit is no longer communicating with the BAS, the controller is still on and operational.  
 Based on the filter condition and general appearance the unit does not run often :  
 Recommend the controller be replaced and unit be recommissioned.

**Status** Open  
**Entered** 7/6/2023 3:22:55 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 7/13/2023 12:00:00 AM



# MAU-2

Project / Strath Haven Middle School / Makeup Air Units

MAU

In Progress

|             |               | Design | Proposed | Final | Units |
|-------------|---------------|--------|----------|-------|-------|
| Area Served | Kitchen Hoods |        |          |       |       |
| Location    | Roof          |        |          |       |       |

MAU-2 WORK

### Functional Checklist

AHU Functional Checklist

| Controller | Point Name          | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|---------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|--|
| ----       | OA Damper Status    | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Controller removed from Cbus network due to failure. New controller recommended. |
| ----       | OA Damper Fail      | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | OA Damper Hand      | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | OA Damper Enable    | BO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | OA Damper           | BO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | SA Temp             | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | Smoke Detector      | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | Heating Enable      | BO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | Duct High Static DP | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |
| ----       | Heating Output      | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----   |

**Functional Checklist And Issues Log**



| Controller | Point Name    | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments |
|------------|---------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|----------|
| ----       | System Enable | BO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |

**Complete**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:11 AM

Marked complete by dmychaluk@cm3inc.com on 7/5/2023 11:09:34 AM



MAU-2 ISSUES

**ISSUE-971**

Project / Strath Haven Middle School / Makeup Air Units / MAU-2

Unit is no longer communicating with the BAS, the controller is still on and operational.  
Based on the filter condition and general appearance the unit does not run often :  
Recommend the controller be replaced and unit be recommissioned.

|                          |                       |
|--------------------------|-----------------------|
| <b>Status</b>            | <b>Open</b>           |
| <b>Entered</b>           | 7/7/2023 3:18:16 PM   |
| <b>Entered By</b>        | dmychaluk@cm3inc.com  |
| <b>Priority</b>          | Automation            |
| <b>Category</b>          | Automation            |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com  |
| <b>Respondent Status</b> | <b>Open</b>           |
| <b>Due Date</b>          | 7/14/2023 12:00:00 AM |



# HWP-1

Project / Strath Haven Middle School / Misc

Pump(3)

Complete

|        |          |       |       |
|--------|----------|-------|-------|
| Design | Proposed | Final | Units |
|--------|----------|-------|-------|

HWP-1 WORK

### Functional Checklist

Pump Functional Checklist

| Controller | Point Name  | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments |
|------------|-------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|----------|
| ----       | Pump Enable | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----     |
| ----       | ----        | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ----     |

Complete

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:13 AM

Marked complete by dmychaluk@cm3inc.com on 5/22/2023 9:58:39 AM

# RTU-6

Project / Strath Haven Middle School / Roof Top Units

RTU

In Progress

|               |              | Design | Proposed | Final                | Units   |
|---------------|--------------|--------|----------|----------------------|---------|
| Area Served   | Gymnasium    |        |          | annexAir             | -       |
| Location      | Roof         |        |          | AHU-20-C-H-HC-AC     | -       |
| Serial Number | 1371-01-0509 |        |          |                      |         |
|               |              |        |          | RF Motor Amps        | 2, 13.3 |
|               |              |        |          | RF RPM               | 2, 1750 |
|               |              |        |          | RF VFD/Motor Voltage | 2, 460  |
|               |              |        |          | SF Motor Amps        | 2, 10   |
|               |              |        |          | SF RPM               | 2, 1760 |
|               |              |        |          | SF VFD/Motor Voltage | 2, 460  |

**RTU-6 WORK**

### Functional Checklist

RTU Standard FC

| Point Name                | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|---------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| Supply Air Temperature    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 66.1               | 67.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Mixed Air Temperature     | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 65.6               | 65.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Return Air Temperature    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 67.1               | 66.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Filter DP                 | AI    | ----  | ---- | ----  | ----   | ----    | ---- | .9                 | 0.02           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| Cooling Coil Leaving Temp | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 65.6               | 65.9           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Room Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Room Humidity             | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| CO2 Sensor                | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 0.5            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| Return Fan VFD Cmd        | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |

**Functional Checklist And Issues Log**



| Point Name             | Units   | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments             |
|------------------------|---------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------------------|
| MA Damper Cmd          | AO      | ----  | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Hot Gas Bypass         | AO      | ----  | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                 |
| Gas Heat Modulation    | AO      | ----  | ---- | P     | P      | P       | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Supply Fan Status      | BI      | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Cooling Stage 1        | BO      | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Cooling Stage 2        | BO      | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Supply Fan Enable      | BO      | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Return Fan Enable      | BO      | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Freezestat             | DI      | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Min OA Damper Stpt     | AlsetPt | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 10             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| C02 Stpt               | AlsetPt | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 200            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Setpoint is very low |
| Building Static Sensor | AI      | ----  | ---- | ----  | ----   | ----    | ---- | .04                | .05            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| RF VFD Min Speed       | AlsetPt | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 25%            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| Return Fan Status      | DI      | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| ----                   | ----    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |
| ----                   | ----    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----                 |

**In Progress**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:16 AM

**Last edit by** dmychaluk@cm3inc.com on 7/5/2023 3:36:23 PM

RTU-6 ISSUES

**ISSUE-416**

Project / Strath Haven Middle School / Roof Top Units / RTU-6

Room CO2 sensor displays incorrect value showing 0.5. : Recommend replacement of sensor, wiring may also be failed.

**Status** Open  
**Entered** 4/26/2023 8:03:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM

| Room Parameters |      |     |
|-----------------|------|-----|
| Room Hum        | 30   | %   |
| Room Hum Sp     | 65   | %   |
| Room CO2        | -0.4 | PPM |

Capture.PNG; Added on 5/22/2023 8:53:14 AM by dmychaluk@cm3inc.com

**ISSUE-417**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-6

Unit fails to provide economizer cooling until the Average Outside Air Temperature rises ABOVE the Winter Mode Setpoint (currently set at 60 degrees F). : Revise programming, clarify meaning of parameters and setpoints, or replace controller.

**Status** Open  
**Entered** 4/26/2023 8:12:41 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM

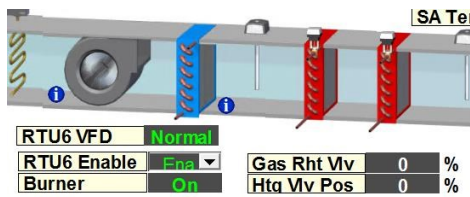
| Roof Top Unit RTU - 6 Parameters      |           | Roof Top Unit RTU - 6 Parameters |            |
|---------------------------------------|-----------|----------------------------------|------------|
| Occupied Cooling Mode Temperature     | 63.0 *    | VFD Speed                        | 25 %       |
| Occupied Cooling Outside Air          | 60.0 *    | Blade Static Press               | 0.05 Inwg  |
| Occupied Heating Mode Temperature     | 62.0 *    | Winter Mode Setpoint             | 60.0 *     |
| Occupied Heating Outside Air          | 60.0 *    | VFD MinSpeed                     | 25 %       |
| Unoccupied Cooling Outside Air        | 60.0 *    | VFD Alarm                        | Normal     |
| Unoccupied Cooling Mode Temperature   | 60.0 *    | Enable                           | Enable     |
| Unoccupied Heating Outside            | 60.0 *    | UnOccupied Cooling Mode          | Disable    |
| Unoccupied Heating Mode Temperature   | 60.0 *    | UnOccupied Heating Mode          | Disable    |
| Average Outside Air CO2               | 475.5 PPM | VFD Minimum Speed Enable         | Enable     |
| Average Outside Air Temperature       | 56.1 *    | Hand On Auto Switch              | Auto       |
| Building Static Pressure Setpoint     | 0.05 Inwg | Auto Mode                        | Auto       |
| Override Time                         | 120 Min   | RTU6 Avg OaCO2                   | 475.5 PPM  |
| Dehumidify Mode Room Temperature      | 63 %      | CO2 Override Setpoint            | 200.0 PPM  |
| Mixed Air Damper Override Setpoint    | 45 %      | CO2 Override Mode                | Disable    |
| Morning Cool Mode Disable Temperature | 75.0 *    | Occupied Mode                    | Occupied   |
| Morning Cooling On Mode Temperature   | 70.0 *    | Morning Cooldown Mode            | Disable    |
| Morning Warm Mode Disable             | 70.0 *    | Morning Warmup Mode              | Enable     |
| Morning Warmup Mode Temperature       | 60.0 *    | Occupied Cooling Mode            | Disable    |
| Heat/Cool Mode                        | Heating   | Occupied Heating Mode            | Enable     |
| Dehumidification Mode                 | Off       | Occupied Schedule                | Occupied   |
| Economizer Mode                       | Off       | Override                         | UnOccupied |
| Economizer Lo Outside Air Sp          | 45.0 *    | LED                              | 0.00       |
|                                       |           | Optimum Start/ Stop              | Off        |
|                                       |           | Override Push Button             | Off        |

Capture.PNG; Added on 5/22/2023 8:53:14 AM by dmychaluk@cm3inc.com

**ISSUE-418**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-6

Points from the controller are misleading displaying Htg Vlv Pos and Gas Rht Vlv. Htg Vlv Pos is actually gas heating modulation signal. Gas Rht Vlv is actually hot gas bypass modulation signal for de-humidification.

**Status** Open  
**Entered** 4/26/2023 8:29:59 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



Capture.PNG; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

**ISSUE-419**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-6

The unit is equipped with a return fan VFD, which is assumed controlled to maintain building static pressure. There is only one VFD output point and it is unclear as to which fan (supply or return) the point is for. : Programming will need to be updated and additional points exposed to properly control and display the unit status properly.

**Status** Open  
**Entered** 4/26/2023 8:40:58 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM

| Roof Top Unit RTU - 6 Parameters |        |     |
|----------------------------------|--------|-----|
| VFD Speed                        | 25     | %   |
| Bldg Static Press                | 0.05   | Inw |
| Winter Mode Setpoint             | 60.0   | °   |
| VFD MinSpeed                     | 25     | %   |
| VFD Alarm                        | Normal |     |

Capture.PNG; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com



43379500\_PXL\_20230426\_135426623.v2.jpg; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

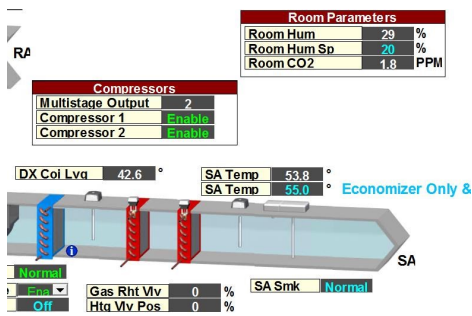


43863878\_PXL\_20230426\_134159762.v2.jpg; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

**ISSUE-420**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-6

A call for dehumidification enabled compressors, but failed to modulate hot gas bypass. :  
 Clarify sequence of operation and programming.

**Status** Open  
**Entered** 4/26/2023 9:09:08 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



Capture.PNG; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

**ISSUE-421**  
Project / Strath Haven Middle School / Roof Top Units / RTU-6

Exhaust air temperature sensor is not located in the airstream. : Replace or reinstall exhaust air temperature sensor as required.

**Status** Open  
**Entered** 4/26/2023 9:43:32 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



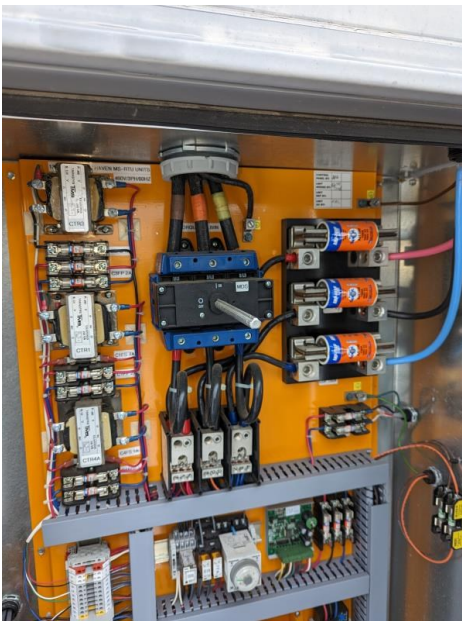
56957497\_PXL\_20230426\_133847289.v2.jpg; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

### ISSUE-422

Project / Strath Haven Middle School / Roof Top Units / RTU-6

The unit manufacturer's disconnect switch is bypassed. : Repair or replace disconnect switch.

**Status** Open  
**Entered** 4/26/2023 9:46:17 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



52790549\_PXL\_20230426\_133742813.v2.jpg; Added on 5/22/2023 8:53:15 AM by dmychaluk@cm3inc.com

**ISSUE-423**  
Project / Strath Haven Middle School / Roof Top Units / RTU-6

Gas burner 2nd stage is turned off. : Repair gas burner and restore operation.

**Status** Open  
**Entered** 4/26/2023 9:49:00 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



38811271\_PXL\_20230426\_134559203.v2.jpg; Added on 5/22/2023 8:53:16 AM by dmychaluk@cm3inc.com

**ISSUE-424**  
Project / Strath Haven Middle School / Roof Top Units / RTU-6

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 4/26/2023 10:21:17 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



47822753\_PXL\_20230426\_134952139.v2.jpg; Added on 5/22/2023 8:53:16 AM by dmychaluk@cm3inc.com



48322755\_PXL\_20230426\_134136967.v2.jpg; Added on 5/22/2023 8:53:16 AM by dmychaluk@cm3inc.com



**ISSUE-425**  
Project / Strath Haven Middle School / Roof Top Units / RTU-6

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 4/26/2023 10:22:26 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



**ISSUE-426**

Project / Strath Haven Middle School / Roof Top Units / RTU-6

Filter status is reading 0.02 actual reading is 0.9. : Recommend calibration/correction of the sensor.

|                          |                      |
|--------------------------|----------------------|
| <b>Status</b>            | <b>Open</b>          |
| <b>Entered</b>           | 4/26/2023 1:22:38 PM |
| <b>Entered By</b>        | dmychaluk@cm3inc.com |
| <b>Priority</b>          | Automation           |
| <b>Category</b>          | Automation           |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com |
| <b>Respondent Status</b> | <b>Open</b>          |
| <b>Due Date</b>          | 5/3/2023 12:00:00 AM |



**ISSUE-427**

Project / Strath Haven Middle School / Roof Top Units / RTU-6

VFD speed not changing when setpoint is modified. Appears the programming inside the Honeywell controller is not controlling the VFD speed properly: Recommend re-programming and correcting the output signal within the controller.

**Status** Open  
**Entered** 4/26/2023 2:31:02 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



# RTU-7

Project / Strath Haven Middle School / Roof Top Units

RTU

In Progress

|               |              | Design | Proposed | Final                | Units |
|---------------|--------------|--------|----------|----------------------|-------|
| Area Served   | Auditorium   |        |          | annexAir             | -     |
| Location      | Roof         |        |          | AHU-F-10-H-P-AC      | -     |
| Serial Number | 1371-01-0508 |        |          |                      |       |
|               |              |        |          | RF VFD/Motor Voltage | 460   |
|               |              |        |          | SF VFD/Motor Voltage | 460   |

RTU-7 WORK

## Functional Checklist

RTU Standard FC

| Point Name                | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                              |
|---------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|
| Disch. Air Temp           | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70                 | 73.8           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| Mixed Air Temperature     | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.6               | 70.9           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| Return Air Temperature    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.6               | 70.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| Filter DP                 | AI    | ----  | ---- | ----  | ----   | ----    | ---- | .4                 | 0.0            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| Cooling Coil Leaving Temp | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.8               | 71.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| Room Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| Room Humidity             | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| CO2 Sensor                | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 451.5          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| Supply Fan VFD Cmd        | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| Exhaust Fan VFD Cmd       | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| MA Damper Cmd             | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| Gas fired Heat            | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Did not test due to mechanical issues |

**Functional Checklist And Issues Log**



| Point Name         | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments                                       |
|--------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|--|
| Hot Gas bypass     | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Supply Fan Status  | BI    | ----  | ---- | ----  | ----   | ----    | Ok   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Cooling Stage 1    | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Cooling Stage 2    | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Supply Fan Enable  | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Exhaust Fan Enable | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Freezestat         | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| Min OA Damper Stpt | Stpt  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 10             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | Damper does not move but stpt is acceptable    |
| C02 Stpt           | stpt  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 530            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| VFD Min Speed      | Stpt  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | No settings show in the BAS but unit has VFD's |
| ----               | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----               | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | ----   |

**Not Started**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:19 AM

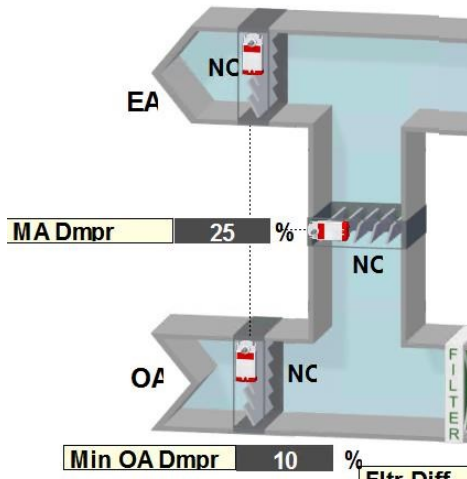
RTU-7 ISSUES

**ISSUE-428**

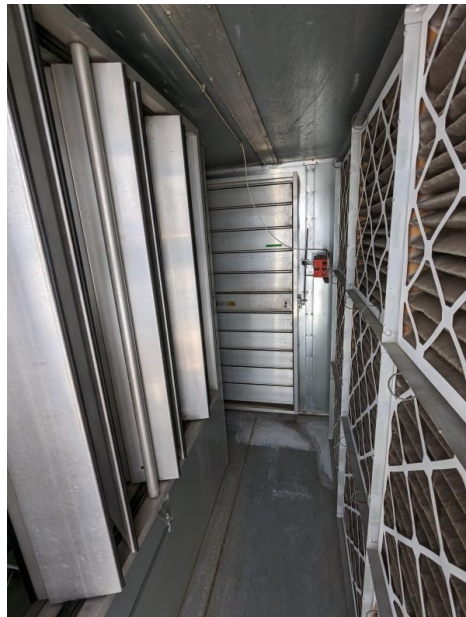
Project / Strath Haven Middle School / Roof Top Units / RTU-7

Outside air damper failed to modulate per BAS command. : Check controller, wiring and actuator. Replace components as required.

**Status** Open  
**Entered** 4/26/2023 2:44:39 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



Capture.PNG; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com



55962625\_PXL\_20230426\_183900069.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com

**ISSUE-429**

Project / Strath Haven Middle School / Roof Top Units / RTU-7

Supply air temperature sensor lacks professional installation and is too short for the duct.  
: Replace and install a new supply air temperature sensor.

**Status** Open  
**Entered** 4/26/2023 2:47:33 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



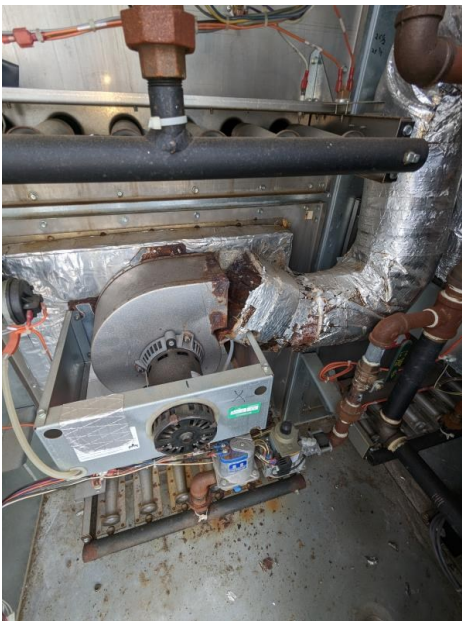
08438508\_PXL\_20230426\_184447592.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com

**ISSUE-430**

Project / Strath Haven Middle School / Roof Top Units / RTU-7

Gas heating combustion exhaust vent has corrosion. And has fallen apart from the inducer. : Replace gas heating exhaust vent. Gas was isolated and closed for this burner

**Status** Open  
**Entered** 4/26/2023 2:49:50 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



44912159\_PXL\_20230426\_184720673.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com

**ISSUE-431**

Project / Strath Haven Middle School / Roof Top Units / RTU-7

Exhaust air damper fails to modulate per BAS command. : Troubleshoot controller, wiring, and actuator. Replace components as required.

**Status** Open  
**Entered** 4/26/2023 3:03:54 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



11989110\_PXL\_20230426\_190230224.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com

**ISSUE-432**  
Project / Strath Haven Middle School / Roof Top Units / RTU-7

Coil is dirty and requires cleaning : Recommend professionally cleaning coil

**Status** Open  
**Entered** 4/26/2023 3:03:59 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



14057387\_PXL\_20230426\_185756724.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com

**ISSUE-433**

Project / Strath Haven Middle School / Roof Top Units / RTU-7

Filters are dirty and require replacement. : recommend replacing filters.

**Status** Open  
**Entered** 4/26/2023 3:04:46 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



42263656\_PXL\_20230426\_183706039.v2.jpg; Added on 5/22/2023 8:53:18 AM by dmychaluk@cm3inc.com



**ISSUE-434**  
Project / Strath Haven Middle School / Roof Top Units / RTU-7

Unit disconnect stem and handle are no longer properly connected. : Recommend correcting disconnect by replacing components.

**Status** Open  
**Entered** 4/26/2023 3:13:15 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



**ISSUE-435**  
Project / Strath Haven Middle School / Roof Top Units / RTU-7

Stage 1 compressor not engaging when commanded. : Recommend troubleshooting cooling circuit for leaks or other failure. Unit is an R-22 system.

**Status** Open  
**Entered** 4/26/2023 3:28:45 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



# RTU-8

Project / Strath Haven Middle School / Roof Top Units

RTU

In Progress

|               |           | Design | Proposed | Final                | Units |
|---------------|-----------|--------|----------|----------------------|-------|
| Area Served   | Cafeteria |        |          | annexAir             | -     |
| Location      | Roof      |        |          | AHU-X-X9-C-H-CH      | -     |
| Serial Number | ILLEGILBE |        |          |                      |       |
|               |           |        |          | RF VFD/Motor Voltage | 460   |
|               |           |        |          | SF VFD/Motor Voltage | 460   |

## RTU-8 WORK

### Functional Checklist

RTU Standard FC

| Point Name                   | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                     |
|------------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------|
| Discharge Air Temperature    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.8               | 69.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| Return Air Temperature       | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 71.4               | 70.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| Mixed Air Temperature        | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.2               | 69.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| Space Temperature            | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 71.7               | 75.5           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                         |
| Space Humidity               | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 44%                | 38             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                         |
| Space C02                    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 31.7           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                         |
| Filter Differential Pressure | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 0.25           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| DX coil leaving Temperature  | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 70.8               | 70             | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| Supply Fan VFD Cmd           | AO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Unable to control VFD speed. |
| OA/RA Damper Cmd             | AO    | ----  | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                         |
| Freezestat                   | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |
| Supply Fan Status            | BI    | ----  | ---- | ----  | ----   | ----    | Ok   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                         |

**Functional Checklist And Issues Log**



| Point Name           | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments |
|----------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| Supply Air Smoke     | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| Return Air Smoke     | BI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----     |
| Cooling Stage 1      | BO    | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| Cooling Stage 2      | BO    | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| Gas Heat Modulation  | AO    | ----  | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| Hot Gas Reheat Valve | AO    | ----  | ---- | F     | F      | F       | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----     |
| Supply Fan Enable    | BO    | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |
| Gas Heat Enable      | BO    | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----     |

**In Progress**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:20 AM

Last edit by danhainey@cm3inc.com on 5/24/2023 10:33:17 AM



RTU-8 ISSUES

**ISSUE-436**

Project / Strath Haven Middle School / Roof Top Units / RTU-8

Zone Temperature sensor is reading 75.5 hand probe is reading 71.5. This sensor should be replaced to properly control the unit. : Recommend replacement of space temperature sensor and running new wire to the sensor.

**Status** Open  
**Entered** 4/25/2023 7:46:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



**ISSUE-437**  
Project / Strath Haven Middle School / Roof Top Units / RTU-8

Space C02 sensor is reading 31 PPM, sensor should be replaced to properly control the unit. : Recommend replacement of space C02 sensor and running new wire to the sensor.

**Status** Open  
**Entered** 5/22/2023 8:41:25 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/29/2023 12:00:00 AM



**ISSUE-438**  
Project / Strath Haven Middle School / Roof Top Units / RTU-8

Zone humidity sensor is reading 35.5 in the BAS, hand probe is reading 44.5. This sensor should be replaced to properly control the unit. : Recommend replacement of space humidity sensor and running new wire to the sensor.

**Status** Open  
**Entered** 5/22/2023 8:47:28 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/29/2023 12:00:00 AM

**ISSUE-624**  
Project / Strath Haven Middle School / Roof Top Units / RTU-8

Compressor 1 non-functional due to mechanical issue. Output from Honeywell controller ok. : Check refrigeration circuit and compressor.

**Status** Open  
**Entered** 5/24/2023 10:45:44 AM  
**Entered By** danhainey@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/31/2023 12:00:00 AM



Compressor1.v2.jpg; Added on 5/24/2023 10:45:45 AM by danhainey@cm3inc.com

**ISSUE-625**

Project / Strath Haven Middle School / Roof Top Units / RTU-8

Hot gas bypass for dehumidification relies on compressor 1 functionality. Compressor 1 is non-functional. : Check hot gas bypass and dehumidification control when compressor 1 circuit is repaired.

**Status** Open  
**Entered** 5/24/2023 10:47:52 AM  
**Entered By** danhainey@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/31/2023 12:00:00 AM



HotGasBypass.v2.jpg; Added on 5/24/2023 10:47:53 AM by danhainey@cm3inc.com

**ISSUE-626**

Project / Strath Haven Middle School / Roof Top Units / RTU-8

Outside air, return air and exhaust air dampers all non-functional. Output from Honeywell controller ok. Outside air damper moves slightly when commanded. : Check control wiring, damper actuators and linkage adjustments.

**Status** Open  
**Entered** 5/24/2023 10:51:09 AM  
**Entered By** danhainey@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/31/2023 12:00:00 AM



EAD.v2.jpg; Added on 5/24/2023 10:51:09 AM by danhainey@cm3inc.com



OAD.v2.jpg; Added on 5/24/2023 10:51:10 AM by danhainey@cm3inc.com



RAD.v2.jpg; Added on 5/24/2023 10:51:11 AM by danhainey@cm3inc.com

**ISSUE-627**  
Project / Strath Haven Middle School / Roof Top Units / RTU-8

Air filters are dirty. : Replace air filters at regular intervals.

**Status** Open  
**Entered** 5/24/2023 10:53:14 AM  
**Entered By** danhainey@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/31/2023 12:00:00 AM



Filters.v2.jpg; Added on 5/24/2023 10:53:14 AM by danhainey@cm3inc.com

### ISSUE-628

Project / Strath Haven Middle School / Roof Top Units / RTU-8

Only 1 stage of gas heat fired when output enabled and modulation (demand) signal set to 100 percent. A second stage was attempting to light. : Check gas heating section and make necessary repairs.

**Status** Open  
**Entered** 5/24/2023 10:58:20 AM  
**Entered By** danhainey@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/31/2023 12:00:00 AM



GasHeat.v2.jpg; Added on 5/24/2023 10:58:21 AM by danhainey@cm3inc.com



# RTU-9

Project / Strath Haven Middle School / Roof Top Units

RTU

In Progress

|             |       | Design | Proposed | Final                  | Units |
|-------------|-------|--------|----------|------------------------|-------|
| Area Served | Shops |        |          | annexAir               | -     |
| Location    | Roof  |        |          | AHU-E0A-O-H-HG-AO      | -     |
|             |       |        |          | RF Motor Amps          | 4     |
|             |       |        |          | RF Recorded Amps       | 1.2   |
|             |       |        |          | RF RPM                 | 1750  |
|             |       |        |          | RF VFD/Motor Voltage   | 460   |
|             |       |        |          | SF Motor Amps          | 6.9   |
|             |       |        |          | SF Recorded Motor Amps | 2.7   |
|             |       |        |          | SF RPM                 | 1750  |
|             |       |        |          | SF VFD/Motor Voltage   | 460   |

**RTU-9 WORK**

**Functional Checklist**

RTU Standard FC

| Point Name                | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments |
|---------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|----------|
| Disch. Air Temp           | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.9               | 68.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Mixed Air Temperature     | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.2               | 68.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Return Air Temperature    | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.2               | 69.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Filter DP                 | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 1.4                | 0.09           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| Cooling Coil Leaving Temp | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.2               | 69.7           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |
| Room Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| Room Humidity             | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----     |
| CO2 Sensor                | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 110            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----     |



**Functional Checklist And Issues Log**

| Point Name             | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                       | Comments                          |
|------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|--------------------------|-----------------------------------|
| Supply Fan VFD Cmd     | AO    | ----  | ---- | Bad   | Bad    | Bad     | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| Exhaust Fan VFD Cmd    | AO    | ----  | ---- | Bad   | Bad    | Bad     | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| MA Damper Cmd          | AO    | ----  | ---- | OK    | OK     | OK      | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Gas Reheat             | AO    | ----  | ---- | Bad   | Bad    | Bad     | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| Heating Vlv            | AO    | ----  | ---- | OK    | OK     | OK      | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Supply Fan Status      | BI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| Cooling Stage 1        | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Cooling Stage 2        | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Supply Fan Enable      | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Exhaust Fan Enable     | BO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Freezestat             | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| Min OA Damper Stpt     | Stpt  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 10             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| C02 Stpt               | stpt  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 200            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| Building Static Sensor | ----  | ----  | ---- | ----  | ----   | ----    | ---- | 0                  | 0              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | Building at .04 tubing shoing 0.0 |
| VFD Min Speed          | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 25             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ----                              |
| ----                   | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| ----                   | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |
| ----                   | ----  | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | ----                              |

**Complete**

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:24 AM

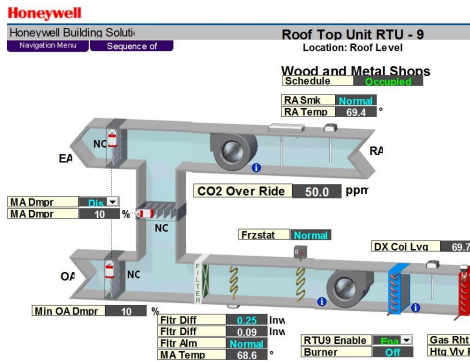
Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:53:24 AM

RTU-9 ISSUES

**ISSUE-439**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-9

Upon lowering the CO2 setpoint to 50 PPM threshold no observed reaction occurred at the RTU. The CO2 mode is still disabled, the OA damper does not modulate open and there is no change to supply fan or exhaust fan speed. : Recommend correcting the CO2 operation within the controller

**Status** Open  
**Entered** 4/25/2023 8:39:15 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Responded Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



| Roof Top Unit RTU - 9 Parameters      |           | Roof Top Unit RTU - 9 Parameters |            |
|---------------------------------------|-----------|----------------------------------|------------|
| Occupied Cooling Mode Temperature     | 70.0 °    | Override Time                    | 120 Mir    |
| Occupied Cooling Outside Air          | 60.0 °    | Bypass Override Time             | 0.0 Mir    |
| Occupied Heating Mode Temperature     | 70.0 °    | Bldg Static Press                | 0.00 Inw   |
| Occupied Heating Outside Air          | 60.0 °    | Wdrlr Mode Setpoint              | 80.0 °     |
| Unoccupied Cooling Outside Air        | 60.0 °    | VFD Speed                        | 49 %       |
| Unoccupied Cooling Mode Temperature   | 70.0 °    | VFD Alarm                        | Normal     |
| Unoccupied Heating Outside            | 60.0 °    | VFD Min Speed Stpt               | 49 %       |
| Unoccupied Heating Mode Temperature   | 65.0 °    | UnOccupied Cooling Mode          | Disable    |
| VFD Minimum speed Setpoint            | 75.00 %   | UnOccupied Heating Mode          | Disable    |
| Average Outside Air CO2               | 426.6 PPI | VFD Minimum Speed Enable         | Disable    |
| Average Outside Air Temperature       | 56.0 °    | Hand On Auto Switch              | Auto       |
| Building Static Pressure Setpoint     | 0.02 Inw  | Auto Mode                        | Auto       |
| Morning Warm Mode Disable             | 70.0 °    | CO2 Override Mode                | Disable    |
| Morning Warm Mode Temperature         | 65.0 °    | Occupied Mode                    | Occupied   |
| CO2 Override Setpoint                 | 50.0 PPI  | Override                         | Unoccupied |
| Dehumidify Mode Room Temperature      | 62 %      | Optimum Start/ Stop              | On         |
| Mixed Air Damper Override Setpoint    | 15 %      | Override Push Button             | Off        |
| Morning Cool Mode Disable Temperature | 75.0 °    | Heat/Cool Mode                   | Heating    |
| Morning Cooling On Mode Temperature   | 70.0 °    | Dehumidification Mode            | Disable    |
|                                       |           | Economizer Mode                  | Enable     |
|                                       |           | Hand Mode                        | Normal     |
|                                       |           | Morning Cooledown Mode           | Disable    |
|                                       |           | Morning Warmup Mode              | Disable    |
|                                       |           | Occupied Cooling Mode            | Disable    |
|                                       |           | Occupied Heating Mode            | Disable    |
|                                       |           | Occupied Schedule                | Normal     |

16118493\_Screenshot 2023-04-25 084026.png; Added on 5/22/2023 8:53:21 AM by dmychaluk@cm3inc.com

16024745\_Screenshot 2023-04-25 084057.png; Added on 5/22/2023 8:53:21 AM by dmychaluk@cm3inc.com



**ISSUE-440**  
Project / Strath Haven Middle School / Roof Top Units / RTU-9

Space C02 sensor is reading 110 PPM which is 300 PPM than standard levels. The sensor is failed and requires replacement. : Recommend replacement of the C02 sensor.

**Status** Open  
**Entered** 4/25/2023 8:43:07 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



**ISSUE-441**  
Project / Strath Haven Middle School / Roof Top Units / RTU-9

Filter DP is reading .09 In WC actual DP is 1.45 In WC. : Recommend replacement/  
Calibration of the DP sensor.

**Status** Open  
**Entered** 4/25/2023 8:45:23 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

**ISSUE-442**  
Project / Strath Haven Middle School / Roof Top Units / RTU-9

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 4/25/2023 8:51:46 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



Filters.v2.jpg; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com

**ISSUE-443**

Project / Strath Haven Middle School / Roof Top Units / RTU-9

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 4/25/2023 8:53:28 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



Coil.v2.jpg; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com

**ISSUE-444**

Project / Strath Haven Middle School / Roof Top Units / RTU-9

Unit disconnect bar is bent and no longer operational. : Recommend replacement of disconnect to enable safe cabinet access.

**Status** Open  
**Entered** 4/25/2023 9:03:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Safety  
**Category** Electrical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

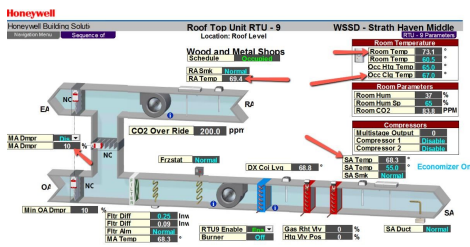


18143641\_PXL\_20230425\_115211177.v2.jpg; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com

**ISSUE-445**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-9

Upon lowering the setpoint below space temperature and return temperature with the economizer active and an outside air temp of 50 Deg F there is no change in economizer position. After further testing we discovered the unit does not economize when in winter mode. This prevents cooling capabilities over the winter for this area. : Recommend correcting the programming sequence to allow for outside air economizing in winter mode.

**Status** Open  
**Entered** 4/25/2023 9:24:56 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

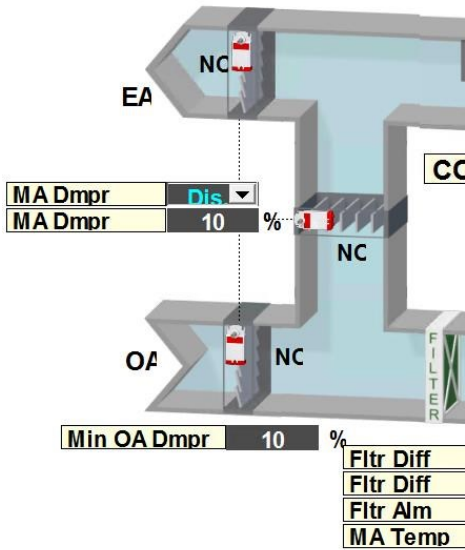


10748343\_2023-04-25\_09-17-46.png; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com

**ISSUE-446**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-9

Economizer cooling found non-functional when space temperature is above setpoint. Supply air temperature setpoint is 55 degrees F, and dampers maintaining 10 percent. Unit is in economizer mode per graphic. : Control to remain. Check programming.

**Status** Open  
**Entered** 4/25/2023 9:48:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



Capture.PNG; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com

**ISSUE-447**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-9

In summer mode with the heating and cooling setpoint raised above current space temperature the controller is calling for and enabling the outside air damper to open at 60%. Current outside air temperature is 55 Deg f. The controller should be attempting to call for heating. : Recommend correction of programming for this function in the controller.

**Status** Open  
**Entered** 4/25/2023 10:36:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



29872335\_Heat.v2.jpg; Added on 5/22/2023 8:53:22 AM by dmychaluk@cm3inc.com



**ISSUE-448**  
Project / Strath Haven Middle School / Roof Top Units / RTU-9

Condenser fan motor for stage 2 compressor is not engaging. : Recommend troubleshooting fan motor and electrical wiring.

**Status** Open  
**Entered** 4/25/2023 10:51:23 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM

**ISSUE-449**

Project / Strath Haven Middle School / Roof Top Units / RTU-9

Min OA damper is fully closed when set to 10% for minimum air. : Recommend correction of position setpoint to allow proper minimum airflow to the space.

**Status** Open  
**Entered** 4/25/2023 10:58:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



06479250\_PXL\_20230425\_145626498.v2.jpg; Added on 5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com

**ISSUE-450**  
 Project / Strath Haven Middle School / Roof Top Units / RTU-9

Unit serves a woodshop area and has no pre filters on the return grilles. This has caused excessive amount of fine wood dust to collect over all electrical components coils, sensors and decking within the unit. : Recommend installation of pre filters for the return duct and cleaning the unit, motors, and internal components of the unit.

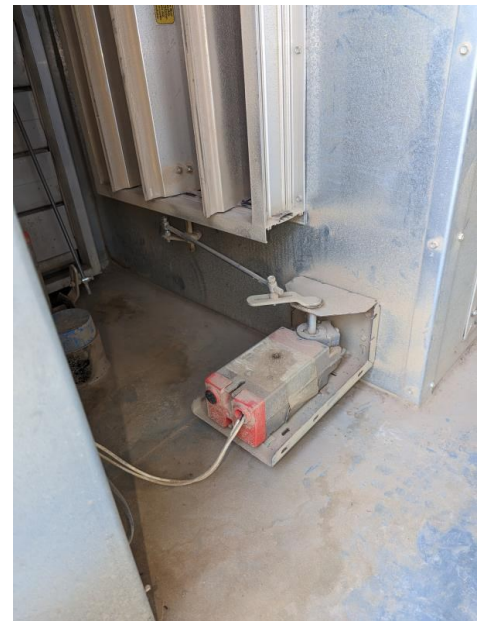
**Status** Open  
**Entered** 4/25/2023 11:02:05 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



33940766\_PXL\_20230425\_145425082.v2.jpg; Added on 5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com



56143906\_PXL\_20230425\_150259228.v2.jpg; Added on 5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com



56737684\_PXL\_20230425\_150250977.v2.jpg; Added on 5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com



**Functional Checklist And Issues Log**



57503366\_PXL\_20230425\_150255755.v2.jpg; Added on  
5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com

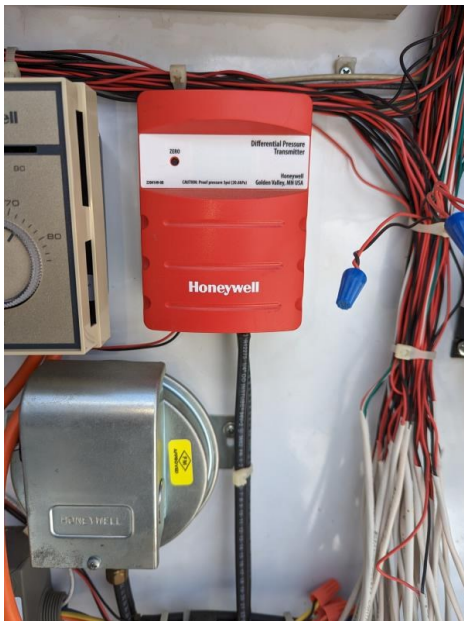
58114292\_PXL\_20230425\_150311977.v2.jpg; Added on  
5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com

**ISSUE-451**

Project / Strath Haven Middle School / Roof Top Units / RTU-9

Building static sensor reading 0.00 in the BAS actual static at the time of reading is 0.04. :  
Recommend calibration of DP sensor.

**Status** Open  
**Entered** 4/25/2023 11:12:10 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/2/2023 12:00:00 AM



10980031\_PXL\_20230425\_151234161.v2.jpg; Added on 5/22/2023 8:53:23 AM by dmychaluk@cm3inc.com



**ISSUE-452**  
Project / Strath Haven Middle School / Roof Top Units / RTU-9

Hot gas reheat valve does not appear to be operational within the controller. :  
Recommend reprogramming controller to have the hot gas reheat work properly.

**Status** Open  
**Entered** 4/26/2023 3:23:40 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



# A000

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                   | Design | Proposed | Final | Units |
|----------------------|-----------------------------------|--------|----------|-------|-------|
| Area Served          | Electrical room and lower storage |        |          | Trane | -     |
| Location             | A105                              |        |          |       |       |
| Location Description | Rear middle ceiling mounted       |        |          |       |       |

A000 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Supply Fan Cmd             | DO    | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----   |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off   |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | X    | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Geothermal Valve not modulating                      |
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 68.8               | 68.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Occupancy Cmd              | DO    | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Unit not following unoccupied cmd                    |
| ----       | Unocc Bypass Switch        | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----   |
| ----       | Geothermal Valve Command   | DO    | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Not closing when unoccupied                          |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Not Mapped to BAS                                    |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Not wired to the controller hard wire safety circuit |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:29 AM

**Marked complete by** dmychaluk@cm3inc.com on 5/22/2023 8:53:29 AM

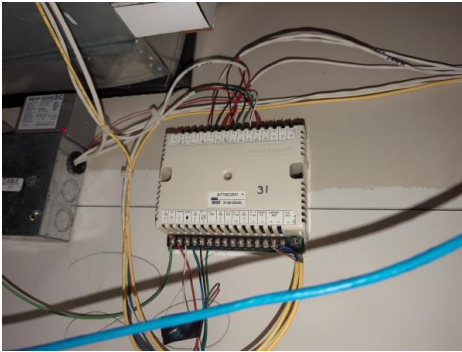
A000 ISSUES

**ISSUE-464**

Project / Strath Haven Middle School / Water Source Heat Pumps / A000

Unit fails to go unoccupied when this mode is commanded. : Check integration, controller and programming.

**Status** Open  
**Entered** 4/27/2023 1:14:38 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



30933936\_16826161402805768925273817292524.v2.jpg;  
Added on 5/22/2023 8:53:28 AM by dmychaluk@cm3inc.com

**ISSUE-465**  
Project / Strath Haven Middle School / Water Source Heat Pumps / A000

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 4/27/2023 1:16:33 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



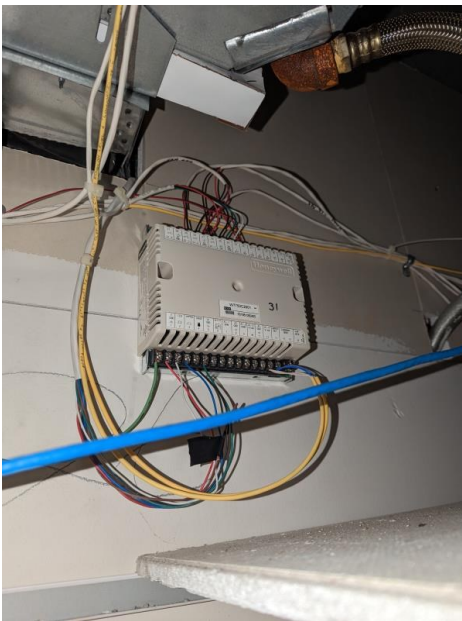
07513220\_16826160747398518837132935058450.v2.jpg;  
Added on 5/22/2023 8:53:29 AM by dmychaluk@cm3inc.com

**ISSUE-466**

Project / Strath Haven Middle School / Water Source Heat Pumps / A000

Fan continues to run when commanded off at the BAS. : Check wiring, controller and programming.

**Status** Open  
**Entered** 4/27/2023 1:32:51 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



54932309\_PXL\_20230427\_174300484.v2.jpg; Added on 5/22/2023 8:53:29 AM by dmychaluk@cm3inc.com

**ISSUE-467**  
Project / Strath Haven Middle School / Water Source Heat Pumps / A000

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 4/27/2023 1:43:01 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



29153495\_PXL\_20230427\_174503325.v2.jpg; Added on 5/22/2023 8:53:29 AM by dmychaluk@cm3inc.com

**ISSUE-468**

Project / Strath Haven Middle School / Water Source Heat Pumps / A000

Outside air damper non-functional with supply fan command. : Check actuator, wiring and controller programming.

**Status** Open  
**Entered** 4/27/2023 1:47:28 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



16453678\_PXL\_20230427\_173908251.v2.jpg; Added on 5/22/2023 8:53:29 AM by dmychaluk@cm3inc.com



# A103

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|             |  | Design | Proposed | Final | Units |
|-------------|--|--------|----------|-------|-------|
| Area Served | Rooms now labeled as A103, A104, A105    |        |          | Trane | -     |
| Location    | A103 labeled on prints as Mail Room D112 |        |          |       |       |

A103 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Supply Fan Cmd             | DO    | ----  | ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | ok   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off   |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Unable to confirm                                      |
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.8               | 70.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Occupancy Cmd              | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----   |
| ----       | Unocc Bypass Switch        | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----   |
| ----       | Geothermal Valve Command   | DO    | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Valve not modulating during occ or call for compressor |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | No dial present  |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Factory wired not a point on the BAS                   |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:25 AM

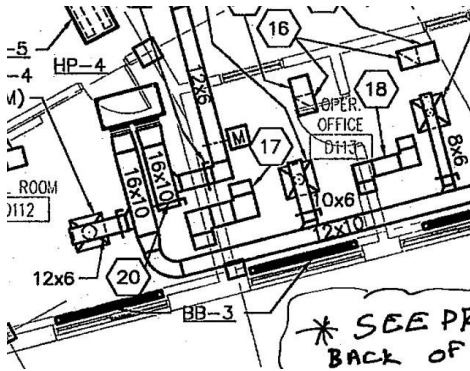
**Marked complete by** dmychaluk@cm3inc.com on 5/22/2023 8:53:25 AM

### ISSUE-453

Project / Strath Haven Middle School / Water Source Heat Pumps / A103

Return air transfer ducts are not installed (indicated by Note 17 on attached image). :  
Install return air transfer ducts.

**Status** Open  
**Entered** 4/26/2023 11:15:49 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/3/2023 12:00:00 AM



Capture.PNG; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com

### ISSUE-454

Project / Strath Haven Middle School / Water Source Heat Pumps / A103

There was no filter bracket found for the heat pump, the filter is wedged in between a return transfer duct and the fan section. Due to this issue the coil has become significantly compacted with dirt and dust and requires cleaning. : Recommend sheetmetal work to build a filter bracket and professional cleaning of the DX coil.

**Status** Open  
**Entered** 4/27/2023 11:18:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



49600013\_PXL\_20230426\_145109115.v2.jpg; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com



50053145\_PXL\_20230426\_145049646.v2.jpg; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com



50537526\_PXL\_20230426\_145028504.v2.jpg; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com

**ISSUE-455**

Project / Strath Haven Middle School / Water Source Heat Pumps / A103

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend updating programming to allow the valve to close.

**Status** Open  
**Entered** 4/27/2023 2:13:22 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



57775645\_PXL\_20230427\_181332595.v2.jpg; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com



# A105

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|             |                   | Design       | Proposed | Final | Units   |
|-------------|-------------------|--------------|----------|-------|---------|
| Area Served | A105 mail room    | Manufacturer |          |       | Trane - |
| Location    | Left wall ceiling |              |          |       |         |

A105 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments               |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|------------------------|
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |
| ----       | Supply Fan Cmd             | DO    | ----  | Ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off             |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | X    | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Unable to confirm      |
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 69.9               | 69.8           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |
| ----       | Occupancy Cmd              | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |
| ----       | Unocc Bypass Switch        | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----                   |
| ----       | Geothermal Valve Command   | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Not exposed to the BAS |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Not exposed to the BAS |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | ----                   |

Complete

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:30 AM

Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:53:30 AM

**ISSUE-469**

Project / Strath Haven Middle School / Water Source Heat Pumps / A105

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 4/27/2023 12:17:06 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



03217425\_PXL\_20230427\_161343500.v2.jpg; Added on 5/22/2023 8:53:30 AM by dmychaluk@cm3inc.com

**ISSUE-470**

Project / Strath Haven Middle School / Water Source Heat Pumps / A105

Return air duct is covered with plastic wrap. : Remove covering from return air duct.

**Status** Open  
**Entered** 4/27/2023 12:20:13 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



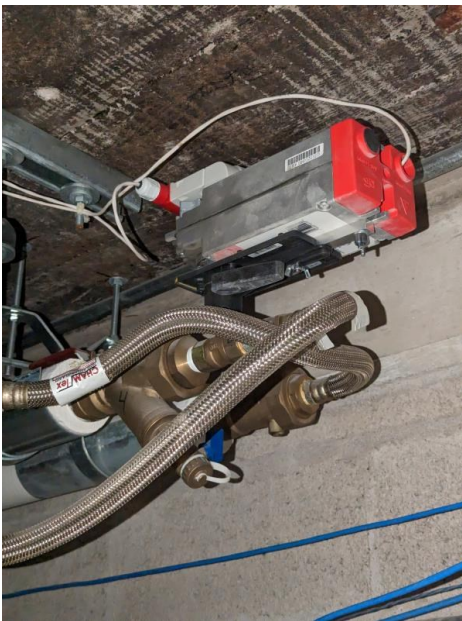
40221354\_PXL\_20230427\_161830838.v2.jpg; Added on 5/22/2023 8:53:30 AM by dmychaluk@cm3inc.com

**ISSUE-471**

Project / Strath Haven Middle School / Water Source Heat Pumps / A105

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend updating programming to allow the valve to close.

**Status** Open  
**Entered** 4/27/2023 12:20:53 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



22386353\_PXL\_20230427\_174039072.v2.jpg; Added on 5/22/2023 8:53:30 AM by dmychaluk@cm3inc.com

**ISSUE-472**

Project / Strath Haven Middle School / Water Source Heat Pumps / A105

Outside air damper shaft is disconnected from damper. : Repair or replace outside air damper.

**Status** Open  
**Entered** 4/27/2023 12:29:09 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



07486190\_PXL\_20230427\_162740685.v2.jpg; Added on 5/22/2023 8:53:30 AM by dmychaluk@cm3inc.com



**ISSUE-473**  
Project / Strath Haven Middle School / Water Source Heat Pumps / A105

Unit fails to go unoccupied when this mode is commanded. : Check integration, controller and programming.

**Status** Open  
**Entered** 4/27/2023 1:12:58 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



# B215

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design       | Proposed | Final               | Units |
|--------------|----------|---------------------|-------|
| Manufacturer |          | Trane               | -     |
| Model        |          | GEVB06341T01ASTRD01 | -     |

B215 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments  |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|---|
| ----       | Compressor Cmd             | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Reversing Valve Cmd        | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Supply Fan Cmd             | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Supply Fan Status          | DI           | ----  |      | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off  |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----  |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 72.1               | 72.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Occupancy Cmd              | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Unocc Bypass Switch        | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----  |
| ----       | Geothermal Valve Command   | DO           | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----  |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Dial is in control of the unit building setpoints have no effect. |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----  |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:37 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 1:15:15 PM



B215 ISSUES

**ISSUE-487**

Project / Strath Haven Middle School / Water Source Heat Pumps / B215

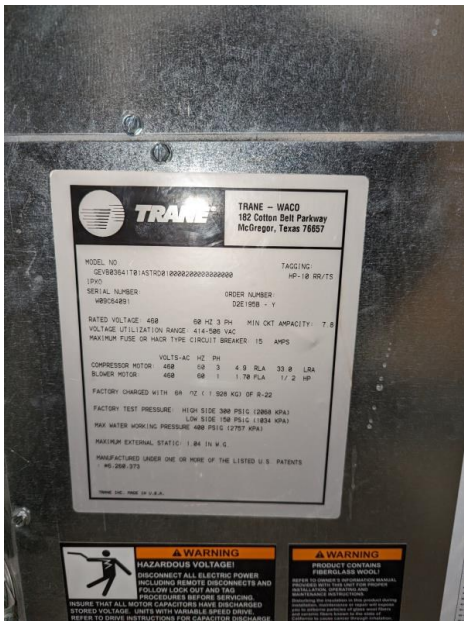
Filter is dirty and requires replacement. : Recommend replacing the filter.

**Status** Open  
**Entered** 4/27/2023 2:34:19 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM

**ISSUE-488**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B215

Discharge is only going up to 74 Deg F in heating mode, cooling appears to be working normally. Recommend troubleshooting unit for proper control.

**Status** Open  
**Entered** 4/27/2023 2:55:51 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



25692022\_PXL\_20230427\_184323537.v2.jpg; Added on 5/22/2023 8:53:37 AM by dmychaluk@cm3inc.com



# B224

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B224 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.3               | 69.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 70             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:41 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:35:01 AM

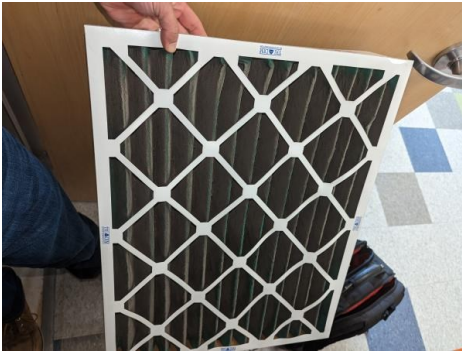
B224 ISSUES

**ISSUE-496**

Project / Strath Haven Middle School / Water Source Heat Pumps / B224

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 1:30:39 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



49653609\_PXL\_20230501\_170537225.v2.jpg; Added on 5/22/2023 8:53:40 AM by dmychaluk@cm3inc.com



50122362\_PXL\_20230501\_170543955.v2.jpg; Added on 5/22/2023 8:53:40 AM by dmychaluk@cm3inc.com



**ISSUE-497**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B224

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 5/1/2023 1:33:09 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



# B226

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B226 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.6               | 70.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:39 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:37:35 AM

B226 ISSUES

**ISSUE-490**

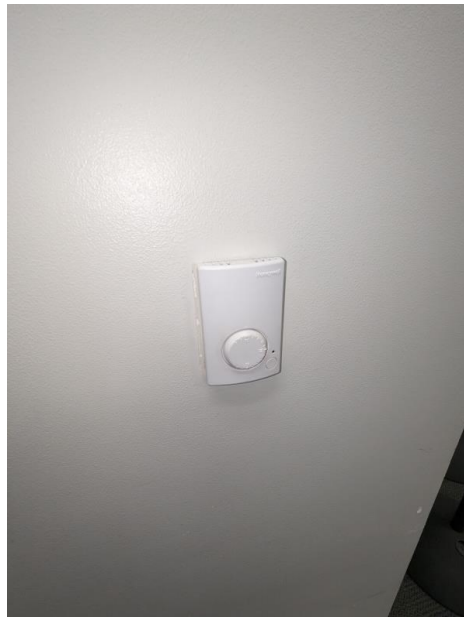
Project / Strath Haven Middle School / Water Source Heat Pumps / B226

Setpoint dial is not responding correctly, when set to 72, dial setpoint reads 75 with an effective of 76. When set to 68 Dial goes to 71 with an effective of 72. : Recommend correcting offsets and setback parameters in the excel controller to properly condition the space. Or removing setpoint dial control.

**Status** Open  
**Entered** 5/1/2023 11:55:08 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



06341487\_PXL\_20230501\_155830515.v2.jpg; Added on 5/22/2023 8:53:39 AM by dmychaluk@cm3inc.com



06810242\_PXL\_20230501\_155813308.v2.jpg; Added on 5/22/2023 8:53:39 AM by dmychaluk@cm3inc.com



**ISSUE-491**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B226

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 11:57:24 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM

**ISSUE-492**

Project / Strath Haven Middle School / Water Source Heat Pumps / B226

OA damper not closing with occupancy. Actuator attempts to close but appears to be bound. : Recommend installing actuator properly with linkage and verifying damper blades have smooth movement. May require new assembly.

**Status** Open  
**Entered** 5/1/2023 12:09:10 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



16829573311724310018575427729733.v2.jpg; Added on 5/22/2023 8:53:39 AM by dmychaluk@cm3inc.com

**ISSUE-493**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B226

Geothermal valve not closing with occupancy command. : Recommend correcting programming in the controller

**Status** Open  
**Entered** 5/1/2023 12:10:29 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



16829574092307624962698461311613.v2.jpg; Added on 5/22/2023 8:53:39 AM by dmychaluk@cm3inc.com



# B230

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|          | Design | Proposed     | Final | Units |
|----------|--------|--------------|-------|-------|
| Location | B229   | Manufacturer | Trane | -     |

B230 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.5               | 71.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 73             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:37 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:37:38 AM

B230 ISSUES

**ISSUE-592**

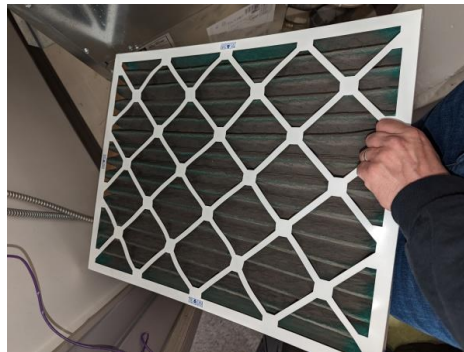
Project / Strath Haven Middle School / Water Source Heat Pumps / B230

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 11:34:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



21039216\_PXL\_20230501\_153031625.v2.jpg; Added on 5/22/2023 8:54:37 AM by dmychaluk@cm3inc.com



21507969\_PXL\_20230501\_153042718.v2.jpg; Added on 5/22/2023 8:54:37 AM by dmychaluk@cm3inc.com

# B260

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

**B260 WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.9               | 70.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:35 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:37:45 AM



B260 ISSUES

**ISSUE-484**

Project / Strath Haven Middle School / Water Source Heat Pumps / B260

Unit configuration needs validation using CARE software. Points are available however they do not match similar sized units : Verify programming and correct if required.

**Status** Open  
**Entered** 5/1/2023 3:18:59 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



**ISSUE-485**

Project / Strath Haven Middle School / Water Source Heat Pumps / B260

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 3:47:57 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM

# B262A

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|              | Design | Proposed | Final | Units |
|--------------|--------|----------|-------|-------|
| Manufacturer |        |          | Trane | -     |

**B262A WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O #        | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments   |
|------------|----------------------------|-------|--------------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI    | ----         | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI    | ----         | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI    | ----         | ---- | ----  | ----   | ----    | ---- | 70.3               | 70.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO    | ----         | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI    | ----         | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | DI    | Manufacturer | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:38 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:38:10 AM



B262A ISSUES

**ISSUE-489**

Project / Strath Haven Middle School / Water Source Heat Pumps / B262A

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 3:48:06 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



# B262B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

**B262B WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O #        | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                        |
|------------|----------------------------|-------|--------------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------|
| ----       | Compressor Cmd             | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | Unable to test unit completely. |
| ----       | Reversing Valve Cmd        | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                            |
| ----       | Supply Fan Cmd             | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                            |
| ----       | Supply Fan Status          | DI    | ----         | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off                      |
| ----       | Geothermal Valve Status    | DI    | ----         | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                            |
| ----       | Space Temperature          | AI    | ----         | ---- | ----  | ----   | ----    | ---- | 73.4               | 69.4           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                            |
| ----       | Occupancy Cmd              | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                            |
| ----       | Unocc Bypass Switch        | DO    | ----         | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                            |
| ----       | Geothermal Valve Command   | DO    | ----         | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                            |
| ----       | Space Temp Setpoint Dial   | AI    | ----         | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                            |
| ----       | Condensate Overflow Switch | DI    | Manufacturer | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                            |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:40 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 11:40:40 AM



B262B ISSUES

**ISSUE-494**

Project / Strath Haven Middle School / Water Source Heat Pumps / B262B

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 2:13:42 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM

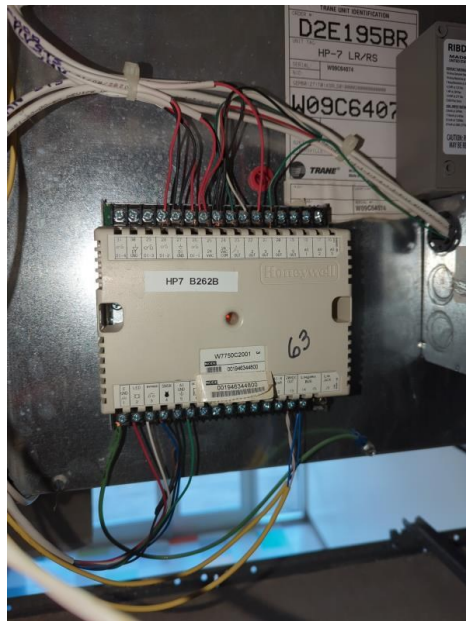
**ISSUE-495**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B262B

Sensor reading 4 Deg F lower than actual and does not appear to be changing temperature as expected. : Recommend replacement of controller and thermostat due to other related issues regarding programming.

**Status** Open  
**Entered** 5/1/2023 2:17:21 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



18572478\_16829653299498713448498573046349.v2.jpg;  
Added on 5/22/2023 8:53:40 AM by dmychaluk@cm3inc.com



11101194\_16829653709813916069655136196354.v2.jpg;  
Added on 5/22/2023 8:53:40 AM by dmychaluk@cm3inc.com



**ISSUE-961**

Project / Strath Haven Middle School / Water Source Heat Pumps / B262B

Geothermal valve not modulating with a call for cooling or occupancy. :  
Recommend replacement of valve, actuator and correcting wiring.

|                          |                        |
|--------------------------|------------------------|
| <b>Status</b>            | <b>Open</b>            |
| <b>Entered</b>           | 7/5/2023 11:40:29 AM   |
| <b>Entered By</b>        | dmychaluk@cm3inc.com   |
| <b>Priority</b>          | Energy                 |
| <b>Category</b>          | Automation, Mechanical |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com   |
| <b>Respondent Status</b> | <b>Open</b>            |
| <b>Due Date</b>          | 7/12/2023 12:00:00 AM  |



# B301

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Area Served          | Corridor   | Manufacturer | Design | Proposed | Final | Units |
|----------------------|--|--------------|--------|----------|-------|-------|
| Location Description | End of corridor connector closest to front of school | Trane        |        |          |       | -     |

**B301 WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 67.5               | 66.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 66             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:43 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:43 AM

B301 ISSUES

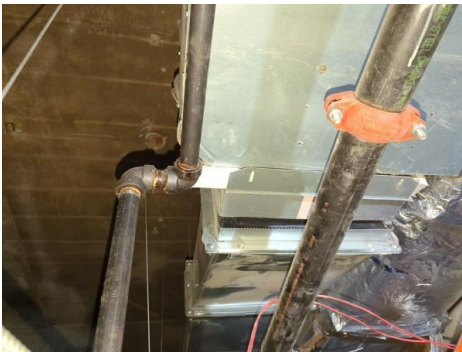
**ISSUE-502**

Project / Strath Haven Middle School / Water Source Heat Pumps / B301

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 8:22:51 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



08858549\_16830302392138760677504550088102.v2.jpg;  
Added on 5/22/2023 8:53:43 AM by dmychaluk@cm3inc.com

**ISSUE-503**

Project / Strath Haven Middle School / Water Source Heat Pumps / B301

Slow leak found on geothermal valve valve connection post hand isolation valve. Line can be isolated to repair. : Recommend correcting leak, possible valve replacement required

**Status** Open  
**Entered** 5/2/2023 8:27:37 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



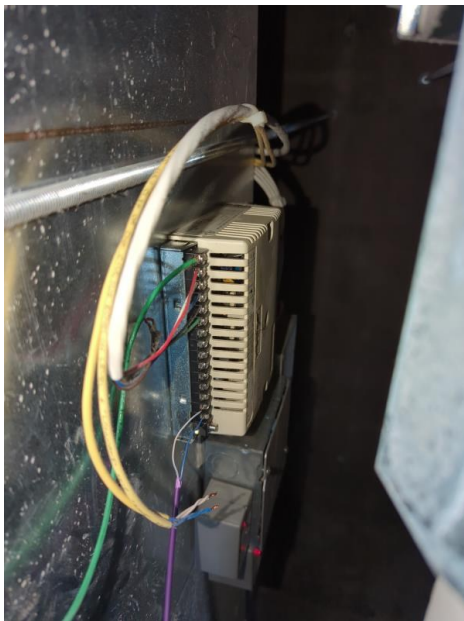
24768905\_16830304806383952676170230693550.v2.jpg;  
Added on 5/22/2023 8:53:43 AM by dmychaluk@cm3inc.com

**ISSUE-504**

Project / Strath Haven Middle School / Water Source Heat Pumps / B301

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 5/2/2023 8:29:15 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



27113221\_16830306740396997580226912802051.v2.jpg;  
Added on 5/22/2023 8:53:43 AM by dmychaluk@cm3inc.com



50379055\_16830307009087003790430141323708.v2.jpg;  
Added on 5/22/2023 8:53:43 AM by dmychaluk@cm3inc.com

# B306

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

**B306 WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.2               | 71             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 80             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:36 AM

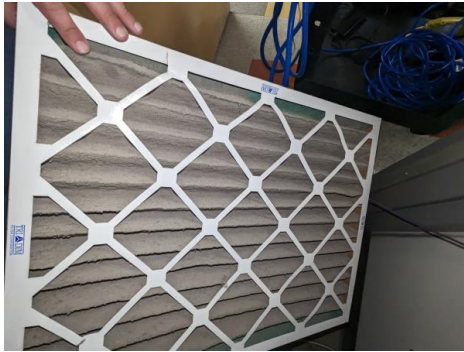
**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:36 AM

B306 ISSUES

**ISSUE-486**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B306

Filters are dirty. : Change air filters on a regular interval.  
Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 2:38:47 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



57217304\_PXL\_20230502\_181159644.v2.jpg; Added on 5/22/2023 8:53:36 AM by dmychaluk@cm3inc.com



59029823\_PXL\_20230502\_181154032.v2.jpg; Added on 5/22/2023 8:53:36 AM by dmychaluk@cm3inc.com



# B310

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B310 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.1               | 69.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 65             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:44 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:44 AM



B310 ISSUES

**ISSUE-505**

Project / Strath Haven Middle School / Water Source Heat Pumps / B310

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/2/2023 12:10:16 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



**ISSUE-506**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B310

Controller unresponsive to commands. : Reconfigure or replace controller.

**Status** Open  
**Entered** 5/2/2023 12:37:45 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



# B312

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B312 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.1               | 68.3           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 79             | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:32 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 10:46:02 AM

B312 ISSUES

**ISSUE-478**

Project / Strath Haven Middle School / Water Source Heat Pumps / B312

Filter is dirty and requires replacement. Coil is also dirty and compacted with dirt it is also the wrong size for the unit : Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/2/2023 7:36:54 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



21669658\_PXL\_20230502\_111855566.v2.jpg; Added on 5/22/2023 8:53:32 AM by dmychaluk@cm3inc.com



22107163\_PXL\_20230502\_111835917.v2.jpg; Added on 5/22/2023 8:53:32 AM by dmychaluk@cm3inc.com



22560297\_PXL\_20230502\_111842951.v2.jpg; Added on 5/22/2023 8:53:32 AM by dmychaluk@cm3inc.com



**ISSUE-970**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B312

Geothermal Valve not modulating when commanded. : Recommend replacement of valve, actuator and correction of wiring.

**Status** Open  
**Entered** 7/5/2023 10:45:47 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 7/12/2023 12:00:00 AM



# B317

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B317 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.5               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 65             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:26 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:26 AM

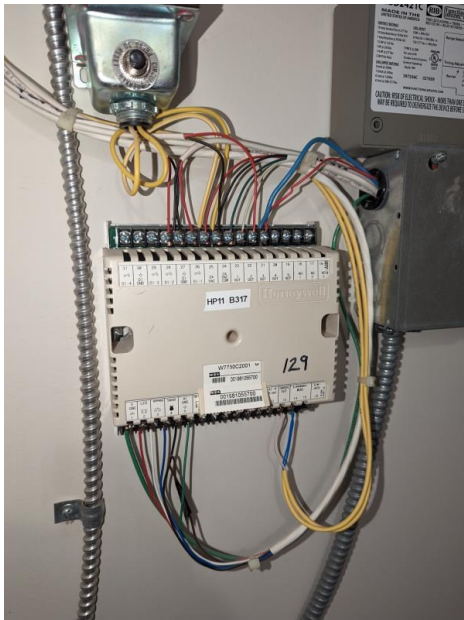
B317 ISSUES

**ISSUE-457**

Project / Strath Haven Middle School / Water Source Heat Pumps / B317

Unit not going into cooling mode when setpoints were lowered. : Recommend correcting programming and configuration of the WSHP.

**Status** Open  
**Entered** 5/2/2023 1:44:46 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



21768002\_PXL\_20230502\_174308501.v2.jpg; Added on 5/22/2023 8:53:26 AM by dmychaluk@cm3inc.com

# B318

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

**B318 WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.7               | 71.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:26 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:26 AM

B318 ISSUES

**ISSUE-456**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B318

Filters are dirty. : Change air filters on a regular interval.  
Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 2:51:36 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



09183969\_PXL\_20230502\_175546930.v2.jpg; Added on 5/22/2023 8:53:25 AM by dmychaluk@cm3inc.com



16668419\_PXL\_20230502\_175553516.v2.jpg; Added on 5/22/2023 8:53:26 AM by dmychaluk@cm3inc.com



17762174\_PXL\_20230502\_175607438.v2.jpg; Added on 5/22/2023 8:53:26 AM by dmychaluk@cm3inc.com



# B325

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B325 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 74.5               | 70.7           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 79             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:27 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:27 AM

B325 ISSUES

**ISSUE-458**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B325

Space temperature sensor reporting incorrect space temperature. : Calibrate or replace space temperature sensor.

**Status** Open  
**Entered** 5/2/2023 9:48:58 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM

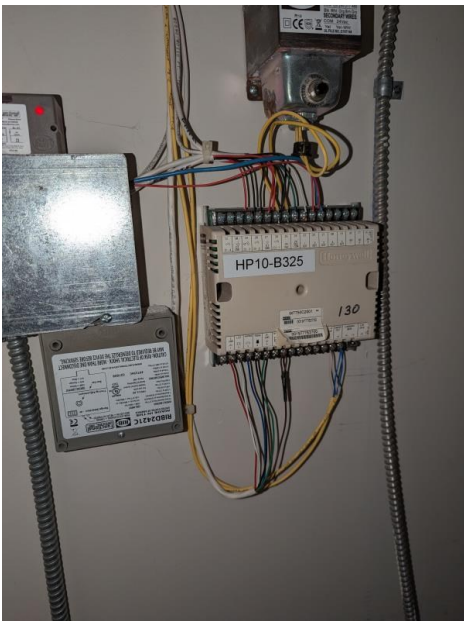


42379056\_PXL\_20230502\_134756172.v2.jpg; Added on 5/22/2023 8:53:27 AM by dmychaluk@cm3inc.com

**ISSUE-459**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B325

Controller not responding to overrides or values device may have been left in manual configuration mode or similar issue. : Recommend configuring the controller and validating unit control. Replacement of the controller may be required.

**Status** Open  
**Entered** 5/2/2023 10:20:16 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



22634687\_PXL\_20230502\_142041129.v2.jpg; Added on 5/22/2023 8:53:27 AM by dmychaluk@cm3inc.com

**ISSUE-460**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B325

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/2/2023 10:25:15 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



56926154\_PXL\_20230502\_134556195.v2.jpg; Added on 5/22/2023 8:53:27 AM by dmychaluk@cm3inc.com



57519908\_PXL\_20230502\_134547306.v2.jpg; Added on 5/22/2023 8:53:27 AM by dmychaluk@cm3inc.com



# B327

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B327 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.3               | 69.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:28 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:28 AM

B327 ISSUES

**ISSUE-461**

Project / Strath Haven Middle School / Water Source Heat Pumps / B327

Filter not installed in unit, was laying beside it. We placed the filter in the unit. Coils require cleaning due to the filter not being installed. : Recommend cleaning coils.

**Status** Open  
**Entered** 5/2/2023 10:27:24 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



26073785\_PXL\_20230502\_142356065.v2.jpg; Added on 5/22/2023 8:53:28 AM by dmychaluk@cm3inc.com



52835926\_16830381386293140261164351330276.v2.jpg; Added on 5/22/2023 8:53:28 AM by dmychaluk@cm3inc.com

**ISSUE-462**

Project / Strath Haven Middle School / Water Source Heat Pumps / B327

Geothermal loop isolation valve is not closing when the unit is disabled, and is possibly seized as it does not fully close when powered down. : Recommend replacement of the valve and actuator

**Status** Open  
**Entered** 5/2/2023 10:36:12 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM

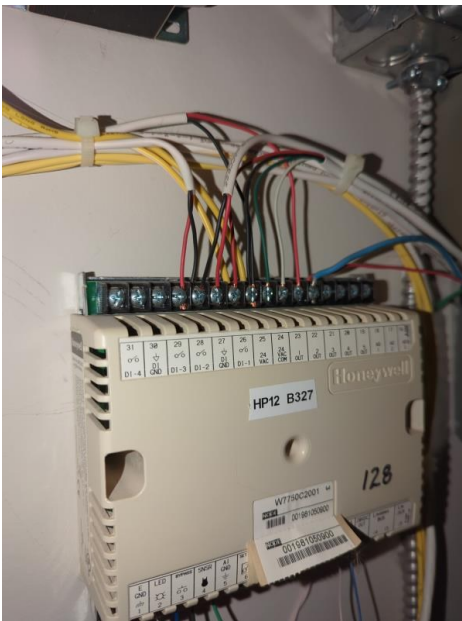


01015490\_1683038694111760000060232901304.v2.jpg; Added on 5/22/2023 8:53:28 AM by dmychaluk@cm3inc.com

**ISSUE-463**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B327

Controller unresponsive to commands. : Reconfigure or replace controller.

**Status** Open  
**Entered** 5/2/2023 10:45:41 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



56214392\_16830392035214739284755374347301.v2.jpg;  
Added on 5/22/2023 8:53:28 AM by dmychaluk@cm3inc.com



# B330A

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                           | Design | Proposed | Final | Units |
|----------------------|---------------------------|--------|----------|-------|-------|
| Area Served          | 3rd Floor Corridor Area C |        |          | Trane | -     |
| Location Description | Corridor Ceiling          |        |          |       |       |

B330A WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 68.6               | 69.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 60             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:34 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:34 AM

B330A ISSUES

**ISSUE-482**

Project / Strath Haven Middle School / Water Source Heat Pumps / B330A

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 3:09:17 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



03168541\_PXL\_20230502\_190717526.v2.jpg; Added on 5/22/2023 8:53:34 AM by dmychaluk@cm3inc.com



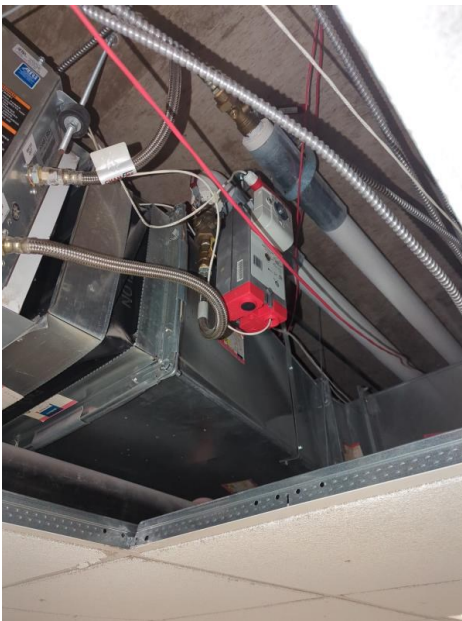
03637294\_PXL\_20230502\_190801609.v2.jpg; Added on 5/22/2023 8:53:34 AM by dmychaluk@cm3inc.com

**ISSUE-483**

Project / Strath Haven Middle School / Water Source Heat Pumps / B330A

Geothermal loop isolation valve is not closing after compressor turns off or when the unit is unoccupied. : Recommend correcting programming and wiring to properly control the isolation valve.

**Status** Open  
**Entered** 5/2/2023 3:12:24 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



16830547381602825768177411320670.v2.jpg; Added on 5/22/2023 8:53:34 AM by dmychaluk@cm3inc.com



# B330B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                           | Design | Proposed | Final | Units |
|----------------------|---------------------------|--------|----------|-------|-------|
| Area Served          | 3rd Floor Corridor Area C |        |          | Trane | -     |
| Location Description | Corridor Ceiling          |        |          |       |       |

B330B WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.4               | 70             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:33 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:33 AM

B330B ISSUES

**ISSUE-479**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B330B

Filters are dirty. : Change air filters on a regular interval.  
Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 3:31:02 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



48913709\_PXL\_20230502\_193325424.v2.jpg; Added on 5/22/2023 8:53:32 AM by dmychaluk@cm3inc.com



49351210\_PXL\_20230502\_193237802.v2.jpg; Added on 5/22/2023 8:53:33 AM by dmychaluk@cm3inc.com

### ISSUE-480

Project / Strath Haven Middle School / Water Source Heat Pumps / B330B

Geothermal loop isolation valve is not closing after compressor turns off or when the unit is unoccupied. a very faint motor noise can be heard when cycling the valve it appears the valve or actuator are failed. : Recommend troubleshooting valve and actuator and correcting any failed wiring preventing the valve from closing.

**Status** Open  
**Entered** 5/2/2023 3:40:16 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



20504467\_16830569988076542519725000890995.v2.jpg;  
Added on 5/22/2023 8:53:33 AM by dmychaluk@cm3inc.com



36832729\_16830570255045705189144086408926.v2.jpg;  
Added on 5/22/2023 8:53:33 AM by dmychaluk@cm3inc.com

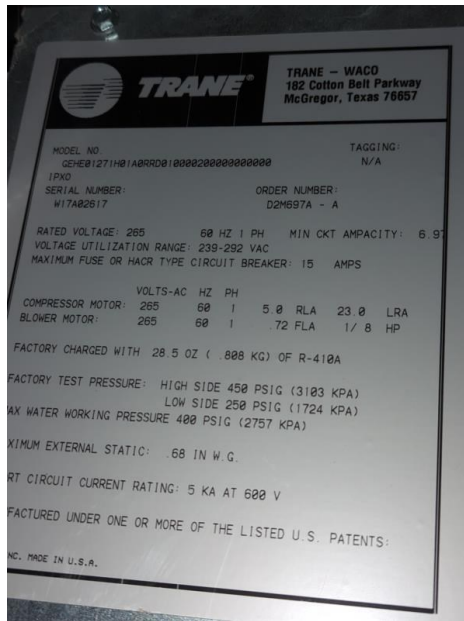
**ISSUE-481**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B330B

Supply fan command drops out however the fan continues to run. RIB light is going off, possible failed board or wiring issue. : Recommend troubleshooting unit control board and wiring.

**Status** Open  
**Entered** 5/2/2023 3:46:26 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



05845400\_1683056938553572163577866083162.v2.jpg;  
Added on 5/22/2023 8:53:33 AM by dmychaluk@cm3inc.com



44549937\_16830569560318247262995061427224.v2.jpg;  
Added on 5/22/2023 8:53:33 AM by dmychaluk@cm3inc.com



# B331

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B331 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.6               | 68.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 65             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:33 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:33 AM



B331 ISSUES

**ISSUE-587**

Project / Strath Haven Middle School / Water Source Heat Pumps / B331

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 9:21:20 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



**ISSUE-588**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B331

Compressor command not working, RIB does not appear to be changing state. Possible failed programming or bad RIB. Mechanical issue ma be present as well. : Recommend validating programming within the controller and repairing mechanical issues related to the compressor command.

**Status** Open  
**Entered** 5/2/2023 9:27:57 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



**ISSUE-589**

Project / Strath Haven Middle School / Water Source Heat Pumps / B331

Geothermal valve not modulating when compressor command goes on or off nor does it close with occupancy command. : Recommend correcting programming and wiring to ensure geothermal valve is closing when the compressor is not running or calling.

**Status** Open  
**Entered** 5/2/2023 9:29:51 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



# B332

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

B332 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.3               | 69.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 65             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:42 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:42 AM

B332 ISSUES

**ISSUE-498**

Project / Strath Haven Middle School / Water Source Heat Pumps / B332

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/2/2023 8:39:32 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



51416403\_16830325593343861694305726792675.v2.jpg;  
Added on 5/22/2023 8:53:41 AM by dmychaluk@cm3inc.com



19235303\_PXL\_20230502\_130705718.v2.jpg; Added on  
5/22/2023 8:53:41 AM by dmychaluk@cm3inc.com



19719684\_PXL\_20230502\_130619091.v2.jpg; Added on  
5/22/2023 8:53:41 AM by dmychaluk@cm3inc.com

**ISSUE-499**  
Project / Strath Haven Middle School / Water Source Heat Pumps / B332

Thermostat has been damaged and has trash stored in its protective box. : Recommend replacement of the thermostat and housing.

**Status** Open  
**Entered** 5/2/2023 8:47:50 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



PXL\_20230502\_124429194.v2.jpg; Added on 5/22/2023 8:53:42 AM by dmychaluk@cm3inc.com

**ISSUE-500**

Project / Strath Haven Middle School / Water Source Heat Pumps / B332

Supply air duct 18x12 is missing insulation, approximately 25 feet. : Repair or replace duct insulation.

**Status** Open  
**Entered** 5/2/2023 8:54:38 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



22689508\_PXL\_20230502\_125308040.v2.jpg; Added on 5/22/2023 8:53:42 AM by dmychaluk@cm3inc.com

**ISSUE-501**

Project / Strath Haven Middle School / Water Source Heat Pumps / B332

Geothermal thermal valve status not working when closed or open the status does not change. Possible point configuration issue : recommend correcting point and validation of point mapping in the BAS.

**Status** Open  
**Entered** 5/2/2023 8:59:47 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/9/2023 12:00:00 AM



16830323777714994626094457310060.v2.jpg; Added on 5/22/2023 8:53:42 AM by dmychaluk@cm3inc.com



# C105

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |   | Design | Proposed | Final | Units |
|----------------------|---|--------|----------|-------|-------|
| Area Served          | C105, C106 Guidance, and Reading Specialist |        |          | Trane | -     |
| Location Description | C105 Above Ceiling                          |        |          |       |       |

C105 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 72.5               | 71.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 74             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:55 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:55 AM

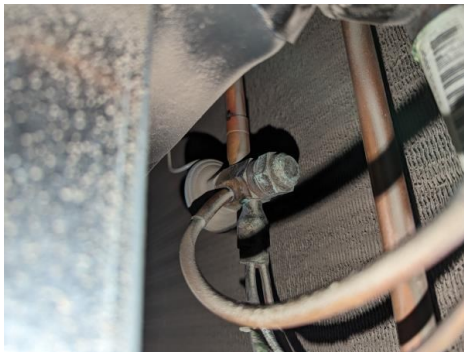
C105 ISSUES

**ISSUE-540**

Project / Strath Haven Middle School / Water Source Heat Pumps / C105

Filter bracket and return flex connection are no longer attached properly. The filter is dirty and requires replacement. The coils is compacted with dirty and requires cleaning. :  
Recommend fixing sheet metal, replacing filter, and cleaning the coil.

**Status** Open  
**Entered** 5/3/2023 2:39:55 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_183653979.v2.jpg; Added on 5/22/2023 8:53:55 AM by dmychaluk@cm3inc.com



11314758\_16831392049015286817067310508942.v2.jpg; Added on 5/22/2023 8:53:55 AM by dmychaluk@cm3inc.com



48422433\_16831392181691320940994831032713.v2.jpg; Added on 5/22/2023 8:53:55 AM by dmychaluk@cm3inc.com

**ISSUE-541**

Project / Strath Haven Middle School / Water Source Heat Pumps / C105

Geothermal isolation valve not modulating with compressor command or occupancy. :  
Recommend replacement of valve, actuator, wiring.

**Status** Open  
**Entered** 5/3/2023 2:42:26 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831393280681141757804246805124.v2.jpg; Added on 5/22/2023 8:53:55 AM by dmychaluk@cm3inc.com

# C108

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                        |              | Design | Proposed | Final | Units |
|----------------------|------------------------|--------------|--------|----------|-------|-------|
| Area Served          | C108 Science Classroom | Manufacturer |        |          | Trane | -     |
| Location Description | C108 Above Ceiling     |              |        |          |       |       |

C108 WORK

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO   |      |      | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|----------------------------|--------------|-------|------|------|------|------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|------------|
|            |                            |              |       |      | 0%   | 50%  | 100% |      |                    |                |                          |                          |                          |            |
| ----       | Compressor Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ---- | ---- | ---- | P    | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ---- | ---- | ---- | F    | ----               | ----           | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ---- | ---- | ---- | ---- | 70.2               | 70.9           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | 69             | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:56 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:56 AM

C108 ISSUES

**ISSUE-542**

Project / Strath Haven Middle School / Water Source Heat Pumps / C108

Filter is dirty and requires changing. Coils are compacted and requires cleaning. :  
Recommend replacement of filters and cleaning of coils.

**Status** Open  
**Entered** 5/3/2023 2:59:38 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_185816308.v2.jpg; Added on 5/22/2023 8:53:56 AM by dmychaluk@cm3inc.com



12101368\_16831403887869214434817359596987.v2.jpg; Added on 5/22/2023 8:53:56 AM by dmychaluk@cm3inc.com

**ISSUE-543**

Project / Strath Haven Middle School / Water Source Heat Pumps / C108

Geothermal Isolation valve status isn't changing state when valve is modulating. This is causing the compressor to turn on before the valve is open. : Recommend correcting status switch, wiring and controller logic.

**Status** Open  
**Entered** 5/3/2023 3:10:32 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831410110072574005080086576016.v2.jpg; Added on 5/22/2023 8:53:56 AM by dmychaluk@cm3inc.com



# C109

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                | Design | Proposed | Final | Units |
|----------------------|----------------|--------|----------|-------|-------|
| Area Served          | Classroom C109 |        |          | Trane | -     |
| Location Description | Ceiling C109   |        |          |       |       |

C109 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.2               | 70.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:57 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:57 AM

C109 ISSUES

**ISSUE-544**

Project / Strath Haven Middle School / Water Source Heat Pumps / C109

Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.

**Status** Open  
**Entered** 5/4/2023 7:22:20 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



22917935\_1683199390790292511721018276791.jpg; Added on 5/22/2023 8:53:56 AM by dmychaluk@cm3inc.com

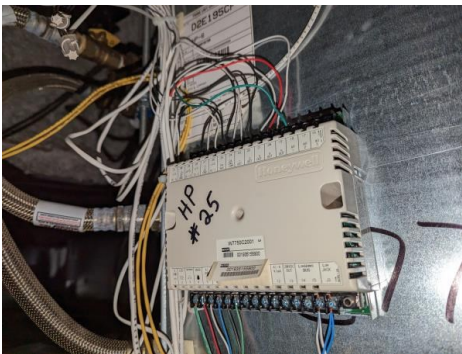


25356266\_16831994993164698550499963591592.v2.jpg; Added on 5/22/2023 8:53:56 AM by dmychaluk@cm3inc.com

**ISSUE-545**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C109

Fan not responding to ab override off command. : Recommend correcting wiring and verifying functionality. Possible unit board failure or RIB failure.

**Status** Open  
**Entered** 5/4/2023 7:23:00 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



PXL\_20230504\_111952794.v2.jpg; Added on 5/22/2023 8:53:57 AM by dmychaluk@cm3inc.com

**ISSUE-546**

Project / Strath Haven Middle School / Water Source Heat Pumps / C109

Geothermal valve not closing when compressor is off or unit unoccupied command is enabled. : Recommend replacement of valve and actuator along with wiring corrections.

**Status** Open  
**Entered** 5/4/2023 7:31:25 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



PXL\_20230504\_112000740.v2.jpg; Added on 5/22/2023 8:53:57 AM by dmychaluk@cm3inc.com



# C110

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                | Design | Proposed | Final | Units |
|----------------------|----------------|--------|----------|-------|-------|
| Area Served          | Classroom C110 |        |          | Trane | -     |
| Location Description | C110 Ceiling   |        |          |       |       |

C110 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.2               | 71.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:57 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:57 AM



C110 ISSUES

**ISSUE-547**

Project / Strath Haven Middle School / Water Source Heat Pumps / C110

Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.

**Status** Open  
**Entered** 5/4/2023 7:39:52 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



**ISSUE-548**

Project / Strath Haven Middle School / Water Source Heat Pumps / C110

Geothermal Isolation valve is not modulating when compressor command is off. :  
Recommend replacement of valve, actuator and correction of wiring.

|                          |                        |
|--------------------------|------------------------|
| <b>Status</b>            | Open                   |
| <b>Entered</b>           | 5/4/2023 7:40:23 AM    |
| <b>Entered By</b>        | dmychaluk@cm3inc.com   |
| <b>Priority</b>          | Energy                 |
| <b>Category</b>          | Automation, Mechanical |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com   |
| <b>Respondent Status</b> | Open                   |
| <b>Due Date</b>          | 5/11/2023 12:00:00 AM  |



# C111

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                        |              | Design | Proposed | Final | Units |
|----------------------|------------------------|--------------|--------|----------|-------|-------|
| Area Served          | C111 Science Classroom | Manufacturer |        |          | Trane | -     |
| Location Description | Above Ceiling          |              |        |          |       |       |

**C111 WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.1               | 70.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:58 AM

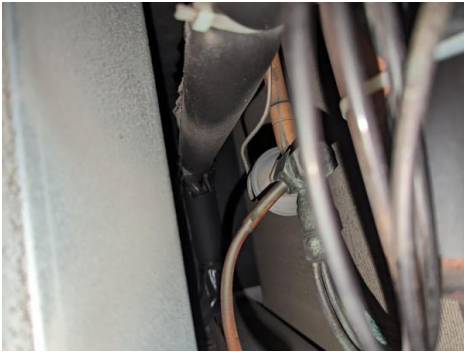
**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:58 AM

C111 ISSUES

**ISSUE-549**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C111

Filter is dirty and the wrong size. The coil is also dirty and compacted : Recommend installing a properly sized air filter at regular intervals and professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/5/2023 7:23:51 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



37968923\_PXL\_20230505\_112336915.v2.jpg; Added on 5/22/2023 8:53:58 AM by dmychaluk@cm3inc.com



38468936\_PXL\_20230505\_112312388.v2.jpg; Added on 5/22/2023 8:53:58 AM by dmychaluk@cm3inc.com



**ISSUE-550**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C111

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 5/5/2023 7:29:02 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



# C113

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |               | Design | Proposed | Final | Units |
|----------------------|---------------|--------|----------|-------|-------|
| Area Served          | Science C113  |        |          | Trane | -     |
| Location Description | Above Ceiling |        |          |       |       |

C113 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.8               | 70.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:00 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:00 AM

C113 ISSUES

**ISSUE-551**

Project / Strath Haven Middle School / Water Source Heat Pumps / C113

Geothermal valve actuator is disconnected from valve body. : Reconnect valve actuator to valve body and test operation. Replace faulty components as required.

**Status** Open  
**Entered** 5/5/2023 7:44:14 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



36548221\_PXL\_20230505\_114057262.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com



37204480\_PXL\_20230505\_114103100.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com

**ISSUE-552**

Project / Strath Haven Middle School / Water Source Heat Pumps / C113

Controller is not properly to the unit. : Recommend properly mounting controller to prevent potential faults.

**Status** Open  
**Entered** 5/5/2023 7:44:25 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



PXL\_20230505\_113603065.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com

**ISSUE-553**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C113

Geothermal balancing valves are open completely. : Properly balance system or set to correct initial values.

**Status** Open  
**Entered** 5/5/2023 7:45:46 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



53306962\_PXL\_20230505\_114141833.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com

**ISSUE-554**

Project / Strath Haven Middle School / Water Source Heat Pumps / C113

Return duct not connected to the unit correctly. This is preventing adequate outside air from entering the unit and space, due to the ERU duct going directly to the return duct. : Recommend installation of a proper filter bracket, and connecting ductwork to the unit.

**Status** Open  
**Entered** 5/5/2023 7:49:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



PXL\_20230505\_113651023.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com



PXL\_20230505\_113821509.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com



PXL\_20230505\_113557893.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com

**ISSUE-555**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C113

Filter is the incorrect size and not properly mounted. The filter needs to be replaced and could need to be cleaned. : Recommend professional cleaning of the coil and replacement of the filter.

**Status** Open  
**Entered** 5/5/2023 7:52:04 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/12/2023 12:00:00 AM



PXL\_20230505\_113557893.v2.jpg; Added on 5/22/2023 8:53:59 AM by dmychaluk@cm3inc.com



# C115

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design       | Proposed | Final | Units |
|--------------|----------|-------|-------|
| Manufacturer |          | Trane | -     |

**C115 WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.5               | 70.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:01 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:01 AM

C115 ISSUES

**ISSUE-556**

Project / Strath Haven Middle School / Water Source Heat Pumps / C115

Filter is not installed correctly allowing unfiltered air to go through the unit. : Recommend installing filters properly and professionally cleaning the coil.

**Status** Open  
**Entered** 5/3/2023 8:26:04 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_122532270.v2.jpg; Added on 5/22/2023 8:54:00 AM by dmychaluk@cm3inc.com

**ISSUE-557**

Project / Strath Haven Middle School / Water Source Heat Pumps / C115

Geothermal valve not modulating closed a very faint noise can be heard when testing. :  
Recommend replacement of the valve and actuator.

**Status** Open  
**Entered** 5/3/2023 8:36:19 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_123444344.v2.jpg; Added on 5/22/2023 8:54:00 AM by dmychaluk@cm3inc.com



# C118

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                | Design | Proposed | Final | Units |
|----------------------|----------------|--------|----------|-------|-------|
| Area Served          | Classroom C118 |        |          | Trane | -     |
| Location Description | Ceiling 118    |        |          |       |       |

C118 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | Ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.3               | 71.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | Fail | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 74             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:02 AM

**Marked complete by** dmychaluk@cm3inc.com on 5/22/2023 8:54:02 AM

C118 ISSUES

**ISSUE-558**

Project / Strath Haven Middle School / Water Source Heat Pumps / C118

Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.

**Status** Open  
**Entered** 5/4/2023 7:10:03 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



09756532\_PXL\_20230504\_110620218.v2.jpg; Added on 5/22/2023 8:54:02 AM by dmychaluk@cm3inc.com



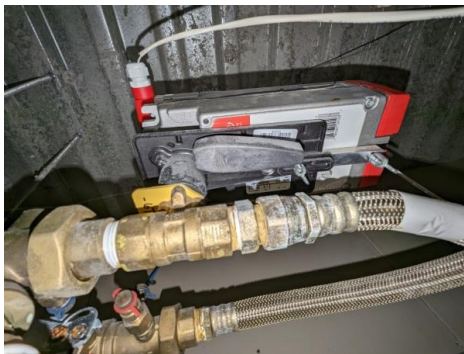
10304050\_PXL\_20230504\_110044826.v2.jpg; Added on 5/22/2023 8:54:02 AM by dmychaluk@cm3inc.com

**ISSUE-559**

Project / Strath Haven Middle School / Water Source Heat Pumps / C118

Geothermal Isolation valve is not modulating when compressor command is off. :  
Recommend replacement of valve, actuator and correction of wiring.

**Status** Open  
**Entered** 5/4/2023 7:10:25 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



47282171\_PXL\_20230504\_110650669.v2.jpg; Added on 5/22/2023 8:54:02 AM by dmychaluk@cm3inc.com



**ISSUE-560**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C118

Unit not switching over to cooling automatically. It will work as expected when forced to cooling mode. : Recommend correcting programming within the controller.

**Status** Open  
**Entered** 5/4/2023 7:15:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



# C119

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design | Proposed | Final | Units |
|--------|----------|-------|-------|
|        |          | Trane | -     |

C119 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 68.1               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO    | ----  | Ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Geothermal Valve Command   | DO    | ----  | Bad  | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

Complete

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:54:03 AM

Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:54:03 AM

C119 ISSUES

**ISSUE-561**

Project / Strath Haven Middle School / Water Source Heat Pumps / C119

Geothermal Isolation valve is not modulating when compressor command is off. :  
Recommend replacement of valve, actuator and correction of wiring.

**Status** Open  
**Entered** 5/4/2023 6:53:30 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



39878565\_PXL\_20230504\_104754597.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com

**ISSUE-562**

Project / Strath Haven Middle School / Water Source Heat Pumps / C119

Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.

**Status** Open  
**Entered** 5/4/2023 6:53:51 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



08331067\_PXL\_20230504\_104632336.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com



08831069\_PXL\_20230504\_104647759.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com



# C120

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                    | Design | Proposed | Final | Units |
|----------------------|--------------------|--------|----------|-------|-------|
| Area Served          | C120 Classroom     |        |          | Trane | -     |
| Location Description | C120 Above Ceiling |        |          |       |       |

C120 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 72.1               | 72.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:04 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:04 AM

C120 ISSUES

**ISSUE-563**

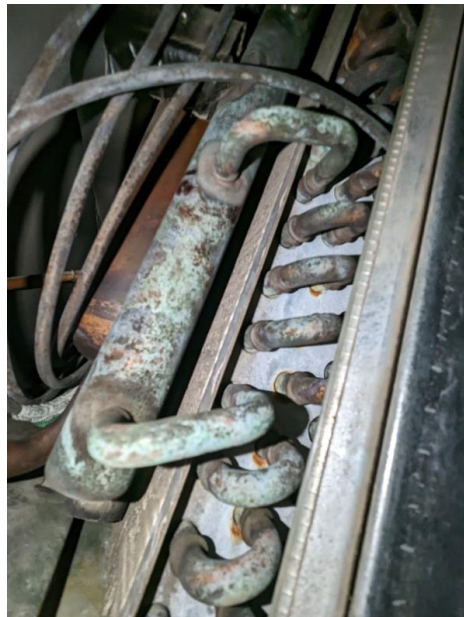
Project / Strath Haven Middle School / Water Source Heat Pumps / C120

Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.

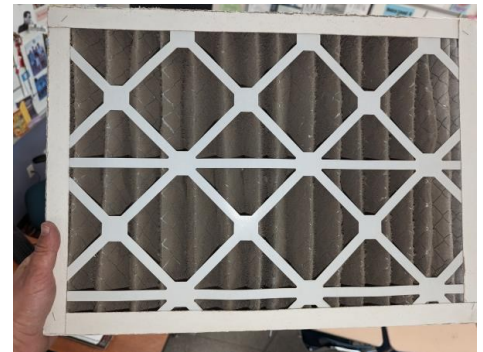
**Status** Open  
**Entered** 5/3/2023 3:17:04 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_191526664.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com



PXL\_20230503\_191502332.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com



PXL\_20230503\_191413414.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com



06020290\_PXL\_20230503\_192159503.v2.jpg; Added on 5/22/2023 8:54:03 AM by dmychaluk@cm3inc.com

**ISSUE-564**

Project / Strath Haven Middle School / Water Source Heat Pumps / C120

Geothermal Isolation valve is not modulating when compressor command is off. :  
Recommend replacement of valve, actuator and correction of wiring.

**Status** Open  
**Entered** 5/3/2023 3:27:46 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831420553821043235998980539451.v2.jpg; Added on 5/22/2023 8:54:04 AM by dmychaluk@cm3inc.com



# C121

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Area Served | C-121 | Manufacturer | Design | Proposed | Final | Units |
|-------------|-------|--------------|--------|----------|-------|-------|
|             |       |              |        |          | Trane | -     |

C121 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                       |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------|
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Supply Fan Cmd             | DO    | ----  | ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off                     |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                           |
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 71.9               | 71.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Occupancy Cmd              | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Unocc Bypass Switch        | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                           |
| ----       | Geothermal Valve Command   | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | No modulating with occ command |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Appears disabled               |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Hardwired in unit not on BAS   |

Complete

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:31 AM

Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:53:31 AM



C121 ISSUES

**ISSUE-474**

Project / Strath Haven Middle School / Water Source Heat Pumps / C121

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 4/27/2023 3:17:42 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



20986477\_PXL\_20230427\_191606161.v2.jpg; Added on 5/22/2023 8:53:31 AM by dmychaluk@cm3inc.com

**ISSUE-475**

Project / Strath Haven Middle School / Water Source Heat Pumps / C121

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 4/27/2023 3:21:42 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



34293013\_PXL\_20230427\_192058996.v2.jpg; Added on 5/22/2023 8:53:31 AM by dmychaluk@cm3inc.com



**ISSUE-476**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C121

Coils are dirty. : Professionally clean coils on a regular interval.

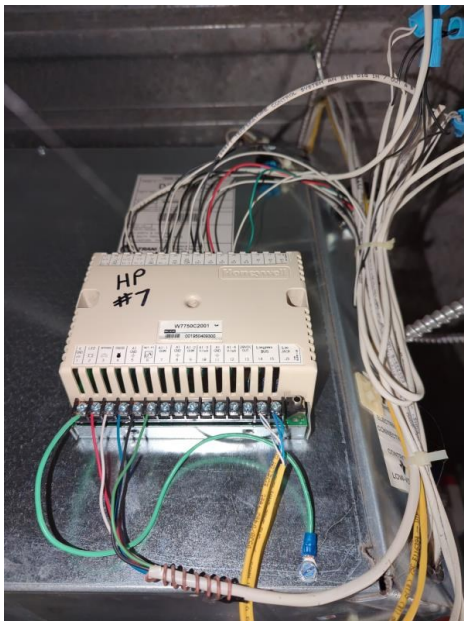
**Status** Open  
**Entered** 4/27/2023 3:23:26 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM

**ISSUE-477**

Project / Strath Haven Middle School / Water Source Heat Pumps / C121

Thermostat thumb wheel setpoint appears to be showing 255 d g F. Controller not responding to setup commands as expected. : Recommend correcting programming within the XI10 controller.

**Status** Open  
**Entered** 4/27/2023 3:35:28 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/4/2023 12:00:00 AM



16826241127551847527379008114012.v2.jpg; Added on 5/22/2023 8:53:31 AM by dmychaluk@cm3inc.com



# C122

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design       | Proposed | Final | Units |
|--------------|----------|-------|-------|
| Manufacturer |          | Trane | -     |

**C122 WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                                 |
|------------|----------------------------|-------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|--|
| ----       | Space Temperature          | AI    | ----  | ---- | ----  | ----   | ----    | ---- | 71.6               | 71.5           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Space Temp Setpoint Dial   | AI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 73.7           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Supply Fan Status          | DI    | ----  | ---- | ----  | ----   | ----    | OK   | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off                               |
| ----       | Geothermal Valve Status    | DI    | ----  | ---- | ----  | ----   | ----    | NA   | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Unable to confirm                        |
| ----       | Condensate Overflow Switch | DI    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Factory wired not tied into the BAS      |
| ----       | Compressor Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Reversing Valve Cmd        | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Supply Fan Cmd             | DO    | ----  | OK   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Occupancy Cmd              | DO    | ----  | Ok   | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                     |
| ----       | Unocc Bypass Switch        | DO    | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                                     |
| ----       | Geothermal Valve Command   | DO    | ----  | Fail | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Valve not closing with occupancy command |

Complete

Assigned to dmychaluk@cm3inc.com

Created by dmychaluk@cm3inc.com on 5/22/2023 8:53:45 AM

Marked complete by dmychaluk@cm3inc.com on 5/22/2023 8:53:45 AM



C122 ISSUES

**ISSUE-507**

Project / Strath Haven Middle School / Water Source Heat Pumps / C122

Filter is dirty and requires replacement. Coil is also dirty and requires cleaning :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/1/2023 3:49:24 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



46262452\_PXL\_20230501\_195905623.v2.jpg; Added on 5/22/2023 8:53:44 AM by dmychaluk@cm3inc.com



46699951\_PXL\_20230501\_195359464.v2.jpg; Added on 5/22/2023 8:53:44 AM by dmychaluk@cm3inc.com

**ISSUE-508**

Project / Strath Haven Middle School / Water Source Heat Pumps / C122

Geothermal valve not closing with occupancy command. : Recommend correction of wiring and programming.

**Status** Open  
**Entered** 5/1/2023 3:51:32 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/8/2023 12:00:00 AM



37889345\_1682971279397855836276384132866.v2.jpg; Added on 5/22/2023 8:53:45 AM by dmychaluk@cm3inc.com



# C123a

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                     |              | Design | Proposed | Final | Units |
|----------------------|-------------------------------------|--------------|--------|----------|-------|-------|
| Area Served          | Chorus C123                         | Manufacturer |        |          | Trane | -     |
| Location Description | C124 Music Department Above Ceiling |              |        |          |       |       |

C123A WORK

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO   |      |      | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|----------------------------|--------------|-------|------|------|------|------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|------------|
|            |                            |              |       |      | 0%   | 50%  | 100% |      |                    |                |                          |                          |                          |            |
| ----       | Compressor Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ---- | ---- | ---- | P    | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ---- | ---- | ---- | ---- | 70.2               | 70             | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | 74             | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:46 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:46 AM

C123A ISSUES

**ISSUE-509**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123a

Filter is dirty and compacted along with the coil. : Recommend replacing filters and cleaning the coil.

**Status** Open  
**Entered** 5/3/2023 2:19:07 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_180942609.v2.jpg; Added on 5/22/2023 8:53:45 AM by dmychaluk@cm3inc.com



PXL\_20230503\_180854984.v2.jpg; Added on 5/22/2023 8:53:45 AM by dmychaluk@cm3inc.com

**ISSUE-510**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123a

Geothermal isolation valve is not moving closed when the compressors are off or the unit is unoccupied. : Recommend replacing valve, actuator, and troubleshooting wiring.

**Status** Open  
**Entered** 5/3/2023 2:21:07 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_181636126.v2.jpg; Added on 5/22/2023 8:53:45 AM by dmychaluk@cm3inc.com



**ISSUE-511**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123a

Programming between C123A and C123B does not appear to be functional. Units are not running together and not passing points together : Recommend correcting programming between the units.

**Status** Open  
**Entered** 5/3/2023 2:31:53 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



# C123B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                           | Design       | Proposed | Final | Units |
|----------------------|---------------------------|--------------|----------|-------|-------|
| Area Served          | Chorus C123               | Manufacturer |          | Trane | -     |
| Location Description | Above Ceiling in corridor |              |          |       |       |

C123B WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 68.3               | 67.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 255            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:46 AM

**Marked complete by** dmychaluk@cm3inc.com on 7/5/2023 12:59:45 PM



C123B ISSUES

**ISSUE-512**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123B

Setpoint dial is showing 255 deg F which is failed. : Recommend replacement of the wiring and sensor.

**Status** Open  
**Entered** 5/3/2023 9:05:37 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

**ISSUE-513**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123B

Filter and coil are dirty and compacted. : Recommend replacing the filter and professionally cleaning the coil.

**Status** Open  
**Entered** 5/3/2023 9:11:24 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_131005189.v2.jpg; Added on 5/22/2023 8:53:46 AM by dmychaluk@cm3inc.com



**ISSUE-514**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C123B

Unit was running in heat when cooling was called. : Verify controller programming.

**Status** Open  
**Entered** 5/3/2023 9:13:58 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

**ISSUE-515**

Project / Strath Haven Middle School / Water Source Heat Pumps / C123B

Geothermal valve is not closing when compressor command is off or when the unit is unoccupied. : Recommend replacement of the valve and actuator, troubleshooting of wiring and controller may be required.

**Status** Open  
**Entered** 5/3/2023 9:17:11 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_130903357.v2.jpg; Added on 5/22/2023 8:53:46 AM by dmychaluk@cm3inc.com



# C124

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                       |              | Design | Proposed | Final | Units |
|----------------------|-----------------------|--------------|--------|----------|-------|-------|
| Area Served          | Music Department C124 | Manufacturer |        |          | Trane | -     |
| Location Description | Above Ceiling         |              |        |          |       |       |

**C124 WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                     | Units        | I/O  |      | AO   |      |      | BI   | Hand<br>Probe<br>Reading | BAS AI<br>Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|--------------------------------|--------------|------|------|------|------|------|------|--------------------------|-------------------|--------------------------|--------------------------|--------------------------|------------|
|            |                                |              | #    | BO   | 0%   | 50%  | 100% |      |                          |                   |                          |                          |                          |            |
| ----       | Compressor<br>Cmd              | DO           | ---- | P    | ---- | ---- | ---- | ---- | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Reversing<br>Valve Cmd         | DO           | ---- | P    | ---- | ---- | ---- | ---- | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan<br>Cmd              | DO           | ---- | P    | ---- | ---- | ---- | ---- | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan<br>Status           | DI           | ---- | ---- | ---- | ---- | ---- | P    | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal<br>Valve Status     | DI           | ---- | ---- | ---- | ---- | ---- | F    | ----                     | ----              | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Space<br>Temperature           | AI           | ---- | ---- | ---- | ---- | ---- | ---- | 70.9                     | 71.2              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Occupancy<br>Cmd               | DO           | ---- | P    | ---- | ---- | ---- | ---- | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Unocc Bypass<br>Switch         | DO           | ---- | ---- | ---- | ---- | ---- | ---- | ----                     | ----              | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Geothermal<br>Valve<br>Command | DO           | ---- | P    | ---- | ---- | ---- | ---- | ----                     | ----              | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Space Temp<br>Setpoint Dial    | AI           | ---- | ---- | ---- | ---- | ---- | ---- | ----                     | 255               | <input type="checkbox"/> | ✓                        | <input type="checkbox"/> | ----       |
| ----       | Condensate<br>Overflow Switch  | Manufacturer | ---- | ---- | ---- | ---- | ---- | ---- | ----                     | ----              | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:48 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:48 AM

C124 ISSUES

**ISSUE-516**

Project / Strath Haven Middle School / Water Source Heat Pumps / C124

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/3/2023 10:47:08 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16758167\_1683125582386876569338841402966.v2.jpg; Added on 5/22/2023 8:53:47 AM by dmychaluk@cm3inc.com



12546552\_16831256107533145805741948003094.v2.jpg; Added on 5/22/2023 8:53:47 AM by dmychaluk@cm3inc.com

**ISSUE-517**

Project / Strath Haven Middle School / Water Source Heat Pumps / C124

Supply diffusers in room appear to be feeding too much air into the space. : Recommend a balancing be performed with a flow hood for the diffusers to ensure they are providing proper flow.

**Status** Open  
**Entered** 5/3/2023 10:48:42 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



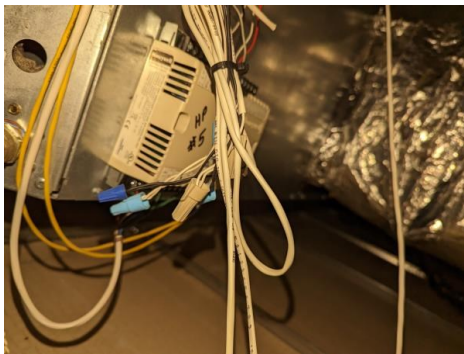
15151072\_16831257060127565541838364627135.v2.jpg;  
Added on 5/22/2023 8:53:47 AM by dmychaluk@cm3inc.com

**ISSUE-518**

Project / Strath Haven Middle School / Water Source Heat Pumps / C124

Compressor command and compressor start are not hard wired to the geothermal isolation valve status. This is allowing the compressor to run before the geothermal valve can open. Valve status is not functional the valve does move. : Recommend replacement of status switch mounted on the actuator and updating programming.

**Status** Open  
**Entered** 5/3/2023 10:57:18 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



57167479\_PXL\_20230503\_145814796.v2.jpg; Added on 5/22/2023 8:53:47 AM by dmychaluk@cm3inc.com



57651858\_PXL\_20230503\_145800370.v2.jpg; Added on 5/22/2023 8:53:47 AM by dmychaluk@cm3inc.com

**ISSUE-519**

Project / Strath Haven Middle School / Water Source Heat Pumps / C124

Space sensor went into a failed state after adjusting the dial. Wee able to correct it however it still should be replaced. Sensor is located directly behind a microwave. : Recommend replacement of the sensor and relocating the sensor near the return grille.

**Status** Open  
**Entered** 5/3/2023 11:09:37 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_150607118.v2.jpg; Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com



PXL\_20230503\_150540596.v2.jpg; Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com

# C125A

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                     |              | Design | Proposed | Final | Units |
|----------------------|-------------------------------------|--------------|--------|----------|-------|-------|
| Area Served          | Orchestra C125                      | Manufacturer |        |          | Trane | -     |
| Location Description | C124 Music Department Above Ceiling |              |        |          |       |       |

**C125A WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.4               | 70.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 70.1           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:49 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:49 AM

C125A ISSUES

**ISSUE-520**

Project / Strath Haven Middle School / Water Source Heat Pumps / C125A

Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. :  
Recommend replacement of filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/3/2023 10:28:23 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



53232902\_PXL\_20230503\_141448098.v2.jpg; Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com



53672501\_PXL\_20230503\_141410122.v2.jpg; Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com

**ISSUE-521**

Project / Strath Haven Middle School / Water Source Heat Pumps / C125A

Geothermal valve not cycling closed when the compressor command is off or when the unit is unoccupied. Based on other failures its possible the valve is seized. : Recommend replacing valve and actuator and correcting wiring as needed.

**Status** Open  
**Entered** 5/3/2023 10:43:42 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



59478122\_16831250597471835743256472838583.v2.jpg;  
Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com



15902931\_16831251063632492789037824633478.v2.jpg;  
Added on 5/22/2023 8:53:48 AM by dmychaluk@cm3inc.com



# C125B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                  | Design | Proposed | Final | Units |
|----------------------|------------------|--------|----------|-------|-------|
| Area Served          | Orchestra C125   |        |          | Trane | -     |
| Location Description | Corridor Ceiling |        |          |       |       |

C125B WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                     | NA                                  | Comments                              |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|--------------------------|-------------------------------------|---------------------------------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off                            |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Not wired to unit controller (shared) |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----                                  |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----                                  |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | ----                                  |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:50 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:50 AM

C125B ISSUES

**ISSUE-522**

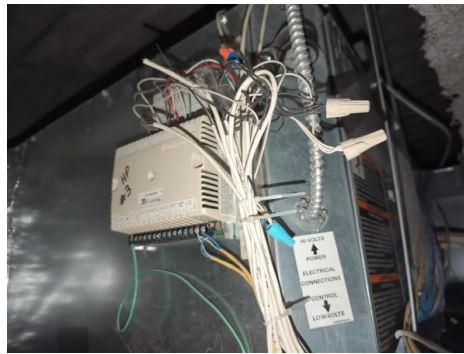
Project / Strath Haven Middle School / Water Source Heat Pumps / C125B

Compressor command and compressor start are not hard wired to the geothermal isolation valve status. This is allowing the compressor to run before the geothermal valve can open. Valve status is functional so the programming needs to be updated or the status needs to be hardwired to the compressor circuit.

**Status** Open  
**Entered** 5/3/2023 9:50:32 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831218032211460700307084197396.v2.jpg; Added on 5/22/2023 8:53:49 AM by dmychaluk@cm3inc.com



06438485\_16831218418727913344865754047750.v2.jpg; Added on 5/22/2023 8:53:49 AM by dmychaluk@cm3inc.com



**ISSUE-523**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C125B

Leak noted at balancing valve and isolation valve union. : Repair pipe leak as required.

**Status** Open  
**Entered** 5/3/2023 9:51:57 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

**ISSUE-524**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C125B

Filter not properly installed and is damaged. Cool is dirty due to this issue. : Recommend installation of filter and professional cleaning of coil.

**Status** Open  
**Entered** 5/3/2023 9:55:26 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_135236089.v2.jpg; Added on 5/22/2023 8:53:49 AM by dmychaluk@cm3inc.com



**ISSUE-525**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C125B

Unit shares a space temperature sensor with C125A and appears that required programming is non-functional. : Program controllers or station so that one sensor provides full setpoint functionality to both heat pumps. Control in unison.

**Status** Open  
**Entered** 5/3/2023 9:59:22 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



# C126

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                         | Design | Proposed | Final | Units |
|----------------------|-------------------------|--------|----------|-------|-------|
| Location             | C127 Instrument Storage |        |          | Trane | -     |
| Location Description | C127 Instrument Storage |        |          |       |       |

C126 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.3               | 70.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 69             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:50 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:50 AM

C126 ISSUES

**ISSUE-526**

Project / Strath Haven Middle School / Water Source Heat Pumps / C126

Filter used is the wrong size. The filter fell over into the return duct. The coils are dirty and compacted because of this. : Recommend installing proper size filters and cleaning the coil.

**Status** Open  
**Entered** 5/3/2023 1:41:30 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_173617250.v2.jpg; Added on 5/22/2023 8:53:50 AM by dmychaluk@cm3inc.com



PXL\_20230503\_173741545.v2.jpg; Added on 5/22/2023 8:53:50 AM by dmychaluk@cm3inc.com

**ISSUE-527**

Project / Strath Haven Middle School / Water Source Heat Pumps / C126

Strainer is resting on a lighting fixture preventing service of the equipment. : Recommend moving the lighting fixture to allow for proper maintenance.

**Status** Open  
**Entered** 5/3/2023 1:43:24 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831357959406098064201057767236.v2.jpg; Added on 5/22/2023 8:53:50 AM by dmychaluk@cm3inc.com

**ISSUE-528**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C126

Geothermal valve not closing when the unit is unoccupied or when the compressor command is off. : Recommend replacement of the valve, actuator, and correcting wiring issues.

**Status** Open  
**Entered** 5/3/2023 1:58:18 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831366868123414405469089304223.v2.jpg; Added on 5/22/2023 8:53:50 AM by dmychaluk@cm3inc.com



# C128A

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                 |              | Design | Proposed | Final | Units |
|----------------------|---------------------------------|--------------|--------|----------|-------|-------|
| Area Served          | Band C128                       | Manufacturer |        |          | Trane | -     |
| Location Description | C129 Instrument Storage Ceiling |              |        |          |       |       |

**C128A WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 67                 | 67             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 73             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:51 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:51 AM

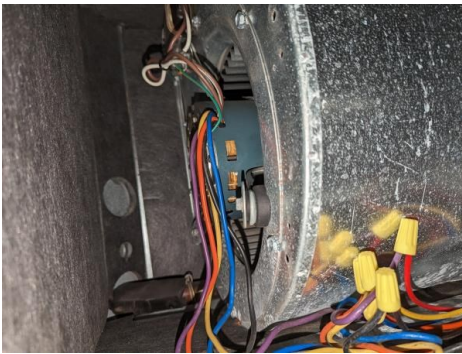
C128A ISSUES

**ISSUE-529**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128A

Unit fan not following occupancy and override commands. Output engages however the fan does not turn on. Fan status does change but the fan is not moving. Possible mechanical issue or electrical. : Check system and wiring. Repair or replace components as required. Adjust CT for the fan to read an accurate tolerance.

**Status** Open  
**Entered** 5/3/2023 1:09:27 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



54911032\_PXL\_20230503\_170444782.v2.jpg; Added on 5/22/2023 8:53:51 AM by dmychaluk@cm3inc.com

**ISSUE-530**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128A

Filters installed in unit are the wrong size. : Properly install filters of manufacturer recommended size.

**Status** Open  
**Entered** 5/3/2023 1:12:55 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



13329940\_PXL\_20230503\_165653957.v2.jpg; Added on 5/22/2023 8:53:51 AM by dmychaluk@cm3inc.com

**ISSUE-531**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128A

Thermostat dial is not reporting correctly in the BAS. The programming in the controller may need to be corrected. : Recommend replacement of the thermostat and correcting programming.

**Status** Open  
**Entered** 5/3/2023 1:18:02 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831342768988164525002941918047.v2.jpg; Added on 5/22/2023 8:53:51 AM by dmychaluk@cm3inc.com



# C128B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                         | Design | Proposed | Final | Units |
|----------------------|-------------------------|--------|----------|-------|-------|
| Area Served          | Band C128               |        |          | Trane | -     |
| Location Description | Area A Corridor Ceiling |        |          |       |       |

C128B WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                              |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off                            |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                                  |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Not wired to unit controller (shared) |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                                  |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                                  |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                                  |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                                  |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                                  |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:52 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:52 AM

C128B ISSUES

**ISSUE-532**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128B

Wrong filter size is used in this unit. Allowing unfiltered air to flow through the unit. :  
Recommend installed the correct size air filter and properly sealing filter access.

**Status** Open  
**Entered** 5/3/2023 1:25:42 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_172130661.v2.jpg; Added on 5/22/2023 8:53:52 AM by dmychaluk@cm3inc.com

**ISSUE-533**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128B

Geothermal loop Isolation valve not closing when compressors are off or when the unit is unoccupied. : Recommend replacement of the actuator and valve along with verification of wiring.

**Status** Open  
**Entered** 5/3/2023 1:27:55 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_172552500.v2.jpg; Added on 5/22/2023 8:53:52 AM by dmychaluk@cm3inc.com

**ISSUE-534**

Project / Strath Haven Middle School / Water Source Heat Pumps / C128B

Corrosion and evidence of a slow leak was found on the balancing valve for the geothermal loop. Leak is not active but most likely will get worse over time. : Recommend correcting failed components.

**Status** Open  
**Entered** 5/3/2023 1:29:59 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_172604985.v2.jpg; Added on 5/22/2023 8:53:52 AM by dmychaluk@cm3inc.com



**ISSUE-535**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C128B

Space setpoint appears to be passing through from C128A however the two units are not operating in unison. One mechanical repair of A is complete we recommend correcting programming logic between both units so they work in unison.

**Status** Open  
**Entered** 5/3/2023 1:32:05 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



# C136

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                    |              | Design | Proposed | Final | Units |
|----------------------|------------------------------------|--------------|--------|----------|-------|-------|
| Area Served          | Corridor in C area stariwell       | Manufacturer |        |          | Trane | -     |
| Location Description | Ceiling in front of main staircase |              |        |          |       |       |

C136 WORK

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO   |      |      | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                     | NA                       | Comments   |
|------------|----------------------------|--------------|-------|------|------|------|------|------|--------------------|----------------|--------------------------|--------------------------|--------------------------|------------|
|            |                            |              |       |      | 0%   | 50%  | 100% |      |                    |                |                          |                          |                          |            |
| ----       | Compressor Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ---- | ---- | ---- | P    | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ---- | ---- | ---- | P    | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ---- | ---- | ---- | ---- | 69.4               | 68.6           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | P    | ---- | ---- | ---- | ---- | ----               | ----           | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ---- | ---- | ---- | ---- | ----               | 55             | ✓                        | <input type="checkbox"/> | <input type="checkbox"/> | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ---- | ---- | ---- | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/> | ✓                        | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:54 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:54 AM

C136 ISSUES

**ISSUE-536**

Project / Strath Haven Middle School / Water Source Heat Pumps / C136

Filter and coil are dirty and compacted. : Recommend replacement of filter and professional cleaning of coil.

**Status** Open  
**Entered** 5/3/2023 8:51:39 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_124438598.v2.jpg; Added on 5/22/2023 8:53:54 AM by dmychaluk@cm3inc.com



# C138A

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                      |              | Design | Proposed | Final | Units |
|----------------------|--------------------------------------|--------------|--------|----------|-------|-------|
| Area Served          | 1st floor C section corridor         | Manufacturer |        |          | Trane | -     |
| Location Description | In ceiling in front of C108 and C105 |              |        |          |       |       |

**C138A WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 69.2               | 70.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 55             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:04 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:04 AM



C138A ISSUES

**ISSUE-565**

Project / Strath Haven Middle School / Water Source Heat Pumps / C138A

Setpoint dial (SetPointTemp) is limited to 74 degrees F when turned all the way up, and EffectSetPt reads 78 degrees F. : Check controller programming and integration.

**Status** Open  
**Entered** 5/3/2023 7:32:19 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

**ISSUE-566**

Project / Strath Haven Middle School / Water Source Heat Pumps / C138A

Geothermal valve no longer connected to its bracket. May have broken free from mount due to valve issues. : Recommend replacement of valve body and actuator .

**Status** Open  
**Entered** 5/3/2023 7:33:31 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_112143188.v2.jpg; Added on 5/22/2023 8:54:04 AM by dmychaluk@cm3inc.com

**ISSUE-567**

Project / Strath Haven Middle School / Water Source Heat Pumps / C138A

Filter and coil are dirty and require service. : Recommend replacement of filter and professional cleaning of coil.

**Status** Open  
**Entered** 5/3/2023 7:35:09 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_112130254.v2.jpg; Added on 5/22/2023 8:54:04 AM by dmychaluk@cm3inc.com



# C138B

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

| Design       | Proposed | Final | Units |
|--------------|----------|-------|-------|
| Manufacturer |          | Trane | -     |

**C138B WORK**

### Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                     | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|--------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.5               | nan            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:06 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:06 AM

C138B ISSUES

**ISSUE-568**

Project / Strath Haven Middle School / Water Source Heat Pumps / C138B

Filter no longer secured in the unit. It is dirty and the coil appears to be dirty as well. :  
Recommend replacement of the filter and professional cleaning of the coils.

**Status** Open  
**Entered** 5/3/2023 8:02:56 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_115910685.v2.jpg; Added on 5/22/2023 8:54:05 AM by dmychaluk@cm3inc.com

**ISSUE-569**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C138B

Controls / electrical access panel cover is removed from unit. : Reinstall access panel cover.

**Status** Open  
**Entered** 5/3/2023 8:05:16 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

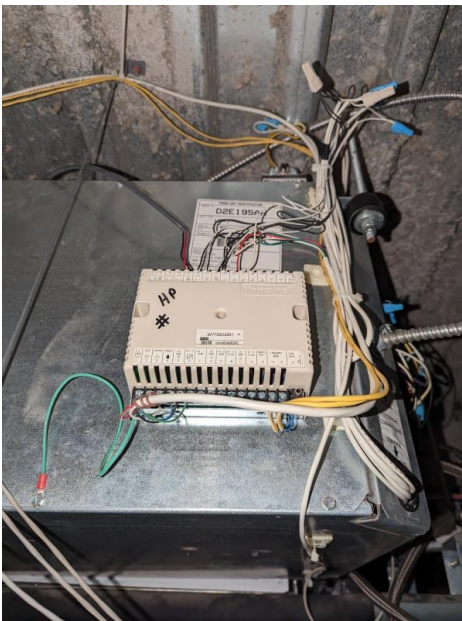


57641005\_PXL\_20230503\_115850189.v2.jpg; Added on 5/22/2023 8:54:05 AM by dmychaluk@cm3inc.com

**ISSUE-570**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C138B

Supply fan continues to run when unit is commanded unoccupied. : Replace controller, check controller programming and integration.

**Status** Open  
**Entered** 5/3/2023 8:09:28 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM

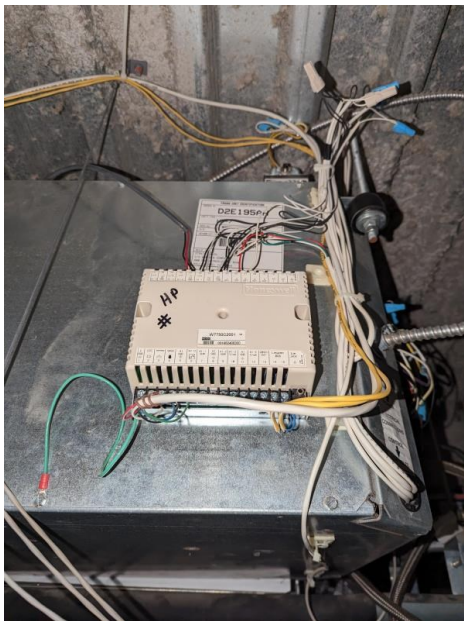


29615259\_PXL\_20230503\_120650559.v2.jpg; Added on 5/22/2023 8:54:05 AM by dmychaluk@cm3inc.com

**ISSUE-571**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C138B

Space temperature sensor reads nan degrees F. : Check wiring, controller and programming. Replace components as required.

**Status** Open  
**Entered** 5/3/2023 8:15:34 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



03648277\_PXL\_20230503\_120650559.v2.jpg; Added on 5/22/2023 8:54:06 AM by dmychaluk@cm3inc.com



22458604\_PXL\_20230503\_121609019.v2.jpg; Added on 5/22/2023 8:54:06 AM by dmychaluk@cm3inc.com



# C139

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |   | Design | Proposed | Final | Units |
|----------------------|---|--------|----------|-------|-------|
| Area Served          | 1st Floor Area A Music Corridor           |        |          | Trane | -     |
| Location Description | Above Ceiling between doors C128 and C130 |        |          |       |       |

C139 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.2               | 70.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 70             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:53:54 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:53:54 AM

C139 ISSUES

**ISSUE-537**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C139

Geothermal isolation valve is not properly supported causing excessive strain on the piping and fitting. : Recommend properly securing valve to prevent strain.

**Status** Open  
**Entered** 5/3/2023 9:19:48 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831199642204253188955451966625.v2.jpg; Added on 5/22/2023 8:53:54 AM by dmychaluk@cm3inc.com

**ISSUE-538**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C139

Filter and coil are dirty and compacted. : Recommend replacement of filter and and cleaning of coil.

**Status** Open  
**Entered** 5/3/2023 9:23:43 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



PXL\_20230503\_132117298.v2.jpg; Added on 5/22/2023 8:53:54 AM by dmychaluk@cm3inc.com

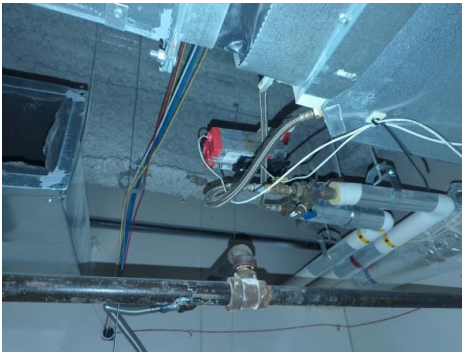


PXL\_20230503\_132014019.v2.jpg; Added on 5/22/2023 8:53:54 AM by dmychaluk@cm3inc.com

**ISSUE-539**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C139

Geothermal isolation valve not closing with occupancy or compressor command. Valve stays open regardless of control, possibly seized or failed actuator : Recommend replacement of valve and actuator and correction of wiring as needed.

**Status** Open  
**Entered** 5/3/2023 9:27:00 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/10/2023 12:00:00 AM



16831204060862708957150953038942.v2.jpg; Added on 5/22/2023 8:53:54 AM by dmychaluk@cm3inc.com



# C237

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                  | Design | Proposed | Final | Units |
|----------------------|----------------------------------|--------|----------|-------|-------|
| Area Served          | 2nd Floor Area C Staircase Lobby |        |          |       |       |
| Location Description | Above Ceiling                    |        |          |       |       |
| Manufacturer         |                                  |        |          | Trane | -     |

C237 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 68.2               | 68.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:35 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:35 AM

C237 ISSUES

**ISSUE-590**

Project / Strath Haven Middle School / Water Source Heat Pumps / C237

Filters are dirty. : Change air filters on a regular interval.

**Status** Open  
**Entered** 5/4/2023 8:10:23 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



51332952\_PXL\_20230504\_121053913.v2.jpg; Added on 5/22/2023 8:54:35 AM by dmychaluk@cm3inc.com



51786080\_PXL\_20230504\_120956590.v2.jpg; Added on 5/22/2023 8:54:35 AM by dmychaluk@cm3inc.com

**ISSUE-591**

Project / Strath Haven Middle School / Water Source Heat Pumps / C237

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 5/4/2023 8:11:16 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



12519992\_PXL\_20230504\_120901379.v2.jpg; Added on 5/22/2023 8:54:35 AM by dmychaluk@cm3inc.com



# C240

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                           | Design | Proposed | Final | Units |
|----------------------|---------------------------|--------|----------|-------|-------|
| Area Served          | 2nd Floor Area A Corridor |        |          | Trane | -     |
| Location Description | Corridor Ceiling          |        |          |       |       |

C240 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.3               | 69.8           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 75             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:07 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:07 AM



C240 ISSUES

**ISSUE-572**

Project / Strath Haven Middle School / Water Source Heat Pumps / C240

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

**Status** Open  
**Entered** 5/4/2023 9:08:57 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



**ISSUE-573**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C240

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/4/2023 9:10:23 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



# C33

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|             |   | Design | Proposed | Final | Units |
|-------------|---|--------|----------|-------|-------|
| Area Served | 3rd Floor Area C Stairwell              |        |          | Trane | -     |
| Location    | 3rd Floor Area A Corridor Above Ceiling |        |          |       |       |

C33 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.6               | 71.4           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 85             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:18 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:18 AM



C33 ISSUES

**ISSUE-574**

Project / Strath Haven Middle School / Water Source Heat Pumps / C33

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/4/2023 1:54:56 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



**ISSUE-575**

Project / Strath Haven Middle School / Water Source Heat Pumps / C33

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

|                          |                        |
|--------------------------|------------------------|
| <b>Status</b>            | <b>Open</b>            |
| <b>Entered</b>           | 5/4/2023 2:00:59 PM    |
| <b>Entered By</b>        | dmychaluk@cm3inc.com   |
| <b>Priority</b>          | Energy                 |
| <b>Category</b>          | Automation, Mechanical |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com   |
| <b>Respondent Status</b> | <b>Open</b>            |
| <b>Due Date</b>          | 5/11/2023 12:00:00 AM  |

# C332

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

**In Progress**

|                      |                | Design | Proposed | Final | Units |
|----------------------|----------------|--------|----------|-------|-------|
| Area Served          | Classroom C332 |        |          | Trane | -     |
| Location Description | Above Ceiling  |        |          |       |       |

## C332 ISSUES

### ISSUE-576

Project / Strath Haven Middle School / Water Source Heat Pumps / C332

OA damper endswitch is stated to be failed. : Recommend replacing damper actuator end switch with a new combo actuator or end switch.

**Status** Open  
**Entered** 5/4/2023 1:14:17 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



PXL\_20230504\_170929681.v2.jpg; Added on 5/22/2023 8:54:19 AM by dmychaluk@cm3inc.com

**ISSUE-577**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C332

Thermostat control not working, when set to 71 it reflects 84 setpoint. Set to 60 it reflects 75 . Set to 85 it reads 65. : Recommend troubleshooting thermostat and controller. A new controller may be required.

**Status** Open  
**Entered** 5/4/2023 1:16:03 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



PXL\_20230504\_171252256.v2.jpg; Added on 5/22/2023 8:54:19 AM by dmychaluk@cm3inc.com



# C333

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                | Design | Proposed | Final | Units |
|----------------------|----------------|--------|----------|-------|-------|
| Area Served          | Classroom C333 |        |          | Trane | -     |
| Location Description | Above Ceiling  |        |          |       |       |

C333 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | F    | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.5               | 71.6           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | F              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:23 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:23 AM

C333 ISSUES

**ISSUE-581**

Project / Strath Haven Middle School / Water Source Heat Pumps / C333

Geothermal valve actuator is disconnected and located on top of unit. : Reinstall actuator and control wiring. Replace actuator or valve assembly as required.

**Status** Open  
**Entered** 5/4/2023 12:03:19 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Energy  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



13261124\_PXL\_20230504\_160632136.v2.jpg; Added on 5/22/2023 8:54:22 AM by dmychaluk@cm3inc.com



13901739\_PXL\_20230504\_155603462.v2.jpg; Added on 5/22/2023 8:54:22 AM by dmychaluk@cm3inc.com

**ISSUE-582**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C333

Filters are dirty. : Change air filters on a regular interval.  
Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/4/2023 12:08:01 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM

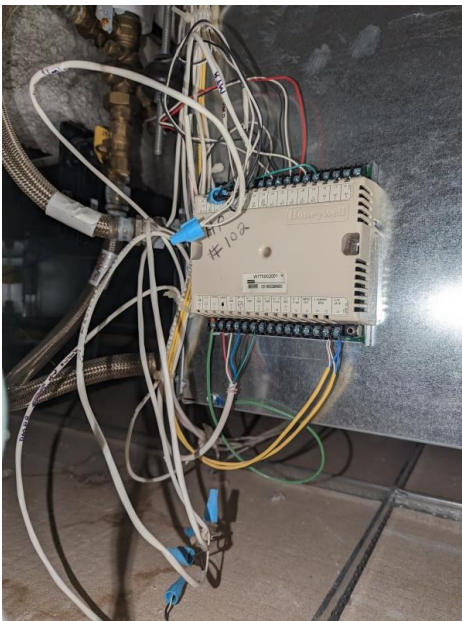


00086285\_PXL\_20230504\_161831246.v2.jpg; Added on 5/22/2023 8:54:23 AM by dmychaluk@cm3inc.com

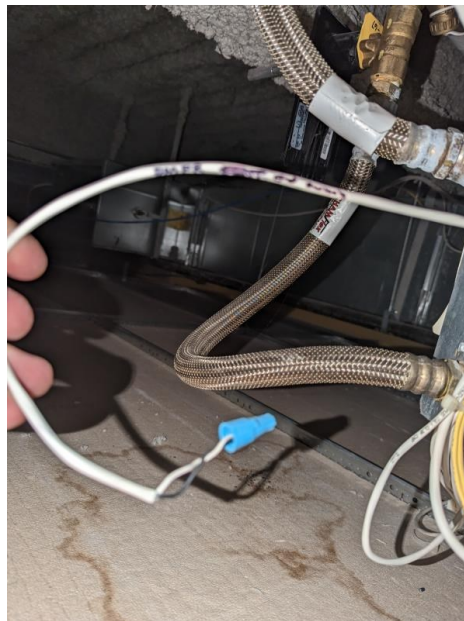
**ISSUE-583**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C333

Controller wiring has been tampered with and controller database not reporting. :  
Replace controller.

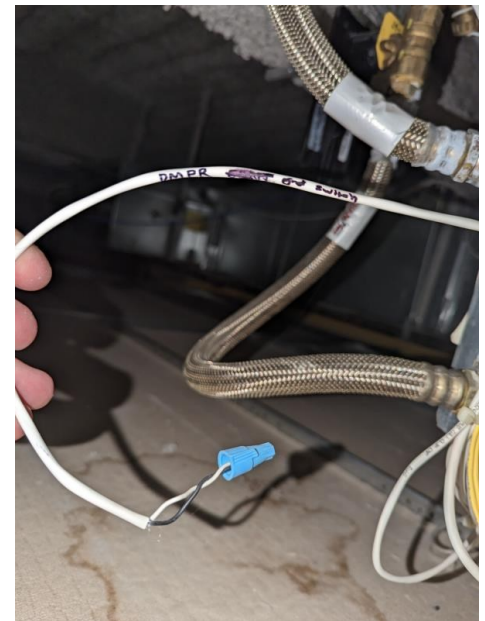
**Status** Open  
**Entered** 5/4/2023 12:17:49 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



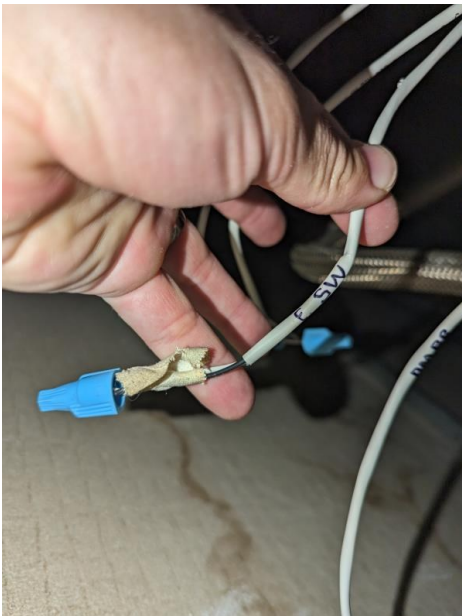
16401207\_PXL\_20230504\_155608418.v2.jpg; Added on 5/22/2023 8:54:23 AM by dmychaluk@cm3inc.com



16948082\_PXL\_20230504\_155639050.v2.jpg; Added on 5/22/2023 8:54:23 AM by dmychaluk@cm3inc.com



17448092\_PXL\_20230504\_155642418.v2.jpg; Added on 5/22/2023 8:54:23 AM by dmychaluk@cm3inc.com



**Functional Checklist And Issues Log**



17932498\_PXL\_20230504\_155658432.v2.jpg; Added on  
5/22/2023 8:54:23 AM by dmychaluk@cm3inc.com

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# C335

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

**Complete**

|                      |                        | Design | Proposed | Final | Units |
|----------------------|------------------------|--------|----------|-------|-------|
| Area Served          | Technology Office C335 |        |          | Trane | -     |
| Location Description | C335 Above Ceiling     |        |          |       |       |

**C335 WORK**

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.6               | 71.2           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 72             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:23 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:23 AM

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# C338

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                                  | Design | Proposed | Final | Units |
|----------------------|----------------------------------|--------|----------|-------|-------|
| Area Served          | 3rd Floor Area A Staircase Lobby |        |          |       |       |
| Location Description | Above Ceiling                    |        |          |       |       |
| Manufacturer         |                                  |        |          | Trane | -     |

C338 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments   |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| ----       | Compressor Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 70.3               | 69.3           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----       |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | F              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----       |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----       |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:20 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:20 AM



C338 ISSUES

**ISSUE-578**

Project / Strath Haven Middle School / Water Source Heat Pumps / C338

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/4/2023 10:17:26 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



**ISSUE-579**

Project / Strath Haven Middle School / Water Source Heat Pumps / C338

Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.

|                          |                        |
|--------------------------|------------------------|
| <b>Status</b>            | Open                   |
| <b>Entered</b>           | 5/4/2023 10:18:26 AM   |
| <b>Entered By</b>        | dmychaluk@cm3inc.com   |
| <b>Priority</b>          | Energy                 |
| <b>Category</b>          | Automation, Mechanical |
| <b>Assigned To</b>       | dmychaluk@cm3inc.com   |
| <b>Respondent Status</b> | Open                   |
| <b>Due Date</b>          | 5/11/2023 12:00:00 AM  |



**ISSUE-580**  
Project / Strath Haven Middle School / Water Source Heat Pumps / C338

Controller unresponsive to commands. : Reconfigure or replace controller.

**Status** Open  
**Entered** 5/4/2023 10:52:44 AM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Controls Programming  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



# C341

Project / Strath Haven Middle School / Water Source Heat Pumps

WSHP

In Progress

|                      |                           | Design | Proposed | Final | Units |
|----------------------|---------------------------|--------|----------|-------|-------|
| Location             | 3rd Floor Area A Corridor |        |          | Trane | -     |
| Location Description | Corridor Ceiling          |        |          |       |       |

C341 WORK

## Functional Checklist

WSHP Functional Checklist

| Controller | Point Name                 | Units        | I/O # | BO   | AO 0% | AO 50% | AO 100% | BI   | Hand Probe Reading | BAS AI Reading | Pass                                | Fail                                | NA                                  | Comments                    |
|------------|----------------------------|--------------|-------|------|-------|--------|---------|------|--------------------|----------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------|
| ----       | Compressor Cmd             | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | ----                        |
| ----       | Reversing Valve Cmd        | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Supply Fan Cmd             | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Supply Fan Status          | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 0 on 1 off                  |
| ----       | Geothermal Valve Status    | DI           | ----  | ---- | ----  | ----   | ----    | P    | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Space Temperature          | AI           | ----  | ---- | ----  | ----   | ----    | ---- | 71.6               | 71             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Occupancy Cmd              | DO           | ----  | P    | ----  | ----   | ----    | ---- | ----               | ----           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Unocc Bypass Switch        | DO           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                        |
| ----       | Geothermal Valve Command   | DO           | ----  | F    | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Only works in cooling mode. |
| ----       | Space Temp Setpoint Dial   | AI           | ----  | ---- | ----  | ----   | ----    | ---- | ----               | 78             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | ----                        |
| ----       | Condensate Overflow Switch | Manufacturer | ----  | ---- | ----  | ----   | ----    | ---- | ----               | ----           | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | ----                        |

## Functional Checklist And Issues Log



**Complete**

**Assigned to** dmychaluk@cm3inc.com

**Created by** dmychaluk@cm3inc.com on 5/22/2023 8:54:25 AM

**Marked complete by** danhainey@cm3inc.com on 5/22/2023 8:54:25 AM

C341 ISSUES

**ISSUE-584**

Project / Strath Haven Middle School / Water Source Heat Pumps / C341

Outside air damper actuator is disconnected from damper shaft. : Install damper actuator and test operation. Replace an wire components as required.

**Status** Open  
**Entered** 5/4/2023 12:29:55 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Automation  
**Category** Automation, Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



35004670\_PXL\_20230504\_162706752.v2.jpg; Added on 5/22/2023 8:54:24 AM by dmychaluk@cm3inc.com

**ISSUE-585**

Project / Strath Haven Middle School / Water Source Heat Pumps / C341

Filters are dirty. : Change air filters on a regular interval.

Coils are dirty. : Professionally clean coils on a regular interval.

**Status** Open  
**Entered** 5/4/2023 12:40:02 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** IAQ  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



10190969\_PXL\_20230504\_164643657.v2.jpg; Added on 5/22/2023 8:54:25 AM by dmychaluk@cm3inc.com

**ISSUE-586**

Project / Strath Haven Middle School / Water Source Heat Pumps / C341

Compressor command is functional on the controller however the compressor does not engage. : Recommend troubleshooting unit factory controller and compressor control.

**Status** Open  
**Entered** 5/4/2023 1:00:35 PM  
**Entered By** dmychaluk@cm3inc.com  
**Priority** Mechanical  
**Category** Mechanical  
**Assigned To** dmychaluk@cm3inc.com  
**Respondent Status** Open  
**Due Date** 5/11/2023 12:00:00 AM



40738831\_PXL\_20230504\_164918356.v2.jpg; Added on 5/22/2023 8:54:25 AM by dmychaluk@cm3inc.com



## Issues Log Condensed

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CLOSED  
0 0% of 220

INFO. ONLY  
0 0% of 220

AWAIT. VER.  
0 0% of 220

OPEN  
220 100% of 220

| ID         | Priority   | Category   | Description   | Owner Status | Resp. Status | Assoc. With | Assigned To          | Due                  | Date Closed |
|------------|------------|------------|---|--------------|--------------|-------------|----------------------|----------------------|-------------|
| ISSUE- 416 | Automation | Automation | Room CO2 sensor displays incorrect value showing 0.5. : Recommend replacement of sensor, wiring may also be failed.   | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 417 | Automation | Automation | Unit fails to provide economizer cooling until the Average Outside Air Temperature rises ABOVE the Winter Mode Setpoint (currently set at 60 degrees F). : Revise programming, clarify meaning of parameters and setpoints, or replace controller.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 418 | Automation | Automation | Points from the controller are misleading displaying Htg Vlv Pos and Gas Rht Vlv. Htg Vlv Pos is actually gas heating modulation signal. Gas Rht Vlv is actually hot gas bypass modulation signal for de-humidification.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 419 | Automation | Automation | The unit is equipped with a return fan VFD, which is assumed controlled to maintain building static pressure. There is only one VFD output point and it is unclear as to which fan (supply or return) the point is for. : Programming will need to be updated and additional points exposed to properly control and display the unit status properly. | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 420 | Automation | Automation | A call for dehumidification enabled compressors, but failed to modulate hot gas bypass. : Clarify sequence of operation and programming.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 421 | Automation | Automation | Exhaust air temperature sensor is not located in the airstream. : Replace or reinstall exhaust air temperature sensor as required.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 422 | Automation | Automation | The unit manufacturer's disconnect switch is bypassed. : Repair or replace disconnect switch.   | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 423 | Mechanical | Mechanical | Gas burner 2nd stage is turned off. : Repair gas burner and restore operation.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 424 | IAQ        | Mechanical | Filters are dirty. : Change air filters on a regular interval.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 425 | Energy     | Mechanical | Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE- 426 | Automation | Automation | Filter status is reading 0.02 actual reading is 0.9. : Recommend calibration/correction of the sensor.  | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |

Issues Log Condensed



| ID        | Priority   | Category   | Description   | Owner Status | Resp. Status | Assoc. With | Assigned To          | Due                   | Date Closed |
|-----------|------------|------------|---|--------------|--------------|-------------|----------------------|-----------------------|-------------|
| ISSUE-427 | Automation | Automation | VFD speed not changing when setpoint is modified. Appears the programming inside the Honeywell controller is not controlling the VFD speed properly: Recommend re-programming and correcting the output signal within the controller. | Open         | Open         | RTU-6       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-428 | Automation | Automation | Outside air damper failed to modulate per BAS command. : Check controller, wiring and actuator. Replace components as required.   | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-429 | Automation | Automation | Supply air temperature sensor lacks professional installation and is too short for the duct. : Replace and install a new supply air temperature sensor.   | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-430 | Mechanical | Mechanical | Gas heating combustion exhaust vent has corrosion. And has fallen apart from the inducer. : Replace gas heating exhaust vent. Gas was isolated and closed for this burner   | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-431 | Automation | Automation | Exhaust air damper fails to modulate per BAS command. : Troubleshoot controller, wiring, and actuator. Replace components as required.  | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-432 | Energy     | Mechanical | Coil is dirty and requires cleaning : Recommend professionally cleaning coil  | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-433 | IAQ        | Mechanical | Filters are dirty and require replacement. : recommend replacing filters.   | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-434 | Mechanical | Mechanical | Unit disconnect stem and handle are no longer properly connected. : Recommend correcting disconnect by replacing components.  | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-435 | Mechanical | Mechanical | Stage 1 compressor not engaging when commanded. : Recommend troubleshooting cooling circuit for leaks or other failure. Unit is an R-22 system.   | Open         | Open         | RTU-7       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM  |             |
| ISSUE-436 | Automation | Automation | Zone Temperature sensor is reading 75.5 hand probe is reading 71.5. This sensor should be replaced to properly control the unit. : Recommend replacement of space temperature sensor and running new wire to the sensor.              | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM  |             |
| ISSUE-437 | Automation | Automation | Space CO2 sensor is reading 31 PPM, sensor should be replaced to properly control the unit. : Recommend replacement of space CO2 sensor and running new wire to the sensor.   | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/29/2023 12:00:00 AM |             |
| ISSUE-438 | Automation | Automation | Zone humidity sensor is reading 35.5 in the BAS, hand probe is reading 44.5. This sensor should be replaced to properly control the unit. : Recommend replacement of space humidity sensor and running new wire to the sensor.        | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/29/2023 12:00:00 AM |             |

Issues Log Condensed

Issues Log Condensed



| ID         | Priority   | Category   | Description   | Owner Status | Resp. Status | Assoc. With | Assigned To          | Due                  | Date Closed |
|------------|------------|------------|---|--------------|--------------|-------------|----------------------|----------------------|-------------|
| ISSUE- 439 | IAQ        | Automation | Upon lowering the C02 setpoint to 50 PPM threshold no observed reaction occurred at the RTU. The C02 mode is still disabled, the OA damper does not modulate open and there is no change to supply fan or exhaust fan speed. : Recommend correcting the C02 operation within the controller   | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 440 | IAQ        | Automation | Space C02 sensor is reading 110 PPM which is 300 PPM than standard levels. The sensor is failed and requires replacement. : Recommend replacement of the C02 sensor.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 441 | Automation | Automation | Filter DP is reading .09 In WC actual DP is 1.45 In WC. : Recommend replacement/ Calibration of the DP sensor.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 442 | IAQ        | Mechanical | Filters are dirty. : Change air filters on a regular interval.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 443 | IAQ        | Mechanical | Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 444 | Safety     | Electrical | Unit disconnect bar is bent and no longer operational. : Recommend replacement of disconnect to enable safe cabinet access.   | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 445 | Energy     | Automation | Upon lowering the setpoint below space temperature and return temperature with the economizer active and an outside air temp of 50 Deg F there is no change in economizer position. After further testing we discovered the unit does not economize when in winter mode. This prevents cooling capabilities over the winter for this area. : Recommend correcting the programming sequence to allow for outside air economizing in winter mode. | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 446 | Automation | Automation | Economizer cooling found non-functional when space temperature is above setpoint. Supply air temperature setpoint is 55 degrees F, and dampers maintaining 10 percent. Unit is in economizer mode per graphic. : Control to remain. Check programming.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 447 | Energy     | Automation | In summer mode with the heating and cooling setpoint raised above current space temperature the controller is calling for and enabling the outside air damper to open at 60%. Current outside air temperature is 55 Deg f. The controller should be attempting to call for heating. : Recommend correction of programming for this function in the controller.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 448 | Mechanical | Mechanical | Condenser fan motor for stage 2 compressor is not engaging. : Recommend troubleshooting fan motor and electrical wiring.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE- 449 | IAQ        | Automation | Min OA damper is fully closed when set to 10% for minimum air. : Recommend correction of position setpoint to allow proper minimum airflow to the space.  | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |

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|-----------|------------|------------|--|--------------|--------------|-------------|----------------------|----------------------|-------------|
| ISSUE-450 | IAQ        | Mechanical | Unit serves a woodshop area and has no pre filters on the return grilles. This has caused excessive amount of fine wood dust to collect over all electrical components coils, sensors and decking within the unit. : Recommend installation of pre filters for the return duct and cleaning the unit, motors, and internal components of the unit. | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE-451 | Automation | Automation | Building static sensor reading 0.00 in the BAS actual static at the time of reading is 0.04. : Recommend calibration of DP sensor.   | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/2/2023 12:00:00 AM |             |
| ISSUE-452 | Automation | Automation | Hot gas reheat valve does not appear to be operational within the controller. : Recommend reprogramming controller to have the hot gas reheat work properly.   | Open         | Open         | RTU-9       | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE-453 | Mechanical | Mechanical | Return air transfer ducts are not installed (indicated by Note 17 on attached image). : Install return air transfer ducts.   | Open         | Open         | A103        | dmychaluk@cm3inc.com | 5/3/2023 12:00:00 AM |             |
| ISSUE-454 | IAQ        | Mechanical | There was no filter bracket found for the heat pump, the filter is wedged in between a return transfer duct and the fan section. Due to this issue the coil has become significantly compacted with dirt and dust and requires cleaning. : Recommend sheetmetal work to build a filter bracket and professional cleaning of the DX coil.           | Open         | Open         | A103        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE-455 | Energy     | Automation | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend updating programming to allow the valve to close.   | Open         | Open         | A103        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE-456 | IAQ        | Mechanical | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | B318        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE-457 | Automation | Automation | Unit not going into cooling mode when setpoints were lowered. : Recommend correcting programming and configuration of the WSHP.  | Open         | Open         | B317        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE-458 | Energy     | Automation | Space temperature sensor reporting incorrect space temperature. : Calibrate or replace space temperature sensor.   | Open         | Open         | B325        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE-459 | Energy     | Automation | Controller not responding to overrides or values device may have been left in manual configuration mode or similar issue. : Recommend configuring the controller and validating unit control. Replacement of the controller may be required.   | Open         | Open         | B325        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE-460 | IAQ        | Mechanical | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B325        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE-461 | IAQ        | Mechanical | Filter not installed in unit, was laying beside it. We placed the filter in the unit. Coils require cleaning due to the filter not being installed. : Recommend cleaning coils.  | Open         | Open         | B327        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |

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|------------|------------|------------------------|--|--------------|--------------|-------------|----------------------|----------------------|-------------|
| ISSUE- 462 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is disabled, and is possibly seized as it does not fully close when powered down. : Recommend replacement of the valve and actuator | Open         | Open         | B327        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE- 463 | Automation | Automation             | Controller unresponsive to commands. : Reconfigure or replace controller.  | Open         | Open         | B327        | dmychaluk@cm3inc.com | 5/9/2023 12:00:00 AM |             |
| ISSUE- 464 | Automation | Automation             | Unit fails to go unoccupied when this mode is commanded. : Check integration, controller and programming.  | Open         | Open         | A000        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 465 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.   | Open         | Open         | A000        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 466 | Automation | Automation             | Fan continues to run when commanded off at the BAS. : Check wiring, controller and programming.  | Open         | Open         | A000        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 467 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.                        | Open         | Open         | A000        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 468 | Automation | Automation, Mechanical | Outside air damper non-functional with supply fan command. : Check actuator, wiring and controller programming.  | Open         | Open         | A000        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 469 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.   | Open         | Open         | A105        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 470 | Energy     | Mechanical             | Return air duct is covered with plastic wrap. : Remove covering from return air duct.  | Open         | Open         | A105        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 471 | Energy     | Automation             | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend updating programming to allow the valve to close.   | Open         | Open         | A105        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 472 | Mechanical | Mechanical             | Outside air damper shaft is disconnected from damper. : Repair or replace outside air damper.  | Open         | Open         | A105        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |
| ISSUE- 473 | Automation | Automation             | Unit fails to go unoccupied when this mode is commanded. : Check integration, controller and programming.  | Open         | Open         | A105        | dmychaluk@cm3inc.com | 5/4/2023 12:00:00 AM |             |

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| ISSUE-474 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.   | Open         | Open         | C121        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-475 | Energy     | Mechanical             | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.  | Open         | Open         | C121        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-476 | Energy     | Mechanical             | Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | C121        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-477 | Automation | Automation             | Thermostat thumb wheel setpoint appears to be showing 255 d g F. Controller not responding to setup commands as expected. : Recommend correcting programming within the X110 controller.   | Open         | Open         | C121        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-478 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and compacted with dirt it is also the wrong size for the unit : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B312        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-479 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | B330B       | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-480 | Energy     | Automation             | Geothermal loop isolation valve is not closing after compressor turns off or when the unit is unoccupied. a very faint motor noise can be heard when cycling the valve it appears the valve or actuator are failed. : Recommend troubleshooting valve and actuator and correcting any failed wiring preventing the valve from closing. | Open         | Open         | B330B       | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-481 | Energy     | Automation, Mechanical | Supply fan command drops out however the fan continues to run. RIB light is going off, possible failed board or wiring issue. : Recommend troubleshooting unit control board and wiring.   | Open         | Open         | B330B       | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-482 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | B330A       | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-483 | Energy     | Automation             | Geothermal loop isolation valve is not closing after compressor turns off or when the unit is unoccupied. : Recommend correcting programming and wiring to properly control the isolation valve.   | Open         | Open         | B330A       | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-484 | Automation | Controls Programming   | Unit configuration needs validation using CARE software. Points are available however they do not match similar sized units : Verify programming and correct if required.  | Open         | Open         | B260        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-485 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B260        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |

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|-----------|------------|------------------------|--|--------------|--------------|-------------|----------------------|-------------------------|-------------|
| ISSUE-486 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | B306        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM |             |
| ISSUE-487 | IAQ        | Mechanical             | Filter is dirty and requires replacement. : Recommend replacing the filter.  | Open         | Open         | B215        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-488 | Mechanical | Mechanical             | Discharge is only going up to 74 Deg F in heating mode, cooling appears to be working normally. Recommend troubleshooting unit for proper control.   | Open         | Open         | B215        | dmychaluk@cm3inc.com | 5/4/2023<br>12:00:00 AM |             |
| ISSUE-489 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B262A       | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-490 | Automation | Automation             | Setpoint dial is not responding correctly, when set to 72, dial setpoint reads 75 with an effective of 76. When set to 68 Dial goes to 71 with an effective of 72. : Recommend correcting offsets and setback parameters in the excel controller to properly condition the space. Or removing setpoint dial control. | Open         | Open         | B226        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-491 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B226        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-492 | Automation | Automation, Mechanical | OA damper not closing with occupancy. Actuator attempts to close but appears to be bound. : Recommend installing actuator properly with linkage and verifying damper blades have smooth movement. May require new assembly.  | Open         | Open         | B226        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-493 | Energy     | Automation             | Geothermal valve not closing with occupancy command. : Recommend correcting programming in the controller  | Open         | Open         | B226        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-494 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B262B       | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-495 | Energy     | Automation             | Sensor reading 4 Deg F lower than actual and does not appear to be changing temperature as expected. : Recommend replacement of controller and thermostat due to other related issues regarding programming.   | Open         | Open         | B262B       | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-496 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | B224        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |
| ISSUE-497 | Energy     | Automation             | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.  | Open         | Open         | B224        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM |             |

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|-----------|------------|------------------------|---|--------------|--------------|-------------|----------------------|--------------------------|-------------|
| ISSUE-498 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | B332        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-499 | Automation | Automation             | Thermostat has been damaged and has trash stored in its protective box. : Recommend replacement of the thermostat and housing.  | Open         | Open         | B332        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-500 | Energy     | Mechanical             | Supply air duct 18x12 is missing insulation, approximately 25 feet. : Repair or replace duct insulation.  | Open         | Open         | B332        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-501 | Automation | Automation             | Geothermal thermal valve status not working when closed or open the status does not change. Possible point configuration issue : recommend correcting point and validation of point mapping in the BAS. | Open         | Open         | B332        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-502 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | B301        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-503 | Mechanical | Mechanical             | Slow leak found on geothermal valve valve connection post hand isolation valve. Line can be isolated to repair. : Recommend correcting leak, possible valve replacement required                        | Open         | Open         | B301        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-504 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.                               | Open         | Open         | B301        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-505 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.                                       | Open         | Open         | B310        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-506 | Automation | Automation             | Controller unresponsive to commands. : Reconfigure or replace controller.   | Open         | Open         | B310        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00 AM  |             |
| ISSUE-507 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and requires cleaning : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | C122        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM  |             |
| ISSUE-508 | Energy     | Automation             | Geothermal valve not closing with occupancy command. : Recommend correction of wiring and programming.  | Open         | Open         | C122        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00 AM  |             |
| ISSUE-509 | IAQ        | Mechanical             | Filter is dirty and compacted along with the coil. : Recommend replacing filters and cleaning the coil.   | Open         | Open         | C123a       | dmychaluk@cm3inc.com | 5/10/2023<br>12:00:00 AM |             |

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| ISSUE- 510 | Energy     | Automation, Mechanical | Geothermal isolation valve is not moving closed when the compressors are off or the unit is unoccupied. : Recommend replacing valve, actuator, and troubleshooting wiring.   | Open         | Open         | C123a       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 511 | Energy     | Automation             | Programming between C123A and C123B does not appear to be functional. Units are not running together and not passing points together : Recommend correcting programming between the units.   | Open         | Open         | C123a       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 512 | Automation | Automation             | Setpoint dial is showing 255 deg F which is failed. : Recommend replacement of the wiring and sensor.  | Open         | Open         | C123B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 513 | IAQ        | Mechanical             | Filter and coil are dirty and compacted. : Recommend replacing the filter and professionally cleaning the coil.  | Open         | Open         | C123B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 514 | Automation | Controls Programming   | Unit was running in heat when cooling was called. : Verify controller programming.   | Open         | Open         | C123B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 515 | Energy     | Automation, Mechanical | Geothermal valve is not closing when compressor command is off or when the unit is unoccupied. : Recommend replacement of the valve and actuator, troubleshooting of wiring and controller may be required.  | Open         | Open         | C123B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 516 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | C124        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 517 | Mechanical | Mechanical             | Supply diffusers in room appear to be feeding too much air into the space. : Recommend a balancing be performed with a flow hood for the diffusers to ensure they are providing proper flow.   | Open         | Open         | C124        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 518 | Automation | Automation             | Compressor command and compressor start are not hard wired to the geothermal isolation valve status. This is allowing the compressor to run before the geothermal valve can open. Valve status is not functional the valve does move. : Recommend replacement of status switch mounted on the actuator and updating programming. | Open         | Open         | C124        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 519 | Energy     | Automation             | Space sensor went into a failed state after adjusting the dial. Wee able to correct it however it still should be replaced. Sensor is located directly behind a microwave. : Recommend replacement of the sensor and relocating the sensor near the return grille.   | Open         | Open         | C124        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 520 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.  | Open         | Open         | C125A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 521 | Energy     | Automation, Mechanical | Geothermal valve not cycling closed when the compressor command is off or when the unit is unoccupied. Based on other failures its possible the valve is seized. : Recommend replacing valve and actuator and correcting wiring as needed.   | Open         | Open         | C125A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |

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|------------|------------|------------------------|---|--------------|--------------|-------------|----------------------|-----------------------|-------------|
| ISSUE- 522 | Automation | Automation             | Compressor command and compressor start are not hard wired to the geothermal isolation valve status. This is allowing the compressor to run before the geothermal valve can open. Valve status is functional so the programming needs to be updated or the status needs to be hardwired to the compressor circuit.            | Open         | Open         | C125B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 523 | Mechanical | Mechanical             | Leak noted at balancing valve and isolation valve union. : Repair pipe leak as required.  | Open         | Open         | C125B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 524 | IAQ        | Mechanical             | Filter not properly installed and is damaged. Cool is dirty due to this issue. : Recommend installation of filter and professional cleaning of coil.  | Open         | Open         | C125B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 525 | Automation | Controls Programming   | Unit shares a space temperature sensor with C125A and appears that required programming is non-functional. : Program controllers or station so that one sensor provides full setpoint functionality to both heat pumps. Control in unison.  | Open         | Open         | C125B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 526 | IAQ        | Mechanical             | Filter used is the wrong size. The filter fell over into the return duct. The could are dirty and compacted because of this. : Recommend installing proper size filters and cleaning the coil.  | Open         | Open         | C126        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 527 | Mechanical | Mechanical             | Strainer is resting on a lighting fixture preventing service of the equipment. : Recommend moving the lighting fixture to allow for proper maintenance.   | Open         | Open         | C126        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 528 | Energy     | Automation, Mechanical | Geothermal valve not closing when the unit is unoccupied or when the compressor command is off. : Recommend replacement of the valve, actuator, and correcting wiring issues.   | Open         | Open         | C126        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 529 | Automation | Controls Programming   | Unit fan not following occupancy and override commands. Output engages however the fan does not turn on. Fan status does change but the fan is not moving. Possible mechanical issue or electrical. : Check system and wiring. Repair or replace components as required. Adjust CT for the fan to read an accurate tolerance. | Open         | Open         | C128A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 530 | IAQ        | Mechanical             | Filters installed in unit are the wrong size. : Properly install filters of manufacturer recommended size.  | Open         | Open         | C128A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 531 | Automation | Automation             | Thermostat dial is not reporting correctly in the BAS. The programming in the controller may need to be corrected. : Recommend replacement of the thermostat and correcting programming.  | Open         | Open         | C128A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 532 | IAQ        | Mechanical             | Wrong filter size is used in this unit. Allowing unfiltered air to flow through the unit. : Recommend installed the correct size air filter and properly sealing filter access.   | Open         | Open         | C128B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 533 | Energy     | Automation, Mechanical | Geothermal loop Isolation valve not closing when compressors are off or when the unit is unoccupied. : Recommend replacement of the actuator and valve along with verification of wiring.   | Open         | Open         | C128B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |

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|------------|------------|------------------------|--|--------------|--------------|-------------|----------------------|-----------------------|-------------|
| ISSUE- 534 | Mechanical | Mechanical             | Corrosion and evidence of a slow leak was found on the balancing valve for the geothermal loop. Leak is not active but most likely will get worse over time. : Recommend correcting failed components.   | Open         | Open         | C128B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 535 | Automation | Automation             | Space setpoint appears to be passing through from C128A however the two units are not operating in unison. One mechanical repair of A is complete we recommend correcting programming logic between both units so they work in unison.                     | Open         | Open         | C128B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 536 | IAQ        | Mechanical             | Filter and coil are dirty and compacted. : Recommend replacement of filter and professional cleaning of coil.  | Open         | Open         | C136        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 537 | Mechanical | Mechanical             | Geothermal isolation valve is not properly supported causing excessive strain on the piping and fitting. : Recommend properly securing valve to prevent strain.  | Open         | Open         | C139        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 538 | IAQ        | Mechanical             | Filter and coil are dirty and compacted. : Recommend replacement of filter and and cleaning of coil.   | Open         | Open         | C139        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 539 | Energy     | Mechanical             | Geothermal isolation valve not closing with occupancy or compressor command. Valve stays open regardless of control, possibly seized or failed actuator : Recommend replacement of valve and actuator and correction of wiring as needed.                  | Open         | Open         | C139        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 540 | IAQ        | Mechanical             | Filter bracket and return flex connection are no longer attached properly. The filter is dirty and requires replacement. The coils is compacted with dirty and requires cleaning. : Recommend fixing sheet metal, replacing filter, and cleaning the coil. | Open         | Open         | C105        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 541 | Energy     | Automation, Mechanical | Geothermal isolation valve not modulating with compressor command or occupancy. : Recommend replacement of valve, actuator, wiring.  | Open         | Open         | C105        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 542 | IAQ        | Mechanical             | Filter is dirty and requires changing. Coils are compacted and requires cleaning. : Recommend replacement of filters and cleaning of coils.  | Open         | Open         | C108        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 543 | Automation | Automation             | Geothermal Isolation valve status isn't changing state when valve is modulating. This is causing the compressor to turn on before the valve is open. : Recommend correcting status switch, wiring and controller logic.                                    | Open         | Open         | C108        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 544 | IAQ        | Mechanical             | Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.  | Open         | Open         | C109        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE- 545 | Energy     | Automation, Mechanical | Fan not responding to ab override off command. : Recommend correcting wiring and verifying functionality. Possible unit board failure or RIB failure.  | Open         | Open         | C109        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |

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| ISSUE- 546 | Energy     | Automation, Mechanical | Geothermal valve not closing when compressor is off or unit unoccupied command is enabled. : Recommend replacement of valve and actuator along with wiring corrections.   | Open         | Open         | C109        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE- 547 | IAQ        | Mechanical             | Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size.   | Open         | Open         | C110        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE- 548 | Energy     | Automation, Mechanical | Geothermal Isolation valve is not modulating when compressor command is off. : Recommend replacement of valve, actuator and correction of wiring.   | Open         | Open         | C110        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE- 549 | IAQ        | Mechanical             | Filter is dirty and the wrong size. The coil is also dirty and compacted : Recommend installing a properly sized air filter at regular intervals and professionally clean coils on a regular interval.  | Open         | Open         | C111        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 550 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.   | Open         | Open         | C111        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 551 | Energy     | Automation, Mechanical | Geothermal valve actuator is disconnected from valve body. : Reconnect valve actuator to valve body and test operation. Replace faulty components as required.  | Open         | Open         | C113        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 552 | Automation | Automation             | Controller is not properly to the unit. : Recommend properly mounting controller to prevent potential faults.   | Open         | Open         | C113        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 553 | Mechanical | Mechanical             | Geothermal balancing valves are open completely. : Properly balance system or set to correct initial values.  | Open         | Open         | C113        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 554 | IAQ        | Mechanical             | Return duct not connected to the unit correctly. This is preventing adequate outside air from entering the unit and space, due to the ERU duct going directly to the return duct. : Recommend installation of a proper filter bracket, and connecting ductwork to the unit. | Open         | Open         | C113        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 555 | IAQ        | Mechanical             | Filter is the incorrect size and not properly mounted. The filter needs to be replaced and could need to be cleaned. : Recommend professional cleaning of the coil and replacement of the filter.   | Open         | Open         | C113        | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE- 556 | IAQ        | Mechanical             | Filter is not installed correctly allowing unfiltered air to go through the unit. : Recommend installing filters properly and professionally cleaning the coil.   | Open         | Open         | C115        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE- 557 | Energy     | Mechanical             | Geothermal valve not modulating closed a very faint noise can be heard when testing. : Recommend replacement of the valve and actuator.   | Open         | Open         | C115        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |

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| ISSUE-558 | IAQ        | Mechanical             | Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size. | Open         | Open         | C118        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-559 | Energy     | Automation, Mechanical | Geothermal Isolation valve is not modulating when compressor command is off. : Recommend replacement of valve, actuator and correction of wiring.                                 | Open         | Open         | C118        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-560 | Automation | Automation             | Unit not switching over to cooling automatically. It will work as expected when forced to cooling mode. : Recommend correcting programming within the controller.                 | Open         | Open         | C118        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-561 | Energy     | Mechanical             | Geothermal Isolation valve is not modulating when compressor command is off. : Recommend replacement of valve, actuator and correction of wiring.                                 | Open         | Open         | C119        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-562 | IAQ        | Mechanical             | Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size. | Open         | Open         | C119        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-563 | IAQ        | Mechanical             | Filter is the wrong size and is clogged and dirty, coil is compacted and dirty. : Recommend professional cleaning of the coil and replacement of the filter with the proper size. | Open         | Open         | C120        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-564 | Energy     | Automation, Mechanical | Geothermal Isolation valve is not modulating when compressor command is off. : Recommend replacement of valve, actuator and correction of wiring.                                 | Open         | Open         | C120        | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-565 | Automation | Controls Programming   | Setpoint dial (SetPointTemp) is limited to 74 degrees F when turned all the way up, and EffectSetPt reads 78 degrees F. : Check controller programming and integration.           | Open         | Open         | C138A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-566 | Energy     | Automation, Mechanical | Geothermal valve no longer connected to its bracket. May have broken free from mount due to valve issues. : Recommend replacement of valve body and actuator .                    | Open         | Open         | C138A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-567 | IAQ        | Mechanical             | Filter and coil are dirty and require service. : Recommend replacement of filter and professional cleaning of coil.   | Open         | Open         | C138A       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-568 | IAQ        | Mechanical             | Filter no longer secured in the unit. It is dirty and the coil appears to be dirty as well. : Recommend replacement of the filter and professional cleaning of the coils.         | Open         | Open         | C138B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-569 | Mechanical | Mechanical             | Controls / electrical access panel cover is removed from unit. : Reinstall access panel cover.  | Open         | Open         | C138B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |

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| ISSUE-570 | Automation | Controls Programming   | Supply fan continues to run when unit is commanded unoccupied. : Replace controller, check controller programming and integration.   | Open         | Open         | C138B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-571 | Automation | Automation             | Space temperature sensor reads nan degrees F. : Check wiring, controller and programming. Replace components as required.  | Open         | Open         | C138B       | dmychaluk@cm3inc.com | 5/10/2023 12:00:00 AM |             |
| ISSUE-572 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.  | Open         | Open         | C240        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-573 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | C240        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-574 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | C33         | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-575 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.  | Open         | Open         | C33         | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-576 | Automation | Automation             | OA damper endswitch is stated to be failed. : Recommend replacing damper actuator end switch with a new combo actuator or end switch.  | Open         | Open         | C332        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-577 | Automation | Automation             | Thermostat control not working, when set to 71 it reflects 84 setpoint. Set to 60 it reflects 75 . Set to 85 it reads 65. : Recommend troubleshooting thermostat and controller. A new controller may be required. | Open         | Open         | C332        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-578 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.   | Open         | Open         | C338        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-579 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.  | Open         | Open         | C338        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-580 | Automation | Controls Programming   | Controller unresponsive to commands. : Reconfigure or replace controller.  | Open         | Open         | C338        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |
| ISSUE-581 | Energy     | Automation, Mechanical | Geothermal valve actuator is disconnected and located on top of unit. : Reinstall actuator and control wiring. Replace actuator or valve assembly as required.   | Open         | Open         | C333        | dmychaluk@cm3inc.com | 5/11/2023 12:00:00 AM |             |

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| ISSUE- 582 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | C333        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 583 | Automation | Automation             | Controller wiring has been tampered with and controller database not reporting. : Replace controller.   | Open         | Open         | C333        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 584 | Automation | Automation, Mechanical | Outside air damper actuator is disconnected from damper shaft. : Install damper actuator and test operation.<br>Replace an wire components as required.   | Open         | Open         | C341        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 585 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | C341        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 586 | Mechanical | Mechanical             | Compressor command is functional on the controller however the compressor does not engage. : Recommend troubleshooting unit factory controller and compressor control.  | Open         | Open         | C341        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 587 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.<br>Coils are dirty. : Professionally clean coils on a regular interval.  | Open         | Open         | B331        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00<br>AM  |             |
| ISSUE- 588 | Automation | Automation, Mechanical | Compressor command not working, RIB does not appear to be changing state. Possible failed programming or bad RIB. Mechanical issue ma be present as well. : Recommend validating programming within the controller and repairing mechanical issues related to the compressor command. | Open         | Open         | B331        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00<br>AM  |             |
| ISSUE- 589 | Energy     | Automation             | Geothermal valve not modulating when compressor command goes on or off nor does it close with occupancy command. : Recommend correcting programming and wiring to ensure geothermal valve is closing when the compressor is not running or calling.                                   | Open         | Open         | B331        | dmychaluk@cm3inc.com | 5/9/2023<br>12:00:00<br>AM  |             |
| ISSUE- 590 | IAQ        | Mechanical             | Filters are dirty. : Change air filters on a regular interval.  | Open         | Open         | C237        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 591 | Energy     | Automation, Mechanical | Geothermal loop isolation valve is not closing when the unit is satisfied. : Recommend controller program updates to control the valve per manufacturer's recommendation.   | Open         | Open         | C237        | dmychaluk@cm3inc.com | 5/11/2023<br>12:00:00<br>AM |             |
| ISSUE- 592 | IAQ        | Mechanical             | Filter is dirty and requires replacement. Coil is also dirty and has corrosion forming. : Recommend replacement of filter and professional cleaning of the coils.   | Open         | Open         | B230        | dmychaluk@cm3inc.com | 5/8/2023<br>12:00:00<br>AM  |             |
| ISSUE- 593 | Automation | Automation             | Exhaust fan signal is not tracking with supply fan. Controller will be replaced. :recommend re-configuring wiring for exhaust fan.  | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023<br>12:00:00<br>AM |             |

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| ISSUE-594 | Automation | Automation | Exhaust fan damper doesn't close when commanded. :Recommend replacing actuator and verify signal with new controller.   | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-595 | Energy     | Automation | Geothermal isolation valve is no longer mounted to the valve body. Nor is it wired. : Recommend replacement of actuators and pulling new wire which runs approximately 8' through the unit  | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-596 | Mechanical | Mechanical | Heat wheel motor has a significant amount of oil around the base. : Recommend replacement of motor  | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-597 | Automation | Automation | Freezestat capillary is corroded and should be replaced   | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-598 | Automation | Automation | Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.  | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-599 | Automation | Automation | Unit is not responding correctly to control overrides or automation. Controller is slated for replacement unit does not run automatically or when overridden safety circuit appears to be holding the unit out. : Recommend correction of wiring during controller replacement. | Open         | Open         | SHMS-ERU-1  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-600 | Automation | Automation | Heat wheel air temp sensor is reading wrong. :recommend replacement or calibration, if possible.  | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-601 | Automation | Automation | Exhaust air temp sensor is reading wrong. :recommend replacement or calibration, if possible.   | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-602 | IAQ        | Mechanical | Filters must be changed. Very impacted.   | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-603 | Automation | Automation | Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.  | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-604 | Automation | Automation | Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times  | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-605 | Automation | Automation | Heat wheel air temp sensor is off by over 100 degrees. Must calibrate or replace.   | Open         | Open         | SHMS-ERU-3  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |

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| ISSUE-606 | Automation | Automation             | Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.  | Open         | Open         | SHMS-ERU-3  | dmychaluk@cm3inc.com | 5/26/2023<br>12:00:00<br>AM |             |
| ISSUE-607 | Automation | Automation             | Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times  | Open         | Open         | SHMS-ERU-3  | dmychaluk@cm3inc.com | 5/26/2023<br>12:00:00<br>AM |             |
| ISSUE-608 | IAQ        | Automation             | Exhaust damper status will not change state it shows closed even though the damper is open. Cycling the damper did not change the state of the status. Recommend installation of a new damper actuator with built in end switch, or installation of an external end switch mounted to the damper assembly. It appears ERU 4 is not running due to this issue. | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-609 | Automation | Automation             | Zone humidity Sensor reading -7%. : Recommend replacing the sensor and verifying readings within the BAS.   | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-610 | Automation | Automation             | Outside air damper reporting incorrect status (damper is open and the status is closed). : Replace controller or check programming.   | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-611 | Energy     | Automation, Electrical | Heat wheel VFD not responding to BAS commands. Unable to confirm if failure lies in the VFD, controller, or wiring. : A new controller is being installed as part of this project. : Recommend the VFD be verified again and replaced if required.  | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-612 | Automation | Automation             | Geothermal flow status showing flow regardless of geothermal valve position. : Recommend replacing/installing a new flow meter, a meter was not able to be located.   | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-613 | Energy     | Automation             | Geothermal loop valve has two actuators the lower actuator does not move when a signal is sent. The upper actuator moves the valve stem as expected. : Confirm requirement for two actuators on the valve stem. : Replace/secure actuator properly and confirm operation of components.   | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-614 | Automation | Automation             | Supply air fan operating at 70% VFD speed and not making status. : Check fan proving device, controller and programming. Replace components as required.  | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-615 | Automation | Automation             | Unit not turning on when commanded, it appears this is due to issue within the existing Excel controller. Additional issues may exist in wiring or hardware. Outputs are relatively functional but will not work automatically. : Recommend full commissioning upon controller replacement and correction of issues.  | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/2/2023<br>12:00:00<br>AM  |             |
| ISSUE-616 | Automation | Automation             | Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.  | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/26/2023<br>12:00:00<br>AM |             |

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| ISSUE-617 | Automation | Automation             | Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fan does not appear to be running normally and does not respond to commands.                                       | Open         | Open         | SHMS-ERU-4  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-618 | Mechanical | Mechanical             | Disconnect switch is bent and damaged unit cannot be turned off to access the cabinet. : Recommend installation of a new disconnect switch.  | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE-619 | Mechanical | Mechanical             | Appears to be a slow glycol leak on the geothermal loop that needs correction. : recommend removal of all pipe insulation, repair of any leaks, cleaning/disinfecting the cabinet and insulation of piping.                  | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE-620 | IAQ        | Mechanical             | OA filters are dirty and clogged. : Recommend replacement of the OA filters for the ERU  | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 5/12/2023 12:00:00 AM |             |
| ISSUE-621 | Automation | Automation             | Duct Static sensor is not reading correcting and not changing with supply fan status or speed. : Recommend replacement of sensor and tubing.   | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-622 | Automation | Automation             | Unit is not responding correctly to control overrides or automation. Controller is slated for replacement fans running at 100% during occupied times   | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 5/26/2023 12:00:00 AM |             |
| ISSUE-623 | Automation | Automation             | When overriding the zone humidity set point the zone humidity changes to the set point value. It is possible this sensor does not exist. : Recommend replacement of sensor and running new wire if needed.                   | Open         | Open         | SHMS-ERU-2  | dmychaluk@cm3inc.com | 5/29/2023 12:00:00 AM |             |
| ISSUE-624 | Mechanical | Mechanical             | Compressor 1 non-functional due to mechanical issue. Output from Honeywell controller ok. : Check refrigeration circuit and compressor.  | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/31/2023 12:00:00 AM |             |
| ISSUE-625 | Mechanical | Mechanical             | Hot gas bypass for dehumidification relies on compressor 1 functionality. Compressor 1 is non-functional. : Check hot gas bypass and dehumidification control when compressor 1 circuit is repaired.                         | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/31/2023 12:00:00 AM |             |
| ISSUE-626 | Automation | Automation, Mechanical | Outside air, return air and exhaust air dampers all non-functional. Output from Honeywell controller ok. Outside air damper moves slightly when commanded. : Check control wiring, damper actuators and linkage adjustments. | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/31/2023 12:00:00 AM |             |
| ISSUE-627 | IAQ        | Mechanical             | Air filters are dirty. : Replace air filters at regular intervals.   | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/31/2023 12:00:00 AM |             |
| ISSUE-628 | Mechanical | Mechanical             | Only 1 stage of gas heat fired when output enabled and modulation (demand) signal set to 100 percent. A second stage was attempting to light. : Check gas heating section and make necessary repairs.                        | Open         | Open         | RTU-8       | dmychaluk@cm3inc.com | 5/31/2023 12:00:00 AM |             |

Issues Log Condensed

## Issues Log Condensed



| ID        | Priority   | Category               | Description   | Owner Status | Resp. Status | Assoc. With | Assigned To          | Due                         | Date Closed |
|-----------|------------|------------------------|---|--------------|--------------|-------------|----------------------|-----------------------------|-------------|
| ISSUE-961 | Energy     | Automation, Mechanical | Geothermal valve not modulating with a call for cooling or occupancy. : Recommend replacement of valve, actuator and correcting wiring.   | Open         | Open         | B262B       | dmychaluk@cm3inc.com | 7/12/2023<br>12:00:00<br>AM |             |
| ISSUE-966 | Automation | Automation             | Unit is no longer communicating with the BAS, the controller is still on and operational. Based on the filter condition and general appearance the unit does not run often : Recommend the controller be replaced and unit be recommissioned. | Open         | Open         | MAU-1       | dmychaluk@cm3inc.com | 7/13/2023<br>12:00:00<br>AM |             |
| ISSUE-967 | Automation | Automation             | Building static does not appear to be updating and holds a constant reading through the day. : Recommend verification of sensor installation and installing a new sensor if determined to be failed.  | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 7/14/2023<br>12:00:00<br>AM |             |
| ISSUE-968 | Automation | Automation             | EX and RA temperature sensors are not reading accurately between 3 and 4 deg F cooler than actual. : Recommend verification of offsets within the controller and replacement of sensors if required.  | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 7/14/2023<br>12:00:00<br>AM |             |
| ISSUE-969 | Automation | Automation, Mechanical | Geothermal flow status is not changing state based on valve position. : Recommend replacement/installation of a flow switch in the geothermal loop piping   | Open         | Open         | SHMS-ERU-5  | dmychaluk@cm3inc.com | 7/14/2023<br>12:00:00<br>AM |             |
| ISSUE-970 | Energy     | Automation, Mechanical | Geothermal Valve not modulating when commanded. : Recommend replacement of valve, actuator and correction of wiring.  | Open         | Open         | B312        | dmychaluk@cm3inc.com | 7/12/2023<br>12:00:00<br>AM |             |
| ISSUE-971 | Automation | Automation             | Unit is no longer communicating with the BAS, the controller is still on and operational. Based on the filter condition and general appearance the unit does not run often : Recommend the controller be replaced and unit be recommissioned. | Open         | Open         | MAU-2       | dmychaluk@cm3inc.com | 7/14/2023<br>12:00:00<br>AM |             |